1885-6.

NEW SOUTH WALES.

VOTES

AND

PROCEEDINGS

OF THE

LEGISLATIVE ASSEMBLY

DURING THE SESSION

OF

1885-6,

WITH THE VARIOUS DOCUMENTS CONNECTED THEREWITH.

IN EIGHT VOLUMES.

VOL. VII.

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LEGISLATIVE ASSEMBLY.

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(*With Supplementary Cover containing Plans.*)

TABLE OF CONTENTS.

VOL. VII.

Title-page.

Table of Contents.

Index.

RAILWAYS—

	PAGE.
Progress Report of Commissioner for 1885 ...	1
Report of Commissioner for 1885 ...	3
Light Lines—Report of Sir John Fowler ...	263
Railway Bridges Inquiry—Report of Royal Commission ...	265
Railway Employés—Return of, who find Fidelity Guarantees ...	485
Ditto —At Redfern, Eveleigh, and Darling Harbour, receiving less than 8s. per day	493
Ditto —Discharged since 1 March, 1886 ...	495
Traffic Manager's Office—Return to Order...	497
Station-masters—Names, Dates of Appointments, &c. ...	499
Amount due for Carriage by Wright, Heaton, & Co.—Return ...	503
Station Buildings at Bathurst, Dubbo, and Orange—Return ...	507
Carson Woods Patent Paving at Junee Railway Station ...	509
Illawarra Railway—Amounts of Claims and of Valuations of Land ...	517
Illawarra and Homebush-Waratah—Claims for and Valuations, Land resumed ...	521
Tenterfield to Queensland Border—Return to Order ...	523
Ditto ditto —Messrs. Stevens & Co.'s Contract ...	535
Extensions sanctioned under the Loan Act of 1884 ...	545
Orange to Molong—Land Resumed—Return to Order ...	547
Pearce's Corner to Ball's Head—Correspondence ...	549
Trial Surveys—Expenditure of Vote for ...	567
Sub-way, Alt-street, Ashfield—Return to Order ...	569
Empty Waggons on Great Northern and North-Western—Return ...	595
City Extension—Reports, Plans, &c.—Return to Address ...	597
Forbes to Wilcannia—Ordering of Sleepers and Permanent Way Materials ...	605
Uralla to Inverell *via* Bundarra and *via* the Great Northern Line—Curves and Grades on...	609
Tickets issued to Singleton—Return to Order ...	611
Farmers Trains—Particulars of running—Return ...	613
Refreshment Rooms on Great Northern and North-Western Lines—Tariff ...	615
Free Passes to Railway Officials—Return ...	617
Ditto School Children—Petition against—Electors of the Nepean ...	619
Evans Combination Truck—Correspondence ...	621
Coal-boxes, Darling Harbour— Ditto ...	641

RAILWAYS—*continued*— PAGE.

Claim of New Lambton Colliery Company—Return (*in part*) to Order... 647
Private Property Rented by Department—For Offices within the City of Sydney—Return ... 657
Workshops, Eveleigh—Cost of, &c.—Return 659
Glen Innes to Inverell—Petition from Residents of New England in favour of, *via* Uralla ... 661
Great Northern, through Uralla—Petition from Residents of Uralla 663
Lawrence to Tenterfield—Petition, Chairman of meeting, Lawrence 665
Michelago Station—Petition, Squatters, Farmers, &c. 667
To Burrowa—Petition, Residents of Yass and Tangmangaroo 669
Mrs. Catharine Butterly—Petition of 671
Government Railway Bill—Message 673

TRAMWAYS—

Progress Report for 1885 675
Total cost, including Rolling Stock, Buildings, and Land—Return 677
Dismissal of Engineer Hoskings—Return to Order 679
Between Waverley and Randwick—Petition from Randwick, Coogee, and Waverley 683

ROADS AND BRIDGES—

Road Trust Accounts—Half-years ending 30 June and 31 December, 1883 and 1884 685
Ditto Ditto 1885 695
Subordinate Roads under Trustees—Distribution of Vote for 1886 701
Ditto Ditto —Officers of Department—Distribution of Vote for 1886... 707
Road from Felltimber Creek to Carcoar—Return to Order 721
Ditto Ditto —Further Return to Order 739
Road, The Islands to Cowra through Binnie Estate—Return to Order 741
Road, Bowan Park to Cudal—Return of Expenditure of 745
Bridge over Mandurama Creek—Notification of Resumption of Land for 747
Approach to "Spit" Ferry, Middle Harbour— Ditto 749
Accident to John Livingstone M'Callum—Return to Order 751

POSTAL—

Report for 1885 761
Branch Post Offices, William-street, Paddington, Haymarket, and Oxford-street—Business during 1878, 1883, 1884, and 1885—Return 913
Mail Communication between New South Wales and the United Kingdom, *viâ* Suez—Extension of Contract with Orient Steam Navigation Co. 915
Future Mail Communication between Great Britain and Australia, *viâ* Suez—Correspondence 917
Ditto ditto —Further ditto... 925
Ditto ditto Ditto ... 927
Ditto ditto —Message ... 933
Mail Service between Sydney and San Francisco—New Contract between Colonies of New South Wales and New Zealand... 935
Mail Service between Sydney and San Francisco—New Contract between Colonies of New South Wales and New Zealand—Further papers 955
Mail Service between Sydney and San Francisco—Message 957
Ditto ditto Ditto 959
Pacific Mail Service—Papers—Return to Order 961
Postal Contract—Orient Steam Navigation Co.—Message 983
Ditto Ditto Ditto 985
Money Order Branches—Return to Order... 987

TELEGRAPHIC—

Cable Communication between Australia and Great Britain—Report on reduction of rates and duplication of Cables 989
Government Cablegrams—Amounts paid, from 1880 to 1885—Return to Order 993
Electric Telegraphs—Amended Rules and Regulations 995
Prepayment of Telegrams by postage stamps—Regulation 1001
Ditto by cash— Ditto 1003
"Collect" Telegrams— Ditto 1005
Reduction of Rates, between Narrabri and Narrabri Railway Station, and between New South Wales and Victoria—Regulation 1007
Iron Columns for Telegraph Lines, George-street—Return to Order 1009
Mr. Metcalfe, Engineer in Telegraph Department—Dismissal of—Return to Order 1041

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

INDEX

TO THE

VOTES AND PROCEEDINGS

AND

PAPERS LAID UPON THE TABLE

DURING THE SESSION

1885-6.

(Opened 17th November, 1885, prorogued 25th October, 1886.)

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
A		
ABOLITION OF PUNISHMENT BY WHIPPING BILL:—		
Motion made (*Mr. Harold Stephen*) for leave to bring in, 47; read 1°, 55; Order of the Day postponed, 80, 107, 130, 175; motion being moved for postponement of the Order of the Day, and House counted out, 225; Order of the Day postponed, 241, 313, 398; motion made for, 2°, and negatived, 502.		
ABORIGINES:—		
Annual Report of the Board for the Protection of, laid on Table, 408	2	727
ABUSES IN CONNECTION WITH THE SHIPPING OF NEW SOUTH WALES:—		
Motion made (*Mr. O'Sullivan*) for a Select Committee to investigate and report upon complaints made regarding unseaworthy ships, marine surveys, tampering with the Plimsoll mark, insufficiency of life-saving appliances, overloading, shipment and defective berthing of seamen, and other alleged, 333.		
PETITIONS PRESENTED AND REFERRED TO SELECT COMMITTEE:—		
F. J. Thomas, Chairman of the Steamship Owners' Association, for leave to appear before the Select Committee, 359	4	1091
T. D. Hay, Secretary of the Australasian Institution of Marine Engineers with similar prayer, 469.	4	1093
ACTING CLERK OF ASSEMBLY (See "CLERK OF ASSEMBLY")		
ACTIONS FOR LOSS BY FIRES (See "RAILWAYS")		
ADDITIONAL ESTIMATES (See "FINANCE")		
ADDITIONAL SITTING DAY:—		
Motion made (*Sir Patrick Jennings*) that during remainder of Session, Monday be a Sitting Day of the House, and that Government Business take precedence of General Business on that day—amendment that House meet at 2·30 p.m. on each Sitting Day, and that no new business be taken after 10·30 p.m.—negatived—original motion carried, 539.		
ADDITIONAL STIPENDIARY MAGISTRATE BILL:—		
Message from the Governor recommending, 507; motion made (*Mr. Garvan*) for Committee of the Whole, 511; Order of the Day discharged, 653.		
ADDRESS:—		
IN REPLY TO GOVERNOR'S OPENING SPEECH:—		
Select Committee appointed, 9; brought up and read by Clerk, 10; amendment moved, and Debate adjourned, 10; resumed and adjourned, 13, 16, 20, 24, 27, 37, 40; amendment negatived and original question agreed to, 41; presented to Lieutenant-Governor, and answer reported, 43.		
TO GOVERNOR:—		
In acknowledgment of His Excellency's (Lord Carrington) Message respecting his Appointment, 67; answer from His Excellency the Governor reported, 71	2	5
Returning Estimates for 1886, and Supplementary Estimates for 1885 and previous years, 89, 165.		
ADDRESSES AND ORDERS:—		
Alphabetical Register of	1	859

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION, 1885-6.	PAPERS. VOL.	PAGE.
A		
ADJOURNMENT:—		
OF HOUSE:—		
Motion made for, and passed, 5, 16, 20, 41, 56, 98, 113, 116, 118, 126, 160, 169, 223, 254, 306, 310, 327, 355, 362, 380, 385, 396, 406, 422, 475, 494, 497, 593, 602, 619, 644, 653.		
Motion made for, and negatived, 31, 36, 51 (2), 74, 98, 108, 151, 175, 185, 189, 193 (2), 207, 216, 223, 225, 230, 246, 253, 264, 268, 277, 281, 306, 309, 315, 321, 323, 338, 345, 367, 373, 385, 398, 408, 435, 448, 456, 461, 465, 469, 473, 474, 478, 489, 507, 526, 532, 555, 561, 589, 592 601, 607, 652, 656.		
Motion made for, after Ministerial Statement, and negatived on Division, 109.		
Motion made for, and withdrawn, 45, 82, 100, 103, 120, 137, 169, 178, 265, 322, 345, 657.		
Motion made for, and House counted out, 427, 596		
Motion made for, during a Debate, 322, 341 (*continuous sitting*).		
Motion made for, as a mark of respect to the memory of the late Sir Alexander Stuart, and withdrawn, 323.		
For want of a quorum before commencement of business, 363, 417, 551.		
For want of a quorum after commencement of business, 189, 225, 314, 427, 450, 466, 556, 563, 596, 615.		
OF DEBATE:—		
Motion made for, and passed, and to take precedence, 10, 13, 16, 20, 24, 28, 37, 102, 173, 178.		
Motion made for, and passed, 164, 189, 211, 230, 295, 296, 318, 322, 327, 333, 338, 345, 350, 414, 445, 449 (2), 465, 484, 490, 518, 519, 598, 621.		
Motion made for, and withdrawn, 137, 332, 540, 614.		
Motion made for, and negatived, 145, 178, 189, 315, 322, 448, 457, 532, 533.		
SPECIAL:—51, 53, 69, 72, 82, 103, 123, 126, 137, 199, 265, 345, 630, 656.		
ADMINISTRATION, NEW:—		
House informed of steps taken in formation of, by Mr. Dibbs, 43.		
Formation of Sir John Robertson's, announced, and Seats declared vacant, 72; Writs returned and Members sworn, 73.		
Formation of Sir Patrick Jennings's announced, and Seats declared vacant, 125; Writs returned and Members sworn, 127.		
ADMINISTRATION OF JUSTICE:—		
COONAN *v.* ATKINSON:—		
Motion made (*Mr. Abigail*) for copies of the Supreme Court records, Judge's Notes, &c., having reference to the case of, 65; Return to Address laid on Table, 97	4	707
DR. CALLAGHAN, J.P.:—		
Motion made (*Mr. Bowman*) for all correspondence relating to the appointment of, as Licensing Magistrate, Windsor, in the room of Mr. M'Quade, 185; Return to Order laid on Table (not printed), 222.		
PIERCE FOWLER:—		
Motion made (*Mr. Garland*) for all papers, minutes, &c., in reference to the charges brought against, for forgery and embezzlement, 82; Return to Address laid on Table, 193	4	725
PUNISHMENT BY WHIPPING:—		
Motion made (*Mr. Harold Stephen*) for a return showing particulars of cases of, 146; Return (*in part*) to Address laid on Table, 222; Supplementary Return to Address laid on Table, 321	4	873, 879
REGINA *v.* PULVER:—		
Motion made (*Mr. Bowman*) for copies of all depositions, official minutes, and correspondence relative to case of, tried at Tamworth, 188; Return to Address laid on Table, 291	4	861
THE POLICE *v.* SAMUEL ARMAGER:—		
Motion made (*Mr. Neild*) for copies of all depositions in case of, 188; Return to Address laid on Table (not printed), 240.		
MR. COMAN, J.P.:—		
Motion made (*Mr. Abigail*) for copies of all letters, reports, and other documents referring to the temporary appointment of, as Acting Police Magistrate for portion of Eden Electorate, 284; Return to Order laid on Table, 440	4	907
CASE OF MRS. FOOTE:—		
Motion made (*Mr. Abigail*) for copies of all letters, depositions, and other documents referring to, recently charged before the Bench at East Maitland with larceny, 284; Return to Address laid on Table, 444	4	755
PAID MAGISTRATES OF THE COLONY:—		
Motion made (*Mr. Henry Clarke*) for a return giving names, length of service, and other particulars of, including Stipendiary Magistrates, 299; Return to Order laid on Table, 651	2	475
CHARGES AGAINST EDWARD BROWN HOLT;—		
Motion made (*Mr. Wisdom*) for copies of depositions in case of, the names of witnesses, nature of evidence, and other particulars, 301; Return to Address laid on Table, 325	4	745
STIPENDIARY MAGISTRATES:—		
Motion made (*Mr. Neild*) for a return showing the time actually occupied daily in the hearing of cases, at the Central and Water Police Offices, by the several, 325; Return to Order laid on Table, 566	4	901
EX-CLERGYMAN COOMBES:—		
Depositions in case of, laid on Table, 337	4	753
POLICE MAGISTRATES AND CLERKS OF PETTY SESSIONS:—		
Motion made (*Mr. Neild*) for a return showing amounts paid to, for expenses incurred removing from one district to another, 341; Return to Order laid on Table, 402	4	881
MESSRS. A. FORSYTH & CO. *v.* THE MINISTER FOR PUBLIC WORKS:—		
Motion made (*Mr. Forsyth*) for copies of all papers, letters, minutes, &c., relating to the claim for compensation and the action at law thereon, tried in the Supreme Court, 353; Return to Order laid on Table, 354; Further Return to Order laid on Table, 440	6	1033, 1045
SUPREME COURT:—		
Motion made (*Mr. W. J. Fergusson*) for the issue of a Royal Commission to inquire into and report upon the present constitution of, and its various branches and the practice and procedure thereof, and as to desirableness of introducing reforms with a view to the better administration of Justice and the lessening of the costs of litigation, 412.		
CLAIM OF CHARLES STEVENS:—		
Motion made (*Mr. Vaughn*) for Select Committee to enquire into and report upon, arising out of the action Pearson *v.* Stevens, tried in the Supreme Court, and Report of Session 1883-4 referred, 258; Report brought up, 448; motion made for adoption of Report and Debate adjourned, 518; Order of the Day postponed, 572, 658.	5	253
MR. GEORGE STEVENSON:—		
Petition from residents of the Macleay River, referring to recent inquiry into alleged irregularities in discharge of official duties of, as Clerk of Petty Sessions, Kempsey, stating that injustice has been done, and praying for a searching inquiry by a Select Committee, presented, 469	2	485

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
A		
ADMINISTRATION OF JUSTICE (*continued*) :—		
CIRCUIT COURTS :—		
Motion made (*Mr. Holborow*) for a Return showing the hours the Judges sat during the last four circuits, with particulars of business dealt with, and the amount expended in the erection of Courthouses, 483.		
CONVICTIONS AND COMMITTALS OF JUVENILE OFFENDERS :—		
Return of, under sixteen years of age, for 1883-1886, laid on Table, 483	4	761
INDUSTRIAL SKILL OF PRISONERS IN GAOLS :—		
Motion made (*Mr. Kidd*) for a Return showing the particulars of, 496 ; Return to Order laid on Table, 613	4	955
KEMPSEY DISTRICT :—		
Proceedings and Papers referring to the Inquiry into, laid on Table, 496	4	763
RELEASE FROM GAOL OF PATRICK HALL :—		
Correspondence, &c., respecting, laid on Table, 613	4	915
PETTY SESSIONS CASES HEARD AT ARMIDALE, GLEN INNES, INVERELL, AND TENTERFIELD :—		
Return showing number of, during 1885, and to 30th June, 1886, laid on Table, 629	4	913
ADMISSION TO THE BODY OF THE HOUSE :—		
The Hon. W. H. Burgess, Colonial Treasurer of Tasmania, 62.		
AD VALOREM DUTIES (See "FINANCE" also "TARIFF")		
ADVERTISEMENTS (See "GOVERNMENT")		
ADVICE TO THE GOVERNOR (See "MINISTERIAL ADVICE TO THE GOVERNOR")		
AGRICULTURAL PRODUCE (See "SUPPLY" also "TARIFF")		
AGRICULTURAL SOCIETIES :—		
Motion made (*Mr. Gould*) for a return showing the names of all, which have participated in the annual grants, showing the amounts paid to each, including special grants, 257 ; Return to Order laid on Table, 318	6	45
AGRICULTURE AND LIVE STOCK :—		
Returns of, for the year ended 31st March, 1886, laid on Table, 233	6	25
AIREY, LIEUTENANT H. P. (See "ARTILLERY, PERMANENT")		
ALBANY (See "DEFENCE")		
ALBURY (See "WATER SUPPLY")		
ALIGNMENT OF STREETS :—		
Motion made (*Mr. Abbott*) for return showing the name of each Municipal Borough, within 10 miles of Sydney, whose streets have been aligned, with particulars of, 294 ; Return to Order laid on Table, 539	6	229
ALLANDALE (See "RAILWAYS")		
ALPHABETICAL REGISTER OF ADDRESSES AND ORDERS :—		
Sessional Paper	1	859
ALPHABETICAL REGISTER OF BILLS :—		
Sessional Paper	1	857
ANNEXATION (See "NEW HEBRIDES" also "DESPATCHES")		
ANSWERS AND QUESTIONS (See also "QUESTIONS") :—		
Sessional Order passed, 45.		
APPEAL TO THE PRIVY COUNCIL :—		
Proceedings in case of Barton *v.* Taylor, laid on Table, 253	2	13
APPROPRIATION BILL :—		
Ordered (*Sir Patrick Jennings*), founded on Resolutions of Ways and Means Nos. 15 and 16, presented and read 1°, 643 ; read 2°, committed, reported without amendment, report adopted ; read 3°, passed, and sent to Council, 653 ; returned without amendment, 656 ; assented to in Legislative Council Chamber, 660.		
ARBITRATION ACT AMENDMENT BILL :—		
Motion made (*Mr. Forsyth*) for leave to bring in, presented and read 1°, 163 ; Order of the Day postponed, 189, 229 ; read 2° and committed,—no report from Committee, 331.		
ARMAGER, SAMUEL (See "ADMINISTRATION OF JUSTICE")		
ARMIDALE (See "CROWN LANDS" also ADMINISTRATION OF JUSTICE")		
ARMSTRONG, CAPTAIN :—		
Petition from, setting forth circumstances of his removal from office of Resident Magistrate of Lord Howe Island, that recommendation of Select Committee has never been acted upon, and praying to be heard by Counsel at the Bar, presented, 128 ; motion made (*Mr. O'Sullivan*) that the prayer of the Petition be granted, 193 ; motion, *contingent* on passing of last motion, made, that Counsel be now heard, and Mr. Buchanan, Counsel learned in the Law, heard at the Bar, 193.	8	1153
Certain letters and other documents, from which he had quoted, relative to the case of, laid on Table by Sir John Robertson (not printed), 193.		
Motion made (*Mr. Trickett*) for Committee of the Whole to consider Address to Governor, that necessary steps be taken to provide a sum not exceeding £3,000 as compensation to, for all consequences of his dismissal as Resident Magistrate of Lord Howe Island, and debate adjourned, 333 ; Order of the Day postponed, 453 ; debate resumed, resolution carried, on casting vote of Mr. Speaker, 570 ; Order of the Day postponed, 583, 597, 633 ; House in Committee,—no report, 657.		
Petition from, that his case has now been more than four years before Parliament, and praying earliest and serious consideration before prorogation, presented and read by Clerk, 652	8	1155
ARMSTRONG'S SETTLEMENT BILL :—		
Received from Legislative Council and read 1°, 562 ; read 2°, committed, reported without amendment, and report adopted, 572 ; read 3°, passed, and returned to Council without amendment, 581 ; assent reported, 611.		
ARMS AND AMMUNITION :—		
Return of, in Ordnance Department, laid on Table, 402	2	253
ART GALLERY, NATIONAL :—		
Statistical information respecting, laid on Table, 15	4	567
ARTILLERY, PERMANENT :—		
DANIEL BEHAN :—		
Petition from, complaining of his dismissal from the Force, presented, 60	2	241
Motion made (*Mr. Abigail*) that a Select Committee be appointed to inquire into case of, 449.		
SPALDING-AIREY INQUIRY :—		
Correspondence respecting promotion of Lieutenant H. P. Airey to the rank of Captain, laid on Table, 120	2	239
CONDUCT OF SERGEANT CULLEN :—		
Motion made (*Mr. G. A. Lloyd*) for copies of all papers in connection with a military investigation into, 414 ; Return to Address laid on Table, 489	2	243

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
A		
ASHFIELD (See "RAILWAYS")		
ASHFIELD CHURCH OF ENGLAND SCHOOL BILL:—		
Petition presented (*Mr. Hammond*) for leave to bring in, 117; leave given, presented and read 1°, 119; referred to Select Committee, 130; Report brought up, 178; Order of the Day postponed, 229; read 2°, committed, reported without amendment, and report adopted, 241; read 3°, passed, and sent to Council, 245; returned with amendment, 285; amendment agreed to, 332; assent reported, 360.	8	715
ASSEMBLY (See also "ADJOURNMENT" also "CHAIRMAN OF COMMITTEES" also "CLERK OF ASSEMBLY" also "PARLIAMENT" also "PRIVILEGE" also "SPEAKER")		
Sitting on Sunday, 380.		
Continuous sitting, 341, 343, 380, 389, 533.		
Sergeant-at-Arms removes the Honorable Member for Morpeth, Mr. Wisdom, from the Chamber for persistent obstruction and disorder, 380.		
Sergeant-at-Arms takes the Honorable Member for Morpeth, Mr. Wisdom, into custody on Speaker's warrant, 608.		
Member named by Mr. Speaker, 440.		
Message from Commissioners on opening Parliament, 3.		
Usher of Black Rod delivers Message, 3, 8.		
Members sworn, 4, 7, 8, 13, 17, 21, 73, 100, 127, 246 (2), 343, 359.		
Pro Formâ Bill, 8.		
Opening Speech, 8.		
Address in Reply, 9, 10, 13, 16, 20, 24, 27, 37, 40, 41, 43.		
Committee appointed to inspect Journals of Legislative Council as to proceedings on Sydney Corporation Act Amendment Bill, 240.		
Previous Question proposed and passed, 268.		
No report from Committee of the Whole, 331, 465, 567, 657.		
Interruption of business, 13, 100, 609, 656.		
Ballot for Select Committee, 60.		
Call of the House, 197, 264, 265, 268.		
Vacant seats, 72, 125, 126, 259, 331.		
Standing Orders suspended, 80, 112, 133, 134, 135, 150 (2), 184, 197, 261, 361, 492.		
Orders of the Day discharged, 130 (3), 193, 240, 257 (2), 301, 333, 367, 372, 398, 409, 412, 453, 530, 571, 572, 607, 613, 614 (2), 651, 653 (7), 658 (2).		
Bill withdrawn, 130 (2), 257 (2), 301, 367, 372, 398, 409, 530, 571, 572, 607, 613, 614 (2), 653 (6), 658 (2).		
Bill recommitted, 362, 454, 479, 526, 534, 583, 597.		
Bill laid aside in consequence of amendments made by Legislative Council, 354, 453.		
No Tellers on Division, 160, 189, 398, 541, 546.		
Casting Vote given by Mr. Speaker, 570.		
Counsel heard at the Bar, 193.		
Resolutions required to be put *seriatim*, and negatived, 378.		
Elections and Qualifications Committee, 16, 31, 36 (2), 68, 71, 72, 73, 74, 75 (2), 80, 81, 100, 102, 142, 161.		
Sittings after midnight, 41, 65, 147, 178, 179, 186, 220, 223, 233, 249, 254, 265, 281, 287, 301, 306, 309, 318, 322, 327, 341, 345, 355, 378, 380 (2), 385, 390, 403, 406, 409, 416, 422, 436, 440, 457, 462, 470, 475, 484, 490, 494, 497, 507, 511, 524, 529, 532, 540, 545, 559, 567, 571, 577, 582, 589, 593, 602, 607, 615, 621, 623, 630, 639, 643, 647, 653, 656.		
Ministerial statement made by the Hon. G. R. Dibbs, 43, 67, 68, 69.		
Do. do. Sir John Robertson, 74, 90, 109, 115, 118, 120.		
Do. do. Sir Patrick Jennings, 127, 160, 315, 343, 385, 474, 485, 503, 523, 532, 602.		
Statement by Sir Patrick Jennings as to steps taken by him towards the formation of a Ministry, 123.		
Sessional Orders passed, 45, 46, 47, 222, 254.		
Do. Additional Sitting Day (Monday), 539.		
Precedence of Government Business on Private Day, 53, 62, 155, 377, 378.		
Do do Tuesdays, 222.		
Alternation of General Notices of Motions and Orders of the Day on Fridays, 254.		
General Business postponed till later on the Notice Paper, 142, 550, 583.		
Deputy Speaker's Commission, Mr. Garrett, 49; Mr. Trickett, 157; Mr. Slattery, 395.		
New Administration announced, 43, 72, 125.		
Vote of Censure—Policy of the Government, 102.		
Do. New Hebrides, 173, 177, 178, 179.		
Sir Peter Scratchley, K.C.M.G.—Motion expressing condolence with Lady Scratchley on death of, 49; reply, 71.		
Sir Alexander Stuart, K.C.M.G., M.L.C.—Motion expressing condolence with Lady Stuart and family on death of, 323; reply (by cable) reported, 351.		
Letter from Sir John Robertson resigning his seat as a Member for Mudgee, entered on Records of the House, 331.		
Contingent motions moved, 193, 201, 205, 230, 292, 449.		
Do. —objection taken to a Member moving, on behalf of another Member, 246.		
The Hon. W. H. Burgess, Colonial Treasurer of Tasmania, admitted to the body of the House, 62.		
Refers Question back to Select Committee for further inquiry and report, 120.		
Committee of the Whole asked leave to sit again on "*Tuesday*," amendment proposed "*Wednesday*" and withdrawn, 186.		
Papers laid upon Table by a private Member (not printed), 193, 355.		
Disorder—Mr. Speaker resumed Chair having observed grave disorder in Committee of the Whole, 379 (2).		
Do. Mr. Wisdom, Hon. Member for Morpeth, guilty of persistent obstruction and disorder, 379. Mr. Speaker directed his removal from the Chamber, 380.		
Do. Mr. Shepherd called on by name, heard in his place, withdrew words, and apologized, 440.		
Do. Reported from Committee of the Whole—words used by Sir Henry Parkes—during debate words used by Mr. Wisdom adjudged disorderly, &c., Mr. Wisdom refused to comply with the resolution of the House, adjudged guilty of contempt, and committed to the custody of the Sergeant-at-Arms on Mr. Speaker's warrant, 607, 608; Sir Henry Parkes's explanation of words used by him accepted as satisfactory, 609.		
Do. Mr. Wisdom, Hon. Member for Morpeth, called by name by Mr. Deputy Speaker (*Mr. Slattery*), 656.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE,
A		
ASSEMBLY—*continued* :—		
Motion made (*Mr. Copeland*) that Sir Henry Parkes be now heard, 100.		
Motion made (*Mr. Thompson*) that Sir John Robertson be now heard, 100.		
Motion made (*Mr. Garrett*) (1) That the Ballot-papers, Electoral District of Young, be laid upon the Table, (2) That the Clerks at the Table examine the ballot-papers taken at No. 2 Booth, Young, and the Speaker report the result—Mr. Speaker ruled that paragraph (2) cannot be put,—amended motion withdrawn, 94.		
Motion made (*Mr. Harold Stephen*) that the ballot-papers, Electoral District of Young, be laid on Table, and negatived on Division, 278.		
Motion made (*Mr. Thompson*) that the dignity and honor of this House will be conserved by taking steps to prevent the sale of intoxicating drinks in the Parliamentary Refreshment Room, except at meal-times, and House counted out, 314.		
Motion made (*Mr Heydon*) for Committee of the Whole to consider the necessary steps to be taken to make provision in the Estimates for the Payment of Members of the Legislative Assembly, 155; Order of the Day postponed, 175; House in Committee and progress reported, 185; leave given to sit again on "Tuesday" next, after amendment "Wednesday" had been proposed and withdrawn, 186; House in Committee and progress reported, 194; Call of the House to consider the Question, 197, 264, 265(2), 268; House in Committee, *Point of Order* reported and decided, Committee resumed, and Resolution reported, 265; Order of the Day postponed, 278, 296; resolution received, read 1°, 2°, and agreed to, 333.		
Motion made (*Sir Henry Parkes*) that the ruling of the Speaker given on Saturday, 10th July, a.m., "is" contrary alike to the letter of the Standing and Sessional Orders and to the practice of Parliament as established by former Speakers of this House, and has a direct tendency to curtail the privileges of Parliament, and to undermine the just protection of minorities,—amendment moved (*Sir Patrick Jennings*) to omit all words after "is" and to insert in their place—"consistent with the right understanding of the Rules, Orders, and Usages of Parliament; is warranted by precedent; and tends to preserve and protect the due course of Public Business without infringing the rights of minorities; and this House endorses and confirms the ruling accordingly"—amendment and motion as amended carried on division, 389, 390.		
Motion made (*Mr. Garrett*) that the Resolution agreed to on the 14th July, 1886, in reference to "Mr. Speakers' Ruling—Continuous Sitting," be rescinded, 544; and negatived, 545.		
Motion made (*Mr. Foster*) that the removal and exclusion of the honorable and learned member for Morpeth from the House by the "Speaker" without the order or resolution of the House, were contrary to the law and usages of Parliament and the privileges of this House; amendment moved (*Mr. Want*) to substitute other words after "Speaker," 402; and amendment carried, 403.		
Motion made (*Mr. W. J. Fergusson*) for Committee of the Whole to consider whether it be referred to the Standing Orders Committee that members serving on Select Committees on Private Bills be paid, and that to provide therefor parties applying for Private Bills be required to deposit an additional £25, 413; Order of the Day postponed, 425, 572, 658.		
Motion made (*Mr. G. A. Lloyd*), for a Return giving particulars of cost of printing and binding Parliamentary Papers and *Hansard*, for Session 1883-4, 489.		
Ministerial advice to the Governor and resignation of the Ministry—correspondence laid on Table and read by Clerk, 111	2	7
Paper respecting assumed state of parties in the House, laid on Table (not printed), 111.		
Proceedings in the Appeal to Privy Council in case of Barton *v.* Taylor, laid on Table, 253	2	13
Motion made (*Mr. Abigail*) for copies, in detail, of the whole costs to the country in the cases Taylor *v.* Barton and others, 394.		
Votes and Proceedings, Nos. 1 to 153	1	1
Business undisposed of, at the close of the Session	1	663
Attendances of Members in Divisions and Counts-out during the Session	1	667
Business of the Session	1	669
Weekly Reports of Divisions in Committee of the Whole, Nos. 1 to 21	1	671
Weekly Abstracts of Petitions received, Nos. 1 to 41	1	775
Alphabetical Registers of Bills	1	857
Alphabetical Registers of Addresses and Orders	1	859
Standing and Select Committees appointed during the Session	1	867
Explanatory Abstracts of sums estimated and voted	3	1079
ASSENT TO BILLS (See also "MESSAGES")		
Given in Legislative Council Chamber, 660.		
ASSIGNEES OF FIRE INSURANCE POLICIES ENABLING BILD :—		
Motion made (*Mr. Wall*) for leave to bring in, 570; presented and read 1°, 630; Order of the Day postponed, 657.		
ASSISTANT UNDER SECRETARY FOR LANDS (*See* "CROWN LANDS")		
ASYLUMS :—		
FOR INEBRIATES :—		
Petition from residents of Sydney and Suburbs, urging the necessity for the establishment of, presented, 359	8	1235
Petition from residents of Hartley and surrounding District, with similar prayer, presented, 555	8	1237
GLADESVILLE :—		
Motion made (*Mr. Sydney Smith*) for copies of all correspondence, minutes, &c., having reference to the supply of a boiler for, 412.		
RANDWICK :—		
Motion made (*Dr. Wilkinson*) for return showing particulars of Expenditure on treatment of Children and cost per head, 633.		
GOVERNMENT, FOR INFIRM AND DESTITUTE :—		
Report of 1885, laid on Table, 642	2	719
ATTENDANCE OFFICERS (See "EDUCATION")		
ATTENDANCES OF MEMBERS IN DIVISIONS AND COUNTS-OUT :—		
Sessional Paper	1	667
AUDIT, BOARD OF (See "FINANCE")		
AUDITOR GENERAL :—		
Special Report from, respecting transfer of £275,000 to Treasurer's Advance Account, such transfer not being within the provisions of the Audit Act, laid on Table, 74	3	1021
Abstracts of the Public Accounts for 1885, with Report thereon by, laid on Table, 455	3	809
AUSTRALASIAN STOCK CONFERENCE (See "STOCK")		
AUSTRALIAN BARB WIRE COMPANY :—		
Copies of papers referring to orders given to, for supply and erection of barbed wire fencing, laid on Table, 301	8	1185

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
A		
AUSTRALIAN JOINT STOCK BANK ACT AMENDMENT BILL:—		
Petition presented (*Mr. Ives*) for leave to bring in, 309; leave given, presented and read 1°, 313; referred to Select Committee, 317; Report brought up, 408; read 2°, committed, reported without amendment, and report adopted, 503; read 3°, passed and sent to Council, 507; returned without amendment, 561; assent reported, 588.	8	723
AUSTRALIAN MUSEUM:—		
Report of the Trustees for 1884, laid on Table, 15	4	453
Do 1885, do 478	4	519
B		
BALANCES (See "FINANCE")		
BALLOTING FOR SELECT COMMITTEES:—		
Sessional Order passed, 46.		
For Select Committee—Privilege—Mr. Melville, M.P., 60.		
BALLOT PAPERS, ELECTORAL DISTRICT OF YOUNG:—		
Motion made (*Mr. Garrett*), (1) That the ballot-papers be laid on Table, and (2) that those taken at No. 2 Booth, Young, be examined by the Clerks at the Table and the Speaker report the result,—Speaker ruled that paragraph (2) cannot be put; amended motion, by leave, withdrawn, 94.		
Motion made (*Mr. Harold Stephen*) that the Ballot-papers be laid upon Table, and negatived on Division, 278.		
BALMAIN CEMETERIES CLOSING BILL:—		
Motion made (*Mr. Garrard*) for leave to bring in, presented and read 1°, 317; Order of the Day discharged and Bill withdrawn, 372.		
BALMAIN TRAMWAY BILL:—		
Petition presented (*Mr. Burns*) for leave to bring in, 60; leave given, (*Mr. Hyam*) and read 1°, 65; referred to Select Committee, 81; Report brought up, 98; Order of the Day postponed, 130; read 2°, committed, reported with amendments, and report adopted, 189; Order of the Day postponed, 193; read 3°, passed and sent to Council, 197; returned with amendments, 286; amendments agreed to and disagreed to, 332; Message to Council, 343; Council insists on its amendments disagreed to, 388; disagreements to Council's amendments not insisted upon, 399; assent reported, 424.	8	737
BANK:—		
GOVERNMENT SAVINGS:—		
Statement of Accounts, for the year 1885, laid on Table, 128	3	1023
Amended Regulations, laid on Table, 142	3	1025
BANK LIABILITIES AND ASSETS:—		
For Quarter ended 30th September, 1885, laid on Table, 8	3	1037
Do 31st December, 1885, do 97		1039
Do 31st March, 1886, do 248		1041
Do 30th June, 1886, do 453		1043
BANK OF ENGLAND (See "FINANCE")		
BANK OF NEW SOUTH WALES ACTS AMENDMENT BILL:—		
Received from Council and read 1°, 169; Order of the Day postponed, 189; read 2°, committed, reported without amendment, and report adopted, 257; read 3°, passed, and returned to Council without amendment, 260; assent reported, 300.		
BANKING ACCOUNT (See "FINANCE")		
BARB WIRE (See "AUSTRALIAN BARB WIRE COMPANY")		
BARBOUR, MR. ROBERT:—		
Proposed as Chairman of Committees, and negatived, 143.		
Privilege:—Motion made (*Mr. Abigail*) for a Select Committee to inquire into and report upon the circumstances connected with the voidance and re-selection of R. Barbour's conditional purchase, Parish of Couridjah, County of Camden, 338; motion made (*Mr. Barbour*) for leave to appear before the Committee in person or by Counsel, 343; Report brought up and read by Clerk, 408	2	145
BAR OF THE HOUSE:—		
Mr. Buchanan, Counsel learned in the Law, heard on behalf of Captain Armstrong, 193.		
BARKER'S ESTATE BILL:—		
Petition presented (*Mr. Teece*) for leave to bring in, 50; leave given, and read 1°, 56; referred to Select Committee, 61; Report brought up, 68; Order of the Day postponed, 80, 116, 130, 151, 175, 189; read 2°, committed, reported with amendments, and report adopted, 212; read 3° and passed, 215; sent to Council, 216.	8	731
BARRISTERS BILL:—		
Motion made (*Mr. Neild*) for leave to bring in, and read 1°, 47; Order of the Day postponed, 61, 80, 116, 130, 177, 204, 256; on motion for 2°, *Point of Order* taken, that Title did not correspond with Order of Leave, and clauses were not covered by the Title, and sustained—Order of the Day discharged, and Bill withdrawn, 257.		
BARRISTERS BILL (No. 2):—		
Motion made (*Mr. Neild*) for leave to bring in, 313; presented and read 1°, 318; Order of the Day postponed, 372, 465; Order of the Day discharged, and Bill withdrawn, 571.		
BARTON AND GOOLD MESSRS. (See "RAILWAYS")		
BARTON, MR. E. H. (See "CROWN LANDS")		
BARTON, THE HONORABLE EDMUND:—		
Elected Speaker, 5; presented to Governor, 7.		
v. TAYLOR—APPEAL TO PRIVY COUNCIL:—		
Proceedings in, laid on Table, 253	2	13
Motion made (*Mr. Abigail*) for copies in detail of the whole costs to the country in the cases Taylor *v.* Barton and others, 394.		
BATHURST (See "WATER SUPPLY")		
BEER (See "SPIRITS, WINE, AND BEER")		
BEHAN, DANIEL (See "ARTILLERY, PERMANENT")		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
B		
BELL'S ESTATE BILL :—		
Petition presented (*Mr. Trickett*), for leave to bring in, 116 ; 62nd Standing Order suspended, 134 ; leave given, presented and read 1°, 135 ; referred to Select Committee, 141 ; Report brought up, 264 ; read 2°, committed, reported without amendment and report adopted, 331 ; read 3°, passed and sent to Council, 337 ; returned without amendment, 374 ; assent reported, 424.	8	743
BENEVOLENT ASYLUM :—		
Statement respecting relief afforded to indigent persons, laid on Table, 151	2	725
BENNETT'S RAILWAY BILL :—		
61st Standing Order suspended, 184 ; Petition presented (*Mr. Humphery*) for leave to bring in, 188 ; leave given, presented and read 1°, 192 ; referred to Select Committee, 197 ; Report brought up, 278 ; read 2° and committed, 332 ; Order of the Day postponed, 399, 414 ; House in Committee, Bill reported with amendments and report adopted, 427 ; read 3°, passed, and sent to Council, 434 ; returned with amendments, 531 ; amendments agreed to, 572 ; assent reported, 599.	8	757
BERNEY, MR. AUGUSTUS (See "CUSTOMS")		
BERREMBED (See "CROWN LANDS")		
BILLABONG RIVER (See "RESERVES")		
BILLS :—		
Withdrawn, 130 (2), 257 (2), 301, 367, 372, 398, 409, 530, 571, 572, 607, 613, 614 (2), 653 (2), 658 (2) Laid aside in consequence of amendments made by Legislative Council, 354, 453. Recommitted, 362, 454, 479, 526, 534, 583, 597.		
Alphabetical Register of	1	857
BINGERA DISTRICT (See "MINING")		
BINNIE ESTATE (See "ROADS")		
BIRD ESTATE BILL :—		
Petition presented (*Mr. Purves*) for leave to bring in, 188 ; leave given, 193 ; presented and read 1°, 216 ; referred to Select Committee, 220 ; Report brought up, 314 ; Order of the Day postponed, 385 ; read 2°, committed, reported without amendment, and report adopted, 465 ; Order of the Day postponed, 469 ; read 3°, passed, and sent to Council, 473 ; returned without amendment, 528 ; assent reported, 556.	8	769
BIRTHS, DEATHS, AND MARRIAGES, COUNTY OF CUMBERLAND :—		
Motion made (*Mr. Bowman*) for a return showing the names of the Registrars of, specifying whether they hold any other public office, 185 ; Return to Order, laid on Table, 220	8	1113
BISHOPRIC AND CHURCH PROPERTY (See "SYDNEY BISHOPRIC AND CHURCH PROPERTY BILL")		
BISHOPSCOURT SALE AND LEASING BILL :—		
Petition presented (*Mr. R. B. Smith*) for leave to bring in, 133 ; leave given, presented and read 1°, 141 ; referred to Select Committee, 150 ; Report brought up (*Mr. Abbott*), 246 ; read 2°, committed, reported with amendment, and report adopted, 331 ; read 3°, passed and sent to Council, 337 ; returned without amendment, 373 ; assent reported, 424.	8	777
BLACKFRIARS ESTATE STREETS AND LANES BILL :—		
Motion made (*Mr. Dibbs*) for Committee of the Whole, 544 ; House in Committee, 549 ; resolution reported and agreed to, presented and read, 1°, 550 ; read 2°, committed, reported without amendment and report adopted, 598 ; read 3°, passed and sent to Council, 601.		
BLACK ROD :—		
Delivers Message from Commissioners on opening Parliament, 3.		
Delivers Message from the Lieutenant-Governor, 8		
Delivers Message from His Excellency the Governor, 660.		
BLAKENEY *V.* PEGUS (See "TELEGRAPHS")		
BLUE BOOK :—		
For the year 1885, laid on Table, 539	8	63
BOARD, MR. A. S. (See "VOLUNTEERS")		
BOARD'S SETTLEMENT BILL :—		
Petition presented (*Mr. Hyam*) for leave to bring in, 117 ; 62nd Standing Order suspended 134 ; leave given, 135 ; presented and read 1°, 136 ; referred to Select Committee, 141 ; Report brought up, 175 ; read 2°, committed, reported with amendment, and report adopted, 211 ; read 3°, passed, and sent to Council, 215 ; returned without amendment, 249 ; assent reported, 277.	8	785
BODALLA ESTATE BILL :—		
Received from Council and read 1°, 68 ; read 2°, committed, reported without amendment, and report adopted, 82 ; read 3°, passed and returned to Council without amendment, 89 ; assent reported, 115.		
BOMBALA (See "RAILWAYS")		
BONDED WAREHOUSES :—		
Motion made (*Mr. Ives*) for return showing all in Sydney, with particulars of ownership, situation, capacity, &c, 367 ; Return to Order, laid on Table, 453	3	1163
BONNARD, MR. HENRY E. (See "VINE DISEASES BILL")		
BORING FOR WATER (See "WATER SUPPLY")		
BOROUGH OF EAST ST. LEONARDS WHARVES BILL :—		
Petition presented (*Sir Henry Parkes*) for leave to bring in, 507 ; leave given, presented and read, 1°, 512 ; referred to Select Committee, 518 ; Report brought up, 532 ; Order of the Day postponed, 571, 618, 657.	8	791
BOTANIC GARDENS :—		
Regulations, laid on Table, 13, 69, 97, 169	5	267
BOTANY (See "WATER SUPPLY")		
BOTTLE FOREST (See "RESERVES")		
BOUNDARIES OF MUNICIPALITIES RE-ADJUSTMENT BILL :—		
Motion made (*Mr. Dibbs*) for leave to bring in, 597 ; presented and read 1°, 601 ; Order of the Day discharged and Bill withdrawn, 653.		
BOURKE (See "WATER SUPPLY" ; also "CROWN LANDS" also "RAILWAYS" also "COUNTRY TOWNS WATER AND SEWERAGE ACT")		
BOWAN PARK (See "ROADS")		
BOWENFELS COAL-MINING AND COPPER SMELTING COMPANY'S RAILWAY (SALE AND VESTING) BILL :—		
Petition presented (*Mr. Teece*) for leave to bring in, 210 ; leave given, presented, and read 1°, 214 ; referred to Select Committee, 220 ; name added to Committee, 225 ; Report brought up, 369 ; read 2°, committed, reported without amendment, and report adopted, 426 ; read 3°, passed, and sent to Council, 433 ; returned with amendment, 474 ; Council's amendment agreed to 503 ; Message to Council, 504 ; assent reported, 540.	8	799

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.

	PAPERS. VOL.	PAGE.
B		
BRABOURNE PAPERS :—		
Summary of the contents of, laid on Table, 593	8	1121
BRANDS BRANCH (See "MINING")		
BRAIDWOOD (See "RAILWAYS")		
BREACH OF PRIVILEGE (See "PRIVILEGE")		
BREWARRANNA (See "RESERVES")		
BRIDGES (See also "RAILWAYS")		
MANDURAMA CREEK :—		
Notification of resumption of land, for approaches to, laid on Table, 489	7	747
BROWN ISLANDS .—		
Despatch notifying German Annexation of the, laid on Table, 164	2	225
BROWN, POLICE SUPERINTENDENT (See "POLICE")		
BUILDING SOCIETIES BILL —		
Motion made *(Mr. William Clarke)*, for leave to bring in, presented and read 1°, 164; Order of the Day postponed, 210, 225, 294, 331, 372, 425, 539; Order of the Day discharged and Bill withdrawn, 613.		
BUNDARRA (See "RAILWAYS")		
BUNGENDORE (See "ROADS.")		
BURGESS, THE HONORABLE W. H. :—		
Colonial Treasurer of Tasmania, admitted to the body of the House, 62.		
BURNS, THE HONORABLE JOHN FITZGERALD :—		
Accepted Office as Colonial Treasurer; Seat, as Member for The Hunter, declared vacant, 72; issue and return of Writ reported, and sworn, 73.		
BURRAGORANG MOUNTAIN :—		
ROAD OVER :—		
Motion made (*Mr. Targett*) for copies of J. S. Kent's contract for construction of, with plans, schedules, &c., and all correspondence in connection with, 432; Return to Order, laid on Table (not printed), 606.		
BURROWA (See "RAILWAYS")		
BUSINESS DAYS :—		
Sessional Order passed, 45.		
ADDITIONAL SITTING DAY :—		
Motion made (*Sir Patrick Jennings*) that during remainder of present Session, Monday be a Sitting Day of this House, and that Government Business take precedence of General Business on that Day,—amendment that House meet at 2.30 p m. on each Sitting Day, and that no new business be taken after 10.30 p.m. negatived,—original motion carried, 539.		
BUSINESS OF THE HOUSE .—		
Sessional Order passed, 46.		
Precedence of Government Business on private day, 53, 62, 155, 377, 378.		
Precedence of Government Business on Tuesdays, 222.		
Alternation of General Notices of Motions and Orders of the Day on Fridays, 254.		
General Business postponed till later on the Notice Paper, 142, 550, 583, 656.		
BUSINESS OF THE SESSION :—		
Sessional Paper	1	669
BUSINESS UNDISPOSED OF AT THE CLOSE OF THE SESSION :—		
Sessional Paper	1	663
BUTTERLY, MRS. CATHERINE :—		
Petition from, detailing circumstances under which her son had lost his life while in the execution of his duty as a Railway Porter at Blayney Platform, and praying favourable consideration in the premises, presented, 462	7	671
BY-LAWS .—		
LAID ON TABLE :—		
Under Municipalities Act :—		
Borough of Balmain, 13	6	231
Do Bathurst, 120		297
Do Petersham, 13, 660		233
Do Queanbeyan, 13		237
Do Yass, 13		245
Do Manly, 23		255
Do Granville, 74		263
Do Albury, 69		373
Do Narrandera, 74		273
Do Woollahra, 74		291
Do Burwood, 88		375
Do Alexandria, 128		299
Do Paddington, 169		301
Do Waverley, 169, 248		303
Do Victoria, 185		307
Do North Willoughby, 301		309
Do West Maitland, 395		315
Do Darlington, 461		377
Do Canterbury, 587		379
Do Singleton, 606		335
Municipal District of Dubbo, 13		247
Do South Singleton, 65		257
Do North Illawarra, 74, 301		293
Do Leichhardt, 13, 169		251
Do Nowra, 321, 489		311
Do Wentworth, 453		321
Do Parkes, 489		323
Do Strathfield, 489		325
Do Hay, 606		333
Do Taree, 642		337
Free Public Library, Cobar, 15		345
Do Cootamundra, 15		347
Do Parkes, 291		349
Do Lismore, 549		351

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
B		
BY-LAWS (*continued*) :—		
LAID ON TABLE (*continued*) :—		
Under Nuisances Prevention Act :—		
Borough of Granville, 69	6	355
Do Albury, 69, 489		373, 367
Do Young, 97		357
Do Burwood, 88, 606		375, 371
Do Wagga Wagga, 128		359
Do Wallsend, 185		361
Do Queanbeyan, 185		363
Do Darlington, 461		377
Do Alexandria, 539		369
Do Canterbury, 587		379
Municipal District of Dubbo, 88		353
Do Hamilton, 453		365
Under Country Towns Water and Sewerage Act :—		
Borough of Deniliquin, 120		985
Borough of Newcastle, 128		983
Under Public Vehicles Regulation Act, 13		385
University, 128, 651	4	391
C		
CABLEGRAMS (See "TELEGRAPHS")		
CALLAGHAN, DR., J.P. :—		
Motion made (*Mr. Bowman*) for all correspondence relating to the appointment of, as Licensing Magistrate, Windsor, in the room of Mr. M'Quade, 185; Return to Order, laid on Table (not printed), 222.		
CALL OF THE HOUSE :—		
Motion made (*Mr. Abbott*) for, to consider the question of Payment of Members, 197; Order of the Day read, Call of the House proceeded with, 264, 265(2); absentees excused, 268.		
CAMPBELL, MR. JOHN, OF TRANGIE (See "CROWN LANDS")		
CAMPBELL, MR. WILLIAM ROBERT :—		
Resignation of, as Member for The Gwydir, reported and seat declared vacant, 259.		
CAMPERDOWN PARSONAGE (See "ST. STEPHEN'S CHURCH OF ENGLAND PARSONAGE CAMPERDOWN LAND SALE BILL")		
CARCOAR (See "ROADS")		
CAREENING COVE :—		
SALE OF GOVERNMENT LAND TO EXECUTORS OF THE LATE EDWARD LORD :—		
Motion made (*Mr. Abbott*) for all papers, plans, &c., 80; Return to Address, laid on Table, 350...	5	211
CARRINGTON, THE RIGHT HONORABLE BARON :—		
GOVERNOR OF THE COLONY :—		
Message No. 1, announcing appointment, 63; taken into consideration, and Address in acknowledgment adopted, 67; answer reported, 71	2	3, 5
Commission appointing, laid on Table, 65	2	1
CARSON WOODS' PATENT PAVING :—		
Correspondence respecting, at Junee Railway Station, laid on Table, 36	7	509
CASTING VOTE :—		
Given by Mr. Speaker, 570		
CEMETERIES REGULATION BILL :—		
Motion made (*Mr. Melville*) for leave to bring in, 145; presented and read 1°, 151; Order of the Day postponed, 212, 229; read 2° and committed, 400; further considered in Committee, 503; Order of the Day postponed, 571; Order of the Day discharged and Bill withdrawn, 658.		
CENSURE, VOTE OF :—		
POLICY OF THE GOVERNMENT :—		
Motion made (*Mr. Garvan*) that the policy of the Government is unsatisfactory to this House, and debate adjourned, 102; debate resumed, and motion carried on division, 108.		
NEW HEBRIDES :—		
Motion made (*Sir Henry Parkes*) that any expression of acquiescence by this Government in the annexation of, by France, is opposed to the main interest of New South Wales and the other Australian Colonies, and that it is the duty of this Colony to convey to the Imperial Government its disapproval of the colonization by any Power other than Great Britain, and debate adjourned, 173; debate resumed, 177; amendment proposed, and debate adjourned, 178; debate resumed, amendment negatived, 179; original question negatived on division, 180.		
FRESH TAXATION.		
Motion made (*Sir Henry Parkes*) *contingent* on motion that Speaker leave the Chair to go into Committee of Ways and Means, in reference to, and debate adjourned, 230; debate resumed, 232; amendment negatived on division, 233.		
STATE OF THE PUBLIC FINANCES—		
Motion made (*Sir Henry Parkes*) that the present state of the public finances, as explained to this House by the Colonial "Treasurer" is highly unsatisfactory, and that the foregoing Resolution be communicated by Address to His Excellency the Governor,—amendment moved (*Mr. Abbott*) to omit all the words after the word "Treasurer" and insert other words and debate adjourned, 621; debate resumed, 623; words omitted and motion as amended carried, 624.		
CENTENARY OF THE COLONY :—		
Motion made (*Mr. Harold Stephen*) that steps be at once taken for the celebration of, and that an International Exhibition be part of the celebration, and negatived, 216.		
Motion made (*Mr. Reid*) for Committee of the Whole to consider the desirableness of holding an Exhibition, displaying the resources and progress of Australasia—amendment moved to refer the question to a Select Committee—amendment and original question withdrawn, 449.		
Ministerial Statement made (*Sir Patrick Jennings*) as to proposed mode of celebrating, 503, 532.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
C		
CENTENARY OF THE COLONY (*continued*) :—		
Motion made (*Sir Patrick Jennings*) for Committee of the Whole to consider whether steps be taken to ensure a due and fitting celebration of, in the year 1888, at an expense of £50,000—and that there be erected at a cost of £75,000 a building to be called "The Centennial Memorial Hall" and used for a National Art Gallery and Technological Museum, 558; Message from Governor recommending, 559; House in Committee—*Point of Order* that a question already decided by the House cannot be submitted in Committee of the Whole as an amendment to the resolution, reported and upheld by Mr. Speaker, 566; no report from Committee of the Whole, 567.		
Motion made (*Mr. Harold Stephen*) for Committee of the Whole to consider whether steps should be at once taken for the erection of a building which would be suitable for use in connection with an International Exhibition, should such be in future decided upon, and negatived, 658.		
CENTENNIAL EXHIBITION :—		
Petition from Mayor of Sydney, as Chairman of Public Meeting of citizens, that the honor and credit of the colony demand that the Centenary of Australia should be celebrated in a fitting manner by the colonists of Australasia, suggesting an Exhibition, and that the co-operation of the Governments of the other colonies be invited, presented, 377	8	1139
CERTIFICATE OF TITLE :—		
Motion made (*Mr. Abbott*) for copy of application to the Registrar-General for an amended, of certificate, vol. 70, folio 237, together with a copy of such certificate, and all papers, reports, &c., in reference to such application, 193; Return to Order, laid on Table, 233	8	1105
CHAIRMAN OF COMMITTEES :—		
Election of Mr. Garrett, 45.		
Mr. Targett proposed, 45.		
Mr. Spring proposed, 45.		
Deputy Speaker's Commission, 49, 157, 395.		
Deputy (*Mr. Gould*) for this day only, 111.		
Do (*Mr Trickett*) do 131, 633.		
Do (*Mr. Slattery*) do 247.		
Do (*Mr. Day*) do 642, 646, 652, 656.		
Resignation of office of, by Mr. Garrett, 134.		
Mr. Targett proposed and negatived on division, 143.		
Mr. Garrard do do 143.		
Mr. Barbour do 143.		
Mr. William Clarke proposed, 143; and negatived on division, 144.		
Mr. Spring proposed, 143; and negatived on division, 144.		
Mr. Gould proposed, 144.		
Mr. Trickett proposed and elected after division, 144.		
Reports Points of Order from Committee of the Whole, 248, 265, 380 (2), 457, 502, 511 (2), 566, 582.		
Takes the Chair during the indisposition and unavoidable absence of Mr. Speaker, 341, 533, 623, 631, 641, 645, 649, 655.		
Mr. Slattery, acting as, 380.		
Resignation of office of, by Mr. Trickett, 381.		
Mr. Slattery proposed; amendment, to substitute Mr. Gould's name, negatived, and Mr. Slattey elected, 390, 391.		
Reports disorder—words used by Sir Henry Parkes—from the Committee of Supply, 607.		
CHAPMAN, MR. F. (See "CIVIL SERVICE")		
CHARGES AGAINST EDWARD BROWN HOLT (See ADMINISTRATION OF JUSTICE")		
CHARITIES, PUBLIC :—		
Annual Report of Inspector, laid on Table, 13, 660	2	593, 657
Return respecting Travelling Expenses of Inspector during the past five years, laid on table, 489	2	717
CHEMISTS BILL (See "PHARMACEUTICAL SOCIETY OF NEW SOUTH WALES INCORPORATION BILL")		
CHILDREN (See "WORKING CLASSES" also "STATE CHILDREN'S RELIEF DEPARTMENT")		
CHINESE IMMIGRATION :—		
Return respecting, laid on Table, 111	2	869
CHRISTIAN CHAPEL LANDS SALE BILL :—		
61st Standing Order suspended to admit of presentation of Petition, 150; Petition presented (*Mr. Abigail*) for leave to bring in, 155; leave given, presented and read 1°, 160.		
CHURCH AND SCHOOL LANDS DEDICATION ACT :—		
Petition from the residents of Blayney and district for amendment of, to enable the Government to dedicate portions of Church and School land for Commons and other public purposes, presented, 112	4	441
CHURCH AND SCHOOL LANDS DEDICATION ACT AMENDMENT BILL :—		
Motion made (*Dr. Renwick*) for leave to bring in, 168; presented and read 1°, 268; read 2° and committed, 474; reported with amendments and reported adopted, 475; read 3°, passed and sent to Council, 478.		
CHURCH PROPERTY (See "SYDNEY BISHOPRIC AND CHURCH PROPERTY BILL")		
CIGAR MANUFACTURERS (See "TOBACCO DUTIES")		
CIRCUIT COURTS (See "ADMINISTRATION OF JUSTICE")		
CITY EXTENSION (See "RAILWAYS")		
CITY OF SYDNEY IMPROVEMENT BOARD :—		
Sixth Annual Report, being for 1884-5, laid on Table, 13	6	185
Seventh do do 1885-6, do 606	6	187
CIVIL SERVICE :—		
Motion made (*Mr. Hungerford*) for a return showing all Civil servants receiving less than £200 per annum on the Permanent and Temporary Staffs, 184; Return to Order laid on Table, 313	2	405
DEPARTMENT OF LANDS :—		
Return showing the payments made to Permanent Officers during 1884 and to 30th April, 1886, over and above the amounts voted as salaries, laid on Table, 261, 301	5	77, 81
Papers respecting the appointment of an Assistant Under Secretary for Lands, laid on Table, 422	2	419
MR. W. A. LESLEY :—		
Return to Order (*Second Session*, 1885), laid on Table, 8	2	383
MR J. C. CROMMELIN :—		
Motion made (*Mr. Abbott*) for all documents, reports, &c, relating to the suspension and removal of, from the position of Superintending Inspector of Rabbits, 185; Return to Address, laid on Table, 229	2	387

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
C		
CIVIL SERVICE—*continued* :—		
MR. H. VINDIN, INSPECTOR OF RABBITS :—		
Motion made (*Mr. Abbott*) for all papers relative to appointment of, and promotion as Superintending Inspector, 188; Return to Address, laid on Table, 506	2	399
TEMPORARY APPOINTMENTS TO :—		
Motion made (*Mr. Hammond*) for return showing all, since 1885, over which the Civil Service Board have no control stating names, salary, &c., 325; Returns (*in part*) to Order laid on Table, 523, 539 (2), 606	2	431
TEMPORARY DRAFTSMEN, SURVEY OFFICE —		
Motion made (*Mr. Neild*) for a copy of a Petition presented in 1882, representing that the salaries of professional draftsmen are inadequate, and all papers relating to the 12½ per cent. increase granted to, 340; Return to Order, laid on Table, 349	2	443
MR. CROPPER, CORONER FOR DISTRICT OF CROOKWELL —		
Motion made (*Mr Tarrant*) for copies of all papers in connection with appointment of, 388.		
FOREST RANGERS —		
Motion made (*Mr. Wall*) for a return showing the number, where employed, remuneration received, giving salary and allowances separately, 394		
GOVERNMENT STATISTICIAN —		
Motion made (*Mr. Abigail*) for copies of all applications for the position of, together with copies of the recommendations in favour of, 401; Return to Order laid on Table (not printed), 469		
CUSTOMS DEPARTMENT —		
Motion made (*Mr. Abigail*) for a return showing all officers appointed, dismissed, and disrated, with particulars of each case, from 1880 to 30 June, 1886, 425; Return to Order laid on Table, 469	2	427
MR. GEORGE STEVENSON :—		
Petition from residents of the Macleay River referring to recent inquiry into alleged irregularities in discharge of official duties of, as Clerk of Petty Sessions, Kempsey, stating that injustice has been done, and praying for a searching inquiry by a Select Committee, presented, 469	2	485
TRAVELLING EXPENSES, IN THE PUBLIC SERVICE —		
Motion made (*Mr. Sydney Smith*) for a Select Committee to inquire into expenditure on, and Debate adjourned, 484; Order of the Day postponed, 572, Order of the Day discharged, 651		
TRAVELLING EXPENSES OF INSPECTOR OF PUBLIC CHARITIES :—		
Return respecting, during the last five years, laid on Table, 489	2	717
RETIREMENT OF MR. P. MCDONAGH FROM THE GOVERNMENT PRINTING OFFICE :—		
Motion made (*Mr. Davies*) for copies of all correspondence, &c, having reference to, and his subsequent appointment to the Dispatch Branch of the Educational Department, 558; Return to Order, laid on Table, 656	2	477
APPOINTMENT OF MR. F. CHAPMAN AS PROTHONOTARY OF THE SUPREME COURT :—		
Motion made (*Mr. Abbott*) for all papers, correspondence, &c, relating to, and the salary of the Office, 566; Return to Address, laid on Table, 629	2	469
CROWN PROSECUTORS :—		
Return of, commissioned for the last and the approaching Circuit Courts, with number of cases tried and for trial at each Court, laid on Table, 566	4	909
MR. STEPHEN MURPHY :—		
Motion made (*Mr. William Clarke*) as amendment on going into Committee of Supply, that the action of the Minister of Justice in disregarding the recommendation by the Civil Service Board of, to the position of Clerk of Petty Sessions at Orange, is inimical to the best interests of the Service and entirely opposed to the letter and spirit of the Act,—and withdrawn, 582.		
LEAVE OF ABSENCE TO OFFICERS OF :—		
Motion made (*Sir Henry Parkes*) for a return giving particulars of since 1872, 651.		
LEAVE OF ABSENCE TO HENRY HALLORAN, ESQ, C M G —		
Motion made (*Sir Henry Parkes*) for all letters, minutes, documents, &c., relative to, for twelve months, 651.		
MR. E. O. MORIARTY, ENGINEER-IN-CHIEF FOR HARBOURS AND RIVERS :—		
Statement showing positions held and salary received by, laid on Table, 656	2	481
CIVIL SERVICE ACT (See also "CROWN LANDS") :—		
Memorandum from Board, relative to interpretation of certain sections, laid on Table, 92	2	379
Minute embodying recommendation of the Board for certain amendments in, laid on Table, 116	2	373
First Report from Board for 1885, laid on Table, 128	2	307
Petition from certain teachers in the Public Schools of the Colony, that they are dissatisfied with the, and suggesting amendments, presented, 220	2	381
FOREST BRANCH, MINES DEPARTMENT :—		
Motion made (*Mr. Fitzgerald*) for a return showing increases to salaries of officers, 89; Return to Order, laid on Table, 100	6	129
CIVIL SERVICE ACT AMENDMENT BILL —		
Motion made (*Mr Dibbs*) for Committee of the Whole, 133; Message from Governor recommending, 146; House in Committee, 146; resolution agreed to, Bill presented and read 1°, 147; Order of the Day, postponed, 155; Order of the Day discharged and Bill withdrawn, 530.	2	487
CIVIL SERVICE ACT AMENDMENT BILL (No 2) :—		
Message from Governor, recommending, 629; Standing Orders suspended, 630; motion made (*Mr Dibbs*) for leave to bring in, presented and read 1°, 630; read 2°, 638, 639; committed, reported without amendment, report adopted, read 3°, passed and sent to Council, 639; returned without amendment, 651; assent reported, 659,	2	489
CIVIL SERVICE BILL —		
Message from Governor, recommending, 556; motion made (*Mr. Dibbs*) for Committee of the Whole, 558; House in Committee and resolution agreed to, Bill presented and read 1°, 562; Order of the Day discharged and Bill withdrawn, 607.	2	491
CLARKE, MR WILLIAM —		
Proposed as Chairman of Committees, 143, and negatived on division, 144		
CLERK OF ASSEMBLY —		
Reads Proclamation on opening of Parliament, 1.		
Announces receipt of Writs of Election for new Parliament, 1		
Informs House that he had received and reads Commission to administer oath to Members, 4.		
Reads Speaker's Commission to administer the Oath, 7.		
Corrects discrepancies in names of Members, 8.		
Reads Address in Reply, 10.		
Reads petition, 13, 50, 70, 80, 92, 142, 177 (2), 179, 193, 236, 240, 246, 253 (2), 261, 268, 276, 281, 295, 313, 317 (2), 318, 341, 349 (2), 359, 377, 385, 394, 398, 406, 421 (3), 434, 435, 462, 469, 614, 642, 652.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
C		
CLERK OF ASSEMBLY—*continued* :—		
Summoned to produce Records, 20, 125, 209, 231, 423, 429 (2).		
Swears Members of Elections and Qualifications Committee, 31, 36, 100, 161.		
Reads Deputy Speaker's Commission to administer the Oath, 49, 157, 395.		
Reads Message from Baron Carrington respecting his appointment as Governor, 67.		
Reads Report from Elections and Qualifications Committee—*Mackinnon v. Watson*, 71.		
Do do do do *Dangar v. R. B. Smith*, 120.		
Absent on leave—Mr. F. W. Webb appointed Acting Clerk—Commission, 73; sworn, 73.		
Reads Report from Select Committee—Privilege—Mr. Melville, M.P., 79.		
Do do Mr. Barbour, M.P., 408.		
Reads Message from Governor requesting withdrawal of Estimates, 89, 165.		
Reads correspondence—Ministerial advice to Governor and Resignation of Ministry, 111.		
Reads Report from Committee appointed to inspect Journals of Legislative Council, 240.		
Calls over Roll of Members—Call of the House, 265(2).		
Reads extract from report of a speech of Sir Henry Parkes at Wingham, 355.		
Reads Resolution to admit of introduction of Stamp Duties Act Amendment Bill, 361, 453.		
Reads Resolution to admit of introduction of Commons Regulation Bill (No. 3), 416.		
Leave given to return documents laid on Table, 444.		
Reads extract from *The Daily Telegraph* complained of as Privilege, 456.		
Informs House that Mr. Speaker is absent through fatigue, 533.		
Takes down disorderly words used by Mr. Wisdom, in the House, 607.		
Informs House of the unavoidable absence of Mr. Speaker, 631, 641, 645, 649, 655.		
CLERK OF PETTY SESSIONS (See "ADMINISTRATION OF JUSTICE")		
CLIFF, MR. JOHN WILLIAM (See "CROWN LANDS")		
COAL BOXES (See "RAILWAYS")		
COAL MINES (See "MINING")		
COAST HOSPITAL (See "HOSPITAL")		
COBAR (See "RAILWAYS")		
COGHLAN, MR. (See "CIVIL SERVICE")		
COLLIERIES (See also "MINING") :—		
ROYAL COMMISSION ON :—		
Report from, on the Accidents at Lithgow Valley Colliery, laid on Table, 388	5	671
Do do Ferndale Colliery, laid on Table, 506		785
Copies of, issued in connection with the Accidents at Lithgow Valley and Ferndale Collieries, laid on Table, 558		1053
Third Report of, laid on Table, 652		871
Do —Appendix to, laid on Table, 660		1030
COLLISION AT ALLANDALE (See "RAILWAYS")		
COLONIAL EXHIBITION (See "EXHIBITION")		
COLONIAL STEAMERS :—		
Motion made (*Mr. Burns*) for a return showing the number, gross and net tonnage, the shipping fees paid, the date of articles, and the names of the owners of, 232; Return to Order laid on Table, 402	8	1091
COMAN, MR., J.P. :—		
Motion made (*Mr. Abigail*) for copies of all letters, reports, &c., referring to the temporary appointment of, as Acting Police Magistrate for a portion of the Eden Electorate, 284; Return to Order, laid on Table, 440	4	907
COMBINATION TRUCK (See "RAILWAYS")		
COMMERCIAL RELATIONS :—		
BETWEEN GREAT BRITAIN AND SPAIN :—		
Convention respecting, laid on Table, 453	8	1181
COMMISSIONS (See also "FISHERIES") :—		
To the Hon. G. R. Dibbs, the Hon. Sir Patrick Jennings, and the Hon. J. P. Abbott, to administer oath to Members, received and read by Clerk, 4.		
Speaker's, to administer the Oath, 7.		
Deputy Speaker's, to administer the Oath in the absence of Mr. Speaker, 49, 157, 395.		
Appointing the Right Honorable Baron Carrington, P.C., Governor of the Colony, laid on Table, 65.	2	1
ROYAL, ON CONSERVATION OF WATER :—		
First Report of Commissioners, laid on Table, 69	6	387
Second Do do do 354	6	949
ROYAL, ON COLLIERIES :—		
Report from, on the Accidents at Lithgow Valley Colliery, laid on Table, 388	5	671
Do do Ferndale Colliery, laid on Table, 506		785
Copies of, issued in connection with the accidents at Lithgow Valley and Ferndale Collieries, laid on Table, 558		1053
Third Report of, laid on Table, 652		871
Do Appendix to, laid on Table, 660		1030
ROYAL OR STABILITY OF CERTAIN RAILWAY BRIDGES :—		
Report of, together with Minutes of Evidence, Diagrams and Appendices, laid on Table, 534	7	265
ROYAL :—		
Motion made (*Mr. Harold Stephen*) for a return showing number and cost, in detail, of all appointed during the past ten years, 558.		
COMMISSIONERS FOR OPENING PARLIAMENT :—		
Message from, 3.		
COMMITTEE :—		
Appointed to inspect Journals of Legislative Council as to proceedings on Sydney Corporation Act Amendment Bill, reported, Report read by Clerk, and received, 240.		
COMMON :—		
FIELD OF MARS :—		
Motion made (*Mr. Abbott*) for return showing area, area subdivided and sold, price paid, with cost and particulars of survey, 192.		
WILBERFORCE :—		
Petition from certain Trustees and residents of Wilberforce, that the proposed sale of certain portions of the Common would be highly prejudicial to them, and that the resumption and sale be not sanctioned, presented, 435	6	149
COMMONS REGULATION ACT AMENDMENT BILL :—		
Motion made (*Mr. Vaughn*) for leave to bring in, presented and read 1°, 98; Order of the Day discharged, and Bill withdrawn, 130.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.

	PAPERS. VOL.	PAGE.

C

COMMONS REGULATION ACT AMENDMENT BILL (No. 2).
Motion made (*Mr. Fletcher*) for Committee of the Whole, 154; Order of the Day postponed, 165; Order of the Day discharged, 193.
Motion made (*Mr. Fletcher*) for Committee of the Whole, 222; House in Committee, and resolution agreed to, presented and read 1°, 287; Order of the Day discharged, and Bill withdrawn, 409.

COMMONS REGULATION ACT AMENDMENT BILL (No. 3):—
Motion made (*Mr. Fletcher*) that resolution on which Commons Regulation Bill (No. 2) was founded, be read, Bill presented and read 1°, 416; read 2°, committed, reported with amendments, and report adopted, 435; read 3°, passed, and sent to Council, 444; returned with amendments, including one in the Title, 526; Order of the Day postponed, 531; amendments agreed to, but with a verbal amendment in new clause, 541; Council agrees to amendment upon its amendments, 549; assent reported, 569.

COMPANIES ACT AMENDMENT BILL:—
Motion made (*Mr. W. J. Fergusson*) for leave to bring in, 432; presented and read 1°, 440; Order of the Day postponed, 503, 555; read 2°, committed, reported without amendment, and report adopted, 572; read 3°, passed and sent to Council, 581.

COMPENSATION (See "RAILWAY LANDS COMPENSATION BILL")

CONDITIONAL LEASES (See "CROWN LANDS")

CONDITIONAL PURCHASES (See "CROWN LANDS" also "CROWN LANDS TITLES AND RESERVATIONS VALIDATION BILL")

CONDOLENCE:—
On Death of His Excellency Sir Peter Scratchley, K.C.M.G.:—
Resolution to Lady Scratchley passed, 49; acknowledgment reported, 71.
On Death of The Honorable Sir Alexander Stuart, K.C.M.G., M.L.C.:—
Resolution to Lady Stuart and family passed, 323; Reply (by cable) reported, 351.

CONFIDENCE (See "WANT OF CONFIDENCE")

CONSERVATION OF WATER (See "WATER SUPPLY")

CONSOLIDATED REVENUE FUND BILL:—
Message (Vote of Credit), 74; Standing Orders suspended, 80; ordered, presented, read 1°, 2°, committed, reported without amendment, report adopted, read 3°, passed and sent to Council, returned without amendment, 81; assent reported, 88. — 3 — 1047

CONSOLIDATED REVENUE FUND BILL (No. 2):—
Message (Vote of Credit), 111; Standing Orders suspended, 112; ordered, presented, read 1°, 2°, committed, reported without amendment, report adopted, read 3°, passed, and sent to Council, 113; returned without amendment, 121; assent reported, 123. — 3 — 1049

CONSOLIDATED REVENUE FUND BILL (No. 3):—
Standing Orders suspended, 133; Message (Vote of Credit), 134; ordered, presented, read 1°, 2°, committed, reported without amendment, report adopted, read 3°, passed, and sent to Council, 136; returned without amendment, 151; assent reported, 157. — 3 — 1051

CONSOLIDATED REVENUE FUND BILL (No. 4):—
Standing Orders suspended, 197; Message (Vote of Credit), 198; ordered, presented, read 1°, 2°, committed, reported without amendment, report adopted, read 3°, passed, and sent to Council, 200; returned without amendment, 201; assent reported, 205. — 3 — 1053

CONSOLIDATED REVENUE FUND BILL (No. 5):—
Message (Vote of Credit), 261; Standing Orders suspended, 261; ordered, presented, read 1°, 2°, committed, reported without amendment, report adopted, read 3°, passed, and sent to Council, 262; returned without amendment, 265; assent reported, 276. — 3 — 1055

CONSOLIDATED REVENUE FUND BILL (No. 6):—
Message (Vote of Credit), 326; Ordered, presented, and read 1°, 326; read 2°, committed, reported without amendment, and report adopted, 338; read 3°, passed, and sent to Council, 340; returned without amendment, 355; assent reported, 359. — 3 — 1057

CONSOLIDATED REVENUE FUND BILL (No. 7):—
Message (Vote of Credit), 402; Ordered, presented, and read 1°, 404; read 2°, committed, reported with amendments, and report adopted, 416; read 3°, passed, and sent to Council, 421; returned without amendment, 422; assent reported, 423. — 3 — 1059

CONSOLIDATED REVENUE FUND BILL (No. 8):—
Message (Vote of Credit), 479; Ordered, presented and read 1°, 480; read 2°, committed, reported without amendment, and report adopted, 489; read 3°, and passed, 492; sent to Council, 493; returned without amendment, 497; assent reported, 505. — 3 — 1061

CONSOLIDATED REVENUE FUND BILL (No. 9):—
Message (Vote of Credit), 576; Ordered, presented, and read 1°, 577; Standing Orders suspended, 582; read 2°, committed, reported without amendment, report adopted, read 3°, passed and sent to Council, 582; returned without amendment, 592; assent reported, 595. — 3 — 1063

CONSTITUTION ACT AMENDMENT (See "MINISTERIAL ELECTION BILL")

CONTEMPT:—
Motion made (*Sir Patrick Jennings*) that Mr. Wisdom, the Honorable Member for Morpeth, is guilty of, and for such, be committed by Speaker's Warrant to the Custody of the Sergeant-at-Arms; Speaker issues his Warrant, and the Sergeant-at-Arms takes the Honorable Member for Morpeth into custody, and removes him from the House, 608.

CONTINGENT NOTICES:—
On the passing of a motion—moved (*Mr. O'Sullivan*) that Council be heard at the Bar, on behalf of Captain Armstrong, 193.
On Supply—moved (*Mr. William Clarke*) in favour of taxing grain, pulse, hay, chaff, flour, and other agricultural produce, 201, 205.
On Ways and Means—moved (*Sir Henry Parkes*) to pass resolutions respecting Fiscal Policy of the Government, 230.
On Ways and Means—moved (*Mr. Neild*) in reference to proposal to tax lands within Municipal boundaries, and that any Land Tax should be of a progressive character, 292.
Objection taken to one Member moving a *Contingent Notice* on behalf of another, 246.
As amendment to motion moved—moved (*Mr. Harold Stephen*) in reference to the Centenary of the Colony, and by leave, withdrawn, 449.

CONTINUOUS SITTING OF THE HOUSE:—
From day to day, 341, 343, 533.
From Thursday to Sunday, 380.

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
C		
CONTINUOUS SITTING OF THE HOUSE (*continued*) :—		
MR. SPEAKER'S RULING :—		
Motion made (*Sir Henry Parkes*) that House dissent from, amendment moved (*Sir Patrick Jennings*) that House endorses and confirms, and amendment carried on division, 389.		
Motion made (*Mr. Garrett*) that Resolution agreed to on 14 July, 1886, a.m., be rescinded, 544 and negatived, 545.		
CONTRACT DRAFSMEN (See "CROWN LANDS")		
CONTRACTS WITH MESSRS. HUDSON BROTHERS (See "RAILWAYS")		
CONVENTION :—		
Respecting Commercial relations between the Government of Great Britain and Spain, laid on Table, 453	8	1181
CONVICTIONS (See "LICENSING ACT")		
COODE, SIR JOHN :—		
Copy of notes and minutes of, touching his requirements respecting certain Harbours and Rivers, laid on Table, 291	4	961
COOMA (See "RAILWAYS")		
COOMA CHURCH OF ENGLAND PARSONAGE BILL :—		
Petition presented (*Mr. Dawson*) for leave to bring in, 300 ; leave given, 304; presented and read 1°, 305 ; referred to Select Committee, 313 ; Report brought up, 332 ; read 2°, committed, reported with amendments and report adopted, 425 ; read 3°, passed and sent to Council, 440 ; returned with amendments, 473 ; amendments agreed to, 503 ; assent reported, 540.	8	807
COOMBES, EX-CLERGYMAN :—		
Depositions in case of, laid on Table, 337	4	753
COONAMBLE (See "CROWN LANDS")		
COONAN, MR. (See "PRIVILEGE")		
COONAN *v.* ATKINSON :—		
Motion made (*Mr. Abigail*) for copies of the Supreme Court records, Judge's Notes, &c., having reference to the case of, 65 ; Return to Address, laid on Table, 97	4	707
COPELAND, THE HON. HENRY :—		
Accepted office as Secretary for Lands, seat as a Member for East Sydney declared vacant, 125 ; issue and return of writ reported, sworn, 127.		
CORNWELL'S ESTATE BILL :—		
Petition presented (*Mr. Trickett*) for leave to bring in, 50 ; leave given, presented, and read 1°, 56 ; referred to Select Committee, 61 ; Report brought up, 74 ; read 2° and committed, 93 ; reported with amendments and report adopted, 94 ; read 3°, passed, and sent to Council, 98.	8	815
Petition in favour of, presented, 76	8	821
CORONER (See "CIVIL SERVICE")		
COROWA (See "RAILWAYS")		
CORPORATION ACT AMENDMENT BILL (See "SYDNEY CORPORATION ACT AMENDMENT BILL")		
COUNSEL AT THE BAR :—		
Mr. Buchanan heard, on behalf of Captain Armstrong, 193.		
Motion made (*Mr. G. A. Lloyd*) that there be heard, on behalf of Mr. G. Peacock, in reference to Duty on Pulp Fruit, and negatived, 246.		
Petition for leave to appear by, presented, 128, 236, 507.		
COUNTRY TOWNS WATER AND SEWERAGE ACT :—		
Notification of authority for the construction of Water Supply Works for Wentworth, laid on Table, 13	6	989
Notification of authority for construction of Water Supply Works for Bourke, laid on Table, 656	6	987
BY-LAWS UNDER—LAID ON TABLE :—		
Borough of Deniliquin, 120	6	985
Borough of Newcastle, 128	6	983
COURT-HOUSE :—		
PARRAMATTA :—		
Motion made (*Mr. Davies*) for all papers and minutes respecting the purchase of land adjacent to the railway station, as a site for, 116 ; Return to Order, laid on Table, 249	4	883
WEST MAITLAND :—		
Motion made (*Mr. Thompson*) for copies of all letters, plans, specifications, estimates, and other documents having reference to the purchase of a site for, and the erection of the Court-house, 281 ; Return to Order, laid on Table (not printed), 350 ; ordered to be printed, 548	4	889
COURT OF PETTY SESSIONS, QUAMBONE :—		
Petition from residents of District praying for establishment of, presented, 398	4	911
COWRA (See "ROADS")		
CRAMSIE, MR. (See "PRIVILEGE")		
CRANES AT NEWCASTLE (See "GOVERNMENT CRANES")		
CREDITORS REMEDIES EXTENSION BILL (See "JUDGMENT CREDITORS REMEDIES EXTENSION BILL")		
CREMATION BILL :—		
Received from Legislative Council and read 1°, 445 ; Order of the Day postponed, 555, 615 ; Order of the Day discharged and Bill withdrawn, 658 ;		
CRIMINAL LAW FURTHER AMENDMENT BILL (See also "ABOLITION OF PUNISHMENT BY WHIPPING BILL") :—		
Motion made (*Mr. Want*) for leave to bring in, presented and read 1°, 164 ; Order of the Day discharged and Bill withdrawn, 653.		
CROMMELIN, MR. J. C. :—		
Motion made (*Mr. Abbott*) for all documents, reports, &c., relating to the suspension and removal of, from the position of Superintending Inspector of Rabbits, 185 ; Return to Address, laid on Table, 229	2	387
CROOKWELL (See "RAILWAYS")		
CROOKWELL ROMAN CATHOLIC CHURCH LAND SALE BILL :—		
Petition presented (*Mr. Holborow*) for leave to bring in, 592 ; leave given, presented, and read 1°, 596 ; referred to Select Committee, 597 ; Report brought up, 607 ; Order of the Day postponed, 658 ;	8	823
CROPPER, MR., CORONER FOR DISTRICT OF CROOKWELL :—		
Motion made (*Mr. Tarrant*) for copies of all papers in connection with the appointment of, 388.		
CROPS, FAILURE OF :—		
Petition from Farmers of Eugowra alleging heavy losses through the disastrous drought, and praying a grant of seed wheat, presented, 177	6	51

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
C		
CROWN LANDS (See also "CROWN LANDS ACT" also "RESERVES" also "LANDS ACT AMENDMENT BILL"):—		
DEPARTMENT:—		
Report for 1884, laid on Table, 27	5	1
Return of number of Draftsmen and Clerks employed under Surveyor-General on 14 May, 1886, laid on Table, 245	2	451
Return of Payments to Permanent Officers during 1884, 1885, and 1886, over and above the amounts voted as Salaries, laid on Table, 261, 301	5	77, 81
Motion made (*Mr. Neild*) for a copy of a Petition presented in 1882 representing that the salaries of the Temporary Draftsmen, Survey Office, are inadequate, together with all reports thereon, and all papers relating to the 12½ per cent increase granted to them. 340; Return to Order, laid on Table, 489	2	443
Papers respecting the appointment of Assistant Under Secretary for Lands, laid on Table, 422	2	419
Return respecting Contract Draftsmen in the Survey Branch of, laid on Table, 651	2	449
DEDICATED TO PUBLIC PURPOSES —		
Abstract of, laid on Table, 27, 45, 79, 128, 199, 233, 305, 353, 422, 478, 561, 642	5	411
RESERVED FOR PRESERVATION OF WATER SUPPLY:—		
Abstract of, laid on Table, 27, 44, 79, 128, 199, 233, 305, 353, 422, 478, 561, 642	5	355
SITES OF CITIES, TOWNS, AND VILLAGES —		
Abstract of, laid on Table, 27, 44, 79, 128, 199, 233, 305, 353, 422, 478, 561, 642	5	387
ALTERATIONS IN DESIGNS OF TOWNS AND VILLAGES:—		
Abstract of, laid on Table, 27 (2), 79, 128, 199, 233, 305, 353, 422, 478, 561, 642	5	319
DEDICATION OF CERTAIN LANDS FOR VARIOUS PURPOSES:—		
Gazette notices laid on Table, 27, 79 (2), 128, 199, 233, 264, 305, 353, 398, 421, 478	5	317, 435
ALTERATION IN NAME OF VILLAGE:—		
Abstract of, laid on Table, 45	5	343
DEDICATED TO RELIGIOUS PURPOSES:—		
Abstract of, laid on Table, 79, 128, 199, 421, 642	5	345
EVAN MCINTOSH'S CONDITIONAL PURCHASE AT CURRABUBULA:—		
Motion made (*Mr. Levien*) for Select Committee to inquire into and report upon, 51.		
LAND OFFICES, ARMIDALE, WALCHA, GLEN INNES, INVERELL, AND TENTERFIELD:—		
Motion made (*Mr. Inglis*) for return showing particulars of business done at, 60; Return to Order, laid on Table, 406	5	111
HUNTAWONG, BERREMBED, DEEPWATER, AND GANMAIN PASTORAL HOLDINGS.—		
Return to Order (*Second Session*, 1885), laid on Table (not printed), 40		
REMOVAL OF LAND OFFICE FROM ARMIDALE TO GLEN INNES:—		
Return to Order (*Second Session*, 1885), laid on Table, 79; Final Return to Order, laid on Table, 416	5	87, 101
SALE OF, CAREENING COVE TO EXECUTORS OF THE LATE EDWARD LORD:—		
Motion made (*Mr. Abbott*) for all papers, plans &c., in connection with, 80; Return to Address, laid on Table, 350	5	211
GEORGE DOUGHERTY'S CONDITIONAL PURCHASE.—		
Motion made (*Mr. Gould*) for Select Committee to inquire into the forfeiture of, and that Report from Select Committee of Session 1883-4 be referred, 145; Report brought up, 237; adopted, 277.	5	235
PRE-LEASE OF WILLIAM SKEENE, CONARGO:—		
Motion made (*Mr. Chanter*) for all papers, &c, relating to, 150; Return to Order, laid on Table, (not printed) 633.		
LAND AND SURVEY OFFICES, BOURKE —		
Return showing the expenditure in connection with, and the revenue received, during the quarter ended 31st March, 1886, laid on Table, 245	5	109
SELECTIONS OF CHARLES HENRY THATCHER, FORBES —		
Motion made (*Mr. Burke*) for all papers in reference to the forfeiture of, and all additionals thereto, 151.		
SELECTIONS OF JOHN WILLIAM CLIFF, AT LIVERPOOL —		
Motion made (*Mr. Jones*) for all papers, reports, &c., referring to, 253.		
SELECTIONS BY MESSRS. FISHER AT COONAMBLE:—		
Motion made (*Mr Abigail*) for copies of all correspondence, &c., referring to, also copies of the proceedings before the Land Board at Coonamble, 378.		
MR. HENRY ARTHUR HOUGH:—		
Petition from, alleging that he has been put to trouble, litigation, and expense through having to defend two Supreme Court actions for trespassing on land which he had selected on Tarramiah Run, which land had been surveyed before selection, and praying for justice, presented, 240;	5	241
Motion made (*Mr. McCulloch*) that the Petition be referred to a Select Committee, 313; Report brought up, 378; motion made that Report be adopted, 448; amendment moved and debate adjourned, 449; Order of the Day postponed, 504, 572, 658.	5	243
CLAIM OF CHARLES STEVENS:—		
Motion made (*Mr. Vaughn*) for Select Committee to inquire into and report upon, arising out of the action Pearson *v.* Stevens, tried in the Supreme Court, and that Report of Session 1883-84 be referred, 258; Report brought up, 448; motion made for adoption of Report and Debate adjourned, 518; Order of the Day postponed, 572, 658.	5	253
CONDITIONAL PURCHASES:—		
Motion made (*Dr. Ross*) for a return showing particulars of, made since 1884, 349.		
Return of travelling expenses paid to Permanent and Temporary Inspectors of, during 1885, and to 31 May, 1886, laid on Table. 350	5	83
Motion made (*Mr. Abigail*) for copies of letters sent by the Under Secretary for Lands, to the Permanent Inspectors *re* the appointment and employment of the Special Temporary Inspectors of, 353		
Motion made (*Mr. Abigail*) for a return showing number and area of all, from 1861 to 1884, the forfeitures of which have been approved, but upon which no refunds have been granted, and the surveys of which have not been approved of by the Surveyor-General within twelve months, 394.		
CONDITIONAL PURCHASES ON PERICOOTA RUN.—		
Motion made (*Mr. Chanter*) that a Select Committee be appointed to inquire into and report upon, in the District of Moama, 333.		
Motion made (*Mr. Chanter*) for all papers and other correspondence relating to, 340; Return to Order, laid on Table, 534	5	173

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS.	
	VOL.	PAGE.
C		
CROWN LANDS—*continued*:—		
ROBERT BARBOUR'S CONDITIONAL PURCHASE, COURIDJAH, COUNTY OF CAMDEN:—		
Motion made as *Privilege* (*Mr. Abigail*) for Select Committee to inquire into and report upon voidance and re-selection of, 338; leave given to Mr. Barbour to appear before Select Committee in person or by Counsel, 345; Report brought up, 408	2	145
SELECTED OR SOLD BY AUCTION:—		
Return showing the quantity of, from 1865 to 1872 inclusive, laid on Table, 359	5	257
Do do 1873 to 1885 do 359	5	259
J. J. THOMPSON'S CONDITIONAL PURCHASE ON KAROOLA RUN:—		
Return to Order laid on Table *Session* 1883-4, ordered to be printed, 412	5	117
ROBERT MACKRELL'S SELECTION AT FORBES:—		
Motion made (*Mr. Vaughn*) for appointment of Select Committee to inquire into the case of, and debate adjourned, 449; Order of the Day postponed, 504, 572, 658.		
FORBES LAND BOARD:—		
Motion made (*Mr. Stokes*) for copies of all correspondence, minutes, &c., with reference to the confirmation of Conditional Purchases and rents of Conditional Leases and confirmation of same, 558.		
MR. E. H. BARTON'S CONDITIONAL PURCHASE, COUNTY OF NARRAMINE, PARISH OF TRANGIE:—		
Petition from John Campbell, of Trangie, near Dubbo, representing that this Conditional Purchase was made in 1882, was declared void in the succeeding year, and that Petitioner's application for it as an additional conditional purchase was declared void and the land made a Village Reserve, and that the land containing his improvements has been advertised for sale, and praying consideration, presented, 566	5	261
RENTS OF:—		
Motion made (*Mr. Abbott*) for copy of the circular to the Chairmen of the Land Boards, as to the basis of calculations adopted by them in arriving at the appraisement of rents of pastoral, homestead, and conditional leases, and of the lands included in the resumed areas, with the replies of the Chairmen, and the minute of the Minister on which the circular was written, 580.		
LAND OFFICES, GLEN INNES OR ARMIDALE:—		
Motion made (*Mr. W. J. Fergusson*) for copies of all reports in reference to location of Land Offices at Glen Innes or their removal to Armidale, 586; Return to Order, laid on Table, 656	5	103
CROWN LANDS ACT AMENDMENT BILL:—		
Motion made (*Mr. Spring*) for Committee of the Whole, 100; Order of the Day, discharged, 130.		
CROWN LANDS ACT OF 1884:—		
Amended regulations, laid on Table, 44, 92, 97, 133 (2), 169, 295, 301, 461, 507	5	275
Motion made (*Mr. Wisdom*) for return showing amount of revenue derived from, and the cost of administering, up to the present date, 276; Return (*in part*) to Order, laid on Table, 337	5	263
Motion made (*Mr. Abigail*) for return showing revenue received and expenditure incurred under, arranged in Land Board Districts, 278; Memorandum from Under Secretary for Lands in reference to compliance with, laid on Table, 398	5	265
PETITIONS PRESENTED:—		
Suggesting amendments, 79, 88, 125, 128, 300, 398, 434	5	291, 299, 307
Complaining of administration of, 128	5	297
Lessees and Occupiers of Crown Lands deprecating the action of the Department in proceeding with the new appraisements in the Western District with the avowed intention to collect increased rents with arrears, and praying for certain amendments, presented, 406	5	305
Tank-sinkers, carriers, mechanics, and labourers in the Western Division, that improvements on stations have come to a standstill, and their valuable plant, teams, and workshops thus remain idle, and praying consideration, with a view to such amendments of the Act as will restore employment to labour and bring back prosperity to the Western District, 576	5	309
Merchants, traders, forwarding agents, hotelkeepers and others, with a similar prayer, 576	5	311
Tenants of the Crown in the Western and portions of the Central Division of the Colony, detailing losses and annoyances suffered, suggesting certain amendments and praying consideration, 606.	5	313
Certain selectors and conditional leaseholders of the Eastern and Central Divisions, near Wellington, complaining of delay in permitting selectors to take possession of their land, that the minimum rent fixed is too high, and that the law presses heavily on them, and praying relief, 633	5	315
EXPENSES IN ADMINISTRATION OF:—		
Motion made (*Mr. Teece*) for Return showing details of expenditure of Vote of £25,000, 82; Return to Order, laid on Table (not printed), 133.		
DISTRICT SURVEYORS UNDER:—		
Motion made (*Mr. Fitzgerald*) for a copy of the minute by Mr. Secretary Farnell, and approved by the Cabinet, defining the position of, also the subsequent minute by Mr. Secretary Abbott upon the same subject, 229; Return to Order, laid on Table, 435	5	85
CROWN LANDS TITLES AND RESERVATIONS VALIDATION BILL:—		
Standing Orders suspended, 492; Motion made (*Mr. Copeland*) for leave to bring in, presented and read 1°, 493; read 2°, 494; committed, reported with amendments, and report adopted, 508; read 3°, passed, and sent to Council, 510; returned with amendments, 592; amendments disagreed to and agreed to, 597; Message to Council, 597; Council does not insist on its amendment disagreed to, 613; assent reported, 628.		
Petition from Joseph Tarrant that the Bill may be amended so as to fully preserve his rights to certain land, now in dispute, and praying to be heard by counsel at the Bar of the House, presented, 507	5	459
CROWN PROSECUTORS (See "CIVIL SERVICE")		
CUDAL (See "RAILWAYS" also "ROADS")		
CULCAIRN (See "RAILWAYS")		
CULLEN, SERGEANT, CONDUCT OF (See "ARTILLERY, PERMANENT")		
CUSTOMS (See also "FINANCE")		
LANDING SURVEYOR:—		
Motion made (*Mr. Ives*) for copies of all matters referred to, and his decisions thereon, 378; Return to Order, laid on Table, 453	2	423
MR. AUGUSTUS BERNEY:—		
Motion made (*Mr. Ives*) for copies of all minutes, papers, &c., in reference to the offer to, of the appointment of Chief Clerk and Cashier, and his replies, 378; Return to Order, laid on Table, 453	2	425

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
C		
CUSTOMS. (See also "FINANCE") (*continued*):—		
TAXATION—WANT OF CONFIDENCE:—		
Motion made (*Sir Henry Parkes*), that the proposed Customs Taxation would be fraught with great and serious public injury, and that the Government in seeking to impose such, has not the support of the electors, that for these and other reasons the present advisers of the Crown are not entitled to the confidence of the House—requirement that Resolutions be put *seriatim* negatived—378; original question negatived, 379.		
BONDED WAREHOUSES:—		
Motion made (*Mr. Ives*) for a Return of all, in Sydney, with particulars of ownership, situation, capacity, &c., 367; Return to Order, laid on Table, 453	3	1163
DEPARTMENT:—		
Motion made (*Mr. Abigail*) for a return showing all officers appointed, dismissed, and disrated from 1880 to 30th June, 1886, with particulars in each case, 425; Return to Order, laid on Table, 469	2	427
CUSTOMS DUTIES BILL:—		
Resolution from Committee of Ways and Means reported, 254; received, 269; agreed to, 272.		
Ordered (*Sir Patrick Jennings*), founded on Resolution of Ways and Means, presented and read 1°, 272; Message from Governor, recommending, 318; Motion made for 2° and Debate adjourned, 318; Debate resumed and further adjourned, 322, 326, 327, 338, 341, 345, 350; resumed, read 2° (*after division*) and committed, 355; House in Committee—*disorder*—Speaker resumed Chair, having observed grave disorder, and after a time left Chair; Speaker again resumed Chair to restore order, and the Honorable Member for Morpeth being guilty of persistent disorder, 379; Speaker directed his removal from the Chamber and again left the Chair, 380; *Point of Order* reported from Committee—Speaker decided that Committee was properly sitting notwithstanding that he had not taken the Chair at the ordinary meeting hour (4 *p.m.*) on Friday; House again in Committee; *Point of Order* reported from Committee, Speaker ruled that, a clause referring to a Schedule being under discussion, the items of that Schedule could not be referred to in anticipation; Committee resumed and reported progress, 380; House again in Committee, 395, 406, 409, 416, 422; reported with amendments, 422; report adopted—amendment, "this day six months" having been first negatived,—440, 441; read 3°—amendment to recommit having been first negatived—and passed, 529; Message to Council, 530; agreed to without amendment, 566; assent reported, 588.	3	1091
D		
DAILY TELEGRAPH (See "PRIVILEGE")		
DAIN, MR., MAIL CONTRACTOR:—		
Return to Order (*Second Session*, 1885) laid on Table (not printed), 108.		
DAIRIES SUPERVISION BILL:—		
Received from Council and read 1°, 374; read 2° and committed, 516; further considered in Committee, reported with amendments, and report adopted, 524; recommitted, reported 2° with further amendment and report adopted, 526; re-committed, reported 3° with further amendment and report adopted, 534; read 3°, passed, and returned with amendments, 538; amendments agreed to, 549; assent reported, 599.		
PETITIONS RESPECTING, PRESENTED:—		
Dairymen and others that the Bill injuriously affects all interested in the milk trade, and urging amendments, 421	4	615
Borough Council of Balmain, that the Bill be not passed unless funds for working it are provided from other sources than Municipal Councils, 531	4	617
DANGAR, Mr. OTHO ORDE (See "ELECTORAL")		
DAY, MR. GEORGE:—		
Appointed Deputy Chairman of Commitees for this day only, 642, 646, 652, 656.		
DEATH:—		
Of Sir Peter Scratchley, K.C.M.G., 49, 71.		
Of the Honorable Sir Alexander Stuart, K.C.M.G., M.L.C., 323(2), 351.		
DEBATE (See "ADJOURNMENT")		
DEEPWATER (See "CROWN LANDS")		
DEFAMATION ACT AMENDMENT BILL:—		
Motion made (*Mr. Reid*) for leave to bring in, presented and read 1°, 92; Order of the Day postponed, 117, 146, read 2°, committed, reported without amendment, report adopted, 210; read 3°, passed, and sent to Council, 214; returned with amendments, 285; Order of the Day postponed, 294, 325, 372, 426, 504, 572, 623, 651; Council's amendments agreed to, 657; assent reported, 659.		
DEFENCE:—		
NAVAL, OF AUSTRALIA:—		
Correspondence relating to, laid on Table, 120, 169	2	273, 275
Papers and correspondence relating to, laid before a meeting held on H.M.S. "Nelson," the Premiers of Victoria, Queensland, New South Wales, and the Naval Commander-in-Chief, being present, laid on Table, 223	2	277
Memorandum by the Premier for His Excellency the Governor respecting, laid on Table, 254	2	299
ALBANY AND THURSDAY ISLAND:—		
Correspondence respecting, laid on Table, 373	2	303
DENGUE FEVER:—		
Report of Chief Medical Inspector on, laid on Table, 55	4	609
DENILIQUIN. (See "COUNTRY TOWNS WATER AND SEWERAGE ACT")		
DEPOSITIONS (See "ADMINISTRATION of JUSTICE")		
DEPUTY CHAIRMAN (See "CHAIRMAN OF COMMITTEES")		
DEPUTY SPEAKER:—		
Receipt of Commission to, to Administer the Oath, reported by Speaker, 49, 157, 395.		
Takes the Chair during the indisposition or unavoidable absence of Mr. Speaker, 341, 533, 623, 631, 641, 645, 649, 655		
Calls on Mr. Wisdom, the Honorable Member for Morpeth, by name, for refusing to withdraw disorderly words interjected, 656.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
D		
DESIGNS (See "PATENTS AND DESIGNS BILL")		
DESPATCHES:—		
LAID ON TABLE:—		
Present system of administration at Norfolk Island, 74	2	223
Sydney Mint, 74	8	1115
Notifying German Annexation of Marshall, Brown, and Providence Islands in the Pacific, 164.	2	225
DIAMOND DRILLS (See "MINING")		
DIBBS, THE HONORABLE G. R.:—		
Informs House of steps taken in formation of his Administration, 43.		
Ministerial Statement made by, in regard to the public business, 43, 67, 68, 69.		
Accepted Office as Colonial Secretary, seat as a Member for The Murrumbidgee declared vacant, 125; issue and return of writ reported, sworn, 127.		
Resignation of, as Colonial Secretary tendered and not accepted, Ministerial Statement, 474, 485.		
DISEASES IN SHEEP ACTS:—		
Regulation, laid on Table, 27	6	41
Motion made (*Mr. R. B. Wilkinson*) for a return showing the revenue and expenditure during the past five years, 464; Return to Order laid on Table, 593	6	39
DISORDER:—		
Mr. Speaker resumed Chair to restore order, having observed grave disorder in Committee of the Whole, 379 (2).		
The Hon. Member for Morpeth, Mr. Wisdom, guilty of persistent obstruction and disorder, 379; Mr. Speaker directed his removal from the Chamber, 380.		
The Hon. Member for East Macquarie, Mr. Shepherd, declining to submit to authority of the Chair, named by Mr. Speaker, heard in his place, withdrew words, and apologized, 440.		
Reported from Committee of Supply—use of disorderly words by Sir Henry Parkes and his refusal to withdraw them,—motion made (*Sir Patrick Jennings*), that words are disorderly and ought to be withdrawn and apologised for—*Disorder*—Mr. Wisdom, in debate, using the words, "this is a brutish Government," and the words having been taken down, 607; motion made (*Sir Patrick Jennings*), that words are disorderly, &c., and carried, and Mr. Wisdom declining to withdraw the words, Sir Patrick Jennings moved Mr. Wisdom guilty of contempt, and that he be committed to custody of Sergeant-at-Arms, Speaker's warrant issued and Mr. Wisdom removed from the Chamber, 608;—amendment moved (*Dr. Ross*) to the motion respecting words used by Sir Henry Parkes, that the explanation offered by Sir Henry Parkes is satisfactory, and carried, 608, 609.		
The Hon. Member for Morpeth, Mr. Wisdom, refusing to withdraw disorderly words interjected, named by Deputy Speaker (Mr. Slattery), 656.		
DISSENT (See "SPEAKER")		
DISTRICT COURTS ACT OF 1858:—		
Annual Returns under the 103rd section of, laid on Table, 613	4	625
DISTRICT SURVEYORS:—		
Circular sent to, to report on various Reserves in the Colony, laid on Table (not printed), 133.		
Motion made (*Mr. Fitzgerald*) for a copy of the minute by Mr. Secretary Farnell, and approved by the Cabinet, defining the position of under Crown Lands Act, also the subsequent minute by Mr. Secretary Abbott upon the same subject, 229; Return to Order, laid on Table, 435	5	85
DIVISIONS:—		
Attendances of Members in, and Counts-out	1	667
Weekly Reports of, in Committee of the Whole, Nos. 1 to 21	1	671
IN THE HOUSE:—		
No tellers for, 160, 189, 398, 541, 546.		
Casting Vote of Speaker, 570.		
Adjournment of Debate, 145, 164, 178, 189 (2), 322, 448, 449, 457, 532, 533.		
Special adjournment, 82, 199 (2).		
That a Paper laid on the Table, be printed, 368.		
Precedence of Government Business on Tuesdays, 222.		
Do do on Friday next, 377, 378.		
Additional Sitting Day, Monday, 539.		
Call of the House—Absentees excused, 268.		
Mr. Speaker's Ruling—Continuous Sitting, 389 (2), 390, 545.		
The Lieutenant-Governor's Opening Speech—Address in Reply, 41.		
Chairman of Committees—Mr. Garrett, 45.		
Election Petition—*Watson v. Mackinnon*, 75.		
Cornwell's Estate Bill, 93.		
Policy of the Government—Vote of Censure, 108.		
Ministerial Statement—Adjournment, 109.		
Licensing Acts Amendment Bill, 137.		
Chairman of Committees—Mr. Targett, 143.		
Do Mr. Garrard, 143.		
Do Mr. William Clarke, 144.		
Do Mr. Spring, 144.		
Do Mr. Trickett, 144.		
Do Mr. Slattery, 390, 391.		
Suburban Railways, 145.		
Payment of Members of the Legislative Assembly, 155, 333.		
Privilege—Seat of Mr. Cramsie, a Member for Balranald, 160.		
Do Mr. Coonan, M.P., 587.		
New Hebrides, 180.		
Supply—Contingent motion in favour of taxing agricultural produce, 205.		
Do Amendment referring to calling for tenders for rails and sleepers for Railway, Forbes to Wilcannia, before the approval of the Plans and Books of Reference, 593.		
Do Amendment in the nature of an instruction to the Committee in reference to the items on the Loan Estimates, 644.		
Ways and Means—Contingent motion in reference to Taxation Proposals of the Government, 233.		
Do Amendment that Counsel be heard at the Bar, on behalf of Mr. G. Peacock, in relation to the proposed duty on Pulp Fruit, 246.		
Do Reception of resolution (Income Tax), 309.		
George Dougherty's Conditional Purchase, 277.		
Ballot Papers—Electoral District of Young, 278.		
Stamp Duties Act Amendment Bill, 281.		
Customs Duties Bill, 355, 380, 441, 529 (3).		
Want of Confidence in the Government—Customs Taxation, 379.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6. | PAPERS. VOL. | PAGE.

D

DIVISIONS (*continued*) :—
IN THE HOUSE (*continued*) :—
Sir John Robertson Grant Bill, 368, 379, 384.
Medical Practitioners Bill, 399.
Removal from the House of the Honorable Member for Morpeth, by order of Mr. Speaker, 403 (3)
Supreme Court—Royal Commission, 412.
Select Committees on Private Bills, 413.
Manufacture in this Colony of Ironwork required by the Government, 413 (2).
Land Tax Bill (No. 2), 454, 530.
Sydney Town Hall and Streets Municipal Loan Bill, 458, 462.
Free Railway Passes to School Children, 483.
Railway Contracts with Messrs. Hudson Brothers, 484.
Wollongong Public School Site Sale Bill, 493.
Income Tax Bill, 496, 497.
Abolition of Punishment by Whipping Bill, 502.
Railway—City Extension, 532, 533.
Do between Orange and Forbes *via* Cudal and Toogong, 534.
Do Narrabri to Moree, 540.
Do Grafton to the Tweed River, 546.
Do Glen Innes to Inverell, 546.
Do Tarago to Braidwood, 549.
Captain Armstrong, 570, 657.
Divorce Extension Bill, 571.
That the words, "This is a brutish Government," are disorderly, should be withdrawn and apologised for, 608.
That Mr. Wisdom, the Honorable Member for Morpeth, is guilty of contempt, and for that contempt be committed by Speaker's Warrant to the custody of the Sergeant-at-Arms. 608.
That the words (used by Sir Henry Parkes in Committee of Supply, "This is a brutal Ministry," and reported to the House), are disorderly, ought to be withdrawn and apologised for, on which amendment was moved that explanation offered is satisfactory, 609.
Municipalities Act Amendment Bill, 614.
State of the Public Finances—Vote of Censure, 624.
That Resolution from Committee of Supply be disagreed to, 638.
Civil Service Act Amendment Bill (No. 2), 639.
Building for International Exhibition, 658.
IN COMMITTEE OF THE WHOLE :—
Payment of Members of the Legislative Assembly (*Resolution*) 671, 681, 682 (2).
Employers Liability Bill, 674.
Stamp Duties Act Amendment Bill, 683, 684, 685 (3), 686 (2), 687.
Do do (No. 2), 691, 692 (2), 693.
Do do (No. 3), 732.
Prickly Pear Destruction Bill, 687.
Sir John Robertson, K.C.M.G. (*Resolutions*) 695.
Regulation of Factories and Workshops Bill, 705, 706, 763, 764.
Customs Duties Bill, 696 (2), 697 (2), 698 (3), 699 (2), 700, 729.
Schedule A, Fixed Duties.
Aerated and mineral waters, 704.
Bags and sacks, 705.
Calico, 705.
Biscuits, 710, 711.
Bolts, spikes, nuts, rivets, &c., 711.
Butter and lard, 711, 712.
Cakes, 712.
Candles, 712.
Chicory, &c., 713.
Coffee, 713.
Confectionery, 713.
Cordage, 714.
Doors, 714.
Dynamite and lithofracteur, 714.
Fruits, boiled or in pulp, 715 (3).
Iron chains, 720.
Iron or steel wire, 721.
Oatmeal, 721 (2).
Oils, 722.
Paper, advertising matter, circulars, &c., 722.
Sashes, 723.
Shutters (wood), 723.
Soap, 724.
Tea, 724.
Timber, dressed, 724.
Do rough and undressed, 725 (2).
Tanks, iron, 725.
Woolpacks, 726.
Zinc, 726.
Schedule B, Free List.
Rollers, 727.
Sewing machines, 727.
Machinery for mining purposes, 728.
Chaffcutters, 728.
Picks and shovels, 728.
Vine Diseases Bill, 731, 732.
Land Tax Bill (No. 2), 733, 736 (2), 737 (2), 738, 739, 740.
Places of Detention Bill, 737, 738, 760.
Wollongong Public School Site Sale Bill, 741, 742.
Medical Practitioners Bill, 742, 743 (2), 758 (3).
Income Tax Bill, 746, 748 (2), 749, 750 (2).
Crown Lands Titles and Reservation Validation Bill, 746, 747.
Noxious Trades Sites Bill, 751.

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
D		
DIVISIONS (*continued*) :—		
IN COMMITTEE OF THE WHOLE (*continued*) :—		
Dairies Supervision Bill, 752.		
Centenary of the Colony. (*Resolutions*) 756.		
Patents and Designs Bill, 756, 757 (2).		
Municipalities Act Amendment Bill, 764.		
Divorce Extension Bill, 765 (2), 766 (2).		
Captain Armstrong. (*Resolution*) 774.		
IN COMMITTEE OF SUPPLY :—		
General Estimates for 1886.		
Legislative Assembly. (*Speaker*) 753.		
Do do (*Chairman of Committees*) 753.		
Legislative Council and Assembly, 754.		
Colonial Secretary's Department, 754.		
Police, 755.		
Curator of Intestate Estates, 759 (2).		
Department of Lands, 761.		
Permanent and Volunteer Military Forces, General Staff, 761.		
Military Instructors, 761.		
Artillery Force, 762.		
Additional Estimates for 1886.		
Master in Lunacy, 767.		
Registrar General, Junior Examiner of Titles, 767, 768.		
Lands Titles Office, 768.		
Customs, 768, 769.		
Increases to Public Officers under the Civil Service Act; further sum, 769.		
Loan Estimate.		
Wood paving Circular Quay, 772.		
Newcastle Harbour Improvements, 772.		
Wollongong Harbour Deepening, 772.		
Purchase of land, Phillip and Hunter streets, for Police and other Public Offices, 773.		
University Medical School, 773.		
Dubbo Public Buildings, including Site, 773.		
Iron bridge over the Gwydir or Big River, at Bingera, 773.		
Purchase of Railway Stores, 774.		
IN COMMITTEE OF WAYS AND MEANS :—		
Establishment of His Excellency the Governor. (*Resolution*) Chairman leave the Chair to report progress, and ask leave to sit again, 673.		
Fixed Duties, *Ad Valorem* Duties, and Free List. (*Resolution*) 679.		
Income Tax. (*Resolution*) 689.		
Resolution covering Estimated Expenditure for 1886, 771.		
DIVORCE EXTENSION BILL :—		
Received from Council and read 1°, 249; Order of the Day postponed, 276, 372; motion made for 2°, and debate adjourned, 465; debate resumed, read 2°, and committed, 571; further considered in Committee, no Quorum reported from Committee of the Whole eight times, and House counted out, 615.		
PETITIONS PRESENTED FROM :—		
Residents of the Colony that they are conscientiously opposed to the provisions of, and praying the House to refuse its assent to the Bill, 276 (2), 469 (2) 570 (2)		
Residents in City and surrounding Districts of Newcastle, with similar prayer, 295 (2)		
Ministers of the several Churches in the City and surrounding districts of Newcastle, with similar prayer, 469		
Bishop and Archdeacons of the Diocese, on behalf of the Synod of Grafton and Armidale, praying that the Bill be not allowed to become law, 281	8	1159
Bishop of Sydney, with the advice of the Standing Committee of the Synod of the Church of England with similar prayer, 349		
Synod of the Diocese of Newcastle with similar prayer, 353		
Committee of Privileges appointed by the Wesleyan Conference to guard the interests of the Wesleyan portion of the community, with similar prayer, 373		
Residents of Singleton, that the Bill is contrary to the British Constitution and the revealed will of God, and praying the House not to pass the Bill, 373		
Residents in Sydney and Suburbs, in favour of, 368		
Presbyterians, Wesleyans, Anglicans, and others, Queanbeyan District, in favour of, 549	8	1175
David Smith, Moderator of the Presbytery of Sydney, in favour of, 642		
DIVORCE PROCEDURE AMENDMENT BILL :—		
Received from Council and read 1°, 374; read 2°, 426; committed, 427; further considered in Committee, reported without amendment and report adopted, 504; read 3°, passed and returned to Council, without amendment, 507; assent reported, 525.		
DOMAINS :—		
Regulations, laid on Table, 13, 97, 169	5	267
ENTRANCE TO, AT SIR JOHN YOUNG CRESCENT :—		
Motion made (*Mr. Burdekin*) that a foot-passengers gate-way be opened opposite Crown-street, 89.		
DOUGHERTY, MR. GEORGE (See "CROWN LANDS")		
DREDGE SERVICE :—		
Report of Engineer-in-Chief for Harbours and Rivers on operations, laid on Table, 633	4	967
Copies of Papers respecting Contract for towing punts, Newcastle, laid on Table (not printed), 656.		
DUTIES (See "FINANCE")		
E		
EAST MACQUARIE (See "SHEPHERD, MR. JOHN")		
EAST ST. LEONARDS (See "BOROUGH OF EAST ST. LEONARDS WHARVES BILL")		
EDUCATION (See also "PUBLIC INSTRUCTION ACT AMENDMENT BILL" also "WOLLONGONG PUBLIC SCHOOL SITE SALE BILL" also "UNIVERSITY") :—		
LANDS RESUMED FOR PURPOSES OF :—		
Notifications of, laid on Table, 15, 74, 102, 128, 220, 291, 350, 385, 402, 478, 496, 592, 633, 651	4	407

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
E		
EDUCATION (*continued*) :—		
PUBLIC INSTRUCTION ACT :—		
Regulations under, laid on Table, 31	4	215
Return respecting expenditure under, laid on Table, 169	4	229
REPORT FOR 1885 :—		
Of Minister of Public Instruction, laid on Table, 151 / Do Appendices to, laid on Table, 185	4	1
STATISTICS OF SCHOOLS :—		
Motion made (*Mr. Kidd*) for particulars respecting teachers in certain schools, 107; Return to Order, laid on Table, 216	4	237
SYDNEY GRAMMAR SCHOOL :—		
Report for 1884, laid on Table, 111	4	325
SALE OF SITE OF OLD PUBLIC SCHOOL, WOLLONGONG :—		
Motion made (*Mr. Suttor*) for all letters, minutes, and documents respecting, 112; Return to Order, laid on Table, 160	4	297
FREE RAILWAY PASSES TO SCHOOL CHILDREN :—		
Petition against the passing of any resolution for conveying children free on our railways to schools other than those constituted by the State, presented, 142	7	619
Motion made (*Mr. Stokes*) in favour of issue of, on certain conditions—amendment moved and negatived—original motion negatived on division, 483.		
PRIVATE SCHOOLS :—		
Motion made (*Mr. Abigail*) for copies of those portions of the reports of the School Attendance Officers having reference to, showing the number and other particulars of such schools, 163; Return to Order, laid on Table, 222	4	247
PROSECUTIONS BY SCHOOL ATTENDANCE OFFICERS :—		
Motion made (*Mr. Abigail*) for a return showing particulars of, in certain Metropolitan Districts, 197; Return to Order, laid on Table, 216	4	245
TECHNICAL COLLEGE :—		
Motion made (*Dr. Wilkinson*) for return showing names, work required from, and salaries of lecturers, 56.		
Motion made (*Dr. Wilkinson*) for a return showing fees required from students in the various classes, and the number of students who attended in 1885, 197; Return to Order, laid on Table, 284	4	269
Motion made (*Mr. Abbott*) for all correspondence, &c., relating to the appointment and proposed removal of Mr. W. T. Wiley, as Secretary, 229; Return to Address, laid on Table, 305	4	271
CIVIL SERVICE ACT :—		
Petition from Teachers in the Public Schools, that they are dissatisfied with the operations of, and suggesting certain amendments, presented, 220	2	381
TRAINING SCHOOLS, HIGH SCHOOLS, AND SYDNEY GRAMMAR SCHOOL :—		
Information respecting, laid on Table, 435	4	335
TRUANT INSPECTORS AND ATTENDANCE OFFICERS :—		
Motion made (*Mr. Wall*) for a return of cost incurred by the Department in connection with, 580; Return to Order, laid on Table, 592	4	265
EDWARDS RIVER (See "RESERVES")		
ELECTION OF MAYOR (See "SYDNEY CORPORATION ACT AMENDMENT BILL No. 2")		
ELECTIONS AND QUALIFICATIONS COMMITTEE (See "ELECTORAL")		
ELECTORAL—(See also "MINISTERIAL ELECTION BILL")		
Petitions from Municipal District of Leichhardt praying that the District may be created a separate Electorate, presented, 50, 614	2	235, 237
WRITS OF ELECTION FOR NEW PARLIAMENT :—		
Received by Clerk, 1.		
DISCREPANCIES BETWEEN NAMES ENDORSED ON WRITS AND NAMES OF MEMBERS :—		
Returns amended by Clerk, 8.		
ELECTIONS AND QUALIFICATIONS COMMITTEE :—		
Speaker lays warrant on Table, 16, 80, 142; maturity reported, 31, 100, 161; Members sworn, 31, 36, 100, 161; petitions referred, 36, 75; Speaker appoints meeting, 36, 81; leave given to sit during adjournment of House, 68, 102; Report brought up, 71, 120; leave given to adjourn *sine die*, 72, 120; resignation of Chairman reported, 74.	2	51, 63
Election Petition—Mackinnon v. Watson—Young :—		
Laid on Table, and referred to Committee, 36; Report brought up and read by Clerk—Mr. J. A. Mackinnon declared elected, 71; Mr. Mackinnon sworn, 73	2	51
Election Petition—O. O. Dangar v. Robert Burdett Smith—The Macleay :—		
Laid on Table and referred to Committee, 75; Report brought up and read by Clerk—Mr. R. B. Smith declared duly elected, 120	2	63
Clerk summoned to produce proceedings, &c., at Kempsey Police Office, in case "Waters *v.*—Sutherland,—Perjury, 209.		
Election Petition—Watson v. Mackinnon—Young :—		
Laid on Table, and motion made (*Sir John Robertson*) to refer to Committee, and negatived on division, 75.		
Seat of Mr. Cramsie, a Member for Balranald :—		
Motion made (*Mr. Neild*) that it be referred to Committee, to consider and report whether Mr. Cramsie is beneficially interested in a contract for the supply of goods to the Government, and withdrawn, 97.		
Motion again made (*Mr. Neild*) and negatived on division, 160.		
Motion made (*Mr. Neild*) for papers in connection with supply by Cramsie, Bowden, & Co., of forage and plant to Government Rabbit Camps in Balranald District, 97; Return to Order laid on Table, 111; further Return to Order, laid on Table, 155	2	173, 179
ROLLS :—		
Return to Order (*Second Session*, 1885), laid on Table, 20	2	227
Return showing number of electors, laid on Table, 40	2	229
MUDGEE :—		
Acceptance of office as Colonial Secretary and Premier, by Sir John Robertson; motion made for vacation of seat, amendment moved and negatived; seat as a Member for, declared vacant, 72; issue and return of writ reported, sworn, 73.		
Receipt of a letter from Sir John Robertson, K.C.M.G., resigning his seat as a Member for, reported, and entered on the Records of the House, 331; seat declared vacant, 331; issue and return of writ reported, 351; Mr. William Chandos Wall sworn, 359.		
THE HUNTER :—		
Acceptance of office as Colonial Treasurer, by John Fitzgerald Burns, Esquire, and seat as Member for, declared vacant, 72; issue and return of writ reported, sworn, 73.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
E		
ELECTORAL (*continued*) :—		
YOUNG :—		
Acceptance of office as Secretary for Lands, by Gerald Spring, Esquire, and seat as a Member for, declared vacant, 72; issue and return of writ reported, sworn, 73.		
Motion made (*Mr. Garrett*) (1.) That the ballot papers be laid on Table. (2.) That those taken at No. 2 booth, Young, be examined by the Clerks at the Table and the result reported by Mr. Speaker.—Speaker ruled that paragraph (2) cannot be put—amended motion withdrawn, 94.		
Motion made (*Mr. Harold Stephen*) that the Ballot Papers be laid on table, and negatived on division, 278.		
BALMAIN :—		
Acceptance of office as Secretary for Public Works, by Jacob Garrard, Esquire, and seat as a Member for, declared vacant, 72; issue and return of writ reported, sworn, 73.		
THE HASTINGS AND MANNING :—		
Acceptance of office as Minister of Public Instruction, by James Henry Young, Esquire, and seat as a Member for, declared vacant, 72; issue and return of writ reported, sworn, 73.		
YASS PLAINS :—		
Acceptance of office as Minister of Justice, by Louis Francis Heydon, Esquire, and seat as Member for, declared vacant, 72; issue and return of writ reported, sworn, 73.		
GRENFELL :—		
Acceptance of office as Secretary for Mines, by Robert Matteson Vaughn, Esquire, and seat as Member for, declared vacant, 72; issue and return of writ reported, sworn, 73.		
WEST SYDNEY :—		
Acceptance of office as Postmaster-General, by Daniel O'Connor, Esquire, and seat as a Member for, declared vacant, 72; issue and return of writ reported, sworn, 73.		
THE BOGAN :—		
Acceptance of office as Colonial Treasurer and Premier by Sir Patrick Jennings, and seat as a Member for, declared vacant, 125; issue and return of writ reported, sworn, 127.		
THE MURRUMBIDGEE :—		
Acceptance of office as Colonial Secretary by G. R. Dibbs, Esquire, and seat as a Member for, declared vacant, 125; issue and return of writ reported, sworn, 127.		
EAST SYDNEY :—		
Acceptance of office as Secretary for Lands by H. Copeland, Esquire, and seat as a Member for, declared vacant, 125; issue and return of writ reported, sworn, 127.		
THE HUME :—		
Acceptance of office as Secretary for Public Works by W. J. Lyne, Esquire, and seat as a Member for, declared vacant, 125; issue and return of writ reported, sworn, 127.		
REDFERN :—		
Acceptance of office of Minister of Public Instruction by Arthur Renwick, Esquire, M.D., and seat as a Member for, declared vacant, 126; issue and return of writ reported, sworn, 127.		
EDEN :—		
Acceptance of office of Minister of Justice by J. P. Garvan, Esquire, and seat as a Member for, declared vacant, 126; issue and return of writ reported, sworn, 127; Speaker calls attention to irregularity of Election—non-receipt of writ by Returning Officer, 127.		
NEWCASTLE :—		
Acceptance of office of Secretary for Mines by J. Fletcher, Esquire, and seat as a Member for, declared vacant, 126: issue and return of writ reported, sworn, 127.		
BATHURST :—		
Acceptance of office of Postmaster-General by F. B. Suttor, Esq., and seat as Member for, declared vacant, 126; issue and return of writ reported, sworn, 127.		
GUNDAGAI :—		
Acceptance of office of Attorney-General by J. H. Want, Esq., and seat as Member for, declared vacant, 126; issue aud return of writ reported, sworn, 127.		
GENERAL ELECTIONS :—		
Motion made (*Mr. Abigail*) for a return showing the cost of the last three, and the last five Ministerial Elections, distinguishing amount expended in each electorate, 141; Return to Order, laid on Table, 350	2	231
THE GWYDIR :—		
Resignation of William Robert Campbell, Esquire, 259; issue and return of writ reported, 335; Mr. Thomas Henry Hassall, sworn, 347.		
ELECTRIC LIGHTING (See also "GARDEN PALACE GROUNDS")		
PARLIAMENTARY BUILDINGS :—		
Reports of Messrs. Dalgarno and Hammand on, laid on Table, 350	2	193
Letter from Mr. Speaker, and memorandum from Mr. E. C. Cracknell, Superintendent of Electric Telegraphs, relative to, laid on Table, and ordered to be printed (*after division*), 368	2	195
Motion made (*Mr. Garrard*) for a Select Committee to inquire into and report upon, 497.		
Petition from H. H. Kingsbury, contractor and agent of the Edison Company, for leave to appear before the Committee in person or by Counsel, and to produce papers and witnesses and examine and cross-examine witnesses, presented and referred to the Select Committee, 518	2	197
EMPLOYERS LIABILITY BILL :—		
Motion made (*Mr. Garrard*) for leave to bring in and read 1°, 61; Order of the Day postponed, 80, 130, 189; read 2°, committed, reported with amendments, and report adopted, 240; read 3°, passed, and sent to Council, 244; returned with amendments, 409; amendments agreed to, 466; assent reported, 501.		
EMPLOYES (See "RAILWAYS")		
EMPTY WAGGONS. (See "RALWAYS")		
ENDOWMENTS OF MUNICIPALITIES. (See "MUNICIPAL")		
ENNIS ESTATE BILL :—		
Received from Council and read 1°, 291; Order of the Day postponed, 294, 333, 367, 399; read 2°, committed, reported without amendment, and report adopted, 427; read 3°, passed, and returned to Council without amendment, 434; assent reported, 479.		
EQUITY COURT :—		
Returns showing amount of money paid into, by the Trustees of the late P. Farrelly's Will, laid on Table, 337	8	1133
ESTIMATES (See "FINANCE")		
EVANS COMBINATION TRUCK (See "RAILWAYS")		
EVELEIGH (See "RAILWAYS")		
EXCLUSION FROM THE HOUSE (See "WISDOM, MR. ROBERT")		
EXECUTORS (See "NEW SOUTH WALES TRUSTEES, EXECUTORS, AND AGENCY COMPANIES BILL")		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
E		
EXHIBITION (See also "CENTENARY OF THE COLONY")		
INDIAN AND COLONIAL :—		
Information respecting cost of representation of the Colony at, laid on Table, 97..	8	1137
CENTENNIAL :—		
Petition from the Mayor of Sydney, as Chairman of Public Meeting of Citizens, that the honor and credit of the Colony demand that the Centenary of Australia should be celebrated in a fitting manner by the Colonists of Australasia, suggesting an Exhibition, and that the Governments of other Colonies be invited to co-operate, presented, 377	8	1139
BUILDING FOR INTERNATIONAL :—		
Motion made (*Mr. Harold Stephen*) for a Committee of the Whole to consider whether steps should be at once taken for the erection of, for use, should such exhibition be in future decided upon, and negatived, 658.		
EXHIBITS ONLY :—		
Laid on Table, 207 (2) 208 (3), 254, 435 (3), 544 (2), 593.		
EXPLANATORY ABSTRACTS :—		
Of sums estimated and voted	3	1079
EXPORTATION OF WOOL (See "WOOL")		
EXTENSIONS (See "RAILWAYS")		
F		
FACTORIES AND WORKSHOPS (See "REGULATION OF FACTORIES AND WORKSHOPS BILL" also "WORKING CLASSES")		
FAILURE OF CROPS :—		
Petition from farmers of Eugowra, alleging they have sustained heavy losses through the disastrous drought, and praying a grant of seed wheat, presented, 177	6	51
FARMERS TRAINS :—		
Return of particulars respecting the running of Special, laid on Table, 350	7	613
FARRELLY, THE LATE P. :—		
Return showing amount of money paid into Equity Court by the Trustees of, laid on Table, 337...	8	1133
FELLTIMBER CREEK (See "ROADS")		
FEMALES (See "WORKING CLASSES")		
FERNDALE COLLIERY (See "COLLIERIES")		
FIDELITY GUARANTEES :—		
Return of employés in the Railway Department compelled to find, laid on Table, 268	7	485
Motion made (*Mr. Burns*) for copies of all minutes, reports, and other documents in reference to the adoption of the Scheme that the Treasury instead of Insurance Companies should provide, 548.		
FIELD OF MARS COMMON :—		
Motion made (*Mr. Abbott*) for a Return showing the area, area sub-divided and sold, price paid, cost and particulars of survey, 192.		
FINANCE (See also "UNAUTHORIZED EXPENDITURE INDEMNITY BILL" also "TARIFF")		
APPLICATION OF BALANCES :—		
Minute authorizing, laid on Table by Speaker, 7, 39	3	1033, 1035
BANK LIABILITIES AND ASSETS :—		
For quarter ended 30th September, 1885, laid on Table, 8	3	1037
Do 31st December, 1885, do 97	3	1039
Do 31st March, 1886, do 248	3	1041
Do 30th June, 1886, do 453	3	1043
LOAN OF £5,500,000 :—		
Return to Order (*Second Session*, 1885), laid on Table, 23	3	997
Ministerial Statement relative to placing, on London Money Market on 16 July, 1886, made by Sir Patrick Jennings, 385.		
Correspondence, &c., in connection with, issued on 16th July, 1886, laid on Table, 402	3	1013
BANK OF ENGLAND :—		
Return showing daily balance in, to the credit of the Government, laid on Table 36	3	981
Motion made (*Mr. Burns*) for a copy of Government Banking Account with, from the floating of the Loan of £5,500,000 to date, 133; Return to Order, laid on Table, 248	3	977
TRANSFER OF £275,000 FROM CONSOLIDATED REVENUE FUND TO TREASURER'S ADVANCE ACCOUNT :—		
Special report from Auditor-General respecting, and stating that such transfers do not come within the provisions of the Audit Act, laid on Table, 74	3	1021
PUBLIC ACCOUNTS :—		
Report of Board of Audit, laid on Table, 74, 128	3	797, 803
Abstracts of, for the year 1885, together with Auditor-General's report thereon—laid on Table by Mr. Speaker, 455	3	809
INSCRIBED STOCK ACT :—		
Third report on the creation, inscription, and issue of Stock under, laid on Table, 74	3	781
FINANCIAL POSITION OF THE COLONY :—		
Petition respecting, presented, 92	3	1045
LOAN ACCOUNTS :—		
Returns relating to certain charges against, laid on Table, 128	3	1017
SPECIFIC AND *Ad Valorem* CUSTOMS DUTIES :—		
Statement of estimated additional Revenue from the proposed, laid on Table, 198	3	1093
Return of *Ad Valorem* Duties collected from 7th to 29th April, 1886, laid on Table, 210	3	1099
Return relative to collection of *Ad Valorem* Duties, from 1865 to 1872, laid on Table, 318	3	1103
Return showing amount of duty collected on, from 7th to 30th April, laid on Table, 216	3	1101
Statement showing how the estimate of the yield of each of the proposed new duties is made up, laid on Table, 277, 301,	3	1095, 1097
BALANCES ON APPROPRIATIONS FOR 1885 SERVICES :—		
Statement showing amounts estimated as likely to be required, and the amounts estimated as not likely to be required, laid on Table, 198	3	983
FINANCIAL STATEMENT :—		
Made by Mr. Dibbs, 62, 65.		
Made by Mr. Burns, 90.		
Made by Sir Patrick Jennings, 165, 607, 610.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
F		
FINANCE (*continued*):—		
STATE OF PUBLIC FINANCES—VOTE OF CENSURE:—		
Motion made (*Sir Henry Parkes*) that the present state of the Public Finances, as explained by the Colonial "Treasurer" is highly unsatisfactory—amendment moved (*Mr. Abbott*) to omit all words after the word "Treasurer" with a view of inserting other words, and debate adjourned, 621; debate resumed, 623; words omitted, and motion as amended carried, 624.		
SUPPLY:—		
Sessional Order passed, 46.		
Motion made (*Mr. Dibbs*) for House to go into Committee, 56.		
Motion made (*Sir Patrick Jennings*), for House to go into Committee—*Contingent* amendment moved (*Mr. William Clarke*) in favour of taxing agricultural produce, and Debate adjourned, 201; Debate resumed and amendment negatived on Division, 205.		
Motion made (*Sir Patrick Jennings*) for House to go into Committee—amendment moved (*Mr. William Clarke*) that the action of the Minister of Justice in disregarding the recommendation by the Civil Service Board of Mr. Stephen Murphy to the position of Clerk of Petty Sessions, Orange, is inimical to the best interests of the Civil Service, and opposed to the letter and spirit of the Civil Service Act,—and withdrawn, 582.		
Motion made (*Dr. Renwick*) for House to go into Committee,—amendment moved (*Mr. Sydney Smith*) expressing disapproval of the action of the Minister for Public Works in taking steps to provide rails and sleepers for proposed Railway from Forbes to Wilcannia, before the Plans and Books of Reference had been approved by Parliament, and negatived, 593.		
Motion made (*Sir Patrick Jennings*) for House to go into Committee,—amendment moved (*Mr. Neild*) to add words that the Committee be instructed not to agree to any item in the Loan Estimates not of an urgent or permanent nature, and likely to be reproductive to at least 4 per centum per annum, 643; amendment negatived, 644.		
House in Committee, and Mr. Dibbs made Financial Statement, 62, 65.		
Do Mr. Burns do 90.		
Do Sir Patrick Jennings made Supplementary Financial Statement, 610.		
House in Committee, 80, 113, 136, 165, 200, 205, 261, 326, 404, 479, 556, 559, 562, 567, 576, 577, 582, 583, 589, 593, 607, 610, 630, 644, 647.		
Resolutions reported, 80, 113, 136, 165, 200, 261, 326, 404, 480, 576, 630, 647.		
Resolutions received, 633.		
Resolutions agreed to, 81, 113, 136, 165, 200, 261, 326, 404, 480, 576, 638, 647.		
Motion made (*Mr. Garrett*), that a Resolution be disagreed to, 638.		
No Quorum reported from Committee of, 556, 563.		
Point of Order, reported from Committee of, 583.		
Disorder reported from Committee of, 607, 608, 609.		
WAYS AND MEANS:—		
Sessional Order passed, 46.		
Order of the Day read, and objection taken to Mr. G. A. Lloyd moving *Contingent Notice* on behalf of another Member, 246.		
Motion made (*Mr. Dibbs*) for House to go into Committee, 56.		
Motion made (*Sir Patrick Jennings*) for House to go into Committee—*Contingent* amendment moved (*Sir Henry Parkes*) to substitute certain resolutions dealing with the Fiscal Policy of the Colony, and Debate adjourned, 230; Debate resumed, 232; and amendment negatived on division, 233;		
Motion made (*Sir Patrick Jennings*) for House to go into Committee—amendment moved (*Mr. G. A. Lloyd*) that Counsel be heard at the Bar, on behalf of Mr. George Peacock, in relation to the proposed Duty on Pulp Fruit, and amendment negatived on Division, 246.		
Motion made (*Sir Patrick Jennings*) for House to go into Committee—*Contingent* amendment (*Mr. Neild*) moved in reference to the taxing of Lands within Municipal Boundaries, and that any Land Tax should be of a progressive character, and amendment negatived, 292.		
House in Committee, and Sir Patrick Jennings made Financial Statement, 165.		
House in Committee, 81, 113, 136, 200, 208, 220, 223, 233 237, 246 (2), 248, 249, 254, 262, 292, 301, 306, 326, 404, 480, 576, 638, 647.		
Resolutions reported, 81, 113, 136, 200, 237, 254, 262, 292, 306, 326, 404, 480, 576, 638, 647.		
Resolutions received, 269, 309, 643.		
Resolutions agreed to, 81, 113, 136, 200, 237, 262, 272, 292, 310, 326, 404, 480, 576, 643, 647.		
No Quorum in Committee reported, 246.		
Point of Order reported from, 248.		
Estimates for 1886, laid on Table by Mr. Dibbs, 62	3	579
Do do Mr. Burns, 100	3	645
Do do Sir Patrick Jennings, 169	3	711
ESTIMATES FOR 1886, AND SUPPLEMENTARY ESTIMATES FOR 1885 AND PREVIOUS YEARS:—		
Message No. 3 (*Mr. Dibbs*) recommending accompanying, laid on Table, 61	3	1, 3, 139
Message No. 4, requesting return of, read by Mr. Speaker, considered, read by Clerk, and Address to Governor returning, 89	3	181
Message No. 5 (*Mr. Burns*) recommending accompanying, laid on Table, 90	2	183, 185, 321
Message No. 16, requesting return of, read by Mr. Speaker, considered, read by Clerk, and Address to Governor, returning, 165	3	363
Message No. 17 (*Sir Patrick Jennings*) recommending accompanying, laid on Table, 165	3	365, 367, 517
ADDITIONAL ESTIMATES FOR 1886:—		
Message No. 95 (*Sir Patrick Jennings*) recommending accompanying, laid on Table, 607	3	563, 565
LOAN ESTIMATE FOR 1886:—		
Message No. 105 (*Sir Patrick Jennings*) recommending accompanying, laid on Table, 643	3	573, 575
EXPLANATORY ABSTRACTS:—		
Of Sums estimated and Sums voted	3	1079
FIRE BRIGADES ACT:—		
Regulations laid on Table, 40, 74(2), 128, 248, 422	2	999
WOOLLAHRA VOLUNTEER BRIGADE:—		
Motion made (*Mr. Neild*) for copies of all letters, applications, &c., by, for registration under the Act, 188; Returns to Order, laid on Table, 198, 208	2	1019
FIRE BRIGADES BOARD:—		
METROPOLITAN BRIGADE, &c.:—		
Report laid on Table, 40, 313	2	925, 953
Regulations under the Act of 1884, laid on Table	2	999
Statement showing cost of, under the Act of 1884, laid on Table, 587	2	1017
DENILIQUIN:—		
Report from, under the Act of 1884, laid on Table, 208	2	993

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
F		
FIRE BRIGADES BOARD (*continued*) :—		
FORBES :—		
Regulations of, laid on Table, 489	2	1015
Report from, under the Act of 1884, laid on Table, 561	2	997
GRAFTON :—		
Report from, under the Act of 1884, laid on Table, 385	2	989
Regulations, do do 74	2	1007
GOULBURN :—		
Report from, under the Act of 1884, laid on Table, 385	2	995
Regulations, do do 74	2	1005
BATHURST :—		
Regulations of, under the Act of 1884, laid on Table, 422	2	1013
WAGGA WAGGA :—		
Regulations of, under the Act of 1884, laid on Table, 128	2	1009
ORANGE :—		
Regulations of, under the Act of 1884, laid on Table, 248	2	1011
FIRE INSURANCE (See "ASSIGNEES OF FIRE INSURANCE POLICIES ENABLING BILL")		
FIRES, ACTIONS FOR LOSS BY (See "RAILWAYS")		
FISHERIES :		
INSPECTOR QUINAN :—		
Motion made (*Mr. White*), for all letters, papers, &c., respecting suspension of, 82; Return to Order, laid on Table, 128	2	899
Motion made (*Mr. Targett*) for reports by, as to illegal net-fishing in Port Jackson, 100; Return to Order, laid on Table, 198	2	895
Motion made (*Mr. Abigail*) for copies of all letters, reports, minutes, &c, referring to numerous charges made against, with copy of letter of Mr. J. P. Abbott on Mr. Quinan's behalf, 558.		
COMMISSION :—		
Motion made (*Mr. W. Clarke*) for a return respecting, 188; Return to Order, laid on Table, 216	2	915
FISHERIES ACTS AMENDMENT BILL :—		
Motion made (*Mr. William Clarke*), for leave to bring in, presented and read 1°, 317; Order of the Day postponed, 399, 464, 544; motion made for 2°, by leave withdrawn, Order of the Day discharged, and Bill withdrawn, 614.		
FISHER, MESSRS. (See "CROWN LANDS")		
FLANAGAN, JOHN (See "POLICE")		
FLETCHER, THE HON. JAMES :—		
Accepted office as Secretary for Mines, seat as a Member for Newcastle, declared vacant, 126; issue and return of writ reported, sworn, 127.		
FLOGGING BILL (See "ABOLITION OF PUNISHMENT BY WHIPPING BILL")		
FOOTE, MRS. :—		
Motion made (*Mr Abigail*) for copies of all letters, depositions, or other documents referring to the case of, recently charged before the Bench at East Maitland, with larceny, 284, Return to Address, laid on Table, 444	4	755
FORBES (See "RAILWAYS" also "CROWN LANDS" also "FIRE BRIGADES BOARD")		
FOREST BRANCH, DEPARTMENT OF MINES :—		
Annual Report on, laid on Table, 27, 416	6	69, 109
Notice of cancellation of part of 26th Timber and State Forest Regulation, laid on Table, 469	6	131
Motion made (*Mr. Fitzgerald*) for a Return showing the increases to salaries of officers of, under Civil Service Act, 89, Return to Order, laid on Table, 100	6	129
Motion made (*Mr. Wall*) for a return shewing the number of Forest Rangers employed throughout the Colony, where employed, remuneration received, giving salary and allowances separately, and the revenue received from each Ranger's district, 394; Return to Order, laid on Table, 483	5	113
FOREST RESERVES (See "RESERVES")		
FORMAL BUSINESS :—		
Sessional Order passed, 46.		
FOWLER, PIERCE (See "ADMINISTRATION OF JUSTICE")		
FORSYTH, MESSRS. A. & Co. (See "ADMINISTRATION OF JUSTICE")		
FOWLER SIR JOHN :—		
Report on Prospect Dam, Sydney Water Supply, laid on Table, 168	6	991
Report on Light Railways, laid on Table, 168	7	263
FREE PASSES (See "RAILWAYS")		
FREE PUBLIC LIBRARY (See also "BY LAWS") :—		
Report from Trustees for 1885-6, laid on Table, 128	4	443
FREIGHT (See "RAILWAYS")		
FRIDAYS :—		
Alternation of General Notices of Motion and Orders of the Day on,—Sessional Order passed, 254.		
Precedence of Government Business on Friday next, 377, 378.		
FRONTAGES RESERVATION (See "WATER FRONTAGES RESERVATION BILL")		
FULL LOCAL OPTION (See "LOCAL OPTION")		
G		
GALONG (See "RAILWAYS")		
GANMAIN (See "CROWN LANDS")		
GAOLS (See also "PLACES OF DETENTION BILL")		
PORT MACQUARIE :—		
Report of the Comptroller-General of Prisons on, laid on Table, 506	4	953
INDUSTRIAL SKILL OF PRISONERS IN :—		
Motion made (*Mr. Kidd*) for a return showing particulars of, 496; Return to Order, laid on Table, 613	4	955
GARDEN PALACE GROUNDS :—		
Regulations laid on Table, 13, 69, 97, 169	5	267
MACQUARIE-STREET GATEWAY :—		
Motion made (*Mr. Burdekin*) that it is desirable that the foot gate-way from Macquarie-street opposite the Colonial Secretary's Office, be opened during the same hours as the gates of the Botanic Garden, 94.		
LIGHTING OF, WITH ELECTRIC LIGHT :—		
Motion made (*Mr. Burdekin*) for Committee of the Whole to consider Address to the Governor that provision be made for, 278, Order of the Day postponed, 367, House in Committee,—no report, 465.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
G		
GARRARD, THE HONORABLE JACOB :—		
Accepted office as Secretary for Public Works, seat as a Member for Balmain declared vacant, 72 ; issue and return of writ reported, sworn, 73.		
Proposed as Chairman of Committees and negatived on division, 143.		
GARRETT, MR. THOMAS :—		
Elected Chairman of Committees, 45.		
Deputy Speaker's Commission in favour of, 49.		
Resignation by, of office of Chairman of Committees, 134.		
GARVAN, THE HONORABLE J. P. :—		
Accepted office as Minister of Justice, seat as a Member for Eden declared vacant, 126 ; issue and return of writ reported, sworn, 127.		
GAS (See "MUNICIPAL GAS ACT AMENDMENT BILL")		
GENERAL BUSINESS :—		
Sessional Order passed, 45.		
Do do Alternation of Notices of Motions and Orders of the Day on Fridays, 254.		
Notices of Motions postponed till later in the sitting, 550, 583.		
Postponed to follow an Order of the Day of Government Business, 656.		
GENERAL ELECTIONS (See "ELECTORAL")		
GEORGE-STREET (See "TELEGRAPHS")		
GEORGE'S RIVER (See "OYSTER CULTURE LEASES")		
GLADESVILLE ASYLUM :—		
Motion made (*Mr. Sydney Smith*) for copies of all correspondence, minutes, &c., having reference to the supply of a boiler for, 412.		
GLEN INNES (See "CROWN LANDS" also "RAILWAYS" also "RESERVES" also "ADMINISTRATION OF JUSTICE"		
GLEN INNES MARKETS LEASING BILL :—		
61st Standing Order suspended to admit of presentation of petition, 150; petition presented (*Mr. W. J. Fergusson*) for leave to bring in, 172; leave given, presented and read 1°, 185 ; referred to Select Committee, 188; Report brought up, 254; read 2°, committed, reported with an amendment, and report adopted, 331; read 3°, passed and sent to Council, 337 ; returned without amendment, 373 ; assent reported, 424.	8	829
GLENMORE ROAD, PADDINGTON :—		
LOW-LYING LAND NEAR :—		
Motion made (*Mr. Neild*) for the resumption of, by the Government, and withdrawn, 413.		
GOLDRICK, CONSTABLE (See "POLICE")		
GORDON TRAMWAY (See "WILLOUGHBY AND GORDON TRAMWAY BILL")		
GOULBURN (See "WATER SUPPLY" also "RAILWAYS" also "FIRE BRIGADES BOARD" also "ST. SAVIOUR'S GLEBE LAND LEASING BILL")		
GOULD, MR. ALBERT JOHN :—		
Appointed Deputy Chairman of Committees for this day only, 111.		
Proposed as Chairman of Committees, 144, 390.		
GOVERNMENT :—		
ADVERTISEMENTS IN NEWSPAPERS :—		
Motion made (*Mr. Abigail*) for returns showing amount paid for, from 1881 to 1885, 47; Return to Order laid on Table, 74	8	1099
ASYLUMS (See "ASYLUMS")		
BANKING ACCOUNT WITH BANK OF ENGLAND :—		
Motion made (*Mr. Burns*) for a copy of, from the floating of the Loan for £5,500,000 to date, 133; Return to Order laid on Table, 248	3	977
BUSINESS :—		
Sessional Order passed, 45, 222.		
Precedence of, on private day, 53, 62, 155, 377, 378.		
Do on Tuesdays, 222.		
Additional Sitting Day, Monday, 539.		
CABLEGRAMS :—		
Motion made (*Mr. Neild*) for return of amounts paid for transmission to and from the Agent-General, 137 ; Return to Order, laid on Table, 301	7	993
CRANES AT NEWCASTLE :—		
Return to Order (*Session* 1883-4) laid on Table, 20	4	1033
IRONWORK REQUIRED BY :—		
Motion made (*Mr. Davies*) that all constructive ironwork used in the building of bridges, rolling stock, locomotives, motors, dredges, &c., required by the Government, be manufactured in the Colony, and amended, 413.		
MEDICAL OFFICERS :—		
Motion made (*Mr William Clarke*), for a Return showing all duties and emoluments attached to, with the names of the present incumbents of the officers, 309 ; Return to Order, laid on Table, 523	2	587
MEDICAL SERVICES TO :—		
Motion made (*Mr. Slattery*) for a return of, performed during the current year by gentlemen not being salaried officers of the Government, giving details, 280.		
OFFICES :—		
Return of Rent paid for Buildings used as, laid on Table, 629	8	1087
POLICY—VOTE OF CENSURE :—		
Motion made (*Mr. Garvan*) that the policy of the Government is unsatisfactory to this House, and debate adjourned, 102 ; debate resumed, and motion carried on division, 108.		
PREMISES LEASED IN SYDNEY FOR PURPOSES OF :—		
Motion made (*Mr. Harold Stephen*) for a return showing, and at what rental, 464; Return (*in part*) to Order, laid on Table, 561; Further Return (*in part*) to Order, laid on Table, 576	8	1081, 1085
PRINTING OFFICE—LIST AND DESCRIPTION OF WORK AT :—		
Return to Order (*Session* 1883-4) for 1884, laid on Table, 74	2	819
PRINTING OFFICE—RETIREMENT OF MR. P. MCDONAGH FROM :—		
Motion made (*Mr. Davies*) for copies of all correspondence, &c., having reference to, and his subsequent appointment to the Dispatch Branch of the Educational Department, 558 ; Return to Order, laid on Table, 656	2	477
SAVINGS BANK :—		
Statement of Accounts for the year 1885, laid on Table, 128	3	1023
Amended Regulations, laid on Table, 142	3	1025

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
G		
GOVERNMENT (*continued*) :—		
SHIPPING OFFICE :—		
Motion made (*Mr. Burns*) for a return showing the number, gross and net tonnage, shipping fees paid by, and names of owners of all colonial steamers who shipped their crews through, 232 ; Return to Order laid on Table, 402	8	1091
STATISTICIAN :—		
Motion made (*Mr. Abigail*) for copies of all applications for the position of, together with copies of the recommendations in favour of Mr. Coghlan, 401 ; Return to Order, laid on Table (not printed), 469.		
Ministerial Statement made by Sir Patrick Jennings in reference to the establishment of the Department, 485.		
STEAMERS IN PORT JACKSON :—		
Return of particulars respecting, laid on table (not printed), 618 ; ordered to be printed, 643 ...	8	1097
GOVERNMENT RAILWAYS BILL :—		
Motion made (*Mr. Lyne*), for Committee of the Whole, 361 ; Message from Governor recommending, 444 ; House in Committee and resolution agreed to, 445 ; presented and read 1°, 453 ; motion made for, 2°, and debate adjourned, 598 ; Order of the Day discharged and Bill withdrawn, 653.		
GOVERNOR :—		
Proclamation of, opening Parliament, 1.		
Opening Speech, 8 ; Address in reply to Opening Speech of, 9, 10, 13, 16, 20, 24, 27, 37, 40, 41, 43 ; Reply to Address, 43.		
Appointment of the Right Honorable Baron Carrington, Message No. 1, 63 ; Message taken into consideration and Address in acknowledgment adopted, 67 ; Reply to Address, 71	2	3, 5
Commission appointing The Right Honorable Baron Carrington, P.C., as, laid on Table, 65	2	1
Message from, on prorogation of Parliament, 660.		
Speech, proroguing Parliament, 660.		
MINISTERIAL ADVICE TO :—		
Sir Henry Parkes proceeding to move, as a matter of *Privilege*, that any advice tendered to the Crown to dissolve Parliament at the present time would be unjustifiable and deserving of censure,—Point of Order taken that the motion was not entitled to be regarded as *Privilege*, and sustained by Mr. Speaker, 110.		
GOWRIE-STREET, SOUTH SINGLETON :—		
Motion made (*Mr. Gould*) for copies of all papers, reports, plans, &c., referring to the application of the Borough Council for the opening of, removal of obstructions from, and the closing of, 253.		
GRAFTON (See "RAILWAYS" also "FIRE BRIGADES BOARD")		
GRAIN (See "SUPPLY")		
GRAMMAR SCHOOL (See "EDUCATION")		
GRANT OF MONEY (See "ROBERTSON THE HON. SIR JOHN, K.C.M.G.")		
GRAPE VINES AND GRAPES IMPORTATION PROHIBITION BILL (See "VINE DISEASES BILL") :—		
Motion made (*Mr. Dibbs*) for Committee of the Whole, 291 (For further proceedings see "Vine Diseases Bill.")		
GUARANTEES (See "FIDELITY GUARANTEES")		
GUNDAGAI (See "RAILWAYS")		
GUNNEDAH (See also "RESERVES") :—		
TRUSTEES OF WOLSELEY PARK :—		
Motion made (*Mr. Abigail*) for all correspondence respecting appointment of, and a statement showing receipts and disbursements, and meetings held by, 133.		
H		
HALLORAN, HENRY, ESQ., C.M.G. (See "CIVIL SERVICE")		
HALL, PATRICK (See "ADMINISTRATION OF JUSTICE")		
HANNAN, PATRICK (See "MINING")		
HANSARD (See "PARLIAMENT")		
HARBOURS AND RIVERS :—		
Copy of Notes and Minutes of Sir John Coode, touching his requirements respecting certain, laid on Table, 291	4	961
Report of Engineer-in-Chief for, on Dredging Operations, laid on Table, 633	4	967
HARTLEY DISTRICT (See "ROADS")		
HASSALL, MR. THOMAS HENRY :—		
Return of Writ for The Gwydir, certifying to election of, reported, 335 ; sworn, 347.		
HAWKESBURY RIVER (See "RAILWAYS")		
HAYES AND M'FADDEN'S CONTRACT, NYNGAN :—		
Motion made (*Mr. Abigail*) for particulars of, especially in reference to an accident to J. L. M'Callum through the burning instead of chopping down trees, 188 ; Return to Order laid on Table (not printed), 216.		
Motion made (*Mr. Abigail*) for copies of all correspondence, &c., in reference to the accident to J. L. M'Callum, during the execution of, 294 ; Return to Order, laid on Table, 350	7	751
HAY GAS BILL :—		
Petition presented (*Mr. R. B. Wilkinson*) for leave to bring in, 69 ; leave given, presented and read 1°, 80 ; referred to Select Committee, 89 ; Report brought up, 178 ; Order of the Day postponed, 229 ; read, 2°, committed, reported without amendment, and report adopted, 241 ; read 3°, passed, and sent to Council, 245 ; returned with admendments, 305 ; one amendment disagreed to, and all the other amendments agreed to, 332 ; Message to Council, 338 ; Council insists on its amendment disagreed to, 354 ; disagreement to Council's amendment not insisted upon, 399 ; assent reported, 424.	8	835
Petition in favour of, from the Municipal Council of Hay, presented, 69	8	841
HEALTH :—		
BOARD OF :—		
Report of Medical Inspector on Dengue Fever, laid on Table, 51	4	609
Report of, upon an Outbreak of Typhoid Fever in Municipal District of Leichhardt, laid on Table, 223	4	585

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
H		
HEYDON, THE HONORABLE LOUIS FRANCIS :—		
Accepted Office as Minister of Justice, Seat as Member for Yass Plains declared vacant, 72; issue and return of Writ reported, sworn, 73; resignation of, as Minister of Justice, announced, 90.		
HIGH SCHOOLS (See "EDUCATION")		
HOLT, EDWARD BROWN (See "ADMINISTRATION OF JUSTICE")		
HOMEBUSH-WARATAH (See "RAILWAYS")		
HOMESTEAD LEASES (See "CROWN LANDS")		
HONORABLE WITHIN THE COLONY OF NEW SOUTH WALES :—		
Motion made (*Mr Abbott*) for copy of all Despatches referring to the use of the term, 257; Return to Address, laid on Table, 301	2	9
HORNSBY JUNCTION (See "RAILWAYS")		
HORTON, MR. THOMAS (See "MINING")		
HOSKINGS, ENGINEER (See "TRAMWAYS")		
HOSKINGTOWN (See "ROADS")		
HOSPITAL (See also "INSANE" also "PRINCE ALFRED HOSPITAL ACTS AMENDMENT BILL") :—		
COAST, LITTLE BAY :—		
Report for 1884, laid on Table, 469	2	575
Do 1885, do 469	2	581
HOUGH, MR. HENRY ARTHUR :—		
Petition from, that he has been put to trouble, litigation, and expense, through having to defend two Supreme Court actions for trespassing upon land which he had selected on Tarramiah Run, which land had been surveyed before selection, and praying that justice may be done to him, presented, 240; motion made (*Mr. McCulloch*) that the Petition be referred to a Select Committee, 313; Report brought up, 378; Motion made (*Mr. McCulloch*) that the Report be adopted, 448; amendment moved and debate adjourned, 449; Order of the Day, postponed, 504, 572, 658.	5 5	241 243
HUDSON BROTHERS (See "RAILWAYS")		
HUNTAWONG (See "CROWN LANDS")		
HUNTER RIVER DISTRICT (See "WATER SUPPLY")		
I		
ILLAWARRA (See "RAILWAYS")		
ILLAWARRA STEAM NAVIGATION ACT AMENDMENT BILL :—		
Petition presented (*Mr. Henry Clarke*) for leave to bring in, 479; leave given, presented and read 1°, 483; referred to Select Committee, 489; Report brought up, 500; Order of the Day postponed, 572, 658.	8	843
IMMIGRATION :—		
Further Returns to Address laid on Table—Steam-ships "Aberdeen," 13, 205; "Belgic," 13; "Florida," 74; "Parthia," 111; "Cuzco," 169; "Port Victor" and "Energia," 453; "Port Pirie," 606	2	833
Report of Agent on complaint as to hiring Immigrants per s.s. "Parthia," laid on Table, 74	2	867
Report from Agent, for 1885, laid on Table, 128	2	827
CHINESE :—		
Return respecting, laid on Table, 111	2	869
IMPORTED STOCK ACTS :—		
Regulation, laid on Table, 27, 593	6	35, 37
INCOME TAX :—		
Resolution affirming desirableness of imposing, reported from Committee of Ways and Means, 306; Resolution received, 309; read 2°, and agreed to, 310.		
INCOME TAX BILL :—		
Ordered (*Sir Patrick Jennings*), founded on resolution of Ways and Means, No. 10, presented and read 1°, 469; Message from the Governor recommending, 470; motion made for 2°, and debate adjourned, 490; debate resumed, read 2°, 496; committed, 497; further considered in Committee, 508, 511, 515; Order of the Day discharged and Bill withdrawn, 653.		
INDEMNITY (See "UNAUTHORIZED EXPENDITURE INDEMNITY BILL")		
INDIAN AND COLONIAL EXHIBITION (See "EXHIBITION")		
INDOOR WORKERS (See "WORKING CLASSES")		
INDUSTRIAL SKILL OF PRISONERS (See "ADMINISTATION OF JUSTICE")		
INEBRIATE ASYLUM :—		
Petition from residents of Sydney and Suburbs urging the necessity for the establishment of, presented, 359	8	1235
Petition from residents of Hartley and surrounding District, with similar prayer, presented, 555	8	1237
INFANTRY (See "VOLUNTEERS")		
INFIRM AND DESTITUTE (See "ASYLUMS")		
INSANE :—		
Report of Dr. Tucker on the Hospitals for, visited by him under the circular letter of the Colonial Secretary, laid on Table, 107	2	535
Annual Report of the Inspector-General, for 1885, laid on Table, 198	2	493
INSCRIBED STOCK ACT :—		
Third Report on Creation, Inscription, and Issue of Stock under, laid on Table, 74	3	781
INSPECTORS OF CONDITIONAL PURCHASES (See "CROWN LANDS")		
INTERMENT OF THE DEAD (See "CEMETERIES REGULATION BILL")		
INTERNATIONAL EXHIBITION (See "CENTENARY OF THE COLONY")		
INTERPRETER (See "ORIENTAL INTERPRETER")		
INTERRUPTION :—		
Of Business of the House, 13, 100, 609, 656.		
INVERELL (See "CROWN LANDS" also "RAILWAYS" also "ADMINISTRATION OF JUSTICE")		
INVERELL CHURCH OF ENGLAND LAND SALES BILL :—		
Petition presented (*Mr. Abbott*) for leave to bring in, 295; leave given, presented and read 1°, 299; referred to Select Committee, 313; Report brought up, 367; read 2°, committed, reported without amendment, and report adopted, 426; read 3°, passed and sent to Council, 433; returned with amendments, 528; amendments agreed to, 572-3; assent reported, 599.	8	849

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
I		
IRON COLUMNS (See "TELEGRAPHS")		
IRON-WORK REQUIRED BY THE GOVERNMENT:—		
Motion made (*Mr. Davies*) that all constructive iron-work used in the building of bridges, rolling stock, locomotives, motors, dredges, &c., be manufactured in this Colony, and amended, 413.		
J		
JENNINGS, THE HON. SIR PATRICK ALFRED, K.C.M.G.:—		
Statement made by, as to steps taken by him towards the formation of a new Administration, 123.		
Ministerial statement made by, 127, 160, 315, 343, 385, 474, 485, 503, 523, 532, 602.		
Formation of new Administration by, announced, 125; accepted office as Colonial Treasurer, seat as a Member for The Bogan, declared vacant, 125; issue and return of writ reported, sworn, 127.		
JENNINGS, MR. W. H. (See "QUARRY")		
JERVIS BAY (See "RAILWAYS")		
JUDGMENT CREDITORS REMEDIES EXTENSION BILL:—		
Motion made (*Mr. Levien*) for leave to bring in, 61.		
JUDGMENT CREDITORS REMEDIES EXTENSION BILL (No. 2):—		
Motion made (*Mr. Williamson*) for leave to bring in, presented and read 1°, 398; Order of the Day postponed, 425; read 2°, committed, and no quorum reported from Committee of the Whole and House counted out, 466.		
JUNEE (See "RAILWAYS")		
JUVENILE OFFENDERS (See "ADMINISTRATION OF JUSTICE")		
K		
KAHIBAH (See "MINING")		
KAROOLA RUN (See "CROWN LANDS")		
KEMPSEY (See "ADMINISTRATION OF JUSTICE")		
KENT, JOHN S. (See "ROADS")		
KIAMA (See "RAILWAYS")		
KIAMA TRAMWAY ACT AMENDMENT BILL:—		
Petition presented (*Mr Tarrant*) for leave to bring in, 601; leave given, 613.		
KIANDRA (See "ROADS")		
KINGSBURY, MR. H. H. (See "ELECTRIC LIGHT IN PARLIAMENTARY BUILDINGS")		
KISS'S GEORGE-STREET PROPERTY BILL:—		
Received from Legislative Council and read 1°, 461; Order of the Day postponed, 473; read 2°, committed, reported without amendment, and report adopted, 572; read 3°, passed, and returned to Council without amendment, 581; assent reported, 611.		
KITE'S LEASING BILL:—		
Petition presented (*Mr. Suttor*) for leave to bring in, 16; leave given and read 1°, 48; referred to Select Committee, 51; Report brought up, 69; read 2°, committed, reported without amendment, and report adopted, 83; read, 3°, passed, 89; sent to Council, 90; returned without amendment, 134; assent reported, 158.	8	855
L		
LAMBTON COLLIERY (See "NEW LAMBTON COLLIERY COMPANY")		
LAND (See "CROWN LANDS"; also "SETTLED ESTATES BILL")		
LANDING SURVEYOR, CUSTOMS DEPARTMENT:—		
Motion made (*Mr. Ives*) for copies of all matters referred to, and his decisions thereon, 378; Return to Order, laid on Table, 453	2	423
LAND OFFICES (See "CROWN LANDS")		
LANDS ACT AMENDMENT BILL:—		
Motion made (*Mr. Copeland*) for Committee of the Whole, 651; House in Committee, resolution agreed to, presented and read 1°, 657.		
LANDS DEPARTMENT:—		
Report for 1884, laid on Table, 27	5	1
Report of number of Draftsmen and Clerks employed under Surveyor-General on 14 May, 1886, laid on Table, 245	2	451
Return of Payments to Permanent Officers during 1884 and 1885, and part of 1886, over and above the amounts voted as Salaries, laid on Table, 261, 301	5	77, 81
LANDS FOR PUBLIC PURPOSES ACQUISITION ACT (See also "RESUMPTION OF LAND"):—		
NOTIFICATIONS OF RESUMPTIONS UNDER, LAID ON TABLE:—		
Abstract of, for Public Parks, 68	6	143
For Public School purposes, 15, 74, 102, 128, 220, 291, 350, 385, 402, 478, 496, 592, 633, 651	4	407
For Sewerage purposes, 367	6	1031
For approach to the "Spit" Ferry, Middle Harbour, 507	7	749
LAND TAX BILL (See also "WAYS AND MEANS")		
Resolution reported from Ways and Means and agreed to, 292; Ordered (*Sir Patrick Jennings*) founded on Resolution of Ways and Means, presented and read 1°, 292; Order of the Day discharged and Bill withdrawn, 301.		
LAND TAX BILL (No. 2):—		
Motion made (*Sir Patrick Jennings*) that Resolution of Ways and Means be now read, Resolution read, Bill presented and read 1°, 301; motion made for 2° and debate adjourned, 445; debate resumed and Bill read 2°, 454; Message from Governor recommending, 457; committed, 462, 470, 474 (2); reported with amendments and report adopted, 474; recommitted, reported 2° with further amendments, and report adopted, 479; read 3°, passed, and sent to Council, 530.	3	1071
PETITION PRESENTED FROM:—		
Landholders and others in the Hume electorate, that the Bill will if passed operate as a tax upon energy, industry, and perseverance, and praying that it be not passed, 462	3	1073

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
L		
LAWRENCE (See "RAILWAYS")		
LEASES OF SETTLED LAND (See "SETTLED ESTATES BILL")		
LEAVE OF ABSENCE (See "CIVIL SERVICE")		
LECTURES AT THE TECHNICAL COLLEGE:—		
Motion made (*Dr. Wilkinson*) for return showing names of lecturers and salaries given, 56; Return to Order, laid on Table, 74	4	267
LEGISLATIVE COUNCIL:—		
Committee appointed to inspect Journals of, as to proceedings on Sydney Corporation Act Amendment Bill, and to report,—reported, Report read by Clerk and received, 240.		
LEICHHARDT (See also "MUNICIPAL" also "RESERVES"):—		
OUTBREAK OF TYPHOID FEVER AT:—		
Report of the Board of Health upon, laid on Table, 223	4	585
LESLEY, MR. W. A. (See "CIVIL SERVICE")		
LEVIEN, MR. ROBERT HENRY:—		
Motion made (*Mr. Chanter*) that the conduct of, an honorable member for Tamworth, as detailed to the House, is a breach of privilege—motion, by leave, withdrawn, and apology made to the House by, 134.		
LIBEL (See "DEFAMATION ACT AMENDMENT BILL")		
LIBRARY COMMITTEE:—		
Sessional Order passed, 47.		
Names added to, 142.		
LICENSING ACT:—		
CONVICTIONS UNDER:—		
Further Return (*in part*) to Order (*Session* 1883-4), laid on Table, 116	4	715
Do do do 507	4	717
"VICTORIA PARK HOTEL":—		
Correspondence, &c. respecting the granting of a certificate for, laid on Table (not printed), 613; ordered to be printed, 633	2	891
LICENSING ACTS AMENDMENT BILL:—		
Motion made (*Mr. Olliffe*) for Committee of the Whole, 137; Order of the Day postponed, 146, 189; Order of the Day discharged, 240.		
LIFE-BOAT:—		
Return to Order (*Second Session*, 1885) laid on Table, 8	4	1075
LIGHTHOUSE ON SMOKY CAPE:—		
Motion made (*Mr. Kethel*) for Committee of the Whole, to consider resolutions in favour of the erection and maintenance of, 293; Order of the Day postponed, 317, 367; House in Committee, resolutions reported and agreed to, 426.		
Petitions from Shipowners, Shipmasters, Seamen, and others, interested in the shipping trade, in favour of, presented, 313, 359	4	1087, 1089
LITHGOW COLLIERY DISASTER:—		
Motion made (*Mr Abigail*) for copies of all correspondence &c., having reference to the mode of conducting the Inquiry into, 256; Return to Order, laid on Table (not printed), 444.		
Report from the Royal Commission on Collieries on, laid on Table, 388	5	671
Copy of Commission issued in connection with, laid on Table, 558	5	1053
LITTLE BAY (See "HOSPITAL")		
LIVE STOCK AND AGRICULTURE:—		
Return of, for the year ended 31st March, 1886, laid on Table, 233	6	25
LOAN BILL (See "PUBLIC WORKS LOAN BILL")		
LOAN ESTIMATE ("See "FINANCE")		
LOANS (See "FINANCE"; also "RAILWAYS"; also "SYDNEY TOWN HALL AND STREETS MUNICIPAL LOAN BILL")		
LOCAL OPTION:—		
Return showing result of Vote taken in the Metropolitan District, 1885, laid on Table, 185	2	877
Return showing result of Vote taken in the Metropolitan Suburban Municipalities in 1885, laid on Table, 185	2	879
Petition from League and others in favour of full local option, presented and read by Clerk, 13	2	881
Do do do do do 633	2	883
Do R. M'Kinnon, Moderator of the General Assembly of the Presbyterian Church, in favour of, presented, 134	2	885
Petition from Residents of Sydney and Newcastle and suburbs against the extension of the principle, presented, 193	2	887
LORD HOWE ISLAND (See "ARMSTRONG, CAPTAIN")		
LORD, THE LATE MR. EDWARD (See "CAREENING COVE")		
LOW-LYING LAND (See "GLENMORE ROAD, PADDINGTON")		
LYNE, THE HON. W. J.:—		
Accepted office as Secretary for Public Works, seat as a Member for The Hume declared vacant, 125; issue and return of writ reported, sworn, 127.		
M		
MACKINNON, MR. J. A. (See "ELECTORAL")		
MACKRELL, ROBERT (See "CROWN LANDS")		
MACQUARIE-STREET GATEWAY (See "GARDEN PALACE GROUNDS")		
MAGISTRATES (See "ADMINISTRATION OF JUSTICE")		
MAIL SERVICES (See "POSTAL")		
MAITLAND (See "WEST MAITLAND COURT-HOUSE")		
MANDURAMA CREEK (See "BRIDGES")		
MANLY (See "QUARRY")		
MANUFACTURE IN THIS COLONY OF IRONWORK:—		
Motion made (*Mr. Davies*) in favour of, used in the building of bridges, rolling stock, locomotives, motors, &c., &c., required by the Government and amended, 413.		
MARRAR RUN (See "RESERVES")		
MARRIED WOMEN'S PROPERTY ACT AMENDMENT BILL:—		
Received from Council and read 1°, 291; Order of the Day postponed, 309, 333, 372, 399; read 2°, committed, reported without amendment, and report adopted, 466; read 3°, passed, and returned to Council without amendment, 472; assent reported, 501.		
MARINE SURVEYS (See "ABUSES IN CONNECTION WITH THE SHIPPING OF NEW SOUTH WALES")		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
M		
MARSHALL ISLANDS :—		
Despatch notifying German annexation of the, laid on Table, 164	2	225
MARYVILLE COLLIERY COMPANY RAILWAY BILL :—		
Petition presented (*Mr. G. A. Lloyd*) for leave to bring in, 107; leave given, 112; presented and read 1°, 116; referred to Select Committee, 119; names added to Select Committee, 146; Report brought up, 207; read 2°, committed, reported without amendment, and report adopted, 241; read 3°, passed, and sent to Council, 245; returned with amendment, 285; amendment agreed to, 296; assent reported, 360.	8	869
MATRIMONIAL CAUSES (See "DIVORCE EXTENSION BILL" also "DIVORCE PROCEDURE AMENDMENT BILL")		
MAYOR, ELECTION OF (See "SYDNEY CORPORATION ACT AMENDMENT BILL No. 2")		
M'CALLUM, J. L. (See "ROADS")		
McDONAGH, MR. (See "CIVIL SERVICE")		
McINTOSH, EVAN (See "CROWN LANDS")		
McIVOR, MATTHEW (See "MINING")		
McLAUGHLIN ESTATE BILL :—		
61st Standing Order suspended to admit of presentation of petition, 135; petition presented (*Mr. Abigail*) for leave to bring in, 169; leave given, presented and read 1°, 172; referred to Select Committee, 185; Report brought up, 200; read 2°, committed, reported with amendment, and report adopted, 257; read 3°, passed, and sent to Council, 260.	8	863
MECHANICS SCHOOL OF ARTS (See "SYDNEY MECHANICS SCHOOL OF ARTS INCORPORATION BILL")		
MEDICAL OFFICERS OF THE GOVERNMENT.—		
Motion made (*Mr. William Clarke*) for a return giving a list of the duties and emoluments of, with the names of the incumbents of the offices, 309; Return to Order, laid on Table, 523	2	587
MEDICAL PRACTITIONERS BILL :—		
Motion made (*Mr. Tarrant*) for Committee of the Whole, 185; House in Committee, no quorum reported, and House counted out, 189.		
Motion made (*Mr. Tarrant*) for Committee of the Whole, 204; House in Committee and resolution reported, 211; resolution agreed to, presented and read 1°, 212; Message from Governor recommending, 276; Order of the day postponed, 278; motion made for 2°, and debate adjourned, 296; read 2°, and committed, 399; further considered in Committee, 502, 571; reported with amendments, and report adopted, 571; Order of the Day, postponed, 583 (2); read 3°, passed and sent to Council, 583.	8	1239
Petition from Sydney and suburbs, that they view the Bill with apprehension, and are opposed to it, presented, 394	8	1241
MEDICAL SERVICES TO GOVERNMENT :—		
Motion made (*Mr. Slattery*) for a return of, during the current year, by gentlemen not being salaried officers of the Government, giving details, 280.		
MEETING OF THE HOUSE :—		
Sessional Order passed, 45.		
MELVILLE, MR. (See "PRIVILEGE")		
MEMBERS (See also "PAYMENT OF MEMBERS OF THE LEGISLATIVE ASSEMBLY")		
Commission to administer Oath to, received and read by Clerk, 4, 7, 49.		
Sworn, 4, 7, 8, 13, 17, 21, 73, 100, 127, 246 (2), 347, 359.		
Named by Speaker, 440.		
Named by Deputy Speaker, 656.		
Attendances of, in Divisions and Counts-out	1	667
MEREWETHER (See "MUNICIPAL")		
MEREWETHER, Mr. E. C. (See "MINING")		
MEREWETHER "VERNON" BOYS :—		
Motion made (*Mr. Ollif'e*) for all papers and correspondence relative to case of, in respect to property to which it is stated they are entitled, 214; Return to Order, laid on Table, 284	4	583
MESSAGES :—		
FROM COMMISSIONERS :—		
On opening Parliament, 3.		
TRANSMISSION OF, BETWEEN THE TWO HOUSES :—		
Sessional Order passed, 46.		
FROM THE LIEUTENANT-GOVERNOR :—		
Requesting attendance of House in Council Chamber, 8.		
No. 1. Mail Service between Sydney and San Francisco, 53	7	957
2. Postal Contract with the Orient Steam Navigation Company, 53	7	983
3. Estimates for 1886, and Supplementary Estimates for 1885 and previous years, 61	3	1
FROM THE GOVERNOR :—		
No. 1. Appointment of the Right Honorable Baron Carrington, 63, 67	2	3, 5
2. Vote of Credit (January), 74	3	1047
3. Assent to Consolidated Revenue Fund Bill, 88.		
4. Withdrawal of Estimates for 1885-6, 89	3	181
5. Estimates for 1886, and Supplementary Estimates for 1885 and previous years, 90	3	183
6. Vote of Credit (February), 111	3	1049
7. Assent to Bodalla Estate Bill, 115		
8. Assent to Consolidated Revenue Fund Bill (No. 2), 123.		
9. Regulation of Factories and Workshops Bill, 134.	4	619
10. Vote of Credit (March), 134	3	1051
11. Postal Contract with the Orient Steam Navigation Company, 142	7	985
12. Postal Communication between Sydney and San Francisco, *via* Auckland and Honolulu, 142	7	959
13. Civil Service Act Amendment Bill, 146.	2	487
14. Assent to Consolidated Revenue Fund Bill (No. 3), 157.		
15. Assent to Kite's Leasing Bill, 158.		
16. Withdrawal of Estimates for 1885-6, 165.	3	363
17. Estimates for 1886 and Supplementary Estimates for 1885 and previous years, 165	3	365
18. Vote of Credit (April), 198	3	1053
19. Assent to Consolidated Revenue Fund Bill (No. 4), 205		
20. Mail Communication between Great Britain and Australia, *viâ* Suez, 216.	7	933
21 Assent to Moore Estate Act Amendment Bill, 230.		
22. Stamp Duties Act Amendment Bill, 261	3	1065
23. Vote of Credit (May), 261	3	1055
24. Prickly Pear Destruction Bill, 262.	6	65
25. Medical Practitioners Bill, 276	8	1239
26. Assent to Consolidated Revenue Fund Bill (No. 5), 276.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
M		
MESSAGES (*continued*) :—		
FROM THE GOVERNOR (*continued*) :—		
No. 27. Assent to St. Mary's Waverley Church of England Land Sale Bill, 277.		
28. Assent to Board's Settlement Bill, 277.		
29. Assent to Newcastle Steamship Company's Preferential Shares Bill, 277.		
30. Assent to Bank of New South Wales Acts Amendment Bill, 300.		
31. Customs Duties Bill, 318	3	1091
32. Vote of Credit (June), 326	3	1057
33. Assent to Consolidated Revenue Fund Bill (No. 6), 359.		
34. Assent to Wyatt Estate Leasing Bill, 359.		
35. Assent to Muswellbrook Cattle Sale-yards Bill, 360.		
36. Assent to Maryville Colliery Company Railway Bill, 360.		
37. Assent to Ashfield Church of England School Bill, 360.		
38. Assent to Pringle's Estate Mortgaging Bill, 360.		
39. Assent to Moorebank Estate Bill, 360.		
40. Assent to Sisters of Charity Estate Bill, 360.		
41. Assent to Randwick Church Land Sale Bill, 361.		
42. Stamp Duties Act Amendment Bill (No. 2), 361	3	1067
43. Sir John Robertson Grant Bill, 368	3	1077
44. Newcastle Sand-drift Reclamation Bill, 395	8	1147
45. Vote of Credit (July), 402	3	1059
46. Assent to Consolidated Revenue Fund Bill (No. 7), 423.		
47. Assent to Sir John Robertson Grant Bill, 423.		
48. Assent to Prickly Pear Destruction Bill, 423.		
49. Assent to Glen Innes Markets Leasing Bill, 424.		
50. Assent to Bishopscourt Sale and Leasing Bill, 424.		
51. Assent to Hay Gas Bill, 424.		
52. Assent to Balmain Tramway Bill, 424.		
53. Assent to Bell's Estate Bill, 424.		
54. Patents and Designs Bill, 434	8	1145
55. Vine Diseases Bill, 440	8	1149
56. Government Railways Bill, 444	7	673
57. Stamp Duties Act Amendment Bill (No. 3), 457	3	1069
58. Land Tax Bill (No. 2), 457	3	1071
59. Assent to Trustee Act Amendment Bill, 464.		
60. Assent to Municipal Gas Act Amendment Bill, 465.		
61. Assent to Net-fishing in Port Hacking Prohibition Bill, 465.		
62. Assent to St. Stephen's Church of England Parsonage Camperdown Land Sale Bill, 465.		
63. Income Tax Bill, 470	3	1075
64. Assent to Randwick Cemetery Unused Lands Sale Bill, 478.		
65. Assent to Mrs. Payten's Estate Leasing Bill, 478.		
66. Assent to Ennis Estate Bill, 479.		
67. Vote of Credit (August), 479	3	1061
68. Assent to Stamp Duties Act Amendment Bill (No. 3), 501.		
69. Assent to Married Women's Property Act Amendment Bill, 501.		
70. Assent to Employers Liability Bill, 501.		
71. Assent to Uther Estate Leasing Bill, 501.		
72. Assent to Parramatta Church School Bill, 501.		
73. Assent to St. James's School Compensation Trust Bill, 501.		
74. Assent to West Wallsend and Monk-Wearmouth Railway Bill, 502.		
75. Assent to Consolidated Revenue Fund Bill (No. 8), 505.		
76. Additional Stipendiary Magistrate Bill, 507	4	905
77. Noxious Trades Sites Bill, 512	4	621
78. Assent to Divorce Procedure Amendment Bill, 525.		
79. Assent to Cooma Church of England Parsonage Bill, 540.		
80. Assent to Parramatta Public Baths Bill, 540.		
81. Assent to Bowenfels Coal-mining and Copper-smelting Company's Railway (Sale and Vesting) Bill, 540.		
82. Assent to Sydney Town Hall and Streets Municipalities Loan Bill, 555.		
83. Assent to Bird Estate Bill, 556.		
84. Civil Service Bill, 556	2	491
85. Centenary of the Colony, 559	8	1141
86. Assent to Commons Regulation Act Amendment Bill (No. 3), 569.		
87. Assent to Public Vehicles Regulation Act Amendment Bill, 569.		
88. Vote of Credit (September), 576	3	1063
89. Assent to Customs Duties Bill, 588.		
90. Assent to Australian Joint Stock Bank Act Amendment Bill, 588.		
91. Assent to Consolidated Revenue Fund Bill (No. 9), 595.		
92. Assent to Dairies Supervision Bill, 599.		
93. Assent to Bennett's Railway Bill, 599.		
94. Assent to Inverell Church of England Land Sales Bill, 599.		
95. Additional Estimates for 1886, 607	3	563
96. Assent to Places of Detention Bill, 611.		
97. Assent to Armstrong's Settlement Bill, 611.		
98. Assent to Kiss's George-street Property Bill, 611.		
99. Assent to Silverton Tramway Bill, 628.		
100. Assent to Mudgee Gaslight and Coke Company's Bill, 628.		
101. Assent to Newcastle Sand-drift Reclamation Bill, 628.		
102. Assent to Crown Lands Titles and Reservations Validation Bill, 628.		
103. Assent to Settled Estates Bill, 629.		
104. Civil Service Act Amendment Bill (No. 2), 629	2	489
105. Loan Estimate for 1886, 643	3	573
106. Assent to Vine Diseases Bill, 659.		
107. Assent to Municipalities Act Amendment Bill, 659.		
108. Assent to Defamation Act Amendment Bill, 659.		
109. Assent to Civil Service Act Amendment Bill (No. 2), 659.		
110. Assent to Penrith Water and Gas Supply Bill, 660.		
111. Assent to Sydney Mechanics School of Arts Incorporation Bill, 660.		
Requesting attendance of the House in the Legislative Council Chamber, 660.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6. | PAPERS. VOL. | PAGE.

M

MESSAGES (*continued*) :—
FROM ASSEMBLY TO COUNCIL :—
Transmitting Consolidated Revenue Fund Bill, 81.
Kite's Leasing Bill, 90.
Trustee Act Amendment Bill, 98.
Cornwell's Estate Bill, 98.
Consolidated Revenue Fund Bill (No. 2), 113.
Do do do (No. 3), 136.
Uther Estate Leasing Bill, 154.
St. Mary's Waverley Church of England Land Sale Bill, 154.
Balmain Tramway Bill, 197.
Newcastle Steamship Company's Preferential Shares Bill, 197.
Consolidated Revenue Fund Bill (No. 4), 200.
Defamation Act Amendment Bill, 214.
Sydney Corporation Act Amendment Bill, 214.
Board's Settlement Bill, 215.
Wyatt Estate Leasing Bill, 215.
Muswellbrook Cattle Sale-yards Bill, 215.
Barker's Estate Bill, 216.
Employers Liability Bill, 244.
Maryville Colliery Company Railway Bill, 245.
West Wallsend and Monk-Wearmouth Railway Bill, 245.
Hay Gas Bill, 245.
Ashfield Church of England School Bill, 245.
McLaughlin Estate Bill, 260.
Net-fishing in Port Hacking Prohibition Bill, 260.
Pringle's Estate Mortgaging Bill, 260.
Consolidated Revenue Fund Bill (No. 5), 292.
Stamp Duties Act Amendment Bill, 284.
Prickly Pear Destruction Bill, 294.
Moorebank Estate Bill, 299.
Sisters of Charity Estate Bill, 300.
Randwick Church Land Sale Bill, 300.
Bishopscourt Sale and Leasing Bill, 337.
Glen Innes Markets Leasing Bill, 337.
Bell's Estate Bill, 337.
Municipal Gas Act Amendment Bill, 357.
Consolidated Revenue Fund Bill (No. 6), 340.
Stamp Duties Act Amendment Bill (No. 2), 367.
Sir John Robertson Grant Bill, 384.
St. Stephen's Church of England Parsonage Camperdown Land Sale Bill, 402.
Consolidated Revenue Fund Bill (No. 7), 421.
Randwick Cemetery Unused Lands Sale Bill, 432.
Mrs. Payten's Estate Leasing Bill, 432.
Parramatta Public Baths Bill, 433.
Parramatta Church School Bill, 433.
Inverell Church of England Land Sales Bill, 433.
Bowenfels Coal-mining and Copper-smelting Company's Railway (Sale and Vesting) Bill, 433.
St. James' School Compensation Trust Bill, 434.
Bennett's Railway Bill, 434.
Cooma Church of England Parsonage Bill, 440.
Commons Regulation Act Amendment Bill (No. 3), 444.
Stamp Duties Act Amendment Bill (No. 3), 461.
Sydney Town Hall and Streets Municipal Loan Bill, 462.
Newcastle Sand-drift Reclamation Bill, 464.
Vine Diseases Bill, 469.
Places of Detention Bill, 472.
Bird Estate Bill, 473.
Church and School Lands Dedication Act Amendment Bill, 478.
Consolidated Revenue Fund Bill (No. 8), 493.
Wollongong Public School Site Sale Bill, 493.
Australian Joint Stock Bank Act Amendment Bill, 507.
Crown Lands Titles and Reservations Validation Bill, 510.
Public Vehicles Regulation Act Amendment Bill, 510.
Noxious Trades Sites Bill, 526.
Customs Duties Bill, 530.
Land Tax Bill (No. 2), 530.
Silverton Tramway Bill, 581.
Mudgee Gaslight and Coke Company's Bill, 581.
Companies Act Amendment Bill, 581.
Consolidated Revenue Fund Bill (No. 9), 582.
Medical Practitioners Bill, 583.
Settled Estates Bill, 587.
Penrith Water and Gas Supply Bill, 587.
Blackfriars Estate Streets and Lanes Bill, 601.
Patents and Designs Bill, 602.
Regulation of Factories and Workshops Bill, 607.
Sydney Mechanics School of Arts Incorporation Bill, 618.
Civil Service Act Amendment Bill (No. 2), 639.
Public Works Loan Bill, 653.
Appropriation Bill, 653.
Returning, without amendment, Bodalla Estate Bill, 89.
Moore Estate Act Amendment Bill, 215.
Bank of New South Wales Acts Amendment Bill, 260.
Ennis Estate Bill, 434.
Married Women's Property Act Amendment Bill, 472.
Divorce Procedure Amendment Bill, 507.
Armstrong's Settlement Bill, 581.
Kiss's George-street Property Bill, 581.

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-86. | PAPERS. VOL. | PAGE.

M

MESSAGES (*continued*) :—
FROM ASSEMBLY TO COUNCIL (*continued*) :—
Returning, with amendments, Dairies Supervision Bill, 538.
Municipalities Act Amendment Bill, 628.
Agreeing to amendments in St. Mary's Waverley Church of England Land Sale Bill, 211.
Wyatt Estate Leasing Bill, 278.
Muswellbrook Cattle Sale Yards Bill, 295.
Maryville Colliery Company Railway Bill, 296.
Ashfield Church of England School Bill, 332.
Pringle's Estate Mortgaging Bill, 332.
Prickly Pear Destruction Bill, 395.
Trustee Act Amendment Bill, including amendment in the Title, 425.
Net Fishing in Port Hacking Prohibition Bill, including amendment in the Title, 427.
Municipal Gas Act Amendment Bill, 427.
West Wallsend and Monk-Wearmouth Railway Bill, 466.
Employers Liability Bill, 466.
Cooma Church of England Parsonage Bill, 503.
Parramatta Public Baths Bill, 503.
Bowenfels Coal-mining and Copper-smelting Company's Railway (Sale and Vesting) Bill, 504.
Sydney Town Hall and Streets Municipal Loan Bill, 524.
Commons Regulation Act Amendment Bill (No. 3) ; including amendment in Title, but verbally amending new clause, 541.
Public Vehicles Regulations Act Amendment Bill, 550.
Bennett's Railway Bill, 572.
Inverell Church of England Land Sales Bill, 573.
Vine Diseases Bill, 643.
Defamation Act Amendment Bill, 657.
Penrith Water and Gas Supply Bill, 657.
Disagreeing to one, and agreeing to the other amendments in Hay Gas Bill, 338.
Uther Estate Leasing Bill, 469.
Places of Detention Bill, 582.
Crown Lands Titles and Reservations Validation Bill, 597.
Agreeing to some and disagreeing to others of the amendments in Balmain Tramway Bill, 343.
Agreeing to, disagreeing to, and amending amendments in Newcastle Sand-drift Reclamation Bill, 606.
Not insisting on disagreements to amendments in Balmain Tramway Bill, 399.
Hay Gas Bill, 399.
Granting leave to a Member of the Assembly to appear and give evidence before a Select Committee of the Legislative Council, 515.
FROM COUNCIL TO ASSEMBLY :—
Transmitting Bodalla Estate Bill, 68.
Bank of New South Wales Acts Amendment Bill, 169.
Moore Estate Act Amendment Bill, 198.
Divorce Extension Bill, 249.
Married Women's Property Act Amendment Bill, 291.
Ennis Estate Bill, 291.
Divorce Procedure Amendment Bill, 374.
Dairies Supervision Bill, 374.
Cremation Bill, 445.
Kiss's George-street Property Bill, 461.
Municipalities Act Amendment Bill, 528.
Prince Alfred Hospital Acts Amendment Bill, 562.
Armstrong's Settlement Bill, 562.
Sydney Bishopric and Church Property Bill, 562.
Returning Consolidated Revenue Fund Bill, without amendment, 81.
Do do do (No. 2), without amendment, 121.
Kite's Leasing Bill, without amendment, 134.
Consolidated Revenue Fund Bill (No. 3), without amendment, 151.
St. Mary's Waverley Church of England Land Sale Bill, with amendment, 198.
Consolidated Revenue Fund Bill (No. 4), without amendment, 201.
Newcastle Steamship Company's Preferential Shares Bill, without amendment, 237.
Board's Settlement Bill, without amendment, 249.
Muswellbrook Cattle Sale-yards Bill, with amendment, 253.
Wyatt Estate Leasing Bill, with amendment, 254.
Consolidated Revenue Fund Bill (No. 5), without amendment, 265.
Maryville Colliery Company Railway Bill, with amendment, 285.
Ashfield Church of England School Bill, with amendment, 285.
Defamation Act Amendment Bill, with amendments, 285.
Balmain Tramway Bill, with amendments, 286.
Hay Gas Bill, with amendments, 305.
Pringle's Estate Mortgaging Bill, with amendments, 321.
Moorebank Estate Bill, without amendment, 344.
Sisters of Charity Estate Bill, without amendment, 344.
Randwick Church Land Sale Bill, without amendment, 344.
Net fishing in Port Hacking Prohibition Bill, with amendments, including an amendment in the Title, 344.
Trustee Act Amendment Bill, with amendments, including an amendment in the Title, 344.
Stamp Duties Act Amendment Bill, with amendments, 354.
Consolidated Revenue Fund Bill (No. 6), without amendment, 355.
Uther Estate Leasing Bill, with amendments, 361.
Bishopscourt Sale and Leasing Bill, without amendment, 373.
Glen Innes Markets Leasing Bill, without amendment, 373.
Bell's Estate Bill, without amendment, 374.
Prickly Pear Destruction Bill, with amendments, 374.
Municipal Gas Act Amendment Bill, with amendment, 375.

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-86.	PAPERS. VOL.	PAGE.
M		
MESSAGES (*continued*) :—		
FROM COUNCIL TO ASSEMBLY (*continued*) :—		
Returning West Wallsend and Monk-Wearmouth Railway Bill, with amendments, 375.		
Employers Liability Bill, with amendments, 409.		
Consolidated Revenue Fund Bill (No. 7), without amendment, 422.		
Sir John Robertson Grant Bill, without amendment, 422.		
St. Stephen's Church of England Parsonage Camperdown Land Sale Bill, without amendment, 441.		
Stamp Duties Act Amendment Bill (No. 2), with amendments, 445.		
Randwick Cemetery Unused Lands Sale Bill, without amendment, 461.		
Mrs. Payten's Estate Leasing Bill, without amendment, 461.		
St. James's School Compensation Trust Bill, without amendment, 473.		
Parramatta Church School Bill, with amendment, 473.		
Cooma Church of England Parsonage Bill, with amendments, 473.		
Parramatta Public Baths Bill, with amendments, 474.		
Bowenfels Coal-mining and Copper-smelting Company's Railway (Sale and Vesting) Bill, with an amendment, 474.		
Stamp Duties Act Amendment Bill (No. 3), without amendment, 479.		
Consolidated Revenue Fund Bill (No. 8), without amendment, 497.		
Wollongong Public School Site Sale Bill, with amendments, 515.		
Sydney Town Hall and Streets Municipal Loan Bill, with amendment, 515.		
Commons Regulation Act Amendment Bill (No. 3), with amendments including an amendment in the Title, 526.		
Places of Detention Bill, with amendments, 527.		
Bird Estate Bill, without amendment, 528.		
Inverell Church of England Land Sales Bill, with amendments, 528.		
Bennett's Railway Bill, with amendments, 531.		
Public Vehicles Regulation Act Amendment Bill, with amendments, 545.		
Australian Joint Stock Bank Act Amendment Bill, without amendment, 561.		
Customs Duties Bill, without amendment, 566.		
Newcastle Sand-drift Reclamation Bill, with amendments, 587.		
Consolidated Revenue Fund Bill (No. 9), without amendment, 592.		
Crown Lands Titles and Reservations Validation Bill, with amendments, 592.		
Vine Diseases Bill, with amendments, 609.		
Settled Estates Bill, without amendment, 613.		
Mudgee Gas-light and Coke Company's Bill, without amendment, 613.		
Silverton Tramway Bill, without amendment, 613.		
Sydney Mechanics School of Arts Incorporation Bill, without amendment, 642.		
Civil Service Act Amendment Bill (No. 2), without amendment, 651.		
Penrith Water and Gas Supply Bill, with amendments, 652.		
Appropriation Bill, without amendment, 656.		
Public Works Loan Bill, without amendment, 656.		
Insisting upon its amendment disagreed to, in Hay Gas Bill, 354.		
Balmain Tramway Bill, 388.		
Not insisting upon portion of amendment disagreed to in Uther Estate Bill, 479.		
Not insisting upon its amendment disagreed to in Places of Detention Bill, 592.		
Crown Lands Titles and Reservations Validation Bill, 613.		
Not insisting upon its amendment disagreed to, and agreeing to amendment upon one of its amendments in the Newcastle Sand-drift Reclamation Bill, 613.		
Agreeing to amendments in Dairies Supervision Bill, 549.		
Municipalities Act Amendment Bill, 644.		
Agreeing to Assembly's amendment upon Council's amendments in Commons Regulation Act Amendment Bill (No. 3), 549.		
Requesting leave to examine a Member of the Legislative Assembly as a witness before a Select Committee of the Legislative Council, 515.		
METCALF, MR. (See "TELEGRAPHS")		
METROPOLITAN (See "FIRE BRIGADES BOARD")		
MICHELAGO RAILWAY STATION :—		
Petition from squatters, farmers, selectors, graziers, traders, artizans, and others, submitting reasons for adopting another site for, presented, 385	7	667
MIDNIGHT :—		
Sittings after, 41, 65, 75, 147, 178, 179, 186, 220, 223, 233, 249, 254, 265, 281, 287, 301, 306, 309, 318, 322, 327, 341, 345, 355, 378, 380(2), 385, 390, 403, 406, 409, 416, 422, 436, 440, 457, 462, 470, 475, 484, 490, 494, 497, 507, 511, 524, 529, 532, 540, 545, 559, 567, 571, 577, 582, 589, 593, 602, 607, 615, 621, 623, 630, 639, 643, 647, 653, 656.		
MILITARY (See also "ARTILLERY, PERMANENT")		
SERVICES OF MAJOR PARROTT, C.E., IN THE SOUDAN :—		
Motion made (*Mr. Neild*) for copies of Despatches, Correspondence, &c., respecting the Hydrological and Geological Reports furnished to the British Government, 217 ; Return to Address, laid on Table, 301	2	269
CONDUCT OF CORRESPONDENCE :—		
Minutes respecting, laid on Table, 489	2	251
MILK (See "DAIRIES SUPERVISION BILL")		
MINERAL CONDITIONAL PURCHASES (See "CROWN LANDS TITLES AND RESERVATION VALIDATION BILL")		
MINING :—		
ACT FURTHER AMENDMENT ACT :—		
Regulations relating to Leases under, laid on Table, 133	5	1087
DEPARTMENT :—		
Annual Report for 1885, laid on Table, 222	5	461
DEPARTMENT—FOREST BRANCH :—		
Annual Report laid on Table, 27, 416	6	69, 109
Motion made (*Mr. Fitzgerald*) for a Return showing the increases to salaries of officers of, under the Civil Service Act, 89 ; Return to Order, laid on Table, 100	6	129
Motion made (*Mr. Wall*) for a return showing the number of Forest Rangers, where employed, remuneration received, giving salary and allowances separately, and the revenue received from each District, 394 ; Return to Order, laid on Table, 483	5	113

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
M		
MINING (*continued*) :—		
DEPARTMENT—STOCK AND BRANDS BRANCH :—		
Annual Report, for the year 1885, laid on Table, 373	6	1
DEPARTMENT—PUBLIC PARKS BRANCH :—		
General Report for 1885, laid on Table, 461	6	135
DIAMOND DRILLS :—		
Motion made (*Dr. Ross*) for return showing number of used by the Government, and other particulars, 65; Return to Order, laid on Table, 74	5	1055
Motion made (*Mr. W. J. Fergusson*) for a Return showing the number now in use, cost, revenue from, where, and for whom at work, 367; Return to Order, laid on Table, 385	5	1057
CLAIM OF MR. THOMAS HORTON :—		
Motion made (*Mr. Purves*) for Select Committee, previous report and papers referred, 82; Report brought up, 100; adopted, 193	8	1117
VENTILATION OF COAL MINES :—		
Motion made (*Mr. Melville*) for correspondence, reports, &c., and a return respecting, 93.		
CLAIM OF NEW LAMBTON COLLIERY COMPANY :—		
Motion made (*Mr. Shepherd*) for all correspondence as to claim against the Crown of £28,000 and the offer of £500, for resumption of land near Newcastle, 137; Return to Order, laid on Table, 164	7	647
Motion made (*Mr. Abigail*) for copies of all letters, papers, or other documents in reference to the purchase of rails by, from the Government, 425; Return to Order, laid on Table (not printed), 629.		
CLAIM OF MATTHEW M'IVOR TO A TIN MINE AT PHEASANT'S CREEK :—		
Motion made (*Mr. Targett*) for a Select Committee to inquire into and report upon, 414; Report brought up, 497	5	1079
LEASES IN THE BINGERA DISTRICT :—		
Motion made (*Mr. Hassall*) for a Return showing the number applied for, with date and names of applicants, and all particulars of, 432.		
MR. E. C. MEREWETHER'S MINERAL LEASE, KAHIBAH :—		
Motion made (*Mr. Neild*) for all letters and papers connected with, including all papers connected with Mr. Alexander Lindsay's application that a Government Township be laid out on such leasehold, 141; Return (*in part*) to Order, laid on Table, 284	5	1059
PATRICK HANNAN'S CLAIM AT TEMORA :—		
Motion made (*Mr. O'Sullivan*) that a Select Committee be appointed to inquire into and report upon, and that Report from Select Committee (*Session* 1883-4) be referred, 258; Report brought up, 321; adopted, 484	5	1075
LITHGOW COLLIERY DISASTER :—		
Motion made (*Mr. Abigail*) for copies of all letters, minutes, telegrams, &c., having reference to mode of conducting inquiry into, 256; Return to Order laid on Table (not printed), 444.		
ROYAL COMMISSION ON COLLIERIES :—		
Report from, on the accidents at Lithgow Valley Colliery, laid on Table, 444	5	671
Do do Ferndale Colliery, laid on Table, 506		785
Third Report of, laid on Table, 652		871
Do Appendix to, laid on Table, 660		1030
Copies of Commissions issued in connection with Accidents at Ferndale and Lithgow Valley Collieries, laid on Table, 558	5	1053
SCHOOLS OF MINES :—		
Motion made (*Mr. Shepherd*) for Committee of the Whole to consider resolutions in respect to, 278; House in Committee, resolution reported and agreed to, 296.		
MINING ON PRIVATE PROPERTY BILL :—		
Motion made (*Mr. Garland*) for leave to bring in, 192; presented and read 1°, 408; Order of the Day postponed, 503; motion made for 2°, by leave withdrawn—Order of the Day discharged and the Bill withdrawn, 614.		
MINISTERIAL ADVICE TO THE GOVERNOR :—		
Sir Henry Parkes proceeding to move as *Privilege* that any advice to dissolve Parliament at the present time would be unjustifiable and deserving of censure,—Point of Order taken that the motion was not entitled to be regarded as *Privilege* and sustained by Mr. Speaker, 110.		
RESIGNATION OF THE MINISTRY :—		
Correspondence respecting, laid on Table, and read by Clerk, 111	2	7
MINISTERIAL ELECTION BILL :—		
Motion made (*Mr. Abbott*) for leave to bring in, presented and read 1°, 145; Order of the Day postponed, 188, 240, 331, 398, 502; Order of the Day discharged and Bill withdrawn, 572.		
MINISTERIAL STATEMENT :—		
Made by the Hon. G. R Dibbs, 43, 67, 68, 69.		
Made by Sir John Robertson, 74, 90, 109, 115, 118, 120.		
Made by Sir Patrick Jennings, 127, 160, 315, 343, 385, 474, 485, 503, 523, 532, 602.		
MINT, SYDNEY :—		
Despatch, laid on Table, 74	8	1115
MITCHELL, COUNTY OF (See "RESERVES")		
MONDAY :—		
Motion made (*Sir Patrick Jennings*) that for remainder of Session Monday be a Sitting Day, and that Government Business take precedence,—amendment, that House meet at 2·30 p.m. on each Sitting Day, and that no new business be taken after 10·30 p.m. negatived—original motion carried, 539.		
MONEY ORDER BRANCHES :—		
Motion made (*Mr. Moore*) for a Return showing the non-official Post Offices at which are established, 566; Return to Order, laid on Table, 642	7	987
MOLONG (See "RAILWAYS")		
MONK-WEARMOUTH RAILWAY (See "WEST WALLSEND AND MONK-WEARMOUTH RAILWAY BILL")		
MOOREBANK ESTATE BILL :—		
Petition presented (*Mr. McCulloch*) for leave to bring in, 112; 62nd Standing Order suspended, 134; leave given, presented and read 1°, 135; referred to Select Committee, 146; Report brought up, 222; read 2°, committed, reported without amendment, and report adopted, 295. read 3° passed and sent to Council, 299; returned without amendment, 344; assent reported, 360.	8	875
Petition from certain tenants of the Estate, praying for compensation for improvements made by them during their tenancy, presented and referred to Select Committee, 146.	8	885

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885–6.	PAPERS. VOL.	PAGE.
M		
MOORE ESTATE ACT AMENDMENT BILL:—		
Received from Council and read 1°, 198; read 2°, committed, reported without amendment, and report adopted, 211; read 3°, passed, and returned to Council without amendment, 215; assent reported, 230.		
MOREE (See "RAILWAYS")		
MORIARTY MR. E. O. (See "CIVIL SERVICE")		
MORPETH (See "WISDOM, MR. ROBERT")		
MRS. PAYTEN'S ESTATE LEASING BILL:—		
Petition presented (*Mr. Abbott*) for leave to bring in, 291; leave given, presented and read 1°, 294; referred to Select Committee, 299; Report brought up, 343; read 2°, committed, reported without amendment, report adopted, 425; read 3°, passed, and sent to Council, 432; returned without amendment, 461; assent reported, 478.	8	887
MUDGEE GAS-LIGHT AND COKE COMPANY'S BILL:—		
Petition presented (*Mr. De Courcy Browne*) for leave to bring in, 120; 62nd Standing Order suspended, 134; leave given, 135; presented and read 1°, 406; referred to Select Committee, 412; Report brought up, 445; Order of the Day postponed, 539; read 2°, committed, reported without amendment and report adopted, 571; read 3°, passed, and sent to Council, 581; returned without amendment, 613; assent reported, 628.	8	893
MUNICIPAL (See also "BY-LAWS" also "WAYS AND MEANS" also "SYDNEY TOWN HALL AND STREETS MUNICIPAL LOAN BILL" also "BOUNDARIES OF MUNICIPALITIES READJUSTMENT BILL" also "BLACKFRIARS ESTATE STREETS AND LANES BILL"):—		
DISTRICT OF LEICHHARDT:—		
Petition praying to be created a separate Electorate, presented and read by Clerk, 50	2	235
Do do 614	2	237
DISTRICT OF MEREWETHER:—		
Return to Order (*Second Session*, 1885) laid on Table, 128	6	189
ENDOWMENTS:—		
Motion made (*Mr. Burns*) for a return showing the amounts paid, whether ordinary or special, from 1867 to 1885; also, payments for preliminary expenses, 133; Return to Order, laid on Table, 248	6	223
Motion made (*Mr. Burns*) for a return showing the amount authorized for, from 1867 to 1885, distinguishing special from ordinary endowments, 133; Return to Order, laid on Table, 248	6	225
Statement of amounts paid as, to certain Municipalities, during 1886, laid on Table, 629	6	227
ALIGNMENT OF STREETS:—		
Motion made (*Mr. Abbott*) for Returns showing the name of each Borough within 10 miles of Sydney whose streets have been aligned, and particulars of, 294; Return to Order, laid on Table, 539	6	229
MUNICIPAL GAS ACT AMENDMENT BILL:—		
Motion made (*Mr. Abbott*) for leave to bring in, 276; presented and read 1°, 291; read 2°, committed, reported without amendment and report adopted, 332; read 3°, passed and sent to Council, 337; returned with an amendment, 375; Order of the Day postponed, 399; amendment agreed to and message to Council, 427; assent reported, 465.		
MUNICIPALITIES ACT AMENDMENT BILL:—		
Received from Council and read 1°, 528; Order of the Day postponed, 548; read 2°, 614; committed, reported with amendments and report adopted, 615; read 3°, passed, and returned with amendments, 628; amendments agreed to, 644; assent reported, 659.		
Petitions in support of, presented from the Borough Council of Woollahra, 570; Victoria, 602; Balmain, 614; Waverley, 614; and Five Dock, 614	6	219
MURPHY MR. STEPHEN (See "CIVIL SERVICE")		
MURRAY RIVER ("See "RESERVES")		
MURRUMBIDGEE RIVER (See "RESERVES")		
MURRURUNDI (See "RESERVES")		
MUSEUM:—		
Report for 1884, laid on Table, 15	4	453
Report for 1885, laid on Table, 478	4	519
MUSWELLBROOK CATTLE SALE-YARDS BILL:—		
Petition presented (*Mr. Trickett*) for leave to bring in, 79; leave given, 89; presented and read 1°, 90; referred to Select Committee, 93; Report brought up, 128; Order of the Day postponed, 165, 193; read 2°, committed, reported without amendment, and report adopted, 211; read 3°, passed, and sent to Council, 215; returned with an amendment, 253; Order of the Day postponed, 264, 276; Council's amendment agreed to, 295; assent reported, 360.	8	899
N		
NARRABRI (See "RAILWAYS")		
NATIONAL ART GALLERY (See "ART GALLERY")		
NATIONAL PARK:—		
Return of money voted for and spent upon, laid on Table, 629	6	145
NAVAL DEFENCE OF AUSTRALIA:—		
Correspondence relating to, laid on Table, 120, 169	2	273, 275
Papers and correspondence respecting, laid before a meeting on H.M.S. "Nelson," the Premiers of Victoria, New South Wales, and Queensland, and the Naval Commander-in-Chief being present, laid on Table, 223	2	277
Memorandum by the Premier for His Excellency the Governor respecting, laid on Table, 254	2	299
NET-FISHING (See "FISHERIES")		
NET-FISHING IN PORT HACKING PROHIBITION BILL:—		
Motion made (*Sir John Robertson*) for leave to bring in, 220; presented and read 1°, 222; read 2°, committed, reported without amendment, and report adopted, 257; read 3°, passed, and sent to Council, 260; returned with amendments, including one in the Title, 344; Order of the Day postponed, 372, 399; amendments agreed to and message to Council, 427; assent reported, 465.		
Petition from Fishermen and Residents of Botany, Port Hacking, and George's River against, and praying the House not to pass the Bill, presented, 264	2	923

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-86.	PAPERS. VOL.	PAGE.
N		
NEUTRAL BAY (See "CAREENING COVE")		
NEW ADMINISTRATION :—		
House informed of steps taken in formation of, by Mr. Dibbs, 43.		
Formation of Sir John Robertson's, announced, and seats declared vacant, 72; Writs returned, and Members sworn, 73.		
Formation of, by Sir Patrick Jennings, announced, and seats declared vacant, 125; Writs returned, and members sworn, 127.		
NEWCASTLE (See also "COUNTRY TOWNS WATER AND SEWERAGE ACT") :—		
GOVERNMENT CRANES :—		
Return to Order (*Session* 1883-4) laid on Table, 20.	4	1033
TOWING DREDGE PUNTS :—		
Copies of Papers respecting contract for, laid on Table (not printed), 656.		
NEWCASTLE SAND-DRIFT RECLAMATION BILL :—		
Motion made (*Mr. Fletcher*) for Committee of the Whole, 387; Message from Governor recommending, 395; House in Committee, resolution reported and agreed to, Bill presented and read 1°, 435; read 2°, committed, reported with amendments, and report adopted, 462; read 3°, passed, and sent to Council, 464; returned with amendments, 587; amendments agreed to, disagreed to, and amended, 598; Message to Council, 606; Council does not insist on its amendment disagreed to, and agrees to amendment upon its amendment, 613; assent reported, 628.	8	1147
NEWCASTLE STEAMSHIP COMPANY'S PREFERENTIAL SHARES BILL :—		
Petition presented (*Mr. G. A. Lloyd*) for leave to bring in, 98; leave given, 100; presented and read 1°, 102; referred to Select Committee, 107; Report brought up, 117; Order of the Day postponed, 130, 146, 165, 177, read 2°, committed, reported without amendment and report adopted, 194; read 3°, passed and sent to Council, 197; returned without amendment, 237; assent reported, 277.	8	905
NEW GUINEA :—		
Statements of receipts and expenditure in connection with the Protectorate, laid on Table, 120	2	199
Further correspondence and papers respecting administration of British, laid on Table, 223	2	203
NEW HEBRIDES :—		
Telegram to Agent-General respecting laid on Table, 151	2	213
Motion made (*Sir Henry Parkes*) that any expression of acquiescence on the part of the Government in the annexation of, by France, is opposed to the true interest of New South Wales and the other Australian Colonies, and that this Colony should convey its disapproval of the colonization by any other Power than Great Britain, and Debate adjourned, 173; Debate resumed, 177; amendment moved and Debate adjourned, 178; Debate resumed, amendment negatived, 179; original question negatived on division, 180.		
PETITIONS RESPECTING, PRESENTED FROM :—		
Citizens of Sydney that representations should be made to the Imperial Government to avert the cession to France, 172	2	215
Inhabitants of Balmain, that every effort be made to secure the Islands, either as a British Colony or Protectorate, and read by the Clerk, 177	2	217
Residents of Randwick, do do do 179.		
Do Mudgee, in opposition to the proposed annexation by France, 200	2	219
Do Wollongong, that the annexation by France is not calculated to promote the best interests of the Australian Colonies, 240	2	221
NEW LAMBTON COLLIERY COMPANY :—		
Motion made (*Mr. Shepherd*) for all correspondence as to the claim made against the Crown for £28,000, and the offer of £500, for the resumption of land near Newcastle, 137; Return (*in part*) to Order, laid on Table, 164	7	647
Motion made (*Mr. Abigail*) for copies of all letters, papers, or other documents in reference to the purchase of rails by, from the Government, 425; Return to Order, laid on Table (not printed), 629.		
NEW SOUTH WALES TRUSTEES, EXECUTORS, AND AGENCY COMPANY'S BILL :—		
Petition presented (*Mr. Thompson*) for leave to bring in, 97; leave given, 100; presented and read 1°, 102; referred to Select Committee, 107; Report brought up, 229; Order of the Day postponed, 257; motion made for 2°, and Debate adjourned, 295; Order of the Day postponed, 398, 414, 425, 555, 572, 658.	8	911
NEWSPAPERS (See "GOVERNMENT")		
NOBLE, MR. JOHN :—		
Motion made (*Mr. Gould*) for copies of all papers, minutes, reports, plans, &c., having reference to claim of, for compensation for fencing the deviation in the road from Goorangoola to the Great North Road, where it passes through his land, 247.		
NO QUORUM :—		
In house before commencement of business, 363, 417, 551, 563.		
In House after commencement of business, 189, 225, 314, 427, 450, 466, 556, 596, 615.		
Reported from Committee of the Whole, 189, 246, 466, 502, 556, 563, 571, 615 (8).		
Attendances of Members in Divisions and Counts-out	1	667
NO REPORT :—		
From Committee of the Whole, 331, 465, 567, 657.		
NORFOLK ISLAND :—		
Despatch, present system of administration at, laid on Table, 74	2	223
NO TELLERS :—		
On Division, 160, 189, 398, 541, 546.		
NORTH COAST RAILWAY (See "RAILWAYS")		
NOTICES OF MOTIONS :—		
General Business postponed to stand later on the Notice Paper, 142, 550, 583, 656.		
Objection to one member moving a *Contingent* Notice on behalf of another member sustained, 246.		
NOTIFICATIONS (See "LANDS FOR PUBLIC PURPOSES ACQUISITION ACT" also "RESUMPTION OF LAND")		
NOXIOUS PLANTS (See "STOCK")		
NOXIOUS TRADES SITES BILL :—		
Motion made (*Mr. Dibbs*) for Committee of the Whole, 506; House in Committee, resolution reported and agreed to, 511; Message from Governor, recommending, 512; presented and read 1°, 515; read 2°, committed, reported with amendments, and report adopted, 524; read 3°, passed, and sent to Council, 526.	4	621
NUISANCES PREVENTION ACT (See "BY-LAWS")		
NYNGAN (See "RAILWAYS," also "ROADS")		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
O		
O'CONNOR, THE HONORABLE DANIEL :—		
Accepted office as Postmaster General, and seat as a Member for West Sydney declared vacant, 72 ; issue and return of Writ reported, sworn, 73.		
OFFICES (See "GOVERNMENT")		
OPENING :—		
Of Parliament, 1.		
Speech, 8 ; Address in Reply, 9, 10, 13, 16, 20, 24, 27, 37, 40, 41, 43 ; Answer to Address, 43.		
OPENING OF THEATRES ON SUNDAYS :—		
Petition from Sydney Women's Prayer Union and other residents of New South Wales, that they regard with deep and earnest concern that theatres are allowed to remain open on Sundays, a charge being made for admission, and praying legislation to prohibit, presented, 402	8	1157
ORANGE (See "RAILWAYS")		
ORDER (See "POINTS OF ORDER")		
ORDERS OF THE DAY :—		
Discharged, 130(3), 193, 240, 257(2), 301, 333, 367, 372, 398, 409, 412, 453, 530, 571, 572, 607, 613, 614(2), 651, 653(7), 658 (2).		
ORDNANCE DEPARTMENT :—		
Return of arms and ammunition in, laid on Table, 402.....	2	253
ORDNANCE LANDS TRANSFER BILL :—		
Presented and read 1°, *pro forma*, 8.		
ORIENT STEAM NAVIGATION COMPANY (See "POSTAL")		
ORIENTAL INTERPRETER :—		
Motion made (*Mr. Abigail*), for copies of all correspondence, &c., referring to the appointment of, and manner in which the duties are performed, 308 ; Return to Order, laid on the Table (not printed), 461.		
Reports respecting the qualifications of, laid on Table, 539.....	2	483
ORPHAN SCHOOLS, PARRAMATTA :—		
Memorandum regarding question of ownership of the Roman Catholic, and Cabinet minute relative to, laid on Table, 493	2	801
OYSTER CULTURE LEASES :—		
Motion made (*Mr. Abigail*) for papers, minutes, &c., having reference to the application for, on the foreshores of Port Jackson, 48.		
Return of applications for, George's River, laid on Table, 111	2	919
Particulars of applications for, on George's River, laid on Table, 229.....	2	921
P		
PACIFIC MAIL SERVICE (See "POSTAL")		
PADDINGTON—		
LOW LYING LAND NEAR GLENMORE ROAD :—		
Motion made (*Mr. Neild*) for resumption of, and withdrawn, 413.		
PAID MAGISTRATES (See "ADMINISTRATION OF JUSTICE")		
PAINT (See "STANDARD PAINT COMPANY")		
PAPERS :—		
LAID ON TABLE BY A PRIVATE MEMBER :—		
Relative to case of Captain Armstrong, by Sir John Robertson (not printed), 193.		
Newspaper containing report of speech of Sir Henry Parkes at Wingham complained of as *Privilege*, laid on Table by Mr. Heydon (not printed), 355.		
Newspaper containing paragraph complained of, as *Privilege*, laid on Table by Mr. Thompson, (not printed), 456.		
PARKES, SIR HENRY, K.C.M.G. :—		
Motion made (*Mr. Copeland*) that Sir Henry Parkes be now heard (a second time), 100.		
Attention drawn (*Mr. Heydon*) as *Privilege*, to report of a speech of, at Wingham, published in the *Daily Southern Argus*, copy of which was laid on Table, and extract from read by Clerk, and Sir Henry Parkes heard in explanation, 355.		
Disorderly words used by and refusal to withdraw them in Committee of Supply, reported to the House—motion made (*Sir Patrick Jennings*) that the words are disorderly ought to be withdrawn and apologised for,—*disorder*—Mr. Wisdom during debate, using the words "This is a brutish Government," 607; Sir Patrick Jennings moved that the words are disorderly should be withdrawn and apologised for, and carried ; and Mr. Wisdom having refused to comply with the resolution of the House,—motion made (*Sir Patrick Jennings*) that Mr. Wisdom is guilty of contempt, and that he be committed to the custody of the Sergeant-at-Arms,—Speaker's warrant issued, and Mr. Wisdom taken into custody by the Sergeant, 608 ;—amendment moved (*Dr. Ross*) on the motion respecting words used by Sir Henry Parkes, that the explanation offered by Sir Henry Parkes is satisfactory, and carried on division, 608, 609.		
PARKS, PUBLIC (See also "NATIONAL PARK") :—		
Abstract of land resumed for, under the Lands for Public Purposes Acquisition Act, laid on Table, 68	6	143
Return of outstanding claims for, placed upon the Supplementary Estimates for 1885, laid on Table, 265.....	6	141
General Report of Branch, for 1885, Department of Mines, laid on Table, 461	6	135
PARLIAMENT (See also "PAYMENT OF MEMBERS OF THE LEGISLATIVE ASSEMBLY") :—		
Proclamation on opening of, 1.		
Message from Commissioners on opening, 3.		
Lieutenant-Governor's Opening Speech, 8 ; Address in Reply, 9, 10, 13, 16, 20, 24, 27, 37, 40, 41, 43 ; Answer to Address, 43.		
Paper respecting assumed state of parties in the House, laid on Table, (not printed), 111.		
Prorogation of—Adjournment for, 656.		
Do His Excellency the Governor's Speech, 660.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-86.	PAPERS. VOL.	PAGE.
P		
PARLIAMENT (*continued*):—		
COST OF PRINTING AND BINDING PAPERS AND "HANSARD":—		
Motion made (*Mr. G. A. Lloyd*) for a return giving particulars of, 489.		
HANSARD:—		
Motion made (*Mr. Hammond*) for Committee of the Whole to consider resolutions in favour of a daily issue of, 290; Order of the Day postponed, 300, 353, 399, 425, 464, 539, 570, 615, 657.		
Motion made (*Mr. Hammond*) for a report from Government Printer, and also from Chief Parliamentary Reporter as to cost of establishing and maintaining a daily issue, 305; Return (*in part*) to Order laid on Table, 350; Final Return to Order, laid on Table, 541	2	181, 185
Motion made (*Mr. Hammond*) for Committee of the Whole to consider the desirableness of printing for sale extra copies of weekly issue, 349; Order of the Day postponed, 367, 425, 500, 539, 570, 615, 657.		
REFRESHMENT ROOM:—		
Motion made (*Mr. Thompson*) that no intoxicating drinks be sold in, except at meal times, and House counted out, 314.		
ELECTRIC LIGHT IN BUILDINGS:—		
Reports of Messrs. Dalgarno and Hammand on the Electric Lighting of, laid on Table, 350	2	193
Letter from Speaker, with memorandum from Mr. E. C. Cracknell, Superintendent of Electric Telegraphs, relative to electric lighting of, laid on Table, and ordered to be printed (*after Division*), 368	2	195
Motion made (*Mr. Garrard*) for a Select Committee to inquire into and report upon, 497.		
Petition from H. H. Kingsbury, contractor and agent for the Edison Company for leave to appear before the Committee, in person or by Counsel, and to produce papers and witnesses and examine and cross-examine witnesses, presented and referred to the Select Commttiee, 518	2	197
PARRAMATTA (See also "ORPHAN SCHOOLS, PARRAMATTA")		
SITE FOR COURT-HOUSE:—		
Motion made (*Mr. Davies*) for all papers and minutes respecting the purchase of land adjacent to the Railway station as, 116; Return to Order, laid on Table, 246	4	883
RIVER—WHARF AT PUTNEY POINT:—		
Motion made (*Mr. Abigail*), for copies of all minutes, letters, reports, plans, &c., in reference to the erection of, 336; Return to Order laid on Table, 526	4	1011
PARRAMATTA CHURCH SCHOOL BILL:—		
Petition presented (*Mr. Hugh Taylor*) for leave to bring in, 253; leave given, presented and read 1°, 256; referred to Select Committee, 260; Report brought up, 309; Order of the Day postponed, 367; read 2°, committed, reported with amendments, and report adopted, 426; read 3°, passed and sent to Council, 433; returned without amendment, 473; assent reported, 501.	8	933
PARRAMATTA PUBLIC BATHS BILL:—		
Petition presented (*Mr. Hugh Taylor*) for leave to bring in, 229; leave given, 232; presented and read 1°, 237; referred to Select Committee, 269; Report brought up, 309; Order of the Day postponed, 367; read 2°, committed, reported without amendment, and report adopted, 426; read 3°, passed and sent to Council, 433; returned with amendments, 474; Council's amendments agreed to, 503; assent reported, 540.	8	939
PARROTT, MAJOR, C. E.:—		
SERVICES OF, IN THE SOUDAN:—		
Motion made (*Mr. Neild*) for copies of despatches, correspondence, &c., respecting the Hydrological and Geological Reports furnished to the British Government, 217; Return to Address laid on Table, 301	2	269
PASTORAL LEASES (See "CROWN LANDS")		
PASTURES AND STOCK PROTECTION ACTS:—		
Regulations, laid on Table, 27	6	43
PATENT FEES:—		
Return showing the distribution of the sum of £3,380 received during 1885, laid on Table, 160	8	1143
Motion made (*Mr. Garrard*) for a Return showing amount received since 1880, and how distributed, 496.		
PATENTS AND DESIGNS BILL:—		
Motion made (*Mr. Garvan*) for Committee of the Whole to consider expediency of bringing in, 421; Message from Governor, recommending, 434; House in Committee, resolution reported and agreed to, 436; presented and read 1°, 507; read 2° and committed, 524; further considered in Committee, 549, 556, 559, 562, 567, 593; reported with amendments and report adopted, 593; recommitted, reported 2° with further amendments, and report adopted, 597; read 3°, passed and sent to Council, 602.	8	1145
PATENTS BILL:—		
Motion made (*Mr. Targett*) for leave to bring in, 116; presented and read 1°, 193; Order of the Day discharged, and Bill withdrawn, 257.		
PAVING, PATENT:—		
Correspondence respecting Carson Woods, laid on Table, 36	7	509
PAYMENT OF MEMBERS OF THE LEGISLATIVE ASSEMBLY:—		
Motion made (*Mr. Heydon*) for Committee of the Whole to consider the necessary steps to be taken to make provision in the Estimates for, 155; Order of the Day postponed, 175; House in Committee and progress reported, 185; leave asked to sit again on "Tuesday" next, amendment proposed "Wednesday" and withdrawn, 186; House in Committee and progress reported, 194; Call of the House made to consider the Question, 197, 264, 265(2), 268; House in Committee, *Point of Order* reported to the House and decided, Committee resumed, and resolution reported, 265; Order of the Day postponed, 278, 296; resolution received, read 2°, and agreed to, 333.		
PAYTEN'S ESTATE LEASING BILL (See "MRS. PAYTEN'S ESTATE LEASING BILL")		
PEACOCK, MR. (See "TARIFF")		
PEARCE'S CORNER (See "RAILWAYS")		
PEGUS *ats* BLAKENEY (See "TELEGRAPHS")		
PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY (See "POSTAL")		
PENRITH WATER AND GAS SUPPLY BILL:—		
Petition presented (*Mr. T. R. Smith*) for leave to bring in, 453; leave given, presented, and read 1°, 461; referred to Select Committee, 464; Report brought up, 473; Order of the Day postponed, 561; read 2°, committed, reported without amendment and report adopted, 583; read 3°, passed and sent to Council, 587; returned with amendments, 652; amendments agreed to, 657; assent reported, 660.	8	945

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-86.	PAPERS. VOL.	PAGE.
P		
PERICOOTA RUN ("See CROWN LANDS")		
PERMANENT ARTILLERY (See "ARTILLERY PERMANENT")		
PETITIONS (See also "CLERK OF ASSEMBLY"):—		
Sessional Order as to printing, passed, 47.		
To be heard by Counsel at the Bar of the House, 236, 507.		
Referred to Select Committee, 359, 402, 469, 518, 581, 592.		
Weekly Abstracts of, Nos. 1 to 41	1	775
PETTY SESSIONS (See "ADMINISTRATION OF JUSTICE")		
PHARMACEUTICAL SOCIETY OF NEW SOUTH WALES INCORPORATION BILL:—		
Petition presented (*Mr. Burns*) for leave to bring in, 385; leave given, presented, and read 1°, 388; referred to Select Committee, 394; Report brought up, 456; Order of the Day, postponed, 503, 511, 561; read 2° and committed, 614; Order of the Day postponed, 658.	8	951
PHEASANT'S CREEK TIN-MINE (See "MINING.")		
PHYLLOXERA (See "VINE DISEASES BILL.")		
PLACES OF DETENTION BILL:—		
Motion made (*Mr. Garvan*) for leave to bring in, presented and read 1°, 452; read 2°, committed, reported without amendment, and report adopted, 470; read 3°, passed and sent to Council, 472; returned with amendments, 527; Order of the Day, postponed, 534; amendments agreed to and disagreed to, 582; Council does not insist upon its amendment disagreed to, 592; assent reported, 611.		
PLIMSOLL MARK (See "ABUSES IN CONNECTION WITH THE SHIPPING OF NEW SOUTH WALES")		
POINTS OF ORDER (See also "SPEAKER")—		
Arising in the House, 51, 94, 110, 257(2), 278, 533, 593.		
Reported from Committee of the Whole, 248, 265, 380(2), 457; 502, 511(2), 566, 583.		
POISONOUS PLANTS (See "STOCK")		
POLICE:—		
Report of Inspector-General on, for 1885, laid on Table, 74	4	919
Do do on Reward and Superannuation Funds, laid on Table, 79	4	935
CONSTABLE GOLDRICK:—		
Motion made (*Mr. Abigail*) for papers, minutes, &c., relating to the service, suspension, and reinstatement of, 47; Return to Order, laid on Table, 65	4	929
v. SAMUEL ARMAGER:—		
Motion made (*Mr. Nield*) for copies of depositions, &c., 188; Return to Address, laid on Table (not printed), 240.		
DISMISSAL OF JOHN FLANAGAN FROM THE FORCE:—		
Motion made (*Mr. Burke*) for copies of all papers in connection with, 294; Order rescinded, papers having been already laid on Table on 15 January, 1884, 388.		
MAGISTRATES AND CLERKS OF PETTY SESSIONS:—		
Motion made (*Mr. Nield*) for return showing the amounts paid to, for expenses incurred by them in removing from one district to another, 341; Return to Order, laid on Table, 402	4	881
SUPERINTENDENT BROWN OF DENILIQUIN:—		
Motion made (*Mr. Chanter*) for copies of all papers and other documents relating to the charges preferred against, by Constable G. Rowe, 353; Return to Order, laid on Table (not printed), 465; ordered to be printed, 580	2	453
POLICY OF THE GOVERNMENT—VOTE OF CENSURE:—		
Motion made (*Mr. Garvan*) that the policy of the Government is unsatisfactory to the House, and debate adjourned, 102; debate resumed and motion carried on division, 108.		
PORT HACKING (See "NET-FISHING IN PORT HACKING PROHIBITION BILL")		
PORT JACKSON:—		
WATER FRONTAGES:—		
Motion made (*Mr. Reid*) for a return showing particulars of applications to purchase, 93; Return to Order, laid on Table, 151	4	957
GOVERNMENT STEAMERS IN:—		
Return of particulars respecting, laid on Table (not printed), 618; ordered to be printed, 643	8	1097
POSTAL:—		
ANNUAL REPORT:—		
Thirty-first, from the Postmaster-General, being for 1885, laid on Table, 456	7	761
MAIL SERVICE BETWEEN SYDNEY AND SAN FRANCISCO *via* AUCKLAND AND HONOLULU:—		
Correspondence, laid on Table, 20	7	935
Further papers respecting—New contract between the Colonies of New South Wales and New Zealand, laid on Table, 142	7	955
Message No. 1 from Lieutenant-Governor, 53	7	957
Message No. 12 from Governor, 142	7	959
Motion made (*Mr. Suttor*) for Committee of the Whole to consider Resolutions approving of a contract jointly with New Zealand, 286; House in Committee, resolutions reported and agreed to, 436.		
PACIFIC MAIL SERVICE:—		
Return to Order (*Second Session*, 1885), laid on Table, 20	7	961
MAIL COMMUNICATION BETWEEN GREAT BRITAIN AND AUSTRALIA *via* SUEZ:—		
Correspondence, laid on Table, 20, 55, 117, 198	7	915
Message No. 20 from Governor, 216	7	933
Motion made (*Mr. Suttor*) for Committee of the Whole to consider Resolutions approving of agreement in reference to, 286; House in Committee, resolutions reported and agreed to, 437.		
CONTRACT WITH THE ORIENT STEAM NAVIGATION COMPANY:—		
Motion made (*Mr. Suttor*) for Committee of the Whole to consider Resolutions approving of extension of, so as to terminate with the existing mail contracts in January, 1888, 286; House in Committee, resolutions reported and agreed to, 436.		
Message No. 2 from Lieutenant-Governor, 53	7	983
Message No. 11 from Governor, 142	7	985
MR. JOHN DAIN, MAIL CONTRACTOR:—		
Return to Order (*Second Session*, 1885), laid on Table (not printed), 108.		
BRANCH OFFICES, PADDINGTON, WILLIAM-STREET, OXFORD-STREET AND HAYMARKET:—		
Returns showing the business transacted at, laid on Table, 511	7	913
MONEY ORDER BRANCHES:—		
Motion made (*Mr. Moore*) for return showing the Non-official Post-offices at which are established, 566; Return to Order, laid on Table, 642	7	987

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.

P

POSTPONEMENT :—
Of Notice of Motion till later on the Notice Paper, 142, 550, 583, 656.
PRECEDENCE OF BUSINESS (See "GOVERNMENT" also "ADJOURNMENT")
PRE-LEASE (See "CROWN LANDS")
PREMISES LEASED FOR GOVERNMENT PURPOSES IN SYDNEY :—
Motion made (*Mr. Harold Stephen*) for a return showing houses and rooms leased, for what used, and what rental paid, 464; Return (*in part*) to Order, laid on Table, 561; Further Return (*in part*) to Order, laid on Table, 576 ..... 8 1081, 1085
Return of Rent paid for Buildings used as Government Offices, laid on Table, 629 ..... 8 1087
PREVIOUS QUESTION :—
Proposed and passed, 268.
PRICKLY PEAR DESTRUCTION BILL :—
Motion made (*Mr. Fletcher*) for Committee of Whole, 168; Message from Governor, recommending, 262; House in Committee, resolution agreed to, presented and read 1°, 262; read 2° and committed, 273; further considered in Committee, reported with amendments, and report adopted, 287; re-committed, reported 2° with further amendments, and report adopted, 292; read 3°, passed, and sent to Council, 294; returned with amendments, 374; Council's amendments agreed to, 395; assent reported, 423. 6 65
Regulations under, the Act, laid on Table, 656 ..... 6 67
PRINCE ALFRED HOSPITAL ACTS AMENDMENT BILL :—
Received from Legislative Council and read 1°, 562; Order of the Day discharged and Bill withdrawn, 653.
PRINGLE'S ESTATE MORTGAGING BILL :—
Petition presented (*Mr. Levien*) for leave to bring in, 155; leave given, 159; presented and read 1°, 160; referred to Select Committee, 164; Report brought up, 229; read 2°, committed, reported with an amendment in the Title, and report adopted, 257; read 3°, passed, and sent to Council, 260; returned with amendments, 321; amendments agreed to, 332; assent reported, 360. 8 959
PRISONERS (See "ADMINISTRATION OF JUSTICE")
PRISONS :—(See also "PLACES OF DETENTION BILL.")
Annual Report for the year 1884, laid on Table, 408 ..... 4 943
Annual Report, for the year 1885, laid on Table, 268 ..... 4 947
Report of Comptroller-General on Port Macquarie Gaol, laid on Table, 506 ..... 4 953
PRIVATE BILLS :—
Vote of Chairman of Select Committee on, Sessional Order passed, 46.
SELECT COMMITTEES ON :—
Motion made (*Mr. W. J. Fergusson*) for Committee of the Whole to consider whether it be referred to the Standing Orders Committee to report whether Members serving on, should be paid, the parties applying for Private Bills to deposit for that purpose a further sum of £25, 413; Order of the Day postponed, 425, 572, 658.
PRIVATE SCHOOLS (See "EDUCATION")
PRIVILEGE :—
MR. MELVILLE, M.P. :—
Motion made (*Mr. Abigail*) for Select Committee (appointed by ballot) to inquire into and report upon whether Mr. Melville had received the sum of twenty-five pounds from Mr. Ross of Camperdown, for his influence as a Member, to obtain certain concessions from a Member of the Government, 60; leave given to Committee to sit during any adjournment of the House, 68; Report brought up, 79; motion made (*Mr. Abigail*) that the report be adopted—amendment moved (*Mr. Abbott*) to refer the question back to the Committee for further inquiry and report and carried, 120.
MR. TARGETT, M.P. :—
Motion made (*Sir Henry Parkes*) that the Honorable Member for Hartley, Walter Scott Targett, Esq., having stated that he had received the promise of an appointment in the Public Service, and having since attended and voted in division is acting corruptly,—amendment moved and by leave withdrawn, and original motion withdrawn, 630.
MR. COONAN, M.P. :—
Motion made (*Mr. Abigail*) to refer to the Committee of Elections and Qualifications the question whether Mr. Coonan is a party to the contract made between the Government and the New South Wales Railway and Tramway Advertising Company, and by leave withdrawn, 65.
Motion again made (*Mr. Abigail*) and negatived, 587.
Motion made (*Mr. Abigail*) for copies of the Supreme Court records, Judge's Notes, &c., having reference to the case of, 65; Return to Address, laid on Table, 97 ..... 4 707
SEAT OF MR. CRAMSIE, A MEMBER FOR BALRANALD :—
Motion made (*Mr. Neild*) to refer question to Committee of Elections and Qualifications whether Mr. Cramsie is beneficially interested in a contract for the supply of goods to the Government, and by leave withdrawn, 97.
Motion made (*Mr. Neild*) for all papers connected with supply by Cramsie, Bowden, & Co., of forage and plant to Government Rabbit Camps in Balranald District, 97; Return to Order, laid on Table, 111; Further Return to Order, laid on Table, 155 ..... 2 173, 179
Motion made (*Mr. Nield*) to refer question to Committee of Elections and Qualifications whether Mr. Cramsie has not since his election become interested in a contract or agreement for the Public Service, and whether he has not thereby become incapable of sitting as such Member, and negatived on division, 160.
MINISTERIAL ADVICE TO THE GOVERNOR :—
Sir Henry Parkes' proceeding to move as *Privilege* that any advice tendered to the Crown to dissolve Parliament at the present time would be unjustifiable and deserving of censure—Point of Order taken that the motion was not entitled to be regarded as *Privilege*, and sustained by Mr. Speaker, 110.
BREACH OF :—
Motion made (*Mr. Chanter*) that the conduct of Mr. Levien, an Honorable Member for Tamworth, as detailed to the House, is a breach of privilege,—motion by leave withdrawn, and Mr. Levien apologised to the House, 134.

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
P		
PRIVILEGE (*continued*) :—		
MR. BARBOUR, M.P. :—		
Motion made (*Mr. Abigail*) for Select Committee to inquire into and report upon the circumstances connected with the voidance and re-selection of Robert Barbour's Conditional Purchase in the parish of Couridjah, county of Camden, 338 ; motion made (*Mr. Barbour*) for leave to appear in person or by counsel before the Committee, 343 ; Report brought up and read by Clerk 408	2	145
SPEECH OF SIR HENRY PARKES :—		
Attention drawn (*Mr. Heydon*) to report of, at Wingham, published in *The Daily Southern Argus*, a copy of which was laid on Table, and extract therefrom read by clerk,—and Sir Henry Parkes heard in explanation, 355.		
"THE DAILY TELEGRAPH" :—		
Attention drawn (*Mr. Thompson*), to a paragraph appearing in, commenting upon proceedings in the House—copy of paper laid on Table, and extract read by Clerk, 456.		
PRIVY COUNCIL :—		
APPEAL TO,—BARTON *v.* TAYLOR :—		
Proceedings in case of, laid on Table, 253	2	13
Motion made (*Mr. Abigail*) for copies in detail of the whole costs to the country, in the cases Taylor *v.* Barton and others, 394.		
PROCESS FACILITATION BILL (See "SUPREME COURT PROCESS FACILITATION BILL")		
PROCLAMATION :—		
On opening Parliament, 1.		
PRODUCTION OF RECORDS IN A COURT OF LAW :—		
Reported to House, and Clerk authorized, 20, 125, 209, 231.		
PRO FORMA BILL :—		
Presented and read 1°, 8.		
PROROGATION (See "PARLIAMENT")		
PROSPECT DAM :—		
SYDNEY WATER SUPPLY :—		
Sir John Fowler's report on, laid on Table, 168	6	991
PROTECTORATE OF NEW GUINEA :—		
Statement of receipts and expenditure in connection with, laid on Table, 120	2	199
Further correspondence and papers respecting administration of, laid on Table, 223	2	203
PROTHONOTARY OF THE SUPREME COURT :—		
Motion made (*Mr. Abbott*) for all papers, correspondence, &c., respecting appointment of Mr. F. Chapman as, and the salary of the office, 566 ; Return to Address, laid on Table, 629	2	469
PROVIDENCE ISLANDS :—		
Despatch notifying the German Annexation of the, laid on Table, 164	2	225
PUBLIC :—		
ACCOUNTS (See "FINANCE")		
CHARITIES (See "CHARITIES, PUBLIC")		
FINANCES (See "FINANCE")		
INSTRUCTION ACT (See "EDUCATION")		
LIBRARY (See "FREE PUBLIC LIBRARY")		
PARKS (See "PARKS, PUBLIC")		
SCHOOL (See "EDUCATION" also "WOLLONGONG PUBLIC SCHOOL SITE SALE BILL")		
SERVICE (See "CIVIL SERVICE")		
VEHICLES REGULATION ACT (See "BY-LAWS")		
PUBLIC INSTRUCTION ACT AMENDMENT BILL :—		
Motion made (*Mr. Melville*) for leave to bring in, 82.		
PUBLIC VEHICLES REGULATION ACT AMENDMENT BILL :—		
Motion made (*Mr. Trickett*) for leave to bring in, 299 ; presented and read 1°, 306 ; Order of the Day, postponed, 425 : read 2°, committed, reported with amendments, and Report adopted, 503 ; read 3°, passed, and sent to Council, 510 ; returned with amendments, 545 ; amendments agreed to, 550 ; assent reported, 567.		
PUBLIC WATERING PLACES ACT :—		
Regulations, laid on Table, 74	6	61
PUBLIC WORKS LOAN BILL :—		
Ordered (*Sir Patrick Jennings*) founded on Resolution of Ways and Means No. 17, presented and read 1°, 648 ; read 2°, committed, reported without amendment, Report adopted, read 3°, and passed, 652 ; sent to Council, 653 ; returned without amendment, 656 ; assented to in Legislative Council Chamber, 660.		
PULP FRUIT (See "TARIFF")		
PULVER, REGINA *v.* (See "ADMINISTRATION OF JUSTICE")		
PUNISHMENT BY WHIPPING (See also "ABOLITION OF PUNISHMENT BY WHIPPING BILL") :—		
Motion made (*Mr. Harold Stephen*) for a return showing particulars of all cases, 146 ; Return (*in part*) to Address, laid on Table, 222 ; supplementary Return to Address, laid on Table, 321	4	873, 879
PURCHASE OF RAILS (See "NEW LAMBTON COLLIERY COMPANY")		
PUTNEY POINT (See "WHARF")		
Q		
QUAMBONE :—		
Petition from residents of District of, in favour of establishment of Court of Petty Sessions at, presented, 398	4	911
QUARRY :—		
AT QUARANTINE STATION, NEAR MANLY :—		
Correspondence respecting leasing of, to Mr. W. H. Jennings, laid on Table (not printed), 507.		
QUEANBEYAN (See "RESERVES," also "ROADS")		
QUEENSLAND BORDER (See "RAILWAYS")		
QUESTIONS AND ANSWERS :—		
Sessional Order passed, 45.		

Q

QUESTIONS :—
ABATTOIRS :—
Removal of, 25.
Road, 192.
ABBOTT, MR. F. A. :—Conditional Purchase, Wingen, 646.
ABBOTT, MR. J. P., M.P. :—Conditional Purchase, Wingen, 632.
ABBOTT, MR. T. K. :—Payment to, for Special Services, 655.
ABBOTT, MR. W. E. :—Conditional Purchase, Wingen, 646.
ABIGAIL, MR., M.P. :—Relatives in Government Departments, 655.
ABORIGINES :—
Allowance to, 219, 308, 320(2), 488.
Publican fined for serving drink to an aboriginal, 312.
ACCIDENTS :—From scaffolding, 59.
ACTIONS :—
Against the Commissioner for Railways for loss by fire and for tramway accidents, 348.
Taylor *v.* Barton and others,—costs of, 348.
ADMINISTRATION OF JUSTICE :—
Clerks of Petty Sessions. (See "CIVIL SERVICE")
Gulgong Bench of Magistrates, 129.
Case of J. R. Ardill for destroying a fence on a public road, 133.
Police Magistrate for Penrith, 191.
Mr. Coman, J.P., appointed Acting P.M., Moruya, 227.
Short sentence prisoners, 236.
Pierce Fowler, committed for forgery and embezzlement, 256.
Sentence on prisoner E. B. Holt, 307.
Case of ex-clergyman Coombes, 320.
Kempsey Police District, 320, 401.
Costs of actions, Taylor *v.* Barton and others, 348.
Supreme Court vacation, 366.
Sentence of flogging on Howard and M'Knight, 440.
Police Magistrate and Clerk of Petty Sessions, Wollombi, 447.
Prisoners under sixteen years of age, 452, 463, 468, 481.
Prisoner Bertrand, 499.
Bench of Magistrates, Windsor, 509, 525.
Case of Mrs. Foote, 535.
Petty Sessions, cases tried at Armidale, Glen Innes, Inverell, and Tenterfield, 600.
Crown Prosecutors, 565.
Release of Patrick Hall, 605.
AD VALOREM. (See "CUSTOMS")
ADVERTISING COMPANY :—Railway and Tramway, 65.
AGRICULTURE :—
Returns to be laid on Table, 197.
Establishment of model farms, 267, 280, 319, 443, 600.
AIREY, CAPTAIN :—Inquiry into case of, 207.
ALBION-STREET SCHOOL, SURRY HILLS :—Land resumed for, 459.
ALBURY :—
Special train from, for school, 34.
Railway Bridge, Guinea-street, 324.
Railway Station-master (Mr. Willis), 605, 606(2).
Importation of iron pipes for Water Supply, 460.
ALEXANDRIA :—
Reserve, 21.
Sewerage, 21.
Park, 34.
"ALICE MARY" :—Plimsoll mark on, 30.
ALLANDALE :—
Railway Station, 289.
Do Collision at, 548.
AMERICA :—Telegraph Cable between Australia and, 183, 267.
AMOS BROTHERS :—Sale of Land on resumed area of Runs of, Castlereagh River, 482.
ANNEXATION :—Of the New Hebrides by France, 149.
APPRAISEMENT :—
Of Runs under Crown Lands Act, 106.
Appointment of Appraisers, 150.
Of Crown Lands, Dubbo District, 415.
ARBITRATION CLAUSE :—In Railway Contracts, 115.
ARDILL, JOHN ROCHE :—Case of, for destroying a fence, 133.
ARMAMENT :—And Trained Men for defence of the Colony 505.
ARMIDALE :—
Removal of Land Office from, to Glen Innes, 87, 159, 187.
Petty Sessions, cases tried at Glen Innes, Inverell, Tenterfield, and, 600.
ARMS AND AMMUNITION :—In Ordnance Department, 387.
ARTILLERY :—
Case of Sergeant Behan, 39.
Inquiry into Captain Airey's case, 207.
Wollongong Volunteer, 251.
Fatigue pay to Staff Sergeants, 259.
Issue of clothing to, 383.
ASHFIELD :—Subway under Railway, Alt-street, 239, 259.

QUESTIONS (*continued*) :—
ASSEMBLY :—
Telephone between Parliament House and Lands Office, 101.
Exclusion of strangers, 408.
Delivery of letters at, 575.
Cost of Printing and Binding Votes and Proceedings for 1885, 649.
ASSIGNEES, OFFICIAL :—Mode of allotting estates to, 312.
ASSOCIATE TO MR. JUSTICE INNES :—Appointment, 518.
ASYLUMS :—
Benevolent, Parramatta, 87, 222.
Spirits, wine, &c., consumed in, 236.
Newington, for aged and infirm females, 324, 384, 487.
Randwick, 430, 468.
Duties of Inspector of, 384.
ATTENDANCE AT SCHOOL. (See "EDUCATION")
AUDIT :—Of Railway Accounts, 482.
AUDITOR-GENERAL :—New Appointments in Department of, 495.
AUSTRALIAN :—
Combination Railway Trucks, 235.
Barb Wire Company, 235.
Sugar, duty on, 591.
AUSTRALIAN GAS LIGHT COMPANY :—Gas supplied by, to Government, 603.
AUSTRALIAN MUSEUM :—Robbery and Embezzlement from, 553.
"AUSTRALIAN PORTRAIT GALLERY" :—Purchase of copies of, by Government, 227, 231, 232, 236, 509.
BALLINA :—Post Office, 243.
BALL'S HEAD :—Railway from Pearce's Corner, 59.
BALMAIN :—
Bridge, Glebe Point to, 129.
Post and Telegraph Office, 307.
BALRANALD :—Town Common, 632, 650.
BAKEWELL BROS. :—Offer to erect Building for Government Offices, 518.
BANKING ACCOUNT :—In Bank of England, 23, 35.
BANKRUPTCY BILL :—Introduction of, 387.
BARB WIRE COMPANY :—Australian, 235.
BARBOUR, MR. R., M.P. :—
Conditional purchases of, Camden District, 352(2).
Operations of, with Railway Department, 366, 383.
Mr. W. Shoobridge's Selection, through the agency of, Camden District, 419.
BARMEDMAN :—
Reserve, 44.
Cemetery, 44.
BARTON *ats.* TAYLOR :—Costs of actions, 348.
BATHS :—Erection of, at Rushcutter's Bay, 91.
BATHURST :—
Volunteer Corps, 111.
Importation of iron pipes for Water Supply, 460.
Railway Station—business and employés at, 514.
BEATTIE, JAMES :—Appointment of, as Messenger, Customs Department, 649.
BEDROOM :—Cost of furnishing for Secretary for Public Works, 649.
BEER :—Inspection of, 54.
BEGG AND MILLER :—Claim of, 26.
BEHAN, SERGEANT :—Papers in case of, 39.
BELGIAN IRONWORKERS :—Alleged Immigration of, 645.
BELMORE PARK :—Electric Light for, 111, 154, 192, 203.
BENEVOLENT ASYLUMS :—
Relief afforded at, 149.
Site for, Parramatta North, 87, 222.
Spirits, wine, &c., consumed in, 236.
BERRIMA :—Carriage of stores for gaol, 443.
BERRY, MR. :—Selection of Mr. Carl Martin on land claimed by, at Shoalhaven, 506.
BERTRAND, PRISONER :—Proposed release of, 499.
BILOELA :—Graving Dock, 499.
BINGERA :—
Police District, 44, 293.
Tiffin boring machine at, 394.
BLACKFRIARS PUBLIC SCHOOL :—Streets leading to, 209.
BLACKWATTLE SWAMP :—Reclamation of, 29.
BLAYNEY :—Railway to Bourke, 500.
BLAYNEY-MURRUMBURRAH RAILWAY :—
Gradients and platforms, 18.
Particulars of contract for, 19.
Erection of stations on, 228.
BLUE BOOK :—Issue of, for 1885, 456.
BOARD, MR. A. S. :—Application for a Commission, 487.
BOGABILLA :—Custom House, Queensland Border, 139.
BOLWARRA ESTATE :—Road through, 228.
BOMBALA :—Railway from Cooma, 132.
BONDED WAREHOUSES :—Expenses and revenue in connection with, 197.

Q

QUESTIONS (*continued*) :—
BONDI :—
Delivery of letters, 320.
Sewer, 522.
Tramway from Waverley, 603.
BONNOR. (See "WRIGHT *v.* BONNOR.")
BORENORE :—
Railway Station and goods shed, 12, 153.
Do. do. Weighbridge, 460, 514.
Railway to Forbes *viâ* Cudal, 77, 132.
BORING FOR WATER :—
Machine for Forbes, 92.
Between Bourke and Wanaaring, 153.
Tiffin boring machine, Bingera, 394.
BOTANICAL PURPOSES :—Reserve for, Gosford, 87, 357.
BOTANY :—
Delivery of letters, 19.
Reserve, 21.
Tramway, 29, 36.
Toll-bar, 35.
Post and Telegraph Office, 63.
New Cemetery, 87.
Recreation Ground, 87.
BOTTLE FOREST :—Applications for Reserve, 547.
BOUNDARIES OF RUNS :—Particulars of, 11.
BOURKE :—
Boring for water on Road to Wanaaring, 153.
Lands and Survey Office, 228, 372.
Erection of Rabbit-proof Fencing, Narromine to, 510.
Railway to Blayney, 500.
BOURKE STREET :—Sewer, 557.
BOWAN PARK :—Road to Cudal, 500.
BOWLER, MR. S. G. :—Ringbarking preleases by, 150.
BOWNA :—Recreation ground, 324.
BOWRAL :—Railway Station, 105.
BOYS REFORMATORY :—At Rookwood, 58, 63.
BRAIDWOOD :—
Population of District, 604.
Expenditure on Roads in District, 604.
Railway from Tarago, 605(2).
BREWARRANNA :—Water Reserve, 162.
BRIDGES :—
Broken Back, 21, 105.
Over the Murray at Moama, 22, 30
Iron Cove, 25.
Railway, Commission, 30, 36, 149, 158, 335, 352.
Do over the Hawkesbury, 88.
Do over the Parramatta, 221.
Do Iron, between Petersham and Summer Hill, 384.
Do Namoi River, Rocky Crossing, 510.
Tarriaro, over Namoi River, 407.
Larras Lake, near Molong, 477.
Upper Lansdowne River, 39.
William Henry Street, 58.
Glebe Point to Balmain, 129.
Lennox, Parramatta, 182, 460.
Johnston's Creek, Parramatta Road, 231.
BRITISH ASSOCIATION :—Invitation to visit the Colony in the Centennial Year, 509(2), 580.
BROKEN BACK BRIDGE :—Toll-bar, 21, 105.
BRONTE BAY :—Reserve for Park, Waverley, 112, 220 312, 472.
BRUNSWICK RIVER :—Resources of, 408.
BUILDINGS FOR GOVERNMENT OFFICES :—Arrangement with Messrs. Bakewell Bros. to erect, 518,
BULGA ROAD :—Proposed deviation, 289.
BUNGENDORE :—Appointment of Mr. W. M. Cooper Trustee of Park, 518.
BUNNERONG :—Cemetery, 35.
BURWOOD :—Post and Telegraph Office, at Railway Station, 329.
BURRAGORANG MOUNTAIN :—Road over, 523.
BURREN-STREET, MACDONALDTOWN :—Handing over to Municipal Councils, 649.
BYRNES, MR. JAMES :—Railway Land Valuer, leave of absence to, 96.
BYRON, MR. :—Applicant for post of Government Statistician, 407.
CABLE. (See "TELEGRAPH")
CADET CORPS. (See "VOLUNTEERS")
CALCUTTA EXHIBITION :—Cost of representation at, 92.
CAMDEN. (See also "CROWN LANDS")
Electoral Roll, 35.
Phylloxera in district, 40.
CAMDEN HAVEN :—Dredge, 19.
CAMPBELLTOWN :—
Court-house, 33.
Railway Platform between Minto and, 221.
CANADA :—(See "TELEGRAPHS")
CANOWINDRA :—Want of water at, 182.

QUESTIONS (*continued*) :—
CARCOAR :—
Cemetery, 18.
Road to Felltimber Creek, 263, 280.
CARGO :—Gold-field Reserve, 330.
CARRIAGE OF STORES :—Berrima Gaol, 443.
CARTRIDGES, SAFETY :—Fines on masters of ships for wharfing vessels having on board, 335.
CASINO :—Mr. Dunstone, late Road Superintendent, 308.
CASS, MR., M.P. :—Special engine used by, 263.
CASTNER, MR. :—Purchase of railway gasworks by the Government, from, 411.
CATHCART :—Land sale, 58.
CATTLE-STEALING :—Jindera Mountains and Queanbeyan District, 172.
CAVALRY RESERVES :—Equipment, 243, 297.
CAVANOUGH, ANDREW :—Employment of, after dismissal from Tramway service, 452.
CEMETERY :—
Parramatta, 18.
Carcoar, 18.
Bunnerong, 35.
Barmedman, 44.
Botany, 87.
Singleton, 289.
CENTENARY OF THE COLONY :—
Consideration of motion respecting, 420.
Invitation to British Association, 509 (2), 580.
CENTRAL DIVISION. (See CROWN LANDS")
CHARITIES :—Inspector of, 384, 487, 488, 495.
CHINESE :—
Gambling-houses, 43, 456.
Poll Tax, 106, 460.
CHURCH AND SCHOOL LANDS :—Mining on, 99, 149.
CHURCH PURPOSES :—
Alleged grant of land for, Waverley, 514.
CIRCULAR QUAY :—
State of crossings used by pedestrians, 312, 329.
Electric light, 340.
Roadway and wood-paving, 483.
"CITY OF MELBOURNE":—
Suspension of Mr. O'Dowd as Chief Engineer of, 554.
CITY OF SYDNEY IMPROVEMENT ACT :—
Powers under, 139.
Summonses under 31st Clause, 472.
CITY POLICE COURTS :—
Duties of Chamber Magistrates, 129.
CIVIL SERVICE. (See also "CUSTOMS" also "POSTAL")
Duties of Surveyor-General, Deputy Surveyor-General, and Chief Draftsman, under Crown Lands Act, 181.
Proposed reductions in salaries, 195.
Employment of Females in Telegraph Office, 97.
Holding positions in Municipal Councils and elsewhere outside the Service, 112, 554.
Clerk of Petty Sessions, Gunning, 119.
Do do Orange, 184, 358, 382, 486.
Do do Kempsey, 420.
Do do and P.M., Wollombi, 447.
Do do as District Registrars, 267.
Number of Clerks and Draftsmen employed in Lands Department, Sydney, 213, 243(2).
Leave of absence to R. M'Lean, Survey Branch, to enable him to edit an Atlas, 252.
Amount paid to Officers of Lands Department in excess of authorized salary, 244, 255, 293.
Officers acting as directors, 336.
Do under suspension, 349, 357, 358.
Government Officers acting on Commissions, 384.
Increases to Officers of the Railway Department, 415, 443, 557.
Number in, and proportion to the population, 419.
Fidelity Bonds, 150, 196, 419.
Examination of Probationers, 431.
Disrating of a Chairman of a Local Land Board, 451.
Return of Appointments since January, 1885, 456.
Government Statistician, 394, 397, 407, 471, 487, 488, 492, 547, 580, 642.
Appointment of Assistant Under Secretary for Lands, 420.
Suspension of Officer, Lands Department, 487.
Inspector of Public Charities, 384, 487, 488, 495.
Auditor-General's Department, 495.
Registrar-General's Office, 500, 569.
Associate to Mr. Justice Innes, 518.
Temporary Appointments in, 523, 606.
Appointments held by Mr. E. O. Moriarty, 537.
Messrs. Doyle and Lowe, Inspectors of Runs, 553.
Gratuity to the late Mr. M. Farrelly, 558, 566.
Mr. Hubert Dillon, late Police Magistrate at Walgett, 586, 627.
Temporary Draftsmen, Survey Office, 167 (2), 172, 316, 372, 472, 605.
New appointment in Lands or Survey Office, 617.

Q.

QUESTIONS (*continued*) :—
CIVIL SERVICE (*continued*) :—
Appointment of Members of Parliament to, 617.
Leave of absence to Mr. M. S. Hart, Crown Solicitor's Office, 618.
Appointment of Land Appraisers, 641, 650.
Apointment of James Beattie to Customs Department, 649.
Appointment of Mr. H. E. Vindin, 650.
Appointment of Mr. C. J. Lyne, 650.
Appointment of Mr. Sydney Dibbs, 650.
Payments to Mr. T. K. Abbott, S.M., for special services, 655.
Relatives of Mr. Abigail, M.P., in, 655.
CIVIL SERVICE ACT :—
Lithographic Printers in Survey Office, 12.
Salaries, 33.
Superannuation deductions, 57, 162, 239, 324, 329, 351, 460, 645.
Refund of superannuation deductions, 320 460.
Superannuation Fund Accounts, 92.
Interpretation of certain clauses, 92.
Classification of Telegraph Operators, 95, 352, 467.
Do do . Postal Assistants, 467.
Amendment Bill, 192, 195.
Temporary Clerks, Post Office Department, 195.
Statutory increases to salaries, 243, 407, 415, 443, 557.
Increments of salaries to re-classified Officers, 320.
Recommendations for filling new appointments under, 627.
CLEMENCY :—To prisoners in Jubilee year, 263.
CLERKS OF PETTY SESSIONS. (See "CIVIL SERVICE")
CLOTHING :—Issue of, to Permanent Artillery, 383.
COAL COMPANY :—Singleton, 35.
COAL-FIELDS :—Mr. Mackenzie, Examiner of, 77, 596.
COAL-MINES REGULATION ACT :—
Weighing clause, 408.
Compliance with Regulations, 467, 487.
Inspections under the Regulations, 535.
COALS :—Export of, from Sydney Harbour, 487.
COAST WORKS :—Sir John Coode's Report on, 646.
COGHLAN, MR. T. A. :—Appointment of, as Government Statistician, 394, 397.
COLLIERIES. (See also "MINING")
Fined for breach of Regulations under Act, 467.
Lithgow Valley Accident, 517.
Royal Commission on, 557, 580.
Mr. Dixon, Inspector of, 580.
Ferndale Accident, 557, 611.
COLONIAL AND INDIAN EXHIBITION. (See "EXHIBITION")
COLONIAL ARCHITECT'S OFFICE :—Temporary Draftsmen, 172.
COLONY :—News of, in the London Press, 406.
COLO VALLEY :—Survey of, 39.
COMAN, MR., J.P. :—Appointed Acting P.M., Moruya, 227.
COMBINATION TRUCKS :—Earnings and Mileage of, 487.
COMMERCIAL BANK :—Occupancy of Government Building, Cowra, by, 348.
COMMISSION :—Application of Mr. A. S. Board for, in Volunteers, 487.
COMMISSIONERS OF TITLES :—Work of, and Fees received by, 510.
COMMISSIONS :—
Report of, on Railway Bridges, 30, 36, 149, 158, 335, 352.
Water conservation, 58, 96, 451.
Government Officers acting on, 384.
Royal, on Liquor licensing law, 569, 625.
Royal, on Safety of Theatres and Public Halls, 491.
Royal, on Collieries, 517, 557, 580, 611.
COMMON :—
For South Singleton, 204.
Balranald Town, 632, 650.
COMPANIES ACT :—Rules of Court under, 431.
COMPOSITORS :—Temporary, Government Printing Office, 44.
COMPULSORY CLAUSE. (See "EDUCATION")
CONCENTRATED ESSENCES OF SPIRITS, &c. :—Importation of, 397.
CONCESSIONS :—In Railway Rates, 444.
CONDITIONAL LEASE. (See "CROWN LANDS")
CONDITIONAL PURCHASES. (See "CROWN LANDS")
CONERANG :—Township of, near Cooma, 231.
CONSULTATIONS ON RACES :—Legality of, 548.
CONTRACTORS :—
Allowance on account of new Customs Duties to Government, 284.
Final certificates to Railway, 536, 553.
CONTRACT DRAFTSMEN :—Survey Department, 651.
CONTRACTS :—
Amount required for unfinished Government, 204.
For Public Works—Members of Parliament allowed to take plans and specifications for, 645.

QUESTIONS (*continued*) :—
COODE, SIR JOHN :—
Report on Harbours, 290.
Report on Coast Works, 646.
Report on entrance to Shoalhaven at Crookhaven Heads, 627, 632.
Data for, respecting improvements of the Manning and Hastings Rivers, 387, 650.
COOK'S RIVER :—
Surveys of, 19.
Canal, 25.
And Mudbank Road, 25.
And Newtown Road, 25.
Drainage, 75.
Dredging of, 183.
COOMA :—Railway, to Bombala, 132.
COOMBES, EX-CLERGYMAN :—Case of, at Balmain Police Court, 320.
COOPER, MR. W. M. :—Appointed Trustee of Bungendore Park, 518.
COOTAMUNDRA :—
As a polling-place for Young, 15.
Alleged double voting and personation at, 15.
COPYRIGHT UNION, INTERNATIONAL :—Admission of Colony to, 290, 537.
CORONER'S COURT :—Position, 154, 168.
COULL, WILLIAM :—Road through land of, near Picton, 585.
COUNTY MAPS :—Preparation of, 537.
COURNEEN, MR. JAMES :—Late of Prisons Department, 102.
COURT-HOUSE :—
Campbelltown, 33.
Queanbeyan, 44.
Paddington, 96.
Parramatta, 221, 228, 232.
West Maitland, 280, 348, 544.
Darlinghurst, 319.
COURT OF PETTY SESSIONS :—
For Eastern Suburbs, 30, 96, 102, 131, 263, 268, 275, 283, 290, 486.
For Glebe District, 430.
COURT OF QUARTER SESSIONS :—
And Police Court, Parramatta, 259.
And District Courts, Tamworth, Armidale, Glen Innes, Emmaville, and Tenterfield, 352.
COURTS :—
City Police, 129.
Payment of Fees by Stamps, 357.
COWPER WHARF :—Electric Light for, 99, 168, 225, 284.
COWRA :—
Water supply, 11, 132, 440.
Timber reserve, 11.
Government Building occupied by Commercial Bank, 348.
CRICKET GROUND :—Military, adjoining rifle range, 557.
CRIMINALS :—Influx of, 29.
CROOKHAVEN HEADS :—Entrance to Shoalhaven at, 627, 632.
CROSS ROADS, PENRITH :—Railway Siding, 486.
CROSSINGS :—For pedestrians, Circular Quay, 312, 329.
CROUDACE, MR. THOMAS :—Employment of, by the Government, 196.
CROWN LANDS. (See also "SURVEYOR GENERAL'S DEPARTMENT" also RESERVES) :—
Head Office—Number of Clerks and Draftsmen employed, 213, 243 (2).
Department—Amount paid to Officers in excess of authorized salary, 244, 255, 293.
Department—Loss to, by removal or loss of Surveyors corner-pegs, 244.
Department—Retrenchment in, 308.
Do Appraisers of runs, 150, 641, 650.
Do Appointment of Assistant Under Secretary for Lands, 420.
Do Suspension of Officer, 487.
Do New appointment in, 617.
Boundaries of Runs, 11.
Land revenue in 1885, 12.
Improvements—Compensation for, 339.
Do Removal of, 15.
Do On Pastoral Holdings, 467.
Exchange and sale of land under Act of 1884, 21.
Land Boards, 26, 105, 191.
Do Dubbo, 244.
Do travelling expenses of Chairmen, 293.
Do Hillston, 303.
Do Local, Western Division, 353.
Do Eastern, and Central Divisions, 439.
Do Local, Judgments given by, 447.
Do Disrating of a Chairman, 451.
Do Wagga, Urana, Narrandera, and Hillston, 366, 485.

Q.

QUESTIONS (*continued*) :—
CROWN LANDS (*continued*) :—
Land Office at Glen Innes, 26.
Do Bourke, 228, 372.
Do Walgett, 407.
Do Forbes and Parkes, 477.
Do Wagga Wagga, 595.
Do removal of, from Armidale to Glen Innes, 87, 159, 187.
Mr. F. Marsh, Chairman of Land Board at Dubbo, 34.
Form of declaration in regard to conditional purchases, 54.
Mortgaged conditional purchases, 54.
Conditional purchases without residence—Conditional leases, 54.
Land sale at Cathcart and Seymour, 58.
Hydraulic Elevator, Lands Office, 101.
Telephone, Parliament House to Lands Office, 101.
Appraisement of Runs, 106.
Do Blocks, Dubbo District, 415.
Forfeited selections, 129, 167.
Reserves on resumed areas, 130, 485.
Do Marrar Run and County of Mitchell, 290.
Do Gunnedah, Tamworth, and Murrurundi, cancellation of, 315.
Selections, Molong Land Office, 132.
Hardship under administration of Act, 132.
Ringbarking preleases—Mr. S. G. Bowler, Forbes, 150.
Water Reserve, Brewarranna, 162.
Amendment of 52nd clause of the Act, 162.
Conditional Purchasers Legalizing Bill, 168.
Duties of Surveyor-General, Deputy Surveyor-General, and Chief Draftsman under the Act, 181.
Special areas proclaimed under the Act, 195, 521.
Do Scrub lands, Upper Orara, 323.
Conditional leases granted under Act, 204.
Do mining on, 591.
Pastoral Leases do 591.
Thomas Marshall's application for land, Macleay District, 252.
Rents of Leaseholds, 315.
Homestead Leases, 316, 319, 591.
Return respecting Revenue and Expenses under the Act of 1884, 320.
Alleged dummy selection, Grenfell District, 324.
Selected or sold by auction, 336 (2).
Inspectors of Conditional Purchases, 347.
Refund of survey fees to conditional purchasers, 348, 349.
Deposits on conditional purchases and leases, 348.
Conditional Purchases of Mr. Barbour, M.P., Camden District, 352.
Mr. W. Shoobridge's Selections through Mr. Barbour's agency, Camden District, 419.
Conversion of pre-emptive into conditional leases, 366.
Alleged removal of timber from, by J. C. Ellis, 381.
Selection by Robert Munford, 383, 548.
Alleged dummy selection by James Kelly, 383, 548.
Applications under Clause 75 of the Act, 420.
Do Appointment of Assistant Under Secretary, 420.
Delay in paying Refund Vouchers, 431.
District Surveyors under Act of 1884, 431, 505.
Introduction of Amending Bill, 439.
Sale of, West Molong, 456.
Do on resumed area of Messrs. Amos's Runs, Castlereagh River, 482.
Do Tent Hill, 491.
Martin McCormack's application for conditional purchase, 485.
R. W. Knowles' selection, 513, 536.
Mr. Douglass's selection, county of Hunter, 514.
Advertised sale, Walgett, 514.
Moree Land District, 518.
Maps showing resumed and leased areas of runs, 521.
Parish maps, 521, 537.
Legalizing defective conditional purchases, 522.
Prelease of William Skeene, Conargo, 536.
Introduction of Amending Bill, 592.
Pastoral leases in Central and Western Divisions, 631, 646.
Conditional purchases, Wingen, 632, 646.
Amount received from sale of, 642.
CROWN PROSECUTORS :—Names of, and cases for trial, 565.
CROWN-STREET :—Wood-paving, 132, 168.
CROYDON :—Level crossing at Railway Station, 244.
CUDAL :—
Public Well, 132.
Road, Bowan Park to, 500.
CUDGELICO :—Water Supply for, 307.
CUMBERLAND :—Forest Rangers in County of, 329.

QUESTIONS (*continued*) :—
CUSTOMS :—
Custom House, Bogabilla, 139.
Ad Valorem Duties, 209, 256, 372.
Amount received from new duties, 214.
Alleged False Entries at Customs House, 324.
Landing Surveyor, 365,
Alleged disorganization of Department, 384.
Importation of concentrated essences of spirits, &c., 397.
Appointment of James Beattie as Messenger, 649.
Do of Mr. Evans to Department, 554.
Gauging spirits, 565.
DARLINGHURST :—
Entry to new Court-room, 319.
Overcrowded state of Gaol, 393, 496, 618.
DEANE, MR. :—Engineering Branch, Railway Department, 617.
DEATH RATE :—Borough of Parramatta, 420, 543.
DEFENCE OF THE COLONY :—Trained men and armament, 505.
DELIVERY OF LETTERS :—(See "POSTAL").
DENILIQUIN :—Railway from Jerilderie, 23.
DENNIS, JACOB :—Licensed Fisherman, Illawarra, 251.
DENMAN :—Road from Muswellbrook, 538.
DIAMOND DRILLS :—
Particulars of, 17, 59, 357.
Wages of men in Newcastle District, 311.
DIBBS, MR. T. A. :—Alleged purchase by Government of steam yacht belonging to, 23.
DIBBS, MR. SYDNEY :—Appointment of, to Customs Department, 650.
DIBBS, MR. :—Appointment as Associate to Mr. Justice Innes, 518.
DILLON, MR. HUBERT :— Late Police Magistrate at Walgett, 586, 627.
DIRECTORS :—Officers of Civil Service acting as, 336.
DISEASES IN SHEEP ACT :—
Assessment under, 455, 459.
Revenue and Expenditure under, 459.
DISTRESSED FARMERS :—Relief to, 22.
DISTRICT COURTS :—At Armidale, Tamworth, Glen Innes, Inverell, Emmaville, and Tenterfield, 352.
DISTRICT REGISTRARS :—Clerks of Petty Sessions acting as, 267.
DISTRICT SURVEYORS :—Under Crown Lands Act, 431, 505.
DIXSON, MR. :—Inspector of coal mines, 580.
DOG ACT :—Destruction of Dogs under, 244.
DOMAIN :—Naval buildings, 64.
DONOVAN, DR. :—Remission of fine on, under the Infectious Diseases Supervision Act, 280.
DOODLE-COOMA :—Township, 227.
DOUGLASS, MR. :—Selection of, county of Hunter, 514.
DOWNE, MR. :—Appointment of, as Assistant Locomotive Engineer, 544.
DOYLE, MR. J. K. :—Inspector of Runs, 553.
DRAFTSMEN (See "TEMPORARY DRAFTSMEN")
DRAINAGE :—
Into Cook's River, 75.
Of Western Suburbs, 316.
DREDGE :—
Camden Haven, 19.
Service, working hours, 101.
Contract for towing punts, Newcastle, 626.
DUBBO :—
Land Board, 244.
Mr. Frederick Marsh, Chairman of Land Board, 358.
Appraisement of Crown Lands in District, 415.
Railway Engine Sheds, 482.
Surplus storm water, 522.
DUMMY SELECTION :—
Alleged, in Grenfell District, 324.
Do by Robert Munford, 383, 548.
Do by James Kelly, 383, 548.
DUMP-CARS :—Settlement of claims for, 420.
DUNSTONE MR. :—Late Road Superintendent, Casino, 308.
DUTY :—
Exemption of intercolonial steamers from payment of, on stores, 365.
On Australian and Fijian sugar, 591.
DYNAMITE :—Importation of, 259.
EASTER ENCAMPMENTS :—
National Park, 162, 184.
Cost of, 181.
Railway passengers to, 219.
Conveyance of Volunteers and baggage to, 491, 517.
EASTERN SUBURBS :—Court of Petty Sessions for, 30, 96, 102, 131, 263, 268, 275, 283, 290, 486.
EDUCATION (See also "UNIVERSITY") :—
Public School, Tenterfield, 12.
Do Inverell, 30.
Do Muswellbrook, 78.

Q

QUESTIONS (*continued*) :—
EDUCATION (*continued*) :—
Public School Buildings, Randwick, 325.
Do Wollongong, sale of site of old, 106.
Do Windsor, 488, 526.
Do Pennant Hills, 526.
Do Macquarie-street, Parramatta, 543.
Do Parramatta North, 557.
Instruction in Training, High, and Sydney Grammar Schools, 424.
Reduction of Salaries of Public School Teachers, 443.
Onus of proof of non-attendance of children at School, under the compulsory clause of the Act, 455.
Albion-street School, Surry Hills, 459.
Statistics of High Schools, 139.
Inspection of Scholastic, Religious, and Educational Establishments, 140.
Amount expended on Sydney and Country School Buildings, 167.
Expenditure under Public Instruction Act, 171.
Inspector of Public Schools, Molong, 187.
Public School Cadet Corps, 231.
Teaching of Scripture or History under the provision of the Act, 307.
Grievances of trainees and ex-trainees, 525.
Technical College, Site for, Ultimo Estate, 548.
Do Mr. D. T. Wiley, 575.
EIGHT-HOUR SYSTEM OF LABOUR :—
Application of, to Government employés, 18.
Application of, to Government contracts, 33
Demonstration Day—Holiday to Government Printing Office employés, 631, 641.
ELECTORAL :—
Cootamundra as a polling-place for Young, 15.
Double voting and personation at Cootamundra, 15.
Collection of Rolls, 17.
Camden Roll, 35.
Amendment of Expansion Clauses of the Act, 275.
ELECTRIC BELLS :—In Parliamentary Buildings and Government Offices, 632.
ELECTRIC LIGHT :—
Cowper Wharf, Woolloomooloo Bay, 99, 168, 225, 284.
Hyde and Belmore Parks, 111, 154, 192, 203.
Circular Quay and Railway Station, 340.
ELIZABETH-STREET, WATERLOO :—Repair of, 34.
ELLIS, MR. JAMES COLES :—Alleged removal of timber by, from Government land, 381.
EMBEZZLEMENT :—
Cases of, in Railway Department, 579.
At Australian Museum, 553.
EMMAVILLE :—Recreation Ground, 172.
EMPLOYES (See also "RAILWAYS" also "TRAMWAYS") :—
Working-hours in the Dredge Service, 101.
On Roads, Sydney District, 298.
Government Printing Office, 631, 641.
In Public Works Department, 486.
EMPTY WAGGONS :—Running on Great Northern and North-western Railways, 555.
ENDOWMENT OF MUNICIPALITIES :—
Provision for, 131.
Payments to certain Suburban, 613.
ENMORE ROAD :—Improvement of, between Newtown Railway Bridge and Boland's Corner, 612.
EQUITY COURT :—Amount paid into, on account of estate of P. Farrelly, 335.
ESKBANK :—Road, 40.
ESSENCES :—Importation of concentrated, of spirits, &c., 397.
ESTIMATES :—Schedule to, 347.
EVANS, MR. :—Appointment of, to Customs Department, 554.
EVELEIGH :—
Railway workshops, 55, 64, 415 (2), 459.
Do do sewer from, 87.
EXAMINERS OF TITLES :—Appointment of additional, and to fill vacancy, 384.
EXCLUSION OF STRANGERS :—Sessional Order as to, 408.
EXCURSION TICKETS :—Railway, 22.
EXEMPTION :—Of Intercolonial steamers from license fees and payment of duty on stores, &c., 365.
EXHIBITION :—
In London—Mr. Magnus Joseph Pyke, 22, 30, 92.
Do Sir Alexander Stuart, 64.
Calcutta—Cost of representation, 92.
Indian and Colonial, London, 96, 99.
Do preparation of maps for, 158, 163.
Do officials at, 163, 221.
EXPENDITURE :—Public for 1885, 536.
EXPLORATION OF NEW GUINEA :—Under auspices of Geographic Society of Australasia, 420.
EXPLOSIVES :—
Importation of Dynamite, 259.
Safety Cartridges as Ships Cargo, 335.

QUESTIONS (*continued*) :—
EXPORT :—
Quantity of wool for the past six years, 313.
Of Coals from Sydney Harbour, 487.
FAIRY MEADOW :—Railway Platform at, 88.
FARMERS :—
Relief to, 22.
Trains, 96, 97, 163.
FARM PRODUCE :—
Importation from other Colonies, 162.
Railway Freights on, 316, 347, 348, 460.
FARRELLY, MR. MICHAEL :—Gratuity voted for, 558, 566.
FARRELLY, MR. P. :—Amount paid into Equity Court, in Estate of, 335.
FATIGUE PAY :—To Staff Sergeants in Quartermaster General's Department, 259.
FELLTIMBER CREEK :—Road to Carcoar, 263, 280.
FEMALES :—
Employment of, in Telegraph Office, 97.
Immigration of Domestic Servants, 247.
FENCES :—Wire, on main roads, 22.
FERNDALE COLLIERY DISASTER :—Commission to enquire into, 557, 611.
FERRY :—Punt at Wiseman's, 78.
FIDELITY BONDS :—
Telegraph Department, 150.
Railway Department, 196.
Collectors of Revenue, 419.
FIJIAN SUGAR :—Duty on, 591.
FINANCE. (See also "LOAN ACCOUNT") :—
Government Account at Bank of England, 23, 35.
Public Debt, 59.
Ad Valorem Duties, 209, 256, 276.
Amount received from new Customs Duties, 214.
Land and Income Taxes, 225, 228, 276.
Detailed account of amounts charged to Unforeseen Expenses, 247.
Revenue from each item of new Specific Duties, 192, 275, 298.
Fiscal Proposals, 264, 276.
Increase of Taxation during past four years, 196, 298.
Public Expenditure, 1885, 536.
Information as to position of Public Finances, 606.
FINES :—
Inflicted on masters of vessels with safety cartridges on board, 335.
Post and Telegraph Department, 523.
Railway and Tramway Department, 523.
FIRE BRIGADE :—
Orange, 204.
Woollahra Volunteer, 352.
Cost of Metropolitan and Suburban, 585.
FISCAL PROPOSALS :—Statement by the Premier, 264.
FISHERIES :—
Inspector Quinan, 184, 191, 468, 538, 655.
Seizure of nets of Jacob Dennis of Illawarra, 251.
Illegal Fishing, 316, 351.
FISH RIVER CAVES :—Railway, Tarana to Oberon, 275.
FLETCHER, MR. :—Compensation paid to, for Albion-street land, resumed for Public School, 459.
FLOGGING :—Sentence of, on Howard and M'Knight, 440.
FLOUR :—Importation of, 330.
FOOTE, MRS. :—Case of, tried at Maitland, 535.
FORBES :—
Railway to Borenore *via* Cudal, 77, 132.
Boring-machine for, 92.
Railway to Wilcannia, 411, 612.
Land Office—business done, 477.
Weir across Lachlan River, 586.
FORESHORES OF GEORGE'S RIVER : — Applications for Oyster Culture Leases, 86.
FOREST NURSERY :—Reserve near Gosford for, 87, 357.
FOREST RANGERS :—
County of Cumberland, 329.
Mudgee District, 522.
FOREST RESERVES :—Murray and Murrumbidgee Electorates, 547, 555.
FORFEITED SELECTIONS :—Publication of List, 129.
FORSYTH, MESSRS. A. AND CO. :—Claim for compensation by, 297.
FOWLER, PIERCE :—Committed for forgery and embezzlement, 256.
FOWLER, SIR JOHN :—Reports by, on Prospect Dam and Light Railways, 163.
FRAUDS :—Alleged, on the Railway Department, 393, 451, 595.
FREE PASSES :—
To Railway Officials, 131.
To a Deputation, 264.
To the Press, 319.
FREE PUBLIC LIBRARY :—Lending Branch, 77, 112.
FREIGHT (See "RAILWAYS")

Q

QUESTIONS (*continued*) :—
FRIENDLY SOCIETIES :—
Introduction of Bill, 102, 140.
Annual Report, 547.
Establishment of alleged unsafe Societies or Lodges, 604.
FRUIT :—
Alleged stealing of, from trucks, 57.
Carriage of, Parramatta to Sydney, 543.
FURNITURE :—For bedroom for Secretary for Public Works, 649.
GAMBLING :—
Alleged, at Prospect Camp, 168.
Chinese Houses, 43. 456.
GAOLS :—
Leave of absence to warders, 64.
Darlinghurst and Port Macquarie, 393.
Carriage of stores for Berrima, 443.
Darlinghurst, 496, 618.
Mudgee, 548.
Parramatta, position of Gaoler, 596.
GARDEN PALACE GROUNDS :—
Entrance to, 276.
Gates for, 339.
GAS :—Supplied to Government Offices, &c., and charged for by Australian Gaslight Co., 603.
GASWORKS :—Purchase of Railway, from Mr. Castner, by the Government, 411.
GAUGING SPIRITS :—System in force in the Customs, 565.
GEARY'S GAP ROAD, LAKE GEORGE :—Accidents on, 358.
GEOGRAPHICAL SOCIETY OF AUSTRALASIA :—Exploration of New Guinea, 420.
GEORGE'S RIVER :—
Applications for Oyster Leases on foreshores of, 86, 100.
Closing of waters above Tom Ugly's Point, against net-fishing, 182.
GLADESVILLE :—Supply of Boiler for Asylum, 406.
GLADSTONE, The RIGHT HONORABLE W. E.:—Invitation to, to visit the Colonies, 468.
GLEBE DISTRICT :—Court of Petty Sessions for, 430.
GLEBE ISLAND :—
Removal of Abattoirs, 25.
Road from Sydney to, and Balmain, 353.
GLEBE POINT :—Bridge between Balmain and, 129.
GLEN INNES :—
Railway from Grafton, 12, 159.
Railway to Inverell, 23, 168, 472, 489.
Land Office, 26, 87, 159, 187.
Sunday through train to, 91.
Land Board, 191.
Petty Sessions cases tried at Armidale, Inverell, Tenterfield, and, 600.
Deficiency in Railway Accounts at, 601.
GOLD FIELDS :—
Mineral conditional purchases on, 26, 112, 463.
Prospecting for gold, 50.
Reserve Cargo, 330.
Do. Gundaroo, 495.
GOOLAGONG :—Road to Grenfell, 506.
GOONDIWINDI :—Road Warialda *via* Yetman to, 139.
GORDON :—Unemployed engaged on relief works at, 600.
GOSFORD :—Reserve for Botanical purposes near, 87, 357.
GOULBURN :—
Importation of water-pipes for Water Supply, 460.
Return from Railway, from Granville and to Albury, 491.
Railway Stations, Junee, Bathurst, and, 514.
Postmaster at, 522, 537.
GOVERNMENT. (See also "CROWN LANDS.")
Oriental interpreter, 59, 64, 183, 492, 586.
Account at Bank of England, 23, 35.
Lighting of Buildings, Windsor, 19.
Printing Office—Pay of temporary compositors, 44.
Do. Eight-hour Demonstration Day, holiday to supernumerary compositors, 631, 641.
Inspection of Scholastic, Religious, and Educational Establishments, 140.
Buildings, Parramatta—Asphalting in front of, 183.
Building, Cowra, 348.
Rent paid for Buildings used as offices, 184.
Surveyors—money due to, 203.
Contracts unfinished—amounts required for, 204.
Contractors—Allowances to, on account of new Customs duties, 284.
Wharfs, rates charged at, 213.
Supply of Ironwork to, 371.
Officers acting on Commissions, 384.
Statistician—Appointment of Mr. Coghlan, 394, 397.
Do. Application of Mr. Byron for position, 407.
Do. Department, 471, 487, 488, 492, 547, 580, 642.
Arrangement with Messrs. Bakewell Bros. to erect Buildings for Government Offices, 518.
Steamers, Port Jackson, 536, 605, 612.

QUESTIONS (*continued*) :—
GOVERNMENT (*continued*) :—
Gas supplied to, and charged for, 603.
Offices, Telephones and Electric Bells in, 632.
GRAFTON :—Railway to Glen Innes, 12, 159.
GRANVILLE :—
Morning train from, 213.
Duplication of line, to Liverpool, 510.
GRATUITY :—To the late Mr. Michael Farrelly, 558, 566.
GRAVING DOCK :—Biloela, 499.
GREENWICH :—Government Road, North Willoughby, 95.
GRENFELL :—
Reserve, 50.
Mails *viâ* Young to Sydney, 371.
Alleged dummy selection in district of, 324.
Road to Goolagong, 506.
GREVILLE'S YEAR BOOK OF AUSTRALIA :—Purchased by the Government, 252.
GUARANTEES. (See "FIDELITY BONDS")
GULGONG :—Bench of Magistrates—letter signed by Robert Rutherford complaining of decision—charge against Mr. J. F. Plunkett, 129.
GUNDAROO :—
Marked Tree Line Road, 358.
Gold-field Reserve, 495.
Recreation Reserve, 618.
GUNNEDAH :—
Trustees, Wolseley Park, 214, 393.
Cancellation of Reserve at, 315.
Railway from Werris Creek, 439.
GUNPOWDER :—Storage of,—Fire in Pitt-street, 256, 264.
HALL, PATRICK :—Release of, 605.
HAMLET, Mr. :—Report of, on Mr. Peacock's Jam, 431.
"HANSARD" :—
Accommodation for reporters of, 401.
Report as to daily issue, 460.
HARBOUR TRUST :—For Newcastle, 162.
HARBOURS :—Sir John Coode's Reports on, 290.
HARMER, MR. W.:—Issue of deed to, for reclaimed land, Watson's Bay, 330.
HARPER, Mr. SURVEYOR :—Sent to Norfolk Island, 464.
HARRIS PARK :—Approach to Railway Platform, 191.
HART, MR. M. S. :—Leave of absence to, Crown Solicitor's Office, 618.
HASTINGS RIVER :—Data required by Sir John Coode, for report on, 387, 650.
HAWKESBURY :—Railway Bridge over, 88.
HAYES, MR. P.:—Water Frontage, Neutral Bay, 340.
HELSARMEL ESTATE :—Extension of tramway to, 214.
HIGH SCHOOLS :—
Receipts, expenses, and attendance, 139.
Instruction in Sydney Grammar, Training, and, 424.
HILLSTON :—
Local Land Board, 303, 366, 485.
Water Supply for, 366.
HISTORY :—Teaching of, in Public Schools, 307.
HOGAN'S BRUSH, NEAR GOSFORD :—Reserve for Botanic purposes, 87.
HOLT, E. B.:—Sentence on prisoner, 307.
HOMEBUSH-WARATAH RAILWAY :—
Supply of liquor to navvies, 57.
Contracts and date of opening, 76, 207 239.
Resumptions of land, 130.
Expenditure on, and Contracts, 153.
Bridge over the Parramatta, 221
HOMESTEAD LEASES :—
Possession of, 316.
Applications for, 319.
Mining on, 591.
HORNSBY JUNCTION. (See also "PEARCE'S CORNER")
Railway Station, 477.
Railway from, to North Shore, 536, 612.
HORSES :—"Pink-eye" disease, 59.
HOSKINGTOWN :—Village Reserve between Queanbeyan and, 75.
HOSPITALS :—
Molong, 12, 88.
Sydney, Buildings, 182.
Do. Admission of patients, 468.
Spirits, wine, &c., consumed in, 236.
Penrith, 280.
HUDSON BROTHERS, MESSRS :—Railway and Tramway contracts, 579.
HUNTER RIVER :—Water Supply Works, 408.
HYDE PARK :—Electric Light for, 111, 154, 192, 203.
HYDRAULIC ELEVATOR :—Lands Office, 101.
ILLAWARRA RAILWAY :—
Lighting stations on, 19, 482.
George's River Bridge, 76.
Land resumed, 87, 99, 130.
Contracts for, 129.
Approaches to Tempe Station, 153.
Amount voted for and expended on, 303.

Q

QUESTIONS (*continued*) :—
IMMIGRATION :—
Immigrants, per "Florida," 76.
Of Female Domestic Servants, 247.
Nominations for assisted passages, 595.
Alleged, of Belgian ironworkers, 645.
IMPORTS :—
Of Farm Produce from other Colonies, 162.
Railway material, stock, switches, point rods, &c., 486.
IMPROVEMENTS :—On Crown Lands, 15, 339, 467.
INCOME TAX :—Incidence of, 225, 228.
INCREASES. (See "CIVIL SERVICE ACT.")
INDIAN AND COLONIAL EXHIBITION. (See "EXHIBITION.")
INFECTIOUS DISEASES SUPERVISION ACT :—Remission of fine on Dr. Donovan, 280.
INFIRMARY. (See "HOSPITALS.")
INSOLVENCY LAWS :—Alteration in, 535.
INSOLVENT COURT :—
Mode of allotting estates to Official Assignees, 312.
Numbering of Schedules, 443.
INSPECTION :—
And Testing of Spirits, Wines, and Beer, 54.
Government, of Scholastic, Religious, and Educational Establishments, 140.
Of slaughter-houses, 513, 535.
Official, of Mines, 601.
INSPECTORS :—
Of Conditional Purchases—number employed in 1885, and travelling expenses paid to, 347.
Of Asylums, and of Charities, 384.
Of Charities, 384, 487, 488, 495.
Of scaffolding, 340, 537.
Of runs—Messrs. Doyle and Lowe, 553.
INSTRUCTION. (See "EDUCATION")
INTERCOLONIAL STEAMERS :—Exemption of, from License Fees and Duty on Stores, 365.
INTERNATIONAL COPYRIGHT UNION :—Admission of Colony to, 290, 537.
INTERPRETER, GOVERNMENT :—Oriental, 59, 64, 183, 492, 586.
INTIMIDATION CASES :—Mount Pleasant (Wollongong) Miners, 554, 612, 645.
INVERELL :—
Railway from Glen Innes, 23, 168, 472, 489.
Railway to, *via* Bundarra and *via* Glen Innes, 481 (2), 500, 513.
Public School, 30.
Police district, 44, 293.
Road to Yetman, 140.
Roads in District, 408.
Reserve, Volunteer Corps, 411.
Petty Sessions cases tried at Armidale, Glen Innes, Tenterfield, and, 600.
INVITATION :—To the Right Honorable W. E. Gladstone to visit the Colonies, 468.
IRON COVE BRIDGE :—
Safety of foot-passengers, 25.
Closing of waters above, against net-fishing, 182.
IRON PIPES :—Importation of, for Country Water Supplies, 460.
IRONWORK :—Supply of, to the Government, 371.
IRONWORKERS :—Alleged immigration of Belgian, 645.
IRRIGATION :—Introduction of Bill, 381.
JAM :—Report on, made by Mr. Peacock, 431.
JAMIESON, Mr. C. E. :—Draftsman, Railway Survey Branch, 447.
JENNINGS, W. H. :—
Opening of Stone Quarry on Quarantine Ground by, 506.
JERILDERIE :—
Railway to Deniliquin, 23.
Railway from Narrandera, 591.
JINDERA MOUNTAINS :—Cattle-stealing in, 172.
JUBILEE YEAR :—Clemency to Prisoners, 263.
JUDGES OF THE SUPREME AND DISTRICT COURTS :—Suggested reduction in Salaries of, 195.
JUNEE :—
Water supply at, 20, 348.
Do. to Railway Station, 482.
Railway rates to, 99.
Incorporation of, 371.
Railway Workshops, 406, 649.
Railway Station, business and employés at, 514.
Special Trains between Narrandera and, 631.
Mail Train do 655.
KAHIBAH :—Mr. E. C. Merewether's Mineral Lease, 129.
KELLY, JAMES :—Alleged dummy selection by, 383, 548.
KEMPSEY :—
Administration of Justice in district, inquiry into, 320, 401, 655.
Mr. Stevenson, Clerk of Petty Sessions, 421.
KENYON, MR. :—Clerk of Petty Sessions, Gunning, 119.
KIDMAN, MR. :—Amount paid to, for land resumed for Albion-street Public School, 459.

QUESTIONS (*continued*) :—
KNOWLES, MR. R. W. :—Selection of, 513, 536.
KRAMER, MR. F. :—Offer of, to exterminate rabbits, 492.
LACHLAN RIVER :—Weir across, Forbes, 586.
LAMBTON COAL COMPANY :—
Ventilation of Mine, 85.
Mining under Newcastle Pasturage Reserve, 91, 97.
LAMPS :—On Murray Bridge at Moama, 30.
LAND :—
Valuation of, near Church-street, West Maitland, 308.
Selected by Mr. Carl Martin, at Shoalhavon. 506.
LAND APPRAISERS :—Appointment of, by Mr. Abbott, 150, 641, 650.
LAND BILL :—Introduction of amending, 592.
LAND BOARDS AND OFFICES. (See "CROWN LANDS")
LANDS DEPARTMENT. (See "CROWN LANDS")
LAND REVENUE :—Amount of, for the first ten months of 1885, 12.
LAND SALE. (See "CROWN LANDS")
LAND TAX :—Incidence of, 225, 228.
LAND TITLES OFFICE :—
Delay in registration and delivery of Deeds, 191.
Appointment of Examiners of Titles, 384.
Commissioners of Titles, 510.
LAND VALUERS—RAILWAY :—
Leave to Mr. James Byrnes, and appointment of Mr. M'Dermott, 96.
Temporary hands in office of, 641.
LANDING SURVEYOR :—Performance of duties of, 365.
LANDING WAITERS :—Customs Department, 384.
LARRAS LAKE :—Bridge at, near Molong, 477.
LATTICE-WORK :—To carry Telegraph Lines along George-street, 184, 207, 214.
LEASEHOLDS. (See "CROWN LANDS")
LEAVE OF ABSENCE :—
To Mr. Robert M'Lean, Survey Office, to enable him to edit an Altas, 252.
To Post and Telegraph Masters, 554.
To Mr. M. S. Hart, Crown Solicitor's Office, 618.
LEGISLATIVE COUNCIL :—Introduction of Bill for remodelling on elective basis, 456.
LEICHHARDT :—
Lock-up, 219.
Typhoid Fever in, 251.
Post and Telegraph Office for, 632.
LENDING BRANCH, FREE PUBLIC LIBRARY :—Issue of Works of Fiction on Sundays, 77, 112.
LIBRARY. (See "FREE PUBLIC LIBRARY")
LICENSE FEES :—
Of surveyors, 58.
Exemption of Intercolonial Steamers from payment of Duty on Stores and, 365.
LICENSING ACT :—
Amendment of, 54, 91, 439.
Music and Dancing Licenses, 79.
Duties of Police on Sundays under, 91.
Renewal of license for "Victoria Park Hotel," Darlington, 565, 570.
Royal Commission, 569, 625.
LICENSING BOARD :—Port Macquarie, 239, 452.
LIFE BOAT SERVICE :—Steamer for Newcastle, 625.
LIFE-SAVING APPARATUS :—
Rocket sets in Government Stores, 298.
At Green Cape Light-house, 304.
Where placed on the coast, 304, 307.
LIQUOR :—Supply of, to navvies on Railway, 57.
LIQUOR LICENSING LAW :—Royal Commission on, 569, 625.
LITHGOW VALLEY COLLIERY :—
Action upon the Report of the Commission, 517.
Instructions to Commission to enquire into disaster, 557.
LITHOGRAPHIC PRINTERS :—Under Civil Service Act, 12.
LIVERPOOL :—
St. Peter's Loop Line, 23, 412, 415, 495.
Duplication of line from Granville, 510.
LOAN ACCOUNT. (See also "FINANCE") :—
Charges against, 35.
Balance available for railways and public works, 35.
Government Banking Account in Bank of England, 23, 35.
The Loan of £5,500,000, 112.
Power of borrowing under existing Acts, 159.
LOAN VOTE :—For Railway Trial Surveys, 154, 163, 290, 348.
LOANS :—
For Railways and other Public Works, 336.
For Public Works, 646.
LOCAL LAND BOARD. (See "CROWN LANDS")
LOCAL OPTION :—Vote of, in Sydney, 26.
LOCAL GOVERNMENT BILL :—Introduction of, 488.
LOCK-UP :—
Leichhardt, 219.
Parramatta North, 329.
Tingha, 351, 460.

Q

QUESTIONS (*continued*) :—
LOCOMOTIVES (See also "RAILWAYS) :—
Purchased by the Government, 290, 298.
Order for Railway Machinery and, 315.
LOFTUS, LORD AUGUSTUS :—Amount due to Government, for cablegrams and telegrams sent by, 348, 352.
LONDON PRESS :—News of the Colony in, 406.
LONG COVE BAY :—Reclamation of, 129.
LONG, MR. PARRY :—Appointment of, as Examiner of Titles, 384.
LORD, THE LATE MR. E. :—Application by Executors of, to purchase water frontage, Neutral Bay, 340.
LOWE, MR. C. B :—Inspector of Runs, 553.
LOW-LYING LAND :—At Rushcutter's Bay, 452.
LYNDHURST :—Railway Station, 210, 232.
LYNE, MR. C. J. :—Appointment of, to Civil Service, 650.
MACDONALD TOWN :—
Resumption of land for Station, 22.
Plans for Station, 26.
Park, 34.
Burren Street, 649.
Railway Station, 649.
MACKENZIE, MR. :—Examiner of Coal-fields, 77, 596.
MAGISTRATES (see "ADMINISTRATION OF JUSTICE")
MAILS. (See "POSTAL")
MAITLAND WEST :—
Court-house, 280, 348, 544.
Valuation of land near Church-street Railway Station, 308.
Amended By-laws of Municipality, 383.
MAMRE ROAD :—Expenditure on, 203.
MANNING RIVER :—Data required by Sir John Coode, 387, 650.
MAPS :—
For Colonial and Indian Exhibition, 158, 163.
Showing Resumed and Leased Areas of Runs, 521.
Parish and County, 521, 537.
MARINE :—
Alleged unseaworthiness of barque "St. Lawrence," 252.
Alleged Shipping Abuses, 263.
Life-saving Rocket Apparatus, 298.
Life-saving Apparatus, Green Cape Light-house, 304.
Do. where situated on the coast, 304, 307.
Mr. O'Dowd, Chief Engineer "City of Melbourne," 554.
MARINE BOARD :—Local, Newcastle, 626.
MARTIN, MR. CARL :—Land selected by at Shoalhaven, 506.
MARRAR RUN :—Reserve on, 290.
MARSH, MR. F. :—Chairman of Land Board at Dubbo, 34, 358.
MARSHALL, THOMAS :—Application for Land, Macleay District, 252.
MCCORMACK, MARTIN :—Application for Conditional Purchase, 485.
MCDERMOTT, MR. F. S. :—Appointment of, as Railway Land Valuer, 96.
MCKENZIE, MR. D. L. :—Charge against, as Stock Inspector, 580.
MCLEAN, MR. ROBERT :—Leave of absence to, from Survey Office, to enable him to edit an Atlas, 252.
MCQUADE PARK, WINDSOR :—Improvement of, 18.
MEMBERS OF PARLIAMENT (see "PARLIAMENT")
MEREWETHER, MR. E. C. :—Mineral Lease, Kahibah, 129.
MERRIWA :—Road from Muswellbrook, 538.
METROPOLITAN :—
Business at Branch Post Offices, 510.
Cost of Fire-Brigade, 585.
METROPOLITAN WATER AND SEWERAGE ACT :—Extension of to Parramatta, 603.
MICHELAGO :—
Town of, 88.
Railway Station, 429, 440, 444, 448.
MIDELTON, MR. :—Railway Locomotive Overseer, 106, 352, 357, 509.
MILITARY :—
Easter Encampment, National Park, 162, 184.
Cost of Easter Encampments, 181.
Inquiry respecting Captain Airey, 207.
Fatigue Pay to Staff Sergeant, 259.
Major Penrose R.E., 411.
Cricket Ground, adjoining Rifle Range, 557.
Department, Mr. Solomon, 645.
MILLER AND BEGG :—Claim of, 26.
MILLERS :—Railway accounts with, 130.
MILLINGTON, MR. :—Of Surveyor-General's Department, sent to Norfolk Island, 464.
MINING :—(See also "COLLIERIES")
Conditional Purchases on Gold Fields, 26, 112, 463.
Diamond drills, 17, 59.
New Mining Bill, 27, 352.
Mineral Leases, 55, 239.
Mineral Lease, Mr. E. C. Merewether's, Kahibah, 129.

QUESTIONS (*continued*) :—
MINING (*continued*)—
Mineral Leases, Enforcement of labour conditions, 172.
Lease to mine under Newcastle Pasturage Reserve, 77, 85, 91, 97.
Lambton Coal Company, 85, 91, 97.
On Church and School Lands, 99, 149.
Report of Department for 1885, 210.
Decision of District Court as to regulations—Wright *v.* Bonnor, 187.
Refunds to Applicants for Land under the 28th section of the Act, 347.
Weighing Clause under Coal Mines Regulation Act, 408.
Cargo Gold-Field Reserve, 330.
Gundaroo Gold-Field Reserve, 495.
Coal Mines Regulation Act, 535.
Peel and Uralla District, 544, 606.
Mount Pleasant (Wollongong) Miners—Intimidation Cases, 554, 612, 645.
Lithgow Valley and Ferndale Collieries Disasters, 557.
Validation of Mineral Conditional Purchases, 561.
On Conditional, Homestead, and Pastoral Leases, 591.
Official Inspection of Mines, 601.
MINISTERIAL SPECIAL TRAINS :—Number and Cost of, 477, 489, 492, 506.
MINISTERS' UNION :—Protest from, respecting Sunday Entertainments, Concerts, &c., 591.
MINT, SYDNEY :—Silver Coinage at, 336.
MINTO (See "RAILWAYS").
MITCHELL :—Reserve in County of, 290.
MODEL FARMS :—
Establishment of, 267, 280, 319, 443.
Sites for, Western District, 600.
MOLONGLO PLAINS :—Road across, 448.
MOLONG :—
Hospital, 12, 88.
Railway, Orange to, 22, 293, 500.
Weighbridge for Railway Station, 460, 514.
Selections at Land Office, 132.
Inspector of Public Schools, 187.
Public Works in District, 275.
West—Sale of land, 456.
Site for Presbyterian Church, 477.
Bridge at Larras Lake, near, 477.
Road, to the Peabody, 496.
Bank-street, 496.
MONEY ORDER OFFICES :—
Cost of establishing, 544.
Unofficial Post Offices at which Money Order Branches are established, 554.
MOREE :—Land District, 518.
MORIARTY, MR. E. O. :—Appointments held by, 537.
MORRIS, MR. AUGUSTUS :—Motors imported from America, for Tramways, through the agency of, 290, 298.
MOSS VALE :—Friday train from Picton, 419.
MOUNT HOPE :—Charge for Water from Government Tank, 220.
MOUNT PLEASANT MINE :—Intimidation Cases, 554, 612, 645.
MOUNT VICTORIA :—Railway Station, 387.
MOORE PARK :—Mounted Patrol for, 612.
MUDBANK AND COOK'S RIVER ROAD :—Trustees and tolls, 25.
MUDGEE :—
Railway, 85, 97, 129, 352.
Forest Ranger, of District, 522.
Gaol, 548.
MUNICIPALITIES :—
Special grant to, 43.
Civil Servants holding positions under, 112.
Endowment of, 131, 613.
Incorporation of Junee, 371.
Site for Council Chambers, Windsor, 553.
MUNFORD, ROBERT :—Alleged dummy selection, by, 383, 548.
MURRAY :—Bridge over, at Moama, 22, 30.
MURRURUNDI :—
Recreation Ground, 87.
Cancellation of Reserve at, 315.
MUSEUM, AUSTRALIAN :—Robbery and Embezzlement from, 553.
MUSWELLBROOK :—
Road Superintendents, 78, 115.
Public School, 78.
Road to Merriwa, 538.
Road to Denman, 538.
MYRING, MR. T. H. :—Resignation and re-employment of, 247.
NAMOI RIVER :—
Tamiaro Bridge over, 407.
Bridge over at Rocky Crossing, Narrabri, 510.
NARRABRI :—
Railway to Walgett, 192, 408.
Deviation of Railway through, 500.

Q

QUESTIONS (*continued*) :—
NARRANDERA :—
Local Land Board, 366, 485.
Railway to Jerilderie, 591.
Special Goods Trains between Junee and, 631.
Mail Train between Junee and, 655.
NARROMINE :—Erection of rabbit proof fence to Bourke, 510.
NATIONAL PARK :—
Railway passengers to, 219.
Expenditure on, 627.
Alleged removal of lillies and palm fronds from, 641.
NAVAL BUILDINGS :—In Domain, 64.
NAVAL SEAMEN'S HOME :—Grant of land for, and assistance in building, 412.
NEILD, MR. J. C., M.P. :—Special railway carriage occupied by, 459.
NEPEAN :—Water Supply from, 54.
NET-FISHING :—Closing of waters of Parramatta River, Iron Cove, Port Hacking, and George's River, ainst, 182, 219.
NEUTRAL BAY :—
Mr. P. Hayes' Water frontage, 340.
Mr. E. Lord's do. do. 340.
NEWINGTON ASYLUM :—
Deaths in, and trained nurses for, 324.
Sanitary arrangements, dietary scale, mortality, and trained nurses in, 381.
Entertainment at, 487.
NEWCASTLE :—
Lease to mine under Pasturage Reserve, 77, 85, 91, 97.
Harbour Trust, 162.
Wharves. 280, 307.
Diamond Drill-Men in District, 311.
Railway Station, 405.
Departure of mail train from, 482.
Inspector of Scaffolding, 537.
Steamer for Life-Boat Service, 625.
Contract for towing dredge punts to sea, Newcastle, 626.
Local Marine Board, 626.
NEW GUINEA :—Exploration of, under auspices of Geographical Society of Australasia, 420.
NEW HEBRIDES :—
Annexation of, by France, 149.
Resolution from Chamber of Commerce respecting, 655.
NEW LAMBTON COLLIERY COMPANY :—Purchase of railway rails, by, 401, 411.
NEWTOWN :—
Repair of Cook's River Road, 25.
Wood-paving of Road, 132.
NIGHTSOIL :—Disposal of, Borough of Redfern, 86.
NORFOLK ISLAND :—Messrs. Harper & Millington, Surveyor-General's Department sent to, 464.
NORTH COAST RAILWAY :—Surveys of, 117, 168.
NORTH SHORE :—
Railway from Pearce's Corner (Hornsby Junction), 59, 79, 472, 495, 536, 612.
Tramway, 347.
Superintendent of Roads for District, 531.
NORTH WILLOUGHBY :—Road dividing Haslem's, Dullin's, Chisholm's, and Berry's grants, Greenwich, 95.
NOXIOUS TRADES :—
Introduction of Bill, 163.
Provision for, 290.
NOXIOUS PLANTS :—Losses of stock from, 548.
NYNGAN :—Railway employés at, 612.
OBERON :—
Railway to Tarana, 43, 275, 431.
Votes for Roads to, 317.
O'DOWD, MR. :—Chief Engineer of "City of Melbourne," 554.
OFFICERS :—Under Suspension, 349.
OFFICIAL ASSIGNEES :—Mode of allotment of estates to, 312.
ORANGE :—
Railway to Forbes *via* Cudal, 132.
Railway to Molong, 22, 293, 500.
Clerk of Petty Sessions, 184, 358, 382, 486.
Fire Brigade, 204.
Payments to Volunteer Corps, 227.
Water Supply, 316.
Station-master's residence, 561.
ORARA RIVER :—Proclamation of scrub lands as special area, 323.
ORDNANCE DEPARTMENT :—
Survey of Stores, 64.
Arms and Ammunition in, 387.
ORIENTAL INTERPRETER :—Government, 59, 64, 183, 492, 586.
ORPHAN SCHOOL :—Roman Catholic, Parramatta, 467, 486 (2).
OULD, MR. :—Appointment of, as Examiner of Titles, 384.

QUESTIONS (*continued*) :—
OVERCOATS :—
For Tram Conductors, 289, 451.
For Tramway employés, 569.
OVERLOADING OF VESSELS :—Alleged practice of, 55,
OXFORD-STREET, PADDINGTON :—Wood-paving along Tramline, 247, 506.
OYSTER CULTURE LEASES :—
Particulars of, 35.
Foreshores of George's River, 86, 100.
PACIFIC MAIL COMPANY :—Letter from, 304.
PADDINGTON :—
Woodpaving, Oxford-street, 247, 506.
Public sewer, Comber-street, to Liverpool-street, 91, 482.
Erection of Baths, Rushcutter's Bay, 91.
Court-house, Point Piper Road, 30, 96, 102, 131, 263, 268, 275, 283, 290, 486.
PARCELS :—Conveyence of, by rail, 496.
PARISH MAPS :—New edition of, 521, 537.
PARK :—
National, 219, 627, 641.
Redfern, 21.
Alexandria-Macdonald Town, 34.
Waterloo, 63.
Bronte Bay, Waverley, 112, 220, 312, 472.
Richmond, 297.
Parramatta, 304.
Wolseley, Gunnedah, 393.
Bungendore, 518.
PARKES :—Business done at Land Office, 477.
PARLIAMENT :—
Telephone to Lands Office, 101.
Special Train—so-called Parliamentary, 303.
Accommodation for Reporters, Parliament House, 401.
Hansard, Report as to daily issue, 460.
Delivery of letters at Buildings, 575.
Appointment of Members to Civil Service, 617.
Telephones and Electric Bells in Buildings, 632.
Members of, allowed to take contract plans for Public Works, 645.
Cost of printing and binding "Votes and Proceedings, for 1885, 649.
PARRAMATTA :—
Sewerage, 18, 558.
Extension of Metropolitan Water and Sewerage Act to, 580, 603.
Cemetery, 18.
Tramway to Pennant Hills, Castle Hill, and Baulkham Hills, 18, 183.
Filling up of River, 33, 183, 558.
Railway Station, 33, 182 (2), 324.
Site for Benevolent Asylum, 87, 222.
Road Trust, 105.
Conveyance of Mails between Railway Station and Post Office, 115.
River above the Bridge—closing against net-fishing, 182.
Lennox Bridge, 182, 460.
Asphalting in front of Government Buildings, 183.
Bridge across, for Homebush-Waratah Railway, 221.
Site for Court-house, 221, 228, 232.
Police Court and Court of Quarter Sessions, 259.
Park—dwarf wall, &c., 304, 543.
Recreation Reserve Trustees, 311.
Lockup, 329.
Death-rate of borough, 420, 543.
Roman Catholic Orphan School, 467, 486 (2).
Public School, Macquarie-street, 543.
Do North, 557.
Carriage of fruit, to Sydney, 543.
Appointment to vacant position of Gaoler, 593.
PARRAMATTA ROAD :—Wood-paving of, 431.
PASTORAL LEASES :—
Mining on, 591.
In Central and Western Divisions, 631, 646.
PATENT RIGHTS :—
Distribution of fees received, 140, 158, 171, 195, 371.
Introduction of Bill, 154, 340, 383.
PEABODY :—Road Molong to, 496.
PEACOCK, MR. :—Report on Jam made by, 431.
PEARCE'S CORNER (HORNSBY JUNCTION) :—
Railway to North Shore, 59, 79, 472, 495, 536.
Railway Station, 477.
PEEL AND URALLA MINING DISTRICT :—Cancellation of Reserves in, 544, 606.
PEMBROKE, MR. :—Acting Clerk of Petty Sessions, Gunning, 119.
PENNANT HILLS :—Public School, 526.
PENNY POSTAGE SYSTEM :—Extension of, 33, 221, 304, 316.
PENRITH :—
Reserve, 34.
Employés at Railway Station, 76, 86, 140, 203, 283, 297.

Q

QUESTIONS (*continued*) :—
PENRITH (*continued*) :—
Police Magistrate for, 191.
Hospital, 280.
Railway Refreshment Room, 443.
Railway Siding, Cross Roads, 486.
Inspector of Slaughter-houses, 513.
PENROSE, MAJOR, R.E. :—Credentials and work of, 411.
PERMANENT FORCE. (See "ARTILLERY")
PETERSHAM :—
Iron Railway Bridge, 384.
Railway Platform between Summerhill and, 536. 579.
PETTY SESSIONS. (See "COURT OF PETTY SESSIONS," also, "ADMINISTRATION OF JUSTICE")
PHYLLOXERA :—In Camden District, 40.
PICTON :—
Friday train to Moss Vale, 419.
Road through W. Coull's land near, 585.
PIKE'S GAP :—Road Muswellbrook to Merriwa, 538.
"PINK-EYE":—Disease in horses, 59.
PIPER'S FLAT :—Crossing for Railway Line at, 76.
PITT WATER DISTRICT :—Superintendent of Roads for, 531.
PLATFORM. (See "RAILWAYS")
PLIMSOLL MARK :—
On the "Alice Mary," 30.
Fixing of, 54.
PLUNKETT, MR. J. E. :—Alleged charge against, of writing a letter signed Robert Rutherford, 129.
POISONOUS PLANTS :—Losses of Stock from, 548.
POLICE :—
Districts of Inverell, Bingera, and Warialda, 44, 293.
Superannuation Fund, 63.
Quarters, Tingha, 79, 159, 351, 460.
Duties of Inspectors and Sergeants, under Licensing Act, on Sundays, 91.
City Courts, 129.
Protection, Prospect and Water-works, 183.
Court, and Court of Quarter Sessions, 259.
Mounted Patrol for Moore Park, 612.
POLICE MAGISTRATE :—
Penrith, 191.
Walgett, 407, 586, 627.
Wollombi, 447.
POLL-TAX ON CHINESE :—Statistics of, 106, 460.
POPULATION :—
Proportion of Civil Servants to, 419.
Of Braidwood District, 604.
Area, Wingen, 642.
PORT HACKING :—
Closing waters of, against net-fishing, west of North-west Arm, 182.
Net fishing in, 219.
PORT JACKSON :—
Water frontages, 107.
Government steamers in, 536, 605, 612.
PORT MACQUARIE :—
Licensing Board, 239, 452.
Data respecting, required by Sir John Coode, 387.
Gaol, 393.
PORTRAIT GALLERY. (See "AUSTRALIAN PORTRAIT GALLERY")
POSTAL :—
Delivery of letters in Botany districts, 19.
Do Waverley and Bondi, 320.
Do at Parliamentary Buildings, 575.
Suburban letter delivery, 26.
Sunday delivery of letters, 30.
Extension of penny postage system, 33, 221, 304, 316.
Post Office, Tinonee, 39.
Do Yass, 183.
Do Ballina, 243.
Applications for employment in Departments, 40.
Post and Telegraph Office, Botany, 63.
Do do Singleton, 86.
Do do Balmain, 307.
Do do Wagga Wagga, 393.
Do do Leichhardt, 632.
Do do Burwood Railway Station, 329.
Rats in General Post Office, 78.
Conveyance of Mails between Railway Station and Post Office, Parramatta, 115.
Street in front of General Post Office, 86.
Mail Vans, Southern Railway Line, 86.
Messrs. Robertson and Wagner, mail contractors, 158.
Private letter-boxes, General Post-office, 183.
Transfer of clerks, temporary to permanent staff, 159, 221.
Post Office Carvings, 213.
Issue of Postal Notes, 225, 406, 500.
Pacific Mail Service, 304.
Mail between Grenfell and Sydney, 371.
QUESTIONS (*continued*) :—
POSTAL (*continued*) :—
Classification of Assistants and Operators, 467.
Metropolitan branch offices, 510.
Postmaster at Goulburn, 522, 537.
Fines in Department, 523.
Cost of establishing Money Order Offices, 544.
Money Order Branches at unofficial Post Offices, 554.
Leave of absence to Post and Telegraph Masters, 554.
Mr. South appointed Postmaster, Murrumburrah, 599.
Mail Train between Junee and Narrandera, 655.
PRE-EMPTIVE LEASES :—Conversion of, into conditional leases, 366.
PRESS :—
Railway passes to representatives of, 319.
Accommodation for, Parliament House, 401.
London—News of the Colony in, 406.
PRINTING OFFICE. (See "GOVERNMENT")
PRISONERS :—
Short-sentenced, 236.
Clemency to, in Jubilee Year, 263.
Numbers in Colony on certain date, 280.
Sentence on E. B. Holt, 307.
Under sixteen years of age, 452, 463, 468, 481.
Proposed release of Bertrand, 499.
Release of Patrick Hall, 605.
In Darlinghurst Gaol, 618.
PRISONS :—
Retirement of Mr. James Courneen, 102.
Buildings, Trial Bay, 161.
PROBATE OFFICE :—Delay in forwarding Wills from, to Supreme Court Office, 253.
PROBATIONERS :—In the Civil Service, 431.
PROSPECT :—
Alleged gambling at Camp, 168.
Sir John Fowler's report on Dam, 163.
Police protection at, 183.
Reservoir,—number employed at, and medical attendance, 439.
PUBLIC DEBT :—In 1880, 1881, 1882, 1883, and 1884, 59.
PUBLIC INSTRUCTION ACT. (See "EDUCATION")
PUBLIC SCHOOLS. (See "EDUCATION")
PUBLIC TANKS :—Care and leasing of, 210.
PUBLIC EXPENDITURE :—For 1885, 536.
PUBLIC FINANCES :—Information in reference to, 606.
PUBLIC WORKS DEPARTMENT :—
Employés in, 486.
Cost of furnishing bedroom for Secretary for Public Works, 649.
PUBLIC WORKS :—
Members of Parliament allowed to take contract plans, &c., for, 645.
Loans for, 336, 646.
PUBLICAN :—Fined for serving drink to an aboriginal, 312.
PUNTS. (See "FERRIES")
PUTNEY :—Public Wharf at, 159, 324.
PYEMAN, GANGER :—Disrating of, 19.
PYKE, MR. MAGNUS JOSEPH :—Member of the Colonial and Indian Exhibition, 22, 30, 92.
PYRMONT BRIDGE ROAD :—Expenditure of grant, 235.
QUARANTINE GROUND :—Mr. W. H. Jennings's Quarry on, 506.
QUEANBEYAN :—
Closed roads, 29.
Court-house, 44.
Village reserve, between Hoskingtown and, 75.
Cattle-stealing in district, 172.
QUEEN'S WAREHOUSES :—Cost of, and revenue from, 197.
QUINAN, MR. J. :—Inspector of Fisheries, 184, 191, 316, 351, 468, 538, 655.
QUIRINDI :—Payment to Mr. T. K. Abbott for inquiry at, 655.
RABBITS :—
Mr. Kramer's offer to exterminate, 492.
Disposal of skins, 575.
RABBIT NUISANCE ACT :—
Erection of Rabbit-proof fencing, 204, 330, 510.
Mr. T. H. Myring, Officer in charge of, 247.
RACES :—Legality of "Consultations" on, 548.
RAILWAYS :—
Trial survey, North Coast, 11, 117, 168.
Tenterfield to the Queensland Border, 11.
Do do Messrs. Stevens & Co.'s Contract, 128.
Junction of Northern with Queensland Railway, 12.
South Grafton to Glen Innes, 12, 159.
Station and goods shed at Borenore, 12, 153, 514.
Do Tempe, 153, 297.
Do Macdonald Town, 22, 26, 649.
Do Parramatta, 33, 182(2), 324.
Do Bowral, 105.
Do Tamworth, 183.

Q

QUESTIONS (*continued*) :—
RAILWAYS (*continued*) :—
Station, Windsor, 192, 491.
Do Lyndhurst, 210, 232.
Do Croydon, Level Crossing at, 244.
Do Allandale, 289.
Do Church-street, West Maitland, valuation of land near, 308.
Do Redfern, electric light at, 340.
Do Mount Victoria, 387.
Do Newcastle, 405.
Do Michelago, 429, 440, 444, 448.
Do Wagga Wagga, Water Supply to, 455.
Do Tarago, 463.
Do Molong, 460, 514.
Do Hornsby Junction or Pearce's Corner, 477.
Do Junee, 482, 514.
Do Goulburn, Bathurst and Junee, 514.
Do Master's Residence, Orange, 561.
Do Master, Albury, 605, 606 (2).
Do Masters, increase of salaries to, 618.
Stations, weighbridges or steelyards at, 339, 460, 514.
Platform Meadow Flat, 88.
Do Harris Park, 191.
Do between Minto and Campbelltown, 221.
Do Rhodes, 299.
Do between Petersham and Summer Hill, 536, 579.
Siding, Cross Roads, Penrith, 486.
Employés—Uniforms for, 17.
Do Wages of, 18.
Do Hours of labour, 420.
Do Dismissal of, 204.
Do Union for protection of interests of, 187, 203.
Do Penrith, 76, 86, 140, 203, 283, 297.
Do named Stuart, 448.
Do Nyngan, 612.
Do Annual increases to, 612, 618.
Do G. N. and N. W. Lines, 372, 405, 455, 471, 477.
Blayney-Murrumburrah Line, 18, 19, 228.
Illawarra Line, Lighting Stations on, 19, 482.
Do George's River Bridge, 76.
Do Resumption of Land, 87, 99, 130.
Do Contracts for, 129.
Do Amount voted and expended on, 303.
Pay of gangers on South and South-western Lines, 19.
Ganger Pyeman, 19.
Water Supply, Junee Junction, 20.
Orange to Molong, 22, 293, 500.
Excursion tickets, 22.
Jerilderie to Deniliquin, 23.
Loop-line, St. Peter's to Liverpool, 23, 412, 415, 495.
Glen Innes to Inverell, 23, 168, 472, 489, 523.
Inverell—comparison of routes *viâ* Bundarra and *viâ* Glen Innes, 481 (2), 500, 515.
Steel rails, 26.
Steel tires and axles, 29, 57, 323.
Steel crank axles, broken or defective, 312.
Bridges,—Report of Royal Commission on, 30, 36, 149, 158, 335, 352.
Bridge, Iron between Petersham and Summerhill, 384.
Do over the Hawkesbury, 88.
Do over the Parramatta, 221.
Do Rocky Crossing, Narrabri, estimate for, 510.
Special train from Albury for School, 34.
Do so-called Parliamentary, 303.
Do Ministerial, 477, 489, 492, 506.
Do carriage occupied by Mr. J. C. Neild, M.P., 459.
Special Engine used by Mr. Cass, M.P., 263.
Survey of Colo Valley, 39.
Oberon to Tarana, 43, 275, 431.
Refreshment-rooms Lessees, 49.
Do Penrith, 443.
Do Rents of, 419, 430.
Do do Northern Line, 430.
Workshops, Eveleigh, 55, 64, 87, 415(2), 459.
Do Junee, 406, 649.
Alleged fruit-stealing from trucks, 57.
Homebush-Waratah—Supply of liquor to navvies, 57.
Do Resumption of Land, 130.
Do Particulars of Contracts, 153.
Do Contracts and date of opening, 76, 207, 239.
Store labourers at Redfern, 57.
Pearce's Corner (Hornsby Junction) to Ball's Head, 59.
Do do North Shore, 79, 472, 495, 536, 612.
and Tramway Advertising Company, 65.
Crossing at Piper's Flat, 76.
Borenore to Forbes, 77, 132.
Wallerawang and Mudgee, 85, 97, 129, 352.

QUESTIONS (*continued*) :—
RAILWAYS (*continued*) :—
Mail Vans, Southern Line, 86.
Extension into the City, 87, 158.
Sunday through train to Glen Innes, 91.
Loading trucks at Stations, 95.
Farmers Trains, 96, 97, 163.
Land Valuers—Leave of absence to Mr. James Byrnes, and appointment of Mr. F. S. M'Dermott, 96.
Land Valuator's Office, work of temporary hands in, 641.
Rates to Junee and Wagga Wagga, 99.
Mr. Midelton, Locomotive Overseer, 106, 352, 357, 509.
Arbitration Clause in Contracts, 115.
Millers' accounts, 130.
Free-passes to officials, 131.
Do a Deputation, 264.
Do to the Press, 319.
Cooma to Bombala, 132.
Orange or Borenore to Forbes, *viâ* Cudal, 132.
Loan Vote for trial surveys, 154, 163.
Do Votes—Return, 290, 348.
Loans for, and other Public Works, 336.
Suburban Trial Surveys, 161.
Sir John Fowler's report on light, 163.
Report of Commissioner for 1885, 172, 236, 456.
Department—temporary draftsmen, 172.
Extensions, 182.
Charge for unloading metal at Stations, 191.
Narrabri to Walgett, 192, 408.
Deviation through Narrabri, 500.
Department Fidelity Guarantee, 196.
Morning Train from Granville, 213.
Passengers to National Park, 219.
Suburban Passenger Traffic, 232.
Australian Combination Trucks, 235.
Subway under Line at Alt-street, Ashfield, 239, 259.
Supply of Stone for building purposes on Great Western, 256.
Sheep Trucks—End-loading system, 283.
Locomotives purchased by Government, 290, 298.
Do and machinery, order for, 315.
Freights on farm produce, 316, 347, 348, 460.
Do on goods, per truck load, 382.
Do wool from Bourke, 472.
Conveyance of Parcels, 496.
Bridge, Guinea-street, Albury, 324.
Empty waggons despatched from Stations on Great Northern and North-western, 339, 431, 555.
Actions against the Commissioner for loss by fire, 348.
Operations of Mr. Barbour, M.P., with Department, 366.
Charge for storage of goods, 372.
Outstanding accounts, 383.
Alleged frauds, 393, 451, 595.
Purchase of rails by New Lambton Colliery Company, 401, 411.
Forbes to Wilcannia, 411.
Do Sleepers for, 612.
Gasworks—Purchase of, by Government from Mr. Castner, 411.
Payment of increases to Officers of the Department, 415.
Friday train, Picton to Moss Vale, 419.
Rebate allowed by the Department, 420.
Dump-cars, 420.
Werris Creek to Gunnedah, 439.
Concessions and reductions in rates, 444.
Mr. C. E. Jamieson, draftsman, Survey Branch, 447.
Second-class passengers by Express train—passenger traffic between Picton and Mittagong, 447.
Erection of goods sheds, Tamworth, 452.
Surplus steam allowed to escape when trains are passing under foot-bridges, 463.
Cost of running ordinary and goods trains, 464.
Imported material, stock-switches, &c., 486.
Combination Trucks, 487.
Return from, Granville to Goulburn, Goulburn to Albury, 491.
Acting Traffic Inspector, Wellington, 492.
Management of, 499.
Blayney to Bourke, 500.
Conveniences for long-distance travellers, 500.
Trans-trucking goods between New South Wales and Victoria, 505.
Duplication of line, Granville to Liverpool, 510.
Repairs to rolling-stock, 523.
Fines in Department, 523.
Contractors, 536, 553.
Carriage of Fruit, Parramatta to Sydney, 543.
Appointment of Mr. Downe as Assistant Locomotive Engineer, 544.
Collision at Allandale Station, 548.

Q

QUESTIONS (*continued*) :—
RAILWAYS (*continued*) :—
Cases of embezzlement in Department, 579.
Deficiency in accounts, Glen Innes, 601.
Messrs. Hudson Brothers' Contracts, 579.
Narrandera to Jerilderie, cost of, and returns from, 591.
Tarago to Braidwood, 605(2).
Mr. Deane, Engineering Branch, 617.
Trains between Junee and Narrandera, 631, 655.
Engine sheds, Wellington and Dubbo, 482.
Audit of accounts, 482.
Mail train from Newcastle, 482.
RANDWICK :—
Tramway from Waverley, 36, 203, 253, 320, 472, 525, 646.
Store labourers at Tramworks, 57.
Public School Buildings, 325.
Asylum, 430, 468.
REAL PROPERTY ACT :—
Commissioners under, 181.
Appointment of Examiners of Titles, 384.
REBATE :—Allowed by Railway Department, 420.
RECLAMATION :—Snail's, White, Roselle, and Long Cove Bays, 129, 195.
Issue of deed for Mr. W. Harmer's, Watson's Bay, 330.
RECREATION GROUND. (See also "RESERVES") :—
Botany, 87.
Murrurundi, 87.
Emmaville, 172.
Bowna, 324.
REDFERN :—
Park, 21.
Sewerage, 21.
Nuisance at, from Shea's Creek, 43.
Disposal of nightsoil, 86.
REDUCTIONS IN SALARIES :—
Suggested, of Ministers, and the Judges of the Supreme and District Courts, 195.
Public School Teachers, 443.
REFORMATORY :—
Rookwood, 58, 63.
Conversion of N.S.S. "Vernon" to a, 509.
REFRESHMENT ROOMS. (See "RAILWAYS")
REFUNDS :—
To applicants for land under the 28th section, Mining Act, 347.
Delay in paying, in Lands Department, 431.
REGISTRATION OF DEATH :—Refusal of, for want of medical man's certificate, 196.
REGISTRAR-GENERAL'S OFFICE :—
Hours open to the Public, 500.
Work given out from, 569.
RELIEF WORKS. (See "UNEMPLOYED")
RELIGIOUS PURPOSES :—Alleged Grant of Land for Church purposes in Waverley, 514.
RELIGIOUS ESTABLISHMENTS. (See "INSPECTION")
RENT :—
Paid by Government, for buildings used as offices, 184.
For Pastoral Leases, in Western and Central Divisions, 646.
REPORTERS :—Accommodation for, House of Parliament, 401.
RESERVES :—
Timber, near Cowra, 11.
Timber and Forest, Murray, Murrumbidgee, and Edwards Rivers, 547, 555.
Waterloo, Alexandria, and Botany, 21.
Penrith, 34.
Barmedman, 44.
Grenfell, 50.
Village, between Queanbeyan and Hoskingtown, 75.
Botanical, near Gosford, 87, 357.
Vegetable Creek Mining District, 95.
On resumed areas, 130, 485.
Wood's Flat, 132.
Water, Brewarrana, 162.
Recreation, Bronte Bay, 112, 220, 312, 472.
Do Parramatta, 311.
Do Gundaroo, 618.
Marrar Run and County of Mitchell, 290.
Gunnedah, Tamworth, and Murrurundi—cancellation of, 315.
North Shore and Middle Harbour, 329.
Gold-field, Cargo, 330.
Do Gundaroo, 495.
In Electoral District of the Upper Hunter, 455.
Bottle Forest, 547.
Charge against Messrs. D. L. McKenzie and Weekes of monopolizing a Travelling Stock Reserve, 580.
Peel and Uralla Mining District, 544, 606.
RESERVE CORPS (See "VOLUNTEERS")

QUESTIONS (*continued*) :—
RESERVOIR AT PROSPECT. (See "PROSPECT")
RESUMPTION OF LAND :—
Illawarra Railway, 87, 99, 130.
Homebush Waratah Line, 130.
City of Sydney, 1884-86, 544.
RESUMED AREAS :—
Reserves on, 130, 485.
Maps showing leased, and of Runs, 521.
RETRENCHMENT :—In the Lands Department, 308.
REVENUE :—
From Proposed Taxation, 192, 275, 298.
From *Ad valorem* Duties, 209, 256.
Fidelity Guarantee for Collectors of, 419.
Inspectors or Detectives, Tramway Department, 452.
RHODES :—Railway Platform, 299.
RICHMOND :—
Water supply, 36.
Park, 297.
RICHMOND RIVER :—
Resources of, 408.
Survey of Bar, 510.
Improvement of Entrance to, 596.
RIFLE RANGE :—For Volunteer Reserves, 197, 236, 244.
RIFLE TEAM TO REPRESENT THE COLONY IN ENGLAND :—
Subsidy to, 184.
Selection of, 221.
RIFLES :—Supply of, to Volunteer Infantry, 12.
ROADS :—
Wire fences on, 22.
Mudbank and Cook's River, 25.
Newtown and Cook's River, 25.
In the Queanbeyan district, 29.
Vale of Clwydd, and Eskbank, 40.
John-street, Singleton, to River Hunter, 53, 209.
Springwood to Sassafras Gully, 60.
Superintendents, Muswellbrook, 78, 115.
Superintendent, for North Shore and Pittwater Districts, 531.
Trust, Parramatta, 105.
Parramatta to Rouse Hill, 105.
Greenwich, North Willoughby, 95.
Warialda, *via* Yetman to Goodiwindi, 139.
Inverell to Yetman, 140.
Abattoir, 192.
Mamre, 203.
Main North through Singleton, 204.
Through Bolwarra Estate, 228.
Parramatta, Johnston's Creek Bridge, 231.
Pyrmont Bridge, through Sydney, Glebe, and Camperdown, 235.
Felltimber Creek to Carcoar, 263, 280.
Bulga, deviation, 289.
To Oberon, grants and expenditure on, 317.
Sydney to Glebe Island and Balmain, 353.
Marked-Tree Line, Gundaroo, 358.
Geary's Gap, Lake George, 358.
Sydney District—Employés on, 298.
Old South Head—Tram stopping places, 308, 321.
Do Bellevue Hill to the Light-house, 311.
Mr. Dunstone, late Superintendent, Casino, 308.
Vote for Subordinate, 397, 401, 452.
Reduction in Vote for 1886, 525.
In district of Inverell, 408.
Across Molonglo Plains, 448.
Molong to the Peabody, 496.
Bowan Park to Cudal, 500.
Grenfell to Goolagong, 506.
Over Burragorang Mountain, 523.
Muswellbrook to Merriwa, Pike's Gap, 538.
Muswellbrook to Denman, 538.
Through W. Coull's land, near Picton, 585.
In Wollombi Electorate, 603.
Expenditure on, in Braidwood District, 604.
Enmore, 612.
ROBERTSON AND WAGNER, MESSRS. :—Mail Contractors between Deniliquin and Hay, 158.
ROCKET :—Life-saving apparatus, 298.
ROCK FLAT :—Township of, near Cooma, 231.
ROMAN CATHOLIC ORPHAN SCHOOL, PARRAMATTA :—
Expenditure on, 467, 486.
Claim of Church Authorities to, 486.
ROOKWOOD :—
Reformatory, 58, 63.
Model Farms, 267.
ROSELLE BAY :—Reclamation of, 129.
ROYAL COMMISSION :—
On Railway Bridges, 30, 36, 149, 158, 335, 352.
On the Liquor Licensing Law, 569, 625.
Water Conservation, 58, 96, 451.
Safety of Theatres and Public Hall's 491.
Collieries, 517, 557, 580, 611.

Q

QUESTIONS (*continued*) :—
ROYAL NAVAL SEAMEN'S HOME :—Promise of site for, and assistance in building, 412.
RULES OF COURT :—Under Companies Act, 431.
RUNS. (See "CROWN LANDS")
RUSHCUTTER'S BAY :—
Sewer, 36, 78.
Baths, 91.
Low-lying land at, 452.
RUTHERFORD ROBERT :—Letter signed by, complaining of decision of Gulgong Bench of Magistrates—Charge against Mr. J. F. Plunkett, 129.
RYAN, TRAM MAINTENANCE-MAN :—Dismissal and re-employment of, 289.
SACKVILLE REACH :—Proposed Tramway from Windsor to, 523.
SAFETY CARTRIDGES :—As ships cargo—fines inflicted on masters of vessels, 335.
SALARIES OF CIVIL SERVANTS. (See "CIVIL SERVICE ACT")
SASSAFRAS GULLY :—Road from Springwood, 60.
SCAFFOLDING :—
Accidents from, 59.
Appointment of Inspector, 340.
Do Newcastle, 537.
SCHEDULES :—
To Estimates, 347.
Of Insolvents, 443.
SCHOLARSHIPS :—Founding of, at University, 102.
SCHOLASTIC ESTABLISHMENTS. (See "INSPECTION")
SCHOOLS. (See "EDUCATION")
SCRIPTURE :—Teaching of, in Public Schools, 307.
SCRUB LANDS :—Upper Orara as special area, 323.
SEAMEN :—Royal Naval Home, 412.
SEASON TICKETS :—On Tramways, 27, 78, 150, 489.
SELECTIONS. (See "CROWN LANDS")
SEWERAGE :—
Parramatta, 18, 558, 580, 603.
Redfern, Waterloo, and Alexandria, 21.
Completion of City and Paddington works, 22.
Claim of Messrs. Begg and Miller, 26.
Rushcutter's Bay, 36, 78.
Railway Workshops, Eveleigh, 87.
Comber-street to Liverpool-street, Paddington, 91, 482.
Sydney Water Supply and, 162.
Drainage of Western Suburbs, 316.
Bondi Sewer, 522.
Bourke-street Sewer, 557.
SEYMOUR :—Land sale, 58.
SHEA'S CREEK :—Nuisance from, 43.
SHEEP :—
Assessment under Diseases in Sheep Act, 455, 459.
Receipts and Expenditure under Diseases in Sheep Act, 459.
SHEEP-TRUCKS :—Trial of end-loading system, 283.
SHIP'S CARGO :—Safety Cartridges as, 335.
SHIPPING :—
Alleged unseaworthiness of barque "St. Lawrence," 252.
Alleged abuses, 263.
SHOALHAVEN :—
Land selected by Mr. Carl Martin, 506.
Entrance to, at Crookhaven Heads, 627, 632.
SHOOBRIDGE, MR. W. :—Selections of, through the agency of Mr. Barbour, Camden District, 419.
SILVERTON :—Proposed Tramways to, from South Australian Border, 231.
SINGLETON :—
Coal Company, 35.
Road from John-street to Hunter River, 53, 209.
Post and Telegraph Office, 86.
Cemetery, 289.
South—Common, 204.
Do Gowrie-street, 267.
Main North Road, and John and Gowrie Streets, 204.
SKEENE, WILLIAM :—Prelease of, Conargo, 536.
SLAUGHTER-HOUSES :—
Inspector of, Penrith, 513,
Inspection of, 535.
SNAIL'S BAY :—Reclamation of, 129.
SOLOMON, MR. :—Temporary assistant, Military Department, 645.
SOUTH HEAD OLD ROAD :—
Tram stopping-places, 308, 321.
Bellevue Hill to the Light-house, 311.
SOUTH, MR. :—Appointed postmaster, Murrumburrah, 599.
SPECIAL AREAS :—Under Crown Lands Act, 195, 323, 521.
SPECIAL TRAIN. (See "RAILWAYS")
SPIRITS :—
Inspection of, 54.
Wine, &c., consumed in Hospitals, Asylums, and Benevolent Institutions, 236.

QUESTIONS (*continued*) :—
SPIRITS (*continued*) :—
Importation of Concentrated Essences of, 397.
Gauging of, by Customs Officers, 565.
SPRINGWOOD :—Road to Sassafras Gully, 60.
"ST. LAWRENCE," BARQUE :—Alleged unseaworthiness of, 252.
ST. PETER'S AND LIVERPOOL LOOP-LINE :—
Construction of, 23.
Working plan for, 412.
Route of, 415, 495.
STAMP SELLERS :—Amount owing to Government by, 112.
STAMPS :—Payment of Court fees by, 357.
STANDARD PAINT COMPANY :—Papers respecting supply of Paints by, 235.
STATISTICIAN, GOVERNMENT :—
Appointment of Mr. Coghlan, 394, 397.
Application of Mr. Byron for position of, 407.
Department, 471, 487, 488, 492, 547, 580, 642.
STEAM YACHT :—Alleged purchase of Mr. T. A. Dibbs', by the Government, 23.
STEAMERS :—
"Tomki" and "Star of the South," leaving Macleay River Ports on Sundays, 168.
Government, Port Jackson, 536, 605, 612.
STEEL AXLES AND RAILS. (See "RAILWAYS")
STEELYARDS :—Or weigh-bridges at railway stations, 393.
STEVENS & CO. :—Railway Contract of, to Queensland Border, 128.
STEVENSON, MR :—Clerk of Petty Sessions, Kempsey, 421.
STOCK :—
Losses of, from noxious and poisonous plants, 548.
Charge against Inspector D. L. M'Kenzie, 580.
STOCK AND WEATHER REPORTS :—Expenditure on, 548.
STONE :—
Supply of, for building purposes on Great Western Railway, 256.
Quarry, on Quarantine Ground, 506.
STORAGE :—
Of gunpowder in building in Pitt-street, burnt down, 256, 264.
On goods arriving by railway, 372.
STORES :—Ordnance, Survey of, 64.
STRANGERS :—Sessional Order as to Exclusion of, 408.
STREETS :—Leading to Blackfriars Public School, 209.
STUART, SIR ALEXANDER :—Exhibition Commissioner in London, 64.
SUBORDINATE ROADS :—Vote for, available, 397, 401, 452.
SUBURBAN :—
Provision for letter delivery, 26.
Railway Trial Surveys, 161.
Railway Passenger Traffic, 232.
Drainage of Western suburbs, 316.
Cost of Fire Brigades, 585.
Endowments to certain Municipalities, 613.
SUBWAY. (See "ASHFIELD")
SUGAR :—Duties on Australian and Fijian, 591.
SUMMER HILL :—Railway platform between Petersham and, 536, 579.
SUNDAY :—
Delivery of letters, 30.
Selling of Newspapers at Stannifer, 97.
Steamers leaving Macleay River Ports on, 168.
Entertainments, concerts, &c., 591.
SUPERANNUATION FUND :—
Deductions, 57, 162, 239, 324, 329, 351, 460, 645.
Refund of deductions, 320, 460.
Accounts, 92.
SUPREME COURT :—
Delay in forwarding Wills, &c., from Probate Office to Custodian of Wills, 253.
Case of Messrs. Forsyth & Co., 297.
Vacation, 366.
SURRY HILLS :—Land resumed for Albion-street School, 459.
SURVEY :—
Office, Bourke, 228.
Refund of fees to conditional purchasers, 348, 349.
SURVEYOR GENERAL'S DEPARTMENT :—
Lithographic printers under Civil Service Act, 12.
Temporary Draftsmen, 167 (2), 172, 316, 372, 472, 605.
Duties of Surveyor-General, Deputy Surveyor-General, and Chief Draftsman, 181.
Money due to surveyors, 203.
Loss to, by removal or loss of corner-pegs, 244.
Leave of Absence granted to Mr. Robert McLean to enable him to edit an Atlas, 252.

Q

QUESTIONS (*continued*) :—
SURVEYOR GENERAL'S DEPARTMENT (*continued*) :—
Messrs. Harper and Millington, sent to Norfolk Island, 464.
New appointment in, 617.
Contract Draftsmen, 651.
District surveyors, 431, 505.
SURVEYORS LICENSE FEES :—Disposal of, 58.
SUSPENSION :—
Government officers under, 349.
Officer in Lands Department, 487.
SYDNEY :—
Wood-paving in streets, 88.
Do Crown-street and Newtown Road, 132.
Railway extension into the City, 158.
Sewerage and Water Supply, 162.
Water Supply, 23, 34, 279, 297.
University, 59, 102, 181, 255, 405.
Hospital Buildings, 182.
Do Admission of Patients, 468.
Mint—Silver coinage, 366.
Road District—Employés, 298.
Export of coals from, 487.
Resumptions of land in, 1884-6, 544.
SYDNEY GRAMMAR SCHOOL :—Instruction in Training, High Schools and, 424.
TAMWORTH :—
Railway Station, 183.
Erection of Goods Sheds, 452.
Cancellation of Reserve at, 315.
TANKS PUBLIC :—
Care and leasing of, 210.
Charge for Water from Mount Hope, 220.
TARAGO :—
Railway Station, 463.
Railway to Braidwood, 605 (2)
TARANA :—Railway to Oberon, 43, 275, 431.
TARPAULIN SHED :—Corner of Castlereagh and Devonshire Streets, 92.
TARRIARO BRIDGE :—Over Namoi River, 407.
TAXATION :—
Revenue from proposed specific duties, 192, 275, 298.
Increase in, during the past four years, 196, 298.
Ad valorem duties, 209, 256, 276.
Land and Income Taxes, 225, 228, 276.
TAYLOR *v.* BARTON :—Costs of action, 348.
TEACHERS. (See "EDUCATION")
TECHNICAL COLLEGE :—
Mr. D. T. Wiley, 298, 575.
Site for, Ultimo estate, 548.
TELEGRAPHS (See also "POSTAL"):—
Messages between N. S. Wales and Queensland, 12.
Access to enclosed land by line-repairers, 95.
Classification of Operators, under Civil Service Act, 95, 352, 467.
Employment of Females as Operators, 97.
Expenditure and receipts, Yetman Office, 140.
Delay in delivery of Telegrams, 149.
Fidelity Bonds, in Department, 150.
Cable between United States or Canada and Australia, 183, 267.
Lattice-work and columns to carry lines along George-street, 184, 207, 214.
Cost of Government Cablegrams, 290.
Money due to Government for certain Cablegrams and Telegrams, 340, 348, 352.
Cash payment for Telegrams, 366.
Fines in Department, 523.
Cable communication with England, 543.
Leave of absence to Post and Telegraph Masters, 554.
TELEPHONES :—
Between Parliament House and Lands Office, 101.
In Parliamentary Buildings and Government Offices, 632.
TEMPE :—Railway Station, 297.
TEMPORARY APPOINTMENTS. (See "CIVIL SERVICE")
TEMPORARY COMPOSITORS :—Government Printing Office, 44.
TEMPORARY DRAFTSMEN :—
Survey Department, 167 (2), 172, 316, 372, 472, 605, 651.
Railway and Colonial Architect's Department, 172.
TEMPORARY WATER SUPPLY. (See "WATER SUPPLY")
TENDERS :—For Ironwork required by Government, invited in the Colony, 371.
TENT HILL :—Sale of Crown Lands at, 491.
TENTERFIELD :—
Railway from, to the Queensland Border, 11.
Public School, 12.
Petty Sessions cases tried at Armidale, Glen Innes, Inverell, and, 600.
THEATRES :—Report of Royal Commission on safety of, 491.

QUESTIONS (*continued*) :—
THOMPSON & GILES, MESSRS. :—Resumption of premises for new street in front of General Post Office, 86.
TIFFIN BORING MACHINE :—Bingera, 394.
TIMBER :—Alleged removal of, from Government land, by J. C. Ellis, 381.
TIMBER RESERVE :—
Cowra, 11.
In Murray and Murrumbidgee electorates, 547, 555.
TINGHA :—Police Quarters, 79, 159, 351, 460.
TINONEE :—Post Office, 39
TOLL-BAR :—
TOWING DREDGE PUNTS :—Contract for, Newcastle, 626.
TOWN COMMON :—Balranald, 632, 650.
TOWNSHIP :—
At Doodle-Cooma, 227.
Conerang, or Rock Flat, near Cooma, 231.
Broken Back Bridge, 21.
Botany Road, 35.
TRAINEES. (See "EDUCATION")
TRAMWAYS :—
Parramatta to Pennant Hills, Castle Hill, and Baulkham Hills, 18, 183.
Season tickets, 27, 78, 150, 489.
Botany, 29, 36.
Waverley to Randwick, 36, 203, 253, 320, 472, 525, 646.
Waverley to Bondi, 603.
Advertising Company, 65.
Holidays to Guards, 75.
Proposed purchase of, 85.
Workmen's tickets, 92, 489.
Expenditure on, 162, 366.
Crown-street, 168.
Waiting-room, Park-street, 168.
Extension, to Helsarmel Estate, 214.
Proposed, to Silverton, from South Australian Border, 231.
Waterproofs for Conductors, 284.
Overcoats for Conductors, 289, 451.
Uniforms and Overcoats for Employes, 569, 603.
Maintenance-man Ryan, 289.
Motors imported, 290.
Stopping-places, Old South Head Road, 308, 321.
North Shore, 347.
Actions arising from accidents, 343.
Special Conductors to watch collection of fares, 452.
Employment of Andrew Cavanough after dismissal from, 452.
First and Second-class Cars, 492.
Windsor to Sackville Reach, 523.
Fines in Department, 523.
Messrs. Hudson Brothers contracts, 579.
Forged Tickets, 603.
TRANS-TRUCKING GOODS :—Between New South Wales, and Victorian Railways, 502.
TRAVELLERS BY RAIL :—Conveniences for long distance, 500.
TRAINING SCHOOLS :—Instruction in Sydney Grammar, High and, 424.
TRAVELLING STOCK ROUTE :—Over Tarriaro Bridge, 407.
TRIAL BAY :—Prisons Buildings, 161.
TRIAL SURVEYS :—
Loan Vote for Railway, 154, 163.
Suburban Railways, 161.
TUMBERUMBA :—Site for Presbyterian Church, 312.
TWEED RIVER :—Resources of, 408.
TYPHOID FEVER :—
Number of cases and treatment, 140.
In District of Leichhardt, 251.
UNEMPLOYED :—
Employed by the Government, 187.
Relief to, by the Government, 382.
Engaged in Relief Works, 600, 631.
UNFORESEEN EXPENSES :—Detailed account of amounts charged to, 247.
UNITED STATES. (See "TELEGRAPHS")
UNIVERSITY :—
Lectures by Dr. Wilkinson, 59.
Founding of Scholarships, 102.
Professors and Tutors at, 181.
Appropriations in aid of, 255.
Examinations, 405.
UNSEAWORTHY VESSELS :—Survey of, 55.
UPPER LANSDOWNE RIVER :—Bridge, 39.
UPPER HUNTER :—Reserves in Electoral District of, 455.
URALLA :—Reserve in Mining District, 544, 606.
URANA :—Local Land Board, 366, 485.
VACATION :—Of Supreme Court, 366.
VALE OF CLWYDD :—Road, 40.

Q

QUESTIONS (*continued*) :—
VALIDATION OF MINERAL CONDITIONAL PURCHASES :—
Introduction of Bill for, 561.
VALUATION :—Of Land near Church-street Railway Station, West Maitland, 308.
VEGETABLE CREEK :—Reserves in, Mining District, 95.
"VERNON":—
Particulars of, 30.
Boys on board, who had been charged with or committed for offences against Criminal Law, 463.
Conversion of, to a Reformatory, 509.
VESSELS :—
Unseaworthy, 55.
Overloading of, 55.
"VICTORIA PARK HOTEL," DARLINGTON :—Renewal of License for, 565, 570.
VINDIN, MR. H. E. :—Appointment of, as Superintending Rabbit Inspector, 650.
VOLUNTEERS :—(See also "EASTER ENCAMPMENTS")
Supply of Rifles, 12.
Promotions in infantry Regiments, 22.
Money due to Bathurst Corps, 111.
Rifle Range for Reserves, 197, 236, 244.
Rifle Team to represent the Colony in England, 184, 221.
Payments to Orange Corps, 227.
Snider Carbines to Public School Cadet Corps, 231.
Reserve Corps, 236(2).
Do Cavalry Corps, 243, 297.
Wollongong Volunteer Artillery, 251.
Inverell Reserve Corps, 411.
Mr. A. S. Board's Application for a Commission, 487.
VOTES AND PROCEEDINGS :—Cost of Printing and Binding for 1885, 649.
WAGGA WAGGA :—
Local Land Board, 366, 485.
Do. Do., Office, 595.
Post and Telegraph Office, 393.
Water Supply, Railway Station, 455.
Do Importation of iron-pipes for, 460.
WALGETT :—
Land Office, 407.
Railway from Narrabri, 192, 408.
Police Magistrate, 407, 586, 627.
Advertised Land Sale at, 514.
WALLERAWANG :—Railway to Mudgee, 85, 97, 129, 352.
WANAARING :—Boring for Water on Bourke Road, 153.
WARATAH. (See "HOMEBUSH-WARATAH RAILWAY")
WARDERS IN GAOLS :—Leave of absence to, 64.
WARIALDA :—
Police district, 44, 293.
Road, *via* Yetman to Goondiwindi, 139.
WATER AUGERS :—Particulars of, 17.
WATER FRONTAGES :—
Port Jackson, 107.
P. Hayes', Neutral Bay, 340.
E. Lord's, Neutral Bay, 340.
WATERPROOFS :—For Tram-conductors, 284.
WATER SUPPLY :—(See also "PROSPECT")
Cowra, 11, 132, 440.
Junee, 20, 348.
Sydney and Suburbs, 23, 34, 162, 279, 297.
Temporary supply to Sydney, 23, 26, 58, 59, 86.
Richmond and Windsor, 36.
From the Nepean, 54.
Conservation Commission, 58, 96, 451.
Road, Bourke to Wanaaring, 153.
Canowindra, 182.
Mount Hope, 220.
Cudgelico, 307.
Orange, 316.
Hillston, 366.
Hunter River, 408.
Wagga Wagga Railway Station, 455.
Importation of iron-pipes for, 460.
Junee Railway Station, 482.
WATER RESERVE :—Brewarranna, 162.
WATERLOO :—
Reserve, 21.
Sewerage, 21.
Tramway, 29.
Repair of Elizabeth-street, 34.
Nuisance at, from Shea's Creek, 43.
Park, 63.
WATSON'S BAY :—Issue of deed for reclaimed land (Mr. W. Harmer's), 330.

QUESTIONS (*continued*) :—
WAVERLEY :—
Tramway to Randwick, 36, 253, 320, 472, 525, 646.
Do. Bondi, 603.
Public Park, Bronte Bay, 112, 220, 312, 472.
Delivery of Letters, 320.
Alleged Grant of Land for Church Purposes, Waverley, 514.
WEATHER AND STOCK REPORTS :—Expenditure on, 548.
WEEKES, MR. :—Charge against, of monopolising a Travelling Stock Reserve, 580.
WEIR :—Across the Lachlan River, Forbes, 586.
WEIGHBRIDGES :—
Or Steelyards at Railway Stations, 339.
Molong and Borenore Stations, 460, 514.
WELLINGTON :—
Railway Engine Sheds, 482.
Acting Railway Traffic Inspector, 492.
WERRIS CREEK :—Railway to Gunnedah, 439.
WESTERN DIVISION. (See "CROWN LANDS")
WESTERN SUBURBS :—Drainage of, 316.
WEST MAITLAND :—
Court-house, 280, 348, 544.
Valuation of land near Church-street Railway Station, 308.
Amended By-laws of Municipality, 383.
WHARFAGE RATES :—Charged at Government Wharves in the various Ports, 213.
WHARVES :—
Wingham, 19.
Putney, Parramatta River, 159, 324.
Newcastle, 280, 307.
WHEAT :—Importation of, 330.
WHITE BAY :—Reclamation of, 129.
WILCANNIA :—Railway from Forbes, 411, 612.
WILEY, MR. D. T. :—Technical College, 298, 575.
WILKINSON, DR. :—Lectures by, at University, 59.
WILLIAM HENRY STREET :—Bridge, 58.
WILLS. (See "SUPREME COURT")
WILLIS, MR. ARTHUR :—Appointments and Increases of salary to, in Railway Department, 605, 606 (2).
WINDSOR :—
Improvement of McQuade Park, 18.
Lighting Government Buildings, 19.
Water supply, 36.
Lighting Railway Station, 192, 491.
Bench of Magistrates, 509, 525.
Tramway to Sackville Reach, 523.
Site for Public School, 488, 526.
Site for Municipal Council Chambers, 553.
WINES :—
Inspection of, 54.
Spirits, &c., consumed in Hospitals, Asylums, and Benevolent Institutions, 236.
WINGHAM :—Wharf, 19.
WINGEN :—
Conditional Purchase, 632, 646.
Population Area, 642.
WISEMAN'S FERRY :—Punt at, 78.
WOLLOMBI :—
Police Magistrate and Clerk of Petty Sessions, 447.
Roads in Electorate, 603.
WOLLONGONG :—
Sale of Site of Old Public School, 106.
Volunteer Artillery, 251.
Miners' imprisoned at, for alleged intimidation, 554, 612, 645.
WOLSELEY PARK, GUNNEDAH :—Trustees of, 214, 393.
"WOLVERENE":—Future utilization of, 312.
WOOD-PAVING :—
In Sydney streets, 88.
Crown-street and Newtown Road, 132.
Oxford-street, Paddington, 247, 506.
Parramatta Road, 431.
Circular Quay, 483.
WOOD'S FLAT :—Survey of Town and revocation of Reserve, 132.
WOOL :—Export of, 1880-86, 313.
WOOLLAHRA :—Volunteer Fire Brigade, 352.
WOOLLOOMOOLOO BAY :—Electric Light for, 99, 168, 225, 284.
WORKMEN'S TICKETS :—On Tramways, 92, 489.
WORKING HOURS :—Employés in Dredge Service, 101.
WRIGHT v. BONNOR :—Decision of District Court, *re* Mining Regulations, 187.
YASS :—Post Office, 183.
"YEAR BOOK OF AUSTRALIA":—Purchase of copies by the Government, 252.
YETMAN :—
Road, Warialda to Goondiwindi, *via*, 139.
Telegraph Office, 140.
Road to Inverell, 140.

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
Q		
QUINAN, MR., INSPECTOR OF FISHERIES:—		
Motion made (*Mr. White*), for all letters, papers, &c., respecting suspension of, 82; Return to Order, laid on Table, 128	2	899
Motion made (*Mr. Targett*) for reports by, respecting illegal net-fishing in Port Jackson, 100; Return to Order, laid on Table, 198	2	895
Motion made (*Mr. Abigail*) for copies of all letters, reports, minutes, &c., referring to numerous charges made against, with a copy of letter of Mr. J. P. Abbott, on the subject, 558.		
QUORUM (See "NO QUORUM.")		
R		
RABBIT NUISANCE ACT:—		
Regulations, laid on Table, 27	6	57
Petition from Runholders and others resident in the Northern portion of the Western Division of the Colony, representing that an invasion of Rabbits, which are fast spreading in their direction, is threatened, and praying for the erection of a rabbit-proof fence, presented, 325...	6	59
ADMINISTRATION OF:—		
Motion Made (*Mr. Neild*), for Select Committee to inquire into, and by leave withdrawn, 137.		
Motion made (*Mr. Neild*), for Select Committee to inquire into, and Debate adjourned, 164; Order of the Day postponed, 193; Debate further adjourned, 211; motion by leave withdrawn, and Order of the Day discharged, 333.		
MR. J. C. CROMMELIN:—		
Motion made (*Mr Abbott*) for all documents, reports, &c., relating to the suspension and removal of, from position of Superintending Inspector of Rabbits, 185; Return to Address, laid on Table, 229	2	387
MR. H. VINDIN, INSPECTOR OF RABBITS:—		
Motion made (*Mr. Abbott*), for copies of all papers relative to appointment of, and promotion as Superintending Inspector, 188; Return to Address, laid on Table, 506	2	399
RAILWAY LANDS COMPENSATION BILL:—		
Motion made (*Mr. Abbott*) for leave to bring in, presented and read 1°, 294; Order of the Day discharged, and Bill withdrawn, 367.		
RAILWAYS (See also "GOVERNMENT RAILWAY BILL"; also "BENNETT'S RAILWAY BILL"; also "TRAMWAYS")		
REPORT FOR 1885:—		
Progress, by the Commissioner, laid on Table, 246	7	1
Commissioner's on Railways and Tramways, laid on Table, 456	7	3
BRIDGES INQUIRY COMMISSION:—		
Report of Royal Commission, with minutes of evidence, diagrams, and appendices, laid on Table, 534	7	265
ALLEGED FRAUDS:—		
Ministerial statement respecting, made by Sir Patrick Jennings, 315.		
WRIGHT, HEATON, AND CO.:—		
Return showing amount due by, for railway carriage, laid on Table, 20	7	503
STATION BUILDINGS AT BATHURST, DUBBO, AND ORANGE:—		
Return, laid on Table, 20	7	507
EMPLOYES:—		
Return respecting pay of those engaged at Redfern, Eveleigh, and Darling Harbour, laid on Table, 23	7	493
Motion made (*Mr. Olliffe*) for a return showing number and occupations of, who receive remuneration as night expenses when absent from home, 133.		
Return of, compelled to find a fidelity guarantee, laid on Table, 268	7	485
Return of, discharged from the service since 1st March, 1886, for causes other than misconduct, laid on Table, 337	7	495
Motion made (*Mr. Gould*), for all correspondence, &c., having reference to complaints of being paid less than full time, from locomotive drivers and firemen on Great Northern, 398.		
TO BURROWA:—		
Petition from Yass, Tangmangaroo, &c., in favour of line from Bowning, presented, 31	7	669
GALONG TO BURROWA:—		
Plan, section, and book of reference, laid on Table (*as Exhibits only*), 544.		
Motion made (*Mr. Davies*) for copies of all letters, papers, correspondence, and reports having reference to the extension of, 548; Return to Order, laid on Table (not printed), 629		
CITY EXTENSION:—		
Return to Address (*Second Session*, 1885), laid on Table (not printed), 36; ordered to be printed, 586	7	597
Plan, section, and book of reference, laid on Table (*as Exhibits only*), 207; approved of, 533.		
ORANGE TO FORBES *viâ* CUDAL AND TOOGONG:—		
Plan, section, and book of reference, laid on Table (*as Exhibits*), 207; motion made (*Mr. Lyne*) for approval, and amendment to examine Engineer-in-Chief at the Bar of the House, 533; amendment withdrawn and motion carried on division, 534.		
NARRABRI TO MOREE:—		
Plan, section, and book of reference, laid on Table (*as Exhibits*), 208; approved of, 540.		
NYNGAN TO COBAR:—		
Plan, section, and book of reference, laid on Table (*as Exhibits*), 208; approved of, 534.		
KIAMA TO JERVIS BAY.		
Plan, Section, and Book of Reference of proposed line, Part No. 1, laid on Table (*as Exhibits*), 254; approved of, 416.		
Message from Council for leave to examine a Member of the Assembly before Select Committee in reference to, and Message in reply granting leave, 515.		
Plan, section, and book of reference of proposed line, part No. 2, laid on Table (*as Exhibits*), 593.		
CULCAIRN TO COROWA:—		
Plan, Section, and Book of Reference, laid on Table (*as Exhibits only*), 435; approved of, 541.		
GUNDAGAI TO TUMUT:—		
Plan, Section, and Book of Reference, laid on Table (*as Exhibits only*), 435; approved of, 549.		
TARAGO TO BRAIDWOOD:—		
Plan, Section, and Book of Reference, laid on Table (*as Exhibits only*), 435; approved of, 549.		
GRAFTON TO TWEED RIVER:—		
Plan, Section, and Book of Reference, Part No. 1, laid on Table (*as Exhibits only*), 470; motion made (*Mr. Lyne*) for approval of plan, &c., 545; and amendment that matter be referred to a Select Committee having been negatived,—passed, 546.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
R		
RAILWAYS (*continued*) :—		
GOULBURN TO CROOKWELL :—		
Plan, section, and book of reference, laid on Table (*as Exhibits only*), 544.		
GLEN INNES TO INVERELL :—		
Petition representing that line to Inverell *via* Glen Innes is 50 miles longer than by Uralla, and for that and other reasons praying the adoption of the shorter and more direct route to Newcastle, presented, 120	7	661
Plan, section, and book of Reference, laid on Table (*as Exhibits*), 208; motion made (*Mr. Lyne*) for approval of plan, &c., and amendment that Engineer-in-Chief be examined at the Bar of the House having been negatived, passed, 546.		
TRIAL SURVEY, URALLA TO INVERELL :—		
Motion made (*Mr. Inglis*) for all reports, correspondence, &c., relative to, 185; Return to Order, laid on Table (not printed), 398.		
TO INVERELL :—		
Return showing the grades and curves, from Uralla *viâ* the trial survey line by way of Bundarra, and *viâ* the Great Northern Railway from Glen Innes, laid on Table, 555	7	609
TERMINAL POINT OF GREAT NORTHERN, AT QUEENSLAND BORDER :—		
Motion made (*Mr. Lee*), for copies of correspondence, letters, minutes, &c., having reference to the fixing of, 48; Return to Order, laid on Table, 116	7	523
TIRES AND AXLES :—		
Motion made (*Mr. Abigail*), for correspondence, reports, &c., respecting tender for, with Messrs. Vickers & Co., or other British manufacturers, 61.		
REFRESHMENT ROOMS :—		
Petition against sale of intoxicating drinks at, presented, 80	2	889
Motion made (*Mr. Sydney Smith*), for copies of all papers, &c., in reference to leasing of, 325.		
Tariff of prices, at, on the Great Northern and North-Western Railway, laid on Table, 435	7	615
TICKETS ISSUED TO SINGLETON :—		
Return to Order (*Second Session*, 1885) laid on Table, 88	7	611
ILLAWARRA :—		
Return showing particulars of land resumed for, laid on Table, 92, 248	7	517, 521
Motion made (*Mr. Williamson*), for copies of all correspondence in connection with contract of section No. 3, 416.		
LAWRENCE TO TENTERFIELD :—		
Petition setting forth the advantages of, presented, 112	7	665
LOAN VOTES :—		
Motion made (*Mr. Neild*) for a Return showing the state of, at end of each year from 1860—1885, 136.		
FREE PASSES—SPECIAL TRAINS :—		
Motion made (*Mr. Neild*) for Select Committee to inquire into the issue of, and running of, 137.		
FREE PASSES TO SCHOOL CHILDREN :—		
Petition against the passing of any resolution for conveying children free to schools other than those constituted by the State, presented, 142	7	619
Motion made (*Mr. Stokes*) in favour of issue of, amendment moved and negatived, original question negatived on division, 483.		
FREE PASSES TO OFFICIALS :—		
Return of particulars respecting the issue of, laid on Table, 555	7	617
SUBURBAN :—		
Motion made (*Mr. Neild*) that the construction of a system of, is urgently required, adjournment of Debate negatived, original question negatived, 145.		
SUB-WAY UNDER LINE AT ALT-STREET, ASHFIELD :—		
Motion made (*Mr. Henson*) for all correspondence respecting, 163; Return to Order, laid on Table, (not printed) 261; ordered to be printed, 469	7	569
LIGHT LINES :—		
Sir John Fowler's Report, laid on Table, 168	7	263
BRIDGE OVER THE HAWKESBURY RIVER :—		
Motion made (*Mr. Abbott*) for all correspondence, tenders, plans, &c., relating to, 185.		
HOMEBUSH-WARATAH LINE :—		
Particulars of resumption of land for, laid on Table, 248	7	521
MESSRS. STEVENS AND CO.'S CONTRACT :—		
Correspondence relative to, for Railway to Queensland Border, laid on Table, 193	7	535
TRIAL SURVEYS :—		
Return showing the surveys upon which the vote for, has been expended, and the sums paid for each survey, laid on Table, 216	7	567
ACTIONS FOR LOSS BY FIRE AGAINST THE COMMISSIONER :—		
Motion made (*Mr. Thompson*) for a return showing particulars of, 229.		
EXTENSIONS :—		
Return showing estimated cost of preliminary work and amount expended on, sanctioned under the Public Works Loan Act for 1884, laid on Table, 268	7	515
Motion made (*Mr. Hungerford*), that a Commission be appointed to collect information and take evidence in connection with all Lines projected or to be projected with a view to extensions being carried out in the interest of the country only, and negatived, 314.		
ORANGE TO MOLONG—BLAYNEY TO BOURKE.		
Motion made (*Dr. Ross*) for a return showing the revenue and expenditure at the respective stations on these two lines, 284.		
Motion made (*Dr. Ross*) for a return showing the area of land resumed for railway Orange to Molong, giving particulars, 291; Return to Order, laid on Table, 325	7	547
PRIVATE PROPERTY RENTED BY DEPARTMENT FOR OFFICES :—		
Return respecting, within the City of Sydney, laid on Table, 325	7	657
SPECIAL FARMERS TRAINS :—		
Return of particulars respecting the running of, laid on Table, 350	7	613
PEARCE'S CORNER (HORNSBY JUNCTION) TO BALL'S HEAD :—		
Copies of Correspondence, &c., on proposed, laid on Table, 350	7	549
MICHELAGO STATION :—		
Petition from squatters, farmers, selectors, graziers, traders, artizans, and others, submitting reasons for adopting another site for, presented, 385	7	667
COOMA TO BOMBALA :—		
Motion made (*Mr. Harold Stephen*), for Committee of the Whole to consider the desirability of immediately undertaking, and debate adjourned, 414; Order of the Day postponed, 483, 572, 658.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
R		
RAILWAYS (*continued*) :—		
TRAFFIC MANAGER'S OFFICE :—		
Motion made (*Mr. Davies*) for a return showing particulars of all temporary or permanent appointments to, during the year 1880, and of all present occupants of office in, 493; Return to Order, laid on Table, 555	7	497
IMPORTED MATERIAL :—		
Motion made (*Mr. Hugh Taylor*) for a return showing the number of sets of stock-switches, point-rods, chair-slides, and lever-stands imported, with cost of each delivered ready for use, 514.		
NORTH COAST :—		
Motion made (*Mr. James Henry Young*) for Committee of the Whole to consider desirableness of provision being made to proceed with, without delay, and debate adjourned, 519; Order of the Day, postponed, 572, 658.		
EMPTY WAGGONS EMPLOYED ON GREAT NORTHERN AND NORTH WESTERN :—		
Return respecting, laid on Table, 555	7	595
FORBES TO WILCANNIA :—		
Copies of official correspondence relating to the action taken towards obtaining supplies of sleepers and permanent materials for the Wilcannia end of, laid on Table, 558	7	605
Amendment moved (*Mr. Sydney Smith*), on going into Committee of Supply, expressing disapproval of the action of the Minister of Public Works in taking steps to provide rails and sleepers for, before the plans and books of reference had been approved by Parliament, and negatived, 593.		
THROUGH URALLA :—		
Petition from residents of the district, complaining that the eastern boundary of the Municipality is fenced in by the Great Northern Railway, and praying for an opening across the line, presented, 566	7	663
COLLISION AT ALLANDALE :—		
Motion made (*Mr. Burns*) for copies of all papers relating to the inquiry into, 421; Return to Order laid on Table (not printed), 570.		
FREIGHT ON MERCHANDISE :—		
Motion made (*Mr. Dalton*) for copies of all letters, reports, and other documents having reference to concessions made by the Department to Messrs. Barton and Goold, or others, 432.		
FREIGHTS :—		
Motion made (*Mr. Davies*) for copies of all correspondence referring to the introduction of reduced charges on consignments of six tons in weight, with a statement of the extent to which such concessions have been availed of by individuals and the various carrying firms, with particulars and an estimate of the consequent loss to the Revenue, 500.		
REMOVAL OF WORKSHOPS FROM JUNEE TO WAGGA WAGGA :—		
Motion made (*Mr. Abigail*) for copies of all letters, minutes, &c., referring to proposed, together with an estimate of the additional cost of carrying on the work at Wagga Wagga, 449.		
WORKSHOPS, EVELEIGH :—		
Return of information respecting cost of machinery in, laid on Table, 629	7	659
PURCHASE OF RAILS BY NEW LAMBTON COLLIERY COMPANY :—		
Motion made (*Mr. Abigail*) for copies of all letters, papers or other documents in reference to, 425; Return to Order, laid on Table (not printed), 629.		
STATION MASTERS :—		
Return showing names of, with dates of first appointment, present salary and last increase, 656	7	499
URALLA TO GLEN INNES :—		
Motion made (*Mr. Williamson*) for a comparative statement of original estimate for, and amounts actually paid; and all papers, &c., in reference to the conversion of the contract by the Bank of New Zealand, and House counted out, 449, 450.		
MRS. CATHERINE BUTTERLY :—		
Petition from, detailing the circumstances under which her son lost his life whilst in the execution of his duty, as a Porter, at Blayney Platform, and praying favourable consideration in the premises, presented, 462.	7	671
CONTRACTS WITH MESSRS. HUDSON BROTHERS :—		
Motion made (*Mr. Forsyth*) for copies of all correspondence in connection with, and a return of all payments on account of, and negatived on division, 484.		
COAL-BOXES, DARLING HARBOUR :—		
Minutes, correspondence &c., respecting, laid on Table, 656	7	641
EVANS COMBINATION TRUCK :—		
Correspondence, minutes, &c., relating to, laid on Table, 629	7	621
RANDWICK. (See "TRAMWAYS" also "ASYLUMS")		
RANDWICK CEMETERY UNUSED LANDS SALE BILL :—		
Petition presented (*Mr. Tarrant*), for leave to bring in, 300; leave given, presented and read 1°, 304; referred to Select Committee, 308; Report brought up, 325; read 2°, committed, reported without amendment and report adopted, 425; read 3°, passed, and sent to Council, 432; returned without amendment, 461; assent reported, 478.	8	965
RANDWICK CHURCH LAND SALE BILL :—		
Petition presented (*Mr. Day*) for leave to bring in, 116; 62nd Standing Order suspended, 134; leave given, presented and read, 1°, 135; referred to Select Committee, 141; Report brought up, 155; Order of the Day postponed, 175, 207, 241, 257; read 2°, committed, reported without amendment and report adopted, 295; read 3°, passed and sent to Council, 300; returned without amendment, 344; assent reported, 361.	8	973
REAL PROPERTY ACT :—		
Particulars respecting the Responsibilities and Duties of the Commissioners and Examiners of Titles under, laid on Table, 185	8	1101
Returns under, for 1885, laid on Table, 354	8	1103
APPLICATION FOR AMENDED CERTIFICATE OF TITLE :—		
Motion made (*Mr. Abbott*) for copy of, of certificate vol. 70, folio 237, together with copy of such certificate and all papers, reports, &c., respecting, 193; Return to Order, laid on Table, 233	8	1105
RECOMMITTED :—		
Bills, 362, 454, 479, 526, 534, 583, 597.		
REFRESHMENT :—		
COMMITTEE :—		
Sessional Order passed, 47.		
Names added to, 142, 633.		
ROOM :—		
Motion made (*Mr. Thompson*) that no intoxicating drinks be sold in, except at meal-times, and House counted out, 314.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
R		
REFRESHMENT (*continued*) :—		
RAILWAY, ROOMS :—		
Petition against sale of intoxicating drinks at, presented, 80	2	889
Motion made (*Mr. Sydney Smith*) for copies of all papers, &c., referring to the leasing of, 325.		
Tariff of prices, on Great Northern and North-Western Railways, laid on Table, 435	7	615
REFUNDS ON CONDITIONAL PURCHASES (See "CROWN LANDS")		
REGISTRARS OF BIRTHS, DEATHS, AND MARRIAGES :—		
COUNTY OF CUMBERLAND :—		
Motion made (*Mr. Bowman*), a return showing names, salaries, and fees received by, and whether holding any other Public Office, 185 ; Return to Order, laid on Table, 220	8	1113
REGULATION OF FACTORIES AND WORKSHOPS BILL :—		
Motion made (*Dr. Renwick*), for Committee of the Whole, 48 ; Order of the Day postponed, 51, 76 ; House in Committee, resolution agreed to, presented and read 1°, 94 ; Message from Governor, recommending, 134 ; Order of the Day postponed, 130, 146, 189, 193, 211, 220, 278 ; read 2° and committed, 398 ; further consideration in Committee, *Point of Order* taken whether, having been introduced by an unofficial Member, the Bill can be proceeded with by a Responsible Minister, unless classed as a Government measure, reported to and decided by Speaker, 502 ; further considered in Committee (as a Government measure), reported with amendments, and report adopted, 602 ; read 3°, passed, and sent to Council, 607.	4	619
REGULATIONS :—		
LAID ON TABLE :—		
Government Domains, Botanic Gardens, and Garden Palace Grounds, 13, 69, 97, 169	5	267
Prepayment of Telegrams by Postage Stamps, 13	7	1001
"Collect" Telegrams, 230	7	1005
Rabbit Nuisance Act, 27	6	57
Imported Stock Acts, 27, 593	6	35, 37
Diseases in Sheep Acts, 27	6	41
Pastures and Stock Protection Acts, 27	6	43
Public Instruction Act, 31	4	215
Fire Brigades Act, 40, 74 (2), 128, 248, 422, 489	2	999
Crown Lands Act of 1884, 44, 92, 97, 133 (2), 295, 301, 461, 507	5	269
Public Watering Places Act, 74	6	61
Amended, for working Telegraphic Lines, 92	7	995
Mining Act further Amendment Act, 133	5	1087
Government Savings Bank, 142	3	1025
Timber and State Forests, 469	6	131
Prickly Pear Destruction Act, 656	6	67
REMOVAL FROM THE HOUSE :—		
THE HONORABLE MEMBER FOR MORPETH, MR. WISDOM :—		
By the Sergeant-at-Arms, on the direction of Mr. Speaker, 380.		
Motion made (*Mr. Foster*) that the removal and exclusion of, by the Speaker, without the Order or Resolution of the House, were contrary to the Law and Usages of Parliament and the Privileges of this House—amendment moved (*Mr. Want*) to substitute other words in the resolution, 402 ; amendment and motion, as amended, carried on division, 403.		
By the Sergeant-at-Arms, under warrant issued by Mr. Speaker, 608.		
RENTS (See "CROWN LANDS" also GOVERNMENT")		
RENWICK, THE HON. ARTHUR, M.D. :—		
Accepted office as Minister of Public Instruction, seat as a Member for Redfern declared vacant, 126 ; issue and return of writ reported, sworn, 127.		
REPORTS (See also "NO REPORT") :—		
LAID ON TABLE :—		
Public Charities, 13, 660	2	593, 657
City of Sydney Improvement Board (Sixth), 13	6	185
Do do (Seventh), 606	6	187
University, for 1884, 15	4	349
Do 1885, 478	4	385
Museum, for 1884, 15	4	453
Do 1885, 478	4	519
Vital Statistics (29th), 23	8	1
Department of Mines, for 1885, 222	5	461
Do Forest Branch, 27, 416	6	69, 109
Do Stock and Brands Branch, 373	6	1
Do Public Parks Branch, 461	6	135
Lands Department, for 1884, 27	5	1
"Vernon," 27, 656	4	569, 575
Fire Brigades Board, 40	2	925
Do for the year 1885, 313	2	953
Do Deniliquin, 208	2	993
Do Grafton, 385	2	989
Do Goulburn, 385	2	995
Do Forbes, 561	2	997
Dengue Fever, 55	4	609
Royal Commission on Conservation of Water, 69	6	387
Do do (second), 354	6	949
Special, from Auditor-General as to transfer of £275,000 from Consolidated Revenue Fund to Treasurer's Advance Account, in anticipation of the sanction of Parliament, 74	3	1021
Police Department for 1885, 74	4	919
Police Reward and Superannuation Funds, 79	4	935
Immigration Agent, as to hiring of Immigrants per s.s. "Parthia," 74	2	867
Do for 1885, 128	2	827
Board of Audit on Public Accounts, 74, 128	3	797, 803
Third Report on Creation, Inscription, and Issue of Stock, under Inscribed Stock Act, 74	3	781
Dr. Tucker's on Hospitals for Insane visited by him under the circular letter of the Colonial Secretary, 107	2	535
Sydney Grammar School, for the year 1884, 111	4	325
Free Public Library for 1885-86, 128	4	443
Civil Service Board, First, for 1885, 128	2	307
Vaccination, for 1883, 205	2	807
Do 1884, 205	2	811
Do 1885, 128	2	817

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
R		
REPORTS (*continued*):—		
LAID ON TABLE (*continued*):—		
Education for 1885, 151	4	1
Do Appendices to, 185		
Sir John Fowler's on Prospect Dam, Sydney Water Supply, 168	6	991
Do Light Railways, 168	7	263
Inspector-General of the Insane for 1885, 198	2	493
Superintendent of Electric Telegraphs on Reduction of Rates for Cablegrams and Duplication of Submarine Cables, 198	7	989
Tramways, Progress on Transactions, for the year 1885, 205	7	675
Railways, Progress, by Commissioner for Railways, for the year 1885, 246	7	1
Commissioner for Railways, on Railways and Tramways for 1885, 456	7	3
Typhoid Fever at Leichhardt, 223	4	585
State Children's Relief Department, for year 1885-6, 268	2	741
Royal Commission on Collieries on Accident, Lithgow Valley Colliery, 388	5	671
Do do do at Ferndale Colliery, 506	5	785
Do do (Third), 652; Appendix, 660	5	871
Prisons, for the year 1884, 408	4	943
Do 1885, 268	4	947
Board for Protection of the Aborigines—Annual, 408	2	727
Auditor-General's, on Public Accounts for the year 1885, 455	3	809
Postmaster-General for 1885, 456	7	761
Coast Hospital, Little Bay, for 1884, 469	2	575
Do do 1885, 469	2	581
Comptroller-General of Prisons on Port Macquarie Gaol, 506	4	953
Royal Commission on Stability of certain Railway Bridges, &c., with Minutes of Evidence, Diagrams, and Appendices, 534	7	265
Government Oriental Interpreter, Qualifications of, 539	2	483
Australasian Stock Conference, 629	6	21
Engineer-in-Chief for Harbours and Rivers on Dredging Operations, 633	4	967
Government Asylums for the Infirm and Destitute, 642	2	719
FROM ELECTIONS AND QUALIFICATIONS COMMITTEE:—		
Mackinnon v. *Watson*, 71	2	51
O. O. Dangar v. *R. B Smith*, 120	2	63
FROM SELECT COMMITTEES:—		
Ruling of Speaker, that Reports brought up in a previous Parliament ought not to be adopted, 51.		
Amendment on motion for adoption of, Privilege—Mr. Melville, M P, that question be referred back for further inquiry and report, 120.		
Appointed to inspect Journals of Legislative Council as to proceedings on Sydney Corporation Act Amendment Bill, 240.		
Uther Estate Leasing Bill, 67		1049
St Mary's Waverley, Church of England Land Sale Bill, 67		1009
Barker's Estate Bill, 68	8	731
Kite's Leasing Bill, 69		855
Cornwell's Estate Bill, 74		815
Privilege—Mr. Melville, M P., 79	2	109
Do Mr. Barbour, M.P., 408		145
Balmain Tramway Bill, 98		737
Claim of Mr. Thomas Horton, 100		1117
Wyatt Estate Leasing Bill, 102		1073
Newcastle Steamship Company's Preferential Shares Bill, 117		905
Muswellbrook Cattle Sale-yards Bill, 128		899
Randwick Church Land Sale Bill, 155		973
Sisters of Charity Estate Bill, 164		995
Board's Settlement Bill, 175		785
Hay Gas Bill, 178	8	835
Ashfield Church of England School Bill, 178		715
McLaughlin Estate Bill, 200		863
Maryville Colliery Company Railway Bill, 207		869
West Wallsend and Monk-Wearmouth Railway Bill, 222		1055
Moorebank Estate Bill, 222		875
New South Wales Trustees Executors and Agency Company's Bill, 229		911
Pringle's Estate Mortgaging Bill, 229		959
George Dougherty's Conditional Purchase, 237	5	235
Bishopscourt Sale and Leasing Bill, 246		777
Glen Innes Markets Leasing Bill, 254		829
Bell's Estate Bill, 264		743
Bennett's Railway Bill, 278	8	757
Parramatta Public Baths Bill, 309		939
Parramatta Church School Bill, 309		933
Bird Estate Bill, 314		769
Patrick Hannan's Mining Claim at Temora, 321	5	1075
Randwick Cemetery Unused Lands Sale Bill, 325		965
St Stephen's Church of England Parsonage Camperdown Land Sale Bill, 326		1019
Cooma Church of England Parsonage Bill, 332		807
Mrs. Payten's Estate Leasing Bill, 343	8	887
Inverell Church of England Land Sales Bill, 367		849
Bowenfels Coal-mining and Copper-smelting Company's Railway (Sale and Vesting) Bill, 369		799
St James School Compensation Trust Bill, 373		1001
Mr. Henry Arthur Hough, 378	5	243
Australian Joint Stock Bank Act Amendment Bill, 403		723
Willoughby and Gordon Tramway Bill, 435	8	1061
Mudgee Gaslight and Coke Company's Bill, 445		893
Claim of Charles Stevens, 448	5	253
Pharmaceutical Society of New South Wales Incorporation Bill, 456		951
Penrith Water and Gas Supply Bill, 473	8	945
Silverton Tramway Bill, 496		979

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
R		
REPORTS (*continued*) :—		
LAID ON TABLE (*continued*) :—		
Claim of Mathew M'Ivor to a Tin-mine at Pheasant Creek, 497	5	1079
Illawarra Steam Navigation Act Amendment Bill, 500	8	843
Sydney Mechanics School of Arts Incorporation Bill, 511		1029
Settled Estates Bill, 519		1211
Borough of East St. Leonards Wharves Bill, 532		791
Crookwell Roman Catholic Church Land Sale Bill, 607		823
RESERVES :—		
QUEANBEYAN RECREATION :—		
Motion made (*Mr. O'Sullivan*) for accounts and papers in reference to, 61.		
LEICHHARDT :—		
Motion made (*Mr. Hawthorne*) for all correspondence on the subject of appointing Trustees for, 93.		
GLEN INNES LAND DISTRICT :—		
Return to Order (*Second Session*, 1885), laid on Table, 133	6	151
MARRAR RUN AND COUNTY OF MITCHELL, PARISH OF BREWARRANNA :—		
Motion made (*Mr. Gormly*) for copies of all reports, papers, &c., referring to, 210; Return to Order, laid on Table, 313	6	155
IN THE COLONY :—		
Circular sent to the District Surveyors to report on, laid on Table (not printed), 133.		
GUNNEDAH, TAMWORTH, AND MURRURUNDI :—		
Return showing cancellation of, during May and June, 1886, laid on Table, 406	6	175
Supplementary Return of the area available within Reserves cancelled, from 1st January to 31st May, 1886, laid on Table, 507	6	179
TIMBER AND FOREST, ON THE MURRAY, EDWARDS, WAKOOL, BILLABONG, AND MURRUMBIDGEE RIVERS :—		
Return respecting certain, laid on Table, 549	6	133
BOTTLE FOREST :—		
Particulars of applications for portions of, laid on Table, 555	6	183
PROCLAIMED ON RESUMED AREAS :—		
Motion made (*Mr. Wall*) for a return showing the number and extent of, since the Crown Lands Act of 1884 came into operation, and names of the owners of runs on which proclaimed, 570.		
RESIGNATION :—		
Of a Member, reported, 259.		
Of office of Chairman of Committees, 134, 381.		
Of Office of Colonial Secretary, by Mr. Dibbs, tendered and not accepted,—Ministerial Statement, 474, 485.		
OF SIR JOHN ROBERTSON, K.C.M.G. :—		
Receipt of letter, reported by Speaker, and, on motion of Sir Patrick Jennings, entered on records of the House, 331.		
RESIGNATION OF THE MINISTRY—MINISTERIAL ADVICE TO THE GOVERNOR :—		
Correspondence respecting, laid on Table, and read by Clerk, 111	2	7
RESOLUTIONS (See also "FINANCE") :—		
Required to be put *seriatim*, negatived, 378.		
FROM COMMITTEE OF THE WHOLE :—		
Reported, 94, 147, 211, 262, 265, 287, 296, 369, 426, 435, 436(3), 437, 441, 445, 511, 550, 562, 657.		
Received, 333.		
Agreed to, 94, 147, 212, 262, 287, 296, 333, 369, 426, 435, 436(3), 437, 441, 445, 511, 550, 562, 657.		
FROM COMMITTEE OF SUPPLY :—		
Reported, 80, 113, 136, 165, 200, 261, 326, 404, 480, 576, 630, 647.		
Received, 633.		
Agreed to, 81, 113, 136, 165, 200, 261, 326, 404, 480, 576, 638, 647.		
Motion made (*Mr. Garrett*) that a Resolution be disagreed to, 638.		
FROM COMMITTEE OF WAYS AND MEANS :—		
Reported, 81, 113, 136, 200, 237, 254, 262, 292, 306, 326, 404, 480, 576, 638, 647.		
Received, 269, 309, 643.		
Agreed to, 81, 113, 136, 200, 237, 262, 272, 292, 310, 326, 404, 480, 576, 643, 647.		
RESUMED AREAS (See "RESERVES")		
RESUMPTION OF LAND (See also "CROWN LANDS"; also "MINING") :—		
HUNTER RIVER DISTRICT WATER SUPPLY :—		
Notification of, laid on Table, 15	6	1025
WATER SUPPLY, SYDNEY AND SUBURBS :—		
Notification of, laid on Table, 13	6	995
WHARF ACCOMMODATION, WEST KEMPSEY :—		
Notifications of, laid on Table, 13	4	1009
PUBLIC SCHOOL PURPOSES :—		
Notification of, laid on Table, 15, 74, 102, 128, 220, 291, 385, 402, 478, 496, 592, 633, 651	4	407
PUBLIC PARKS :—		
Abstract of, laid on Table, 68	6	143
ILLAWARRA AND HOMEBUSH-WARATAH RAILWAY :—		
Particulars of, laid on Table, 248	7	521
SEWERAGE PURPOSES :—		
Notification of, laid on Table, 367	6	1031
APPROACHES TO BRIDGE OVER MANDURAMA CREEK :—		
Notification of, laid on Table, 489	7	747
APPROACH TO "SPIT" FERRY, MIDDLE HARBOUR :—		
Notification of, laid on Table, 507	7	749
RETICULATION PIPES (See "WATER SUPPLY")		
REVENUE (See "FINANCE" also "CROWN LANDS ACT")		
RIFLE TEAM :—		
TO REPRESENT THE COLONY AT WIMBLEDON :—		
Correspondence respecting the selection of the proposed, laid on Table, 216	2	267
ROADS :—		
TRUST ACCOUNTS :—		
For half-years ending 30th June and 31st December, 1883 and 1884, laid on Table, 56	7	685
Do do 1885 do 318	7	695
HOSKINGTOWN TO BUNGENDORE :—		
Motion made (*Mr. O'Sullivan*), for copies of reports and correspondence relating to closing of, 65		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
R		
ROADS (*continued*) :—		
FELLTIMBER CREEK TO CARCOAR :—		
Return to Order, laid on Table in Second Session, 1885, ordered to be printed, 89 ; Further Return to Order (*Second Session*, 1885), laid on Table, 160	7	721, 739
Leave given to Clerk to return to the Department of Public Works, the two Returns to Order laid on Table, 444.		
OPENING OF, THE ISLANDS TO COWRA :—		
Motion made (*Mr. Baker*) for all correspondence, &c., relative to application of people of Cowra for, through the Binnie Estate, 154 ; Return to Order, laid on Table, 205	7	741
MESSRS HAYES AND M'FADDEN'S CONTRACT, NYNGAN :—		
Motion made (*Mr. Abigail*) for particulars of, referring especially to an accident to J. L. M'Callum through the burning instead of chopping down trees, 188 ; Return to Order, laid on Table (not printed), 216.		
Motion made (*Mr. Abigail*) for copies of all correspondence, &c., in connection with the accident to J. L. M'Callum during the execution of, 294 ; Return to Order, laid on Table, 350	7	751
CLAIM OF MR. JOHN NOBLE :—		
Motion made (*Mr. Gould*) for copies of all papers, minutes, reports, plans, &c., having reference to, for compensation for fencing the deviation in the road from Goorangoola to the Great North Road, where it passes through his land, 247.		
BETWEEN QUEANBEYAN AND KIANDRA :—		
Motion made (*Mr. O'Sullivan*) for Committee of the Whole to consider resolutions advocating the construction of and erection of a Bridge over the Murrumbidge River, and by leave withdrawn, 258.		
SUPERINTENDENTS :—		
Motion made (*Mr Abigail*) for copies of all letters, minutes, reports, sworn declarations, or other documents, relating to the work and accounts of the Superintendents of the Wiseman's Ferry, Tweed and Richmond River, and Hartley Districts, from 1884 to date, 276 ; Return to Order, laid on Table (not printed), 489.		
SUBORDINATE :—		
Schedule showing classification and proposed distribution of Vote for, under officers of Roads Department, laid on Table, 284	7	707
Schedule showing classification and proposed distribution of Vote for, under Trustees, laid on Table, 291	7	701
OVER BURRAGORANG MOUNTAIN :—		
Motion made (*Mr. Targett*) for copies of Mr. John S. Kent's contract for construction of, with all plans, schedules, measurements, and correspondence, in connection therewith, 432 ; Return to Order laid on Table (not printed), 606.		
BOWAN PARK TO CUDAL :—		
Information respecting, laid on Table, 606	7	745
ROBERTSON, THE HON. SIR JOHN, K.C.M.G. (See also "SIR JOHN ROBERTSON GRANT BILL") :—		
Formation of New Administration by, announced, 72 ; accepted office as Colonial Secretary and Premier,—motion made for vacation of seat, amendment moved and negatived,—seat as a Member for Mudgee declared vacant, 72 ; issue and return of writ reported, sworn, 73.		
Ministerial Statement made by, 74, 90, 109, 115, 118, 120.		
Motion made (*Mr. Thompson*), that Sir John Robertson be now heard (a second time), 100.		
Receipt of letter resigning his seat as a Member for Mudgee, reported, and on Motion of Sir Patrick Jennings, entered on records of the House, 331 ; seat declared vacant, 331.		
Motion made (*Sir Patrick Jennings*) for Committee of the Whole to consider resolution in favour of granting to, a sum not exceeding Ten thousand pounds, in view of his long distinguished and patriotic services, 349 ; Message from Governor recommending, 368 ; Motion made that Speaker leave the Chair, 368 ; House in Committee and resolution agreed to, 369. (For further proceedings see "Sir John Robertson Grant Bill.")		
ROSS, MR. (See "PRIVILEGE")		
ROSSI, CAPTAIN F. R. L. (See "ST. SAVIOURS GLEBE LAND LEASING BILL")		
ROMAN CATHOLIC ORPHAN SCHOOL (See "ORPHAN SCHOOLS, PARRAMATTA")		
ROYAL COMMISSIONS :—		
Motion made (*Mr. Harold Stephen*) for a Return showing number and cost in detail of all, appointed during the past ten years, 558.		
CONSERVATION OF WATER :—		
First Report of Commissioners, laid on Table, 69	6	387
Second do do 354	6	949
STABILITY OF CERTAIN RAILWAY BRIDGES :—		
Report of, together with Minutes of Evidence, Diagrams and Evidence, laid on Table, 534	7	265
COLLIERIES :—		
Report from, on the Accidents at Lithgow Valley Colliery, laid on Table, 388	5	671
Do do Ferndale Colliery, laid on Table, 506	5	785
Copies of, issued in connection with the accidents at Lithgow Valley and Ferndale Collieries, laid on Table, 558	5	1053
Third Report of, laid on Table, 652	5	871
Do Appendix to, laid on Table, 660		
RULINGS OF SPEAKER (See also "SPEAKER") :—51, 94, 110, 249, 257 (2), 265, 278, 309, 380 (2), 389, 457, 502, 511(2), 533, 544, 567, 583, 523.		
S		
SALE OF INTOXICATING DRINKS AT RAILWAY REFRESHMENT ROOMS :—		
Petition against, presented, 80	2	88
SAND-DRIFT RECLAMATION (See "NEWCASTLE SAND-DRIFT RECLAMATION BILL")		
SAN FRANCISCO MAIL SERVICE (See "POSTAL")		
SAVINGS BANK (See "BANK")		
SCHOOLS (See "EDUCATION")		
SCHOOL OF ARTS (See "SYDNEY MECHANICS SCHOOL OF ARTS INCORPORATION BILL")		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
S		
SCHOOLS OF MINES:—		
Motion made (*Mr. Shepherd*) for Committee of the Whole to consider resolutions in respect to, 278; House in Committee, resolution reported and agreed to, 296.		
SCRATCHLEY, HIS EXCELLENCY SIR PETER, K.C.M.G.:—		
Motion made (*Mr. Dibbs*) expressing condolence with Lady Scratchley, on death of, 49; acknowledgment reported, 71		
SEAMEN (See "ABUSES IN CONNECTION WITH THE SHIPPING OF NEW SOUTH WALES")		
SELECT COMMITTEES (See also "REPORTS"):—		
Balloting for, Sessional Order passed, 46.		
Vote of Chairman on private Bills; Sessional Order passed, 46.		
Ruling of Speaker on adoption of Reports brought up during previous Parliaments, 51.		
"Privilege—Mr. Melville, M.P.," Report referred back for further inquiry and report, 120.		
Petitions referred to, 359, 402, 469, 518, 581, 592.		
Abstract of Standing and, appointed during the Session	1	867
PAYMENT OF MEMBERS OF, ON PRIVATE BILLS:—		
Motion made (*Mr. W. J. Fergusson*) for Committee of the Whole to consider resolutions, 413; Order of the Day postponed, 425, 572, 658.		
SELECTIONS (See "CROWN LANDS")		
SERGEANT-AT-ARMS:—		
Removes Honorable Member for Morpeth, Mr. Wisdom, from the Chamber, 380.		
Speaker issues his Warrant to, committing the Honorable Member for Morpeth to custody of,—takes the Honorable Member into custody and removes him from the Chamber, 608.		
SERIATIM:—		
Motion that resolutions be put,—negatived, 378.		
SESSIONAL ORDERS passed, 45, 46, 47, 142, 222, 254, 539, 633.		
SETTLED ESTATES BILL:—		
Motion made (*Mr. Septimus Stephen*) for leave to bring in, presented and read 1°, 107; Order of the Day postponed, 130, 212; motion made for 2°, and amendment, that Bill be referred to Select Committee, carried, 241; Report brought up, 519; read 2°, committed, reported without amendment, and report adopted, 571; recommitted, reported 2° without amendment and report adopted, 583; read 3°, passed and sent to Council, 587; returned without amendment, 613; assent reported, 629.	8	1211
SEWERAGE PURPOSES:—		
Notification of resumption of land, between Great Barcom and Liverpool Streets, for, laid on Table, 367	6	1031
SHEEP ACTS (See "DISEASES IN SHEEP ACTS")		
SHEPHERD, MR. JOHN:—		
AN HONORABLE MEMBER FOR EAST MACQUARIE:—		
Called to Order, and declining to submit to the authority of the Chair, named by Mr. Speaker,—whereupon heard in his place and apologised to the Chair, 440.		
SHIPPING ABUSES (See "ABUSES IN CONNECTION WITH THE SHIPPING OF NEW SOUTH WALES")		
SHIPPING OFFICE, GOVERNMENT:—		
Motion made (*Mr. Burns*) for a return showing the number, the gross and net tonnage, the shipping fees paid by, and other particulars, of Colonial Steamers which have shipped their crews through, 232; Return to Order, laid on Table	8	1091
SILVERTON TRAMWAY BILL:—		
Petition presented (*Mr. Burns*) for leave to bring in, 434; leave given, presented and read 1°, 448; referred to Select Committee, 453; Report brought up, 496; read 2°, committed, reported with amendments, and report adopted, 571; read 3° and passed, 580; and sent to Council, 581; returned without amendment, 613; assent reported, 628.	8	979
SIMPSON, MR. GEORGE BOWEN:—		
Accepted office as Attorney-General in Sir John Robertson's Administration, 72.		
SINGLETON (See also "RAILWAYS")		
SOUTH, GOWRIE-STREET:—		
Motion made (*Mr. Gould*) for copies of all papers, reports, plans, &c., referring to the application of the Borough Council for the opening of, removal of obstructions from, and the closing of Gowrie-street, 253.		
SIR JOHN ROBERTSON GRANT BILL:—		
Motion made (*Sir Patrick Jennings*) for Committee of the Whole to consider Resolution, 349; Message from Governor recommending, 368; House in Committee, and resolution agreed to 368, 369; Bill presented and read 1°, 373; read 2°, committed, reported without amendment, and report adopted, 379; read 3°, passed, and sent to Council, 384; returned without amendment, 422; assent reported, 423.	3	1077
SIR JOHN YOUNG CRESCENT (See "DOMAINS")		
SISTERS OF CHARITY ESTATE BILL:—		
Petition presented (*Mr. Day*) for leave to bring in, 116; 62nd Standing Order suspended, 134; leave given, presented and read 1°, 135; referred to Select Committee, 141; Report brought up, 164; Order of the Day postponed, 189; Mr. Barbour, for Mr. Day, proceeding to move 2°, Speaker ruled that one Member cannot, for another, move the second reading of a Bill, and Order of the Day postponed, 257; read 2°, committed, reported without amendment, and report adopted, 295; read 3° and passed, 299; sent to Council, 300; returned without amendment, 344; assent reported, 360.	8	995
SITTING DAY: (See "ADDITIONAL SITTING DAY")		
SKEENE, WILLIAM (See "CROWN LANDS")		
SLATTERY, MR. THOMAS MICHAEL:—		
Appointed Deputy Chairman of Committees for one day only, 247.		
Acting as Chairman of Committees, 380.		
Proposed and elected as Chairman of Committees, 390, 391.		
Deputy Speaker's Commission in favour of, 395.		
SLANDER (See "DEFAMATION ACT AMENDMENT BILL")		
SLAUGHTER HOUSES:—		
Information respecting the Inspection of certain, laid on Table, 576	4	623
SLEEPERS (See "RAILWAYS")		
SMITH, MR. ROBERT BURDETT (See "ELECTORAL")		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
S		
SMOKY CAPE LIGHT-HOUSE :—		
Motion made (*Mr. Kethel*) for Committee of the Whole to consider resolutions in favour of erection and maintenance of, 293; Order of the Day postponed, 317, 367; House in Committee, resolutions reported and agreed to, 426.		
Petitions from shipowners, shipmasters, seamen, and others interested in the shipping trade, in favour of, presented, 313, 359.	4	1087, 1089
SOUDAN CONTINGENT :—		
MAJOR PARROTT, C.E., ENGINEER OFFICER IN :—		
Motion made (*Mr. Neild*) for copies of all despatches, correspondence, &c., respecting the Hydrological and Geological Reports furnished to the British Government, 217; Return to Address laid on Table, 301	2	269
SPAIN :—		
Convention respecting Commercial Relations between the Government of Great Britain and, laid on Table, 453	8	1181
SPALDING-AIREY INQUIRY (See "ARTILLERY")		
SPEAKER :—		
Election of Mr. Edmund Barton, 5; presentation of, to Lieutenant-Governor, 7.		
Commission to administer the Oath, 7.		
Gives Casting Vote, 570.		
Lays Paper on Table, 7, 39, 74.		
Lays Abstracts of Public Accounts for the year 1885, with Auditor-General's Report thereon, laid on Table, 455	3	809
Letter from, relative to Electric lighting, Parliamentary Buildings, laid on Table and ordered to be printed (*after division*), 368	2	195
Reports discrepancies in names of Members, 8.		
Reports attendance of Members in Council Chamber, 8.		
Informs House that Clerk had been summoned to produce Records, 20, 125, 209, 231,423, 429 (2).		
Lays Warrant appointing Committee of Elections and Qualifications on Table, 16, 80 142; reports maturity, 31, 100, 161; appoints meeting, 36, 81; reports resignation of Chairman, 74.		
Reports presentation of Address in Reply, and Lieutenant-Governor's Answer, 43.		
Reports receipt of Deputy Speaker's Commission to administer the Oath, 49, 157, 395.		
Reports presentation of Address of Congratulation on appointment of Baron Carrington as Governor, and reply thereto, 71.		
Reports acknowledgment of Address of Condolence to Lady Scratchley on death of Sir Peter Scratchley, 71.		
Informs House of issue and return of writs, 73, 127, 335, 351.		
Reports receipt of Commission for Mr. F. W. Webb as Acting Clerk during the absence on leave of the Clerk of Assembly, 73; administers oaths of allegiance and office to Mr. Webb, 73.		
Calls attention to irregularity in Election of Eden—non-receipt of Writ by Returning Officer, 127.		
Reports resignation of Member, 259, 331.		
Reports resignation of Chairman of Committees, Mr. Garrett, 134.		
Do do Mr. Trickett, 381.		
Informs Mr. Buchanan, Counsel learned in the Law, of resolution passed, that he be heard at the Bar on behalf of Captain Armstrong, 193.		
Reports excuses from Members absent upon Call of the House, 264.		
Directs Clerk to call over Roll of Members—Call of the House, 265.		
Retires from the Chair from indisposition or fatigue, 341, 533, 623.		
Unavoidably absent on account of indisposition, 631, 641, 645, 649, 655.		
Chairman of Committees takes the Chair, in the absence of, 341, 533, 623, 631, 641, 645, 649, 655.		
Calls on Business of the Day after continuous sitting on Customs Duties Bill, 341, 343.		
Invites attention to character of amendments made by Legislative Council in the Stamp Duties Bill, 354.		
Calls attention to the character of the amendments made by Legislative Council in the Stamp Duties Act Amendment Bill (No. 2), 453.		
Directs Clerk to read Resolution of Ways and Means on which Stamp Duties Act Amendment Bill was founded, 361, 453.		
Resumes Chair to restore order, having observed grave disorder in Committee of the Whole (Customs Duties Bill), 379(2).		
Directs Sergeant-at-Arms to remove the Honorable Member for Morpeth, Mr. Wisdom, from the Chamber for persistent obstruction and disorder, 380.		
Names the Honorable Member for East Macquarie, Mr. Shepherd, 440.		
Directs Clerk to read extract from newspaper complained of, on motion of Privilege, 355, 456.		
Directs Clerk to take down disorderly words used during debate, 607.		
Issues his Warrant committing the Honorable Member for Morpeth to the custody of the Sergeant-at-Arms, 608.		
Presents Appropriation and Public Works Loan Bill to His Excelleney the Governor in the Ligislative Council Chamber, for assent, 660.		
APPEAL TO PRIVY COUNCIL—CASE OF BARTON *v.* TAYLOR :—		
Proceedings in, laid on Table, 253	2	13
CASES TAYLOR *v.* BARTON AND OTHERS :—		
Motion made (*Mr. Abigail*) for copies, in detail, of the whole of the costs to the country in, 394.		
REMOVAL FROM THE HOUSE OF THE HONORABLE MEMBER FOR MORPETH BY ORDER OF :—		
Motion made (*Mr. Foster*) that the, without the Order or Resolution of the House was contrary to the Law and Usages of Parliament and the Privileges of this House,—amendment moved, (*Mr. Want*) to substitute other words, 402; amendment and motion as amended carried, on division, 403.		
RULING—CONTINUOUS SITTING :—		
Motion made (*Sir Henry Parkes*) that the ruling given on Saturday, 10th July, a.m. "is" contrary alike to the letter of the Standing and Sessional Orders and to the practice of Parliament as established by former Speakers of this House, and has a direct tendency to curtail the privileges of Parliament, and to undermine the just protection of minorities,—amendment moved (*Sir Patrick Jennings*) to omit all words after "is," and to insert in their place—"consistent with the right understanding of the Rules, Orders, and Usages of Parliament; is warranted by precedent; and tends to preserve and protect the due course of Public Business without infringing the rights of minorities; and this House endorses and confirms the ruling accordingly"—amendment and motion as amended carried, on division, 389, 390.		
Motion made (*Mr. Garrett*) that the Resolution agreed to on 14th July, 1886, be rescinded, 544; and negatived, 545.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
S		
SPEAKER—*continued*:—		
RULINGS OF:—		
Motion made (*Mr. Thompson*) that House dissent from, and negatived, 309.		
That the House ought not to adopt a Report of a Select Committee of a previous Parliament, 51.		
That Resolution—That Ballot-papers, Young, be examined by Clerk, at the Table, and result reported by Speaker to the House—cannot be put, 94.		
That a motion referring to Ministerial advice to the Governor to dissolve Parliament, submitted by Sir Henry Parkes, was not entitled to be regarded as *Privilege*, 110.		
That an amendment cannot be proposed in Committee of Ways and Means which would increase the burdens of the people without the direct or indirect sanction of the Crown, 249.		
That one Member cannot move the second reading of a Bill for another, with the only exception of one responsible Minister for another Minister, 257.		
That the Title of the Barristers Bill did not correspond with the Order of Leave, and the Clauses of the Bill were not covered by the Title, 257.		
That an amendment submitted in Committee on Payment of Members, and rejected as out of order, was not identical with any proposition already disposed of by the Committee, 265.		
That it should be left for the decision of the House whether a motion in reference to Ballot Papers, Electoral District of Young, be put, 278.		
That an honorable member is not in order in quoting from a speech made in a previous debate of the present session,—motion made (*Mr. Thompson*) to dissent from the ruling of the Chair, and negatived, 309.		
That the Committee of the Whole (Customs Duties Bill) was properly sitting,—The House, through that Committee being in continuous sitting, and that it was not proper nor incumbent on him to interrupt the still existent sitting by taking the Chair at 4 o'clock p.m., 380.		
That, a clause of the Customs Duties Bill referring to Schedule A being under consideration, the items of that Schedule could not be discussed in anticipation, nor until the Schedule itself was under consideration, 380.		
Upholds opinion of Chairman, that words proposed to be inserted in clause 4 of the Stamp Duties Act Amendment Bill (No. 3) were properly before the Committee, as not imposing a tax or duty but being rather of the nature of a penalty, 457.		
That the Regulation of Factories and Workshops Bill having been brought in by an unofficial Member, and proceeded with by such Member as a Responsible Minister without being accepted as a Government measure, was rather a matter of constitutional propriety than of Order, 502.		
Upholds the opinion of the Chairman as to the inadmissibility, on the ground of inconsistency, of a proposed amendment to clause 6 of the Income Tax Bill, 511(2).		
That the 1st and 3rd Sessional Orders do not come into operation in cases where the House is already sitting at 4 o'clock P.M., and engaged in the despatch of Business, but have reference only to fresh meetings of the House, and not to sittings extending over twenty-four hours, and that it was therefore not right for him to call on the business for the new day, and thus begin a fresh sitting, 533.		
Upholds the opinion of the Chairman that a question (Centennial Exhibition) already decided by the House, during the present Session, cannot be submitted as an amendment upon a resolution before the Committee of the Whole, 567.		
That the Chairman had taken the usual and proper course in proposing the question in Committee of Supply without the Minister in charge moving the resolution, 583.		
That it is incompetent for an Honorable Member, who had already spoken to the main question, to propose an amendment, 593.		
SPECIAL ADJOURNMENT:—		
Motion made for, and passed, 51, 53, 69, 72, 82, 103, 123, 126, 137, 199, 265, 345, 630.		
SPECIAL TRAINS (See "RAILWAYS")		
SPECIFIC DUTIES (See "FINANCE")		
SPIRITS, WINE, AND BEER:—		
Further Return (*in part*) to Order (*Session* 1883-4), laid on Table, 116	4	715
Do do do do 507	4	717
SPRING, THE HON. GERALD:—		
Proposed as Chairman of Committees, 45.		
Do do and negatived on Division, 144.		
Accepted office as Secretary for Lands, and seat as a Member for Young declared vacant, 72; issue and return of writ reported, sworn, 73.		
STAMP DUTIES ACT AMENDMENT BILL:—		
Resolution reported from Committee of Ways and Means and agreed to, ordered (*Sir Patrick Jennings*), founded on Resolution of Ways and Means, presented and read 1°, 248; Message from Governor recommending, 261; read 2°, 272; committed, 273; further considered in Committee, reported with amendments, recommitted, reported 2° with further amendments, and Report adopted, 281; read 3°, passed, and sent to Council, 284; returned with amendments, Speaker calls attention to character of amendments, and Bill laid aside, 354.	3	1065
STAMP DUTIES ACT AMENDMENT BILL (No. 2):—		
Message from Governor recommending, 361; Standing Orders suspended, 361; Resolution of Ways and Means on which previous Bill was brought in, read by Clerk, 361; ordered (*Sir Patrick Jennings*), presented, read 1°, and read 2°, 361; committed, reported without amendment, recommitted, reported 2° with amendments and report adopted, 362; read 3°, passed and sent to Council, 367; returned with amendments, 445; Order of the Day read—Speaker pointed out character of the amendments made by the Council,—Order of the Day discharged and Bill laid aside, 453.	3	1067
STAMP DUTIES ACT AMENDMENT BILL (No. 3):—		
Resolution of Ways and Means on which original Bill was brought in, read by Clerk, 453; ordered (*Sir Patrick Jennings*), presented and read 1°, 453; Message from Governor recommending, 457; read 2°, committed—*Point of Order* reported from Committee and decided, and Committee resumed—reported with amendment and report adopted, 457; read 3rd, passed and sent to Council, 461; returned without amendment, 479; assent reported, 501.	3	1069
STANDARD PAINT COMPANY:—		
Copies of papers referring to orders given to, for the supply of paints, laid on Table, 318	8	1203
STANDING ORDERS:—		
Sessional Order for Committee passed, 46.		
Names added to Committee, 141.		
Motion made (*Mr. W. J. Fergusson*) for Committee of the Whole to consider resolutions to be referred to Committee of, respecting payment of Members of Select Committees on Private Bills, 413.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
S		
STANDING ORDERS (*continued*) :—		
Suspended, to enable Bill to pass through all stages in one day, 80, 112, 133, 197, 261, 361, 492 582, 630.		
Do to cover irregularity in introduction of Private Bills, 134, 135, 150(2), 184.		
STANDING AND SELECT COMMITTEES :—		
Abstract of, appointed during the Session	1	867
STATE CHILDREN'S RELIEF DEPARTMENT :—		
Annual Report for the year ended 5th April, 1886, laid on Table, 268	2	741
Motion made (*Mr. Davies*) for a return showing detailed particulars of the administration and management of, for the years 1885 and 1886, 330; Return to Order, laid on Table, 469	2	731
STATE OF THE PUBLIC FINANCES—VOTE OF CENSURE (See "FINANCE")		
STATISTICIAN, GOVERNMENT :—		
Motion made (*Mr. Abigail*) for copies of all applications for the position of, together with copies of the recommendations in favour of Mr. Coghlan, 401; Return to Order laid on Table (not printed), 469.		
Ministerial Statement made by Sir Patrick Jennings in reference to the Establishment of the Department of, 485.		
STATISTICAL REGISTER :—		
Parts I, II, and III, laid on Table, 461		
Parts IV, laid on Table, 489	8	329
Parts V and VI, laid on Table, 555		
For 1885, laid on Table, 629		
STEAMERS (See "COLONIAL STEAMERS" also "GOVERNMENT")		
STEVENS, CHARLES, CLAIM OF :—		
Motion made (*Mr. Vaughn*) for Select Committee to inquire into and report upon, arising out of the action Pearson *v.* Stevens, tried in the Supreme Court, and that Report of Session 1883-4, be referred, 258; Report brought up, 448; motion made for adoption of Report, and debate adjourned, 518; Order of the Day postponed, 572, 658.	5	253
STEVENS & CO. (See "RAILWAYS")		
STEVENSON, MR. GEORGE (See "ADMINISTRATION OF JUSTICE")		
STIPENDIARY MAGISTRATES (See "ADMINISTRATION OF JUSTICE" also "ADDITIONAL STIPENDIARY MAGISTRATE BILL")		
ST. JAMES SCHOOL COMPENSATION TRUST BILL :—		
Petition presented (*Mr. Septimus Stephen*) for leave to bring in, 326; leave given, presented and read 1°, 331; referred to Select Committee, 336; Report brought up, 373; read 2°, committed, reported without amendment and report adopted, 426; read 3°, passed, and sent to Council, 434; returned without amendment, 473; assent reported, 501.	8	1001
ST. LEONARDS WHARVES BILL (See "BOROUGH OF EAST ST. LEONARDS WHARVES BILL")		
ST. MARY'S WAVERLEY CHURCH OF ENGLAND LAND SALE BILL :—		
Petition presented (*Mr. Teece*) for leave to bring in, 50; leave given and read 1°, 56; referred to Select Committee, 61; Report brought up, 67; Order of the Day postponed, 80, 116, 130; read 2°, committed, reported without amendment, and report adopted, 151; read 3°, passed and sent to Council, 154; returned with amendments, 198; amendments agreed to and Message to Council, 211; assent reported, 277.	8	1009
ST. SAVIOUR'S GLEBE LAND LEASING BILL :—		
Petition presented (*Mr. Septimus Stephen*) for leave to bring in, 570; leave given, presented and read 1°, 576; referred to Select Committee, 580.		
PETITIONS IN REFERENCE TO, PRESENTED FROM :—		
F. R. L. Rossi, Captain, Senior Trustee of St. Saviour's, Goulburn, in opposition to, praying inquiry and redress and to be heard at the Bar or before the Select Committee; referred to Select Committee, 581	8	1015
Certain parishioners of St. Saviour's Parish, Goulburn, in opposition to, and praying permission to appear before the House or the Select Committee,—referred to such Committee, 592	8	1017
ST. STEPHENS CHURCH OF ENGLAND PARSONAGE CAMPERDOWN LAND SALE BILL :—		
Petition presented (*Mr. Septimus Stephen*) for leave to bring in, 313; leave given, presented and read 1°, 317; referred to Select Committee, 321; Report brought up, 326; read 2°, committed, reported without amendment, and report adopted, 399; read 3°, passed, and sent to Council, 402; returned without amendment, 441; assent reported, 465.	8	1019
STOCK :—		
Information respecting losses of, from Noxious or Poisonous Plants, laid on Table, 613	6	53
Report of Australasian Conference, laid on Table, 629	6	21
STOCK ACTS (See "IMPORTED STOCK ACTS" also "PASTURES AND STOCK PROTECTION ACTS")		
STOCK AND BRANDS BRANCH :—		
DEPARTMENT OF MINES :—		
Annual Report for the year 1885, laid on Table, 373	6	1
STRANGERS :—		
Sessional Order for exclusion of, passed, 47.		
STREETS (See "MUNICIPAL" also "SYDNEY TOWN HALL AND STREETS MUNICIPAL LOAN BILL")		
STUART, THE HONORABLE SIR ALEXANDER K.C.M.G., M.L.C. :—		
Sir Patrick Jennings informed the House of the death of, 323.		
Motion made (*Mr. Abbott*) that as a mark of respect to the memory of, this House do now adjourn, and by leave withdrawn, 323.		
Motion made (*Sir Patrick Jennings*) expressing condolence with Lady Stuart and family on death of, 323; Speaker informed House that he had communicated the Resolution to Lady Stuart, and had received, by cable, her thanks for kind sympathy, 351.		
SUBORDINATE ROADS (See "ROADS")		
SUBURBAN RAILWAYS (See "RAILWAYS")		
SUBWAY (See "RAILWAYS")		
SUEZ (See "POSTAL")		
SULLIVAN'S ESTATE BILL :—		
Petition presented (*Mr. T. R. Smith*) for leave to bring in, 629; leave given, presented and read 1°, 646; referred to Select Committee, 651.		
SUMMONS TO THE CLERK (See CLERK OF ASSEMBLY")		
SUNDAY :—		
Sitting on (Customs Duties Bill), 380.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL,	PAGE.
S		
SUNDAYS (See OPENING OF THEATRES ON SUNDAYS")		
SUPPLEMENTARY ESTIMATES (See "FINANCE")		
SUPPLY:—		
Sessional Order passed, 46.		
Motion made (*Mr. Dibbs*) for House to go into Committee, 56.		
Motion made (*Sir Patrick Jennings*) for House to go into Committee, *Contingent* amendment moved (*Mr William Clarke*) in favour of taxing Grain, Pulse, and other Agricultural produce, and Debate adjourned, 201; Debate resumed and amendment negatived on Division, 205.		
Motion made (*Sir Patrick Jennings*) for House to go into Committee, amendment moved (*Mr. Wm. Clarke*) that the action of the Minister of Justice in disregarding the recommendation by the Civil Service Board of Mr. Stephen Murphy to the position of Clerk of Petty Sessions at Orange, is inimical to the best interests of the Service, and opposed to the letter and spirit of the Civil Service Act, and withdrawn, 582.		
Motion made (*Dr. Renwick*) for House to go into Committee, amendment moved (*Mr. Sydney Smith*) expressing disapproval of the action of the Minister for Public Works in taking steps to provide rails and sleepers for the proposed railway from Forbes to Wilcannia before plans and books of reference had been approved by Parliament, and negatived, 593.		
Motion made (*Sir Patrick Jennings*) for House to go into Committee, amendment moved (*Mr. Neild*) to add words "that the Committee be instructed not to agree to any item in the Loan Estimates not of an urgent or permanent nature and likely to be reproductive to the extent at least of 4 per cent. per annum, 643; amendment negatived, 644.		
House in Committee, and Mr. Dibbs made Financial Statement, 62, 65.		
Do Mr. Burns do 90.		
Do Sir Patrick Jennings made a Supplementary Financial Statement, 607.		
Do 80, 113 136, 165, 200, 205, 261, 326, 404, 479, 556, 559, 562, 567, 576, 577, 582, 533, 589, 593, 607, 610, 630, 644, 647.		
Resolutions reported, 80, 113 136, 165, 200, 261, 326, 404, 480, 576, 630, 647.		
Resolutions received, 633.		
Resolutions agreed to, 81, 113 136, 165, 200, 261, 326, 404, 480, 576, 638, 647.		
Motion made (*Mr. Garrett*) that one of the Resolutions be disagreed to, 638.		
No Quorum reported from Committee of, 556, 563.		
Point of Order reported from Committee of, 583.		
Disorder reported from Committee of—words used by Sir Henry Parkes, 607, 608, 609.		
SUPREME COURT PROCESS FACILITATION BILL:—		
Motion made (*Mr. Levien*) for leave to bring in, 61.		
SUPREME COURT PROCESS FACILITATION BILL (No. 2):—		
Motion made (*Mr. Williamson*) for leave to bring in, presented and read 1°, 398; Order of the Day, postponed, 425, 504, 572, 658.		
SUPREME COURT (See also "CIVIL SERVICE")		
Motion made (*Mr. W. J. Fergusson*) that a Royal Commission issue, to inquire into and report upon the present constitution of, and its various Branches, the practice and procedure thereof, and whether it is desirable to introduce reforms, for the better administration of Justice, and lessening the cost of litigation, 412.		
SURVEYOR-GENERAL (See "CROWN LANDS")		
SUSPENSION OF STANDING ORDERS (See "STANDING ORDERS")		
SUTTOR, THE HON. F. B.:—		
Accepted office as Postmaster-General, seat as Member for Bathurst declared vacant, 126; issue and return of Writ reported, sworn, 127.		
SYDNEY:—		
GRAMMAR SCHOOL (See "EDUCATION")		
IMPROVEMENT BOARD (See "CITY OF SYDNEY IMPROVEMENT BOARD")		
MINT:—		
Despatch, laid on Table, 74	8	1115
PREMISES LEASED FOR GOVERNMENT PURPOSES IN:—		
Motion made (*Mr. Harold Stephen*) for return showing, for what purposes and at what rental, 464; Return (*in part*) to Order, laid on Table, 561; Further Return (*in part*) to Order, laid on Table, 576	8	1081, 1085
TECHNICAL COLLEGE (See "EDUCATION")		
UNIVERSITY (See "UNIVERSITY")		
WATER SUPPLY (See "WATER SUPPLY")		
SYDNEY BISHOPRIC AND CHURCH PROPERTY BILL:—		
Received from Legislative Council and read 1°, 562; Order of the Day postponed, 615, 658.		
Petitions from certain Members of the Church of England that the Bill is contrary to the provisions of the Act establishing Church Synods, and tends to destroy the legal independence and individuality of parishes, and praying that certain amendments may be introduced, presented, 614 (3), 618, 629 (3)	8	1025, 1027
SYDNEY CORPORATION ACT AMENDMENT BILL:—		
Motion made (*Mr. O'Connor*) for leave to bring in, 48; presented and read 1°, 60; Order of the Day postponed, 82, 93 130, 175; read 2° and committed, 210; reported with amendment and report adopted, 211; read 3°, passed, and sent to Council, 214; motion made (*Mr. O'Connor*) for a Committee to inspect the Journals of the Legislative Council, Committee retired and brought up Report, which was read by Clerk and received, 240.		
SYDNEY CORPORATION ACT AMENDMENT BILL (No. 2):—		
Motion made (*Mr. O'Connor*) for leave to bring in, 220.		
SYDNEY MECHANICS SCHOOL OF ARTS INCORPORATION BILL:—		
Petition presented (*Mr. Forsyth*) for leave to bring in, 367; leave given, 372; presented and read 1°, 388; referred to Select Committee, 394; Report brought up, 511; Order of the Day postponed, 558; read 2°, committed, reported with amendments, and Report adopted, 615; read 3°, passed, and sent to Council, 618; returned without amendment, 642; assent reported, 660.	8	1029
SYDNEY TOWN HALL AND STREETS MUNICIPAL LOAN BILL:—		
Motion made (*Mr. Dibbs*) for leave to bring in, presented and read 1°, 452; read 2°, committed, reported without amendment, and report adopted, 458; read 3°, passed and sent to Council, 462; returned with amendment, 515; amendment agreed to and Message to Council, 524; Assent reported, 555.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS VOL	PAPERS PAGE
T		
TAMWORTH (See "RESERVES")		
TARAGO (See "RAILWAYS")		
TARGETT, MR. W. S. (See also "PRIVILEGE")		
Proposed as Chairman of Committees, 45.		
Do do and negatived on Division, 143.		
TARIFF (See also "FINANCE")		
PETITIONS PRESENTED FROM —		
Bootmakers and saddlers, advocating the imposition of a twenty per cent. duty on all goods imported of such industries, 142	3	1105
Residents of the Murrumbidgee Electorate, that the taxation falls unduly on the poor man, 164	3	1151
The New South Wales Farmers Union, disapproving of the financial policy of the Government, and praying for the imposition of a duty on all agricultural products, 177 ..	3	1135
Residents of Orange in opposition to the proposals now under consideration, and in favor of the stimulation of Colonial Industry by a protective tendency, 193	3	1145
Farmers and others of Bowan Park, near Cudal, urging the inclusion of Agricultural Produce in the list of articles for taxation, 205	3	1139
Public meeting at Molong, in opposition to present Tariff, and advocating a system of Protection to remedy the existing depression in the Colony, 232	3	1149
G. Peacock, complaining of the proposed definite duty on Pulp Fruit imported, and that such duty, if carried, will close the large industry carried on by him, sacrificing his manufactory and plant, and throwing a number of men out of employment and praying that he may be heard at the Bar of the House on the subject, 236	3	1157
Amendment moved (*Mr G A Lloyd*), on going into Committee of Ways and Means, that Counsel be heard at the Bar, and negatived on Division, 246		
Fruit-growers at Pennant Hills and Castle Hill, against the levying of the proposed duty upon Pulp Fruit, 246	3	1141
Fruit-growers at Ryde and Gladesville, against the levying of proposed duty upon Pulp Fruit, 246		
Persons in the Publishing, Lithographing, Engraving, and other kindred trades, representing that the present Tariff is inimical to their interests, and praying relief, 253 .	3	1153
Merchants, Traders, Artisans, and others, in opposition to the alterations and amendment proposed in the Tariff, more especially to the *ad valorem* Duties, and praying that some other scheme may be devised to meet the deficit, 261, 277, 281, 284, 317, 325, 359	3	1113, 1115, 1119.
Chairman and members of the Newcastle Chamber of Commerce, to the same effect, 317 ...	3	1117
Merchants, Traders, and others, in Newtown, Petersham, and elsewhere, to the same effect, 276	3	1113
Do do do in and about Newcastle, to the same effect, 317	3	1117
Public Meeting of Citzens of Sydney, that much injury will be done to the commerce of the country if the alterations and extensions of the Customs Tariff submitted be passed into law, and praying the House not to pass the Customs Act, 268	3	1147
Certain Producers, Traders, Artisans, and others, urging that before new burdens of Taxation are imposed material reductions in the expenditure should be made, suggesting the adoption of a system of direct taxation upon property, and praying the House not to pass any Bill to extend the present Customs Tariff, 281 (2), 284, 291 (4), 295, 305 (9), 309, 313, 317, 318, 321, 325, 331, 338, 343 (3), 349 (4), 373, 402	3	1121
Certain Producers, Traders, Artisans, and others, in district of Molong, with similar prayer, 281, 300	3	1121, 1123
Do do Gundaroo do 305	3	1123
Do do Yass Plains do 317	3	1125
Henry Strange Fry, Chairman of Public Meeting at Bulli, with similar prayer, 291 .	3	1121
Luke Gulson, Chairman of Public Meeting, with similar prayer, 313 ...	3	1123
Electors of The Hume, in favour of the *ad valorem* and specific duties, and suggesting certain taxes as desirable for raising revenue, 341	3	1107
John Lewis, as Chairman of Public Assemblage of residents of Moama and District, in favour of *ad valorem* duties of 5 per cent. as equitable and necessitated by special circumstances, 373	3	1111
George H. Sparkes, as Chairman of Public Meeting at Newtown, in opposition to the Customs proposals of the Government, and advocating retrenchment, together with a land and property tax, 373	3	1143
Manchester Unity of Independent Order of Oddfellows, New South Wales, in opposition to the proposal to impose a duty on medicines imported, which would entail a serious increase of expenditure on their Unity, and praying withdrawal of the proposed duties, 421 ...	3	1155
Bathurst Farmers Union and others interested in the agricultural industry, that the taxes proposed will press most unfairly on them, and praying the House not to consent to any *ad valorem* duties unless imported farm produce be included, 421	3	1137
Public Meeting of Residents of Leichhardt and Petersham in favour of Protective Policy, and the imposition of a 10 to 15 per cent duty on all imported goods that can be manufactured in the Colony, 453	3	1109
William Peacock, manufacturer, detailing circumstances under which duty was levied on green and pulp fruit, and praying full inquiry, 539	3	1159
TARRAMIAH RUN (See "CROWN LANDS")		
TARRANT, MR JOSEPH (See "CROWN LANDS TITLES AND RESERVATIONS VALIDATION BILL")		
TAXATION (See "FINANCE")		
TAYLOR, MR A G (See "PRIVY COUNCIL")		
TECHNICAL COLLEGE (See "EDUCATION")		
TELEGRAPHS —(See also "ELECTRIC LIGHTING")		
Notice showing reduction in rates on messages between Narrabri Town and Railway Station, and between the Border Stations and Victoria, laid on Table, 92	7	1007
REGULATIONS —		
For prepayment of Telegrams by Postage Stamps, laid on Table, 13	7	1001
Amended, for working the lines in New South Wales, laid on Table, 92	7	995
Notification respecting prepayment of Telegrams by cash, laid on Table, 169	7	1003
Respecting "Collect" Telegrams, laid on Table, 230	7	1005
CASE OF BLAKENEY V. PEGUS —		
Motion made (*Mr. Melville*) for all telegrams, correspondence, relating to, respecting a missent telegram, 141; Return to Order laid on Table (not printed), 518.		
RATES FOR CABLEGRAMS AND DUPLICATION OF SUBMARINE CABLES —		
Report of Superintendent of Electric Telegraphs in regard to proposed reduction of, laid on Table, 198	7	989
GOVERNMENT CABLEGRAMS —		
Motion made (*Mr. Neild*) for a return of amounts paid for transmission to and from the Agent-General, 137; Return to Order, laid on Table, 301	7	993

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS.	
	VOL.	PAGE.
T		
TELEGRAPHS (*continued*) :—		
IRON COLUMNS FOR LINES ALONG GEORGE-STREET :—		
Motion made (*Mr. Davies*) for copies of all papers, tenders, &c., having reference to the erection of, 229; Return to Order, laid on Table, 350	7	1009
MR. METCALF, ENGINEER IN THE DEPARTMENT :—		
Motion made (*Mr. Garrard*) for copies of all minutes, letters, papers and other documents in connection with the appointment, suspension, and dismissal of, 372; Return to Order, laid on Table, 479	7	1041
TELLERS (See "NO TELLERS")		
TEMORA (See also "MINING"):—		
Revocation of Resumption of land for site for School of Arts, laid on Table, 79	5	317
TEMPORARY :—		
STAFF (See "CIVIL SERVICE")		
WATER SUPPLY (See "WATER SUPPLY")		
APPOINTMENTS (See "CIVIL SERVICE")		
DRAFTSMEN (See "CROWN LANDS")		
TENTERFIELD (See "CROWN LANDS," also "RAILWAYS," also "ADMINISTRATION OF JUSTICE")		
THATCHER, CHARLES HENRY (See "CROWN LANDS")		
THEATRES (See "OPENING OF THEATRES ON SUNDAYS")		
THE DAILY TELEGRAPH (See "PRIVILEGE")		
THOMPSON, J. J., CONDITIONAL PURCHASE OF (See "CROWN LANDS")		
THURSDAY ISLAND (See "DEFENCE")		
TIMBER REGULATION (See "REGULATIONS")		
TIMBER RESERVES (See "RESERVES")		
TIN MINE AT PHEASANT'S CREEK (See "MINING")		
TIRES AND AXLES (See "RAILWAYS")		
TITLE "HONORABLE" WITHIN THE COLONY OF NEW SOUTH WALES :—		
Motion made (*Mr. Abbott*) for copies of all despatches relating to the use of, 257; Return to Address, laid on Table, 301	2	9
TITLES (See "CROWN LANDS TITLES AND RESERVATIONS VALIDATION BILL")		
TOBACCO DUTIES :—		
Petition from cigar manufacturers and others, that the levying of the excise on cigars manufactured in the Colony is restrictive and prohibitory, presented, 253	3	1161
TOOGONG (See "RAILWAYS")		
TOWN HALL LOAN (See "SYDNEY TOWN HALL AND STREETS MUNICIPAL LOAN BILL")		
TRAFFIC MANAGER'S OFFICE (See "RAILWAYS")		
TRAINING SCHOOLS (See "EDUCATION")		
TRAMWAYS (See also "BALMAIN TRAMWAY BILL" also "KIAMA TRAMWAY ACT AMENDMENT BILL")		
DISMISSAL OF ENGINEER HOSKINGS :—		
Return to Order (*Second Session*, 1885), laid on Table, 20	7	679
PROGRESS REPORT FOR 1885 :—		
On the Transactions of the Government, laid on Table, 205	7	675
COST OF :—		
Return showing, including rolling stock, buildings, machinery, and land, laid on Table, 216	7	677
ACCIDENTS—CASES AGAINST COMMISSIONER FOR RAILWAYS :—		
Motion made (*Mr. Thompson*) for return showing particulars of, 294.		
BETWEEN WAVERLEY AND RANDWICK :—		
Petition from Owners of property and Electors in the Boroughs of Randwick, Coogee, and Waverley, referring to proposal to connect by a loop-line the Tram Terminus at Waverley with the Engine-sheds at Randwick, advocating a connection *via* Coogee, and praying for a survey of the route, presented, 523	7	683
TRANGIE (See "CROWN LANDS")		
TRAVELLING EXPENSES (See also "CIVIL SERVICE")		
IN THE PUBLIC SERVICE :—		
Motion made (*Mr. Sydney Smith*) for a Select Committee to inquire into expenditure on, and debate adjourned, 484; Order of Day postponed, 572; Order of Day discharged, 651.		
TRIAL SURVEY (See "RAILWAYS")		
TRICKETT, MR. WILLIAM JOSEPH :—		
Appointed Deputy Chairman of Committees for day only, 134, 633.		
Proposed as Chairman of Committees, and elected on division, 144.		
Deputy-Speaker's Commission in favour of, 157.		
Resignation of, as Chairman of Committees, 381.		
TRUANT INSPECTORS. (See "EDUCATION")		
TRUSTEE ACT AMENDMENT BILL :—		
Motion made (*Mr. W. J. Fergusson*) for leave to bring in, presented and read 1°, 47; read 2°, committed, reported without amendment, and report adopted, 94; read 3°, passed and sent to Council, 98; returned with amendments, including one in the Title, 344; amendments agreed to, 425; assent reported, 464.		
TRUSTEES (See "NEW SOUTH WALES TRUSTEES EXECUTORS AND AGENCY COMPANY'S BILL")		
TUCKER, DR. :—		
Report by, on Hospitals for the Insane visited by him under the circular letter of the Colonial Secretary, laid on Table, 107	2	535
TUESDAYS :—		
Precedence of Government Business on—Sessional Order, 222.		
TUMUT (See "RAILWAYS")		
TWEED AND RICHMOND RIVER DISTRICT (See "ROADS" also "RAILWAYS")		
TYPHOID FEVER :—		
Report of the Board of Health upon outbreak of, in Municipal District of Leichhardt, laid on Table, 223	4	585

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I.—12TH PARLIAMENT—SESSION 1885-86.	PAPERS. VOL.	PAGE.
U		
UNAUTHORIZED EXPENDITURE INDEMNITY BILL :—		
Motion made (*Mr. Burns*) for leave to bring in, presented and read 1°, 39; Order of the Day discharged, and Bill withdrawn, 130.		
UNITED STATES WOOL DUTIES :—		
Correspondence respecting, laid on Table, 193	6	33
UNIVERSITY :—		
Report for 1884, laid on Table, 15	4	349
Do 1885, do 478		385
Amended By-laws, laid on Table, 128		391
By-laws, laid on Table, 651		393
Return respecting Professorships and Students, laid on Table, 188		405
URALLA (See "RAILWAYS")		
USHER OF THE BLACK ROD :—		
Delivers Message from Commissioners on opening Parliament, 3.		
Delivers Message from the Lieutenant-Governor, 8.		
Delivers Message from His Excellency the Governor, 660.		
UTHER ESTATE LEASING BILL :—		
Petition presented (*Mr. Teece*) for leave to bring in, 50; leave given and read 1°, 56; referred to Select Committee, 61; Report brought up, 67; Order of the Day postponed, 80, 116, 130; read 2°, committed, reported without amendment, and report adopted, 151; read 3°, passed, and sent to Council, 154; returned with amendments, 361; Order of the Day postponed, 398; amendments agreed to and disagreed to, 466; Message to Council, 469; Council does not insist upon portion of amendment disagreed to, 479; assent reported, 501.	8	1049
V		
VACANT SEATS (See "ELECTORAL")		
VACCINATION :—		
Report for 1885, laid on Table, 128	2	817
Do. 1883, do. 205	2	807
Do. 1884, do. 205	2	811
VALIDATION. (See "CROWN LANDS TITLES AND RESERVATIONS VALIDATION BILL")		
VAUGHN, THE HONORABLE ROBERT MATTESON :—		
Accepted office as Secretary for Mines, and Seat as Member for Grenfell declared vacant, 72; issue and return of writ reported, sworn, 73.		
VEHICLES. (See "PUBLIC" also "PUBLIC VEHICLES REGULATION ACT AMENDMENT BILL")		
VENTILATION OF COAL MINES :—		
Motion made (*Mr. Melville*) for all correspondence and reports, and a return respecting, 93.		
"VERNON" :—		
Annual Report, laid on Table, 27, 656	4	569, 575
Return respecting, laid on Table, 45	4	581
BOYS MEREWETHER :—		
Motion made (*Mr. Olliffe*) for all papers and correspondence relative to case of, in respect to property to which it is stated they are entitled, 214; Return to Order, laid on Table, 284	4	583
"VICTORIA PARK HOTEL" :—		
Correspondence respecting the granting of a certificate for, laid on Table (not printed), 613; ordered to be printed, 633	2	891
VINDIN, MR. H., INSPECTOR OF RABBITS :—		
Motion made (*Mr. Abbott*) for copies of all papers relating to appointment of, and promotion as Superintending Inspector, 188; Return to Address, laid on Table, 506	2	399
VINE DISEASES BILL :—		
Motion made (*Mr. Dibbs*) for Committee of the Whole, 291; Message from Governor, recommending 440; House in Committee, resolution agreed to, presented and read 1°, 441; read 2°, committed and reported with amendments, 444; recommitted, reported 2° with further amendments and report adopted, 454; read 3°, passed and sent to Council, 469; returned with amendments, 609; amendments agreed to, 643; assent reported, 659.	8	1149
Petition from Henry E. Bonnard that he is opposed to the Bill for the reasons set forth, and praying that it may be amended as suggested, presented, 619	8	1151
VITAL STATISTICS :—		
Twenty-ninth Annual Report, laid on Table, 23	8	1
VOLUNTEERS :—		
INFANTRY :—		
Motion made (*Mr. Neild*) for copies of all letters and other documents relating to the application of Mr. A. S. Board for a Commission, 141; Return to Address, laid on Table, 205; Supplementary Return to Address, laid on Table, 354	2	255, 261
TEAM FOR WIMBLEDON RIFLE MATCHES :—		
Correspondence respecting the selection of the proposed, to represent the Colony, laid on Table, 216	2	267
VOTE OF CENSURE (See also "WANT OF CONFIDENCE")		
POLICY OF THE GOVERNMENT :—		
Motion made (*Mr. Garvan*) that the policy of the Government is unsatisfactory to this House, and debate adjourned, 102; debate resumed and motion carried on division, 108.		
NEW HEBRIDES :—		
Motion made (*Sir Henry Parkes*) that any expression of acquiescence by this Government in the annexation of, by France, is opposed to the main interest of New South Wales and the other Australian Colonies, and that it is the duty of this Colony to convey to the Imperial Government its disapproval of the colonization by any Power other than Great Britain, and debate adjourned, 173; debate resumed, 177; amendment proposed, and debate adjourned, 178; debate resumed, amendment negatived, 179; original question negatived on division, 180.		
NEW TAXATION :—		
Motion made (*Sir Henry Parkes*) *contingent* on motion that Speaker leave the Chair to go into Committee of Ways and Means in reference to, and Debate adjourned, 230; Debate resumed, 232; amendment negatived on division, 233.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885-6.	PAPERS. VOL.	PAGE.
V		
VOTE OF CENSURE (*continued*) :—		
STATE OF THE PUBLIC FINANCES :—		
Motion made (*Sir Henry Parkes*) that the present state of the public finances, as explained by the Colonial "Treasurer" is highly unsatisfactory, and that the foregoing Resolution be communicated by Address to His Excellency the Governor,—amendment moved (*Mr. Abbott*) to omit all words after "Treasurer" and insert other words, and debate adjourned, 621 ; debate resumed, 623 ; words omitted, and motion as amended carried, 624.		
VOTE OF CHAIRMAN OF SELECT COMMITTEE ON PRIVATE BILLS :—		
Sessional Order passed, 46.		
VOTE OF CREDIT :—		
Message recommending, 74, 111, 134, 198, 261, 326, 402, 479, 576.		
VOTES AND PROCEEDINGS (See also "ASSEMBLY")		
Motion made (*Mr. G. A. Lloyd*) for a return giving particulars of cost of printing and binding, and all Parliamentary Papers and "Hansard," for Session 1883-4, 489.		
W		
WAGGA WAGGA (See "RAILWAYS" also "WATER SUPPLY")		
WAKOOL RIVER (See "RESERVES")		
WALCHA (See "CROWN LANDS")		
WALL, MR. WILLIAM CHANDOS :—		
Return of Writ for Mudgee, certifying to election of, reported, 351 ; sworn, 359.		
WANAARING (See "WATER SUPPLY")		
WANT OF CONFIDENCE (See also "VOTE OF CENSURE")		
Motion made (*Sir Henry Parkes*) that the proposed Customs Taxation would be fraught with great and serious public injury, and that the Government in seeking to impose such Taxation has not the support of the electors of the country ; that for these and other weighty reasons the present advisers of the Crown are not entitled to the confidence of this House—requirement that Resolutions be put *seriatim* negatived, 378 ; and original question negatived, 379.		
WANT, THE HON. J. H. :—		
Accepted office as Attorney-General, and seat as Member for Gundagai, declared vacant, 126 ; issue and return of writ reported, sworn, 127.		
WAREHOUSES (See "WORKING CLASSES")		
WATER FRONTAGES :—		
CAREENING COVE :—		
Motion made (*Mr. Abbott*) for all papers, plans, &c., in connection with sale of Government land, to the executors of the late Mr. Edward Lord, 80 ; Return to Address, laid on Table, 350 ...	5	211
PORT JACKSON :—		
Motion made (*Mr. Reid*) for a return showing particulars of applications to purchase, 93 ; Return to Order, laid on Table, 151	4	957
WATER FRONTAGES RESERVATION BILL :—		
Motion made (*Mr. Reid*) for leave to bring in, presented and read 1°, 93 ; Order of the Day postponed, 117, 146, 225, 294, 332 ; Order of the Day discharged and Bill withdrawn, 398.		
WATER SUPPLY (See also "PENRITH WATER AND GAS SUPPLY BILL" also "COUNTRY TOWNS WATER AND SEWERAGE ACT")		
WENTWORTH :—		
Notification authorizing construction of works, laid on Table, 13	6	989
BOURKE :—		
Notification authorizing construction of works, laid on Table, 656	6	987
SYDNEY AND SUBURBS :—		
Notification of resumption of land in connection with, laid on Table, 13	6	995
Return showing daily flow from 30-in. pipe at Prospect to the lower canal, laid on Table, 88	6	1021
Sir John Fowler's Report on Prospect Dam, laid on Table, 168	6	991
HUNTER RIVER DISTRICT :—		
Notification of resumption of land in connection with, laid on Table, 15	6	1025
Return of Expenditure on, to 30 June, 1886, and estimated cost of completion, laid on Table, 435	6	1023
TEMPORARY, FOR SYDNEY :—		
Papers in connection with, laid on Table, 27	6	997
Further papers, laid on Table, 31	6	1019
ROYAL COMMISSION ON CONSERVATION OF WATER :—		
First Report of Commissioners, laid on Table, 69	6	387
Second do. do. 354	6	949
BOTANY DAMS :—		
Correspondence respecting alleged pollution of, laid on Table, 88	6	993
BORING FOR, BETWEEN BOURKE AND WANAARING :—		
Statement showing cost of, laid on Table, 155	6	1029
BATHURST, WAGGA, GOULBURN AND ALBURY :—		
Return showing total cost of Reticulation Pipes, Special Castings, &c. for, laid on Table, 523	6	1027
WATSON, MR. W. J. (See "ELECTORAL")		
WAVERLEY (See "ST. MARY'S WAVERLEY CHURCH OF ENGLAND LAND SALE BILL" also "TRAMWAYS")		
WAYS AND MEANS :—		
Sessional Order passed, 46.		
Motion made (*Mr. Dibbs*) for House to go into Committee, 56.		
Motion made (*Sir Patrick Jennings*) for House to go into Committee—*Contingent* amendment moved (*Sir Henry Parkes*) in reference to the Taxation proposals of the Government, and debate adjourned, 230 ; debate resumed, 232 ; amendment negatived on division, 233.		
Motion made (*Sir Patrick Jennings*) for House to go into Committee—amendment moved (*Mr. G. A. Lloyd*) that Counsel be heard at the Bar, on behalf of Mr. George Peacock, in relation to the proposed duty on Pulp Fruit, and negatived on division, 246.		
Motion made (*Sir Patrick Jennings*) for House to go into Committee—*Contingent* amendment moved (*Mr. Neild*) in reference to the taxing of land within Municipal boundaries and that any land tax should be of a progressive character, and negatived, 292.		
Order of the Day read, and *Mr. G. A. Lloyd*, for Mr. Foster, proceeding to move *Contingent* Notice, objection taken to his doing so, 246.		

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I—12TH PARLIAMENT—SESSION 1885–6.	PAPERS. VOL.	PAGE.
W		
WAYS AND MEANS—*continued* :—		
Estimates for 1886 *(Mr. Dibbs)* laid on Table, 62	3	579
Do *(Mr. Burns)* do 100	3	645
Do *(Sir Patrick Jennings)* do 169	3	711
House in Committee, Sir Patrick Jennings made Financial Statement, 165.		
House in Committee, 81, 113, 136, 200, 208, 220, 223, 233, 237, 246, 248(2), 249, 254, 262, 292, 301, 306, 326, 404, 480, 576, 638, 647.		
Resolutions reported, 81, 113, 136, 200, 237, 254, 262, 292, 306, 326, 404, 480, 576, 638, 647.		
Resolution received, 269, 309, 643.		
Resolutions agreed to, 81, 113, 136, 200, 237, 262, 272, 292, 310, 326, 404, 480, 576, 643, 647.		
No Quorum in Committee reported, 246.		
Point of Order reported from, 248.		
WEBB, MR. FREDERICK WILLIAM :—		
Commission in favour of as Acting-Clerk during the absence on leave of the Clerk of the Assembly reported, 73 ; oaths of allegiance and office administered to, 73.		
WEEKLY ABSTRACT OF PETITIONS :—		
Nos. 1. to 41	1	775
WEEKLY REPORTS OF DIVISIONS IN COMMITTEE OF THE WHOLE :—		
Nos. 1. to 21	1	671
WENTWORTH (See "WATER SUPPLY")		
WEST KEMPSEY :—		
Notification of resumption of land in connection with wharf accommodation, laid on Table, 13	4	1009
WEST MAITLAND COURT-HOUSE :—		
Motion made (*Mr. Thompson*) for copies of all letters, plans, specifications, and other documents, relating to the purchase of a site for and the erection of a Court-house, 281 ; Return to Order, laid on Table (not printed), 350 ; ordered to be printed, 548.	4	889
WEST WALLSEND AND MONK-WEARMOUTH RAILWAY BILL :—		
Petition presented (*Mr. G. A. Lloyd*) for leave to bring in, 118 ; 62nd Standing Order suspended, 134 ; leave given, presented and read 1°, 137 ; referred to Select Committee, 150 ; Report brought up, 222 ; Order of the Day postponed, 229 ; read 2°, committed, reported without amendment, and report adopted, 241 ; read 3°, passed, and sent to Council, 245 ; returned with amendments, 375 ; Order of the Day postponed, 398 ; Council's amendments agreed to, 465 ; Message to Council, 466 ; assent reported, 502.	8	1055
WHARF :—		
PUTNEY POINT, PARRAMATTA RIVER :—		
Motion made (*Mr. Abigail*) for copies of all minutes, letters, reports, plans, &c., in reference to erection of, 336 ; Return to Order laid on Table, 526.	4	1011
WHIPPING (See "ABOLITION OF PUNISHMENT BY WHIPPING BILL" also "PUNISHMENT BY WHIPPING")		
WILBERFORCE COMMON :—		
Petition from certain Trustees and residents of Wilberforce, representing that the proposed sale of certain portions of the Common would be prejudicial to them, and praying that the resumption or sale be not sanctioned, presented, 435.	6	149
WILCANNIA (See "RAILWAYS")		
WILEY, Mr. W. T. (See "EDUCATION")		
WILLOUGHBY AND GORDON TRAMWAY BILL :—		
Petition presented (*Mr. Ives*) for leave to bring in, 359 ; leave given, presented and read 1°, 367 ; referred to Select Committee, 385 ; Report brought up, 435 ; Order of the Day postponed, 572, 658	8	1061
Petition from Michael McMahon in opposition to, and praying to be heard in person or by Counsel before the Select Committee, presented and referred to the Committee, 402.	8	1071
WINE (See "SPIRITS, WINE, AND BEER")		
WISDOM, MR. ROBERT :—		
THE HONORABLE MEMBER FOR MORPETH :—		
Guilty of persistent obstruction and disorder, 379 ; Speaker directs Sergeant-at-Arms to remove, him from the Chamber, 380.		
Refuses to withdraw disorderly words interjected, and named by Mr. Deputy Speaker (*Mr. Slattery*), 656.		
Motion made (*Mr. Foster*) that the removal and exclusion from the House of, by the Speaker, without the Order or Resolution of the House were contrary to the Law and Usages of Parliament and the Privileges of this House—amendment moved (*Mr. Want*) to substitute other words, 402 ; amendment and motion, as amended, carried on division, 403.		
Uses disorderly words, which were taken down, "This is a brutish Government," 607 ; motion made (*Sir Patrick Jennings*) that words are disorderly, should be withdrawn and apologised for, and carried, and Mr. Wisdom, refusing to comply with the Resolution, Sir Patrick Jennings moved that Mr. Wisdom is guilty of contempt, and should be committed to the custody of the Sergeant-at-Arms, Speaker's Warrant issued, and the Honorable Member taken into custody and removed from the House, 608 ; discharged from the custody of the Sergeant-at-Arms, 609.		
WISEMAN'S FERRY DISTRICT (See "ROADS")		
WITHDRAWAL OF ESTIMATES (See "FINANCE")		
WOLLONGONG :—		
SALE OF SITE OF OLD PUBLIC SCHOOL :—		
Motion made (*Mr. Sutton*) for all correspondence, 112 ; Return to Order, laid on Table, 160	4	297
WOLLONGONG PUBLIC SCHOOL SITE SALE BILL :—		
Motion made (*Dr. Renwick*) for leave to bring in, presented and read 1°, 478 ; read 2°, committed, reported without amendment, and report adopted, 490 ; read 3°, passed, and sent to Council, 493 ; returned with amendments, 515 ; Order of Day discharged, and Bill withdrawn, 653.		
WOLSELEY PARK, GUNNEDAH :—		
Motion made (*Mr. Abigail*) for all correspondence respecting appointment of Trustees of, and statement showing receipts and disbursements and meetings attended, 133.		
WOODS, CARSON, PATENT PAVING :—		
Correspondence respecting, laid on Table, 36	7	509
WOOL :—		
Correspondence respecting the United States Duties, laid on Table, 193	6	33
Return showing exportation of, from 1880–86, laid on Table, 318	6	31
WOOLLAHRA VOLUNTEER FIRE BRIGADE :—		
Motion made (*Mr. Neild*) for copies of all letters, applications, &c., by, for registration under the Act, 188 ; Returns to Order, laid on Table, 198, 208	2	1019

REFERENCES TO THE VOTES AND PROCEEDINGS, VOL. I.—12TH PARLIAMENT—SESSION 1885-6.	PAPERS.	
	VOL.	PAGE.
W		
WORDS (See also "*DISORDER*")		
Disorderly, used by the Honorable Member for Morpeth (Mr. Wisdom), taken down, 607.		
WORKING CLASSES:—		
Motion made (*Mr. O'Sullivan*) for Committee of the Whole to consider the expediency of appointing a Commission to inquire into the hours of labour of indoor workers, and the condition of shops, warehouses, and factories, with a view to legislation for preventing the overworking of females and children, and the proper sanitation of premises, 107; Order of the Day postponed, 116, 117, 130, 177, 193, 216, 294; Order of the Day discharged, 412.		
WORKSHOPS (See "REGULATION OF FACTORIES AND WORKSHOPS BILL" also RAILWAYS")		
WRIGHT, HEATON, & CO. (See "RAILWAYS")		
WRITS OF ELECTION (See "ELECTORAL")		
WYATT ESTATE LEASING BILL:—		
Petition presented (*Mr. W. J. Fergusson*) for leave to bring in, 40; leave given and read 1°, 47; referred to Select Committee, 50; Report brought up, 102; order of the Day postponed, 116, 130, 175; motion made for 2°, and debate adjourned, 189; read 2°, committed, reported without amendment, and report adopted, 112; read 3°, passed, and sent to Council, 215; returned with amendment, 254; Order of the Day postponed, 264; Council's amendment agreed to, 278; assent reported, 359.	8	1073
Y		
YOUNG (See "ELECTORAL")		
YOUNG, THE HONORABLE JAMES HENRY:—		
Accepted office as Minister of Public Instruction, and seat as a Member for The Hastings and Manning declared vacant, 72; issue and return of Writ reported, sworn 73.		

1885-6.

NEW SOUTH WALES.

RAILWAYS OF NEW SOUTH WALES.

(PROGRESS REPORT OF COMMISSIONER FOR 1885.)

Presented to Parliament pursuant to Act.

The Commissioner for Railways to The Honorable the Secretary for Public Works.

Department of Public Works,
Railway Branch,
Sydney, 17th May, 1886.

SIR,

In submitting a Progress Report upon the Railway Transactions for the past year, I have to express my regret that those transactions should show a considerable fall in the net return to the capital expended. The causes of this decline are not far to seek; the bad seasons and consequent depression in the producing interests of the Colony have affected very materially the Railway traffic, and the unproductive character of some of the extensions—in most cases, I believe, temporarily unproductive only—has contributed to the result which is a decrease, as compared with the return for the year 1884, of ·83 per cent., the return to capital expended having been for the past year 3·37 per cent. as against 4·20 in 1884.

The tables and returns, which are being compiled to show the transactions in detail, will not affect the result, but will enable me to demonstrate that it is due to the causes I have stated.

CAPITAL ACCOUNT.

During the year 1885 a further sum of £2,909,715 was expended on account of capital, increasing the gross expenditure to £24,962,972. Of this sum £21,839,378 have been expended upon lines in operation, and the balance, £3,123,594, invested in unproductive lines in course of construction.

Of the sum of £2,909,715 expended during last year, £1,751,138 were expended upon lines in operation, swelling the expenditure under that head to £21,839,378.*

The amount of £1,751,138 was made up as under:—

Invested in the construction of 114 additional miles of railway opened during 1885 ...	£1,148,334
Additions and improvements to works and stations, &c.	182,791
Additional rolling-stock, machinery, and workshops	420,013
	£1,751,138

The

* Includes cost of old Pitt-street Tramway and value of rolling-stock used on Camden Tramway.

The following extensions were opened during 1885:—

Tarago to Bungendore...	... 20 miles ...	4 March.
Murrumburrah to Young	... 18 „ ...	26 „
Byrock to Bourke ...	... 48 „ ...	13 Sept.
Orange to Molong ...	... 22 „ ...	22 Dec.
Hurstville to Sutherland	... 6 „ ...	26 „
	114 „	

Which, added to the 1,618 miles in operation at the close of 1884, increased the total mileage opened for traffic to 1,732. There were, in addition, 408 miles in course of construction, 9 of which have been brought into operation during the currency of the present year.

Revenue and Expenditure.

The gross earnings for 1885 should have been, had the rate of earning in 1884 per mile of line been maintained £2,422,774

They realized only 2,174,368

Showing a decline of £248,406

The working expenses were £1,458,153

And the net earnings 716,215

The following is a summary of the gross earnings, working expenditure, and net earnings for 1885 as compared with 1884:—

	1885.	1884.	Increase.	Decrease.
	£	£	£	£
Gross earnings	2,174,368	2,086,237	88,131	.....
Working expenses	1,458,153	1,301,259	156,894	.....
Net earnings	716,215	784,978	.....	68,763

Net Earnings.

The percentage of net earnings to capital expended in 1885, as against 1884, was as under:—

	No. of miles opened.	Capital invested.	Net earnings.	Percentage of interest to capital.
		£	£	
1885.....	1,732	21,831,276*	716,215	3·37
1884.....	1,618	20,080,138*	784,978	4·20
Increase	114	1,751,138	.....	.....
Decrease.....	.....	.....	68,763	·83

* Excludes cost of old Pitt-street Tramway, &c.

I have the honor to be,
Sir,
Your most obedient Servant,

Chas. A. Goodchap

Commissioner for Railways.

The Honorable
The Secretary for Public Works.

Sydney: Thomas Richards, Government Printer.—1886

[8d.]

1885-6.

NEW SOUTH WALES.

RAILWAYS AND TRAMWAYS

OF

NEW SOUTH WALES.

REPORT

BY

THE COMMISSIONER FOR RAILWAYS

FOR THE YEAR

1885.

Presented to Parliament by Command.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1886.

[7s.] 443—a

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CONTENTS OF REPORT FOR 1885.

	PAGE.
1. Railway Capital authorized ...	5
2. Railway Capital expended ...	5
3. Lines Open and in Progress ...	6
4. Land taken for Railway Purposes ...	11
5. Importation of Railway Materials ...	12
6. Existing Lines—	
Maintenance of Ways and Works ...	12
Locomotive and Carriage Division ...	13
7. Revenue and Expenditure ...	13
8. Division of the Lines into Sectional Areas ...	20
9. Ton Mileage ...	28
10. Wool Traffic ...	28
11. Coal Traffic ...	29
12. Accidents ...	30
13. Returns ...	30
14. Recapitulation ...	31

Tramways of New South Wales ... 33

1885-6.

NEW SOUTH WALES.

RAILWAYS OF NEW SOUTH WALES.

(REPORT FOR 1885.)

The Commissioner for Railways to The Honorable the Secretary for Public Works.

Department of Public Works,
Railway Branch,
Sydney, 15th July, 1886.

SIR,

Following upon the Progress Report made to you on the 17th May last, I have now the honor to submit a statement, more in detail, of the transactions of this Department for the year 1885.

No. 1.—RAILWAY CAPITAL AUTHORIZED.

The total amount which has been authorized to be raised by loans is £40,207,161. At the close of 1885 the total value of Debentures issued was £24,615,400. The amount still to be raised is £15,591,761, which will probably bear interest at the rate of $3\frac{1}{2}$ per cent. Railway Debt. Appendix Nos. 8 and 9, pp. 93, 99.

The Railway capital bears interest at the rate raised and to be raised, as follows:—

£7,062,300—5 per cent.	annual interest	£353,115
£12,053,100—4 ,, ...	,,	£482,124
£5,500,000—$3\frac{1}{2}$,, ...	,,	£192,500
£15,591,761—$3\frac{1}{2}$,, ... (still to be raised)	,,	£545,712

2.—RAILWAY CAPITAL EXPENDED.

At the close of 1885 there had been expended on lines open for traffic £21,839,378,* and on lines in course of construction £3,123,594; in all, £24,962,972, of which amount the sum of £2,909,715 was expended in the year 1885, as under:— Capital expended. Appendix Nos. 10 and 11, pp. 100, 110.

Construction	£2,476,981
Rolling stock and machinery, &c.	420,013
Trial surveys	12,721
	£2,909,715

The sources from which the money expended on Railway Lines open for traffic have been obtained, are:—

From Loans	£21,091,136
,, Revenue	740,140
	£21,831,276†

If,

* Includes cost of old Pitt-street Tramway, taken up in 1867, and £3,223 cost of rolling stock used on Camden Tramway
† Excludes do do do do

If, in apportioning the net revenue, the interest bearing capital alone were considered, the return would give for the year 1885, 3·49 per cent.; but distributing it over the whole amount of capital expended on lines in operation without regard to the source from which it has been obtained, the percentage which the net revenue gives is reduced from 3·49 to 3·37.

3.—Lines Open and in Progress.

Of the sum of £2,909,715 expended in 1885 for construction, the sum of £1,280,566 was expended on lines open for traffic, and the balance £1,629,149 invested in unproductive lines in course of construction.

Additions to Capital Account—Lines open for traffic.

In the year 1884 the capital invested in lines open was £20,080,138.* During 1885 a further sum of £1,751,138 was added, making the total capital invested £21,831,276.

Additions to Capital Account.

The amount of £1,751,138 was made up as follows, viz.:—

Amount transferred from Construction Account, &c.	£470,570
Expenditure during 1885 on Construction, &c.	677,764
Additions and Improvements to Works and Stations, &c.	182,791
Additional Rolling Stock, Machinery, and Workshops, &c.	420,013

See detail in Appendix 10a, page 102.

Lines open. Appendix No. 4, page 70.

The year 1885 opened with the mileage divided into the various lines as under:—

	M
Southern.	
Main Southern Line—Sydney to Albury...	388
South-Western line—Junee to Hay, and Narrandera to Jerilderie ...	232
Darling Harbour Branch	1
Cooma Branch	20
Illawarra Branch	9
	650
Western.	
Main Western Line—Granville to Byerock	442
Richmond Branch—Blacktown to Richmond	16
Mudgee Branch—Wallerawang to Mudgee	85
	543
Northern.	
Main Northern Line—Newcastle to Glen Innes	323
North-Western—Werris Creek to Narrabri	97
Branches—Morpeth, Bullock Island, &c.	5
	425
Grand total	1,618

The

* Excludes cost of the old Pitt-street Tramway, and cost of Rolling Stock used on the Camden Line, for which latter see Tramway Returns.

The following extensions were opened during the year 1885 :— Extensions opened during 1885.

SOUTHERN.	Date.	Miles.
Tarago to Bungendore (Cooma Line)	6th March, 1885 ...	20
Murrumburrah to Young (Junction Line between Southern and Western system)	26th March, 1885 ...	18
Hurstville to Sutherland (Illawarra Line)	26th December, 1885 ...	6
		44
WESTERN.		
Byerock to Bourke	3rd September, 1885 ...	48
Orange to Molong	25th December, 1885 ...	22
		70
Total	... ...	114

Making altogether a total of 1,732 miles in operation at the close of the year. The average mileage in operation for the whole period was 1,663.

Since the close of the year the following extensions have been opened, making a total of 1,774 miles in operation at the present date :—

9th March, 1886—Sutherland to Waterfall ... 9 miles
1st June, 1886—Cootamundra to Gundagai ... 33 „
42 miles.

The extension to Waterfall, on the Southern Coast Line, is one of considerable importance, as it not only brings us nearer to the coal-fields and rich district of Illawarra, but makes easy of access the great National Park of the Colony, a magnificent heritage of 36,000 acres, secured to the people principally through the instrumentality of Sir John Robertson, K.C.M.G. A small branch line runs into the Park—which has a frontage of 9 miles to the railway, with an ocean frontage of nearly 8 miles—where a station has been formed, named "Loftus," from which place roads and foot-paths radiate leading to the picturesque views and scenery that are to be found in all parts of this great public domain. It is from the anticipated excursion traffic which the popularity of this pleasure ground for the people must induce that the Illawarra Line, between the immediate Suburban area and the coal-fields area, will be, for many years, mainly supported.

The following contracts have been let since the date of my last report :—

Illawarra Railway.

Fourth section—10 miles.

Tenders for this length were opened on the 27th January last; nine tenders in all were received, and the lowest, Messrs. Mooney & Co., for £93,719 19s., accepted. Illawarra Railway—fourth section.

The line is to be completed on the 31st January, 1887.

Homebush to Waratah Railway.

Hawkesbury Bridge.

The Hawkesbury Bridge is intended to carry the Homebush-Waratah Railway by a double line across the River Hawkesbury. It will be the largest bridge in the Southern Hemisphere, the river at the point of crossing being close upon 3,000 ft. wide. Hawkesbury Bridge.

In

In one feature this bridge is without a parallel, viz., in the depth to which the foundation has to be carried. In some parts of the river-bed sound bottom is only reached at a depth of 170 ft. from water level, while a clear headway of 40 ft. above water level has, according to the specification, to be given.

The mode in which this stupendous work should be carried out was a subject of anxious deliberation by the Government, and it was finally resolved that competition for its construction and erection should be thrown open to the whole world, and that, instead of calling for tenders in the usual way to the design made by the Engineer-in-Chief, manufacturers should be asked to submit their own designs, and to tender to them, a procedure which is not uncommon in America, but, although adopted to some extent in England by the Admiralty in respect of warships built by private firms, is otherwise very unusual in the latter country.

To secure the best form of structure as regards stability, durability, and scientific perfection, the Government determined that the tenders and designs should be submitted for the examination and report of a Board of eminent professional men, and the following gentlemen were nominated for the purpose:—Sir John Hawkshaw, C.E.; Captain Galton, R.E.; W. H. Evans, Consulting Engineer of New York; and if the last-named were unable to act, T. Harrison, C.E., of the North-Eastern Railway, England, was to be nominated.

Sir John Hawkshaw and Mr. Evans declined the appointment, the former on account of professional engagements, the latter by reason of ill-health, and Mr. Harrison, for reasons not stated, did not accept the nomination.

Ultimately the Board was constituted as follows:—Douglas Galton, late Captain R.E., C.B., D.C.L., F.R.S.; W. H. Barlow, C.E., Past President of the Institute of Civil Engineers; G. Berkley, C.E., Vice-President of the Institute, Consulting Engineer to the Great Indian Peninsular and Natal Railways.

It was also arranged that the Government Consulting Engineer in London (Sir John Fowler) should furnish an independent report upon the tenders and designs, and that the whole should be subject to the final recommendation of the Engineer-in-Chief in the Colony.

The proposals in connection with this bridge were received with much interest by the scientific world, both on account of the magnitude and unique character of the work to be undertaken, and of the novelty of the plan adopted by the Government of allowing manufacturers to tender to their own designs.

Tenders were invited in accordance with the resolution of the Government, and fourteen tenders were received.

The following is a brief summary of the tenders and designs which the Board of Engineers considered eligible.

Name of Tenderer.	Amount.	Time.	Main features of Design.	
			Piers.	Superstructure.
	£			
Edgemoor Iron Co.	296,350	2 years	20 Cylinders, in pairs, 20 feet diameter at base.	American lattice type, pin fastenings; span, 292 ft.
Union Bridge Co.	327,000	2½ „	6 caissons, 52 feet x 24 feet at base, with semicircular ends.	American lattice type, pin fastenings; span, 415 ft.
Fforde & Young	377,500	3 „	20 cylinders, 10 ft. 6 in., in pairs, to full depth.	Cantilever, lattice type.
Royce & Co., and Butterley Co.	403,367	3 „	24 cylinders, 16 feet, in pairs ...	Riveted lattice, curved upper boom; main spans, 238 ft. 6 in.
A. Handyside & Co.	456,000	3 „	22 do 15 do ...	Riveted lattice, straight top; main spans, 262 ft.
Arroll Brothers	580,000	4 „	7 caissons, 70 ft. by 33 ft., elliptical.	Riveted lattice, curved upper boom; main spans, 432 ft.
Reichenbach, Godfrey, & Jones.	466,032	No time	8 caissons, rectangular, 54 ft. 3 in. by 22 ft.	Cantilever lattice, continuous, 392 ft. and 311 ft. alternately.
John Dixon	486,100	2 years	36 cylinders, 10 ft., in groups of four.	Riveted lattice, curved upper boom; spans, 251 ft.
R. M. Parkinson	584,898	4 „	8 cylinders, 40 feet in diameter	Riveted lattice, continuous throughout; spans, 338 ft.
Fives-Lille & Co.	515,004	4 „	6 caissons, circular, 57 ft. 5 in. diameter at base.	Bow strong, with stiffened arc; spans, 550 ft.
D. Munroe	702,384	3 „	20 cylinders, 14 feet, in pairs ...	Fish belly, in lattice type; spans, 389 ft. 6 in.

Several of the firms included in this statement submitted alternative designs and tenders, but as the designs were ineligible or otherwise inadmissible they need not be specially noted here.

Besides the foregoing the Phœnix Bridge Co., of Philadelphia, U.S.A., the Dominion Bridge Co., of Montreal, and P. & W. MacLellan, of Glasgow, tendered, but as the bridge of the Phœnix Company was designed for iron instead of steel, and the other tenders were not for the entire structure, as required by the specification, they were excluded from consideration.

It will be seen that, of those which were considered to be eligible, the tender of the Edgemoor Iron Bridge Co. (£296,350) is the lowest, but the Board of Engineers appointed to deal with the matter reported that with sundry alterations and additions, which they specified, the stability of the piers of the Union Bridge Company's design would be much greater than those of the Edgemoor Company's, and that if the suggested alterations could be carried out without increasing the price of the bridge beyond £124 per foot run, their recommendation would be that the tender of the Union Bridge Co. should be accepted.

Sir John Fowler, who as before stated, was to submit an independent opinion, without reference to any conclusion the Board might arrive at, reported that the Union Co. proposed six piers and the Edgemoor Co. ten, but as each pier in the latter case consisted of two cylinders the Edgemoor Co. had practically twenty separate piers to sink against six by the Union Co.'s scheme; that from his own experience of the difficulty of sinking cylinders and caissons the reduced number and larger size of the Union Bridge Co.'s caissons was a distinct advantage, and that the larger spans of their superstructure had a substantial superiority over the smaller spans of the Edgemoor Co. He therefore recommended the acceptance of the Union Bridge Co.'s tender of £327,000, subject to a proper specification and contract being prepared, together with a schedule of additions and deductions at prices based upon the lump sum.

The recommendation of the Engineer-in-Chief was also in favor of the Union Bridge Co.'s design and tender, but he proposed certain modifications of and additions to their design and estimated the further amount to be paid to the Company in respect of these alterations at £22,800. This amount

amount was subsequently reduced to £13,000, so that the price for the whole structure is £340,000.

The Union Bridge Company agreed to accept the contract upon the conditions suggested, and a recent mail brought intelligence that the contract had been duly executed by the Agent-General and the Company and that ample securities have been given by the Company for the due performance of the contract, which is to be completed within thirty months from the date of signing the contract, viz., by the 20th November, 1888. The contractors are to receive by way of premium £250 a week for every week they complete the work within the contract time, and to pay the like amount as ascertained liquidated damages for every week the completion of the work is delayed beyond that period.

The maintenance of the bridge for twelve months after its completion is an obligation of the contractors.

In the Appendix will be found lithograph drawings of the various designs submitted. Sir John Fowler in his report bore testimony to the large amount of labour and expense which the persons tendering must have incurred, and suggested that the Government should, in communicating their final decision to the competitors, recognize by some mark of their appreciation the careful and laborious work manifested in the preparation of the designs. Effect has been given to this suggestion.

It may be mentioned that although the construction of this important work has been secured by an American Bridge Company to its own design, the material of which it is to be composed is to be obtained, by the decision of the contractors themselves, from English manufacturers. The manufacture of the steel superstructure (with the exception of the eye-bars) has been undertaken by Messrs. Arrol and Co., the contractors of the Forth Bridge. The steel-plates and bars will be rolled by Messrs. Colville, of Glasgow, and the steel for the eye-bars by the Steel Company of Scotland. The manufacture of the steel work and iron work of the caissons has been undertaken by Messrs. Head, Wrighton, & Co., of Stockton-on-Tees, and the whole of the cement will be supplied by Messrs. Burge and Barrow, of Rainham, Kent, who are in the first rank of cement manufacturers.

Sir John Fowler, in giving the above particulars, takes occasion to say that in entrusting the work to the above firms the contractors have been greatly guided by his experience and knowledge as to the character of the firms and the excellence of the material they supply, and not merely by the price quoted.

There is every guarantee therefore that this, the largest structure of the kind in Australia, will fulfil the desire of the Government, that it shall possess scientific perfection of design, stability in all its parts, and the durability which, united to the above qualities, is obtained from the employment of the best material.

Cooma Railway.

Michelago to Cooma—39 miles.

Tenders for this extension were opened on the 18th August, 1885. Six tenders were received, and that of Messrs. Walker & Swan, for £314,116 being the lowest, was accepted. The works are to be completed by the 30th June, 1888.

Northern

Northern Line.

Tenterfield to Queensland Border—11 miles.

Tenders for this continuation of the Northern Line to connect with the Queensland Railways at the border were opened on the 19th January last. Six tenders were received, and the lowest, Stevens & Co., for £79,673, accepted. The contract is to be completed by the 31st December next. **Extension to Queensland Border.**

At the present time the following lines are under construction :— **Lines under construction.**

Line.	Sections.	Length.	Date of Completion.	Remarks.
		Miles.		
Illawarra	Second Section	21	31 Dec., 1887	Part opened, 11 miles.
	Third Section	26	30 June, 1886	
	Fourth Section	10	31 Jan., 1887	
Homebush to Waratah	Homebush and Hawkesbury	29	Time expired	Pearce's Corner to North Shore not yet let.
	Hawkesbury Bridge	½	20 Nov., 1888	
	Hawkesbury to Gosford	14	30 Sept., 1886	
	Gosford to near Waratah	49	31 July, 1886	
Cooma	Bungendore to Michelago	48	30 June, 1887	
	Michelago to Cooma	39	30 „ 1888	
Murrumburrah to Blayney	Young to Cowra	47	30 „ 1887	
	Cowra to Blayney	45	30 „ 1887	
Northern Line	Glen Innes to Tenterfield	58	Time expired	
	Tenterfield to Queensland Border	11	31 Dec., 1886	
		397½		

In addition, the following lines have been approved of by Parliament, but have not yet been commenced :— **Lines authorised.**

Extension.	Miles.	Extension.	Miles.
SOUTHERN.		WESTERN.	
City Extension	1	Perth to Rockley	17
Tarago to Braidwood	31	Forbes to Wilcannia	340
Gundagai to Tumut	33	Nyngan to Cobar	82
Goulburn to Crookwell	25	Orange to Forbes	60
Galong to Burrowa	18		
Wagga Wagga to Tumberumba	68	Total, Western	499
Culcairn to Corowa	45		
Kiama to Jervis Bay	41	NORTHERN.	
Bega to Eden	40	Musclebrook to Cassilis	70
		Glen Innes to Inverell	45
Total, Southern	302	Grafton to Glen Innes	103
		Grafton to The Tweed	165
		Narrabri to Moree	61
		Total, Northern	444

The following is a summary of the Railways open, under construction, and authorised :—

Lines open	1,774 miles.
Under construction	386½ „
Authorised	1,260½ „
Total	3,421 miles.

4.—LAND TAKEN FOR RAILWAY PURPOSES.

The particulars of the whole of the land resumed to 31st December, 1885, for Railway purposes, will be found in Appendix No. 5, page 72. **Land resumed, appendix No. 5, page 72.**

The claims outstanding on the 31st December, 1884, were 695, to which 188 were added during 1885, making a total of 883 claims; of these 334 were settled in 1885, leaving at the close of the year 549 in various stages of adjustment, a large number of which have been settled during the present year.

5.—

5.—Importation of Railway Material.

Appendix No. 6, p. 75.

In the Appendix will be found a return of the Permanent-way materials, locomotives, and miscellaneous articles imported during the year under review.

The following is an abstract of the returns :—

Number of Ships employed.	Number of Tons of Goods shipped.	Value of Goods shipped.	Amounts paid for Freight and Insurance.	Average rate of Freight and Insurance per ton.
		£ s. d.	£ s. d.	s. d.
165	40,030	591,740 6 11	*35,080 17 10 †4,769 16 11	17 6 2 4

* Freight. † Insurance.

In the foregoing are included :—

	Weight in Tons.	Value.
		£ s. d.
Permanent-way materials for authorized extensions	19,561	128,632 2 10
" " renewals and doubling line ...	8,831	65,171 17 4
" " Tramways	390	3,108 3 6
59 Locomotives	2,965	163,127 4 10
20 Motors...	277	27,303 15 6
Miscellaneous items	8,006	204,397 2 11
	40,030	591,740 6 11

6.—Existing Lines.

Maintenance of Ways and Works.

Maintenance of ways and works.

Appendix Nos. 1 and 10, pp. 1 and 102.

During the year a large number of works were carried out, details of which will be found on reference to Appendix No. 1. Those charged to the Capital Account have been scheduled, and the cost of each is shown in Appendix No. 10*a*.

The report of the Engineer will be found in Appendix No. 1. He states that the whole of the works were maintained in good condition.

The renewals of both rails and sleepers on the line between Sydney and Picton, the whole of the expense of which has, of course, been charged to revenue, have been heavy, and must continue to be heavy until the whole line (53 miles in length) has been relaid.

On the extensions beyond Goulburn, and from Bathurst to Wellington, the sleepers used, when the lines were constructed, were of the timber obtainable in the districts through which the railway was taken. This timber was known to be of inferior quality, but the object sought in allowing its use was to make the first cost of the lines less severe than would otherwise have been the case. The sleepers, as a natural consequence, have had comparatively but a brief life, and in renewing them (the cost of which has been charged to working expenses) it has been considered true economy to use sleepers of ironbark. The first renewal cost comes earlier upon "maintenance" than it otherwise would, but in replacing the sleepers with durable material the maintenance cost in the future will be proportionately reduced.

The working expenses have also been largely encroached upon by being debited with the cost of ballasting caused by the subsidence of many of the banks on the newly opened extensions which were made up originally during continuous

continuous dry weather. It may be worthy of mention that it is not an unusual practice in other countries to charge to the construction fund, the expense of remedying defects arising from the cause stated, upon the reasonable ground that "maintenance" should not be saddled with the cost of work which is not occasioned by fair wear and tear, or is not an incidence of traffic operation, but it has been the practice here to debit current revenue with the cost of such works, and I am not, on broad grounds, prepared to depart from that practice although its observance necessarily decreases the return of interest which the net earnings give to the capital invested.

Locomotive and Carriage Division.

A large addition to the rolling stock was made in 1885, 1,164 vehicles having been added, particulars of which are given below :—

ABSTRACT of Rolling Stock on hand on 31st December, 1884, and the number and description of Vehicles supplied in 1885. Appendix No. 7, p. 92.

Locomotives.				Passenger.													Goods.																		
																	Waggons.									Vans.									
Tank.	Passenger.	Goods.	Total.	State Carriages.	Dining.	Sleeping.	First-class.	Composite.	Second-class.	Mail-vans.	Prison-vans.	Hearses.	Workmen's Vans.	Horse-boxes.	Carriage Trucks.	Brake-vans.	Total.	Accident Vans	A.	B.	C.	D.	E.	Water Trucks	F.	G.	Loco. Coal.	Powder.	Sheep.	Cattle.	Meat.	Composite Cattle & Goods	Refrigerating.	Ballast Waggons.	Brake-vans.	Dump-car.	Combination.	Total.	Total of all vehicles.
Rolling Stock on hand, 31st December, 1884.																																							
31	141	164	336	2	1	10	106	100	248	16	7	9	22	98	58	99	776	6	228	224	311	4301	304	23	3	125	250	26	395	390	18	1	1	150	159	23	..	6938	8050
Rolling Stock received during 1885.																																							
6	18	30	54	..	..	2	15	9	12	2	..	..	6	19	..	15	80	1	8	10	35	386	30	19	..	118	..	10	26	36	6	..	..	148	5	178	14	1030	1164

The capital expenditure in new stock during the year was £319,580, and a sum of £163,482, charged against revenue, was expended in repairing and renewing existing stock.

The following extracts are made from the report of the Locomotive Engineer, which is published in the Appendix :—

"As reference has been made on more than one occasion to our working expenses not having been debited with the cost of the proper repairs and renewals of our stock, I would take the liberty of stating so far from such being the case we are continually making improvements in our stock irrespective of repairs and renewals, and thereby adding to their value as an asset of the Department, and the entire cost has been charged to working expenses.

"As bearing on this I would mention that when renewing wheels, axles, and draw-gear, we give a much improved article, which enables a much heavier load being carried in the vehicles, thus adding to our train-mile earnings, and the entire cost is charged to working expenses. Then again, the improvements to our sheep and cattle trucks, recommended by the Board appointed to inquire into our live stock traffic, have been similarly charged. In fact the cost of every improvement introduced in our existing stock is borne by working expenses."

7.—REVENUE AND EXPENDITURE.

The gross earnings in 1885 were £2,174,368, the working expenses £1,458,153, and the net earnings, £716,215. Gross and net earnings and working expenditure.

To earn the above amount 158,002 trains were run 6,638,399 miles, equal to 42 miles per train. The number of trains averaged 505 per working day. In

Particulars of coaching traffic.

In the following tables are given the particulars of the Revenue and Expenditure for 1885 compared with 1884:—

COACHING TRAFFIC.

			1884.			1885.		
			S. & W.	North.	Total.	S. & W.	North.	Total.
Number of passengers	First-class ...	No.	1,829,605	144,273	1,973,878	2,265,448	169,756	2,435,204
	Second-class ...	,,	4,477,189	640,867	5,118,056	5,323,451	709,897	6,033,348
	Season tickets— No. of journeys	,,	‡4,033,983	127,192	4,161,175	* 4,878,434	159,360	5,037,794
	Gross ...	,,	10,340,777	912,332	11,253,109	12,467,333	1,039,013	13,506,346
Receipts from Coaching traffic.	First-class ...	£	234,603	35,262	269,865	272,997	40,129	313,126
	Second-class ...	,,	264,127	66,259	330,386	284,305	67,211	351,516
	Season tickets...	,,	§34,461	1,451	35,912	†43,000	1,980	44,980
	Total ...	,,	533,191	102,972	636,163	600,302	109,320	709,622
	Horses and carriages, parcels, &c.	,,	45,615	15,670	61,285	54,283	16,279	70,562
	Mails	,,	21,491	8,043	29,534	23,765	8,528	32,293
	Miscellaneous...	,,	13,298	5,385	18,683	12,958	5,469	18,427
	Gross ...	,,	613,595	132,070	745,665	691,308	139,596	830,904
Average fare per head.	First-class ...	s. d.	2 6¾	4 10½	2 8¾	2 5	4 9½	2 6¾
	Second-class ...	,,	1 2¼	2 0¾	1 3½	1 1	1 10¾	1 2
	Season tickets...	,,	0 2½	0 2¾	0 2¾	0 2⅛	0 3	0 2⅛
	Mean ...	,,	1 0¾	2 1¾	1 1½	0 11½	2 1¼	1 0½
Average receipts from Coaching traffic per average mile of line.	First-class ...	£ s. d.	224 5 9	91 7 0	188 9 1	220 10 3	94 6 2	188 4 8
	Second-class . .	,,	252 10 2	171 13 1	230 14 4	229 13 0	157 19 2	211 6 3
	Season-tickets...	,,	32 19 0	3 15 2	25 1 7	34 14 8	4 13 1	27 0 9
	Total ...	,,	509 14 11	266 15 3	444 5 0	484 17 11	256 18 5	426 11 8
	Horses and carriages, parcels, &c.	,,	43 12 2	40 11 11	42 15 11	43 16 11	38 5 2	42 8 4
	Mails	,,	20 10 11	20 16 5	20 12 6	19 3 11	20 0 8	19 8 3
	Miscellaneous...	,,	12 14 3	13 19 5	13 0 11	10 9 4	12 17 1	11 1 6
	Gross ...	,,	586 12 3	342 3 0	520 14 4	558 8 1	328 1 4	499 9 9
Average receipts per passenger train mile.	First-class ...	d.	27·84	20·32	26·60	28·97	21·76	27·78
	Second-class ...	,,	31·37	38·13	32·51	30·16	36·46	31·20
	Season tickets...	,,	4·09	0·84	3·51	4·56	1·07	3·99
	Total ...	,,	63·30	59·29	62·62	63·69	59·29	62·97
	Horses and carriages, parcels, &c.	,,	5·42	9·02	6·03	5·76	8·83	6·26
	Mails	,,	2·55	4·63	2·91	2·52	4·63	2·87
	Miscellaneous...	,,	1·58	3·10	1·84	1·38	2·97	1·64
	Gross ...	,,	72·85	76·04	73·40	73·35	75·72	73·74
Proportion of classes.	First-class ...	%	17·70	15·81	17·54	18·21	16·33	18·03
	Second-class ...	,,	43·30	70·25	45·48	42·69	68·33	44·67
	Season tickets...	,,	39·00	13·94	36·98	39·10	15·34	37·30
			100·00	100·00	100·00	100·00	100·00	100·00
Proportion of receipts.	First-class ...	%	44·00	34·25	42·42	45·48	36·71	44·12
	Second-class ...	,,	49·54	64·34	51·94	47·36	61·48	49·55
	Season tickets...	,,	6·46	1·41	5·64	7·16	1·81	6·33
			100·00	100·00	100·00	100·00	100·00	100·00

* Includes 1,689,276 journeys made with workmen's tickets. † Includes £8,943 for workmen's tickets.
‡ ,, 1,314,432 ,, ,, § ,, £10,677 ,,

The number of first-class passengers carried shows—

An increase of...	435,843	for South and West Lines.
,, ...	25,483	,, North Line.
An increase of...	461,326	,, for all lines.

The number of second-class passengers carried shows—

An increase of...	846,262	for South and West Lines.
,, ...	69,030	,, North Line.
An increase of...	915,292	,, all lines.

The number of season tickets (journeys)—

Increased ...	844,451	for South and West Lines.
,, ...	32,168	,, North Line.
An increase of...	876,619	,, all lines.

The total increase in the number of passengers carried on all lines was 2,253,237.

The receipts for coaching traffic increased—

£77,713	for South and West Lines.
7,526	,, North Line.
£85,239	,, all lines.

The receipts from coaching traffic per average mile of line show—

	£	s.	d.	
A decrease of ...	28	4	2	for South and West Lines.
,, ...	14	1	8	,, North Line.
,, ...	21	4	7	,, all lines.

The receipts per train mile show—

An increase of...	0·50d.	for South and West Lines.
A decrease of ...	0·32d.	,, North Line.
An increase of...	0·34d.	,, all lines.

The proportion of percentage of classes of passengers shows—

An increase of...	0·49	for 1st class.
A decrease of ...	0·81	,, 2nd ,,
An increase of...	0·32	,, season tickets.

The proportion of percentage of receipts—

Increased ...	1·70	for 1st class.
Decreased ...	2·39	,, 2nd ,,
Increased ...	0·69	,, season tickets.

The

Particulars of goods traffic.

The goods traffic compared in the same way is shown as under :—

GOODS TRAFFIC.

			1884.			1885.		
			S. & W.	North.	Total.	S. & W.	North.	Total.
Tons carried	Merchandise ...	Tons	1,026,425	194,907	1,221,332	955,351	184,373	1,139,724
	Coal	,,	159,705	1,614,200	1,773,905	336,390	1,660,157	1,996,547
	Wool	,,	39,637	15,929	55,566	47,377	15,813	63,190
	Live Stock.....	,,	55,472	18,150	73,622	59,937	13,606	73,543
	Total	,,	1,281,239	1,843,186	3,124,425	1,399,055	1,873,949	3,273,004
Receipts from Goods Traffic.	Merchandise ...	£	718,798	189,598	908,396	685,142	187,680	872,822
	Coal	,,	55,528	75,840	131,368	63,006	77,603	140,609
	Wool	,,	98,780	39,829	138,609	126,418	38,331	164,749
	Live Stock.....	,,	126,314	29,113	155,427	136,892	22,309	159,201
	Miscellaneous..	,,	4,539	2,233	6,772	4,207	1,876	6,083
	Total	,,	1,003,959	336,613	1,340,572	1,015,665	327,799	1,343,464
Average rate per ton.	Merchandise ...	s.	14·01	19·41	14·69	14·34	20·36	15·31
	Coal	,,	6·95	0·94	1·42	3·75	0·93	1·41
	Wool	,,	49·48	50·01	49·89	53·37	48·48	52·14
	Live Stock.....	,,	45·54	32·02	42·22	45·68	32·79	43·29
	Mean	,,	15·68	3·65	8·58	14·46	3·48	8·21
Average No. of tons per mile of line.	Merchandise ...	Tons	981	505	853	771	433	685
	Coal	,,	152	4,182	1,238	272	3,902	1,200
	Wool	,,	38	41	39	38	37	38
	Live Stock.....	,,	53	47	52	48	32	44
	Total	,,	1,224	4,775	2,182	1,129	4,404	1,967
Average receipts per mile of line.	Merchandise ...	£ s. d.	687 3 9	491 3 9	634 7 1	553 8 6	441 1 8	524 13 9
	Coal	,,	53 1 9	196 9 6	91 14 9	50 17 10	182 7 8	84 10 6
	Wool	,,	94 8 9	103 3 8	96 15 10	102 2 3	90 1 8	99 0 9
	Live Stock.....	,,	120 15 2	75 8 5	108 10 9	110 11 6	52 8 7	95 14 1
	Miscellaneous..	,,	4 6 9	5 15 8	4 14 7	3 8 0	4 8 0	3 13 2
	Total	,,	959 16 2	872 1 0	936 3 0	820 8 1	770 7 7	807 12 3
Average receipts per train mile.	Merchandise ...	d.	55·49	53·15	54·99	53·66	51·82	53·25
	Coal	,,	4·29	21·26	7·95	4·93	21·42	8·58
	Wool	,,	7·63	11·17	8·39	9·90	10·58	10·05
	Live Stock.....	,,	9·75	8·16	9·41	10·72	6·16	9·71
	Miscellaneous..	,,	0·35	0·63	0·41	0·33	0·52	0·37
	Total	,,	77·51	94·37	81·15	79·54	90·50	81·96

In the tonnage carried there was

A decrease of 81,608 in merchandise.
An increase of 222,642 in coal.
,, 7,624 in wool.
A decrease of 79 in live stock.

148,579 total increase.

Per average mile of line open, the result shows :—

A decrease of 168 tons in merchandise.
,, 38 ,, coal.
,, 1 ,, wool.
,, 8 ,, live stock.

215 total decrease.

The

The receipts show—

A decrease of	£35,574	in merchandise.
An increase of	9,241	in coal.
,,	26,140	in wool.
,,	3,774	in live stock.
A decrease of	689	in miscellaneous.
	£2,892	total increase.

Per average mile of line open, the receipts show—

	£	s.	d.	
A decrease of	109	13	4	in merchandise.
,,	7	4	3	in coal.
An increase of	2	4	11	in wool.
A decrease of	12	16	8	in live stock.
,,	1	1	5	in miscellaneous.
	£128	10	9	average decrease.

The average receipts per train mile show—

	d.	
A decrease of	1·74	for merchandise.
An increase of	0·63	for coal.
,,	1·66	for wool.
,,	0·30	for live stock.
A decrease of	0·04	for miscellaneous.
	0·81	total increase.

It will be seen from a careful perusal of the foregoing figures that while the coaching traffic receipts exceeded those of 1884 by £85,239, the receipts from the goods traffic increased only by the sum of £2,892, and that this latter result was due to the great depression in trade, there being a decrease in the General Merchandise offered for carriage of no less than 81,608 tons.

As compared with 1884, the receipts per mile of line in operation decreased £21 4s. 7d. for passenger traffic, and £128 10s. 9d. for goods traffic, together £149 15s. 4d. Had the same earning power per mile of line been maintained the increase in Revenue, instead of being £88,131, would have been £248,406, and the return to capital invested 4·50 per cent. instead of 3·37 per cent.

Working Expenditure.

The particulars of the whole of the expenditure are given in the following table:—

Particulars of working expenditure.

			1884			1885		
			S & W	North	Total	S & W	North	Total
Gross working expenses	Maintenance of way, &c ..	£	295,876	71,441	367,317	374,791	78,294	453,085
	Locomotive power, &c	,,	349,131	80,589	429,720	360,730	85,057	445,787
	Repairs of carriages & waggons	,,	66,236	13,597	79,833	61,808	13,583	75,391
	Traffic charges	,,	277,718	98,846	376,564	307,105	110,001	417,106
	Compensation—Personal	,,	2,366	436	2,802	6,896	210	7,106
	Do Goods	,,	798	118	916	890	185	1,075
	Miscellaneous .	,,	30,462	13,645	44,107	40,004	18,599	58,603
	Total	,,	1,022,587	278,672	1,301,259	1,152,224	305,929	1,458,153
Expenditure per average mile of line ...		,,	978	722	909	931	719	877
Expenditure per train mile.	Maintenance of way, &c	d	13 84	13 47	13 77	16·89	14 32	16 38
	Locomotive power, &c	,,	16 33	15 19	16 10	16 25	15 56	16 12
	Repairs of carriages & waggons	,,	3 10	2 56	2 99	2 79	2 49	2 72
	Traffic charges	,,	12 99	18 64	14·12	13·84	20·13	15 08
	Compensation—Personal	,,	0 11	0 08	0 11	0 31	0 40	0·26
	Do Goods .	,,	0 04	0 02	0 03	0 04	0 03	0 04
	Miscellaneous	,,	1 43	2 58	1 65	1 80	3·40	2 12
	Total .	,,	47·84	52 54	48 77	51 92	55·97	52·72
Proportion of expenditure to gross receipts.	Maintenance of way, &c	%	18 30	15 25	17·61	21 95	16 74	20 84
	Locomotive power, &c .	,,	21 59	17 20	20 60	21 14	18·19	20 49
	Repairs of carriages & waggons	,,	4 09	2 90	3 82	3·62	2·95	3·47
	Traffic charges	,,	17 18	21 10	18 06	17·99	23·52	19·19
	Compensation—Personal	,,	0 14	0·09	0 13	0·41	0 04	0 32
	Do Goods	,,	0 04	0 02	0 04	0·05	0 03	0 05
	Miscellaneous ...	,,	1 88	2 90	2 11	2·34	3·98	2 70
	Total ...	,,	63 22	59 46	62 37	67·50	65·45	67·06

The total working expenditure, compared with 1884, increased—

£129,637 or 12·68 per cent. for South and West lines
27,257 or 9·78 ,, North line.
156,894 or 12·06 ,, all lines.

The expenditure per average mile of line open—

Decreased £47 for South and West lines.
,, £3 for North line.
,, £32 for all lines.

The expenditure for train mile shows as follows—

An increase of 4·08d. for South and West lines.
An increase of 3·43d. for North line.
An increase of 3·95d. for all lines.

The proportion of expenditure to gross receipts from all sources shows—

An increase of 4·28 per cent. for South and West lines.
,, 5·99 ,, North lines.
,, 4·69 ,, all lines.

It will be seen that although there was an increase of £156,894 in the working expenditure for 1885, as compared with 1884, there was an actual decrease of £32 per mile of line in operation, which represents a total decrease under that head of £53,232 *Net*

Net Earnings.

The percentage of net earnings to capital expended in 1885, as against 1884, was as under:— Percentage of net earnings to capital.

	1884.			1885.		
	No. of Miles.	Capital invested.	Percentage of interest.	No. of Miles.	Capital invested.	Percentage of interest.
South and West	1,193	15,136,785	4·23	1,307	16,765,769	3·43
North	425½	4,943,354	4·12	425	5,065,507	3·19
All Lines	1,618½	20,080,139	4·20	1,732½	21,831,276	3·37

The subjoined abstract furnishes the percentages which the gross earnings, the working expenditure, and the net earnings bear to the capital expended on lines in operation for 1885, as compared with 1884. Percentage of gross earnings, working expenditure, and net earnings to capital.

		1884.			1885.		
		S. & W.	North.	Total.	S. & W.	North.	Total.
Net receipts from all sources ...	£	594,967	190,011	784,978	554,749	161,466	716,215
Do per average mile...	£	569	492	548	448	379	431
Do per train mile ...	d.	27·83	35·83	29·42	24·99	29·54	25·89
Proportion of gross receipts to capital.	%	11·50	10·15	11·11	10·54	9·23	10·23
Do of expenditure to capital.	„	7·27	6·03	6·91	7·11	6·04	6·86
Do of net receipts to capital.	„	4·23	4·12	4·20	3·43	3·19	3·37

The net earnings from all sources for the year show as follows—

£40,218 decrease South and West.
£28,545 „ North.
£68,763 „ all lines.

The net earnings per average mile of line open show—

A decrease of £121 for South and West lines.
„ £113 for North lines.
„ £117 for all lines.

The proportion of gross earnings to capital

Decreased 0·96 % on South and West lines.
„ 0·92 % on North lines.
„ 0·88 % on all lines.

The

The proportion of net receipts to capital

Decreased 0·80 % on South and West lines.
" 0·93 % on North lines.
" 0·83 % on all lines.

Summary of gross earnings, working expenditure, and net earnings for 1884 and 1885.

The following is a summary of the gross earnings, working expenditure and net earnings of the Railways for 1885, as against 1884 :—

	South and West.	North.	Total.
	£	£	£
Gross earnings, 1885	1,706,973	467,395	2,174,368
Do. 1884	1,617,554	468,683	2,086,237
Increase for 1885	89,419	.....	88,131
Decrease for 1885	.....	1,288	.....
Working expenditure, 1885	1,152,224	305,929	1,458,153
Do. 1884	1,022,587	278,672	1,301,259
Increase for 1885	129,637	27,257	156,894
Net earnings, 1885	554,749	161,466	716,215
Do. 1884	594,967	190,011	784,978
Decrease for 1885...	40,218	28,545	68,763

Sectional returns.

8.—Division of the Railway Lines into Sectional Areas.

In the following statements are given the capital expenditure, the gross earnings, the working expenditure, the net earnings, and the return which the net earnings give to the capital invested in each section.

It will be observed that the section from Sydney to Granville, which for 1884 returned 8·51 per cent. on its capital, returned for the past year 7·57 only. This was wholly caused by the decreased traffic from the lines in the interior, a portion of the revenue derived from which is credited to the Suburban Line for the use which such traffic makes of it.

The

The section Granville to Albury returns 3·56 per cent. on its capital as against 4·32 per cent. for 1884. This falling off is partly due to the increased capital expended on the line towards Cooma, 20 miles of which were opened for traffic in 1885 in excess of the number in operation in 1884. The revenue from goods traffic decreased by the sum of £34,976. There can be very little doubt that the great depression in trade and the protracted drought were the causes of diminution of traffic.

Although there was an increase of £64,959 in the gross earnings of the section from Granville to Bourke, owing to the greater mileage in operation, the earnings per mile fell considerably, the cause in a large measure being due to the extension of the line further into the sparsely populated interior.

The section from Newcastle to Glen Innes shows a loss of interest to capital of ·85 per cent. as compared with the return for 1884. The earning power of this line per mile of line opened decreased from £1,473 in 1884 to £1,304 for the past year. The extension of the line into only partly developed country will in some measure account for this falling off, but in a large degree it is to be attributed to the drought, the disastrous effects of which were more severely felt in the Northern Districts than in any other part of the Colony.

In the return for 1884 the transaction of the South-western line, Junee to Hay and Narrandera to Jerilderie (which latter line had been opened three months only), showed an improvement over the transactions of 1883. This improvement has not only not been maintained, but owing to the limited traffic on the line from Narrandera to Jerilderie the loss in working has increased from £1,055 in 1884 to £13,041 in 1885; of this loss the Jerilderie line is answerable for £10,631. As the capital expended in that branch amounts to £414,179 the interest and loss on working represents the sum of £27,198, which charged against the net earnings derived from the self-supporting and from the less unprofitable lines, serves to reduce materially the returns which they give to the whole railway capital.

The following are the sections which do not pay their working expenses:—

Section.	Loss on working.	Capital expended.	Total working loss expenditure and interest upon capital at 4 per cent.
	£	£	£
Junee to Hay and Jerilderie...	13,041	1,435,263	70,452
Werris Creek to Narrabri	10,675	601,210	34,724
Mudgee Line	5,324	991,581	44,987
Murrumburrah to Blayney	115	219,166	8,881
Totals	29,155	3,247,220	159,044

All sections—South, West, and Richmond.

All Sections—South, West, and Richmond.

Expenditure.

All Sections—
Miles open 1,307
Train mileage 5,326,598

	£	d.	Per cent. to earnings
Locomotive expenses ...	410,556	18·50	24·05
Permanent way do ...	360,352	16·24	21·11
Traffic do ...	312,283	14·07	18·30
General do ...	69,033	3·11	4·04
£	1,152,224	51·92	67·50
Balance, net earnings ...	554,749		
£	1,706,973		

Cost per train mile.

Capital expended—
Construction £13,925,459
Rolling stock, &c. 2,840,310
£16,765,769

Lines in operation—
1,193 miles open for 12 months.
20 „ 10 „
18 „ 9 „
48 „ 3½ „
22 „ 10 days.
6 „ 6 „

Earnings.

All Sections—
Train mileage—
Coaching 2,261,985
Goods 3,064,613
Total.....5,326,598

	£	d.
Earnings from—		
Coaching... ...	691,308	73·35
Goods	1,015,665	79·54
£	1,706,973	76·91

Earnings per train mile.

Per cent. per annum returned on capital... ... ... 3·43

Sydney to Granville.

Suburban Section—Sydney to Granville.

Expenditure.

Sydney to Granville—
Miles open..... 14½
Train mileage 655,623

	£	d.	Per cent. to earnings
Locomotive expenses ...	50,533	18·50	18·54
Permanent way do ..	47,217	17·28	17·33
Traffic do ...	38,437	14·07	14·10
General do ...	8,497	3·11	3·12
£	144,684	52·96	53·09
Balance, net earnings ...	127,856		
£	272,540		

Cost per train mile.

Capital expended—
Construction, &c. £1,234,522
Rolling stock, &c. 453,491
£1,688,013

Line in operation, 12 months.

Earnings.

Sydney to Granville—
Train mileage—
Coaching.....505,067
Goods 150,556
Total.....655,623

	£	d.
Earnings from—		
Coaching... ...	171,865	81·67
Goods	100,675	160·49
£	272,540	99·76

Earnings per train mile.

Per cent. per annum returned on capital... ... ... 7·57

ILLAWARRA LINE—SYDNEY TO SUTHERLAND.

Sydney to Sutherland.

Expenditure.				Earnings.		
Sydney to Sutherland— Miles open ..... 15; Train mileage 101,734		Cost per train mile.	Per cent. to earnings.	Sydney to Sutherland— Train mileage— Coaching..... 96,162; Goods ..... 5,572; Total 101,734		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ..	7,842	18·50	35·85	Earnings from—		
Permanent way do ...	3,740	8·82	17·10	Coaching... ...	18,735	46·76
Traffic do ...	5,964	14·07	27·27	Goods	3,137	135·12
General do ...	1,318	3·11	6·02			
	18,864	44·50	86·24			
Balance, net earnings...	3,008					
£	21,872			£	21,872	51·60
Capital expended— Construction, &c. ... ... £225,000; Rolling stock, &c. 36,393			£261,393			
Lines in operation— 9 miles for 12 months. 6 „ „ 6 days.				Per cent. per annum returned on capital		1·74

SOUTHERN LINE AND BRANCHES.

Granville to Albury, &c.

Expenditure.				Earnings.		
Granville to Albury, and Goulburn to Bungendore— Miles open..... 414½; Train mileage 1,787,236		Cost per train mile.	Per cent. to earnings.	Granville to Albury and Bungendore— Train mileage— Coaching..... 853,442; Goods ..... 933,794; Total 1,787,236		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	137,754	18·50	23·34	Earnings from—		
Permanent way do ...	126,733	17·02	21·47	Coaching... ...	255,342	71·81
Traffic do ...	104,781	14·07	17·75	Goods	334,961	86·09
General do ...	23,163	3·11	3·92			
	392,431	52·70	66·48			
Balance, net earnings...	197,872					
£	590,303			£	590,303	79·27
Capital expended— Construction, &c. ... ... £4,614,313; Rolling stock, &c. 982,233			£5,596,546			
Lines in operation— 394½ miles open for 12 months. 20 „ „ 10 „				Per cent. per annum returned on capital		3·56

Murrumburrah and Blayney Line.

Murrumburrah to Blayney.

Expenditure.

Murrumburrah to Young—
Miles open 18
Train Mileage 13,780

	£	d.	Per cent. to earnings
Locomotive expenses ...	1,062	18·50	19·25
Permanent way do ...	3,583	62·40	64·96
Traffic do ...	808	14·07	14·65
General do ...	178	3·10	3·22
£	5,631	98·07	102·08

Capital expended—
Construction, &c. £209,988
Rolling stock, &c. 9,178
£219,166

Line in operation, 9 months.

Earnings.

Murrumburrah to Young—
Train Mileage—
Coaching..... 6,511
Goods 7,269
Total 13,780

	£	d.
Earnings from—		
Coaching... ...	2,178	80·28
Goods	3,338	110·21
	5,516	96·07
Balance—		
Loss on Working	115	
£	5,631	

Loss per cent. per annum on capital, ·07%.

South-western Line and Branches.

Junee to Hay and Narrandera to Jerilderie.

Expenditure.

Junee to Hay, and Narrandera to Jerilderie—
Miles open 232
Train mileage 229,905

	£	d.	Per cent. to earnings
Locomotive expenses ...	17,720	18·50	31·83
Permanent way do ...	34,531	36·05	62·03
Traffic do ...	13,478	14·07	24·21
General do ...	2,980	3·11	5·36
£	68,709	71·73	123·43

Capital expended—
Construction, &c.... ... ...£1,342,634
Rolling stock, &c. 92,629
£1,435,263

Line open for 12 months.

Earnings.

Junee to Hay and Jerilderie—
Train mileage—
Coaching 75,241
Goods 154,664
Total.....229,905

	£	d.
Earnings from—		
Coaching... ...	23,578	75·21
Goods	32,090	49·80
	55,668	58·11
Loss on working ...	13,041	...
£	68,709	...

Loss per cent. per annum on capital... 0·91

Western Line and Branches.

Granville to Bourke, Blacktown to Richmond, and Orange to Molong.

Expenditure.

Granville to Bourke, Blacktown to Richmond, and Orange to Molong—
Miles open 528
Train mileage 2,418,617

	£	d.	Cost per train mile.	Per cent. to earnings
Locomotive expenses ...	186,419	18·50		25·41
Permanent way do ...	129,580	12·86		17·66
Traffic do ...	141,797	14·07		19·33
General do ...	31,346	3·11		4·27
	489,142	48·54		66·67
Balance net earnings ...	244,493			
£	733,635			

Capital expended—
Construction, &c.... ... ... £5,353,078
Rolling stock, &c. 1,220,729
£6,573,807

Lines in operation—
458 miles for 12 months.
48 „ 3½ „
22 „ 10 days.

Earnings.

Granville to Bourke, Richmond, and Molong—
Train mileage—
Coaching 680,886
Goods 1,737,731
Total.....2,418,617

Earnings from—	£	d.	Earnings per train mile.
Coaching... ...	208,839	73·61	
Goods	524,796	72·48	
£	733,635	72·80	

Per cent. per annum returned on capital ... ... 3·96

Mudgee Line.

Wallerawang to Mudgee.

Expenditure.

Wallerawang to Mudgee—
Miles open 85
Train mileage 119,703

	£	d.	Cost per train mile.	Per cent. to earnings.
Locomotive expenses ...	9,226	18·50		33·62
Permanent way do ...	14,968	30·01		54·55
Traffic do ...	7,018	14·07		25·58
General do ...	1,551	3·11		5·65
£	32,763	65·69		119·40

Capital expended—
Construction, &c. £945,924
Rolling stock, &c. 45,657
£991,581

Line in operation—
12 months.

Earnings.

Wallerawang to Mudgee—
Train mileage—
Coaching..... 44,676
Goods 75,027
Total 119,703

Earnings from—	£	d.	Earnings per train mile.
Coaching... ...	10,771	57·86	
Goods	16,668	53·32	
	27,439	55·01	
Loss on Working ...	5,324		
£	32,763		

Loss per cent. per annum on capital... 0·54

North and North-western Lines—All Sections.

Northern and North-Western Lines—All Sections.

Expenditure.

All Sections N. and N.W. Lines—
Miles open..... 425½
Train mileage 1,311,801

	£	d.	Per cent. to earnings
Locomotive expenses ...	94,882	17·36	20·30
Permanent way do ...	74,296	13·59	15·87
Traffic do ...	108,485	19·85	23·21
General do ...	28,266	5·17	6·05
	305,929	55·97	65·43
Balance, net earnings...	161,466		
£	467,395		

Capital expended—
Construction, &c. £4,495,728
Rolling stock, &c. 569,779
£5,065,507

Lines in operation 12 months.

Earnings.

All Sections N. and N.W. Lines—
Train mileage—
Coaching 442,460
Goods..... 869,341
Total 1,311,801

	£	d.
Earnings from—		
Coaching... ...	139,596	75·72
Goods	327,799	90·50
£	467,395	85·51

Per cent. per annum returned on capital ... ... 3·19

Northern Line—Newcastle to Glen Innes.

Newcastle to Glen Innes and Morpeth and Bullock Island Branches.

Expenditure.

Newcastle to Glen Innes and Morpeth and Bullock Island Branches—
Miles open 328½
Train mileage..... 1,151,984

	£	d.	Per cent. to earnings
Locomotive expenses ...	83,323	17·36	19·47
Permanent way do ...	59,652	12·43	13·94
Traffic do ...	95,268	19·85	22·27
General do ...	17,456	3·63	4·08
£	255,699	53·27	59·76
Balance, net earnings...	172,141		
	427,840		

Capital expended—
Construction, &c. £3,942,738
Rolling stock, &c. 521,559
£4,464,297

Line in operation 12 months.

Earnings.

Newcastle to Glen Innes—
Train mileage—
Coaching 376,063
Goods..... 775,921
Total ... 1,151,984

	£	d.
Earnings from—		
Coaching... ...	125,729	80·24
Goods	302,111	93·45
£	427,840	89·13

Per cent. per annum return on capital ... ... 3·86

North-Western Line—Werris Creek to Narrabri.

Werris Creek to Narrabri.

Expenditure.				Earnings.		
Werris Creek to Narrabri— Miles open..... 97; Train mileage 159,817		Cost per train mile.	Per cent. to earnings	Werris Creek to Narrabri— Train mileage— Coaching ..... 66,397; Goods ..... 93,420; Total 159,817		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	11,559	17·36	29·22	Earnings from— Coaching	13,867	50·12
Permanent way do ...	14,644	21·99	37·02	Goods	25,688	65·99
Traffic do ...	13,217	19·85	33·41		39,555	59·40
General do ...	10,810	16·23	27·33	Balance— Loss on working...	10,675	
£	50,230	75·43	126·98	£	50,230	
Capital expended— Construction, &c. ... ... £ 552,990; Rolling stock, &c. 48,220; £601,210				Loss per cent. per annum on capital		1·77
Line in operation 12 months.						

Railways—Statement of Profit and Loss, 1885.

Statement of profit and loss.

Lines open for Traffic.	Length in Miles.	Periods for which lines were in operation.	Cost of Construction. Amount.	Cost of Construction. Total.	Cost of Rolling Stock, Machinery, Workshops, and Furniture, &c.	Total capital expended.	Net Earnings.	Loss on working.	Rate per cent. per annum of interest returned on capital.	Loss per cent. per annum on capital.	Net Returns.
		Ms.	£	£	£	£	£	£			
Suburban—Sydney to Granville.	14½	12	.....	1,234,522	453,491	1,688,013	127,856	...	7·57	...	...
South—Granville to the Murray, including Cooma Branch.	394½	12	4,394,313								
	20	10	220,000								
				4,614,313	982,233	5,596,546	197,872	...	3·56	...	...
South-Western—Junee to Hay, and Jerilderie Branch.	232	12	.....	1,342,634	92,629	1,435,263	.....	13,041	...	0·91	...
Murrumburrah to Young	18	9	.....	209,988	9,178	219,166	.....	115	...	0·07	...
Western—Granville to Bourke, including Richmond and Molong Branches.	458	12	4,861,118								
	48	3½	300,340								
	22	Days. 10	191,620								
				5,353,078	1,220,729	6,573,807	244,493	...	3·96	...	...
Mudgee—Wallerawang to Mudgee.	85	Ms. 12	.....	945,924	45,657	991,581	.....	5,324	...	0·54	...
Illawarra—Sydney to Sutherland.	9	12	135,000								
	6	Days. 6	90,000								
				225,000	36,393	261,393	3,008	...	1·74	...	...
Northern—Newcastle to Glen Innes.	328½	Ms. 12	.....	3,942,738	521,559	4,464,297	172,141	...	3·86	...	...
North-Western—Werris Creek to Narrabri.	97	12	.....	552,990	48,220	601,210	.....	10,675	...	1·77	...
							745,370	29,155			
				Deduct loss on working			29,155	...	...	...	...
	1,732½	...	.....	18,421,187	3,410,089	21,831,276	716,215	...	...	...	3·37

9.—Ton Mileage.

Gross ton mileage.

In the following tabulated statement are shown the average distance each passenger and each ton of goods (including live stock) was conveyed, and the amount received per passenger and per ton for every mile carried :—

		South & West.	North.	Total.
Average mileage per passenger	Miles.	11·42	27·60	12·66
Average mileage per ton—goods and live stock... ...	"	100·92	17·52	53·44
Average receipts per mile per passenger...	d.	1·01	0·91	1·00
Average receipts per ton per mile, coaching traffic ...	"	15·38	14·41	15·20
Average receipts per ton per mile, goods traffic... ...	"	1·73	2·43	1·86
Average receipts for coaching traffic per ton per mile, including tare	"	0·594	0·528	0·585
Average receipts for goods traffic per ton per mile, including tare	"	0·374	0·459	0·392

Appendix No. 52, p. 168.

In the Appendix will be found returns of the tare of vehicles, and the amount of ton mileage they run during the year with which this Report deals.

10.—Wool Traffic.

Wool traffic.

In my Report for 1884 I had to deplore the large falling off in the wool traffic which the returns for the season of 1884–5 disclosed, a decrease solely attributable to the extreme severity of the drought, and the disastrous effect it had produced upon the sheep depastured over the face of the Colony. In the year 1884 the number of sheep in the Colony decreased from 37,916,000 to 31,600,000, a loss in twelve months of no less than 6,250,000, or over 17 per cent. It is gratifying to find that during the year 1885 this loss has been almost entirely recouped. The following return on the subject is compiled from the Report of the Chief Inspector of Stock.

No. of sheep in the Colony.

Districts.	Number of Sheep, 1st January, 1885.	Number of Sheep, 1st January, 1886.	Increase, 1st January, 1886.	Decrease, 1st January, 1886.
Border	5,420,042	6,889,780	1,469,738	.....
Northern... ...	7,822,971	8,571,004	748,033	.....
Southern... ...	10,723,765	12,492,274	1,768,509	.....
Western	7,693,543	9,867,848	2,174,305	.....
Total ...	31,660,321	37,820,906	6,160,585	.....

It will thus be seen that the Colony has repossessed itself, within comparatively a mere fraction, of the total number of sheep it had lost.

Appendix No. 31, page 139.

With this large increase in the fleece-yielding stock and the further extension of our railways to the waters of the Darling at Bourke, and through the south-western country to Jerilderie, it would be only reasonable to expect that the wool returns for 1885-86 will show a considerable increase. In this

we

we are not disappointed, as the following table of increases and decreases in the wool received from the various districts throughout the Colony discloses:—

Sections.		1884–5.	1885–86.	Increase.	Decrease.
Sydney to Goulburn	Bales	30,807	29,235	.....	1,572
Bredalbane to Albury	„	49,928	59,603	9,675	.....
Junee to Hay	„	35,637	35,924	287	.....
Jerilderie Line	„	1,659	6,463	4,804	.....
Parramatta to Dubbo	„	37,803	40,244	2,441	.....
Narramine to Bourke	„	49,216	79,619	30,403	.....
Mudgee Line	„	6,669	10,497	3,828	.....
Newcastle to Murrurundi ...	„	8,627	10,001	1,374	.....
Doughboy Hollow to Glen Innes	„	35,907	40,309	4,402	.....
Breeza to Narrabri	„	34,273	32,802	.....	1,471
Totals ...		290,526	344,697	57,214	3,043

The net increase shown is 54,171 bales—nearly 57 per cent. of which is due to the large increase from the section between Narramine and Bourke, the number of bales sent having jumped from 49,216 to 79,619.

11.—Coal Traffic.

The coal traffic during the year has been very evenly maintained, the quantity carried during 1885 showing but a slight increase upon that carried in 1884. Coal traffic, Appendix No. 34–41, pp. 143–150.

The following is a return of the coal carried on the Northern Line during 1884 and 1885:—

	Tons.	Freight.
1884	1,614,200	£75,840
1885	1,640,601	£77,603
Increase	26,401	£1,763

The following were the quantities shipped for Foreign and Intercolonial ports:—

	Tons.	Value.
1884	1,550,395	£835,070
1885	1,552,136	£832,495
Increase	1,741	
Decrease		£2,575

The largest Intercolonial shipments were to Victoria; they amounted to 544,005 tons, as against 507,082 tons for the previous year. There was a decrease in the shipments to New Zealand and South Australia.

The largest Foreign shipments as distinguished from Intercolonial were to San Francisco, but as compared with the previous year's shipments there was a falling off, the quantity exported in 1885 amounted to 118,053 tons as against 128,419 tons in 1884, and the shipments both to Hongkong and India were each over 100,000 tons for the year.

The coal traffic on the Southern and Western Lines has continued to increase, and the quantity of shale carried in 1885, which for the two previous years exhibited a decline, shows a slight increase.

The

The following is a return of the coal and shale traffic on the Southern and Western Lines for 1884 and 1885:—

	Coal.		Shale.	
	Tons.	Freight.	Tons.	Freight.
1884	159,705	£55,528	20,642	£6,991
1885	184,750	£63,010	21,293	£7,142
Increase...	25,045	£7,482	651	£151

In addition to the above there were 171,196 tons hauled for the Department, the freight on which would have amounted to £74,852; as this coal was used for our own purposes, no credit has been taken for it in the returns of traffic.

12.—Accidents.

Accidents, Appendix No. 55, page 199.

The mortality and casualty list for last year is heavy as compared with that of 1884, the increase under this head being mainly due to the lamentable catastrophe at Salt Clay Creek, near Cootamundra, on the night of the 25th January, 1885, by which seven lives were lost and twenty-five persons injured. The total number of persons killed on the railway during 1885 was forty-one, of which no less than thirty-two were attributable to the victims own want of caution—seven of the number were passengers, twenty were servants of the Department, and fourteen were trespassers. In the previous year there were but twenty-three fatal cases. The number of persons injured during 1885 was seventy-three, of whom forty-four were passengers, twenty-five servants of the Department, and four trespassers. Of these cases thirty-nine were due to want of caution on the part of the sufferers. The Cootamundra accident swelled the total to the extent of twenty-five; this disaster, it will be well remembered, was caused through the sweeping away of the railway embankment at Salt Clay Creek by an abnormally heavy flood, whose swollen torrent was increased by the sudden bursting away of large dams in the immediate vicinity of the accident; into the chasm so made the train from Melbourne to Sydney fell with a terrible crash. Neither in regard to providing a sufficiency of water-way, nor the energy displayed by the local officers and men to avert the disaster when it became imminent, could any negligence be shown, and the result of the test action in the Supreme Court, which was brought to establish negligence in these respects, was to acquit the Department of responsibility.

13.—Returns.

In addition to the Returns given and referred to in the Report, several others will be found in the Appendix which serve further to illustrate the Railway transactions for the past year.

Annexed to the Appendix are thirteen coloured diagrams showing the particulars of the capital invested, the revenue received, the working expenditure, the net revenue, and the return which the net revenue gave to the capital invested for each of the thirty-one years, from 1855 to the end of 1885.

A Railway map of the lines constructed, under construction, and authorised, is appended, and also a map of Australia, showing in the same way the Railways of the various Colonies.

14.—

14.—Recapitulation.

The transactions during the year are thus summarized:—

The total expenditure for construction was £24,962,972, of which the sum of £21,839,378 was expended for lines opened for traffic.

At the close of the year 1,732 miles of line were opened for traffic, and 407 miles were in course of construction.

The rolling stock consisted of 390 locomotives, 856 coaching, and 7,968 goods, vehicles.

The value of the railway materials, in the conveyance of which 165 vessels were employed, amounted to £591,740, including freight and insurance of £39,851.

During the year 158,002 trains were run a distance of 6,638,399 miles; the earnings amounted to £2,174,368, and the working expenditure to £1,458,153. The number of passengers who travelled was 13,506,346, of whom 2,435,204 were first class, 6,033,348 second class, and 5,037,794 season-ticket holders.

The merchandise traffic consisted of 2,120,955 head of live stock, 361,118 bales of wool, 1,996,547 tons of coal, and 1,139,724 tons of general merchandise.

The earnings per mile open were £1,307, the expenditure was £877, and the net earnings were £430.

The net earnings were £716,215, yielding 3·37 per cent. to the capital invested on lines in operation.

I have the honor to be,

Sir,

Your most obedient Servant,

Commissioner for Railways.

The Honorable William John Lyne, Esq.,
Secretary for Public Works,
&c., &c., &c.

TRAMWAYS OF NEW SOUTH WALES.

Department of Public Works, Railway Branch,
Sydney, 15th July, 1886.

Sir,

Having submitted to you in April last a Progress Report upon the transactions of the Tramways for the year 1885, it now only remains to me to furnish the information in detail.

The following is a Return showing the Capital Expenditure on the Tramways to the 31st December, 1884, and subsequent expenditure to 31st December, 1885 :— Capital Expenditure.

Lines and Sections.	Total Expenditure to 31 December, 1884.	Amount expended in 1885.	Total expended to 31 December, 1885.
	£ s. d.	£ s. d.	£ s. d.
Railway Station to Circular Quay	60,341 0 4	814 13 10	61,155 14 2
Liverpool-street to Randwick and Coogee ..... { £99,545 3 9; Add Trial Surveys 6 9 6	99,551 13 3	5,686 19 5	105,238 12 8
Darlinghurst Junction to Waverley and Woollahra	48,572 3 5	195 0 0	48,767 3 5
Crown-street Junction to Cleveland-street	6,530 6 5	.....	6,530 6 5
Campbelltown to Camden	36,402 7 5	447 3 6	36,849 10 11
Newtown (Glebe Junction) to Marrickville	38,654 16 4	20,446 0 7	59,100 16 11
Glebe Point and Forest Lodge	37,555 16 1	433 1	37,989 12 0
Railway Station Junction to Botany	76,580 3 8	175 8 8	76,755 12 4
Forest Lodge Junction to Leichhardt	30,764 5 4	339 10 4	31,103 15 8
Waverley to Bondi	19,898 1 1	61 10 10	19,959 11 11
North Shore Cable Tram	.....	35,691 11 8	35,691 11 8
Circular Quay to Kent-street ..... { £100,368 7 8; Deduct excess credit 153 13 6	*100,214 14 2	2 4 0	100,216 18 2
Newtown to Cook's River	297 3 7	.....	297 3 7
Harris-street to Pyrmont	276 1 10	.....	276 1 10
Total cost of construction	555,638 12 11	64,293 18 9	619,932 11 8
Tramway Workshops for all Lines	45,520 11 6	6,194 6 4	51,714 17 10
Rolling Stock	175,903 11 2	30,452 14 4	206,356 5 6
Machinery	4,799 7 7	73 6 6	4,872 14 1
Furniture	2,111 13 9	.....	2,111 13 9
Trial surveys	*5,371 9 3	363 18 9	5,735 8 0
Total Tramways ..... £	*789,345 6 2	101,378 4 8	890,723 10 10

* Reduced by £153 18s. 6d. credits during 1884. † This amount appears in Return of 1884 as £5,377 18s. 9d.; it is now reduced by £6 9s. 6d., that sum having been carried to the Randwick Extension.

Eliminating from this Return the expenditure incurred for other than the City and Suburban Lines opened for traffic, the total capital expenditure upon lines opened to the 31st December, 1885, was £708,109. The difference

difference between that amount and the total capital expenditure, £890,724, shown in the Return, is made up as follows:—

	£
Tram Line, Campbelltown to Camden	40,398
North Shore, Cable Line (in part)	35,692
Circular Quay to Kent-street, land, &c., taken for proposed Tram Line	100,217
Newtown to Cook's River	297
Harris-street to Pyrmont...	276
Trial Surveys	5,735
	£182,615

With the exception of the first item (the cost of the tram line from Campbelltown to Camden), the whole of this expenditure has been unproductive, and consequently has not been included in the return of capital expended on lines in operation, nor treated as capital for which the net Tramway revenue had to be debited with interest.

As regards the capital expenditure on the Camden Tramway the returns show a satisfactory result, which will be referred to in a subsequent portion of this Report.

Confining my observations to the capital expenditure upon the City and Suburban Tram Lines opened for traffic, I have to report that the amount expended to the close of 1884 was £643,236. During the year there was added the sum of £64,873, making the capital value £708,109, as under:—

	£
Expended to the end of 1884	643,236
Additions and improvements to Existing Lines...	28,153
Additional Rolling Stock, Workshops and Machinery	36,720
	£708,109

This expenditure was distributed as under:—

Lines opened for Traffic.	Length in Miles.	Total Cost.	Cost per Mile.
		£	£
Railway Station to Circular Quay	1¾	61,156	34,946
Liverpool-street to Randwick and Coogee	5¼	105,239	20,046
Darlinghurst Junction to Waverley and Woollahra	3½	48,767	13,933
Crown-street Junction to Cleveland-street	¾	6,530	8,707
Newtown (Glebe Junction) to Marrickville	3¼	59,101	18,185
Glebe Junction and Forest Lodge	2½	37,990	15,196
Railway Station Junction to Botany	6¾	76,756	11,371
Forest Lodge Junction to Leichhardt	2½	31,104	12,442
Waverley to Bondi	1¼	19,959	15,967
Average cost of construction	27½	446,602	16,240
Tramway workshops £51,715; Rolling stock 202,808; Machinery 4,873; Furniture 2,111		261,507	
Average cost per mile, including all charges	.....	708,109	25,749

No additional lines of Tramways were opened during 1885.

FIRST

First Cable Line in the Colony.

The cable line of Tramway adopted for the North Shore, the contract for which was to have been completed and opened for traffic in October last, was not completed till the 22nd May of this year. The delay has to be accounted for in various ways. An extension of two and a half months was granted on account of the time found to be necessary in deciding upon the detail drawings and specification which, in terms of the contract, had to be furnished by the contractor. Then, further time had to be allowed owing to the non-arrival of the rails from England, and finally a substantial deviation in the course of the route at Milson's Point, and the delay in completing the substituted arrangements for obtaining a water supply, further postponed the day of opening. It is too early yet to form an opinion upon the probable financial result of working this line of cableway; it has an immense capital—looking to the short length of line in operation—to pay interest upon, and it will be only by the exercise of rigid economy in the working expenditure, and by the liberal patronage of the residents of the North Shore of the facilities it affords that this, the first constructed cable-road in the Colony, can be made self-supporting. Cable Tramway, North Shore.

Tramway from Newcastle to Plattsburg.

The construction of this line has been postponed from time to time from various causes. There was a good prospect of its being completed in 1885; but after all the preliminaries had been taken, prior to tenders being invited, it was found that, subsequently to the laying out of the line, a colliery had been opened in the midst of it, necessitating a deviation of the route. It was not till December of 1885 that the Department was in a position to invite tenders, which were opened on the 2nd February of this year. Messrs. Johnston and Billing's was the lowest for the sum of £30,855, and it was accepted on the 4th March. The length of the line to be constructed is 7 miles 30 chains, and the contractors have undertaken to complete the work by the 31st January, 1887, or forfeit £50 a week for every week they are in excess of that time. The work, so far, is progressing satisfactorily, and there is every prospect of its being completed in contract time. Tramway, Newcastle to Plattsburg.

Revenue and Expenditure.

The total earnings derived from the City and Suburban Tramways during the year were £223,340, an increase of £3,398 over the earnings of 1884; the expenditure was £207,995, a decrease of £7,172 upon the expenditure of the preceding year. The net earnings were £15,345, as against £4,775 in 1884, and the return to capital invested increased from 0·76 to 2·17 per cent. Revenue and Expenditure.

As 4 per cent. is the rate at which the Tramway capital has been raised, the transactions for 1885 show a loss of 1·83 per cent., equal to a sum of £12,979; the loss in 1884 was 3·24 per cent., and represented the sum of £20,427.

Although this improvement in the financial affairs of the Tramways is gratifying, it is not so satisfactory as it should be, nor as it can be made to be, by a judicious curtailment of the number of trams run during certain parts of the day when the traffic is too limited to make them otherwise than most unprofitable.

Without in any way interfering with the convenience or requirements of the public, the number of miles run upon the City and Suburban Tramways in 1885 was reduced by 22,000 as compared with the number run in the preceding year; and to this reduction a sensible saving in the working expenditure is to be attributed.

It

It will be seen from the sectional returns which follow that the lines worked at a profit are—

	Gain per cent. on Capital expended.
Railway Line	5·94
Randwick and Coogee Bay Line	2·39
Waverley, Woollahra, and Bondi Line	11·19
Newtown and Marrickville Line	5·97

And the lines worked at a loss are—

	Loss per cent. on Capital expended.
Crown-street Line	5·81
Waterloo and Botany Line	2·73
Glebe and Forest Lodge Line	13·85
Leichhardt Line	3·47

The difficulties which attend the withdrawal of facilities and conveniences once granted to the public are almost insuperable, but when it has been proved by a somewhat lengthened experience that the residents of the non-paying districts have obtained a tram service altogether disproportionate to the population, and to their ability to maintain such service, and that the result financially is so disastrous, it is reasonable to expect they will co-operate with and assist the Department rather than oppose it in bringing about some measure of reform, even if it have the effect of curtailing in some degree, not the facilities, but the redundancy of the facilities for travelling which have been afforded them.

If the Tramways were in the hands of private owners the time-tables for tram-running would of course be regulated or proportioned to the ascertained number of persons to be accommodated, and if it were found, after the establishment of the service, that the number of trips provided was in excess of the requirements of the traffic, that excess number would be immediately abolished.

It is only by a firm adherence to the practice which would prevail if the Tramways were to pass into the hands of private owners that they can be made a commercial success, and give a proper return to the capital invested; and I have for some time past been endeavouring to induce the several Ministers who have presided over the Department of Public Works to consent to a reconstruction of the Tramway time-tables, with a view to the number of trams being proportioned to the requirements of the various suburbs to which tramway accommodation has been extended.

It is estimated that without unduly inconveniencing the patrons of the Tramways, a reduction of fully 200,000 miles of running can be made, which represents about 16 per cent. of the present running; and the saving in the working expenditure that this measure of reform will effect will equal an amount which will make the Tramways self-supporting.

That they are considered to be a source from which large profits may be made is evidenced by the fact that more than one responsible offer has been received to purchase them from the Government at cost price, or to lease them on terms, which would not only pay interest upon the capital invested but realise a profit beyond.

In the following statements are given the capital expenditure, the gross earnings, the working expenditure, and the return which the net earnings give to the capital invested on each section:—

CITY

CITY AND SUBURBAN TRAMWAYS—1885.

All Sections.

All sections.

Expenditure.				Earnings.		
All Sections— Miles open ..... 27½ Train mileage..... 1,220,500		Cost per train mile.	Per cent. to earnings	All Sections— Miles open ..... 27½ Train mileage ... 1,220,500		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	120,706	23·74	54·05	Earnings from all sources	223,340	43·91
Permanent-way do ...	37,298	7·33	16·70			
Traffic do ...	40,565	7·98	18·16			
General do ...	9,426	1·85	4·22			
	207,995	40·90	93·13			
Balance, net earnings ...	15,345					
£	223,340			£	223,340	43·91
Capital expended—						
Construction		£446,602		Per cent. per annum return on capital		2·17
Rolling stock, &c.		261,507				
		£708,109				

NOTE.—In the amount given above as permanent-way expenses there is included ⅛th of the relaying expenditure on the Redfern line during 1882, viz., £2,387 10s., in addition to the actual expenditure of 1885. During 1883 the greater portion of the Crown-street line was relaid with steel rails, and ⅛ of that cost is also included above, although in the books, owing to the custom of voting annual supplies, the whole cost was charged to the accounts of 1883.

Railway Station Line.

Railway Station Line.

Expenditure.				Earnings.		
Railway Station Line— Miles open ..... 1¾ Train mileage 92,122		Cost per train mile.	Per cent. to earnings	Railway Station Line— Miles open ..... 1¾ Train mileage 92,122		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	9,111	23·74	34·21	Earnings from all sources	26,635	69·39
Permanent-way do ...	8,764*	22·83	32·91			
Traffic do ...	3,062	7·98	11·50			
General do ...	711	1·85	2·66			
	21,648	56·40	81·28			
Balance, net earnings...	4,987					
£	26,635			£	26,635	69·39
Capital expended—						
Construction		£61,156		Per cent. per annum return on capital		5·94
Rolling stock, &c.		22,718				
		£83,874				

* Includes proportion of relaying, 1882.

Randwick and Coogee Bay.

Randwick and Coogee Bay Line.

Expenditure.				Earnings.		
Randwick and Coogee Bay Line— Miles open ..... 5¼ Train mileage.....149,931		Cost per train mile.	Per cent. to earnings	Randwick and Coogee Bay Line— Miles open ..... 5¼ Train mileage 149,931		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	14,828	23·74	50·16	Earnings from all sources	29,563	47·32
Permanent-way do ...	5,300	8·48	17·93			
Traffic do ...	4,983	7·98	16·85			
General do ...	1,158	1·85	3·92			
	26,269	42·05	88·86	£	29,563	47·32
Balance, net earnings...	3,294					
	29,563					
Capital expended— Construction			£105,239	Per cent. per annum return on capital		2·39
Rolling stock, &c...			32,767			
			£138,006			

Waverley, Woollahra, and Bondi.

Waverley, Woollahra, and Bondi Lines.

Expenditure.				Earnings.		
Waverley, Woollahra, and Bondi Lines— Miles open ..... 4½ Train mileage..... 269,829		Cost per train mile.	Per cent. to earnings	Waverley, Woollahra, and Bondi Lines— Miles open ..... 4½ Train mileage..... 269,829		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	26,686	23·74	45·60	Earnings from all sources	58,519	52·05
Permanent-way do ...	5,114	4·55	8·74			
Traffic do ...	8,968	7·98	15·32			
General do ...	2,084	1·85	3·56			
	42,852	38·12	73·22			
Balance, net earnings...	15,667					
£	58,519			£	58,519	52·05
Capital expended— Construction			£68,726			
Rolling stock, &c.			71,200			
			£139,926	Per cent. per annum return on capital		11·19

Glebe Point and Forest Lodge Lines.

Glebe Point and Forest Lodge.

Expenditure.				Earnings.		
Glebe Point and Forest Lodge— Miles open ..... 2½ Train mileage 178,940		Cost per train mile.	Per cent. to earnings	Glebe Point and Forest Lodge— Miles open ..... 2½ Train mileage 178,940		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	17,697	23·74	91·07	Earnings from all sources	19,432	26·06
Permanent-way do ...	2,863	3·83	14·73	Balance, loss on working	8,457	.....
Traffic do ...	5,947	7·98	30·61			
General do ...	1,382	1·85	7·11			
£	27,889	37·40	143·52	£	27,889	.....
Capital expended— Construction ... ... £37,990 Rolling stock, &c.... ... ... 23,047 £61,037				Loss per cent. per annum on capital ... ... 13·85		

Newtown and Marrickville Line.

Newtown and Marrickville.

Expenditure.				Earnings.		
Marrickville Line— Miles open ..... 3¼ Train mileage 162,552		Cost per train mile.	Per cent. to earnings	Marrickville Line— Miles open ..... 3¼ Train mileage 162,552		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	16,076	23·74	48·55	Earnings from all sources	33,113	48·89
Permanent-way do ...	4,419	6·52	13·34			
Traffic	5,402	7·98	16·31			
General	1,255	1·85	3·79			
	27,152	40·09	81·99			
Balance, net earnings...	5,961					
£	33,113			£	33,113	48·89
Capital expended— Construction ... ... £59,101 Rolling stock, &c.... ... ... 40,688 £99,789				Per cent. per annum return on capital ... ... 5·97		

Crown-street Line.

Crown-street to Cleveland street.

Expenditure.				Earnings.		
Crown-street Line— Miles open ..... ¾ Train miles..... 73,615		Cost per train mile.	Per cent. to earnings	Crown-street Line— Miles open ..... ¾ Train miles..... 73,615		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	7,280	23·74	73·38	Earnings from all sources	9,920	32·34
Permanent-way do ...	778*	2·53	7·84	Balance, loss on working	1,154	.....
Traffic do ...	2,447	7·98	24·67			
General do ...	569	1·85	5·74			
£	11,074	36·10	111·63	£	11,074	.....
Capital Expended— Construction			£6,530	Loss per cent. per annum on capital		5·81
Rolling-stock, &c.			13,318			
			£19,848			

* Includes proportion cost of relaying, 1883.

Waterloo and Botany Line.

Waterloo and Botany.

Expenditure.				Earnings.		
Waterloo and Botany Line— Miles open ..... 6¾ Train miles 165,440		Cost per train mile.	Per cent. to earnings	Waterloo and Botany Line— Miles open ..... 6¾ Train miles 165,440		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	16,362	23·74	64·85	Earnings from all sources	25,230	36·60
Permanent-way do ...	5,039	7·31	19·97	Balance, loss on working	2,948	.....
Traffic do ...	5,499	7·98	21·79			
General do ...	1,278	1·85	5·07			
£	28,178	40·88	111·68	£	28,178	.....
Capital Expended— Construction			£76,756	Loss per cent. per annum on capital		2·73
Rolling stock, &c.			31,039			
			£107,795			

LEICHHARDT LINE.

Leichhardt.

Expenditure.				Earnings.		
Leichhardt Line— Miles open ..... 2½ Train mileage 128,071		Cost per train mile.	Per cent. to earnings	Leichhardt Line— Miles open ..... 2¾ Train mileage 128,071		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	12,666	23·74	60·52	Earnings from all sources	20,928	39·22
Permanent-way do ...	5,021	9·40	23·99	Balance, loss on working	2,005	.....
Traffic do ...	4,257	7·98	20·34			
General do ...	989	1·85	4·73			
£	22,933	42·97	109·58	£	22,933	.....
Capital expended— Construction ... ... £31,104 Rolling-stock, &c. 26,730						
		£57,834		Loss per cent. per annum on capital		3·47

GOVERNMENT TRAMWAYS, 1885

STATEMENT OF PROFIT AND LOSS.

Profit and loss.

Lines open for Traffic.	Length in Miles.	Cost of Construction.	Cost of Rolling Stock, Workshops, Machinery, Furniture, &c.	Total Capital expended.	Net Earnings.	Loss on Working.	Return per cent per annum on Capital invested.	Loss per cent. per annum on Capital invested.	Net Return.
CITY AND SUBURBAN.		£	£	£	£	£			
Railway Station to Circular Quay....	1¾	61,156	22,718	83,874	4,987	.....	5·94	.....	
Liverpool-street to Randwick and Coogee.	5¼	105,239	32,767	138,006	3,294	.....	2·39	.....	
Darlinghurst Junction to Waverley, Woollahra, and Bondi.	4¾	68,726	71,200	139,926	15,667	.....	11·19	.....	
Crown-street Junction to Cleveland-street.	¾	6,530	13,318	19,848	.....	1,154	.....	5·81	
Devonshire-street Junction to Botany.	6¾	76,756	31,039	107,795	.....	2,948	.....	2·73	
Glebe Point and Forest Lodge.....	2½	37,990	23,047	61,037	.....	8,457	.....	13·85	
Newtown and Marrickville.....	3¼	59,101	40,688	99,789	5,961	.....	5·97	.....	
Leichhardt	2½	31,104	26,730	57,834	.....	2,005	.....	3·47	
					29,909	14,564			
					14,564	.....			
Total	27½	446,602	261,507	708,109	15,345	.....	.....	.....	2·17

Campbelltown and Camden Tramway.

Campbelltown and Camden Tramway.

The subjoined return of the transactions of the Campbelltown and Camden Tramway is very satisfactory. The capital expended upon this line has been—for construction, £36,850; and for rolling stock, &c., £6,771; together, £43,621. For the year 1883 the loss sustained in working this line was £2,456, which, with interest on the capital invested at 4 per cent., was swelled to £4,100. The working expenditure for that year was, however, exceptionally heavy, owing to the large sums which had to be paid for compensation for personal injuries, amounting to £2,161. The expenditure under this head for the succeeding year, 1884, was reduced to £43, and in consequence of this, aided by increased earnings and decreased working expenses, the 6 per cent. loss on capital sustained in 1883 was converted to a net return to capital of 2·38 per cent., leaving the sum of £700 only to be recouped out of the General Revenue. The return for 1885 is still more favourable. There was for that year complete immunity from accident, and although a slight falling off in the coaching traffic took place, the increase in the goods traffic, combined with economy in the working expenditure, resulted in a net return to capital of 3·07 per cent., leaving the sum of £405 only to be recouped out of the General Revenue to meet the balance of interest upon the capital outlay.

Return of Expenditure and Earnings.

Campbelltown to Camden.

Expenditure.				Earnings.		
Camden Tramway— Miles open ..... 7½ Train mileage 23,570		Cost per train mile.	Per cent. to earnings.	Camden Tramway— Miles open ..... 7½ Train miles—Coaching .. 11,849 Goods 11,721 23,570		Earnings per train mile.
	£	d.			£	d.
Locomotive expenses ...	1,095	11·15	28·79	Earnings from— Coaching	1,868	37·83
Permanent way do ...	772	7·86	20·29	Goods	1,936	39·64
Traffic do ...	486	4·95	12·78			
General do ...	111	1·13	2·92			
	2,464	25·09	64·78			
Balance, net earnings ...	1,340					
£	3,804			£	3,804	38·73
Capital expended— Construction			36,850			
*Rolling stock, &c.			6,771			
			£43,621	Per cent. per annum return on capital...		3·07

* Includes £3,223, value of railway rolling stock used on Camden Line.

Accidents.

The following were the accidents for the years 1884 and 1885, together with the number of passenger fares collected :— Accidents.

Years.	Accidents.						Total.		Number of Passenger Fares.
	Servants.		Passengers.		Other than Passengers.				
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
1884	.....	9	6	18	8	19	14	46	30,202,303
1885	1	6	2	7	3	9	6	22	39,594,753
Increase	1	.....	.....	.....	.....	.....	.....	.....	9,392,450
Decrease	.....	3	4	11	5	10	8	24	.....

In the conduct of a service of this kind, the motors running in the midst of the ordinary vehicular traffic and for the most part through crowded streets, it is rather a matter of surprise that the accidents should be so few. The fatal accidents to other persons than passengers amounted to *three only* during the year; and in that time no less than 328,658 separate trams were run. The fatal accidents to passengers were *two*, averaging one to every 20,000,000 passenger fares collected. In the past *two* years only *one* servant of the Department out of a total of 988 has lost his life by accident in the performance of duties which oftentimes expose them to risk.

In concluding this Report it affords me pleasure to state that for the first six months of the present year the Revenue derived from the Tramways is larger than it was for the corresponding period of last year, and that there is a reasonable prospect of the net return for 1886 paying a higher percentage of interest to capital invested than the net returns for 1885 paid.

I have the honor to be,

Sir,

Your most obedient servant,

Commissioner for Railways.

The Honorable William John Lyne,

Secretary for Public Works.

APPENDIX

TO THE

REPORT ON THE RAILWAYS AND TRAMWAYS

OF

NEW SOUTH WALES,

1885.

CONTENTS OF APPENDIX.

NO.		PAGE
1.	Report of Engineer for Existing Lines on the condition of Existing Railway and Tram Lines	1
2.	Report of Locomotive Engineer	34
3.	Report of Superintendent of Tramway Rolling Stock	63
4.	Length of lines and dates of opening	70
5.	Land taken for Railway purposes	72
6.	Permanent way and other materials imported	75
7.	Return of rolling stock on hand	92
8.	Public debt for Railways	93
9.	Amount of Loans for Railways and interest	99
10.	Capital expenditure	100
10A.	Detail of works charged to Capital	102
11.	Cost of construction and cost per mile for sections	110
12.	Number of miles opened per annum	110
13.	Return of earnings	111
14.	Return of traffic and train mileage	112
15.	Return of working expenses and rolling stock	113
16.	Return of Tramway traffic, working expenses, &c.	114
17.	Camden Tramway traffic, &c.	115
18.	Return of Tramway motors received during 1885	117
19.	Return of Tramway cars received during 1885	118
20.	Mileage of Tramway Motors	118
21.	Detailed statement of working expenses—Railways	119
22.	Statement of working expenses—Railways	121
23.	Detailed statement of working expenses—Tramways	122
24.	Working expenses—Camden line	123
25.	Rolling stock manufactured during 1885	124
26.	Tonnage and freight value of merchandise traffic in 1884 and 1885	125
27.	Revenue and expenditure at each station	126
28.	Return showing traffic at each station	132
29.	Live stock earnings for 1884 and 1885	137
30.	Monthly return of wool in 1884 and 1885	138
31.	Return of wool for seasons 1884–85 and 1885–86	139
32.	Exports across the Border	141
33.	Return of traffic at Central Railway Office	142
34.	Coal exported from Newcastle to foreign and intercolonial ports	143
35.	Monthly return of coal hauled on Northern Line	145
36.	Monthly return of coal from Western Collieries	146
37.	Monthly return of shale on Southern and Western lines	147
38.	Tonnage of coal carried O.H.M.S. from Western Collieries	148
39.	Coal shipped at Government cranes	149
40.	Return of coal and shale on the Southern and Western lines, 1884 and 1885	149
41.	Return of coal and shale on all lines, 1884 and 1885	150
42.	Percentage of number and value of 1st and 2nd class passengers	150
43.	Return of mileage of suburban passengers, 1884 and 1885	150
44.	Return of tickets issued to and from suburban stations, 1884 and 1885	151
45.	Detailed statement of mileage	153
46.	Return of mileage, passengers, and goods, 1884 and 1885	154
47.	Annual and average daily mileage of engines	154
48.	Mileage run by each engine	155
49.	Working expenses per mile open and train mile	158
50.	Earnings per mile open and train mile	160
51.	Receipts—Mileage and weight of passengers and goods	161
52.	Weight and train mileage of locomotives and rolling stock, with earnings and expenditure per ton per mile	163
53.	Merchandise traffic rates	172
54.	Comparative statement of rates in each of the Australian Colonies	188
55.	Return of accidents—Railway	199
56.	Return of accidents—Tramway	200
57.	Table showing the progress and financial position of our Railways, from 1855 to 1885	201
58.	Number and classification of Railway and Tramway employés	202
59.	Amount paid for wages in 1884 and 1885	211
60.	Return of free passes issued	212

PLATES.

Diagrams descriptive of Railway transactions from 1855 *to* 1885.

Maps showing Railway Systems and lines.

APPENDIX TO REPORT ON RAILWAYS—1885.

No. 1.

The Engineer for Existing Railways and Tramways to The Commissioner for Railways.

Sir, Railway Department, Office of Engineer for Existing Lines, Sydney.

I have the honor to submit my Annual Report from January 1st to December 31st, 1885, on the condition of the Existing Railways and Tramways under my charge.

SUBURBAN RAILWAYS.

Sydney to Granville Junction—Double Line—Length, 13 *miles* 16 *chains.*

GREAT SOUTHERN AND SOUTH-WESTERN RAILWAYS.

Granville Junction to Albury—Single Line—Length, 373 *miles* 4 *chains.*

Albury to the River Murray—Single Line—Length, 1 *mile.*

Junee Junction to Hay—Single Line—Length, 167 *miles* 29 *chains.*

Narrandera to Jerilderie—Single Line—Length, 64 *miles* 49 *chains.*

Joppa Junction to Tarago—Single Line—Length, 19 *miles* 71 *chains.*

Tarago to Bungendore—Single Line—Length, 19 *miles* 19 *chains—Opened for public traffic, 4th March,* 1885.

Murrumburrah to Young—Single Line—Length, 17 *miles* 57 *chains—Opened for public traffic, 26th March,* 1885.

THE maintenance of the permanent-way and works on these sections has been carefully attended to during the year, and the whole kept in good working order.

The renewals of both rails and sleepers on the portions, Sydney to Granville and Granville to Picton, have been heavy, and must continue so until the entire distance has been relaid.

From Picton to Goulburn the ballast has been renewed in considerable quantities, and from Goulburn to Albury the renewals have been chiefly confined to the sleepers, large numbers of which have been replaced by ironbark sleepers during the year.

Between Albury and the River Murray the permanent-way is in very fair order, and will be easier to maintain when the large heavy bank has been strengthened, which is now being done.

The timber bridges have been carefully maintained during the year, but at considerable expense, and are all in safe running order. In a few places, viz.:—At 22 miles 40 chains, 23 miles, and 24 miles 10 chains, and at Argyle-street, Moss Vale, the timber structures are being replaced by iron, and the work is being pushed on as rapidly as practicable.

The culverts and flood-openings have been kept in good condition.

Extensive repairs and renewals of fencing have been carried out on the whole of the Southern Line.

From Granville southerly the old fencing has been replaced where necessary by about 23 miles of barb-wire, and about 3 miles of buckthorn-wire fencing, erected under contract.

On the South-western and Jerilderie Lines the permanent-way has been maintained in good order, although in places long stretches of soft banks occur. The heavy banks near the Murrumbidgee, on the Jerilderie Line, have given most trouble.

The timber bridges and culverts have been well maintained, and a close watch has been kept for white ants. The charring remedy adopted appears to be effectual in checking the ravages of these insects.

Between Joppa Junction and Tarago the permanent-way is now in first rate order, but a large quantity of ballast was required to attain this result in consequence of the subsidence of the banks, which were made up originally during continuous dry weather.

From

From Tarago to Bungendore the permanent-way and works are in good order. The banks have not settled to the same extent as on the section Joppa Junction to Tarago.

The permanent way between Demondrille Junction and Young is in good running order, but has given considerable trouble during the year. The banks have been troublesome to maintain, and will, I am of opinion, be found difficult to keep in good repair for some time yet.

The following works, exclusive of ordinary repairs, have been carried out during the year:—

Darling Harbour—

Stairs at overbridge refixed.

Bridge lengthened in connection with new sidings.

Signal to protect Glasson's siding erected.

Appliance for unloading dump-cars erected.

Old signal-box removed from Homebush and re-erected for office for cattle-yards.

Ten-ton crane erected.

Culvert lengthened in connection with additional siding accommodation.

Patent weighing-machine attached to steam-crane.

Guard rails fixed at old crossing.

Hay-gauge erected.

Gas laid on to semaphore signals.

Buffer-stops and gates re-erected in connection with new offices.

Buffer-stops fixed to dead-end siding.

Cart-weighbridge erected.

Gate, gatekeeper's box, and fences erected at new wood-yard.

Paling fence erected at Mary Ann-street.

New box-office erected in wood-yard.

Basement story to meat-shed completed by contract.

Sydney—

100-ton testing-machine erected.

Four vices for planing-machine fixed.

Hose and taps fixed for washing out carriages.

Twelve lockers fixed in guard's room.

Additional cess-pit and cross drains constructed in goods-yard.

New offices erected for District Engineer.

New workshops erected for permanent way department.

New store-room erected for Locomotive Running Stores.

New shop erected for watchmakers' use.

Weatherboard fence erected across Holden-street.

New signal-box erected at tunnel.

Water laid on to new signal-box at tunnel.

Planking fixed for storing sheets.

Boxes for fire-extinguishing appliances fixed at goods-shed.

Culvert under Redfern Tunnel constructed for Water Supply Department.

Sydney—continued.

Gas laid on to new shops, Permanent Way Department.

Blacksmiths' forges connected with chimney at Permanent Way shops.

Planing-machine erected.

Additional skylight fixed in Permanent Way shops.

Old signal-box removed from Redfern Tunnel, and re-erected at Redmyre.

Siding altered in connection with new platform.

Gas laid on to lost property office.

Box-office erected for inspector of gasworks.

Additional closet accommodation, Sydney yard.

Wrought-iron tank provided and fixed for w.c. at station.

Water-closet accommodation provided for plumbers and painters—Permanent Way.

Temporary ticket-office provided.

New platforms and parcels office constructed.

Main roof of station painted by contract.

Flagging fixed around the new parcels office.

Filter erected in blacksmith's shop.

Eveleigh—

Office for Locomotive Branch constructed at coal-stage.

Foundations constructed for boiler—electric-light engine.

Tank-stand enclosed for store-room and bath for Locomotive Branch.

New signal-workshop erected.

Culvert at 1 mile 25 chains lengthened.

Fittings in store and bathroom provided.

New entrance gates and watchman's box opposite locomotive running sheds.

New retaining-wall constructed.

Floor of Locomotive carriage—paint-shop asphalted.

Office for fitter in charge erected.

Interlocking shop enclosed.

Temporary shops for carriage trimmers.

Dry retaining wall erected opposite Hudson Bros.

Gas laid on to Traffic Manager's residence.

Temporary store-shed for iron-work erected.

Fittings

Eveleigh—continued.

Fittings, Running Foreman's office, supplied.
Interlocking boxes A and B erected.
Fence removed back to new boundary, Eveleigh to Sydney.
Road laid in for travellers—shops 3 and 4.
New platform wall erected.
Ash-pits for running-shed constructed by contract.
Retaining wall at Woodburn-st. in connection with quadruplication of line erected by contract.
Foundations and pits Shops Nos. 5 to 15 constructed by contract.
Foundations and pits Shops Nos. 16 to 25 constructed by contract.
New coal stages constructed by contract.
Workshops Nos. 1 to 4 constructed by contract.
Office for Locomotive Running Foreman erected by contract.

Macdonaldtown—

New entrance made from Robey-street to station.
Water laid on to Station-master's house.
New sub-way, Burrem-st. constructed, superstructure of which was supplied by contract.

Newtown—

Gas laid on to signals.
Appliances provided for unloading dump-cars.
Gas-lamp erected on down side of passenger crossing.

Stanmore—

Duplicate levers fixed to work signals.
House removed.
Gas laid on to signals and box.
New sub-way constructed.
New platforms do
Signal-box removed from Petersham and re-erected.

Petersham—

Bye-posts removed at entrance to steps.
Up advance-signal renewed.
Abutments, Crystal-st. bridge rebuilt in connection with dead end siding.
Foot-bridge in front of overbridge tar-paved.
Portion of old buildings removed, and temporary accommodation provided for Station-master's staff.
Urinals and closets erected on platform.
Gas-lamps renewed on overbridge.
New foot overbridge completed by contract.
Piers for new viaduct erected by contract.
Platforms extended.

Summerhill—

Portable office for Station-master provided.
New platforms completed.

Ashfield—

Dry rubble wall erected at rear of urinals.
Rubble wall and picket fence constructed.
Additional closet accommodation provided "up" side.
Platform tar-paved by contract.

Croydon—

Wicket-gates fixed at level crossing.
Gates and signal-box interlocked.
Gas laid on to disc-signals.

Burwood—

Grip and box drain constructed at signal-box.
Gas laid on to new up advance-signal.
Additional accommodation provided at Station-master's house.

Homebush—

Up distant-signal renewed.
Platforms tar-paved.
Additional closet and urinal accommodation provided.
Old cattle and sheep yards removed.
Buffer-stops fixed in connection with dead end siding.

Homebush Cattle-yards—

Water supply for cleaning stock trucks provided.
Additional closet accommodation provided.
Boards for unloading sheep renewed.

Rookwood—

Four brick pits constructed and crossing gates erected.
Jewish mortuary platform renewed in connection with alterations and extensions.
Lamps erected at level crossing.

Auburn—

Box erected for gatekeeper.
New signal-box removed and re-erected.
Platforms lengthened.
Old signal-box converted into an office, and placed on "down" side.

Clyde—

End of waiting-shed enclosed for ticket office.
Gate renewed leading in Hudson Bros. siding.
Gatekeeper's box removed from Rookwood and re-erected at Clyde.
Gas laid on to signals.

Granville—

Drain from station to Salt-pan Creek constructed.
New turn-table fixed.
Lamp erected near points leading into weigh-bridge siding.
Lamp erected at gate of station.

Granville—continued.

Additional tank-stand erected.
Bye-pass fixed in gas main.
New coal-stage erected.
Gas laid on to telegraph office.
Lights provided at the level crossing, Woodville or Dog-trap Road.
Fence erected at gate-house, Woodville Road.
Culvert lengthened in connection with dead-end sidings.

Merrylands—

New office for porter-in-charge erected.

Cabramatta—

Small cattle-pen erected.

Guildford—

Wicket-gates erected at station.

Fairfield—

5-ton crane erected.
Steps fixed and tar pavement repaired at station.

Liverpool—

Fences erected at approaches to station.
Brickwork foundations constructed for pumping engine.

Glenfield—

House erected for porter-in-charge.
Iron tanks supplied for porter's house.

Ingleburn—

New gates erected.
Approach formed and level crossing made to new sidings.

Menangle—

Signals altered.
Overhead bridge ballasted.
Guard rails fixed at level crossing.

Douglass Park—

Buffer-stops renewed.

Redbank—

New rubble platform constructed.
Land resumed, fenced, and new culvert constructed.
New station buildings nearly completed.
New home-signals erected.

Picton Lakes—

Entrance gate fixed, and crossing constructed to sand-house.
Foundations made for new water-crane.
Old water-crane removed and re-erected.

Hilltop—

New office, 12 x 12, erected, and fittings provided.
Verandah to new office erected.
New home-signals erected.
New platform constructed.
Two distant-signals removed and re-erected.
Platform-lamp fixed.

Colo Vale—

New home-signals erected.
Distant-signals removed and re-erected.

Mittagong—

Lamp fixed at entrance-gate.
Needle's patent gas apparatus fixed by contract.
Shed erected over pump and generator of Needle's patent gas apparatus.
Alterations effected to turntable (engine).
Drainage of refreshment-room altered and improved.
New portable sheep-race constructed.

Burradoo—

New turn-table fixed at level crossing.

Moss Vale—

New drinking-fountain fixed.

Bundanoon—

New tank-stand erected.

Wingello Siding—

New home-signals erected.

Barber's Creek—

Lamp and disc provided for stopping trains.

Marulan—

New sheep-yards erected.
Fittings provided in Post and Telegraph Office.
New Post Office erected by contract.

Carrick—

Notice-board fixed at each end of bridge, 122 miles 12 chains.

North Goulburn—

New hydraulic-signal erected.
New platform constructed for unloading stock.
Approaches formed to overbridge between Cole and Sterne Streets, Goulburn.

Goulburn—

New interlocking signal-box partly completed.
Four portable box-offices constructed.
Trap-catch-pit fixed in refreshment-room kitchen.
Additional ladies' closets (3), almost completed.
Rough rubble-wall to slopes adjoining Police premises.
Fire-place made in store-office.
New cooking-range fixed in Station-master's residence.
Cooking-range renewed in Inspector's residence.
Path to District Engineer's office asphalted.
Machinery for Permanent-way workshops supplied by contract and partly fixed.
Carpenters' workshops erected by contract.
Foundations constructed for water-cranes for Locomotive Department.
Additions erected to District Engineer's office.
Fittings provided in do
Rails laid to new running-shed, partly finished.

Goulburn—

Notice-boards placed at ladies' waiting-room
Buffer stops raised outside road.
Forms provided in gentlemen's waiting-room —not completed.
Ladies' earth-closets.
Temporary workshops erected.
Permanent-way shops and yard drained.
Mundy-street crossing gates renewed.
Crossing gates at 135 miles 40 chains renewed.
New locomotive running-shed erected by contract.

Breadalbane—

Additional office accommodation provided.
Fittings provided in new office.
Stock-yards widened.
Cooking-range and grate fixed in Station-master's residence.

Fish River—

New locomotive tank-stand erected.

Gunning—

Lamp placed at entrance to station.
Filter and stand fixed.

Jerrawa—

New room erected for night-officer.
New home-signals erected.
New up distant-signal erected.

Yass—

Entrance to platform between refreshment-room and urinals closed.
New drinking-fountain fixed.

Bowning—

Outlet of culvert at 193 miles 40 chains piled.
Drainage of Station-master's residence altered.

Binalong—

New portable sheep race made.
Cooking range fixed in Station-master's residence.

Rocky Ponds—

New home signals erected.
Distant signals removed and re-erected.
New distant signal erected.

Cunningar—

New doors and margin lights fixed to waiting-shed.

Harden—

Refreshment-room fenced.
Fittings and cooking range provided in refreshment-room.
Fireplace fixed in general waiting-room.
New portable Post and Telegraph office constructed.
Additions and alterations effected to Post and Telegraph office.
Sand-house removed from Rocky Ponds and re-erected.
Lamp fixed over refreshment-room door.
Fencing erected at Locomotive Inspector's office.
Fittings provided in LocomotiveInspector's office
New office for Locomotive Inspector erected by contract.
Three additional earth-closets in course of construction.
New dam in progress for locomotive water supply.
Tanks fixed at five employés cottages.
Stove fixed in refreshment-room.
Electric repeater fixed.
Lamps placed under station verandah.

Murrumburrah—

New filter and stand fixed.
Fence set back to widen Neill-street.
Level crossing removed from 233 miles 65 chains to 233 miles 45 chains.

Nubba—

Shelving fixed in office.
New shelter-shed erected.
New cart weighbridge fixed.

Wallendbeen—

Cottage removed from Bomen erected.
New home signals erected.
Distant signal removed.
Turnstiles fixed at level crossing 241 miles 50 chains.

Cootamundra—

Partition placed in goods-shed.
Fence on approach to running-shed renewed.
Platform picket fencing extended.
Scotch blocks fixed each end of goods-shed.
Lamp fixed at north entrance to station.
Grant's patent revolving filter, fixed.
Semaphore and two distant signals removed.
New underbridge 254 miles 12 chains in course of construction—superstructure supplied by contract.
Signals erected at junction of Gundagai line.

Mullaly's Siding—

New Scotch blocks fixed.
New level crossing constructed at 254 miles 20 chains.

Cungegong—

New Scotch block fixed.

Illabo—

New room erected for Telegraph operators.

Junee Junction—

New bell fixed on platform.
New sand furnace erected.
Engine-shed, removed from Bomen, in course of erection.
Stock-yards erected.
Dry earth-closets constructed for Locomotive Branch.

Junee Junction—continued—

Porter's cottage removed from Bethungra and re-erected.
Two tanks fixed to Station-master's house.
New drinking fountain fixed.
Gate fixed to engine-shed.
Temporary station-buildings removed and re-erected.
Turnstiles fixed at level crossing.
Turnstiles fixed at south side of station.
New station name-boards fixed.
Deal counter fixed in goods' office.
Fence enclosing pipes to reservoir, Wantabadgery road altered.
Approaches to new station formed, and kerbed and guttered.
Coping fixed around tank in approach road and platform by contract.
Granolith paving laid on platform by contract.
Shed and copper for heating water for foot-warmers removed.
Longtitudinal beams placed in locomotive workshops for carrying machinery.
Palisading erected around verandah of Station-master's house.
Fittings provided in lamp and store room.
New lamp fixed near turntable.
Counter in parcels office altered.
Bath-room erected to Inspector's residence.
Shed erected at gas-works to protect coal.
Forge made for Locomotive Department.
New hay-gauge constructed.
Coal-shed erected at house for heating water for foot-warmers.
Gas-lights increased in refreshment-room—Manager's yard.
Fittings provided in new station.
Gate-posts fixed to approaches, and picket fencing erected at new station.
Gas laid on to station premises.
Names painted on office doors of new station.
Fittings provided in refreshment-room, and gas laid on.
Tank constructed to new station.
Stench trap, refreshment-room, altered.
Cesspit, and closet constructed at Guard's house.
New passenger station constructed.
New engine turntable fixed.
Blast laid on to Permanent Way blacksmith's shop.
Drainage of refreshment-room altered.
Two lamps fixed at crossing.
Plantations around station put in order.
Extensive buildings erected for refreshment purposes by contract, and completed during the year.

Bomen—

Loading stage widened and covered.

Wagga Wagga—

Gate fixed in fence.
Stock-yards altered.
Four lamps erected at stock-yards.
Pipes to pumping engine opened out.
Underground tank at Station-master's residence altered.
Alterations effected to goods-shed tank.
New drinking fountain fixed.
New signal erected at stockyards.

Sandy Creek—

New tank and stand fixed at station.

Yerong Creek—

Gate fixed in fence behind office.

Doodle Cooma—

Lamp, disc, and notice board provided for stopping trains.
New platform constructed.
Level crossing at 350 miles 43 chains removed.

Culcairn—

New filter and stand fixed.
Drain to pumping engine, Locomotive Department, opened out.

Gerogery—

Turnstile fixed in lieu of wicket gate.
New filter and stand fixed.
Ground at back of Station-master's residence drained.
Yard of gatehouse raised.
Small loading bank for loading stone constructed.

Ettamogah—

New scotch block fixed at siding.

Albury—

Engine-shed partitioned.
Guard rails placed between goods-shed and crane.
New rail fixed in carriage-shed.
Marble reset on counter of refreshment-room.
Fence erected between garden and buffer stops.
New lamp fixed over refreshment-room door.
Two book racks provided in goods office.
Goods-shed partitioned for stowing Customs goods.
Portable sheep races made for interchanging sheep.
Wicket gate fixed at gatehouse.
Tank fixed at gatehouse.
Two hydrants fixed on platform.
Trap catch pit provided at refreshment-room.
Temporary embankment, Albury to River Murray, partly removed. This work is approaching completion.
Door placed at entrance to urinals and closets.

MISCELLANEOUS.

New patent scotch blocks fixed at sidings.
New water tanks provided for supplying fettlers with water.
Superstruction of bridge at 20 miles 24 chains renewed.
10 chains' fencing reset between 16 and 17 miles.
Steps of footbridges, Suburban Line, asphalted by contract.
Fencing lifted at Ritchie's Siding.
Fencing renewed with barbed wire between Newtown and Stanmore, Summerhill and Ashfield, and 48 to 49 miles south.
3 miles buckthorn wire fence erected between Fairfield and Glenfield by contract.
3 miles barbed wire fence erected between Fairfield and Glenfield, by contract.
20 miles barbed wire fence erected between Granville and Campbelltown, by contract.

JUNEE TO HAY.

Old Junee—
Water supply provided for Locomotive Department.
Approach to goods-shed raised.

Marrar—
Entrance gate to platform fixed.
Kitchen erected at gate-house.

Coolaman—
New filter and stand fixed.
Wicket gate erected at main crossing.
Post and Telegraph Office partly erected.

Grong Grong—
Three additional box drains constructed under line.
Wicket gate fixed opposite Mr. Flood's hotel.
Yard at Porter-in-charge's residence drained.
Station name boards fixed.

Narrandera—
Dry earth closets erected for employés of Locomotive Department.
Position of counter in parcels office altered.
New sheep drafting yards erected.
Counter in goods office removed.
Gate opposite 10-ton crane renewed.
Alterations and additions effected, and two tanks provided to gate-house.
Brick foundation constructed under pumper's cottage and gate-house.
Horse posts erected in front of station.
Wicket-gate erected at Station-master's residence.

Narrandera—continued—
Cooking range fixed in Station-master's residence.
Two drinking fountains fixed.
Alteration made to gate-house at 61 miles 23 chains.
American level crossing constructed at 63 miles 8 chains.

Whitton—
Filter and stand fixed.
Battery-box and electric repeater fixed to up distant signal.

Darlington—
New filter and stand fixed.
Shaft bricked up, and twelve 400-gallon tanks fixed for water supply.

Bringagee—
Doorway made leading from verandah to office.

Carrathool—
Two tank stands fixed.
Filter and stand fixed.
New Porter's cottage erected by contract.
Yard at Police Premises fixed and gravelled.

Hay—
Two drinking fountains.
New book rack fixed in goods office.

MISCELLANEOUS.

Patent scotch blocks fixed at sidings.
Mileage and chainage pegs provided.

NARRANDERA TO JERILDERIE.

Narrandera and Jerilderie Junction—
New signals erected.
Main line connected at permanent bridge over Murrumbidgee.

65 *miles* 31 *chains—*
Siding repaired, and points and crossing renewed at ballast pit.

Cuddell—
Approach road to siding formed, and entrance-gates fixed.
Two scotch blocks fixed.

Colombo—
Two book racks provided in goods office, and brackets for staff-boxes fixed.
Race for drafting sheep constructed.
Gates and races of sheep-yards altered.
Three scotch blocks fixed.
Signals erected at station and cattle yards.
Overflow from locomotive tank drained, and Passenger Station drainage altered and improved.
Drain cut to collect water for locomotive purposes.

Colombo

Colombo—continued.

Drain of culvert extended.
Level crossing constructed, 82 miles 14½ chains

Widgewa—

Waiting-shed erected.
Approaches to siding made up, and entrance-gates fixed.
Two scotch blocks fixed.
Top of goods platform lowered.

Coonong—

Four scotch blocks fixed.
New wool-loading stage constructed.
Temporary office removed from Colombo and re-erected.

Bundure—

New wool-loading stage constructed.
Two scotch blocks fixed.
Gatekeeper's yard made up.

Yathong—

Four scotch blocks fixed.
Temporary wool-stage erected.

Jerilderie—

5-ton crane fixed.
New signals erected.
Tank provided at Station-master's residence.
Shelving, &c., provided in offices.
Six scotch blocks fixed.
Alterations effected to sheep-yards.
Box drain constructed.
Signal-levers altered.
Four platform lamps erected.
Approaches to goods-shed made up.

MISCELLANEOUS.

New scotch blocks fixed at sidings.
Tanks provided for Permanent Way employés.

GOULBURN TO COOMA.

Joppa Junction—

Main-line up distant signal removed and re-erected.

Bangalore—

Platform erected.
Box drain constructed under line.

Lake Bathurst—

Temporary platform and waiting-shed erected at shores of Lake.
Turnstile fixed at entrance gate.
Siding to ballast-pit improved.

Tarago—

Signals erected.
Fencing erected at culvert 159 miles 14 chains.

Bungendore—

Cattle race at trucking yards altered.
Additional manholes made in stockyards.
Pumper's cottage erected.
Engine-man's house nearly finished.
2-ton crane removed from Bowral and fixed.
Signals erected.
Lamp fixed at entrance to station.

MISCELLANEOUS.

Scotch blocks fixed at sidings.
Notice boards ("Beware of trains") placed at level crossings.

MURRUMBURRAH TO YOUNG.

Demondrille Junction—

New office 12′ × 12′ erected.
Battery box with six sills for distant signals fixed.
Portable box office made.
Three new scotch blocks fixed.
Handrail placed on temporary sleeper platform.
Station name boards, brackets for staff boxes, and flag stand provided.
Fittings provided in new office.
New up distant signal erected.
Roadway to siding partly formed.
Tank fixed to Station-master's house.

King's Vale—

Platform removed to level crossing.
Roadway made to siding.
Four scotch blocks fixed.
Lamp and disc provided for stopping trains.
New signals erected.
Gate to pumping engine, 246 miles, fixed.

Young—

New 5-ton crane fixed.
New cart weighbridge erected.
New signals erected.

Young—continued.

Cooking range provided in station-master's residence.
Four scotch blocks fixed at stockyards and five at station.
Hay-gauge fixed.
New lamps erected at Main and Lynch Street crossings.
New platform lamps and station name boards fixed, and flag-stand provided.
Fittings provided in goods-shed office.
Fittings placed in new station.
Sheep races altered and improved.
Tank fixed at Porter White's cottage.
Signal-levers altered.
Two lamps and discs provided at Burrowa Road crossing.

MISCELLANEOUS.

Mileage and chainage pegs fixed.
New water tanks provided for Permanent Way Department.
Tools, &c, made for Extension.

CULVERTS

CULVERTS and Flood Openings constructed during the year.

At Miles.	At Chains.	Number.	Number of Openings.	Size of Openings.	Depth of Waterway.	Remarks.
				ft. in.	ft. in.	
Redfern Tunnel		1	1	11 0 × 9 9		Brick culvert for Sydney Water Supply.
14	20	1	1	9 0	7 0	
163	5	1	1	3 0	2 6	
Jerilderie Line— Jerilderie Station-yard		1	1	3 0	1 6	Box drain 48 ft. long.
Bungendore Line—						
150	8	1	3	25 0	5 3	
150	18	1	1	8 0	4 0	
150	33	1	1	15 0	4 9	
155	79	1	1	8 0	2 9	
Temporary road to Lake Bathurst—Ballast-pit.		1	1	8 0	3 1	

CULVERTS and Flood Openings renewed during the year.

At Miles.	At Chains.	Number.	Number of Openings.	Size of Openings.
				ft. in.
43	0	1	1	2 0
44	3	1	1	2 0
Ballast Pit, Siding, Lake Bathurst		1	1	2 0

CULVERTS lengthened during the year.

At Miles.	At Chains.	Size of Culvert.	Number of Openings.	Lengthened.
		ft. in.		ft. in.
1	25½	4 0	1	190 0
Darling Harbour		3 0	1	156 0
13	54	2 0	1	16 0
13	54½	2 0	1	17 6

The following sidings have been laid in during the year:—

	feet.
Darling Harbour—	
Main "up" line extended	594
Main "down" line do	594
Through road to main "down" line, and wharf road	418
Through road to No. 1 and 2 wharf sidings	220
Nos. 1 and 2 wharf, sidings extended	2,550
Two through roads to wharf sidings ...	313
No. 1 siding, "down" line side ...	1,040
No. 1 do "up" line side	670
Compound cross-over road	1,735
Nos. 1 and 2 sidings, "up" line side extended	924
No. 4 siding, "up" line side	762
Nos. 5, 6, and 7 sidings, "up" line side	1,778
Compound cross-over road	78
Siding for N.S.W. Shale and Oil Co.	381
Single compound cross-over road ...	60
Sydney—	
Permanent-way siding extended ...	114
Siding for goods traffic	769

	feet.
Eveleigh—	
Quadruplication of Line, main "up" line	390
Quadruplication of line, main "down" line	381
Sidings at new coal stage	1,284
Dead-end siding, "down" line side ...	316
Engine weigh-bridge siding	254
Sidings at workshops Nos. 5 to 15 ...	2,990
Nos. 1 and 2 double compound crossings to sidings, "up" side	985
Through road to sidings 1 and 2, "up" side	143
Sidings at workshops Nos. 16 to 25 ...	4,883
Petersham—	
Nos. 3, 4, 5, and 6 sidings shifted and extended	369
Rookwood—	
Mortuary branch extended	860
Slip points to siding, "down" side ...	21

Auburn—

	feet.
Auburn—	
Slip points to siding, "down" side ...	21
12 *miles* 10 *chains*—	
Through road	180
Granville—	
Dead-end siding, "down" line side, extended	714
Dead-end siding, "up" line side, extended	850
Siding to new engine turn-table ...	288
14 *miles*—	
Brick and Pottery Company's siding extended	11
14 *miles* 24 *chains*—	
No. 1 siding, inside railway fence, for Morris Brothers	266
Nos. 1 and 2 sidings, outside railway fence, for Morris Brothers	937
Ingleburn—	
Siding and slip points	447
Menangle—	
Two pairs slip points	42
Binalong—	
New siding	1,341
Siding extended	451
Junee Junction—	
New sidings	9,371
Doodle Cooma—	
New Sidings	592
SOUTH-WESTERN LINE.	
Yanko—	
New sidings	519
JERILDERIE LINE.	
Gillimbah—	
New sidings	700
Total	42,606

PERMANENT WAY RELAID WITH STEEL RAILS.

	1877	1878.	1879.	1880.	1881.	1882	1883.	1884.	1885.	Total.
	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.
Main "up" line, 1st mile	1,387		2,465	533	238	...	1,677	1,796	.	8,096
Main "down" line, 1st mile	1,173	2,587	...	424	153	..	1,674	1,782	...	7,793
Main "up" line, Darling Harbour Branch	...	...	...	531	...	1,509	...	1,354	1,538	4,932
Main "down" line, Darling Harbour Branch	...	...	...	259	...	1,487	271	1,829	470	4,316
Main "up line," between 1 and 5 miles	...	..	325	...	..	5,359	...	13,655	...	19,339
Main "down" line, between 1 and 5 miles	...	20	...	3,864	...	3,272	...	5,502	9,273	21,931
Main "down" line, between 5 and 7 miles	...	...	..	..	...	...	...	2,064	3,082	5,146
Main "up" line, between 5 and 7 miles		...	..	.	...	..	..		7,887	7,887
Main "up" line, between 10 and 12 miles	...	...	...	...	5,280	...	...	..	...	5,280
Main "up" line, between 12 and 13 miles	...	..	..	...	...	...	...		2,388	2,388
Main "down" line, at 13 miles	...	...	...	273	...	...	...	...		273
Main line, between 13 and 14 miles	...	...	...	..	..	...	...	289	1,576	1,865
Do do 14 and 18 miles	...	..	1,302	..	1,338	..	1,473	3,258	10,836	18,207
Do do 18 and 19 miles	...	...	...	...	...	...	907	..	.	907
Do do 20 and 22 miles	...	...	...	..	..	...	147	3,266	4,884	8,297
Do do 23 and 25 miles	..	...	...	..	...	...	..	5,214	.	5,214
Do do 26 and 27 miles	...	..	...	...	1,238	...	...	...		1,238
Do do 50 and 53 miles	..	...	...	..	...	2,793	1,779	5,386	3 271	13,229
Do at 68 miles	952	...	...	..	...	..	...	..	...	952
	3,512	2,607	4,092	5,884	8,247	14,420	7,928	45,395	45,205	137,290

PERMANENT WAY RELAID WITH RE-ROLLED IRON RAILS.

Main line between 18 and 19 miles ... ... 1,414 feet.

SIDINGS RELAID WITH STEEL RAILS.

	1879.	1880.	1881.	1882.	1883.	1884.	1885.	Total.
	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.
Sidings at Darling Harbour	...	...	...	...	182	370	..	552
Do at Sydney	...	3,810	3,455	1,495	...	...		8,760
Do at Newtown	...	..	...	...	256	...		256
Do at Petersham	...	...	...	...	...	...	1,171	1,171
Do at Ashfield	...	...	178	...	...	...	.	178
Do at Homebush	...	...	...	...	...	202	.	202
Do at Rookwood	...	...	...	...	.	...	139	139
Do at Duck River	..	...	...	...	374	...	...	374
Do at Granville	743	829	...	...	169	...	...	1,741
Do at Cabramatta	...	...	576	...	...		...	576
Do at Liverpool	...	...	1,275	...	...	..	.	1,275
Do at Picton	...	...	...	...	...	326	...	326
	743	4,639	5,484	1,495	981	898	1,310	15,550

The following sleepers have been used for renewals of main lines during the year:—

Sydney to Granville Junction	1,467
Granville Junction to Picton	3,581
Picton to Goulburn	2,146
Goulburn to Albury	30,883
JERILDERIE LINE.	
Narrandera to Jerilderie	8
Total	38,085

The following sleepers have been used in new sidings laid in during the year:—

Sidings at Darling Harbour	3,801
Do at Sydney	250
Quadruplication of line, Eveleigh to Sydney	300
Sidings at Eveleigh	1,376
Do at Stanmore	250
Do at Petersham	180
Do at Rookwood	302
Do at 12 miles 10 chains	140
Do at Granville	300
Do at Merrylands, for Morris Bros.	400
Do at Ingleburn	150
Do at Binalong	695
Do at Junee Junction	2,509
Do at Doodle Cooma	184
SOUTH-WESTERN LINE.	
Sidings at Yanko	192
JERILDERIE LINE.	
Sidings at Gillinbah	260
Total	11,289

The following quantity of ballast has been used on main lines during the year:—

	cubic yards.
Sydney to Granville Junction	3,068
Granville Junction to Goulburn	7,275
Goulburn to Albury	11,153
Albury to River Murray	70
Junee Junction to Hay	1,422
Narrandera to Jerilderie	3,485
Joppa Junction to Tarago	4,670
Tarago to Bungendore	2,380
Murrumburrah to Young	1,434
Total	34,957

RAILWAY FENCE WIRED DURING THE YEAR:—

Bounding the Property of	Sides.	Mileage. From		Mileage. To		No. of Wires.	Length.	
		miles.	chs.	miles.	chs.		miles.	chs.
Mr. Sands	2	127	0	129	29	2	4	58
Mr. Jobson	2	129	29	131	20	2	3	62
Mr. Hurley	2	256	40	257	15	3	1	30
Total							9	70

ILLAWARRA LINE.

Eveleigh to Hurstville—Double Line—Length, 9 miles 40 chains.

During the year this line and the several works thereon have been kept in good order and repair.

The embankments, where showing signs of settlement, have been made up, the line lifted and ballast renewed where required, and the permanent-way is now in good working order.

The following works have been carried out during the year:—

Erskineville—

New platform and waiting-shed erected.
Gas laid on to new signals.
Closet and urinal accommodation provided.
Water laid on to platforms.
Water laid on to porter's house.
Blackboards supplied and fixed.
Fence removed and refixed at porter's house.

St. Peter's.

Water laid on to urinal.
Water laid on to tanks.
Lamps fixed on steps.
Office fittings supplied.
Additional kerosene lamps fixed.
Gate-house fenced.

Marrickville—

Underground tanks lined at gate-house and station.
Box erected for gatekeeper at siding.
Office fittings supplied.
Additional kerosene lamps fixed.
Approaches to station rolled and blinded.
Urinals altered at station.
Wicket-gates erected up and down side.
Underground tank lined with brick at Marrickville road crossing.
Lamp erected at crossing.
Lamp erected at wicket-gate.

Tempe—

Office fittings supplied.
Lamps erected on up and down platforms.

Arncliffe—

Lamp fixed.
Office fittings supplied.
Steps erected up embankment to Station-master's residence.
New wicket-gate erected.

Rockdale—

Lamps erected on up and down sides and over steps at station.
Turntable fixed for Tramway Co.
Wicket-gate fixed at down side entrance.
Shed erected over pump.
Office fittings supplied.
Roadway fenced off.

Kogarah—

Office fittings supplied.
Wicket-gate erected.
Lamps erected on up and down platforms.

Hurstville—

Lamps fixed.
Office fittings supplied.
Picket fence and bye posts fixed around open drain.
Lamps erected on up and down platforms, and wicket-gate fixed with lamp over it.
Fence erected around Station-master's house.
Turnstiles fixed.

Miscellaneous.

Notices erected at level crossings.
Stop-blocks fixed at stations and sidings.
Private crossing closed 5m. 40ch.
Spikes fixed on top of picket fence, Erskineville.
Gates refixed at 5m. 40ch.

The following sidings have been laid in during the year:—

Rockdale—

	Length in feet.
Junction of Saywell's Tramway with main down line	509
Through road to do	158

Hurstville—

	Length in feet
Compound cross-over road	331
Total... ...	998

The following sleepers have been used in new sidings laid in during the year:—

Junction of Saywell's Tramway, Rockdale... 221

The following quantity of ballast has been used for maintenance of the line during the year:—

Eveleigh to Hurstville ... ... 961 cubic yards.

GREAT

GREAT WESTERN RAILWAY.

Granville Junction to Parramatta—Double Line—Length, 1 *mile* 9 *chains.*

Parramatta to Byrock—Single Line—Length, 439 *miles* 26 *chains.*

Byrock to Bourke—Single Line—Length, 48 *miles* 40 *chains. Opened for public traffic,* 3*rd September,* 1885.

Wallerawang to Mudgee—Single Line—Length, 85 *miles* 18 *chains.*

Orange to Molong—Single Line—Length, 22 *miles* 50 *chains. Opened for public traffic,* 21*st December,* 1885.

The permanent way and various works on these extensions have been well maintained throughout the year.

From Granville to Springwood the work of renewing the sleepers and relaying with steel rails has been steadily continued where required, and on the Blue Mountains considerable numbers of sleepers have been replaced by new ones. At Dargan's Creek 3 miles 55 chains of line has been relaid with re-rolled iron rails.

The timber bridges and culverts between Granville Junction and Bathurst have been kept in safe running order.

The fences are not in a satisfactory state, and extensive renewals will have to be made during the ensuing year.

The permanent way, from Bathurst to Nevertire, is in good order, but between Bathurst and Orange, and Orange and Wellington, the renewals of rails and sleepers have been heavy, and it is anticipated that further expenditure in this direction will have to be incurred in 1886.

The timber bridges, and culverts, &c., have been well maintained, but the piles and braces of some between Dubbo and Nevertire have been attacked by the white ants. Measures have been taken to prevent damage by these insects.

The fencing between Bathurst and Orange badly requires renewing. A portion (13 miles) has been taken in hand.

The permanent way and other works on the section, Byrock to Bourke, are in very fair order.

On the Mudgee line the permanent-way is in good running order, but the cuttings between Capertee and Ilford require constant watching, the strata, through which some of them pass, being of a shaly nature, crumbling after exposure to the weather, and falling down with the vibration of the traffic. Other cuttings are through loamy and gravelly soils in which large stones are imbedded, and as the rains wash away the soil from around these stones they threaten to fall. An extra gang of twenty men was engaged during the greater part of the year in removing loose and dangerous rocks and debris, but as the work progressed the number of men was reduced.

The embankments at Brogan's Creek settled considerably after the rains which fell towards the end of the year.

The slip at Hunt's Cutting, near Mudgee, has been removed by the Construction Branch, and traffic resumed over that portion of the line.

The timber bridges, &c., are in good order, though in a few places the white ants made their appearance but were promptly checked.

From Orange to Molong the permanent-way, bridges, buildings, and other works are in good order.

The following works have been done during the year in addition to ordinary repairs, and renewals of a minor nature :—

Parramatta—

Roof of station renewed.
Gas laid on to up and down distant signals.
Drainage provided for abutments to four bridges.
Foot-bridge, Benevolent Asylum, erected.
Waiting-shed, Domain platform, re-erected.
Gas laid on to new interlocking signals.
10-ton crane erected.
Bye-posts fixed at gate of station.
5-ton crane removed and re-erected.

Parramatta—continued—

Gas stoves fixed in refreshment-rooms, up and down sides.
Paling fence erected at crossing from station to Harris Park.
Fence and gates removed at Wentworth-street.
Station building coloured and repaired by contract.
Foot overbridge painted by contract.

Harris

Harris Park—
New waiting-rooms and w.c. erected.
Gas lamps erected.
Tank fixed at waiting-shed.
New overbridge erected by contract.

Blacktown—
Cattle-pen erected.
Fittings provided for new station.
Gutter and gratings fixed along verandah of station.
Fence renewed at station-yard.
Platform tar-paved by contract.

Rooty Hill—
New cart weighbridge erected.

Penrith—
Pipe lowered, locomotive water supply, Nepean River.
Turnstiles erected at Heard's Crossing.
Covering over pump connected with patent gas apparatus erected.
Platform erected alongside the viaduct.
Tank fixed in new lamp-room.
Foundations of centre pier of tank underpinned.
Closets converted into dry-earth-closets at gate-house.
Closets at station-master's house and engine-drivers' quarters converted into dry-earth-closets.
Additions to refreshment-room provided.

Emu Plains—
Old station removed.
Signals altered and new signals erected.
Windows fixed and concrete floor laid.
New goods-shed erected.
Shed erected over copper at Station-master's house.
Gutter altered, main roof of station.
Tank and stand fixed at Station-master's house.
Fencing and gates erected (new station).
Weatherboard erected fence around Station-master's yard (new station).
Galvanized iron fence on platform erected (new station).
Fence at Sydney end of platform reset.
Gate erected at Hudson Brothers' siding.
Closets converted into dry-earth-closets.

Lucasville—
Box lined at bottom points.

Glenbrook—
Tank fixed at Station-master's residence.

Springwood—
Underground water-tank and cesspit constructed by contract.
Excavation for new sidings carried out by contract.
Seats provided in waiting-room.
Two patent scotch blocks fixed.
Fence erected on new platform.

Faulconbridge—
One patent stop block fixed.
Platform lengthened and buildings renewed.

Linden—
Two patent scotch blocks fixed.
New tank supplied to No. 8 gate-house.
New concrete dam constructed for water supply.

Lawson—
Patent scotch blocks fixed.
Additional ash-pit constructed.
Floor of front room renewed, and picket fence erected in front of Emphon's house.

Wentworth Falls—
Patent stop-blocks fixed.
Platform lengthened and widened.

Katoomba—
Signals erected at Gladstone Coal Co.'s siding.
Patent scotch blocks fixed.
Buffer stops and scotch blocks fixed.
Two new home signals erected, up distant and present home signals removed.

Medlow—
Patent scotch blocks fixed.
Guard rails laid at level crossing.

Blackheath—
Patent scotch blocks fixed.
Level crossing removed and re-erected at different site.
Goods-shed, 20′ × 15′, erected.
Portion of bank at siding removed.

Mount Victoria—
Patent scotch blocks fixed.
Pump and generator of gas-machine covered in.
Alterations effected to telegraph and parcels office.
New 50-feet turn-table laid in.
Alterations and additions to passenger station in progress by contract.
New underground tank constructed by contract.

Hartley Vale—
Signals erected for protection of New South Wales Shale and Oil Co.'s siding.
Gate erected at New South Wales Shale and Oil Co.'s siding.
Patent scotch blocks fixed.

Mount

Mount Wilson—
Patent scotch block fixed.
Small goods-shed erected, with shed for horses and vehicles.

Clarence Siding—
Patent scotch blocks fixed.

Zig-Zag Top Points—
Lamp and post erected.

Zig-Zag Bottom Points—
Lamp and post erected.
Foundation for water-crane constructed.

Esk Bank—
New residence for Station-master, erected by contract.
Paling and picket-fence erected around, and Venetian blinds fixed in, Station-master's residence.
Signal-box constructed for interlocking at Mort's siding and Vale of Clwydd siding.
Catch points put in at Mort's and Vale of Clwydd sidings.

Lithgow—
Signal-box for interlocking erected.

Bowenfels—
Level crossing at 98 miles 53 chains removed 110 feet further west.
Patent scotch blocks fixed.

Marrangaroo—
Foundations for pumping-engine constructed.
Coal platform and shoot erected.

Wallerawang—
Grant's patent filters fixed.
Two lamps and posts erected.
Door erected to urinals.
Bathroom constructed under loco. tank.
Interlocking signal-boxes erected.
Hay gauge erected.
New hydrant fixed for public water supply.
Water laid on from main to employés houses.
Eight lockers fixed in engine-shed.

Rydal—
Patent scotch blocks fixed.

Sodwalls—
Patent scotch blocks fixed.

Tarana—
Patent scotch blocks fixed.

Locksley—
Patent scotch blocks fixed.

Brewongle—
Patent scotch blocks fixed.
Additional bedroom erected to Station-master's residence.

Raglan—
Patent stop-block fixed.

Kelso—
Carriage-dock altered.
Stove fixed in Station-master's residence.

Bathurst—
Water-closets converted into dry-earth-closets.
Partition erected and window put in guard's room.
2 lamps and posts erected on platform.
Signal-box B raised 4 feet.
6 new lamps erected at station; old ones removed.
Alterations made in ladies' room.
Notice-boards for sub-way and platform fixed.
Alterations made in parcels office.
Approach to station improved.
Additions erected to foundry.
Gas laid on locomotive-sheds, &c.
Gas laid on to station.
Water laid on to ashpit at turntable-road.
New brick dock constructed.
Additional improvements effected to ladies' room.
50 feet ashpit constructed in carriage-shed.
Cesspit replaced by dry-earth-closets, &c., at guard's barracks.
Foundations for 3 water-cranes constructed.
Drainage of yard improved.
Alterations of roads in carriage-shed carried out.
Combined fire and locomotive tanks and bath approaching completion, partly done by contract.

Perth—
House erected for gatekeeper.
Up distant-signal erected.
Commissioner's land fenced in.

Wimbledon—
Gates removed and fence restored.
Yard pitched, &c.
Alterations, &c., effected to station buildings.

Newbridge—
Commissioner's land fenced in.
Gate put in fence to give access to church ground.
Two box-drains put in at 164 miles 6 chains.
Two box-drains for level crossing put in at 165 miles 25 chains.
Two box-drains for level crossing put in at 165 miles 35 chains.
Two box-drains for level crossing put in at 166 miles 2 chains.
Two box-drains for level crossing put in at 166 miles 35 chains.
One box-drain for level crossing put in at 167 miles 22 chains.
Two box-drains for level crossing put in at 168 miles 69 chains.
Wicket-gate and wall-lamp erected.
New brick culvert at 167 miles 12 chains.

Blayney—
New well sunk, 16 feet internal diameter, 40 feet deep.
Grant's patent filter fixed.

Blayney—

Blayney—
New loading-stage constructed.
Portable fence and lamp erected at dock.
Boiler and engine-house erected.
Junction of Murrumburrah to Blayney line laid in.
Station-master's residence nearly completed by contract.

Millthorpe—
Gates put in fence.
Do at 179 miles 2½ chains replaced by 15 feet gates.

Spring Hill—
New station erected and new underground tank constructed by contract.
New stove fixed in Station-master's residence.

Huntley—
Two signals and gate erected to siding.

Orange—
Down distant and auxiliary signals removed 200 yards eastward.
New up home-signal erected.
House, 30 feet × 16 feet × 9 feet, erected over pumping machinery, and old house removed.
Approaches to footbridge drained.
Junction of Orange to Molong line laid in.

Kerr's Creek—
Drawer fitted in office.
Additional 60 feet added to loading-stage.

Warne—
Wicket gate erected.
15′ gate and posts erected.

Store Creek—
Small office and temporary platform erected.

Ironbarks—
Stockyard of portable hurdles erected.

Mumbil—
Up and down distant and semaphore signals erected.
Temporary platform erected.
Temporary residence for porter in charge erected.
Level crossing gates and fences erected.
Temporary offices erected.

Springs—
New wicket gate erected.
Road from platform to gates formed.

Wellington—
Grant's patent filter fixed.
Alterations and additions to ladies room made.
Timber overbridge erected at 248 miles 44 chains.
Temporary additions made to refreshment-room.
Shelving fixed in Examiner's house.
New quarters for drivers erected by contract.
Fittings provided in new quarters for drivers.
Private crossing gates at 248 miles 44 chains removed.

Wellington—continued.
Alterations made in telegraph-office.
Buffer stops erected.
21 feet of new boxing laid.
Two new home-signals erected.

Mary Vale—
New 18″ drain 90 feet long constructed.
Two box drains made for level crossing at 258 miles 75 chains.

Ponto—
Temporary platform constructed.
Two signals erected.
Station offices erected.

Murrumbidgerie—
Hay gauge erected.

Dubbo Stock Yards—
Alterations made to flaps of sheep-yard.

Dubbo—
Buffer-stops erected.
Shed 12′ × 12′ erected for storing casks.
Pile-bridge 20′ × 5′ erected.
Timber-flume erected.
Fittings fixed in Traffic-foreman's and Station-master's offices.
Alterations and additions to signals carried out.
Improvements made to drain opposite Messrs. Thoms & Co.'s property.
Alterations of roads effected for new water cranes.
Three new home-signals erected.

Narromine—
Grant's patent filter fixed.
New house for pumpers erected.

Trangie—
Wicket-gate put in fence opposite Campbell's Hotel.
New concrete platform erected.
Bath-room constructed under locomotive tank.
Goods-shed 30′ × 20′ erected.
House removed from Rylstone and erected as residence for porter.
New brick house erected for porter in charge.
New house for pumper erected.
Drainage of ponds carried into tank.

Nevertire—
Grant's patent filter fixed.
Shower-bath constructed under tank.
New house for pumper erected.

Mullengudgery—
House removed from Rylstone and erected for porter-in-charge.
Earth-closets and urinals erected.
Residence of porter-in-charge fenced in.
Notice boards erected.
Side cuttings filled in.

Nyngan—
Grant's patent water-filter fixed.
Reservoir piled.
Verandah and fences erected to Government cottages.

Nyngan—continued.

Picket fence and wicket gates erected.
Refreshment-rooms erected by contract.
Temporary additions made to old refreshment-room.
New house for pumper erected by contract.
Permanent protective works to dam and bridge carried out.
Stock-yards pitched with 9″ stone—288 sup. yards.

Wilga—

Stove fixed in office.

Coolabah—

Timber platform erected.
Station buildings erected.
Two temporary offices removed from Byrock to Mann, Carey, & Co.'s siding, at 426 miles 30 chains.

Glenariff—

Office converted into waiting-room.

Byrock—

2 distant and 1 home semaphore signal erected.
Wicket-gate erected.
10-ton crane erected.

Moculta—

Two home and two distant signals erected.

498 *miles* 55 *chains—*

Level-crossing gates, &c., erected.

Bourke—

One home and one distant signal erected.
10-ton crane erected.
Cart weighbridge and office erected.
Bath-room constructed under loco. tank.

Miscellaneous.

Temporary girders placed in bridge 14 miles 12 chains west.
Tools and implements made for extension Orange to Molong.
Tools and implements made for extension Nyngan to Bourke.

MUDGEE LINE.

Piper's Flat—

Box office from Hunt's Cutting erected.

Ben Bullen—

Two patent stop-blocks fixed.

Capertee—

One patent stop-block fixed.

Carlo's Gap Coal Co.—

Two signals erected.

Ilford—

Two distant and one home signal erected.
Stock-yards removed to Lue.
Three patent stop-blocks fixed.

Rylestone—

Two 12-feet gates erected.
Two patent stop-blocks fixed.
Bank at Tong Bong (163 miles 60 chains) piled.

Lue—

Two distant and one home signal erected.
Wicket-gate fixed.
Gate at 174 miles 47 chains made to close across the line.

Bumberra—

Semaphore signal erected.

Mudgee—

10-ton crane erected.
Garden seats provided at platform.
Two closets and urinals erected for locomotive employés.
Fittings provided in ticket-office.
Two notice boards fixed.
Seven lamp-posts erected.
Cart weighbridge fixed.
One distant and one home signal erected.
Distant signal at stock-yards erected.
Hay-gauge erected.
Bathroom constructed under tank.
Water laid on to Station-master's residence from locomotive tank.
Closets converted into earth-closets.
Water reserve fenced in.
Additional manhole made in stock-yards.
Fence erected across Station-master's yard.
Fence erected from loading stage to house fence.

MISCELLANEOUS.

Grade boards made and fixed between Wallerawang and Capertee.

The following sidings have been laid in during the year:—

	feet.
Parramatta—	
New cross-over road to "down" line and goods siding	81
New through roads to main lines ...	352
Two pairs slip points	36
Wentworthville—	
New main "up" line	668
Single compound cross-over road ...	68
Siding extended "up" line	629
Seven Hills—	
Through roads to main lines	346
Main "up" line	305
Blacktown—	
Main "up" line between 21 and 22 miles	205
Through road to main line	169
Double compound cross-over road ...	393
Rooty Hill—	
Main "up" line between 25 and 26 miles	676
New through road	178
South Creek—	
Main "up" line between 29 and 30 miles	318
New through roads	180

	feet.
Cross Roads—	
New through road	157
Springwood—	
Dead end siding extended and converted into loop siding	789
Dead end siding laid in	390
63 *miles—*	
Loop siding for Gladstone Coal Co. ...	1,813
Dead end siding for do ...	196
Mount Victoria—	
Through road	166
Hartley Vale—	
New siding for N.S.W. Shale and Oil Co.	595
Perth—	
Cross-over road	229
Blayney—	
Dead end siding	367
Wimbledon—	
Dead end siding extended	86
Huntley—	
Dead end siding for Mr. W. J. Carroll	350
Orange—	
New siding for Orange Gas Co. ...	347
Second line, Orange to Molong Junction	2,889
Cross-over road for do	200
Store Creek—	
Loop siding	862
Mumbil—	
Loop siding	1,121
Wellington—	
Loop sidings	1,733
Ponto—	
Loop and dead end sidings	1,062
Trangie—	
Dead end siding	400
426 *miles* 30 *chains—*	
Junction of ballast siding for Messrs. Mann, Carey, & Co.	100
MUDGEE LINE.	
Capertee—	
Dead end siding for Carlo's Gap Coal Co.	804
Total...	19,260

CULVERTS constructed during the year.

At		Number.	Number of Openings.	Size of Openings.	Remarks.
Miles.	Chains.			ft. in.	
21	20	1	2	2 0	Timber culvert.
21	47	1	1	4 0	Brick culvert.

CULVERTS lengthened during the year.

At		Size of Culvert.	Number of Openings.	Lengthened.
Miles.	Chains.	ft. in.		ft. in.
21	35	5 0	1	52 6
35	45½	3 0	1	11 0
51	70	2 0	1	10 0

PERMANENT-WAY RELAID WITH STEEL RAILS.

Mileage.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	Total.
	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.
Between 13 and 14 miles, Up line.	...	...	...	...	...	175	...	...	...	...	...	175
Between 13 and 14 miles, Down line.	...	...	...	1,451	2,106	417	...	...	...	...	...	3,974
Between 14 and 15 miles.....	...	...	1,082	...	106	...	...	...	...	...	...	1,188
Do 15 and 17 miles.....	...	...	...	...	...	...	...	...	...	8,005	...	8,005
Do 17 and 19 miles.....	...	...	...	...	...	...	...	...	1,449	...	9,068	10,517
Do 19 and 26 miles.....	...	...	...	...	...	...	...	...	...	...	895	895
Do 26 and 27 miles.....	...	...	...	...	...	...	572	...	...	...	...	572
Do 29 and 33 miles.....	...	...	...	...	...	...	...	...	...	...	218	218
Do 33 and 34 miles.....	...	...	...	...	...	...	3,768	...	...	...	...	3,768
Do 34 and 35 miles.....	...	...	...	...	...	...	...	...	...	1,020	2,413	3,433
Do 35 and 36 miles.....	...	...	...	...	...	168	4,695	...	...	657	2,139	7,659
Do 36 and 37 miles.....	...	...	...	147	...	...	...	2,300	...	657	2,519	5,623
Do 37 and 38 miles.....	...	...	...	...	...	...	...	5,280	...	...	...	5,280
Do 38 and 39 miles.....	...	...	2,204	2,601	...	...	...	6	...	1,782	...	6,593
Do 39 and 40 miles.....	...	...	...	...	...	3,038	...	...	...	...	...	3,038
Do 40 and 43 miles.....	...	...	...	...	...	...	...	4,606	...	4,456	3,087	12,149
Do 43 and 44 miles.....	...	...	1,055	...	...	...	...	...	1,345	1,902	1,299	5,601
Do 44 and 45 miles.....	...	...	494	...	...	...	...	...	...	1,902	2,810	5,206
Do 45 and 46 miles.....	...	...	819	...	...	...	...	...	...	...	3,539	4,358
Do 46 and 47 miles.....	...	...	...	...	...	...	3,387	...	...	...	...	3,387
Do 47 and 48 miles.....	...	...	...	...	...	...	...	660	...	...	...	660
Do 48 and 49 miles.....	...	...	...	...	...	...	...	4,356	...	...	...	4,356
Do 49 and 50 miles.....	...	...	...	...	...	...	5,280	...	...	...	...	5,280
Do 50 and 53 miles.....	5,325	3,644	10,560	...	...	924	...	...	...	...	...	20,453
Do 55 and 56 miles.....	...	...	...	...	...	...	...	2,640	2,640	...	...	5,280
Do 56 and 57 miles.....	...	...	...	...	...	2,640	...	...	1,518	...	...	4,158
Do 57 and 58 miles.....	...	...	...	...	...	...	5,280	3,960	...	...	...	9,240
Do 58 and 62 miles.....	...	...	...	13,200	...	...	...	...	792	...	...	13,992
Do 62 and 63 miles.....	...	...	...	...	...	...	...	...	1,188	...	...	1,188
Do 63 and 67 miles.....	...	...	...	...	7,920	4,290	...	3,960	...	...	...	16,170
Do 66 and 68 miles.....	...	...	...	...	...	...	6,600	...	3,630	...	...	10,230
Do 68 and 69 miles.....	...	...	...	...	...	...	...	3,300	...	...	...	3,300
Do 72 and 74 miles.....	...	...	...	...	...	...	...	...	...	3,300	...	3,300
Do 76 and 77 miles.....	...	...	...	...	...	...	...	...	2,640	...	...	2,640
Do 89 and 90 miles.....	...	...	...	...	...	...	...	3,036	...	...	...	3,036
Do 90 and 91 miles.....	...	...	...	...	...	...	...	3,366	...	...	...	3,366
Do 91 and 92 miles.....	...	...	...	...	...	4,884	...	396	...	...	...	5,280
Do 144 and 145 miles ...	...	...	...	...	...	...	...	...	...	330	1,518	1,848
Do 145 and 146 miles ...	...	...	4,224	...	...	...	...	...	...	2,310	...	6,534
Do 147 and 148 miles ...	...	...	462	...	...	...	...	...	...	396	...	858
Do 148 and 149 miles ...	...	...	990	...	...	...	...	...	...	...	2,178	3,168
Do 149 and 150 miles ...	...	...	1,254	...	...	...	...	...	...	...	...	1,254
Do 151 and 153 miles ...	...	...	...	...	...	...	...	...	...	2,574	1,320	3,894
Do 153 and 154 miles ...	...	...	...	...	...	5,214	...	...	1,320	1,188	...	7,722
Do 154 and 157 miles ...	...	...	...	...	9,702	...	...	...	...	858	3,960	14,520
Do 157 and 158 miles ...	...	...	660	...	...	...	...	...	...	792	1,848	3,300
Do 158 and 159 miles ...	...	...	2,244	...	...	...	...	...	...	1,056	1,584	4,884
Do 159 and 160 miles ...	...	...	...	...	...	...	...	...	...	4,686	...	4,686
Do 160 and 162 miles ...	...	...	...	...	...	2,640	...	5,280	...	2,244	...	10,164
Do 162 and 163 miles ...	...	...	198	...	...	...	...	...	...	...	...	198
Do 163 and 164 miles ...	...	...	924	...	...	...	...	...	...	1,782	1,782	4,488
Do 164 and 165 miles ...	...	...	1,386	...	...	...	...	...	...	1,518	726	3,630
Do 165 and 166 miles ...	...	...	858	...	...	...	...	...	...	...	...	858
Do 166 and 169 miles ...	...	...	...	...	...	...	22,440	...	528	3,894	2,376	29,238
Do 169 and 170 miles ...	...	...	...	...	...	...	...	...	...	1,848	1,650	3,498
Do 170 and 171 miles ...	...	...	132	...	...	...	...	...	...	...	...	132
Do 171 and 172 miles ...	...	...	528	...	...	...	...	...	...	330	3,036	3,894
Do 172 and 173 miles ...	...	...	...	...	...	...	...	...	...	330	...	330
Do 173 and 174 miles ...	...	...	2,640	...	...	...	...	...	...	...	...	2,640
Do 174 and 176 miles ...	...	...	...	...	...	...	...	4,884	2,772	528	...	8,184
Do 176 and 177 miles ...	...	...	858	...	...	...	...	...	...	594	...	1,452
Do 177 and 180 miles ...	...	...	...	...	...	...	...	...	...	7,590	3,234	10,824
Do 180 and 181 miles ...	...	...	2,112	...	...	...	...	...	...	...	...	2,112
Do 181 and 182 miles ...	...	...	1,254	...	...	...	...	...	...	462	2,706	4,422
Do 182 and 184 miles ...	...	...	...	...	...	...	...	...	...	6,336	...	6,336
Do 184 and 186 miles ...	...	...	...	...	...	...	...	...	...	1,716	264	1,980
Do 186 and 188 miles ...	...	...	...	...	...	...	...	5,280	...	528	1,518	7,326
Do 188 and 189 miles ...	...	...	...	...	...	...	...	...	1,584	1,386	...	2,970
Do 189 and 190 miles ...	...	...	...	...	...	...	...	...	...	2,970	...	2,970
Do 191 and 192 miles ...	...	...	...	...	...	...	...	...	1,452	5,742	...	7,194
Total.....	5,325	3,644	36,938	17,399	19,834	24,390	52,022	53,310	22,858	77,669	57,687	371,076

PERMANENT-WAY RE-LAID WITH RE-ROLLED IRON RAILS.

	1883.	1884.	1885.	Total.
	feet.	feet.	feet.	feet.
Between 25 and 26 miles	.....	.....	718	718
Between 47 and 49 miles	.....	7,854	.....	7,854
Between 54 and 55 miles	4,686	.....	.....	4,686
Between 56 and 57 miles	1,122	.....	.....	1,122
Between 61 and 62 miles	2,310	.....	.....	2,310
Between 62 and 63 miles	3,498	.....	.....	3,498
Between 76 and 77 miles	.....	1,914	.....	1,914
Between 77 and 79 miles	.....	10,758	.....	10,758
Between 81 and 82 miles	.....	.....	1,584	1,584
Between 84 and 85 miles	.....	.....	792	792
Between 85 and 88 miles	.....	.....	17,094	17,094
Between 95 and 96 miles	.....	2,706	.....	2,706
Total	11,616	23,232	20,188	55,036

SIDINGS RE-LAID WITH STEEL RAILS.

	1880.	1881.	1882.	1883.	1884.	1885.	Total.
	feet.	feet.	feet.	feet.	feet.	feet.	feet.
Sidings at Parramatta	.....	.....	.....	.....	.....	115	115
Sidings at South Creek	.....	.....	.....	.....	.....	180	180
Sidings at Penrith	.....	166	628	101	2,031	.....	2,926
Sidings at Hartley Vale	277	.....	.....	.....	.....	.....	277
Sidings at Eskbank	697	.....	.....	.....	.....	.....	697
Sidings at Wallerawang	.....	.....	.....	.....	.....	254	254
Total	974	166	628	101	2,031	549	4,449

Sidings re-laid with re-rolled iron rails:—

	feet
Sidings at Mount Victoria	726

The following sleepers have been used in new sidings laid in during the year:—

Sidings at Wentworthville	250
Do Seven Hills	340
Do Blacktown	680
Do Rooty Hill	670
Do South Creek	199
Do Springwood	302
Do Katoomba	700
Do Mount Victoria	56
Do Hartley Vale	24
Do Perth	73
Do Wimbledon	36
Do Blayney	150
Do Huntley	125
Do Orange	247
Do Store Creek	280
Do Mumbil	364
Do Wellington	609
Do Ponto	374
Do Trangie	134
Do 426 miles 30 chains	34

MUDGEE LINE.

Sidings at Capertee	132
Total	5,779

The

The following sleepers have been used for renewals during the year:—

Granville Junction to Bathurst	7,702
Bathurst to Bourke	9,520
Wallerawang to Mudgee	28
Total	17,250

The following quantity of ballast has been used on main lines during the year:—

	Cubic yards.
Granville Junction to Springwood	234
Springwood to Bathurst...	1,857
Bathurst to Dubbo	4,168
Dubbo to Bourke	6,449
Wallerawang to Mudgee	10,733
Total	23,441

RAILWAY FENCE WIRED DURING THE YEAR.

Bounding the property of—	Mileage. From	Mileage. To	No. of Wires.	Length.
	ms. chs.	ms. chs.		m. chs.
Mr. Henlen	160 76	162 0	3	1 4

RICHMOND LINE.

Single Line—Length, 16 *miles* 11 *chains.*

The Permanent-way has been kept in good running order during the year; but between 25¼ and 37¼ miles the line will very shortly need relaying, the rails being too light for the traffic. Extensive renewals of sleepers throughout the line will also be necessary before long.

The bridges, culverts, and other works are in good condition.

The following works have been carried out during the year:—

Windsor—

Turnstiles erected.

Fence, gates, and partition erected.

Fence dividing Gas Co. from station renewed.

Residence erected for station-master by contract.

Clarendon—

Platform for unloading horses renewed.

Richmond—

Windows lowered and new ones provided at engine-house.

MISCELLANEOUS.

Planks fixed outside the sleepers on bridge at 28 miles 55 chains.

PERMANENT-WAY RE-LAID WITH STEEL RAILS.

	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	Total.
	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.
Between 21 and 26 miles	2,642	3,192	.....	10,563	2,215	.....	.....	.....	18,612
Between 32 and 35 miles	.....	.....	.....	795	525	.....	1,239	.....	2,559
Between 37 and 38 miles	.....	.....	.....	.....	1,659	.....	.....	.....	1,659
Total	2,642	3,192	.....	11,358	4,399	.....	1,239	.....	22,830

Sidings relaid with steel rails during the year:—

	feet.
At Riverstone	212

The following quantity of ballast has been used for maintenance of the line during the year:—

	cubic yards.
Blacktown to Richmond...	90

LIST

List of Machinery in Permanent-way Workshops on 31st December, 1885.

At Redfern.

Carpenters' shop—

1 30-h.p. semi-portable engine.
1 dimension planer.
1 wood-turning lathe.
2 circular saw benches.
2 tenoning machines.
1 horizontal boring machine.
1 cross-cutting machine.
1 band-saw machine.
1 fret-saw machine.
1 variety worker.
2 mortising machines.
1 surface planing machine.

Fitting-shop—

2 12-inch lathes.
1 10½-inch lathe.
2 10-inch lathes.
1 6-inch lathe.
1 small hand power drilling machine.
6 vertical drilling machines.
1 radial drilling machine.
2 slotting machines.
5 planing machines.
2 screwing machines.
1 shaping machine.
1 stone-dressing machine.

Smiths' shop—

1 12-h.p. portable engine.
1 16 fires fan.
1 20 fires fan.
2 punching and shearing machines.
2 steam hammers.
1 wood-turning lathe.
1 10-h.p. semi-portable engine.
1 plate-bending machine.

Plumbers' shop—

3 burring machines.
3 swedging machines.
2 folding machines.
1 punching machine.
1 guillotine machine.
1 set tinsmiths' rollers.
1 washer-punching machine.
1 pipe-punching machine.
1 pipe-screwing machine.
1 curving machine.
1 wiring machine.
1 thick edge machine.

Testing room—

1 100 tons Tangye's iron testing machine and pumps.
1 cement testing machine.

At Goulburn.

Fitting-shop—

1 25-h.p. semi-portable engine.
1 planing machine.
1 slotting machine.
1 shaping machine.
1 vertical drilling machine.
1 screwing machine.
1 10″ centre lathe.
1 6″ centre lathe.
1 Sturtevant's blower.

Carpenters' shop—

1 combination dimension planing machine.
1 band-saw.
1 mortising machine.
1 universal wood-worker.
1 sash and door machine.
1 wood-turning lathe.
1 large circular saw bench and 4 feet saw.

Carpenter's shop—continued.

1 small circular saw bench and saws.
1 saw gummer.
1 band-saw setting and filing machine.
1 planing machine knife grinder.

Smiths' shop—

1 14-h.p. semi-portable engine.
1 punching and shearing machine.
1 steam hammer.
1 screwing machine (hand power).
2 vertical drilling machines (hand power).

Tinsmiths' shop—

1 corrugated iron curving machine.
1 pair rollers.
1 folding machine.
2 burring machines.
2 wiring machines.
1 grooving machine.

At Bathurst.

Blacksmiths' shop—

1 punching machine and shears.
1 steam hammer.
1 oliver.

Fitting and Turners' shop—

1 30-h.p. double cylinder engine and boiler.
1 12 feet planing machine.
1 10-inch slotting machine.
1 12-inch shaping machine.
1 12-inch slide and screw-cutting lathe.
1 7-inch do do
1 screwing machine.
1 large drilling machine.
1 small do
1 No. 5 blast fan.
1 8-h.p. winding engine and boiler.
1 4-inch double acting Tangye's pump.

Plumbers' shop—

1 lead washer punching machine.
1 thick edge machine.
2 burring machines.
1 swedging machine.
1 folding machine.
1 setting down machine.
2 pairs rollers.

Carpenters' shop—

1 planing machine.
1 moulding and planing machine.
1 general joiners' machine.
1 band saw.
1 circular saw bench for 30″ saw.
1 mortising machine.
1 tenoning machine.
1 turning lathe.
1 emery stone grinder.

ACCOUNT of Permanent-way Rails turned, renewed, and broken, from the opening of the various Extensions Great Southern, South-western, Western, and Richmond Lines, to 31st December, 1885.

Extensions.	Length		Date when opened for traffic.	Time opened for traffic up to 31st December, 1885.		Rails.		
						Number turned.	Number renewed.	Number broken.
	ms.	chs		yrs.	ms.			
Sydney Yard to 1st mile-post	13	16	26 Sept., 1855	30	3	2,050	2,302	12
1st mile-post to Granville Junction						4,264	2,755	22
Granville Junction to Liverpool	8	68	20 Sept, 1856	29	3	2,221	858	3
Liverpool to Campbelltown	11	65	17 May, 1858	27	7½	2,357	454	8
Campbelltown to Menangle	6	50	1 Sept, 1862	23	4	583	118	12
Menangle to Picton	12	28	1 July, 1863	22	6	1,395	592	1
Picton to Mittagong	23	75	1 Mar, 1867	18	10	5,170	2,497	10
Mittagong to Moss Vale	8	62	2 Dec, 1867	18	1	567	110	10
Moss Vale to Marulan	28	57	6 Aug, 1868	17	4	1,066	192	27
Marulan to Goulburn	19	73	27 May, 1869	16	7	758	289	25
Goulburn to Gunning	30	20	9 Nov, 1875	10	2	1,352	3,630	103
Gunning to Bowning	29	26	3 July, 1876	9	6	1,248	4,143	51
Bowning to Binalong	14	42	1 Nov., 1876	9	2	529	972	6
Binalong to Murrumburrah	19	48	12 Mar., 1877	8	9½	397	1,288	4
Murrumburrah to Cootamundra	25	13	1 Nov, 1877	8	2	368	973	.....
Cootamundra to Bethungra	15	10	15 April, 1878	7	8½	224	765	5
Bethungra to Junee Junction	18	28	6 July, 1878	7	6	46	367	...
Junee Junction to Bomen	17	38	3 Sept., 1878	7	4	44	292	.....
Bomen to South Wagga	5	1	1 Sept., 1879	6	4	30	57	.....
South Wagga to Gerogery	58	63	1 Sept, 1880	5	4	.	1	1
Gerogery to Albury	18	37	3 Feb, 1881	4	11	..	...	.....
Albury to River Murray	1	0	14 June, 1883	2	6½	...	...	...
Sydney to River Murray	387	20	.....	.....		24,669	22,655	300
Joppa Junction to Tarago	19	71	3 Jan, 1884	2	0	.....	.	...
Tarago to Bungendore	19	19	4 Mar., 1885	0	10	.	.....	.....
Joppa Junction to Bungendore	39	10	.....	.....		.	.	...
Junee Junction to Narrandera	61	0	28 Feb, 1881	4	10	.....	15	15
Narrandera to Darlington	37	66	1 Sept, 1881	4	3	1	2	4
Darlington to Currathool	33	66	1 Mar, 1882	3	10	...	.	.....
Currathool to Hay	34	57	4 July, 1882	3	6	...	...	.....
Junee Junction to Hay	167	29	.....	.....		1	17	19
Narrandera to Jerilderie	64	49	16 Sept., 1884	1	3½	...	1	1
Murrumburrah to Young	17	57	26 Mar., 1885	0	9	...	...	...
Eveleigh to Hurstville	9	11	15 Oct, 1884	1	2½	...	.....	.....
Granville to Blacktown	8	24	4 July, 1860	25	6	1,793	984	19
Blacktown to Rooty Hill	3	66	12 Dec., 1861	24	0½	446	203	13
Rooty Hill to South Creek	3	75	1 May, 1862	23	8	316	105	1
South Creek to Penrith	4	66	7 May, 1862	23	6	655	328	2
Penrith to Wentworth Falls	27	70	11 July, 1867	18	5½	10,276	4,828	5
Wentworth Falls to Mount Victoria	14	70	1 May, 1868	17	8	5,040	2,626	5
Mount Victoria to Bowenfels	19	49	18 Oct., 1869	16	2½	5,502	2,345	14
Bowenfels to Wallerawang	7	46	1 Mar, 1870	15	10	1,307	560	.....
Wallerawang to Rydal	6	11	1 July, 1870	15	6	515	125	4
Rydal to Locksley	19	11	20 April, 1872	13	8	2,528	462	4
Locksley to Brewongle	5	31	1 July, 1872	13	6	974	104	.....
Brewongle to Raglan	5	3	4 Mar, 1873	12	10	353	54	...
Raglan to Kelso	3	0	1 May, 1875	10	8	384	32	.....
Kelso to Bathurst	1	35	4 April, 1876	9	9	407	281	4
Bathurst to Blayney	27	69	1 Nov, 1876	9	2	975	5,939	2
Blayney to Orange	19	75	19 April, 1877	8	8½	300	3,333	12
Orange to Wellington	55	55	1 June, 1880	5	7	.....	16	2
Wellington to Dubbo	28	11	1 Feb, 1881	4	11	...	5	5
Dubbo to Nevertire	63	5	20 Oct., 1882	3	2	...	..	.....
Nevertire to Nyngan	35	64	9 June, 1883	2	7	.....	.....	...
Nyngan to Byerock	78	10	2 Sept., 1884	1	4	...	..	.....
Byerock to Bourke	48	40	3 Sept, 1885	0	4	...	...	.....
Granville to Bourke	488	6	...	.....		31,771	22,330	92
Wallerawang to Capertee	22	74	15 May, 1882	3	7½	.	..	...
Capertee to Rylstone	30	41	9 June, 1884	1	7	...	...	.....
Rylstone to Mudgee	31	63	10 Sept., 1884	1	3½	.....	...	.....
Wallerawang to Mudgee	85	18	...	...		.	...	...
Orange to Molong	22	50	21 Dec., 1885	0	0½	...	....	...
Blacktown to Richmond	16	11	1 Dec., 1864	21	1	475	481	...

NOTE.—This statement does not include the relaying of the line from Sydney to Granville, laid originally with Barlow rails, and renewed with double headed rails, nor those portions of the Southern and Western Lines which have been and are being relaid with steel rails

The following shows the number of men per mile of single line engaged in maintenance of the Permanent Way:—

	Men per mile.
Sydney to Granville Junction, including Haslem's Creek Cemetery Branch, Darling Harbour Branch, and sidings, Head of Darling Harbour	1·30
Granville to Goulburn	1·02
Goulburn to River Murray	1·10
Junee Junction to Hay	0·86
Narrandera to Jerilderie	0·99
Joppa Junction to Tarago	1·21
Tarago to Bungendore	1·04
Murrumburrah to Young	1·13
Eveleigh to Hurstville	1·05
Granville Junction to Bathurst	0·80
Bathurst to Orange	0·80
Orange to Wellington	0·81
Wellington to Dubbo	0·17
Dubbo to Nevertire	0·87
Nevertire to Nyngan	0·53
Nyngan to Byerock	0·67
Byerock to Bourke	0·97
Wallerawang to Capertee	0·70
Capertee to Rylstone	0·90
Rylstone to Mudgee	0·76
Orange to Molong	0·88
Blacktown to Richmond...	0·93

GREAT NORTHERN RAILWAY.

Newcastle to West Maitland—Double Line—Length, 20 *miles* 18 *chains.*
West Maitland to Tamworth—Single Line—Length, 161 *miles* 28 *chains.*
Tamworth to Armidale—Single Line—Length, 78 *miles* 49 *chains.*
Armidale to Glen Innes—Single Line—Length, 64 *miles.*
Bullock Island Branch—Double Line—Length, 1 *mile* 43 *chains.*
Morpeth Branch—Single Line—Length, 4 *miles.*
North-western Branch, Werris Creek to Narrabri—Single Line—Length, 96 *miles* 45 *chains.*

The permanent way throughout these sections has been kept in very good running order.

From Murrurundi to Tamworth the road, which, on account of the softness of the formation, has given considerable trouble during the last few years, has been much improved, and is now in good order. The rails on this section are wearing out very rapidly.

The timber bridges and culverts, &c., throughout the line have been well maintained during the year. The wooden structure over Throsby's Creek, near Waratah, has been removed, and an iron bridge on brick piers substituted.

All the buildings and other works are in a very satisfactory condition.

The following works have been carried out during the year:—

Newcastle—

Residence erected for Traffic Manager by contract.
Gas laid on and Venetian blinds supplied to Traffic Manager's residence.
Underground tank, and tank for bath and pantry, &c., erected at Traffic Manager's residence.
Fence erected around Traffic Manager's residence.
Yard levelled at Traffic Manager's residence.
Residence for station-master, erected by contract.
Gas laid on, and Venetian blinds supplied to, Station-master's residence.
Underground tank constructed at do. do.
Erecting fence around do. do.
Yard levelled at do. do.
Glass roof erected over ticket office.
Shelving fixed in parcels' room.
Gas lamp erected at Market-street crossing.

Honeysuckle Point Workshops Yard—

Four box offices erected for Store Department.
Switches made for Burwood Coal Company.
Brick office erected for Store Department.

Honeysuckle

Honeysuckle Point Station—
Parcels' room erected, "down" platform.
Waiting-room erected, "up" platform.
Up platform extended.
Footway made from Hannell-street crossing to station.

Bullock Island Junction—
Additional water supply for Locomotive Department, pumping engine-house, &c, erected.
Two stop blocks erected.
Office for overseer of coal traffic erected.

Bullock Island Branch—
Twenty-ton weighbridge erected.
Junction laid in for Maryville Coal Company.
Gas laid on to berthing-master's residence and office.

Hamilton—
Parcels' room, lamp-room, and urinals erected.
Planked footway made across rails.

Hexham Station—
Waiting-room erected, "up" platform.
Closets and urinal erected do

Tarro—
Two home and two distant signals erected.
Two lamp posts erected on platforms.
Two do do do
Box for stores supplied.

Woodford—
Box for stores supplied.
Platforms extended, and level crossing removed and re-fixed.

East Maitland—
20,000-gallon tank, &c., erected for locomotive water supply.
Closets and urinals erected, "down" platform.
King-street extended.
Fixed seats substituted for chairs in ladies' room.

Morpeth—
Flaps fixed on sheep stage.

High-street—
Additional rooms erected to Station-master's residence.

West Maitland—
Kitchen and servant's room erected to Station-master's residence.
Fence erected at station.

Farley—
General waiting-room converted into ladies' room.
Platform extended 60 feet.
Letter-box, &c., fixed.

Allandale—
Ladies' waiting-room erected.

Greta—
Loading wharf constructed.
Underground tank constructed.

Branxton—
Stock-yards improved.

Rix's Creek—
Waiting-shed and platform erected.

Glennie's Creek—
Closet and urinal erected.
Residence for officer-in-charge erected by contract.

Musclebrook—
Loading wharf constructed.

Aberdeen—
Verandah to Station-master's residence erected.
Platforms connected.

Wingen—
Fire-place fixed in ladies' room.
Parcels room erected.
Stove fixed in Station-master's residence.
Closet erected to ladies' room.

Murrurundi—
20,000-gallon tank, &c., for locomotive water supply erected.
Coal stage re-erected.
Telegraph office converted into office for Station-master.
Wicket gate erected.
House for engine-men erected.

Doughboy Hollow—
Residence for officer-in-charge erected by contract.
Fence erected round officer's house.

Willowtree—
Improvements to stock-yard.

Quirindi—
Additions to office.

Werris Creek—
Refreshment-rooms erected by contract.
Venetian blinds supplied to refreshment-rooms.
Fence erected at refreshment-room.
Pump connected to kitchen, refreshment-room.
Platform extended 100 feet.

Currabubula—
Waiting-room erected.

West Tamworth—
Corrugated fence erected at Traffic Inspector's residence.
Locomotive water supply, erection of pumping engine house, &c.

Tamworth—
Underground tank constructed at gate-house, White-street crossing.
Underground tank constructed at Station-master's residence.
Gas-lamp erected, Fitzroy-st., by Gas Co.
Lamp-post erected, Denison-street.
Marius-street extended.

Tentinhull—

Tentinhull—
Waiting-shed and platform erected.

201 *miles* 40 *chains—*
Siding laid in and platform erected for Mr. George Farquharson.

208 *miles—*
Signal-box and signals erected.
Signalman's residence erected.

Macdonald River—
Residence erected for officer-in-charge.
Platform and waiting-shed erected.
Signals erected.
Booking office erected.
Closet and urinals erected.

Walcha Road—
Fence erected.
Stockyards improved.

Armidale—
Loading stage erected.
Parcels room converted into refreshment-room.
Fence erected to protect trees.
Cooking stove fixed in Station-Masters residence.
Gas laid on to station.

Guyra—
Lamp-room provided.
10-ton dray weighbridge erected.
Additional room erected to station.
Stockyards improved.
Gates erected.

291 *miles* 40 *chains—*
Level crossing constructed.

Llangothlen—
Waiting-shed and platforms erected.

Glencoe—
Level crossing removed and re-erected.

Stonehenge—
Waiting-shed and platform erected.

Glen Innes—
House for enginemen erected.
House for guards erected.
10-ton dray weighbridge erected.
Wicket gate erected Lambeth-street.
Points and crossing laid in at Proudfoot's Siding.
Counter in Telegraph Office shifted.
Furnace constructed for hot water for feet warmers.
Window put in goods-shed office.
Desk made for head porter.
Platform extended to crane.

NORTH-WESTERN LINE.

Breeza—
Level crossing constructed.

Curlewis—
Kitchen and verandah erected and weatherboards substituted for corrugated iron at officer's house.
Closet and urinal erected.

Baan Baa—
Residence erected for officer in charge.
Closet and urinal erected.
Booking offices and goods-shed erected.

Narrabri—
Gates altered to close across line.

MISCELLANEOUS.

Thirteen 400-gallon tanks and stands supplied to gate-houses between Tamworth and Armidale.
Lamps fixed on stations between Armidale and Glen Innes.
Thirteen 400-gallon tanks supplied to gate-houses between Armidale and Glen Innes (263 miles 50 chains to 321 miles 10 chains.)

CULVERTS constructed during the year.

Miles.	Chains.	Number.	Number of Openings.	Size of Openings.	Remarks.
172 North-western Line.	49	1	1	ft. in. 18 0	

The following sidings have been laid in during the year :—

	Feet.
Honeysuckle Point—	
Siding for store branch in workshops' yard	600
Bullock Island Branch—	
Siding for Wickham and Bullock Island Coal Company...	624
Siding for new weighbridge... ...	1,500
Junction for Maryville Coal Company	29
Farley—	
Additional siding	870
Lovhinvar—	
Siding extended	210
Greta—	
Additional siding	864
55 *miles* 30 *chains—*	
Siding for A. and H. Nowland ...	300

	Feet.
Musclebrook—	
Siding extended	300
Murrurundi—	
Additional sidings	1,016
Sidings extended	1,778
Quipolly—	
Siding	255
Duri—	
Siding	300
201 *miles* 40 *chains*—	
Siding for Mr. Farquharson	288
208 *miles*—	
Siding	726
Stonehenge—	
Siding	256
NORTH-WESTERN LINE.	
Breeza—	
Cattle siding extended	120
Total	10,301

PERMANENT-WAY RE-LAID WITH STEEL RAILS.

	1884.	1885.	Total.
	Feet.	Feet.	Feet.
Between 1 and 3 miles	.....	3,474	3,474
Between 3 and 5 miles	7,410	.....	7,410
Between 5 and 7 miles	5,334	1,905	7,239
Between 7 and 9 miles	480	831	1,311
Between 9 and 12 miles	.....	1,320	1,320
Between 12 and 15 miles	2,736	1,260	3,996
Between 15 and 20 miles	6,192	1,302	7,494
Between 20 and 25 miles	.....	1,368	1,368
NORTH-WESTERN LINE.			
Between 196 and 197 miles	.....	558	558
Total	22,152	12,018	34,170

The following sleepers have been used for renewals during the year:—

Newcastle to Murrurundi	1,480
Murrurundi to Tamworth	736
Tamworth to Glen Innes	Nil.
Werris Creek to Narrabri	2,614
Total	4,830

The following quantity of ballast has been used during the year:—

	Cubic yards.
Newcastle to Murrurundi	5,645
Murrurundi to Tamworth	2,808
Tamworth to Glen Innes	1,488
Werris Creek to Narrabri	3,150
Total	13,091

The following sleepers have been used in new sidings laid in during the year:—

Siding for store-branch, Honeysuckle Point workshops yard ...	100
Do for Wickham and Bullock Island Coal Company, Bullock Island Branch	146
Siding for new weighbridge, Bullock Island Branch	500
Junction for Maryville Coal Company, Bullock Island Branch ...	98
Siding at Farley	290
Do at Lochinvar	70
Do at Greta	290
Do for A. & H. Nowland, 55 m. 30 chs.	100
Do at Musclebrook	100
Do at Murrurundi	490
Do at Quipolly	89
Do at Duri	100
Do for Mr. Farquharson 201 m. 40 chs.	94
Do at 208 miles	250
Do at Stonehenge	85

NORTH-WESTERN LINE.

Siding at Breeza	40
Total	2,842

RAILWAY FENCE WIRED DURING THE YEAR:—

Bounding the property of	Mileage. From		Mileage. To		Number of wires.	Length.	
	miles.	chs.	miles.	chs.		miles.	chs.
Mr. Sevil	120	19	121	29	4	1	10
Mr. Hewitt	103	24	104	16	3	0	72
Total						2	2

ACCOUNT of Permanent-way Rails turned, renewed, and broken, from the opening of the various Extensions, Great Northern Railway, to 31st December, 1885.

Extensions.	Length.		Date when opened for traffic.	Time opened for traffic up to 31 December, 1885.		Rails. Number turned.	Rails. Number renewed.	Rails. Number broken.
	ms.	chs.		yrs.	ms.			
Newcastle to Murrurundi, including Morpeth and Bullock Island Branches	124	69	.....	.....		892	256	6
Murrurundi to Quirindi	24	78	13 Aug., 1877	8	4½	2	1,325	.....
Quirindi to Tamworth	37	23	15 Oct., 1878	7	2½	.....	155	.....
Tamworth to Moonbi	12	0	9 Jan., 1882	4	0	.....	14	.....
Moonbi to Uralla	51	57	2 Aug., 1882	3	5	.....	.....	.....
Uralla to Armidale	14	72	1 Feb., 1883	2	11	.....	.....	.....
Armidale to Glen Innes	64	0	19 Aug., 1884	1	4½	.....	1	1
Newcastle to Glen Innes, including Morpeth and Bullock Island Branches	329	59	.....	.....		894	1,751	7
Werris Creek to Gunnedah	40	40	11 Sept., 1879	6	3½	.....	126	.....
Gunnedah to Boggabri	24	5	11 July, 1882	3	5½	.....	.....	.....
Boggabri to Narrabri	32	0	4 Oct., 1882	3	3	.....	.....	.....
Werris Creek to Narrabri	96	45	.....	.....		.....	126	.....

LIST OF MACHINERY IN PERMANENT-WAY WORKSHOPS ON 31ST DECEMBER, 1885:—

1 band saw
1 general joiner
1 Gunther's fan
1 drilling machine
1 mortising machine
1 planing machine
1 iron planing machine
1 25-h.p. horizontal engine
1 Cornish boiler
1 steam hammer, 5 cwt.
1 7-wheel emery grinder
1 screwing machine
1 tenoning machine
1 punching and shearing machine
1 circular saw bench.

The following shows the number of men per mile of single line engaged in maintenance of the Permanent-way:—

	Men per mile.
Newcastle to Murrurundi, including Morpeth and Bullock Island Branches	0·83
Murrurundi to Tamworth	1·07
Tamworth to Glen Innes	0·90
Werris Creek to Narrabri	0·90

GENERAL

GENERAL REMARKS.

RAILWAYS.

A VERY considerable amount of work of every description has been carried out during the year, as the accompanying returns will show.

The Permanent-way on all the lines is in good order.

Immense numbers of new sleepers have been put in in a great many places, and the renewals of rails have been heavy. The quantity of ballast used during the year has also been large.

There are still many sleepers in the road which must be replaced during the ensuing year.

Considerable improvements have been made in the traffic accommodation at Darling Harbour, the lines and wharf having been extended to near the Pyrmont bridge; but this place will soon be crowded, and it is high time that some other place should be fixed on for the export of coal. In a very short time the Illawarra and Northern Lines will be completed, and no definite scheme, so far as I am aware, has been decided upon to provide for the wharfage accommodation which must necessarily be required if we are to conduct a coal traffic of any magnitude.

The repairs to all the timber bridges on all the lines have been well kept up, except the approach to the Wagga bridge, which is in the same state as regards the supports as when the Royal Commission examined it; as are also the iron bridges. Several of the old timber bridges are now being renewed with iron and brick.

A great improvement is being carried out in the widening of the Redfern tunnel, which will be completed before the close of 1886.

The system of interlocking points and signals has progressed satisfactorily, twenty-three places having been completed during the year, making a total of fifty-one stations, &c., at present at work on the several lines.

The Locomotive Workshops at Eveleigh are progressing; four of them, 300′ × 60′ each, have been completed. The foundations of twenty-two buildings of a similar size have been completed, and contracts have been let for the roofing, columns, &c., some of which are on the ground.

I have, &c.,

GEORGE COWDERY,

Engineer for Existing Railways.

TRAMWAYS—COMMISSIONER'S REPORT FOR 1885.

EXISTING LINES.

Lines.	Opened for Public Traffic.	Length of Single Line.		Length of Double Line.		Total Length.	
		ms.	chs.	ms.	chs.	ms.	chs.
Redfern to Hunter-street	15th September, 1879	.....		1	39·29	1	39·29
Hunter-street to Bridge-street	15th August, 1882	.....		0	19·99	0	19·99
Liverpool-street to Randwick Racecourse	14th September, 1880	.....		2	41	2	41
Racecourse to Randwick	19th March, 1881	.....		1	2·09	1	2·09
Randwick to Coogee	25th January, 1883	.....		1	50·76	1	50·76
Darlinghurst to Ocean-street	12th March, 1881	0	6·80	1	40·36	1	47·16
Ocean-street to Waverley	13th April, 1881	0	51·84	0	54	1	25·84
Waverley Tea Gardens to Bondi	24th May, 1884	.....		1	13	1	13
Woollahra Line	17th May, 1881	0	65·22	.....		0	65·22
Crown-street Line	15th September, 1881	0	68·91	.....		0	68·91
Redfern to Junction of George-street West and Glebe Road.	15th August, 1882	.....		0	43·94	0	43·94
George-street West to Glebe Point	15th August, 1882	0	72·75	0	4·85	0	77·60
Junction of George-street West and Glebe Road to Forest Lodge.	15th August, 1882	0	57·06	0	6·53	0	63·59
University Gates to Johnstone-street, Leichhardt	18th June, 1883	.....		1	21·41	1	21·41
Johnstone-street to Short-street, Leichhardt	1st May, 1884	.....		1	9	1	9
George-street West to Newtown Bridge	2nd October, 1882	.....		1	27·09	1	27·09
Newtown to Marrickville	31st December, 1881	1	26·68	0	42·25	1	68·93
Redfern to Botany	17th May, 1882	2	52·09	4	14·03	6	66·12
Campbelltown to Camden	10th March, 1882	7	33	.....		7	33
		15	24·35	19	29·59	34	63·94

Metropolitan Lines.—During the year these lines have been maintained in good order and repair, combined with a minimum outlay for working expenses. It is always a difficult matter to maintain tram lines in good order without incurring heavy expenses, but, considering all circumstances, I think it will be found that the expense of maintaining the permanent way and works per mile has been less this year than what it used to be; at least the greatest vigilance has been exercised in supervision to ensure this result.

In my Report of last year I expressed my opinion about the defective construction of the permanent way of our Tramways. I still adhere to that, and no time should be lost in remedying the state of affairs, more especially as regards the lines within the city boundaries. The cost of maintaining the line from Macquarie-street for instance is out of proportion altogether.

It has been decided to relay a portion of this line with 70-lb. rails as an experiment, but I do not think this will be a success, because the shape of railway rails is not adapted to tramway rolling stock, more especially on curves. What is required is a deep girder rail, which will bring the sleepers well below the surface of the street, and something of this kind will have to be done in order to reduce the working expenses.

The maintenance of the lines, however, has been carried out as effectually as possible, and during the year only one or two accidents, attributable to the state of the permanent way, have occurred, a result which must be considered satisfactory.

It is worthy of notice that after a thorough overhaul in 1884 and the beginning of 1885, the wooden pavements in George-street West and Oxford-street have required but little repairs and attention.

During

During the year the wooden pavement in Newtown Road was completed, and it is gratifying to know that this work does not show the least sign of going or wanting repairs.

A new boiler shop has been erected at Randwick, which has been handed over to the Locomotive Department, and is now being fitted up for their use.

No other works of importance have been carried out during the year, and no new lines have been constructed.

Portions of the Botany and Leichhardt lines have been relaid with steel rails. These lines were originally laid with iron rails from the Eskbank Company, but as these are now fast wearing out the work of renewing with steel rails will be continued as occasion demands.

Campbelltown to Camden Tramway.—During the year this line has been maintained in good order and repair. Beyond the construction of a bridge where the Sydney water supply crosses the tramway and Camden Road at Kenny Hill, and which is now approaching completion, no works of importance have been carried out during the year.

North Shore Tramway-Cable Line.—The work of constructing a cable tramway from Milson's Point to the Reserve at North Shore, with all equipments and appendages, was let to Mr. H. G. Carson Woods during the year. The works are in an advanced stage, and to all appearances the line will be finished and ready for traffic about the end of April next. The work is being carried out in strict accordance with the specification.

A survey for a line from Forest Lodge to Gladesville, *viâ* Balmain and the Parramatta River Bridges, is nearly completed, and will shortly be submitted. Owing to the steep gradients through Balmain an auxiliary cable and dummies will have to be provided for a part of it, viz., between Johnston's Bay and the Five Dock Bridge, in order to haul the trams up Gordon and Weston Streets.

Returns showing in detail works carried out during the year, permanent-way relaid, &c., are appended.

I have, &c.,

GEORGE COWDERY,

Engineer for Tramways.

Redfern to Macquarie-street—

- Pits on Nos. 4 and 5 roads, Pitt-street yard, lengthened.
- Fencing replaced, Pitt-street yard.
- Elizabeth-street and Liverpool-street junction relaid.
- Closets, Bridge-street yard, connected with sewer.
- Roof of running-shed, Pitt-street yard, lined and renewed and ironwork painted.
- Floor renewed and additional joist fixed, platform, Bridge-street.
- Stop-blocks fixed, Bridge-street yard.
- Platform replaced and guard-rails fixed on fence. Pitt-street yard.
- Drain constructed from closets and urinals direct to sewer at workshops, Pitt-street yard.
- Box erected for pointsman, Elizabeth-street.
- Lamp fixed in waiting-room, Hunter and Elizabeth Streets.
- Fringe fixed on verandah of waiting-room, Hunter and Elizabeth Streets.
- 400-gallon tank renewed.

Randwick to Coogee—

- Waiting-shed lifted, asphalting renewed, and kerb and gutter fixed, Randwick.
- Drain diverted from engine-sheds, Randwick.
- Platforms extended and gates and steps altered opposite racecourse, Randwick.
- Gas laid on to waiting-shed, Coogee Bay.
- Brick pit built in connection with water supply, Randwick.
- Coal-stage altered, Randwick.
- Two cesspits constructed with about 4 chains of 4-inch drain-pipes to take the water from urinals, Randwick.
- Drain-pipes extended and gully-shaft constructed, Cowper-street, Randwick.
- House erected for engine and dynamo for electric light, Randwick.
- Floor of electric light engine-room, Randwick, asphalted.
- Waiting-room erected at Coogee by contract.
- New smith and boiler shops erected by contract at Randwick.

Darlinghurst to Waverley and Woollahra—

- Stop-blocks fixed at siding, Waverley tanks.
- Stand-pipes fixed at water-tanks, Darlinghurst.

Parramatta-

Paramatta-street to Newtown and Marrickville—

New closet and urinal erected and fenced, motor-shed, Newtown Bridge.

Glass replaced and battens fixed, Tram-motor shed, Newtown.

278 square yards asphalt blocks laid by contract.

Wooden pavement laid, Newtown-road, by contract.

Leichhardt Line—

Tanks erected for motor water supply, Leichhardt.

Stones substituted for gratings at junction of Norton-street and Parramatta Road, Leichhardt.

Leichhardt Line—continued—

Lamp erected at tanks, Norton-street, Leichhardt.

Waiting-shed erected, Johnson-street, Leichhardt.

Redfern to Botany—

Fence and gates erected at waiting-shed, Waterloo.

Campbelltown to Camden—

Chock blocks fixed at sidings, Camden.

Miscellaneous—

Inside of small running salt water tank painted with asphaltum paint by contract.

PERMANENT-WAY RELAID.

	1881.	1882.	1883.	1884.	1885.	Totals.
	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
Redfern to Macquarie-street	4,620	9,961	.....	384	555	15,520
Liverpool-street to Darlinghurst	2,932	5,570	.....	.....	.....	8,502
Darlinghurst to Moore Park	1,140	652	506	2,626	.....	4,924
Crown-street line	.....	153	2,587	1,125	42	3,907
Darlinghurst to Waverley	386	7,716	5,564	1,383	525	15,574
Woollahra line	.....	542	368	2,193	.....	3,103
Redfern to Botany	.....	384	8,610	8,715	6,685	24,394
Moore Park to Randwick	.....	.....	420	2,004	774	3,198
Redfern to Glebe Point and Forest Lodge.	.....	.....	4,650	2,947	930	8,527
Newtown to Marrickville	.....	.....	3,499	4,956	1,161	9,616
Parramatta-street to Newtown	.....	.....	.....	671	568	1,239
University Gates to Leichhardt	.....	.....	.....	1,645	6,801	8,446
Total	9,078	24,978	26,204	28,649	18,041	106,950

The following sleepers have been used for renewals of main lines during the year:—

Redfern to Macquarie-street	769
Liverpool-street to Randwick and Coogee	215
Darlinghurst to Waverley and Woollahra	72
Campbelltown to Camden	60
Total	1,116

The

The following quantities of ballast have been used for maintenance of the various lines during the year :—

Section.	Gravel.	Blue Metal.	Blue metal Screenings.
	Tons cwts. qrs. lbs.	Tons cwts. qrs. lbs.	Tons cwts. qrs. lbs.
Redfern to Macquarie-street	.....	369 10 0 0	670 16 1 17
Redfern to Glebe and Forest Lodge	1 0 0 0	485 16 3 0	415 3 3 12
Redfern to Botany	27 0 1 0	982 11 2 0	417 12 3 3
Liverpool-street to Randwick and Coogee	174 18 1 0	135 16 3 0	373 18 1 9
Darlinghurst to Waverley and Woollahra	.....	995 17 2 0	665 0 0 12
Waverley Tea Gardens to Bondi	.....	.....	1 19 2 20
Crown-street Line	.....	208 10 3 20	77 2 0 0
Parramatta-street to Newtown and Marrickville	20 11 2 0	1,095 5 3 0	81 3 2 14
University Gates to Leichhardt	.....	1,437 1 1 19	396 0 0 0
Totals	223 10 0 0	5,710 10 2 11	3,098 16 3 3

The following shows the number of men per mile of single line engaged in the maintenance of the permanent way :—

	Men per mile.
Redfern to Macquarie-street	0·87
Liverpool-street to Randwick	1·17
Randwick to Coogee	0·97
Crown-street Line	1·17
Darlinghurst to Waverley and Woollahra	1·53
Waverley Tea Gardens to Bondi	0·43
Redfern to Botany	0·64
Redfern to Forest Lodge and Glebe Point	1·00
George-street West to Marrickville	1·18
Leichhardt Line	0·80
Campbelltown to Camden	0·81

No. 2.

The Locomotive Engineer to The Commissioner for Railways.

Department of Public Works, Railway Branch,

Sir, Locomotive Engineer's Office, Sydney, 21 May, 1886.

I have the honor to submit my Report upon the working of the Locomotive and Carriage and Wagon Branches during the year ending 31st December, 1885.

Eveleigh.

As the question of suitable shop accommodation and machinery has such a very important bearing on the economical and efficient working of the Branch, I will briefly refer to that at present afforded; also that approved and in progress. The want of space to erect any further machinery in our old shops at Sydney has further demonstrated the necessity for the Eveleigh shops being pushed on as speedily as possible.

The running shed at Eveleigh, which will accommodate 126 engines, has been completed and in use. It is now used, both as a running shed and a temporary repairing shop. The relief afforded by this shed has been incalculable. The buildings for smithy, boilermakers' shop, and foundry having been roofed, they are being fitted with the necessary steam cranes, machinery and tools, &c., as rapidly as possible, so that we confidently hope to occupy them at an early date. The works connected with the repairing shops have not advanced as rapidly as I expected, but I am glad to see that more rapid progress has been made lately.

I regret to say that only the foundations of the carriage and wagon shops have been completed; however we will receive much benefit when the traversers, which are in hand, are complete, as we shall then be enabled to make use of the roads in these shops, and thus facilitate the removal of trucks to and from traffic, which have been repaired, or may require repairs. I am pleased to say that the accommodation afforded by the shed put up for the carriage trimmers has been a great boon.

Shop accommodation—other Depôts.

I will now briefly refer to the shop accommodation at Newcastle and other Depôts.

At Newcastle the accommodation is totally inadequate, and the entire place wants re-arranging. The new boiler-shop, when completed, will afford partial relief, but until a proper running shed is provided I do not see how the work can be economically performed.

More extended shop and yard accommodation is much required at Singleton.

The alterations to the Bathurst shops now in hand will be a great convenience in the working of that depôt.

The new shed at Wellington is well advanced towards completion. It is in every respect a suitable building for the purpose.

The new running shed at Goulburn has been completed, but has not yet been brought into use owing to the traversers not working satisfactorily.

Great Southern and Western Lines.

The locomotive engines and tenders have been maintained in efficient working order, and notwithstanding that we had not sufficient to properly work the traffic with a due regard to obtaining the best results, we were enabled, through using a portion of the new running shed as a repairing shop, to pull up some of the arrears of work from previous years. This clearly demonstrates that when we have the increased accommodation and appliances that will be available when the works at Eveleigh are complete, we shall be in a healthy state.

At the end of the year 1884 we had twenty-one engines laid up for general repairs, whereas we have now only thirteen, being a reduction of eight in the year.

There were forty-five new locomotives added to our stock during the year, of which twenty-five were built in England and twenty in America, so that we now have 315 engines on the Southern and Western Lines, inclusive of the two Camden Line engines.

The

The number of new engines appears large for one year's supply, but it must be borne in mind that a considerable number of additional miles (114) of lines have been opened, and the engine mileage has increased 343,378 miles over the year 1884, which is equal to about 7,630 miles per engine of the additional forty-five engines, although we had only the use of them for about four months in the year.

I desire to mention that searching investigations in England clearly show that it is not true economy to overwork locomotive engines, that in fact it can only be done by increased consumption of stores per mile; consequently I felt it my duty to recommend that further additions be made to our hauling power on this ground more particularly to meet requirements of further extensions to be opened at an early date; therefore 12 passenger engines have been ordered from the Vulcan Foundry Company of England, their tender being the lowest. Tenders were invited in the Colonies and in America and England for these engines. Besides the foregoing we have ordered 6 tank engines from Mr. Vale, of the Auburn Works near Parramatta.

The following brief statement will admit of some idea being formed as to the nature and quantity of the work done to locomotive engines during the year, exclusive of ordinary light repairs:—

131 engines received a thorough overhaul.

4 entirely new boilers were put in.

8 boilers were extensively repaired.

28 boilers had the tubes removed and thoroughly repaired and renewed.

4 engines had new cylinders.

9 engines had new crank axles.

1 engine had a new set of driving wheels and axle.

There were 205 entirely new tires put on engine and tender wheels.

32 engines and tenders were thoroughly painted.

3 engines had the Westinghouse brake fitted to them.

We fitted 66 engines with my approved spark arrester, in the smoke-boxes, and 14 engines have had an arrangement fitted to the ash-pans to prevent as far as possible any burning matter from falling out when the engines are in motion.

In addition to the foregoing, which of course were all charged to working expenses, the 20 new American and 4 English engines were erected at our shops.

Having made reference in my Report for the year 1884 to the fact that some of the new engines then under order were being fitted with the "Joy's Valve Gear," I am pleased to say that the engines so fitted have given general satisfaction.

Our passenger and goods stock has been maintained in very good order, and notwithstanding the want of shop accommodation and machinery, a very large amount of stock has been repaired and renewed in a satisfactory manner; but as usual in such cases the cost has been high, and until we get into our new shops we cannot hope for much improvement in this respect.

We have had sixty new passenger vehicles added to our stock, which number is not equal to the demand, consequent on increased traffic by opening of new extensions, &c.

There were 829 new vehicles added to our goods stock, so that we were for the first time able to meet the wants of the freight branch.

Of the passenger stock, 366 vehicles received a thorough repair, and 297 had a general overhaul and extensive repairs. In addition to 571 tires having been turned up, sixty-three entirely new tires were issued and fitted on wheels. Also ninety-two new axles and 319 new brasses were fitted as renewals. Extensive painting work was performed, ninety-five passenger vehicles having been thoroughly painted inside and outside. There were seventy-nine carriages retrimmed, 122 had new carpets and floor-cloths in addition to which 755 new cushions and 140 new curtains were supplied and fitted.

Besides the above, 150 improved "Turton" buffers were fitted to stock as occasion admitted of it.

The following will, I submit, afford ample proof that our goods stock has, as far as practicable, received proper attention in regard to repairs and renewals:—

Over 3,000 vehicles had a general overhaul, and nearly 1,300 were thoroughly repaired and painted. In addition to 978 tires having been turned up in the laths, seventy-nine new wheels and 415 new tires, besides 1,755 new brasses, were supplied and fitted, the entire cost of which was charged to working expenses.

As reference has been made on more than one occasion to our working expenses not having been debited with the cost of the proper repairs and renewals of our stock, I would take the liberty of stating so far from such being the case we are continually making improvements in our stock irrespective of repairs and renewals, and thereby adding to their value as an asset of the Department, and the entire cost has been charged to working expenses.

As bearing on this I would mention that when renewing wheels, axles, and draw-gear, we give a much improved article, which enables a much heavier load being carried in the vehicles, thus adding to our train-mile earnings, and the entire cost is charged to working expenses. Then again, the improvements to our sheep and cattle trucks, recommended by the Board appointed to inquire into our live stock traffic, have been similarly charged. In fact the cost of every improvement introduced in our existing stock is borne by working expenses.

Great Northern Railway.

All the locomotive engines and tenders have been kept in good running order and condition.

Four passenger and five goods engines have been added to the stock during the year, the total number now being seventy-seven. Of this number there are, however, three, viz.,—Nos. 5, 8, and 17, totally unsuited for our present traffic, as they are of too light a type to pull the loads now prevailing, so they have been replaced (at the cost of working expenses) by more powerful engines, specially adapted to the work to be performed.

The engine mileage has increased 24,329 miles over the year 1884. The new passenger engines did not commence to run until late in October, and the goods engines late in August. The mileage run to the end of the year by these new engines was 79,521 miles, equal to about 2,600 miles per engine per month.

The following statement will show that the repairs and renewals to engines were both extensive and very important :—

Thirty-eight engines received an entire overhaul, and three were very extensively repaired.

One new boiler and two new cylinders were made and fitted complete. Three crank axles and seventy-six tires, and one pair of wheels, were replaced by new ones.

Thirty-five engines had improved spark arresters fitted to them.

The Westinghouse Automatic Brake having been adopted for the Northern as well as the Southern and Western lines two engines were fitted with it during this year, and the remainder will be done as early as practicable.

The passenger and goods stock have been maintained in efficient running order although there have been many difficulties to contend with, in the way of adequate shop accommodation and machinery not being available, and which have been particularly referred to before.

During the year twenty new passenger and 201 new goods vehicles have been added to our rolling stock. Of the existing stock twenty-one passenger vehicles received a thorough repair, and thirty-seven got a general overhaul. In addition to 122 tires having been turned up, fifty-eight entirely new tires and 100 new brasses were used in renewals.

The painting work done was considerable, as fifty-five vehicles were thoroughly painted, besides which thirteen were retrimmed, and sixteen had new carpets, &c., laid in them. There were 126 new cushions supplied to carriages also, and improved draw-gear was made and fitted to forty-nine vehicles.

The following repairs and renewals were effected to the goods stock :—

20 vehicles were entirely renewed.

58 vehicles were thoroughly repaired and painted.

67 vehicles had a general overhaul.

In addition to 264 tires having been turned up, there were 28 new tires and 226 new brasses fitted to existing stock.

20 trucks had improved draw-gear fitted to them, and 79 had improvements made to them of an important character.

Water

Water Supplies.

The continuance of dry weather has been a source of much anxiety and expense through several of our supplies for locomotives having failed. In several districts we have been compelled to run water trains at considerable cost. The following will afford some idea of the work done in connection with our ocomotive water supplies during the year:—

Richmond.—A new boiler was supplied.

Liverpool.—A new 6-h.p. engine with boiler complete, and a pair of 6-inch deep well pumps were supplied to replace the old machinery, &c., which was unsuitable.

Lithgow Zigzag.—A new pillar crane was erected.

Picton Lakes.—A new pillar with connecting pipes.

Marangeroo.—A 14-h.p. Tangye horizontal engine, with 6-inch geared pump.

Granville.—Twenty-thousand gallon tank supplied; a Tangye pump, 8″ × 4″ repaired and removed to Narrandera, and 8″ × 6″ pump removed from Narrandera to Granville.

Blayney.—A Tangye steam pump, 9″ × 6″ with 8-h.p. boiler and connecting pipes, supplied.

Goulburn.—Two water cranes, with hydrants and connecting pipes, supplied.

Wentworth Falls.—A Tangye steam pump, 8″ × 6″, and line of new pipes, supplied.

Bathurst.—Three pillar cranes supplied.

Eveleigh.—Pipes laid from tank to new workshops, Nos. 1 to 4.

Orange.—Supplied with a 8-h.p. engine and boiler, and a pair of 6-inch deep well pumps to replace old ones worn out.

Jerilderie.—Supplied with a Tangye steam pump, 8″ × 4″, and new 4-inch pipes.

Wellington.—Pipes laid from tank to new running shed, and ash-pits.

Menangle.—Engine boiler and pumps thoroughly repaired.

Dubbo.—Pumping engine removed.

Narrandera.—Removing and repairing Tangye pump, 8″ × 4″, to Granville; replaced by a Tangye pump, 8″ × 6″, from Granville.

Bullock Island Junction.—A 14″ × 12″ Tangye geared pump and boiler has been fixed in place of No. 1 pump, removed to Tamworth.

East Maitland.—This is an additional watering station intended to relieve West Maitland, and provide a more reliable supply for engines on the Morpeth Branch than could be obtained at Morpeth. No. 12 pump has been removed from Murrurundi and fixed at this station, and a new 20,000-gallon tank and pillar crane have also been erected.

Tamworth.—This supply has been improved, and pumping appliances augmented by the transfer of No. 1 pump from Bullock Island Junction.

The necessary improvements required to be made to the supply at West Maitland have been approved of, and when these are completed the water supplies on the Northern Lines will be ample for all requirements as far as can be seen at present.

Gas-works.

As this is the first year we have had control of fitting up the necessary apparatus for lighting our passenger vehicles by gas, as also the making of the gas used in the same, I desire to state that the taking of this matter entirely into our own hands upon completion of the Castner contract has been a great advantage to the Department, both in respect to the cost, which shows a considerable saving on prices paid to the contractor, and the quality of the fittings in the carriages, as also the quality of the gas supplied.

Redfern Gas-works.—The entire plant is in good order and condition. During the year 12,000,000 cubic feet of gas have been made, of which 4,000,000 have been supplied to carriages, and 8,000,000 to station premises, including locomotive, permanent-way shops, and traffic yards. Fifty-six vehicles have been fitted with gas apparatus, which made a total of 480 vehicles fitted on the Southern and Western Lines. In addition to the foregoing, seventy-four steel cylinders, sixty-seven regulators, one compressing cylinder, and 526 stops and cocks were made at the Redfern Gas-works. Exclusive of renewals to plant, &c., 1,200 lin. feet of piping intended for a high pressure main have been laid in the Sydney yard in an improved form. Thirteen first-class carriages have been fitted with improved lamps, which give a much better light. One 5-h.p. engine has been added to the plant.

Newcastle

Newcastle Gas-works.—The plant is in good order and condition. There were 650,000 cubic feet of gas made and supplied to vehicles, there being 146 now fitted with gas apparatus. One compressing gas cylinder has been renewed, and two benches for retorts have been erected. The water at present in use is unsuitable for boilers. We shall be benefited when the municipal supply is available.

Bathurst Gas-works.—These works are in good order. The quantity of gas made was about 170,000 cubic feet per month. Provision has been made for supplying the station premises, shops, &c., which will show satisfactory results when compared with prices paid to the contractor. A main has been laid to afford the additional lights required. One bench for two retorts has been erected.

Junee Gas-works.—The plant is in good working order. The quantity of gas supplied amounts to about 175,000 cubic feet per month. A new high-pressure main has been laid, with proper stops, cocks, &c., to supply carriages. One bench of two retorts has been erected. The boiler has been thoroughly overhauled and repaired, and a new high-pressure cylinder has been supplied for the compressing pump.

The following tabulated statements will readily show the particulars of the daily supply of gas to the several descriptions of trains:—

1st. The average daily supply of compressed gas to railway carriages.

2nd. The particulars of vehicles fitted with gas apparatus, showing the number of lights and cylinder capacity in each.

No. 1.

AVERAGE daily supply of Compressed Gas to Carriages.

No.	Trains.	Carriages on each Train.	Total number of Carriages.	Number of lights. Total trains.	Number of hours lit up.	Quantity to each Carriage.	Total amount of Gas compressed.
						cubic feet.	cubic feet.
12	Suburban	6	72	212	6½	53	3,816
3	Illawarra	4	12	36	5½	53	636
2	Mails, South and West	6	12	60	6	95	1,140
2	Penrith and Picton	7	14	60	7	84	1,176
2	Morning, South and West	8	16	60	6	74	1,184
1	Express	4	4	20	10½	105	105
	70 spare carriages	...	...	210	...	53	3,710

No. 2.

PARTICULARS of Vehicles fitted with Gas Apparatus, showing the number of lights and cylinder capacity in each.

No.	Class.	Lights.	Cylinder capacity.	Name.	Cubical contents, with 100″ per square inch pressure.
			cubic feet.	feet.	
23	First American cars	3	11,590	6	89,624
5	„ Ashbury carriages	8	15,300	9	114,444
12	„ Sleepers' cars	6	23,107	12	172,835
1	„ Dining-cars	4	15,300	(2) 9	228,888
14	„ Redfern types	6	23,107	12	172,835
10	„ Saloon	3	15,300	9	114,444
3	„ Three compartment carriages	2	9,202	4	66,837
16	„ Carriages	3	11,590	6	89,624
3	„ Clemisons	6	15,300	9	114,444
2	„ State carriages	4	11,590	(4) 6	358,496
13	Composite Redfern types	5	15,300	9	114,444
40	„ Carriages	3	11,590	6	89,624
37	„ Cars	2	9,202	4	66,837
9	Second-class Redfern type	6	23,107	12	172,835
86	„ Carriages	3	11,590	6	89,624
37	„ Cars	2	9,202	4	66,837
3	„ Cleminsons	7	15,300	9	114,444
9	Mail-vans	3	11,590	6	89,624
36	Brake-vans	4	11,590	6	89,624
121	Goods brake-vans	4	5,641	3	42,194
480					

All first-class carriages and compartments, brakes and mail-vans, have No. 1 burners, consuming, when running, 1½ cubic feet per hour per burner.

All second-class and second-class compartments and goods brakes have No. 0 burners, consuming, when running, about ·75 cubic feet per hour.

I am pleased to testify that the contractors for the supply of new rolling stock have given very general satisfaction, both as to the quality of the workmanship and material, and also the expedition displayed in the delivery of our orders.

I regret that I cannot report our usual immunity from accidents. The sad catastrophe at Cootamundra, in which seven lives were lost, gave us very unwelcome experience in this respect. It is however a subject for congratulation that the causes were entirely beyond the control of the Department Considering all the circumstances the damage sustained by the engines and rolling stock was inconsiderable.

Herewith I forward a complete list of returns furnished in connection with your Annual Report, as shown below :—

1. Abstract of rolling stock on hand, 31st December, 1885, and the number and description of vehicles supplied in 1885.
2. Rolling stock on hand 31st December, 1885.
3. Statement of the number and class of rolling stock manufactured by the different contractors during the year 1885.
4. Weights of locomotive engines and tenders, empty and loaded, on 31st December, 1885.
5. Weights of locomotive engines and tenders and mileage run by each engine.
6. Abstract of total and average weights of rolling stock, empty.
7. Statement of the number and classification of persons employed in Locomotive Branch.
8. List and condition of locomotive engines and tenders on 31st December, 1885.
9. List of machinery on all lines, 31st December, 1885, and list of machinery added to stock during the year 1885.
10. List of machinery in workshops 31st December, 1885.

I have, &c.,
W. SCOTT,
Locomotive Engineer.

MACHINERY IN WORKSHOPS.

No.	Description.	Remarks.
	Machine Shop, Sydney.	
1	20-h.p. horizontal steam-engine...	In fair order.
2	Old locomotive boiler for above...	do
3	Do do	do
168	Duplex wheel lathe	In good order.
4	8-ft. double-headed wheel-turning lathe	do
172	4-ft. 6in. do do	do
176	4-ft. 6in. do do	do
5	4-ft. 6in. do do	do
128	4-ft. 6in. do do	do
6	3-ft. 6in. do do	do
7	5-ft. 6in. single-headed wheel turning lathe	In fair order.
8	4-ft. do do	do
9	15-in. screw-cutting lathe	In good order.
129	15-in. do	do
224	15-in. do	do
226	15-in. do	do
10	12-in. do	do
120	12-in. do	do
12	11-in. do	In working order.
13	10-in. do	In good order.
14	10-in. do	do
15	10-in. do	In fair order.
121	10-in. do	In good order.
124	10-in. do	do
174	10-in. do	do
16	9-in. do	do
17	8-in. do	In fair order.

No. 2—*continued.*

No.	Description.	Remarks.
	Machine Shop, Sydney—continued.	
122	8-in. screw-cutting lathe	In good order.
123	8-in. do	do
173	8-in. do	do
131	6-in. do	do
205	6-in. do	do
206	6-in. do	do
207	6-in. do	do
19	9-in. common slide lathe	In fair order.
135	Chasing lathe	In good order.
49	Hand and slide lathe	do
93	Brass finishers' lathe	do
197	Portable key-way grooving machine	do
199	7-in. universal bolt and nut turning and chasing lathe ...	do
233	Slide bar grinding machine	do
236	30-in chuck lathe...	do
20	12-ft. planing machine	In fair order.
21	10-ft. do	In good order.
22	6-ft. do	do
23	3-ft. do	In fair order.
164	Circular shaping machine	In good order.
24	Double-headed shaping machine	do
25	Single-headed do	In fair order.
126	do do	In good order.
134	do do	do
180	do do	do
26	Bolt and nut machine	In fair order.
27	do do	do
133	Bolt and nut centreing machine	In good order.
184	Single-headed shaping machine	do
152	Tap grooving machine	do
165	Circular slotting machine	do
200	Vertical cotter-hole and pin-hole drilling machine	do
201	Four-spindle nut-tapping machine	do
202	Pipe-cutting and screwing machine	do
203	No. 3 Thomas' patent portable drilling machine	do
28	Slotting machine, 12-in. stroke	do
29	do 6-in. do	do
295	12-in. axle-box slotting machine...	do
166	Single-geared slotting machine	do
30	Screwing machine	In fair order.
144	do	In good order.
31	do	do
32	Cylinder boring mill (attached to lathe)	do
33	Radial drilling machine	do
34	do do	do
35	do do	do
36	Vertical drilling machine	In fair order.
143	do do	In good order.
37	Small do	In fair order.
38	do do	do
127	Vertical drilling machine	In good order.
163	Tire-boring machine	do
167	Drill for wheel tires	do
40	Circular saw-bench	In use as table for marking off plates in fitting shop.
41	do do	In fair order.
42	Grindstone and trough	do
43	Do do	do
151	20-in. double emery wheel	In good order.
48	Twist drill grinding machine	do
44	Pillar crane for lathe	do
45	Jib crane for lathe	do
46	Overhead crane for lathe	do
47	do do	do
50	Overhead travelling crane	do
51	do do	do
228	6-h.p. stationary engine	do
225	Portable cylinder boring machine	do
	Shafting, pulleys, &c., for the foregoing	do

No. 2—*continued.*

No.	Description.	Remarks.
	Boiler Shop.	
55	10-h.p. portable engine and boiler	Old boiler condemned and replaced with an old boiler formerly driving No. 23 Garrett & Marshall's pumping engine at Lawson; engine in good order.
56	Large punching and shearing machine	In fair order.
57	Small do do	do
58	Pillar vertical drilling machine	do
59	Plate-bending machine	In good order.
156	do do	Lent to Permanent-way Branch.
60	Fly punching machine	In good order.
61	Circular saw for cutting tubes	In fair order.
62	Blast fan	In good order.
276	Tube-cutting machine	do
94	Tube-cleaning machine	do
96	Plate-heating furnace	In fair order.
	Shafting, pulleys, &c., for the foregoing	do
	Pattern Shop.	
52	14-in. pattern-maker's lathe	In good order.
53	Small wood-turning lathe	do
54	Wardell saw bench	do
145	Band saw	do
153	Moulding tool grinder	do
98	Vertical saw	do
	Shafting, pulleys, &c., for the foregoing	do
	Blacksmiths' Shop.	
64	Tire-bending machine	Not in use (not being required for steel tires now in use).
65	Tire-stretching do	Not in use.
66	Iron crane for wheels	In good order.
67	do do	do
68	45-cwt. steam hammer and furnace	do
69	3-ton crane for do do	do
70	Vertical boiler and donkey-engine for furnace	Boiler taken out and about to be repaired. Donkey-engine in good order.
71	15-cwt. steam hammer	In good order.
72	20-cwt. crane for do	do
73	5-cwt. steam hammer	do
175	do do	do
147	3½-cwt. do	Not in use.
74	Blast-fan	In good order.
161	do	do
229	Boiler for working 45-cwt. steam-hammer	do
75	20-cwt. crane for tires	do
304	Tire furnace	Formerly numbered 65 with tire-stretching machine, but now separated. In good order.
	Carriage Shop.	
97	14-h.p. portable engine and boiler	In fair order.
99	Band saw	In good order.
160	12-in. sweep cutting-saw...	do
100	General joiner	do
101	Vertical drilling machine	do
102	Screwing machine...	do
103	Grindstone and trough	do
154	Moulding tool-grinder	do
104	5½-in. scroll saw	do
155	Wood planing machine	do
105	3½-in. morticing and boring machine	do
159	Cross-cut saw	do
	Shafting, pulleys, &c., for the foregoing	do
	Carriage Shop, Eveleigh.	
209	Blast fan	In good order.
211	Circular saw bench	do
212	Vertical drilling-machine	do
213	Grindstone and trough	do
214	Bolt and nut screwing machine...	do
215	Mortising machine	do
216	Vertical saw	do
217	20 h.p. semi-portable engine	do
	Shafting, pulleys, &c., for the foregoing	do

No. 2—*continued.*

No.	Description.	Remarks.
	General at Sydney.	
76	Locomotive engine weighing-machine	In fair order.
193	2-h.p. engine and vertical boiler	do
158	Steam travelling crane	do
77	Travelling crane	In good order.
78	Do	In fair order.
79	Oil tester	In good order.
80	Small turntable	do
81	Do	do
82	Do	do
83	Do	do
84	Do	do
85	Traverser	do
86	Do	do
169	Do	do
87	Crab-winch for lifting engines	do
88	Do do	do
89	Do do	do
90	Do do	do
91	5-ton jib crane	do
157	Hand fire-engine	do
95	10-ton jib crane	do
162	Tube-tester	do
130	Valve facing machine (for outside cylinders)	do
148	Do do (for inside do)	do
149	Shaft-straightening machine	do
150	Saw-sharpening machine...	Not yet erected.
132	Hydraulic press	In good order.
39	Do	Lent to Tramway Department.
171	Hydraulic testing machine	In good order.
208	Do do	do
231	Blow-pipe brazing machine	do
232	Portable pipe-screwing machine...	do
277	Cylinder-boring machine...	do
177	Five pairs portable steel-yards	do
178	Travelling crane	do
191	Steam port-facing machine	do
196	Blast fan	do
204	Fletcher's furnace	do
142	6-h.p. portable engine and boiler	do
141	Cutting-off saw	do
140	Band saw	do
146	Circular saw and bench	do
230	Travelling crane	do
299	Blast fan	do
	Running Shed, Eveleigh.	
234	13 in. shaping machine	In good order.
235	Vertical drilling machine	do
289	Screwing machine	do
290	15-in. screw cutting lathe	do
291	Blast fan	do
292	8-h.p. vertical engine and boiler	do
293	Grindstone and trough	do
296	8-in. screw cutting lathe...	do
	Shafting, pulleys, &c., for the foregoing	do
	Gas Works, Sydney.	
237	Reservoir	In good order.
238	Do	do
239	Do	do
240	Gas-holder	do
241	5-h.p. gas-compressing pump	do
242	5-h.p. do	In fair order.
243	12-h.p. do	Requires repairs.
244	7-in. screw cutting lathe...	In good order.
245	Grindstone and trough	In fair order.
246	Vertical drilling machine	In good order.
247	Hand pipe-cutting machine	In fair order.
248	15-in. screw cutting lathe	In good order.
249	No. 3 Blake's pump	Under repairs.
250	5-h.p. Soho engine and pump	do

No. 2—*continued.*

No.	Description.	Remarks.
	Gas Works, Sydney—continued.	
301	5-h.p. Soho Engine	In good order.
251	4-in. exhauster	do
252	4-in. do	do
253	6-in. do	do
254	6-in. do	do
255	25-h.p. Cornish boiler	In fair order.
256	Condenser with 4-in. fittings	In good order.
257	Do 6-in. do	do
258	Scrubber with 4-in. do	do
259	Do 6-in. do	do
260	Gas-holder	do
261	Sheet-iron purifier, with 4-in. connections	do
262	Do do 4-in. do	do
263	Cast-iron do 6-in. do	do
264	Do do 6-in. do	do
278	No. 3 Blake's pump	do
	Shafting, pulleys, &c., for the foregoing	do
	Penrith.	
107	10-in. screw cutting lathe	In fair order.
110	Drilling-machine	In good order.
111	Screwing-machine	do
112	Portable punching and shearing-machine	In fair order.
181	12-in. screw cutting lathe	In good order.
182	Radial drilling-machine	do
183	Planing-machine	do
190	12-h.p. Tangye horizontal engine	do
189	10-h.p. boiler for same	do
185	Blast fan	do
194	Goliath for lifting engines	do
	Shafting, pulleys, &c., for the foregoing	do
	Bathurst.	
138	4-h.p. portable engine and boiler	In good order—not at present in use.
116	Large vertical drilling-machine	In good order.
118	10-in. screw cutting lathe	do
137	6-in. do do	do
139	Screwing-machine	do
119	Small shaping-machine	do
92	Hand fire-engine	do
275	30-h.p. semi-portable engine	do
221	7-in shaping-machine	do
179	Travelling crane	do
222	Blast fan	do
294	3-h.p. vertical engine and boiler...	In good order—formerly numbered amongst the pumping engines No. 29.
186	12-in. screw cutting lathe	In good order.
187	Planing-machine	do
195	Punching and shearing machine...	do
188	Radial drilling-machine	do
210	4-ft. wheel lathe	do
297	Vertical drilling-machine	do
	Shafting, pulleys, &c., for the foregoing	do
	Bathurst (Gas Works).	
279	10-h.p. engine and double-acting 4-in. gas pump combined ...	In good order.
280	Exhaust fan	do
281	5-h.p. Tangye Soho horizontal pump	do
282	No. 1, Blake's special pump	Requires repairs.
283	Cast-iron condenser	In good order.
284	Wrought-iron condenser...	do
285	2 cast-iron purifiers	do
286	Wrought-iron reservoir	do
287	do meter	do
	Dubbo.	
117	Small vertical drilling-machine	In fair order.
108	5-in. screw cutting lathe...	do

No. 2—*continued.*

No.	Description.	Remarks.
	Goulburn.	
113	2-h.p. vertical engine and boiler...	In fair order.
114	10-in. screw cutting lathe	do
136	6-in. do do	do
274	Vertical drilling-machine	In good order.
223	Locomotive steam travelling crane	Formerly Locomotive No. 12—in good order.
	Shafting, pulleys, &c., for the foregoing	In good order.
	Harden.	
170	4-h.p. vertical engine and boiler	In fair order.
11	11-in. screw cutting lathe	do
115	Small drilling-machine	do
109	10-in. shaping do	do
	Shafting, pulleys, &c., for the foregoing	In good order.
	Junee.	
192	6-h.p. engine and boiler	Requires renewing.
18	6-in. screw cutting lathe...	In fair order.
218	Radial drilling machine	In good order.
219	13-in. shaping-machine	do
220	Screwing-machine	do
63	Vertical saw	In fair order.
288	10-h.p. vertical engine and boiler	In good order.
125	12-in. screw cutting lathe	do
298	8-in. do do	do
227	Blast fan	do
	Shafting, pulleys, &c., for the foregoing	do
	Junee (Gas Works).	
265	6-h.p. engine	In good order.
266	6-h.p. gas compressing engine	do
267	½-h.p. Vauxhall donkey-pump	Requires repairs.
268	Boiler for driving above	In fair order.
269	Purifier with 4-in. connections	In good order.
270	Gas-holder	do
271	do reservoir	do
272	Condenser with 4-in. connections	do
273	Scrubber do do	do

List of Machinery added to Stock during the year 1885:—

210	4-ft. wheel turning lathe...	In machine shop, Bathurst.
223	Locomotive steam travelling crane	In use at Goulburn; formerly old engine No. 12.
230	Travelling crane	In use at Sydney.
295	12-in. axle-box slotting machine	In machine shop, Sydney.
296	8-in. screw cutting lathe...	In running shed, Eveleigh.
297	Vertical drilling-machine	In machine shop, Bathurst.
298	8-in. screw cutting lathe...	do Junee.
299	Blast fan	In general use at Sydney.
301	5-h.p. Soho engine	In gas-works, Sydney.

Machinery, Great Northern Railway.

Machine Shop, Honeysuckle Point.

1	25-h.p. horizontal engine and boiler	In good order.
2	Duplicate boiler for above	do
3	10-h.p. diagonal engine with boiler	Not in use.
4	Self-acting slide surfacing brake lathe	In good order.
5	5-ft. double-headed wheel lathe...	do
69	4-ft. do do	do
60	Duplex wheel lathe	do
68	Do do	do
6	17-in. screw cutting lathe (gap)...	Unfit for use.
7	12-in. do do	In good order.
70	12-in. do do	do
8	10-in. lathe—not self-acting	do
9	9-in. screw cutting lathe (gap)	do
10	9-in. do do	do
12	8-in. lathe, on wooden bed	do
56	6-in. screw cutting lathe...	do
13	6-ft. planing-machine	do

No. 2—*continued.*

No.	Description.	Remarks.
	Machine Shop, Honeysuckle Point—continued.	
14	6-ft. planing-machine	In good order.
15	Slotting-machine, 18-in. stroke	do
16	Double-headed shaping-machine, 18-in. stroke	do
57	Shaping-machine, 8-in. stroke	do
17	Bolt-screwing and nut-tapping machine	do
58	Do do do	do
18	Cylinder boring-mill, fixed on bed of No. 4 lathe	In fair order.
19	Radial drilling-machine	do
20	Vertical do	do
21	Do do	do
22	Punching and shearing-machine	do
23	Do do	In good order.
25	Plate-bending machine	do
27	Fan blast	do
28	Circular saw bench	Not used.
30	Grindstone with wooden frame	In good order.
31	Do do do	do
62	Do do do	do
32	Emery twist drill-grinder	do
43	Do grinder	do
61	Do tool-grinder	do
42	Overhead traverser for wheel lathes	do
71	Do do do	do
72	Do do do	do
55	Centreing and nut-facing-machine	do
59	Tire drilling and tapping-machine	do
63	12-h.p. semi-portable engine and boiler (Robey's)	do
67	Small turntable for wheels	do
79	Steam gauge tester	do
81	6-in. self-acting screw cutting lathe	do
83	Radial drilling machine	do
84	Slide-bar grinding machine	do
88	18-in. self-acting screw cutting lathe	do
90	Portable cylinder boring machine	do
91	Drilling machine	do
92	Slide-bar grinding machine	do
	Shafting and pulleys	do
	Blacksmiths' Shop.	
44	5-cwt. steam hammer	In good order.
64	Fan blast	do
75	5-ton jib crane	do
76	Traverser for wheels	do
77	Circular saw, wooden frame for cutting tubes	do
82	3-cwt. steam hammer	do
85	Hydraulic shears	do
86	Hydraulic shaft straightener	do
93	Tube cutting machine	do
	Carriage Shop.	
45	General joiner	In good order.
46	Band saw	do
47	Wood shaping-machine	do
48	10-h.p. vertical engine and boiler	do
49	Circular saw bench with rising and falling spindle	do
50	Mortising and boring-machine	do
51	Emery grinding-machine...	do
52	Plane-iron grinding-machine	do
53	10½-in. lathe, wooden bed	do
54	Grindstone with wooden frame	do
80	Horse-hair teasing machine	do
	Shafting and pulleys	do
	General.	
24	Hand punching-press (small)	In good order.
26	Do bear	do
29	Slide-valve facing-machine	do
74	Do do	do
33	Weighing-machine for loco. engines	Not used—Incorrect.

No. 2—*continued.*

No.	Description.	Remarks.
	General—Continued.	
34	Hydraulic press	In good order.
35	Portable crane	do
36	Do	do
37	Crab winch for lifting carriages and waggons	In good order.
38	Do fixed on gauntree for lifting engines, boilers, &c...	do
39	Do with malleable iron frame	do
40	Do with cast-iron frame	do
41	Hydraulic test-pump	do
73	Traverser for wheels	do
78	Hydraulic wheel-press	do
89	10-ton accident crane	do
	Singleton.	
65	6-in. screw cutting-lathe...	In good order.
	Murrurundi.	
66	6-in. screw cutting-lathe...	In good order.
87	Hand-punching bear	do
	Gunnedah.	
11	6-in. screw cutting-lathe...	In good order.
	LIST OF MACHINERY added to stock during the year 1885 :—	
88	18-in. self-acting screw cutting-lathe	In machine-shop, Honeysuckle Point
89	10-ton accident crane	General do do
90	Portable cylinder boring-machine	In machine do do
91	Drilling-machine	do do do
92	Slide bar grinding-machine	do do do
93	Tube cutting-machine	In blacksmiths' do do
	Gas Works, Newcastle—Plant and Machinery.	
	Retort Room.	
1	Bench, 2 retorts—hand and bridge pipes attached to hydraulic main	In good order.
2	Bench, 2 retorts	do
3	16-h.p. boiler	do
4	7 x 3 vertical boiler	do
	Gas main, gas and water service pipes...	do
	Engine Room.	
5	Blake's steam pump	In good order.
6	Vauxhall steam pump	do
7	Engine and gas compresser	do
8	6-h.p. engine	do
9	Vertical drilling machine	do
10	Photometer	do
11	Exhaust fan	do
12	do	do
	Shafting and pulleys, &c.	do
	Gas service pipes, &c.	do
	Brick tank under floor	do
	Workshop.	
13	Gas testing apparatus	In good order.
	Yard.	
14	12-ft. condenser, connections and pipes	do
15	Scrubber, 4ft. diameter, 20 ft. high	do
16	Cast-iron purifier	do
17	do	do
18	Gas holder, 30′ x 14′	do
19	Gas reservoir, 30′ x 3′ 6″, tested to 260 lbs. pressure	do
20	Screwing machine	do
	Pipes, filling hose, tools, &c.	do

No. 2—*continued.*

ENGINES, PUMPS, &c., FOR SUPPLYING WATER.

No.	Place.	Description.	Remarks.
1	Sydney	6-h.p. engine, and two pairs 7-in. pumps with two tubular boilers.	In good order.
6	Do	4-h.p. engine and two boilers and 7-in. double acting pump.	Requires repairing.
23	Do	4-h.p. Garrett & Marshall's pumping engine ...	Not at present in use; in fair order.
2	Do	3½-in. hand pump...	Used for testing air-brake cylinders; in good order.
10	Do	Tangye steam-pump, 6″ x 4″	In good order.
20	Do	Pair 3½-in. hand pumps	In fair order.
37	Do	2-h.p. engine and boiler and pair 3-in. pumps ...	The engine and boiler are worn out and condemned; about to be replaced by new ones; charged to Revenue; pumps in good order.
36	Do	2-h.p. engine and vertical boiler and pair 3½-in. pumps.	Engine and boiler used for driving the cylinder boring machine; pumps in good order.
35	Do	4-h.p. portable engine and boiler and 6″ single lift pump.	Formerly at Orange, condemned; engine and boiler replaced by No. 221, and pump by No. 222; charged to Revenue.
73	Do	Tangye steam pump, 8″ x 4″	Formerly at Eveleigh; in good order used for sinking wells.
3	Do	4-h.p. engine and boiler, and pair 5½″ pumps ...	Formerly at Liverpool; condemned; about to be replaced by new ones; charged to Revenue.
43	Do	Tangye steam-pump, 6″ x 3″	Formerly at Wentworth Falls; requires repairing.
250	Do	Tangye steam-pump, 9″ x 5″ without boiler ...	Formerly at Marangaroo, numbered 83 along with the 10 h.p. vertical boiler; not in use at present.
29	Do	4-in. deep well pumps	Formerly at Bathurst; requires repairs; the 3-h.p. engine and boiler which was formerly connected with this pump has been transferred to No. 294 in the machinery list, and is in use at Bathurst.
216	Do	4-h.p. boiler.	Formerly at Orange and numbered 81, along with the 6″ x 3″ Tangye pump; not in use at present.
251	Do	Tangye steam-pump, 6″ x 3″ without boiler ...	In brass foundry; good order.
92	Do	Pillar crane	In good order.
93	Do	do	do
94	Do	do	do
95	Do	do	do
96	Do	do	do
161	Do	do	Formerly at Lithgow bottom points; condemned and replaced by No. 121; charged to Revenue, but at present in use at Sydney.
162	Do	do	Formerly at Lithgow bottom points; condemned and replaced by No. 223; charged to Revenue.
97	Do	14,000-gallon tank	In good order.
98	Do	do do	do
71	Eveleigh	10-h.p. vertical engine and boiler	do
72	Do	Pair 6″ deep well pumps, (Tangye)	do

No. 2—*continued.*

ENGINES, PUMPS, &c., FOR SUPPLYING WATER.

No.	Place.	Description.	Remarks.
99	Eveleigh	20,000-gallon tank	In good order.
230	Do	do do	do
231	Do	do do	do
232	Do	do do	do
233	Do	do do	do
194	Do	Pillar crane	do
209	Do	do	do
210	Do	do	do
211	Do	do	do
212	Do	do	do
213	Do	do	do
214	Do	do	do
215	Do	do	do
76	Duck River ...	Tangye steam-pump, 8″ x 6″	do
100	Granville	20,000-gallon tank	do
236	Do	do	do
101	Do	Pillar crane	do
193	Do	do	do
4	Liverpool	Windmill pump	Condemned; as it cost the Department nothing at first it is not to be replaced with a pump charged to Revenue.
224	Liverpool	6-h.p. engine and boiler	In good order.
225	Do	Pair 6-in. deep well pumps	do
102	Do	36,000-gallon tank, with jib-crane attached ...	do
103	Do	Pillar crane	do
104	Do	do	do
247	Campbelltown ...	Tangye steam-pump, 6″ x 3″	do
5	Menangle	6-h.p. engine and boiler and pair 7-in. pumps ...	do
105	Do	12,000-gallon tank, with jib-crane attached ...	do
160	Do	20,000 gallon tank	do
67	Picton Lakes ...	8-h.p. horizontal engine and 10-h.p. boiler, with 6-in. geared pump.	do
248	Do	8-h.p. boiler	do
42	Do	Blake's patent steam-pump, 10″ x 6″	do
106	Do	34,000-gallon excavated tank	do
107	Do	do do	do
108	Do	Pillar crane	do
219	Do	do	do
50	Mittagong... ...	Tangye steam-pump, 6″ x 3″	do
109	Do	9,000-gallon tank, with jib-crane attached ...	do
151	Do	20,000 gallon tank	do
198	Do	Pillar crane	do
199	Do	do	do
7	Wingecarribee ...	4-h.p. Garrett & Marshall's pumping engine ...	Requires repairing.
192	Do	Tangye steam-pump, 8″ x 4″	In good order.
110	Do	7,000-gallon tank, with jib-crane attached ...	do
111	Do	10,000-gallon tank, do do ...	do
75	Barber's Creek ...	Tangye steam-pump, 8″ x 4″	do
112	Do	13,000-gallon tank, with jib-crane attached ...	do
113	Do	14,000-gallon tank, do do ...	do
9	Goulburn	17,000-gallon tank, supplied by gravitation ...	do
115	Do	Pillar crane	do
244	Do	do	do
245	Do	do	do
11	Mulwaree Ponds ...	Tangye steam-pump, 6″ x 4″	do
78	Do	Blake's steam-pump, 10″ x 6″	do
12	Do	8-h.p. vertical boiler for same	do
116	Do	20,000-gallon tank, with jib-crane attached ...	do
84	Tarago	Tangye steam-pump, 7″ x 5″	do
123	Do	20,000-gallon tank with jib crane attached ...	do
226	Bungendore ...	Tangye steam-pump, 7″ x 5″	do
227	Do	20,000 gallon tank, with jib-crane attached ...	do
13	Fish River... ...	4-h.p. Garrett and Marshall's pumping engine	do
15	Do	Tangye steam-pump, 8″ x 5″	do
117	Do	13,000-gallon tank with jib crane attached ...	do
197	Do	20,000 gallon tank, with jib-crane attached ...	do
14	Yass	Tangye steam pump, 8″ x 4″	do
86	Do	8-h.p. engine and one 6-in. geared pump ...	do
87	Do	10-h.p. boiler for above	do

No. 2—*continued.*

ENGINES, PUMPS, &c., FOR SUPPLYING WATER—*continued.*

No.	Place.	Description.	Remarks.
118	Yass	20,000-gallon tank with jib crane attached ...	In good order.
119	Do	do do do do ...	do
120	Do	Pillar crane	do
16	Rocky Ponds ...	Tangye steam pump, 8″ x 5″	do
122	Do	20,000-gallon tank with jib crane attached ...	do
17	Illalong Creek ...	Pair 4-in. hand pumps	In fair order
41	Harden	Tangye steam pump, 8″ x 4″	In good order.
74	Do	do do 8″ x 4″	do
124	Do	20,000-gallon tank	do
125	Do	do do	do
126	Do	Pillar crane	do
127	Do	do	do
128	Do	do	do
228	Young	20,000-gallon tank with jib-crane attached ...	do
229	Do	Tangye steam pump, 8″ x 5″	do
40	Cootamundra ...	do do 6″ x 3″	do
18	Do	4-h.p. vertical engine and boiler and pair 5-in. pumps.	do
130	Do	14,000-gallon tank with jib crane attached ...	do
18½	Bethungra... ...	Tangye steam pump, 8″ x 5″	do
77	Do	do do 6″ x 5″	do
131	Do	20,000-gallon tank with jib crane attached ...	do
132	Do	Pillar crane	do
18¾	Junee Junction ...	2½-in. double-acting hand pump...	In fair order.
31	Do	Tangye steam-pump, 6″ x 3″	In good order.
39	Do	do do 6″ x 3″	do
54	Do	No. 5 pulsometer pump	In store. Formerly at Albury.
133	Do	20,000-gallon tank with 2 jib cranes attached...	In good order.
237	Darlington ...	6-h.p. Tangye horizontal engine and vertical boiler, and 3 4½ in. deep well pumps.	In good order. Formerly at Jerilderie.
60	South Wagga ...	6-h.p. horizontal engine and vertical boiler ...	In good order.
61	Do ...	Pair 4-in. deep well-pumps	do
201	Do	Tangye steam pump, 8″ x 4″	do
134	Do	20,000-gallon tank	do
129	Do	do do	do
135	Do	Pillar crane	do
136	Do	do	do
137	Do	do	do
62	Dudal Cooma ...	Tangye steam pump, 7″ x 5″	do
138	Do	20,000-gallon tank with jib crane attached ...	do
53	Culcairn	No. 5 pulsometer pump	do
139	Do	20,000-gallon tank with jib crane attached ...	do
190	Albury	Tangye steam pump, 8″ x 4″	do
140	Do	30,000-gallon tank	do
141	Do	Pillar crane	do
57	Old Junee... ..	Tangye steam-pump, 4″ x 3″	do
55	Boggy Creek ...	No. 5 pulsometer pump	do
52	Do	Tangye steam-pump, 8″ x 4″	do
142	Do	20,000-gallon tank with jib crane attached ...	do
56	Narrandera ...	Tangye steam-pump, 8″ x 4″	do
19	Do	do do 8″ x 4″	do
143	Do	20,000-gallon tank with jib crane attached ...	do
80	Bringagee... ...	4-h.p. vertical engine and boiler, and pair 4-in. deep-well pumps.	do
144	Do	20,000-gallon tank with jib crane attached ...	do
79	Hay	4-h.p. vertical engine and boiler, and pair 4-in. deep-well pumps.	do
145	Do	20,000-gallon tank with jib crane attached ...	do
200	Colombo	Tangye steam pump, 6″ x 3″	do
234	Do	20,000-gallon tank with jib crane attached ...	do
235	Jerilderie	do do do ..	do
246	Do	Tangye steam pump 8″ x 4″	do
69	Penrith	8-h.p. vertical engine and boiler...	do
70	Do	Pair 6-in. geared pumps	do
146	Do	20,000-gallon tank with jib crane attached ...	do
147	Do	do do do ...	do
148	Do	Pillar crane	do
149	Do	do	do
150	Do	do	do
66	Glenbrook... ...	Tangye steam-pump, 6″ x 3″	do
21	Do	11,000-gallon tank, supplied by gravitation ...	do

No. 2—*continued.*

ENGINES, PUMPS, &c., FOR SUPPLYING WATER—*continued.*

No.	Place.	Description.	Remarks.
152	Glenbrook... ...	Pillar crane	In good order.
217	Linden	14 h.p. horizontal engine and 6-in. geared pump	do
182	Do	Pair 8-h.p. vertical boilers	do
184	Do	11,000-gallon tank with jib crane attached ...	do
83	Do	20,000-gallon tank	do
122	Lawson	4-h.p. Garrett & Marshall's pumping-engine ...	Requires repairs. Not in use.
181	Do	12-h.p. vertical boiler	In good order.
68	Do	8-h.p. Tangye horizontal-engine, and 10-h.p. boiler with 6-in. geared pumps.	do
153	Do	30,000-gallon excavated tank	do
154	Do	do do	do
155	Do	Pillar crane	do
156	Do	do	do
157	Do	do	do
249	Wentworth Falls...	Tangye steam-pump, 8″ x 6″	do
158	Do	20,000 gallon tank with two jib cranes attached	do
20½	Blackheath ...	Tangye steam-pump, 8″ x 5″	do
159	Do	11,000 gallon tank with jib crane attached ...	do
25	Mount Victoria ...	Pair 3-in. hand-pumps	do
181½	Do	3,000-gallon tank and jib crane attached ...	do
26	Lithgow (bottom points).	150,000-gallon reservoir, supplied by gravitation	do
121	Do	Pillar crane	To replace No. 161 condemned, charged to Revenue.
223	Do	do	To replace No. 162 condemned, charged to Revenue.
33	Bowenfells ...	Tangye steam-pump, 8″ x 5″	In good order.
163	Do	20,000-gallon tank with jib crane attached ...	do
83	Marrangaroo ..	10-h.p. vertical boiler	In good order; the Tangye-pump, 9″ x 5″, which was formerly connected with this boiler has been removed to Sydney and renumbered 250.
243	Do	14-h.p. Tangye horizontal engine, with 6″ geared pump.	In good order.
164	Do	150,000-gallon reservoir	do
165	Wallerawang ...	20,000-gallon tank with two jib cranes attached	do
166	Do	8,000 do do ..	do
27	Rydal	Pair 3-in. pumps	In good order; not at present in use.
28	Tarana	4-h.p. engine and boiler, and 4-in. double-acting pump.	In good order.
58	Do	Tangye steam-pump, 8″ x 4″	do
167	Do	12,000-gallon tank with jib crane attached ...	do
195	Do	20,000 do do ...	do
51	Bathurst	6-h.p. vertical engine and boiler...	do
65	Do	Pair 6-in. deep well pumps	do
32	Do	Pair 3½-in. hand-pumps	do
45	Do	No. 5 pulsometer pump	Formerly at Tarana. In store at Bathurst.
168	Do	20,000-gallon tank with jib crane attached ...	In good order.
34	Blayney	Tangye steam-pump, 8″ x 4″	do
169	Do	14,000-gallon tank with jib crane attached ...	do
196	Do	20,000 do do ...	do
238	Do	Tangye steam-pump, 9″ x 6″	do
239	Do	8-h.p. vertical boiler	do
221	Orange	8-h.p. engine and boiler	In good order; to replace engine and boiler of pumping-engine No. 35, charged to Revenue.
222	Do	Pair 6-in deep well pumps	In good order; to replace pumps of pumping-engine No. 35, charged to Revenue.
170	Do	20,000-gallon tank with jib crane attached ...	In good order.
64	Kerr's Creek ...	No. 5 pulsometer pump	do
171	Do	20,000-gallon tank with jib crane attached ...	do
172	Store Creek ...	do do do ...	do
46	Do	Tangye steam-pump, 8″ x 5″	do

No. 2—*continued.*

ENGINES, PUMPS, &c., FOR SUPPLYING WATER—*continued.*

No	Place.	Description.	Remarks.
47	Wellington ...	7-h.p. Tangye horizontal engine and boiler and pair 4-in. geared Tangye deep-well pumps.	In good order.
30	Do	Tangye steam-pump, 8″ x 5″	In fair order.
173	Do	20,000-gallon tank with jib crane attached ...	In good order.
174	Do	Pillar crane	do
59	Dubbo	Tangye steam-pump, 8″ x 4″	do
63	Do	No. 5 pulsometer pump	do
175	Do	20,000-gallon tank with two jib cranes attached	do
88	Narramine ..	6-h p. engine and boiler, and pair 5-in. deep well-pumps.	do
176	Do	20,000-gallon tank with jib crane attached ...	do
85	Trangie	Tangye steam-pump, 7″ x 5″	do
38	Do	do do 6″ x 3″	Not in use, requires repairing
114	Do	20,000 gallon tank with jib crane attached ...	In good order.
90	Nevertire	3-h.p. horizontal engine and vertical boiler ...	In fair order.
177	Do	20,000-gallon tank with jib crane attached ...	In good order.
91	Do	3-in. double acting pump...	do
82	Nyngan	Tangye steam pump, 8″ x 5″	do
206	Do	do 8″ x 6″	In good order; numbered to replace pumping-engine No. 24 at Blackheath; condemned; charged to Revenue.
178	Do	20,000-gallon tank with jib crane attached ..	In good order.
207	Do	6-h.p. vertical boiler	do
204	Byrock	Tangye steam pump, 7″ x 5″	do
205	Do	6-h.p. vertical boiler	do
208	Do	20,000 gallon tank with jib crane attached ...	do
202	Wilga	Tangye steam-pump, 7″ x 5″	do
203	Do	6-h.p vertical boiler	do
218	Do	20,000-gallon tank with jib-crane attached ...	do
240	Bourke	20,000 do do ...	do
242	Do	One set treble deep well 4½″ Tangye steam-pumps	do
241	Do ...	6-h.p. vertical engine and boiler..	do
185	Bogan Creek ...	20,000-gallon tank with jib-crane attached ...	do
186	Rylstone	Tangye steam pump, supplied by gravitation, 8″ x 5″.	do
187	Do	20,000-gallon tank with jib-crane attached ...	do
188	Mudgee	Tangye steam pump, 8″ x 4″	do
189	Do	20,000-gallon tank with two jib-cranes attached	do
48	Mulgrave	Pair 4-in. deep well pumps	do
49	Do	3-h.p. vertical engine and boiler...	do
179	Do	10,000-gallon tank with jib-crane attached ...	do
44	Richmond	Pair Tangye 4-in. deep well pumps	do
89	Do	4-h.p. vertical engine and boiler	Engine in good order; the boiler has now been condemned and replaced by No. 220, charged to Revenue.
220	Do	4-h.p. boiler	In good order; to replace boiler of pumping engine No. 89, charged to Revenue.
180	Do	16,000-gallon tank with jib-crane attached ...	In good order.
191	Rockdale	Tangye steam-pump, 6″ x 3″	do
81	Do	Do do 6″ x 3″, without boiler ...	In good order; formerly at Orange. The boiler which was originally connected with this pump was removed to Sydney and renumbered 216.

No. 2—*continued.*

ENGINES, PUMPS, &c., FOR SUPPLYING WATER—*continued.*

No.	Place.	Description.	Remarks.
		PUMPING MACHINERY added to Stock during the Year 1885.	
251	Sydney	Tangye steam-pump, 6″ x 3″, without boiler ...	In brass foundry.
230	Eveleigh	20,000-gallon tank	New running sheds.
231	Do	20,000 do	do do
232	Do	20,000 do	do do
233	Do	20,000 do	do do
236	Granville	20,000 do	Additions to water supply works.
224	Liverpool	6-h.p. engine and boiler	do do
225	Do	Pair 6-in. deep well pumps	do do
219	Picton Lakes ...	Pillar-crane	do do
244	Goulburn	do	do do
245	Do	do	do do
226	Bungendore ...	Tangye steam-pump, 7″ x 5″	New extension of line.
227	Do	20,000-gallon tank, with jib-crane attached ...	do do
228	Young	20,000 do do do ...	do do
229	Do	Tangye steam-pump, 8″ x 5″	do do
237	Darlington ...	6-h.p. Tangye horizontal engine and vertical boiler and three 4½-in. deep well pumps.	Additional water supply.
234	Colombo	20,000-gallon tank, with jib-crane attached ...	New extension of lines.
235	Jerilderie	20,000 do do do ...	do do
246	Do	Tangye steam-pump, 8″ x 4″	do do
249	Wentworth Falls...	do do 8″ x 6″	Additions to water supply works.
223	Lithgow Bottom Points.	Pillar-crane	do do
243	Marangaroo ...	14-h.p. Tangye horizontal engine, with 6-in. geared pumps.	do do
238	Blayney	Tangye steam-pump, 9″ x 6″	do do
239	Do	8-h.p. vertical boiler	do do
221	Orange	8-h.p. engine and boiler	do do
222	Do	Pair 6-in. deep well pumps	do do
218	Wilga	20,000-gallon tank, with jib-crane attached ...	New extension of line.
240	Bourke	20,000 do do do ...	do do
242	Do	One set treble deep well 4½″ Tangye steam-pumps	do do
241	Do	6-h.p. vertical engine and boiler...	do do
220	Richmond	4-h.p. boiler	To replace old boiler worn out and condemned.

GREAT NORTHERN RAILWAY.

ENGINES, PUMPS, &c., for supplying Water.

15	Honeysuckle Point.	7½″ x 6½″, Garrett & Marshall's engine and boiler	In good order.
28	Do ...	20,000-gallon tank	do
29	Do ...	Pillar crane	do
2	Bullock Island Junc.	7″ x 5″ Tangye Bros. steam-pump and boilers...	do
30	Do ...	20,000-gallon tank	do
31	Do ...	Pillar crane	do
32	Do ...	Do	do
56	Do ...	20,000-gallon tank	do
66	Do ..	14″ x 12 Tangye geared pump and boiler ...	do
57	Do Up Branch Line.	Pillar crane	do
58	Bullock Island ...	2,000-gallon tank (wood), with jib crane attached	do
3	Morpeth	Pair 3½″ hand-pumps	In fair order; not now in use.
33	Do	2,000-gallon tank (wood)...	do do
12	East Maitland ...	5″ x 4″ Tangye engine, boiler, and pump ...	In good order; transferred from Murrurundi.
67	Do	20,000-gallon tank	In good order.
68	Do	Pillar crane	do
4	West Maitland ...	7½″ x 6½″ Garrett & Marshall's engine, boiler, and pump.	Requires repairs.
34	Do ...	11,000-gallon tank with jib crane attached ...	In good order.
35	Do ...	10,000-gallon tank	do
36 & 37	Do ...	Two pillar cranes at platform	do
6	Singleton	4½″ x 4″ engine, boiler, and deep well pump ...	In fair order.
26	Do	7″ x 5″ Tangye engine, boiler, and pump ...	In good order.

No. 2—*continued.*

ENGINES, PUMPS, &c., FOR SUPPLYING WATER—*continued.*

No.	Place.	Description.	Remarks.
		GREAT NORTHERN RAILWAY—*continued.*	
38	Singleton	8,000-gallon tank with jib crane attached ...	In good order.
59	Do	20,000-gallon tank	do
7	Ravensworth ...	$7\frac{3}{16}''$ x $4\frac{1}{4}''$ double acting pump fixed on boiler ...	Requires repairs.
39	Do ...	12,000-gallon tank with jib crane attached ...	In good order.
8	Aberdeen	7″ x 4″ engine, boiler, and deep well pump ...	do
40	Do	12,000-gallon tank with jib crane attached ...	do
9	Wingen	$3\frac{1}{2}''$ hand-pump	In fair order; used occasionally.
10	Murrurundi ...	7″ x $4\frac{1}{4}''$ double acting pump fixed on boiler ...	Requires repairs.
27	Do ...	7″ x 5″ Tangye engine, boiler, and pump ...	In good order.
14	Do ...	5″ x 4″ do do ...	In fair order.
41	Do ...	12,000-gallon tank with jib crane attached ...	In good order.
60	Do ...	20,000-gallon tank	do
42	Do ...	Pillar crane	In fair order.
11	Chilcott's Creek ...	$7\frac{3}{16}''$ x $4\frac{1}{2}''$ Tangye engine, boiler, and pump ...	In good order.
43	Do ...	8,000-gallon tank with jib crane attached ...	do
13	Quirindi	6″ x 5″ Tangye engine, boiler, and pump ...	do
44	Do	20,000-gallon tank with jib crane attached ...	do
16	Tamworth... ...	6″ x 4″ Tangye engine, boiler, and pump ...	Under repairs.
1	Do ...	7″ x 5″ do do ...	In good order; transferred from Bullock Island June.
45	Do	20,000-gallon tank with jib crane attached ...	In good order.
22	Swamp Oak ...	7″ x 5″ Tangye engine, boiler, and pump ...	In fair order.
46	Do ...	20,000-gallon tank with jib crane attached ...	In good order.
23	Macdonald River...	7″ x 5″ Tangye engine, boiler, and pump ...	do
47	Do ...	20,000-gallon tank with jib crane attached ...	do
24	Uralla	Shanks & Son's engine and boiler and pair 4″ deep well pumps.	do
48	Do	20,000-gallon tank	do
49	Do	Pillar crane	do
25	Armidale	Shanks & Son's engine and boiler and three single acting 4″ deep well pumps.	do
50	Do	20,000-gallon tank, with two jib cranes attached	do
61	Guyra	7″ x 5″ Tangye engine, boiler, and pump ...	In fair order.
62	Do	20,000-gallon tank with jib crane attached ...	In good order.
63	Ben Lomond ...	20,000 do do ...	do Supplied by gravitation.
64	Glen Innes ...	Shanks & Son's engine and boiler, and three single acting 4″ deep well pumps.	In good order.
65	Do ...	20,000-gallon tank, with jib crane attached ...	do
17	Breeza	8″ x 5″ Tangye engine, boiler, and pump ...	do
51	Do	12,000-gallon tank with jib crane attached ...	do
18	Gunnedah... ...	6″ x 5″ Tangye engine, boiler, and pump ...	In fair order.
19	Do	6″ x 4″ engine and boiler...	In good order
52	Do	20,000-gallon tank with jib crane attached ...	do
20	Boggabri	Shanks & Son's engine and boiler, and pair 4″ deep well pumps.	do
53	Do	20,000-gallon tank with jib crane attached ...	do
21	Narrabri	Shanks & Son's engine and boiler, and pair 4″ deep well pumps.	do
54	Do	20,000-gallon tank	do
55	Do	Pillar crane	do

PUMPING MACHINERY added to Stock during the Year 1885:—

66	Bullock Island Junc.	14 x″ 12″ Tangye geared pump and boiler ...	In good order.
67	East Maitland ...	20,000-gallon tank	do
68	Do ...	Pillar crane	do

No. 2—*continued.*

GREAT SOUTHERN, WESTERN, AND RICHMOND RAILWAYS.

List and Condition of Locomotive Engines and Tenders on 31st December, 1885.

Stock No	Maker's Name.	Maker's No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of stroke	Number of wheels on Engine.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing	Commenced to run.	Condition.
						inches	inches			ft. in.	ft. in.	ft. in.		
1	Beyer, Peacock, & Co.	1892	Goods	Tender engine	Inside	18	24	6	All coupled	4 0	4 0	4 0	April, 1880	In good order.
2	Do	1893	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
3	Do	1894	do	do	do	18	24	6	do	4 0	4 0	4 0	do	Under repairs.
4	Do	1895	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In good order.
5	Hawthorne & Son	944	Passenger.	do	do	14	22	6	4-coupled	4 6	4 6	3 6	Nov., 1856	do
10	Railway Works, Sydney	1	do	do	do	17	24	6	do	3 6	5 6	5 6	June, 1870	Waiting for repairs.
13	Manning, Wardle, & Co.	43	do	do	Outside	16	22	6	do	3 6	5 0	5 0	Jan., 1863	do
14	Beyer, Peacock, & Co.	541	do	do	Inside	16	20	6	Single	3 6	6 0	3 6	Nov., 1865	In good order.
15	Do	543	do	do	do	16	20	6	do	3 6	6 0	3 6	Jan., 1866	do
16	Do	542	do	do	do	16	20	6	do	3 6	6 0	3 6	Dec, 1865	Requires repairs.
17	R. Stephenson & Sons	1541	Goods	do	do	18	24	6	4-coupled	4 0	4 0	4 0	May, 1865	In fair order.
18	Do	1542	do	do	do	18	24	6	do	4 0	4 0	4 0	Sept., 1866	In good order.
19	Do	1543	do	do	do	18	24	6	do	4 0	4 0	4 0	„ 1865	do
20	Do	1547	do	do	do	18	24	6	do	4 0	4 0	4 0	Jan, 1867	do
21	Do	1548	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
22	Do	1549	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
23	Beyer, Peacock, & Co.	443	Passenger.	2-wheel bogie and tender	Outside	18	24	6	do	3 0	5 9	5 9	April, 1867	Waiting repairs.
24	Do	444	do	do	do	18	24	6	do	3 0	5 9	5 9	Feb, 1867	In fair order.
25	Do	445	do	do	do	18	24	6	do	3 0	5 9	5 9	April, 1867	Waiting repairs.
26	Do	449	do	do	do	18	24	6	do	3 0	5 9	5 9	Oct, 1865	In fair order.
27	Do	450	do	do	do	18	24	6	do	3 0	5 9	5 9	Nov., 1866	Requires repairs.
28	Do	451	do	do	do	18	24	6	do	3 0	5 9	5 9	Mar., 1867	do
29	Manning, Wardle, & Co.	88	do	Tank engine	Inside	11	17	6	6-coupled	3 0	3 0	3 0	„ 1864	In good order.
30	Do	109	do	do	do	11	17	6	do	3 0	3 0	3 0	Aug., 1864	In fair order.
31	Do	89	do	do	do	11	17	6	do	3 0	3 0	3 0	do	do
32	Beyer, Peacock, & Co.	928	do	2-wheel bogie and tender	Outside	18	24	6	4-coupled	3 0	5 6	5 6	Nov., 1870	do
33	Do	929	do	do	do	18	24	6	do	3 0	5 6	5 6	do	Waiting repairs.
34	Do	930	do	do	do	18	24	6	do	3 0	5 6	5 6	Dec, 1870	In fair order.
35	Do	931	do	do	do	18	24	6	do	3 0	5 6	5 6	do	Requires repairs.
36	Mort & Co.	1	Mixed	Tender engine	Inside	16	24	6	do	5 6	5 6	3 6	Sept., 1870	Under repairs.
37	Do	2	do	do	do	16	24	6	do	5 6	5 6	3 6	Nov., 1870	do
38	Do	3	do	do	do	16	24	6	do	5 6	5 6	3 6	Dec., 1870	In good order.
39	Do	4	do	do	do	16	24	6	do	5 6	5 6	3 6	Feb, 1871	do
40	Vale & Lacy	5	Goods	do	do	18	24	6	All coupled	4 0	4 0	4 0	Dec, 1870	do
41	Do	6	do	do	do	18	24	6	do	4 0	4 0	4 0	Jan., 1871	In fair order.
42	Do	7	do	do	do	18	24	6	do	4 0	4 0	4 0	Mar, 1871	In good order.
43	Do	8	do	do	do	18	24	6	do	4 0	4 0	4 0	do	Under repairs.
44	R. Stephenson & Sons.	1981	do	do	do	18	24	6	do	4 0	4 0	4 0	Dec, 1870	In good order.
45	Do	1982	do	do	do	18	24	6	do	4 0	4 0	4 0	Feb., 1871	Waiting repairs.
46	Do	1983	do	do	do	18	24	6	do	4 0	4 0	4 0	Mar, 1871	In good order.
47	Do	1984	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
48	Do	2181	do	do	do	19	26	6	do	4 0	4 0	4 0	Dec., 1874	do
49	Do	2182	do	do	do	19	26	6	do	4 0	4 0	4 0	do	do
50	Do	2183	do	do	do	19	26	6	do	4 0	4 0	4 0	do	do

No. 2—*continued.*

LIST and Condition of Locomotive Engines and Tenders on 31st December, 1885—*continued.*

Stock No.	Maker's Name.	Maker's No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of stroke.	Number of wheels on Engine.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing.	Commenced to run.	Condition.
						inches	inches			ft. in.	ft. in.	ft. in.		
51	R. Stephenson & Sons	2184	Goods	Tender engine	Inside	19	26	6	All coupled	4 0	4 0	4 0	Dec., 1874	Under repairs.
52	Do	2348	do	do	do	18	24	6	do	4 0	4 0	4 0	July, 1879	In fair order.
53	Do	2185	do	do	do	19	26	6	do	4 0	4 0	4 0	Feb., 1875	do
54	Do	2187	do	do	do	19	26	6	do	4 0	4 0	4 0	May, 1875	In good order.
55	Do	2188	do	do	do	19	26	6	do	4 0	4 0	4 0	do	do
56	Do	2189	do	do	do	19	26	6	do	4 0	4 0	4 0	Aug., 1875	do
57	Do	2190	do	do	do	19	26	6	do	4 0	4 0	4 0	July, 1875	Under repairs.
58	Do	2191	do	do	do	19	26	6	do	4 0	4 0	4 0	Aug., 1875	In good order.
59	Do	2192	do	do	do	19	26	6	do	4 0	4 0	4 0	do	do
60	Do	2194	Passenger.	do	do	19	28	6	do	5 0	5 0	5 0	Oct., 1874	In fair order.
61	Do	2193	do	do	do	19	28	6	do	5 0	5 0	5 0	Nov., 1874	Waiting for repairs.
62	Do	2195	do	do	do	19	28	6	do	5 0	5 0	5 0	Dec., 1874	In good order.
63	Do	2196	do	do	do	19	28	6	do	5 0	5 0	5 0	do	Waiting for repairs.
64	Do	2198	do	do	do	19	28	6	do	5 0	5 0	5 0	do	In fair order.
65	Do	2197	do	do	do	19	28	6	do	5 0	5 0	5 0	Jan., 1875	do
66	Manning, Wardle, & Co.	182	do	Tank engine	do	12	17	6	do	3 0	3 0	3 0	Feb., 1874	do
67	Mort & Co.	15	do	do	do	13	20	6	do	4 0	4 0	4 0	Mar., 1875	Requires repairs.
68	Do	16	do	do	do	13	20	6	do	4 0	4 0	4 0	do	In good order.
69	Do	17	do	do	do	13	20	6	do	4 0	4 0	4 0	July, 1875	In good order.
70	Do	18	do	do	do	13	20	6	do	4 0	4 0	4 0	do	In fair order.
71	Vale & Lacy	Nil.	do	do	do	13	20	6	do	4 0	4 0	4 0	do	do
72	Do	do	do	do	do	13	20	6	do	4 0	4 0	4 0	do	do
73	Do	do	do	do	do	13	20	6	do	4 0	4 0	4 0	do	In good order.
74	Do	do	do	do	do	13	20	6	do	4 0	4 0	4 0	Aug., 1875	do
75	Railway Works	do	Mixed	Tender engine	do	16	24	6	4-coupled	5 6	5 6	3 9	„ 1876	do
76	Do	do	do	do	do	16	24	6	do	5 6	5 6	3 9	April, 1877	In fair order.
77	Do	do	do	do	do	16	24	6	do	5 6	5 6	3 9	Sept., 1877	In good order.
78	Do	do	do	do	do	16	24	6	do	5 6	5 6	3 9	Dec., 1877	do
79	Beyer, Peacock, & Co.	1624	Passenger.	4-wheel bogie and tender	Outside.	18	24	8	do	3 0	5 6	5 6	May, 1877	do
80	Do	1625	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
81	Do	1626	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
82	Do	1627	do	do	do	18	24	8	do	3 0	5 6	5 6	April, 1877	do
83	Do	1628	do	do	do	18	24	8	do	3 0	5 6	5 6	June, 1877	In fair order.
84	Do	1629	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In good order.
85	Do	1630	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In fair order.
86	Do	1631	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In good order.
87	Do	1632	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In fair order.
88	Do	1633	do	do	do	18	24	8	do	3 0	5 6	5 6	do	Under repairs.
89	Do	1634	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
90	Do	1635	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In fair order.
91	Do	1636	do	do	do	18	24	8	do	3 0	5 6	5 6	Sept., 1877	In good order.
92	Do	1637	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
93	Do	1643	Goods	Tender engine	Inside	18	24	6	All coupled	4 0	4 0	4 0	Aug., 1877	do
94	Do	1644	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
95	Do	1645	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
96	Do	1646	do	do	do	18	24	6	do	4 0	4 0	4 0	do	Requires repairs.

No. 2—*continued.*

LIST and Condition of Locomotive Engines and Tenders on 31st December, 1885—*continued.*

Stock No	Maker's Name	Maker's No	Class.	Description	Cylinders			Number of wheels on Engine.	Coupled or single Wheels	Diameter of Wheels			Commenced to run	Condition
					Position.	Diameter	Length of Stroke			Leading	Driving.	Trailing.		
						inches	inches			ft. in.	ft. in.	ft. in.		
97	Beyer, Peacock, & Co.... ...	1647	Goods ...	Tender engine	Inside..	18	24	6	All coupled	4 0	4 0	4 0	July, 1877...	In fair order
98	Do	1648	do	do ..	do	18	24	6	do	4 0	4 0	4 0	do	In good order
99	Do	1675	do	do	do ...	18	24	6	do	4 0	4 0	4 0	do	Requires repairs.
100	Do ...	1676	do ...	do ...	do ...	18	24	6	do	4 0	4 0	4 0	do .	In fair order.
101	Do ...	1683	do ...	do	do	18	24	6	do	4 0	4 0	4 0	Nov , 1877	In good order
102	Do	1684	do	do . ..	do	18	24	6	do ...	4 0	4 0	4 0	do ...	do
103	Stephenson & Sons ...	2349	do	do	do	18	24	6	do	4 0	4 0	4 0	July, 1879	In fair order
104	Beyer, Peacock, & Co .	1686	do	do	do	18	24	6	do . .	4 0	4 0	4 0	Nov , 1877	Requires repairs
105	Baldwin Locomotive Works	4074	Passenger	4 wheel bogie and tender	Outside	18	24	8	4-coupled .	2 6	5 3	5 3	Oct , 1877	Waiting repairs
106	Beyer, Peacock, & Co	1753	Goods	Tender engine	Inside .	18	24	6	All coupled	4 0	4 0	4 0	Aug , 1878	In fair order
107	Do	1754	do	do .	do ..	18	24	6	do	4 0	4 0	4 0	Sept , 1878	In good order.
108	Do .	1755	do ...	do	do . .	18	24	6	do	4 0	4 0	4 0	do	do
109	Do	1756	do	do	do	18	24	6	do .. .	4 0	4 0	4 0	do	do
110	Do	1757	do ...	do	do	18	24	6	do . ..	4 0	4 0	4 0	Aug , 1878	do
111	Do ..	1758	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In fair order.
112	Do	1759	do	do ..	do	18	24	6	do	4 0	4 0	4 0	Dec , 1878	Requires repairs
113	Do	1760	do ...	do ...	do	18	24	6	do	4 0	4 0	4 0	do . .	Under repairs
114	Do .	1761	do	do	do ..	18	24	6	do ...	4 0	4 0	4 0	do	In good order.
115	Do	1762	do	do	do	18	24	6	do ...	4 0	4 0	4 0	do	Under repairs
116	Do ...	1763	do ...	do	do	18	24	6	do	4 0	4 0	4 0	do ...	In good order
117	Do	1764	do .	do ..	do	18	24	6	do	4 0	4 0	4 0	do	do
118	Do ...	1765	Passenger	4 wheel bogie and tender	Outside	18	24	8	4-coupled	3 0	5 6	5 6	Sept , 1878 ..	In fair order.
119	Do . .	1766	do	do ...	do	18	24	8	do	3 0	5 6	5 6	do	In good order
120	Do .	1767	do	do .	do	18	24	8	do	3 0	5 6	5 6	do .	do
121	Do	1768	do	do	do .	18	24	8	do	3 0	5 6	5 6	do	Requires repairs.
122	Do	1769	do	do ...	do	18	24	8	do ...	3 0	5 6	5 6	do .	Under repairs
123	Do	1770	do	do	do	18	24	8	do ...	3 0	5 6	5 6	do .	In good order.
124	Do .. .	1772	do	do	do	18	24	8	do	3 0	5 6	5 6	Jan , 1879	In fair order
125	Do	1774	do ...	do	do ..	18	24	8	do .	3 0	5 6	5 6	do .	In good order.
126	Do	1776	do ...	do ...	do	18	24	8	do ...	3 0	5 6	5 6	do	In fair order
127	Vulcan Foundry Co . ..	833	do ...	Tank engine	Inside .	12	17	6	All coupled	3 0	3 0	3 0	April, 1879	In good order
128	Do .	834	do ..	do	do ..	12	17	6	do	3 0	3 0	3 0	do	In fair order.
129	Do .	835	do ...	do	do .	12	17	6	do	3 0	3 0	3 0	do	In good order
130	Baldwin Locomotive Works	4395	do	4-wheel bogie and tender	Outside	18	24	8	4-coupled	2 6	5 3	5 3	do	In fair order.
131	Do ...	4405	Goods ...	2-wheel bogie and tender	do	20	24	10	8 coupled	2 6	4 0	4 0	do	In good order.
132	Do	4414	do	do ...	do .	20	24	10	do	2 6	4 0	4 0	do	do
133	Do . .	4525	do	do ...	do ..	20	24	10	do ...	2 6	4 0	4 0	Sept , 1879	Waiting repairs.
134	Do	4526	do	do	do	20	24	10	do	2 6	4 0	4 0	do	In fair order
135	Do	4527	do	do ...	do	20	24	10	do . .	2 6	4 0	4 0	Aug , 1879	Under repairs
136	Do	4528	do	do ...	do .	20	24	10	do ..	2 6	4 0	4 0	Sept , 1879	Waiting repairs
137	Do	4529	do	do ...	do	20	24	10	do	2 6	4 0	4 0	do	In good order.
138	Do	4530	do	do ...	do	20	24	10	do .	2 6	4 0	4 0	do .	Under repairs
139	Do ...	4531	do ..	do	do	20	24	10	do	2 6	4 0	4 0	Aug , 1879. .	Requires repairs.
140	Do	4533	do ...	do .	do	20	24	10	do	2 6	4 0	4 0	Sept , 1879	Waiting repairs.
141	Do ...	4535	do .	do	do	20	24	10	do	2 6	4 0	4 0	do	Under repairs.
142	Beyer, Peacock, & Co.. . .	1890	do .	Tender engine ...	Inside	18	24	6	All coupled	4 0	4 0	4 0	Dec , 1879	Requires repairs

No. 2—*continued.*

LIST and Condition of Locomotive Engines and Tenders on 31st December, 1885—*continued.*

Stock No.	Maker's Name.	Maker's No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of stroke.	Number of wheels on Engine.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing.	Commenced to run.	Condition.
						inches	inches			ft. in.	ft. in.	ft. in.		
143	Dubs & Co.	1275	Passenger	4-wheel bogie and tender	Outside	18	24	8	4-coupled	3 0	5 6	5 6	April, 1880...	In fair order.
144	Do	1269	do	do	do	18	24	8	do	3 0	5 6	5 6	Mar., 1880...	Waiting repairs.
145	Do	1270	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In good order.
146	Do	1271	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
147	Do	1272	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
148	Do	1273	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
149	Do	1274	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
150	Do	1276	do	do	do	18	24	8	do	3 0	5 6	5 6	April, 1880...	Under repairs.
151	Do	1277	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In good order.
152	Do	1278	do	do	do	18	24	8	do	3 0	5 6	5 6	do	Under repairs.
153	Do	1279	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In good order.
154	Do	1285	do	do	do	18	24	8	do	3 0	5 6	5 6	May, 1880...	do
155	Do	1286	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In fair order.
156	Do	1287	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In good order.
157	Do	1288	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In fair order.
158	Beyer, Peacock, & Co.	1909	do	4-wheel bogie and tank	Inside...	16	24	8	do	3 0	5 0	5 0	Sept., 1880...	Under repairs.
159	Do	1910	do	do	do	16	24	8	do	3 0	5 0	5 0	Aug., 1880...	In fair order.
160	Do	1911	do	do	do	16	24	8	do	3 0	5 0	5 0	do	In good order.
161	Do	1912	do	do	do	16	24	8	do	3 0	5 0	5 0	Sept., 1880...	do
162	Do	1913	do	do	do	16	24	8	do	3 0	5 0	5 0	do	do
163	Do	1914	do	do	do	16	24	8	do	3 0	5 0	5 0	July, 1880...	In fair order.
164	Do	1920	Goods	Tender engine	do	18	24	6	All coupled	4 0	4 0	4 0	Sept., 1880...	In good order.
165	Dubs & Co.	1430	Passenger	4-wheel bogie and tender	Outside	18	24	8	4-coupled	3 0	5 6	5 6	April, 1881...	In fair order.
166	Do	1431	do	do	do	18	24	8	do	3 0	5 6	5 6	do	In good order.
167	Do	1432	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
168	Do	1433	do	do	do	18	24	8	do	3 0	5 6	5 6	Mar., 1881...	In fair order.
169	Do	1434	do	do	do	18	24	8	do	3 0	5 6	5 6	April, 1881...	In good order.
170	Do	1435	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
171	Beyer, Peacock, & Co.	2060	do	do	do	18	24	8	do	3 0	5 6	5 6	Nov., 1881...	do
172	Do	2061	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
173	Do	2062	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
174	Do	2063	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
175	Atlas Company, Sydney	1	do	do	do	18	24	8	do	3 0	5 6	5 6	Jan., 1882...	In fair order.
176	Do	2	do	do	do	18	24	8	do	3 0	5 6	5 6	Mar., 1882...	In good order.
177	Do	3	do	do	do	18	24	8	do	3 0	5 6	5 6	Feb., 1882...	do
178	Do	4	do	do	do	18	24	8	do	3 0	5 6	5 6	Mar., 1882...	do
179	Do	5	do	do	do	18	24	8	do	3 0	5 6	5 6	Sept., 1882...	do
180	Do	6	do	do	do	18	24	8	do	3 0	5 6	5 6	Oct., 1882...	Under repairs.
181	Do	7	do	do	do	18	24	8	do	3 0	5 6	5 6	Dec., 1882...	In good order.
182	Do	8	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
183	Beyer, Peacock, & Co.	2064	Goods	Tender engine	Inside...	18	24	6	All coupled	4 0	4 0	4 0	Oct., 1881...	Waiting repairs.
184	Do	2065	do	do	do	18	24	6	do	4 0	4 0	4 0	do	Will shortly require repairs.
185	Do	2066	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In fair order.
186	Do	2067	do	do	do	18	24	6	do	4 0	4 0	4 0	do	Under repairs.
187	Do	2068	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In good order.
188	Do	2069	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In fair order.

No. 2—*continued.*

LIST and Condition of Locomotive Engines and Tenders on 31st December, 1885—*continued.*

Stock No.	Maker's Name	Maker's No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of stroke.	Number of wheels on Engine.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing	Commenced to run.	Condition.
						inches	inches			ft. in.	ft. in.	ft. in.		
189	Beyer, Peacock, & Co	2070	Goods	Tender engine	Inside	18	24	6	All coupled	4 0	4 0	4 0	Nov., 1881	In fair order.
190	Do	2071	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In good order.
191	Henry Vale, Sydney	16	do	do	do	18	24	6	do	4 0	4 0	4 0	April, 1882	In fair order.
192	Do	17	do	do	do	18	24	6	do	4 0	4 0	4 0	May, 1882	Requires repairs.
193	Do	18	do	do	do	18	24	6	do	4 0	4 0	4 0	July, 1882	In fair order.
194	Do	19	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
195	Do	20	do	do	do	18	24	6	do	4 0	4 0	4 0	Mar., 1883	In good order.
196	Do	21	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
197	Do	22	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
198	Do	23	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
199	Do	24	do	do	do	18	24	6	do	4 0	4 0	4 0	April, 1884	Requires repairs.
200	Do	25	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In good order.
201	Do	26	do	do	do	18	24	6	do	4 0	4 0	4 0	do	Waiting for repairs.
202	Do	27	do	do	do	18	24	6	do	4 0	4 0	4 0	Sept., 1884	In fair order.
203	Do	28	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In good order.
204	Do	29	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
205	Beyer, Peacock, & Co.	2073	do	2-wheel bogie and tender	Outside	18	26	8	6-coupled	2 9	4 0	4 0	Jan., 1882	Under repairs.
206	Do	2074	do	do	do	18	26	8	do	2 9	4 0	4 0	do	In fair order.
207	Do	2075	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
208	Do	2076	do	do	do	18	26	8	do	2 9	4 0	4 0	do	Requires repairs.
209	Do	2077	do	do	do	18	26	8	do	2 9	4 0	4 0	Feb., 1882	Under repairs.
210	Do	2078	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
211	Do	2079	do	do	do	18	26	8	do	2 9	4 0	4 0	Mar., 1882	In good order.
212	Do	2080	do	do	do	18	26	8	do	2 9	4 0	4 0	Feb., 1882	Under repairs.
213	Do	2081	do	do	do	18	26	8	do	2 9	4 0	4 0	Mar., 1882	In good order.
214	Do	2082	do	do	do	18	26	8	do	2 9	4 0	4 0	do	In fair order.
215	Do	2083	do	do	do	18	26	8	do	2 9	4 0	4 0	April, 1882	Under repairs.
216	Do	2084	do	do	do	18	26	8	do	2 9	4 0	4 0	do	Waiting repairs.
217	Do	2085	do	do	do	18	26	8	do	2 9	4 0	4 0	do	Under repairs.
218	Do	2086	do	do	do	18	26	8	do	2 9	4 0	4 0	do	Waiting repairs.
219	Do	2091	do	do	do	18	26	8	do	2 9	4 0	4 0	May, 1882	In fair order.
220	Do	2092	do	do	do	18	26	8	do	2 9	4 0	4 0	do	Requires repairs.
225	Do	2308	do	do	do	18	26	8	do	2 9	4 0	4 0	Sept., 1883	In good order.
226	Do	2309	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
227	Do	2310	do	do	do	18	26	8	do	2 9	4 0	4 0	do	Requires repairs.
228	Do	2311	do	do	do	18	26	8	do	2 9	4 0	4 0	do	In good order.
229	Do	2312	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
230	Do	2313	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
239	Do	2322	do	do	do	18	26	8	do	2 9	4 0	4 0	May, 1884	In fair order.
240	Do	2323	do	do	do	18	26	8	do	2 9	4 0	4 0	do	In good order.
241	Do	2324	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
242	Do	2325	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
243	Do	2326	do	do	do	18	26	8	do	2 9	4 0	4 0	July, 1884	do
244	Do	2327	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
245	Do	2328	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
246	Do	2329	do	do	do	18	26	8	do	2 9	4 0	4 0	do	In fair order.

No. 2—*continued.*

LIST and Condition of Locomotive Engines and Tenders on 31st December, 1885—*continued.*

Stock No.	Maker's Name.	Maker's No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of stroke.	Number of wheels on Engine.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing.	Commenced to run.	Condition.
						inches	inches			ft. in.	ft. in.	ft. in.		
247	Beyer, Peacock, & Co.	2330	Goods	2-wheel bogie and tender	Outside	18	26	8	6-coupled	2 9	4 0	4 0	July, 1884	In good order.
248	Do	2331	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
249	Do	2332	do	do	do	18	26	8	do	2 9	4 0	4 0	Aug., 1884	Requires repairs.
250	Do	2333	do	do	do	18	26	8	do	2 9	4 0	4 0	do	In good order.
251	Do	2334	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
252	Do	2335	do	do	do	18	26	8	do	2 9	4 0	4 0	do	In fair order.
253	Do	2336	do	do	do	18	26	8	do	2 9	4 0	4 0	do	In good order.
254	Do	2337	do	do	do	18	26	8	do	2 9	4 0	4 0	do	In fair order.
255	Do	2150	Passenger	4-wheel bogie and tender	Inside	17	26	8	4-coupled	3 6	6 0	6 0	Nov., 1882	do
256	Do	2151	do	do	do	17	26	8	do	3 6	6 0	6 0	Dec., 1882	do
257	Do	2152	do	do	do	17	26	8	do	3 6	6 0	6 0	do	In good order.
258	Do	2153	do	do	do	17	26	8	do	3 6	6 0	6 0	Jan., 1883	do
259	Do	2154	do	do	do	17	26	8	do	3 6	6 0	6 0	do	In fair order.
260	Do	2155	do	do	do	17	26	8	do	3 6	6 0	6 0	do	do
265	Dubs & Co.	1764	do	do	do	18	26	8	do	3 6	6 0	6 0	Jan., 1884	In good order.
266	Do	1765	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
267	Do	1766	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
268	Do	1767	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
269	Do	1768	do	do	do	18	26	8	do	3 6	6 0	6 0	do	In fair order.
270	Do	1769	do	do	do	18	26	8	do	3 6	6 0	6 0	do	In good order.
271	Do	1770	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
272	Do	1771	do	do	do	18	26	8	do	3 6	6 0	6 0	Dec., 1883	do
273	Do	1772	do	do	do	18	26	8	do	3 6	6 0	6 0	Jan., 1884	do
274	Do	1773	do	do	do	18	26	8	do	3 6	6 0	6 0	Dec., 1883	do
275	Do	1774	do	do	do	18	26	8	do	3 6	6 0	6 0	Mar., 1884	do
276	Do	1775	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
277	Do	1776	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
278	Do	1777	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
279	Do	1778	do	do	do	18	26	8	do	3 6	6 0	6 0	April, 1884	In fair order.
280	Do	1779	do	do	do	18	26	8	do	3 6	6 0	6 0	do	In good order.
281	Do	1780	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
282	Do	1781	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
283	Do	1782	do	do	do	18	26	8	do	3 6	6 0	6 0	do	Under repairs.
284	Do	1783	do	do	do	18	26	8	do	3 6	6 0	6 0	do	In good order.
285	Vulcan Foundry Company	992	do	Tank Engine	do	15	22	6	All coupled	4 0	4 0	4 0	do	do
286	Do	993	do	do	do	15	22	6	do	4 0	4 0	4 0	do	do
287	Do	994	do	do	do	15	22	6	do	4 0	4 0	4 0	May, 1884	do
288	Do	995	do	do	do	15	22	6	do	4 0	4 0	4 0	do	do
289	Do	996	do	do	do	15	22	6	do	4 0	4 0	4 0	do	do
290	Do	997	do	do	do	15	22	6	do	4 0	4 0	4 0	do	do
294	Baldwin Loco. Works	7387	Goods	Single bogie (Mogul class) and tender.	Outside.	19	24	8	6-coupled	2 6	4 0	4 0	Mar., 1885	do
295	Do	7388	do	do	do	19	24	8	do	2 6	4 0	4 0	do	do
296	Do	7389	do	do	do	19	24	8	do	2 6	4 0	4 0	April, 1885	do
297	Do	7390	do	do	do	19	24	8	do	2 6	4 0	4 0	Feb., 1885	In fair order.
298	Do	7391	do	do	do	19	24	8	do	2 6	4 0	4 0	do	do

No. 2—*continued.*

LIST and Condition of Locomotive Engines and Tenders on 31st December, 1885—*continued.*

Stock No.	Maker's Name.	Maker's No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of stroke.	Number of wheels on Engine.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing.	Commenced to run.	Condition.
						inches	inches			ft. in.	ft. in.	ft. in.		
299	Baldwin Loco. Works	7392	Goods	Single bogie (Mogul class) and tender.	Outside.	19	24	8	6-coupled	2 6	4 0	4 0	Feb., 1885	Under repair.
300	Do	7394	do	do	do	19	24	8	do	2 6	4 0	4 0	Mar., 1885	In good order.
301	Do	7395	do	do	do	19	24	8	do	2 6	4 0	4 0	do	do
302	Do	7396	do	do	do	19	24	8	do	2 6	4 0	4 0	Feb., 1885	In fair order.
303	Do	7398	do	do	do	19	24	8	do	2 6	4 0	4 0	do	Requires repairs.
304	Do	7417	Passenger.	do	do	18	26	8	do	3 0	5 0	5 0	July, 1885	In good order.
305	Do	7418	do	do	do	18	26	8	do	3 0	5 0	5 0	do	do
306	Do	7424	do	do	do	18	26	8	do	3 0	5 0	5 0	Aug., 1885	do
307	Do	7425	do	do	do	18	26	8	do	3 0	5 0	5 0	Mar., 1885	do
308	Do	7426	do	do	do	18	26	8	do	3 0	5 0	5 0	April, 1885	do
309	Do	7528	do	do	do	18	26	8	do	3 0	5 0	5 0	Sept., 1885	do
310	Do	7430	do	do	do	18	26	8	do	3 0	5 0	5 0	April, 1885	do
311	Do	7431	do	do	do	18	26	8	do	3 0	5 0	5 0	Mar., 1885	do
312	Do	7435	do	do	do	18	26	8	do	3 0	5 0	5 0	July, 1885	do
313	Do	7437	do	do	do	18	26	8	do	3 0	5 0	5 0	Mar., 1885	do
314	Beyer, Peacock, & Co.	2547	Goods	do	do	18	26	8	do	2 9	4 0	4 0	June, 1885	do
315	Do	2548	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
316	Do	2549	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
317	Do	2550	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
318	Do	2551	do	do	do	18	26	8	do	2 9	4 0	4 0	July, 1885	do
319	Do	2552	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
320	Do	2553	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
321	Do	2554	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
322	Do	2560	do	do	do	18	26	8	do	2 9	4 0	4 0	Sept., 1885	do
323	Do	2561	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
324	Do	2562	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
325	Do	2563	do	do	do	18	26	8	do	2 9	4 0	4 0	Oct., 1885	do
326	Do	2564	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
327	Do	2565	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
328	Do	2566	do	do	do	18	26	8	do	2 9	4 0	4 0	do	do
341	Dubs & Co.	2136	Passenger.	Express; double bogie and tender with Joy's patent valve gear.	Inside	18	26	8	4-coupled	3 6	6 0	6 0	Nov., 1885	do
342	Do	2137	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
343	Do	2138	do	do	do	18	26	8	do	3 6	6 0	6 0	Oct., 1885	do
344	Do	2139	do	do	do	18	26	8	do	3 6	6 0	6 0	Dec., 1885	do
351	Beyer, Peacock, & Co.	2657	do	Tank engine	do	15	22	6	do	3 6	5 0	5 0	do	do
352	Do	2658	do	do	do	15	22	6	do	3 6	5 0	5 0	Nov., 1885	do
353	Do	2659	do	do	do	15	22	6	do	3 6	5 0	5 0	do	do
354	Do	2660	do	do	do	15	22	6	do	3 6	5 0	5 0	do	do
355	Do	2661	do	do	do	15	22	6	do	3 6	5 0	5 0	Dec., 1885	do
356	Do	2662	do	do	do	15	22	6	do	3 6	5 0	5 0	do	do

No. 2—*continued.*

GREAT NORTHERN RAILWAY.

List and Condition of Locomotive Engines and Tenders on 31st December, 1885.

Stock No.	Maker's Name.	Maker's No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of Stroke.	Number of wheels on Engine.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing.	Commenced to run.	Condition.
						inches	inches			ft. in.	ft. in.	ft. in.		
1	Fairbairn & Sons	...	Passenger	Tender engine	Inside	16	24	6	Coupled	5 6	5 6	3 9	Mar., 1857	Under repairs.
2	Do	...	do	do	do	16	24	6	do	5 6	5 6	3 9	do	In good order.
3	Do	...	do	do	do	16	24	6	do	5 6	5 6	3 9	do	In fair order.
4	Do	...	do	do	do	14	22	6	do	4 6	4 6	3 0	Mar., 1856	do
5	Manning, Wardle, & Co.	10	do	do	Outside	15	20	6	Single	3 6	5 9	3 6	Mar., 1861	Obsolete, unfit for service.
6	Do	39	Goods	Tank engine	do	16	24	6	Coupled	3 0	4 6	4 6	Mar., 1863	In good order.
7	Do	38	do	do	do	16	24	6	do	3 0	4 6	4 6	do	do
8	Peto, Brassey, & Betts	77	Passenger	Tender engine	do	15	20	6	Single	3 6	6 0	3 6	Jan., 1864	Obsolete, unfit for service.
9	Manning, Wardle, & Co.	32	Goods	Tank engine	Inside	12	17	6	Coupled	3 0	3 0	3 0	June, 1864	In good order.
10	Do	42	do	Tender engine	Outside	16	22	6	do	3 6	5 0	5 0	Sept., 1864	In fair order.
11	Stephenson & Co.	1544	do	do	Inside	18	24	6	do	4 0	4 0	4 0	July, 1865	do
12	Do	1545	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In good order.
13	Do	1546	do	do	do	18	24	6	do	4 0	4 0	4 0	do	Requires repairs.
14	Beyer, Peacock, & Co.	446	do	2-wheel bogie and tender	Outside	18	24	6	do	3 0	5 9	5 9	Sept., 1865	do
15	Do	447	do	do	do	18	24	6	do	3 0	5 9	5 9	do	do
16	Do	448	do	do	do	18	24	6	do	3 0	5 9	5 9	do	In good order.
17	Manning, Wardle, & Co.	9	Passenger	Tender engine	do	15	20	6	Single	3 6	5 9	3 6	Mar., 1866	Obsolete, unfit for service.
18	Mort's Co.	8	Goods	do	Inside	18	24	6	Coupled	4 0	4 0	4 0	May, 1871	Under repairs.
19	Do	9	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In fair order.
20	Kittson & Co.	1620	do	Tank engine	do	16	24	6	do	4 0	4 0	4 0	June, 1872	Under repairs.
21	Vale & Lacy	...	do	Tender engine	do	18	24	6	do	4 0	4 0	4 0	Nov., 1873	In good order.
22	Do	...	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
23	Mort & Co.	12	do	do	do	18	24	6	do	3 9	3 9	3 9	July, 1874	Under repairs.
24	Do	14	do	do	do	18	24	6	do	3 9	3 9	3 9	Aug., 1874	In good order.
25	Do	11	do	do	do	18	24	6	do	3 9	3 9	3 9	June, 1875	do
26	Do	13	do	do	do	18	24	6	do	3 9	3 9	3 9	do	do
27	Beyer, Peacock, & Co.	1620	Passenger	4-wheel bogie and tender	Outside	18	24	8	do	3 0	5 6	5 6	July, 1877	do
28	Do	1621	do	do	do	18	24	8	do	3 0	5 6	5 6	Aug., 1877	do
29	Do	1622	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
30	Do	1623	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
31	Do	1677	Goods	Tender engine	Inside	18	24	6	do	4 0	4 0	4 0	Oct., 1877	do
32	Do	1678	do	do	do	18	24	6	do	4 0	4 0	4 0	do	Requires repairs.
33	Do	1679	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In fair order.
34	Do	1680	do	do	do	18	24	6	do	4 0	4 0	4 0	do	Requires repairs.
35	Do	1681	do	do	do	18	24	6	do	4 0	4 0	4 0	Sept., 1877	do
36	Do	1682	do	do	do	18	24	6	do	4 0	4 0	4 0	do	In good order.
37	Do	1771	Passenger	do	Outside	18	24	8	do	3 0	5 6	5 6	Feb., 1879	do
38	Do	1773	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
39	Do	1775	do	do	do	18	24	8	do	3 0	5 6	5 6	do	do
40	Do	1887	Goods	do	Inside	18	24	6	do	4 0	4 0	4 0	Feb., 1880	do
41	Do	1888	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
42	Do	1889	do	do	do	18	24	6	do	4 0	4 0	4 0	do	Requires repairs.
43	Do	1896	do	do	do	18	24	6	do	4 0	4 0	4 0	May, 1880	In fair order.
44	Do	1897	do	do	do	18	24	6	do	4 0	4 0	4 0	June, 1880	do
45	Do	1898	do	do	do	18	24	6	do	4 0	4 0	4 0	Aug., 1880	Requires repairs.
46	Do	1899	do	do	do	18	24	6	do	4 0	4 0	4 0	do	do
47	Dubs & Co.	1280	Passenger	4-wheel bogie and tender	Outside	18	24	8	do	3 0	5 6	5 6	Dec., 1880	In fair order.

No. 2—*continued.*

LIST and condition of Locomotive Engines and Tenders on 31st December, 1885—*continued.*

Stock No.	Maker's Name.	Maker's No.	Class	Description.	Cylinders. Position	Cylinders. Diameter.	Cylinders. Length of stroke	Number of wheels on Engine.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving	Diameter of Wheels. Trailing	Commenced to run.	Condition.
						inches	inches			ft. in.	ft. in.	ft. in.		
48	Dubs & Co.	1281	Passenger	4-wheel bogie and tender	Outside	18	24	8	Coupled	3 0	5 6	5 6	Dec., 1880	In fair order.
49	Do	1282	do	do	do	18	24	8	do	3 0	5 6	5 6	Jan., 1881	do
50	Do	1283	do	do	do	18	24	8	do	3 0	5 6	5 6	do	Under repairs.
51	Do	1284	do	do	do	18	24	8	do	3 0	5 6	5 6	Feb, 1881	In fair order.
221	Beyer, Peacock, & Co.	2087	Goods	2-wheel bogie and tender	do	18	26	8	do	2 9 / 4 0	4 0	4 0	May, 1882	Requires repairs.
222	Do	2088	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	In fair order.
223	Do	2089	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	do
224	Do	2090	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	do
231	Do	2314	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	Oct., 1883	In good order.
232	Do	2315	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	do
233	Do	2316	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	Under repairs.
234	Do	2317	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	In good order.
235	Do	2318	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	Nov., 1883	do
236	Do	2319	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	Requires repairs.
237	Do	2320	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	Dec., 1883	In fair order.
238	Do	2321	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	Requires repairs.
261	Dubs & Co.	1760	Passenger	4-wheel bogie and tender	Inside	18	26	8	do	3 6	6 0	6 0	Oct., 1883	do
262	Do	1761	do	do	do	18	26	8	do	3 6	6 0	6 0	do	In good order.
263	Do	1762	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
264	Do	1763	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
291	Beyer, Peacock, & Co.	1891	Goods	Tender engine	do	18	24	6	do	4 0	4 0	4 0	Feb., 1883	Requires repairs.
329	Do	2555	do	2-wheel bogie and tender	Outside	18	26	8	do	2 9 / 4 0	4 0	4 0	Sep., 1885	In good order.
330	Do	2556	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	Aug., 1885	do
331	Do	2557	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	do
332	Do	2558	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	do
333	Do	2559	do	do	do	18	26	8	do	2 9 / 4 0	4 0	4 0	do	do
334	Dubs & Co.	2132	Passenger.	Express, 4 double bogie and tender, with Joy's valve gear.	Inside	18	26	8	do	3 6	6 0	6 0	Oct, 1885	do
335	Do	2133	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
336	Do	2134	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do
337	Do	2135	do	do	do	18	26	8	do	3 6	6 0	6 0	do	do

No. 3.

The Superintendent of Tramway Rolling Stock to The Commissioner for Railways.

Sir, Tramway Motor Branch, Randwick, 7 April, 1886.

I have the honor to report as follows on the maintenance and general condition of the rolling stock, machinery, &c., under my supervision during the year ending December 31st, 1885:—

On January 1st, 1885, sixty-nine engines (independent), six engines (combined), ninety-four cars (double-decked), fourteen cars (single-decked), sixteen service trucks, and two watering tanks were in stock.

An addition has been made to the stock of engines by the arrival of twenty from the Baldwin Locomotive Works, Philadelphia, of the independent type. Five of these commenced running in April, five in May, and the remaining ten in August.

The number of engines maintained in steam for all purposes daily, during the year, has been fifty, and ninety-two cars have been in use daily to meet traffic requirements.

The wear and tear of the engines continued to be very heavy during the year, and although our facilities for performing the work are still limited, yet the engines and cars have been kept in as good working order as possible under the circumstances, and at a slightly less cost than in previous years.

Without entering too much into details, the following statement will show what work has been performed during the year at Randwick and Pitt-street shops.

At Randwick, eight engines were fitted with new boilers; sixty engines received a complete overhaul; fifty-seven received extensive repairs, being in the shops for about one month each; forty-four received extensive repairs, being in the shops for about three weeks each; seventy-one received extensive repairs, being in the shops for about two weeks each; and seventy-nine received repairs, occupying different periods under one week each, making a total of 431 engines repaired.

At Pitt-street shop, thirteen engines received a complete overhaul; eleven engines received repairs, occupying from two to ten days; 1,126 engines received repairs, occupying under one day, making a total of 1,137 engines repaired.

In the above general overhaul is included the fittings of forty-four new steel axles, 160 new steel tires, and retubing of six boilers.

504 steel car wheels have been bored in the machine departments, fitted to axles, and issued to the carriage department.

The above work has been done in addition to the repairs effected by the night staff.

The mileage of engines under steam during the year was as follows:—Seven ran from 25 to 30,000 miles; twenty-four from 20 to 25,000 miles; nineteen from 15 to 20,000 miles; twenty-two from 10 to 15,000 miles; and twenty-three under 10,000 miles. This mileage, done with 2ft. 6in. and 2ft. 11in. wheels will, I think, be found to compare favourably (apart from any consideration of road) with the mileage of engines doing railway service, the latter being done with 3ft. 9in. to 6ft. wheels.

In the carriage department the following work has been executed at Randwick, independent of trifling repairs effected at Bridge-street yard. Cars thoroughly overhauled, eighteen; cars stopped for repairs, occupying under one day, six hundred and fifty-seven; cars stopped for repairs, occupying under two days, three hundred and fifteen; cars stopped for repairs, occupying under three days, sixty-three; cars stopped for repairs, occupying under four days, twenty-four; cars stopped for repairs, occupying under five days, seventeen; cars stopped for repairs, occupying under six days, fifteen; cars stopped for repairs, occupying over one week, thirty.

In this report I would again urge upon the Commissioner the advantage of a terminal cleaning shed as advocated in my last, and for the reasons as therein given. The erection of the machinery in the carriage department is still deferred, pending a final decision on this matter, as, if approved, a rearrangement of the shops will be necessary.

The new boiler and smith-shop has been partially occupied for some time by the spring smiths and when the contracts let are completed, which will be about June next, the whole will be fully occupied by the two branches.

The

The whole of the machinery in the turning and temporary boiler-shops, together with the boiler and engine for driving same, have been kept, and are now, in efficient working order.

During the past year experiment was made of lighting a portion of the running shed at Randwick by electricity; it was done at the expense of the Australasian Electric Light Power and Storage Association. The result was considered satisfactory, and a contract was given to the Association referred to to fit up the whole of the shed; this has been carried out, and the nightly repairs are now effected by the aid of the electric light instead of gas.

The plant of this work consists of 20-h.p. semi-portable compound engine, by Messrs. Marshall, Sons, & Co. (Limited), one brush dynamo for the arc, and one Victorian brush dynamo for the incandescent lights. There are five arc lights fixed at different parts of the yard, twelve groups of four incandescent lights fixed in the shed, fifty-four incandescent lights to jointed brackets for fitters benches, and ninety-four incandescent lights (portable) for use in engine-pits.

Attached are the usual detail returns of engines, cars, and other rolling stock and machinery in workshops, &c.

I have, &c.,
GEO. DOWNE,
Superintendent, Tramway Rolling Stock.

No. 3—*continued.*

List of Tramway Motors on hand on 31st December, 1885.

Stock No.	Maker's Name.	Maker's No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of stroke.	Number of wheels on Motor.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing.	Commenced to run.	Condition.
						inches.	inches.			ft. in.	ft. in.	ft. in.		
1	Baldwin & Co.	4 16 C 19	Passenger.	Motor, 4 wheels	Outside.	11	16	4	Coupled	2 11	2 11	.....	15 Sept., 1879	In good order.
2	Do	„ 18	do	do	do	11	16	4	do	2 11	2 11	.....	15 do 1879	In shops for overhaul.
3	Do	„ 16	do	do	do	11	16	4	do	2 11	2 11	.....	15 do 1879	do do
4	Do	„ 17	do	do	do	11	16	4	do	2 11	2 11	.....	15 do 1879	Require new boiler in about six months.
5	Do	„ 22	do	do	do	11	16	4	do	2 11	2 11	.....	6 Dec., 1880	In fair running order.
6	Do	„ 21	do	do	do	11	16	4	do	2 11	2 11	.....	6 do 1880	In shops for overhaul.
7	Do	„ 20	do	do	do	11	16	4	do	2 11	2 11	.....	6 do 1880	In good order.
8	Do	„ 23	do	do	do	11	16	4	do	2 11	2 11	.....	12 do 1880	do
9	Do	„ 24	do	do	do	11	16	4	do	2 11	2 11	.....	19 do 1880	do
10	Do	„ 25	do	do	do	11	16	4	do	2 11	2 11	.....	5 do 1880	Requires general overhaul
11	Do	4 14 C 29	do	do	do	10	14	4	do	2 11	2 11	.....	25 April, 1881	Stopped for new boiler.
12	Do	6 16⅓ 2	do	Motor, 6 wheels	do	11	16	4	do	2 11	2 11	2 0	17 do 1881	Being fitted with new boiler.
13	Do	4 14 C 28	do	Motor, 4 wheels	do	10	14	4	do	2 11	2 11	.....	18 do 1881	Stopped for new boiler.
14	Do	6 16⅓ C 1	do	Motor, 6 wheels	do	11	16	4	do	2 11	2 11	2 0	20 April, 1881	Being fitted with new boiler.
15	Do	4 14 C 30	do	Motor, 4 wheels	do	10	14	4	do	2 11	2 11	.....	9 June, 1881	Stopped for new boiler.
16	Do	„ 31	do	do	do	10	14	4	do	2 11	2 11	.....	11 do 1881	do do
17	Do	„ 32	do	do	do	10	14	4	do	2 11	2 11	.....	6 July, 1881	In fair order; soon require new boiler.
18	Do	„ 33	do	do	do	10	14	4	do	2 11	2 11	.....	13 do 1881	Stopped for new boiler.
19	Do	6 16⅓ C 9	do	Motor, 6 wheels	do	11	16	6	do	2 11	2 11	2 0	15 do 1881	In fair order. Soon require new boiler.
20	Do	„ 6	do	do	do	11	16	6	do	2 11	2 11	2 0	23 do 1881	do do
21	Do	„ 5	do	do	do	11	16	6	do	2 11	2 11	2 0	23 do 1881	do do
22	Do	„ 8	do	do	do	11	16	6	do	2 11	2 11	2 0	31 do 1881	do do
23	Do	„ 3	do	do	do	11	16	6	do	2 11	2 11	2 0	2 Aug., 1881	In fair order.
24	Do	„ 7	do	do	do	11	16	6	do	2 11	2 11	2 0	31 July, 1881	In fair order. Soon require new boiler.
25	Do	„ 4	do	do	do	11	16	6	do	2 11	2 11	2 0	2 Aug., 1881	Stopped for new boiler.
26	Do	4 14 C 34	do	Motor, 4 wheels	do	10	14	4	do	2 11	2 11	.....	4 do 1881	Just completed, after having general overhaul and new boiler.
27	Do	4 11 C 45	do	do	do	9	12	4	do	2 8	2 8	.....	28 Oct., 1881	In fair order. Soon require new boilor.
28	Do	„ 59	do	do	do	9	12	4	do	2 8	2 8	.....	28 Dec., 1881	Waiting for new cylinder.
29	Do	4 11 C 56	do	do	do	9	12	4	do	2 8	2 8	.....	16 do 1881	Laid-up. Requires new tubes and overhaul.
30	Do	„ 60	do	do	do	9	12	4	do	2 8	2 8	.....	26 Jan., 1882	do do

No. 3—*continued.*

LIST of Tramway Motors on hand on 31st December, 1885—*continued.*

Stock No.	Maker's Name.	Maker's No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of stroke.	No. of Wheels on Motor.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing.	Commenced to run.	Condition.
						inches.	inches.			ft. in.	ft. in.	ft. in.		
31	Baldwin & Co.	4 11 C 55	Passenger.	Motor, 4 wheels	Outside	9	12	4	Coupled.....	2 8	2 8	.....	26 Jan., 1882	Laid-up. Requires new tubes and overhaul.
32	Do	„ 58	do ...	do	do ...	9	12	4	do	2 8	2 8	.....	26 do 1882	Undergoing repairs.
33	Do	„ 57	do ...	do	do ...	9	12	4	do	2 8	2 8	.....	16 Feb., 1882	Laid-up. Leak in fire-box, &c.
34	Do	4 16 C 35	do ...	do	do ...	9	16	4	do	2 11	2 11	.....	1 July, 1882	Fair order. Soon require new boiler.
35	Do	„ 38	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	1 do 1882	In shops for overhaul.
36	Do	„ 36	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	20 June, 1882	In good order.
37	Do	„ 37	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	3 July, 1882	In shops for overhaul.
38	Do	„ 32	do ...	do	do ..	11	16	4	do	2 11	2 11	.....	25 Aug., 1882	In shops for overhaul and new boiler.
39	Do	„ 31	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	22 do 1882	Stopped for new boiler.
40	Do	„ 33	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	25 do 1882	do do
41	Do	„ 34	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	24 do 1882	do do
42	Kitson & Co.	59	do ...	Motor, 6 wheels	do ...	11½	18	4	do	2 6	2 6	.....	2 Oct., 1882	In fair order.
43	Do	„ 60	do ...	Motor, 4 wheels	do ...	11½	18	4	do	2 6	2 6	.....	21 do 1882	do
44	Baldwin & Co.	4 14 C 37	do ...	do	do ...	10	14	4	do	2 11	2 11	.....	14 Dec., 1882	In good order.
45	Do	„ 36	do ...	do	do ...	10	14	4	do	2 11	2 11	.....	16 do 1882	do
46	Do	„ 38	do ...	do	do ...	10	14	4	do	2 11	2 11	.....	1 Mar., 1883	do
47	Do	„ 40	do ...	do	do ...	10	14	4	do	2 11	2 11	.....	3 do 1883	do
48	Do	„ 39	do ...	do	do ...	10	14	4	do	2 11	2 11	.....	6 do 1883	do
49	Do	„ 41	do ...	do	do ...	10	14	4	do	2 11	2 11	.....	6 do 1883	do
50	Kitson & Co.	.....	do ...	Combined motor and car	Inside...	7½	12	4	do	2 4½	2 4½	.....	11 Nov., 1882	Not available for traffic. Engine used for shop purposes.
51	Baldwin & Co.	4 14 C 47	do ...	Motor, 4 wheels	Outside	10	14	4	do	2 11	2 11	.....	28 April, 1883	In good order.
52	Do	„ 45	do ...	do	do ...	10	14	4	do	2 11	2 11	.....	28 do 1883	do
53	Do	„ 44	do ...	do	do ...	10	14	4	do	2 11	2 11	.....	1 May, 1883	do
54	Do	„ 46	do ...	do	do ...	10	14	4	do	2 11	2 11	.....	1 do 1883	In for overhaul.
55	Merryweather.....	— 41	Goods ...	do	Inside...	7½	12	4	do	2 3¼	2 3¼	.....	6 June, 1883	In for retubing.
56	Baldwin & Co.	4 14 C 42	Passenger.	do	Outside	10	14	4	do	2 11	2 11	.....	16 do 1883	In good order.
57	Do	„ 43	do ...	do	do ...	10	14	4	do	2 11	2 11	.....	18 do 1883	do
58	Do	4 16 C 41	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	19 Jan., 1884	do
59	Do	„ 42	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	19 do 1884	In good order.
60	Do	„ 43	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	21 do 1884	In fair order. Soon require overhaul.
61	Do	„ 44	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	21 do 1884	In fair order.
62	Do	„ 45	do ...	do	do ...	11	16	4	do	2 11	2 11	.....	25 June, 1884	In fair order. Requires jobbing repairs.

No. 3—*continued.*

LIST of Tramway Motors on hand on 31st December, 1885—*continued.*

Stock No.	Maker's Name.	Maker's No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of stroke.	No. of Wheels on Motor.	Coupled or single Wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing.	Commenced to run.	Condition.
						inches.	inches.			ft. in.	ft. in.	ft. in.		
63	Baldwin & Co.	4 16 C 46	Passenger.	Motor, 4 wheels	Outside	11	16	4	Coupled	2 11	2 11	.....	25 June, 1884	In fair order. Requires jobbing repairs.
64	Do	" 47	do	do	do	11	16	4	do	2 11	2 11	.....	21 do 1884	In fair order. Requires jobbing repairs.
65	Do	" 48	do	do	do	11	16	4	do	2 11	2 11	.....	24 do 1884	In fair order. Requires jobbing repairs.
66	Do	" 49	do	do	do	11	16	4	do	2 11	2 11	.....	12 April, 1884	In fair order. Requires jobbing repairs.
67	Do	" 50	do	do	do	11	16	4	do	2 11	2 11	.....	12 do 1884	In good order.
68	Do	" 51	do	do	do	11	16	4	do	2 11	2 11	.....	12 do 1884	do
69	Do	" 52	do	do	do	11 (vertical)	16	4	do	2 11	2 11	.....	7 July, 1884	In fair order.
70	Do	4 14½ C 1	do	do	Inside	9 & 12	12	4	do	2 6	2 6	.....	2 May, 1884	In shops (new cylinder).
71	Do	" 2	do	do	do	9 & 12	12	4	do	2 6	2 6	.....	12 do 1884	In shops under repairs.
72	Do	" 3	do	do	do	9 & 12	12	4	do	2 6	2 6	.....	8 do 1884	do
73	Do	" 4	do	do	do	9 & 12	12	4	do	2 6	2 6	.....	19 June, 1884	In fair order.
74	Do	" 5	do	do	do	9 & 12	12	4	do	2 6	2 6	.....	6 Oct., 1884	do
75	Do	" 6	do	do	do	9 & 12	12	4	do	2 6	2 6	.....	17 July, 1884	In shops (new cylinder).
76	Thomas Wearne	.....	do	do	Outside	10	16	4	do	2 6	2 6	.....	26 Jan., 1884	In fair order.
77	Baldwin & Co.	4 16 C 55	do	do	do	11	16	4	do	2 11	2 11	.....	29 Aug., 1885	In good order.
78	Do	" 56	do	do	do	11	16	4	do	2 11	2 11	.....	20 do 1885	do
79	Do	" 57	do	do	do	11	16	4	do	2 11	2 11	.....	22 do 1885	do
80	Do	" 58	do	do	do	11	16	4	do	2 11	2 11	.....	20 do 1885	do
81	Do	" 59	do	do	do	11	16	4	do	2 11	2 11	.....	22 do 1885	do
82	Do	" 72	do	do	do	11	16	4	do	2 11	2 11	.....	24 May, 1885	do
83	Do	" 73	do	do	do	11	16	4	do	2 11	2 11	.....	24 do 1885	do
84	Do	" 74	do	do	do	11	16	4	do	2 11	2 11	.....	24 do 1885	do
85	Do	" 60	do	do	do	11	16	4	do	2 11	2 11	.....	6 April, 1885	In fair order.
86	Do	" 61	do	do	do	11	16	4	do	2 11	2 11	.....	6 do 1885	In good oreer.
87	Do	" 62	do	do	do	11	16	4	do	2 11	2 11	.....	6 do 1885	In fair order.
88	Do	" 63	do	do	do	11	16	4	do	2 11	2 11	.....	6 do 1885	In good order.
89	Do	" 64	do	do	do	11	16	4	do	2 11	2 11	.....	6 do 1885	do
90	Do	" 65	do	do	do	11	16	4	do	2 11	2 11	.....	29 Aug., 1885	In fair order. Soon require overhaul.
91	Do	" 66	do	do	do	11	16	4	do	2 11	2 11	.....	15 do 1885	In good order.
92	Do	" 67	do	do	do	11	16	4	do	2 11	2 11	.....	15 do 1885	do
93	Do	" 68	do	do	do	11	16	4	do	2 11	2 11	.....	22 do 1885	do
94	Do	" 69	do	do	do	11	16	4	do	2 11	2 11	.....	22 do 1885	In fair order.
95	Do	" 70	do	do	do	11	16	4	do	2 11	2 11	.....	24 May, 1885	In good order.
96	Do	" 71	do	do	do	11	16	4	do	2 11	2 11	.....	24 do 1885	do

No. 3—*continued.*

LIST OF CARS ON HAND ON 31ST DECEMBER, 1885.

Class.	Numbers.	Description.	Number of wheels.	To carry.	Remarks.
A	3, 4, 5, 6, 7, 8	Double-deck	Two 4-wheel bogies...	90 passengers ..	In good condition.
A1	1	"	" " ...	90 " ...	In fair running order.
	42, 43, 44, 45, 46.	"	" " ...	90 " ...	Require a thorough overhaul.
	2	Single-deck	" " ...	70 " ...	In good order, altered from double-deck car.
A2	21, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 47	Double-deck	" " ...	90 " ...	In good order.
	107	"	" " ...	90 " ...	In fair order.
	22.....	Single-deck	" " ...	70 " ...	In good order, altered from double-deck car.
A3 ...	48, 49, 50	Double-deck.....	" " ...	60 " ...	In fair order; end platforms dropping with heavy loading; requires varnishing or painting.
A4	51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80 .	"	" " ...	60 " ...	In fair order; end platforms dropping with heavy loading; require varnishing or painting.
A5	81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94	"	" " ...	60 " ...	In fair order; end platforms dropping with heavy loading; requires varnishing or painting.
A6	95, 96, 97, 98	"	" " ...	60 " ...	In fair order; end platforms dropping with heavy loading; require varnishing or painting.
B	9	Single-deck	" " ...	48 " ...	In first-class order.
B1	11	"	" " ...	48 " ...	In first-class order.
	12, 16	"	" " . .	56 " ...	Lent to Mr. Jeannerette, Parramatta Tramway.
	13, 14, 15 ..	"	" " ...	56 " ...	Unserviceable; returned from Camden and Campbelltown Tramway.
	23	"	" " ...	48 " ...	In first-class order.
C	10	"	" " ...	80 " ...	In safe running order, but showing signs of decay.
	17, 18, 19, 20	"	" " ...	70 " ...	
	99	"	" " ...	80 " ...	Requires a thorough overhaul.
D ...	50	Combined car, Kitson type.	4 wheels	50 " ...	Unserviceable.
D1	100, 101, 102, 103, 104, 105, 106	Combined car and motor, Departmental type	"	80 " ...	In good running order.

LIST OF GOODS-TRUCKS AND WATER-TANKS ON HAND ON 31ST DECEMBER, 1885.

Description.	No.	Name of Maker.	Carrying Capacity.	Weight.	Diameter of Wheels.	No. of Wheels.	Condition.
				T. c. q	Feet.		
Truck	1, 2, 3, 4 ...	Permanent-way Department, Railways.	10 tons	4 0 0	2	8	In fair order.
Do	5, 6, 7, 8,	Tram Works, Randwick ..	10 "	4 0 0	2	8	In good order.
Do	9, 10, 11,	do do	10 "	4 0 0	2	8	
Do	12, 13, 14,	do do ..	10 "	4 0 0	2	8	
Do .	15, 16 ...	do do	10 "	4 0 0	2	8	
Water-tank ...	1	Thomas Wearne	1,000 gals.	7 6 0	2	8	In fair order.
Do ...	2	do	2,625 "	16 3 2	2	8	do.

LIST

LIST OF MACHINERY ON HAND AT WORKSHOPS, RANDWICK, ON 31ST DECEMBER, 1885.

No. 1. 1 10-h.p. vertical boiler with horizontal cross tubes and all fittings complete.
„ 2. 1 8-h.p. horizontal engine, with force pump complete.
„ 3. 1 Wheel lathe, 4′ 6″ centres.
„ 4. 1 Screw cutting lathe, 10½″ centres, 16 feet bed, with gap and change wheels complete.
„ 5. 1 do 9½″ 16 do do
„ 6. 1 do 9¼″ 15 do do
„ 7. 1 do 8¼″ 15 do do
„ 8. 1 do 8″ 16 do do
„ 9. 1 do 8″ 14 do do
„ 10. 1 Brass finishers' lathe, 6″ centres, and 5 feet bed.
„ 11. 1 do 6″ do 6 do do
„ 12. 1 Planing machine, 6′ x 2′.
„ 13. 1 Slotting machine, 8″ stroke.
„ 14. 1 Double table shaping machine, 14″ stroke.
„ 15. 1 do do
„ 16. 1 Vertical drilling machine, 18″ space, with round movable table.
„ 17. 1 do 15″ do
„ 18. 1 Small vertical drilling machine with hand power attached.
„ 19. 1 Screwing machine.
„ 20. 1 Wood-turners' lathe (headstock only), fixed on bed, No. 9.
„ 21. 1 Small screwing machine with hand power.
„ 22. 1 Grindstone, 5 feet diameter, on wooden frame.
„ 23. 1 2½-cwt. steam-hammer.
„ 24. 1 No. 2 patent silent fan.
„ 26. 1 Screw cutting lathe, 7½″ centres, with gap and change wheels complete.
„ 32. 1 Punching and shearing machine.
„ 34. 1 Whitworth screw cutting lathe, 10″ centres, with change wheels complete.
„ 35. 1 do 10″ do do
„ 36. 1 Double table shaping machine, 12″ stroke (Whitworth's).
„ 37. 1 Hydraulic press.
„ 38. 1 Set bending rolls 4′ 4″ in diameter, fitted for hand or power.

Machinery in Pitt-street Workshops.

„ 25. 1 16-h.p. vertical boiler, with engine attached.
„ 27. 1 Screw cutting lathe, 7½″ centres, 8 feet bed, with gap and change wheels complete.
„ 28. 1 do 6″ do 6 do do do
„ 29. 1 Shaping machine, 6″ stroke.
„ 30. 1 Vertical drilling machine, 15″ space, with round movable table.
„ 31. 1 Grindstone on wooden frame.
„ 33. 1 Screw cutting lathe, 8″ centres, 10 feet bed, with gap and change wheels complete.

Woodworking Machinery at Randwick not yet erected.

1 Surface plane.
1 Band saw, setting and filing machine.
5 Band saw blades, extra.
1 Automatic knife-grinder.
1 Standard saw bench.
16 Emery wheels.
1 Morticing and boring machine.
1 Moulder and shaper.
4 Chisels and bits, extra.
1 Set of knives, extra.
1 Side moulder.
1 Emery grinder.
1 Planing machine.
1 Band saw machine.

LIST OF PUMPS, CRANES, &C., ON TRAMWAY LINES, 31ST DECEMBER, 1885.

Bridge-street ...	... 1 Stand-pipe, 1 crane.
Botany	... 1 Pump and boiler.
Crown-street ...	... 1 Hydrant.
Coogee	... 1 Tank and connections.
Enmore	... 1 Hydrant.
Forest Lodge ...	... 1 Stand-pipe.
Glebe Point ...	... 1 Crane.
Leichhardt ...	... 1 Crane.
Moore Park ...	... 1 Stand-pipe.
Newtown Road...	... 1 Tank and connections.
Railway	... 2 Stand-pipes.
Randwick Yard ...	... 1 Tank and connections.
Racecourse ...	... 1 Tank and connections.
Waterloo ...	... 1 Crane.
Trafalgar-street	... 1 Hydrant.
Waverly Line ...	... 1 Tank and conneciions, 1 stand-pipe.
Woollahra ...	... 1 Crane.

All in good order.

No. 4.

No. 4.

DATES of OPENING, and the length in miles of the different sections of Railway Lines, from the commencement to 31 December, 1885.

Date of opening.	To where opened.	Southern Line.	Western Line.	Northern Line.	All Lines.
26 Sept., 1855	Parramatta	14	.....	.....	14
26 Sept., 1856	Liverpool	9	.....	.....	9
	Total, 1856	23	.....	.....	23
5 April, 1857	East Maitland	.....	.....	17	17
	Total, 1857	23	.....	17	40
19 Mar., 1858	Newcastle	.....	.....	1	1
17 May, 1858	Campbelltown	12	.....	.....	12
27 July, 1858	West Maitland	.....	.....	2	2
	Total, 1858, 1859	35	.....	20	55
2 July, 1860	Lochinvar	.....	.....	7	7
4 July, 1860	Blacktown	.....	8	.....	8
	Total, 1860	35	8	27	70
12 Dec., 1861	Rooty Hill	.....	3	.....	3
	Total, 1861	35	11	27	73
24 Mar., 1862	Branxton	.....	.....	8	8
1 May, 1862	South Creek	.....	5	.....	5
7 July, 1862	Penrith	.....	5	.....	5
1 Sept., 1862	Menangle	6	.....	.....	6
	Total, 1862	41	21	35	97
7 May, 1863	Singleton	.....	.....	14	14
1 July, 1863	Picton	13	.....	.....	13
	Total, 1863	54	21	49	124
2 May, 1864	Morpeth	.....	.....	3	3
1 Dec., 1864	Richmond	.....	16	.....	16
	Total, 1864, 1865, 1866	54	37	52	143
1 Mar., 1867	Mittagong	24	.....	.....	24
11 July, 1867	Weatherboard	.....	28	.....	28
2 Dec., 1867	Sutton Forest	9	.....	.....	9
	Total, 1867	87	65	52	204
1 May, 1868	Mount Victoria	.....	15	.....	15
6 Aug., 1868	Marulan	28	.....	.....	28
	Total, 1868	115	80	52	247
19 May, 1869	Muswellbrook	.....	.....	31	31
27 May, 1869	Goulburn	20	.....	.....	20
18 Oct., 1869	Bowenfels	.....	20	.....	20
	Total, 1869	135	100	83	318
1 Mar., 1870	Wallerawang	.....	8	.....	8
1 July, 1870	Rydal	.....	6	.....	6
20 Oct., 1870	Aberdeen	.....	.....	7	7
	Total, 1870	135	114	90	339
17 April, 1871	Scone	.....	.....	9	9
1 Aug., 1871	Wingen	.....	.....	10	10
	Total, 1871	135	114	109	358
1 Jan., 1872	Sidings, Collingwood, &c.	1	.....	1	2
5 April, 1872	Murrurundi	.....	.....	14	14
22 April, 1872	Locke's Platform	.....	19	.....	19
1 July, 1872	Macquarie Plains	.....	5	.....	5
	Total, 1872	136	138	124	398

No. 4—*continued.*

Date of opening.	To where opened.	Southern Line.	Western Line.	Northern Line.	All Lines.
	Total, 1872	136	138	124	398
4 Mar., 1873	Raglan	.....	5	.....	5
	Total, 1873, 1874	136	143	124	403
4 Feb., 1875	Kelso	.....	3	.....	3
9 Nov., 1875	Gunning	31	.....	.....	31
	Total, 1875	167	146	124	437
4 April, 1876	Bathurst	.....	2	.....	2
3 July, 1876	Bowning	29	.....	.....	29
1 Nov., 1876	Binalong	14	.....	.....	14
1 Nov., 1876	Blayney	.....	27	.....	27
	Total, 1876	210	175	124	509
12 Mar., 1877	Murrumburrah	20	.....	.....	20
19 April, 1877	Orange	.....	20	.....	20
13 Aug., 1877	Quirindi	.....	.....	24	24
1 Nov., 1877	Cootamundra	25	.....	.....	25
	Total, 1877	255	195	148	598
2 April, 1878	Bullock Island Branch	.....	.....	1½	1½
15 April, 1878	Bethungra	15	.....	.....	15
6 July, 1878	Junee	18	.....	.....	18
3 Sept., 1878	North Wagga Wagga	18	.....	.....	18
14 Oct., 1878	Tamworth	.....	.....	38	38
	Total, 1878	306	195	187½	688½
25 Mar., 1879	Breeza	.....	.....	15	15
1 Sept., 1879	South Wagga Wagga	5	.....	.....	5
11 Sept., 1879	Gunnedah	.....	.....	26	26
	Total, 1879	311	195	228½	734½
1 June, 1880	Wellington	.....	56	.....	56
1 Sept., 1880	Gerogery	59	.....	.....	59
	Total, 1880	370	251	228½	849½
1 Feb., 1881	Dubbo	.....	30	.....	30
3 Feb., 1881	Albury	18	.....	.....	18
28 Feb., 1881	Narrandera	60	.....	.....	60
1 Sept., 1881	Darlington	38	.....	.....	38
	Total, 1881	486	281	228½	995½
9 Jan., 1882	Moonbi	.....	.....	12	12
1 Mar., 1882	Carathool	34	.....	.....	34
15 May, 1882	Capertee	.....	23	.....	23
4 July, 1882	Hay	34	.....	.....	34
11 July, 1882	Boggabri	.....	.....	24	24
2 Aug., 1882	Uralla	.....	.....	51	51
1 Oct., 1882	Narrabri	.....	.....	32	32
20 Oct., 1882	Nevertire	.....	63	.....	63
	Total, 1882	554	367	347½	1,268½
3 Feb., 1883	Armidale	.....	.....	15	15
9 June, 1883	Nyngan	.....	36	.....	36
14 June, 1883	River Murray	1	.....	.....	1
	Total, 1883	555	403	362½	1,320½
3 Jan., 1884	Tarago	20	.....	.....	20
9 June, 1884	Rylstone	.....	31	.....	31
19 Aug., 1884	Glen Innes	.....	.....	63	63
2 Sept., 1884	Byrock	.....	78	.....	78
10 Sept., 1884	Mudgee	.....	32	.....	32
16 Sept., 1884	Jerilderie	65	.....	.....	65
15 Oct., 1884	Hurstville	9	.....	.....	9
	Total, 1884	649	544	425½	1,618½
4 Mar., 1885	Bungendore	20	.....	.....	20
26 Mar., 1885	Young	18	.....	.....	18
3 Sept., 1885	Bourke	.....	48	.....	48
21 Dec., 1885	Molong	.....	22	.....	22
26 Dec., 1885	Sutherland	6	.....	.....	6
	Total, 1885	693	614	425½	1,732½

No. 5.—Table A.

Abstract of the total Quantity and Cost of Land taken for Railway Purposes to the 31st December, 1885, under the Government Railways Act of 1858.

Railway Lines.	Length.	Quantity taken. Private.	Quantity taken. Crown.	Total.	Amount claimed.	Amount paid. For Land and Buildings.	Amount paid. Severance.	Amount paid. As costs of Arbitration.	Amount paid. Claimants' Costs on Conveyances.	Probable Amounts to be paid.	Total Cost.	Rate. Per Mile of Line.	Rate. Per Acre.
	Miles chns.	a. r. p.	a. r. p.	a. r. p.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Great Western Line.													
Granville to Bathurst	131 30	1,343 1 29½	1,600 2 25¾	2,944 0 15¼	89,938 19 1	39,760 8 8	5,788 8 5	80 13 0	1,676 18 5	4,033 7 11	51,339 16 5	390 15 9¼	38 4 3¾
Bathurst to Orange	47 75	610 1 12½	141 2 21	751 3 33½	37,619 11 0	13,283 16 9	2,804 7 3	987 11 5	634 12 0	269 12 1	17,979 19 6	375 1 5	29 9 2¼
Orange to Dubbo	85 25½	337 0 32½	900 3 3	1,237 3 35½	34,361 6 6	13,320 18 6	1,324 19 5	170 7 0	669 16 0	1,375 8 3	16,861 9 2	197 12 7	50 0 1
Dubbo to Nyngan	99 49¼	38 2 31	2,325 3 4	2,364 1 35	2,987 10 0	1,521 13 9	93 7 6	.....	52 7 0	132 14 2	1,800 2 5	18 1 5	46 10 5¼
Nyngan to Bourke	125 49	.....	3,175 1 17	3,175 1 17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wallerawang to Mudgee	84 54	733 1 38½	1,166 1 29	1,899 3 27½	25,399 7 5	12,926 9 11	732 6 7	153 7 6	901 2 11	1,247 4 6	15,960 11 5	188 9 10	21 15 2¼
Richmond Branch	16 11½	127 1 9¼	17 1 29½	144 2 38¾	8,057 16 8	3,540 3 9	1,744 13 1	.....	303 15 7	329 16 10	5,918 9 3	366 12 2½	46 8 3½
Orange to Molong	22 61½	413 2 18½	80 3 39	494 2 17½	20,331 6 1	9,164 0 3	1,251 12 6	.....	100 12 7	3,680 4 2	14,196 9 6	623 10 1¾	34 6 5½
Total, Great Western	613 35¾	3,604 0 11¾	9,409 0 8¼	13,013 0 20	218,695 16 9	93,517 11 7	13,739 14 9	1,391 18 11	4,339 4 6	11,068 7 11	124,056 17 8	202 4 7	34 8 5
Great Northern Line.													
Newcastle to Murrurundi	119 44	1,480 0 19	374 2 15¾	1,854 2 34¾	170,426 8 9	58,736 8 1	9,296 11 11	647 14 9	1,889 13 10	1,837 10 1	72,407 18 8	605 13 5	48 18 5
Murrurundi to Tamworth	62 36	503 1 16	380 2 38	884 0 14	14,134 6 7	5,132 15 2	1,740 11 8	15 15 0	271 19 6	109 2 3	7,270 3 7	116 8 3¾	14 8 10½
Tamworth to Uralla	63 44	438 0 14½	253 2 32¾	691 3 7¼	46,677 3 0	19,699 12 9	2,793 9 4	1,608 10 2	588 14 9	2,021 3 11	26,711 10 11	420 6 5½	60 19 5½
Uralla to Glen Innes	78 36	682 3 4½	1,144 2 26	1,827 1 30½	41,460 19 0	11,773 17 10	2,790 12 6	1,022 11 8	430 12 3	988 18 7	17,006 12 10	216 15 8	24 18 2
Glen Innes to Tenterfield	57 45¼	306 2 36	743 0 9	1,049 3 5	27,764 15 8	3,223 6 9	663 16 10	5 5 0	138 6 0	1,556 3 8	5,586 18 3	97 1 0¾	18 4 3½
Tenterfield to Queensland Border	10 76¾	65 1 14	159 2 1	224 3 15	.....	.....	.....	.....	.....	1,306 15 0	1,306 15 0	119 4 8½	20 0 0
Morpeth Branch	3 35½	34 3 22¼	1 2 28¾	36 2 11	32,367 4 10	18,088 0 9	1,506 16 3	605 16 2	368 7 11	62 17 11	20,631 19 0	5,991 2 7	591 7 2
Bullock Island Branch	1 25½	19 2 18⅚	6 2 32½	26 1 11⅓	14,710 2 0	9,465 16 3	.....	156 0 6	161 14 5	8 16 0	9,792 7 2	7,425 9 8½	499 3 2¼
Total, Great Northern	397 23	3,530 3 25 1/12	3,064 2 23¾	6,595 2 8⅚	347,540 19 10	126,119 17 7	18,791 18 6	4,061 13 3	3,849 8 8	7,891 7 5	160,714 5 5	404 10 7	45 10 4
Great Southern Line.													
Sydney to Granville	13 50	258 3 19	28 0 3	286 3 22	109,860 18 5	70,465 10 8	1,281 9 1	1,352 14 7	811 18 10	5,240 6 9	79,151 19 11	5,809 6 5	305 15 2¾
Granville to Goulburn	120 51	1,316 3 8¼	698 1 0	2,015 0 8¼	80,802 3 0	32,208 3 9	7,295 2 10	717 0 3	1,522 16 6	3,638 3 6	45,381 6 10	376 3 7	34 9 3¼
Goulburn to Yass	54 21	549 1 12½	226 2 35	776 0 7½	42,389 3 9	16,314 17 2	2,482 10 3	317 13 6	596 17 5	1,103 0 0	20,814 18 4	383 11 11¼	37 17 10
Yass to Cootamundra	64 55	469 0 18½	511 3 14	980 3 32½	16,001 9 3	5,078 17 5	561 19 1	175 10 6	184 8 0	1,055 11 7	7,056 6 7	109 1 8	15 0 10
Cootamundra to Wagga Wagga	55 35	210 3 21	566 3 37	777 3 18	12,266 9 6	7,501 1 0	798 0 10	.....	235 11 11	194 12 10	8,729 6 7	157 9 3	41 7 10¾
Wagga Wagga to Albury	77 49	591 2 8	637 0 12	1,228 2 20	60,847 4 0	21,899 13 4	6,428 6 4	25 0 0	389 5 2	654 10 0	29,396 14 10	378 15 3	49 13 10¾
Albury to the River Murray	1 31¼	47 2 2	.....	47 2 2	33,576 10 0	11,326 14 10	1,522 1 3	.....	123 3 6	120 15 0	13,092 14 7	9,414 19 11	275 11 3¼
Murrumburrah to Young	17 66	231 3 26	132 3 39	364 3 25	51,193 15 5	14,597 19 4	1,314 6 7	52 6 8	344 7 6	641 6 7	16,950 6 8	950 18 7¼	73 1 9½
Young to Blayney	91 66	1,052 0 23	673 2 25	1,725 3 8	37,338 1 6	196 0 6	32 0 0	.....	.....	18,026 17 1	18,254 17 7	198 16 0¼	17 7 0
Goulburn to Bungendore	39 32¾	642 0 38	76 2 23	718 3 21	40,153 6 2	4,899 0 8	1,455 12 11	488 12 6	243 11 8	6,964 13 11	14,051 11 8	356 11 1	21 17 6¾
Bungendore to Michelago	47 55	534 2 34	281 1 2	815 3 36	19,710 7 5	2,351 11 7	760 0 0	.....	56 1 8	5,769 0 5	8,936 13 8	187 8 0¼	16 14 3
Michelago to Cooma	38 70½	517 1 6	168 3 15	686 0 21	.....	.....	.....	.....	.....	13,966 18 0	13,966 18 0	359 4 4¾	27 0 0
Cootamundra to Gundagai	33 17¼	506 1 5¾	161 0 11	667 1 16¾	36,271 11 8	2,676 6 8	591 10 0	5 5 0	116 10 6	7,498 6 6	10,887 18 8	327 15 11	21 10 1¼
Total, Great Southern	656 39¾	6,928 2 22	4,163 1 16	11,091 3 38	540,411 0 1	189,515 16 11	24,522 19 2	3,134 3 0	4,624 12 8	64,874 2 2	286,671 13 11	436 13 4½	41 7 6

No. 5—TABLE A—*continued.*

ABSTRACT of the total Quantity and Cost of Land taken for Railway purposes—*continued.*

Railway Lines.	Length.	Quantity taken. Private.	Quantity taken. Crown.	Total.	Amount claimed.	Amount paid. For Land and Buildings.	Amount paid. Severance.	Amount paid. As costs of Arbitration.	Amount paid. Claimants' Costs on Conveyances.	Probable Amounts to be paid.	Total Cost.	Rate. Per Mile of Line.	Rate. Per Acre.
	Miles chns.	a. r. p.	a. r. p.	a. r. p.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
DARLING HARBOUR BRANCH.													
Sydney to Darling Harbour ...	1 11½	16 3 9½	.....	16 3 9½	54,036 0 0	45,938 15 0	.....	348 15 0	319 18 10	.....	46,607 8 10	40,749 13 6¼	2,772 14 1¼
NORTH-WESTERN LINE.													
Werris Creek to Gunnedah ...	41 22	402 3 28	378 3 3	781 2 31	10,242 11 7	6,507 3 5	382 8 6	702 16 0	165 12 4	405 12 5	8,163 12 8	197 15 8¾	20 5 2½
Gunnedah to Narrabri	55 43	234 3 14	1,407 3 4	1,642 2 18	5,280 1 10	2,593 17 11	581 0 0	133 3 6	57 16 5	.....	3,365 17 10	60 12 1½	14 6 7¾
TOTAL, NORTH-WESTERN ..	96 65	637 3 2	1,786 2 7	2,424 1 9	15,522 13 5	9,101 1 4	963 8 6	835 19 6	223 8 9	405 12 5	11,529 10 6	119 1 10	18 1 6¾
SOUTH COAST RAILWAY.													
Sydney to Bottle Forest	24 18¼	265 1 18½	119 0 8	384 1 26½	280,792 9 6	135,856 2 8	7,625 17 9	2,196 15 1	2,350 18 3	17,194 19 1	165,224 12 10	6,819 10 9¼	622 12 7¼
Bottle Forest to Coal Cliff ...	9 31¼	92 3 32	114 2 20	207 2 12	104,479 18 0	1,242 15 6	20 0 0	.....	18 16 0	3,215 11 9	4,497 3 3	478 17 11¾	48 7 7¾
Coal Cliff to Macquarie River	26 20	480 3 18¼	16 2 22	497 2 0¼	329,286 6 10	29,508 17 5	5,372 14 10	.....	760 5 0	38,847 3 3	74,489 0 6	2,837 13 6	154 18 1½
Macquarie River to Kiama ...	10 30	182 1 5	11 0 21	193 1 26	.....	.....	.....	.....	.....	9,114 1 3	9,114 1 3	878 9 3¼	50 0 0
TOTAL, SOUTH COAST	70 19½	1,021 1 33¾	261 1 31	1,282 3 24¾	714,558 14 4	166,607 15 7	13,018 12 7	2,196 15 1	3,129 19 3	68,371 15 4	253,324 17 10	3,606 7 4½	248 0 0½
SOUTH-WESTERN LINE.													
Junee to Narrandera	61 32¾	110 3 32	1,314 2 24	1,425 2 16	5,852 12 11	2,739 16 3	364 5 0	.....	49 6 2	.....	3,153 7 5	51 7 0	28 8 5¼
Narrandera to Hay.....	106 57¾	495 3 13	635 3 34	1,131 3 7	16,990 2 0	4,679 10 5	4,595 10 0	5 5 0	31 3 6	821 2 3	10,132 11 2	94 18 10½	20 8 8½
Narrandera to Jerilderie	64 71¼	823 2 11	728 0 2	1,551 2 13	24,035 9 7	5,497 19 1	1,444 10 0	5 5 0	70 1 11	2,224 5 11	9,242 1 11	138 3 4	11 4 5¼
TOTAL, SOUTH-WESTERN ...	233 1¾	1,430 1 16	2,678 2 20	4,108 3 36	46,878 4 6	12,917 5 9	6,404 5 0	10 10 0	150 11 7	3,045 8 2	22,528 0 6	96 13 6¾	15 15 0
SOUTHERN AND NORTHERN JUNCTION RAILWAY.													
Homebush to Hawkesbury River....	28 55¾	332 0 36	265 3 24	598 0 20	97,323 18 1	29,816 14 4	7,101 11 5	10 10 0	484 6 6	18,263 16 8	55,676 18 11	1,940 3 6	167 11 9¼
Hawkesbury River to Hamilton Platform.	63 78½	721 1 4	518 0 11	1,239 1 15	210,953 16 8	12,057 9 2	2,089 12 0	250 0 0	243 17 3	22,280 2 2	36,921 0 7	577 1 2½	51 3 9¼
TOTAL, SOUTHERN AND NORTHERN JUNCTION RAILWAY	92 54¼	1,053 2 0	783 3 35	1,837 1 35	308,277 14 9	41,874 3 6	9,191 3 5	260 10 0	728 3 9	40,543 18 10	92,597 19 6	999 2 8½	87 17 11
TOTAL ON ALL LINES TO 31ST DECEMBER, 1885	2,161 10½	18,223 2 0 1/12	22,147 2 21	40,371 0 21 1/12	2,245,921 3 8	685,592 7 3	86,632 1 11	12,240 4 9	17,365 8 0	196,200 12 3	998,030 14 2	461 16 2¼	54 15 4

No. 5—*continued.*

TABLE B.

ABSTRACT of the total Quantity and Cost of Land taken for Railway purposes to the 31st December, 1885, under the Public Railways Land Resumption Act of 1874.

Railway Lines	Length	Quantity taken	Amounts paid: For Land	Amounts paid: For Improvements	Amounts paid: Claimants' Costs on Conveyances	For Appraisement	Probable Amounts to be paid	Total Cost	Rate: Per Mile of Line	Rate: Per Acre
	Miles chns	a. r p	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s. d	£ s d
GREAT WESTERN LINE										
Orange to Dubbo	85 25½	6 1 35	3 4 7	90 0 0				93 4 7	1 1 10¼	14 8 3
Dubbo to Nyngan	99 49¾	60 2 26	126 18 5	17 2 6	4 4 2			148 5 1	1 9 9¾	2 8 10½
Nyngan to Bourke	125 49	6 0 0					12 0 0	12 0 0	0 1 11	2 0 0
Wallerawang to Mudgee	84 54	118 0 24	50 6 6	898 4 0	50 8 8		85 4 9	1,084 3 11	12 16 1	9 3 6¼
Orange to Molong	22 61½	16 2 34	4 3 1	79 5 0			9 17 10	93 5 11	4 1 11½	5 11 7¾
Total, Great Western	417 79¼	207 3 39	184 12 7	1,084 11 6	54 12 10		107 2 7	1,430 19 6	3 8 6	6 17 7
GREAT NORTHERN LINE.										
Tamworth to Uralla	63 44	220 1 10	103 15 1	336 19 4	81 15 4	5 5 0	181 13 3	709 8 0	11 3 3	3 4 4¾
Uralla to Glen Innes	78 36	124 1 21	33 14 6	14 15 0			56 16 0	105 5 6	1 6 10	0 16 11¼
Glen Innes to Tenterfield	57 45¼	34 1 7	5 12 0				54 6 2	59 18 2	1 0 9¾	1 14 11¼
Tenterfield to Queensland Border	10 76¾	15 2 20	. . .				31 5 0	31 5 0	2 17 0¼	2 0 0
Total, Great Northern	210 42	394 2 18	143 1 7	351 14 4	81 15 4	5 5 0	324 0 5	905 16 8	4 6 0¾	2 5 11
GREAT SOUTHERN LINE										
Goulburn to Bungendore	39 32¾	67 3 19	2 5 6	20 0 0			101 12 1	123 17 7	3 2 10½	1 16 6
Bungendore to Michelago	47 55	97 0 20	18 9 6	123 17 6	5 2 4		137 16 5	285 5 9	5 19 7¾	2 18 9
Michelago to Cooma	38 70½	56 1 13					112 13 3	112 13 3	2 17 11½	2 0 0
Young to Blayney	91 66	9 3 11					19 12 9	19 12 9	0 4 3¼	2 0 0
Cootamundra to Gundagai	33 17¼	11 3 14		.			23 13 6	23 13 6	0 14 3	2 0 0
Total, Great Southern	251 1½	242 3 37	20 15 0	143 17 6	5 2 4		395 8 0	565 2 10	2 5 0¼	2 6 6¼
SOUTH-WESTERN LINE										
Junee to Narrandera	61 32¾	238 0 16½	320 2 11	557 0 0	55 0 0		145 15 9	1,077 18 8	17 11 1	4 10 6½
Narrandera to Hay	106 57¾	1,248 2 0	1,692 4 3	1,279 7 6	30 12 11		1,243 19 11	4,246 4 7	39 15 9	3 0 8¼
Narrandera to Jerilderie	64 71¼	105 1 3	81 13 11		8 7 2		116 12 6	206 13 7	3 3 8½	1 19 3¼
Total, South western	233 1¾	1,591 3 19½	2,094 1 1	1,836 7 6	94 0 1		1,506 8 2	5,530 16 10	23 14 8½	3 9 5¾
SOUTH COAST RAILWAY										
Sydney to Bottle Forest	24 18¼	29 3 14					59 8 3	59 8 3	2 9 0½	1 19 10
SOUTHERN AND NORTHERN JUNCTION RAILWAY										
Homebush to Hawkesbury River	28 55¾	24 0 21	43 3 0	237 15 0	8 19 10		226 10 0	516 7 10	17 19 10¾	21 7 11¾
Hawkesbury River to Hamilton Platform	63 78½	52 3 16	13 15 7				56 3 6	69 19 1	1 1 10½	1 6 5¾
Total, Southern and Northern Junction Railway	92 54¼	76 3 37	56 18 7	237 15 0	8 19 10		282 13 6	586 6 11	6 6 6½	7 12 4
NORTH WESTERN LINE										
Gunnedah to Narrabri	55 43	105 0 30	153 8 10	23 9 0	7 6 0		94 12 11	278 16 9	5 0 5	2 13 0¼
TOTAL ON ALL LINES TO THE 31ST DECEMBER, 1885	1,285 0	2,649 1 34½	2,652 17 8	3,677 14 10	251 16 5	5 5 0	2,769 13 10	9,357 7 9	7 5 7¾	3 10 7¾

The claims outstanding on the 31st December, 1884, were 695 to which 188 were added during 1885, making a total of 883 claims, of these 334 were settled in 1885, leaving at the close of the year 549 in various stages of adjustment, a large number of which have been settled during the present year

No. 6.

RETURN OF PERMANENT-WAY MATERIAL, RAILS FOR RENEWALS, AND MISCELLANEOUS ARTICLES IMPORTED DURING THE YEAR ENDING 31st DECEMBER, 1885.

Indent for Permanent-way Materials required for 647 miles of Railway Extensions, including Sidings Indent dated 9th October, 1882.

Date of Invoice	Name of Ship	Rails		Fishplates		Bolts and Nuts.		Spikes		Screws		Name of Contractor	Rate per ton	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost per ton	Date of Arrival
		No	Tonnage	No	Tonnage	No	Tonnage	No	Tonnage	No	Tonnage									
1884			T c q lbs		T c q lbs		T c q lbs		T c q lbs		T c q lbs		£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	1885
12 Sept	Kestna			10080	49 9 0 14							C Cammell & Co	7 8 6	367 4 3	27 2 10	2 4 2	8 5 9	404 17 0	8 3 8½	27 Jan
31 Oct	Benares	409	100 1 1 13									,,	5 8 0	540 7 4	38 15 6	4 6 4	5 1 4	588 10 6	5 17 7¼	14 Feb
31 ,,	Oronsay	490	120 8 2 17									,,	5 8 0	650 6 9	46 13 4	5 3 4	6 1 9	708 5 2	5 17 7¾	21 ,,
30 ,,	City of Benares									90246	40 1 0 0	Patent Nut & Bolt Co	19 10 0	780 19 6	22 13 3	7 19 2	10 17 1	822 9 0	20 10 8¾	21 ,,
31 ,,	Gretna	812	200 10 1 15									C Cammell & Co	5 8 0	1082 16 1	77 14 0	8 10 1	28 10 4	1197 10 6	5 19 5¾	14 ,,
14 Nov	Port Adelaide	1197	300 7 1 4									,,	5 8 0	1621 19 4	116 7 10	12 13 3	15 3 3	1766 3 8	5 17 7½	9 ,,
27 ,,	Cumbrian Monarch	410	100 12 0 24									,,	5 8 0	543 6 0	38 19 9	5 5 0	4 3 10	591 14 7	5 17 8	21 March
27 ,,	Manx King	1222	299 17 2 23									,,	5 8 0	1619 7 7	116 4 2	12 12 10	15 2 7	1763 7 2	5 17 6¾	16 ,,
4 Dec	Gulf of Venice	1662	411 5 2 22									,,	5 8 0	2220 18 9	167 6 11	22 8 6	56 0 7	2466 14 9	5 19 10½	3 Feb
27 Nov	Kent	407	100 0 2 25									,,	5 8 0	540 4 0	40 14 1	5 11 4	13 12 0	600 1 5	5 19 11¾	17 ,,
15 Dec	Liguria	1212	300 6 2 16									,,	5 8 0	1621 15 10	122 4 0	16 8 4	38 18 1	1799 6 3	5 19 10	31 January
15 ,,	Rajah	409	100 10 3 21									,,	5 8 0	542 19 0	38 19 3	4 6 9	14 6 4	600 11 4	5 19 5½	28 March
23 ,,	Essex	550	136 9 3 2									,,	5 8 0	737 0 9	55 10 7	7 10 9	18 8 5	818 10 6	5 19 11½	13 ,,
29 ,,	Windsor Castle	398	100 0 2 25									,,	5 8 0	540 4 0	38 15 4	4 6 4	14 4 9	597 10 5	5 19 5½	16 April
20 Nov	Chimborazo	616	150 3 0 0									,,	5 8 0	810 16 2	61 1 10	8 5 7	19 9 0	899 12 7	5 19 10	27 Feb
23 Dec	Iberia	659	164 0 0 7									,,	5 8 0	885 12 4	66 14 7	9 0 8	21 5 7	982 13 2	5 19 10	13 ,,
23 ,,	Thos McLellan	806	200 3 1 12									,,	5 8 0	1080 18 2	77 11 4	8 9 9	28 8 7	1195 7 10	5 19 5¾	21 April
29 ,,	Potosi	794	200 5 1 3									,,	5 8 0	1081 8 6	81 9 9	10 19 11	25 18 7	1199 16 9	5 19 10	19 March
1885																				1885
7 Jan	Glendower	304	70 9 2 8									,,	5 8 0	380 11 8	28 13 7	3 1 8	9 12 3	421 19 2	5 19 9	30 ,,
7 ,,	,, ,,			4896	23 9 3 20							,,	7 8 6	174 9 4	13 11 2	1 2 6	3 15 0	192 18 0	8 4 2¼	30
12 ,,	Potosi	201	50 2 3 19									,,	5 8 0	270 15 9	20 8 0	2 14 4	6 10 3	300 8 4	5 19 10	16 April
27 ,,	Otterspool	1214	300 0 3 17									,,	5 8 0	1620 4 10	116 5 4	12 13 0	42 13 4	1791 16 6	5 19 5½	13 May
13 ,,	Gulf of Mexico	2011	500 7 1 22									,,	5 8 0	2702 0 2	203 11 10	20 19 11	68 3 3	2994 15 2	5 19 8½	25 March
7 ,,	Ulrica	1206	300 4 2 25									,,	5 8 0	1621 5 6	116 6 10	12 13 2	42 13 8	1792 19 2	5 19 5½	8 May
13 ,,	Cartvale	402	100 0 0 10									,,	5 8 0	540 0 6	38 15 0	4 6 4	14 4 8	597 6 6	5 19 5½	13 ,,
28 ,,	M'Diarmid	610	151 0 0 27									,,	5 8 0	815 9 3	58 10 4	6 8 10	21 9 1	901 17 6	5 19 5¾	2 June
28 ,,	Romsdal	656	161 1 3 24									,,	5 8 0	869 18 9	62 8 6	6 17 2	8 2 6	947 6 11	5 17 7½	21 May
4 Feb	Aberdeen	605	149 12 0 17									,,	5 8 0	807 17 7	60 17 5	8 6 1	19 7 6	896 8 7	5 19 10½	13 April
28 Jan	Garonne	609	149 7 0 4									,,	5 8 0	806 10 0	60 15 4	8 4 9	19 7 1	894 17 2	5 19 10	10 ,,
4 ,,	Patriarch	403	100 0 0 10									,,	5 8 0	540 0 6	38 15 0	4 6 4	14 4 7	597 6 5	5 19 5½	24 May
4 Mar	Allerton	1267	322 3 3 21									,,	5 8 0	1739 17 3	124 17 0	13 11 5	45 15 8	1924 1 4	5 19 5½	3 June
2 ,,	Siren	798	200 5 3 18									,,	5 8 0	1081 11 11	77 12 3	8 9 10	28 9 11	1196 3 11	5 19 5½	8 ,,
4 ,,	Pengwern	1115	279 2 0 12									,,	5 8 0	1507 3 5	108 3 1	11 15 7	39 13 10	1666 15 11	5 19 5¾	21 ,,
18 ,,	John Elder	790	200 2 0 9									,,	5 8 0	1080 11 2	81 8 4	10 19 9	25 18 3	1198 17 6	5 19 10	6 May
10 ,,	Samuel Plimsoll	589	148 14 1 3									,,	5 8 0	803 1 1	57 12 7	6 6 11	21 2 10	888 3 5	5 19 6	21 June
12 ,,	Cutty Sark	395	99 19 1 22									,,	5 8 0	539 17 0	38 14 10	4 6 3	14 4 0	597 2 1	5 19 5¾	20 ,,
13 ,,	,, ,,									37518	16 13 0 0	Patent Nut & Bolt Co	19 10 0	324 13 6	9 8 7	3 6 11	4 14 5	342 3 5	20 11 0	20 ,,
13 ,,	,, ,,					14448	8 8 0 0					,,	15 10 0	130 4 0	4 15 1	1 7 0	2 1 4	138 7 5	16 9 5	20 ,,
10 ,,	The Tweed	798	200 3 3 27									C Cammell & Co	5 8 0	1081 1 6	77 11 7	8 9 9	28 9 8	1195 12 6	5 19 5¾	7 Aug
16 ,,	Camb Chieftain	609	151 5 1 10									,,	5 8 0	816 16 10	58 12 4	6 9 0	21 8 11	903 7 1	5 19 5¾	13 July
20 ,,	,,									60164	26 14 0 0	,,	19 10 0	520 13 0	1b 2 2	5 6 1	7 11 3	548 12 6	20 10 11¼	13 ,,
20 ,,	,,					22962	13 7 0 0					,,	15 10 0	206 18 6	7 11 1	2 2 5	3 5 10	219 17 10	16 9 5	13 ,,
24 ,,	Maud	799	202 9 3 24									,,	5 2 0	1032 14 9	129 1 11	8 14 8	28 4 5	1198 15 9	5 18 5¾	29 June
16 ,,	Yarkand	840	200 4 0 0									,,	5 8 0	1081 1 7	77 11 7	8 9 10	28 9 9	1195 12 9	5 19 5¾	9 Aug
17 ,,	The Tweed									37518	16 13 0 0	,,	19 10 0	324 13 6	9 8 6	3 6 11	4 14 5	342 3 4	20 11 0	7 ,,
17 ,,	,,					14448	8 8 0 0		.			,,	15 10 0	130 4 0	4 15 0	1 7 0	2 1 4	138 7 4	16 9 5	7 ,,
19 ,,	Carleton	1232	300 6 0 0									,,	5 8 0	1621 12 5	116 7 4	12 15 3	42 13 5	1793 8 5	5 19 5¾	5 ,,
19 ,,	Hawkesbury	392	100 2 0 0				.					,,	5 8 0	540 10 10	38 15 10	4 6 5	14 5 6	597 18 7	5 19 5¾	12 ,,
8 April	Cuzco	798	200 2 2 25									,,	5 8 0	1080 14 8	81 8 8	10 19 9	25 18 4	1199 1 5	5 19 10	16 June
16 ,,	Gladstone	195	49 15 3 16									,,	5 8 0	268 17 10	19 5 10	2 4 5	7 1 8	297 9 9	5 19 6	31 Aug
4 May	Liguria	1235	301 1 1 8									,,	5 8 0	1625 15 2	122 9 10	16 9 1	38 19 10	1803 13 11	5 19 10	30 June
29 April	Christina Thompson	392	100 2 0 0									,,	5 8 0	540 10 10	38 15 10	4 6 5	14 4 10	597 17 11	5 19 0	23 Sept
16 ,,	Loch Mordant					55728	32 8 0 0		.			Patent Nut and Bolt Co	15 10 0	502 4 0	18 6 8	5 1 4	7 19 4	533 11 4	16 9 4½	31 Aug
16 ,,	,,									183534	81 9 0 0	,,	19 10 0	1588 5 6	46 1 10	15 19 9	23 2 1	1673 9 2	20 10 11	31 ,,
1 May	Cimba	.		11988	55 12 0 14			.				C Cammell & Co	7 8 6	412 17 6	30 12 8	2 9 4	9 7 1	455 6 7	8 3 9½	31 ,,
1 ,,	Orontes			15840	75 2 0 8		.					,,	7 8 6	557 12 10	41 6 3	3 6 7	12 11 9	614 17 5	8 3 9	31 ,,

No. 6—*continued*—Return of Permanent-way Material imported during 1885.

Date of Invoice	Name of Ship	Rails. No	Rails. Tonnage	Fishplates No	Fishplates Tonnage	Bolts and Nuts No	Bolts and Nuts Tonnage	Spikes No	Spikes Tonnage	Screws No	Screws Tonnage	Name of Contractor	Rate per ton	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost per ton	Date of Arrival
1885			T c q lb		T c q lb		T c q lb		T c q lb		T c q lb		£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	1885
29 April	Orontes	392	100 2 0 0									C Cammell & Co	5 8 0	540 10 10	38 15 10	4 6 5	14 4 10	597 17 11	5 19 5½	31 Aug.
16 May	Cairnbulg	404	100 10 3 21									,,	5 8 0	542 19 0	38 19 3	4 6 9	14 5 8	600 10 8	5 19 5½	30 ,,
26 ,,	Iberia	408	102 14 1 11									,,	5 8 0	554 13 6	42 2 11	5 12 9	13 6 10	615 16 0	5 19 11	13 July
22 ,,	Chimborazo	589	150 8 0 12									,,	5 8 0	812 3 10	61 3 10	8 5 11	19 9 6	901 3 1	5 19 10½	5 ,,
16 ,,	Illawarra	823	200 11 0 3									,,	5 8 0	1082 19 6	77 14 3	8 10 1	28 10 4	1197 14 2	5 19 5½	23 Sept
22 ,,	Iberia	588	150 3 0 0									,,	5 8 0	810 16 2	60 14 10	8 4 2	19 8 5	899 3 7	5 19 9½	13 July
26 ,,	Loch Rannock	743	181 6 0 7									,,	5 8 0	979 0 9	70 5 1	7 14 1	25 15 4	1082 15 3	5 19 5½	8 Oct
2 June	Potosi	804	200 5 1 3									,,	5 8 0	1081 8 6	81 9 8	10 19 11	25 19 2	1199 17 3	5 19 10	30 July
2 ,,	Smyrna	400	100 2 0 0									,,	5 8 0	540 10 10	38 15 10	4 6 5	14 4 10	597 17 11	5 19 6¼	19 Sept
18 ,,	,,			15336	73 0 2 8							,,	5 8 0	542 4 9	40 3 2	3 3 10	12 5 0	597 16 9	8 3 8¼	19 ,,
17 ,,	Maisala	827	200 4 2 15									,,	5 8 0	1081 5 0	81 9 5	10 19 11	27 5 4	1200 19 8	5 19 11¼	17 Aug
17 ,,	Kent	831	200 0 3 7									,,	5 8 0	1080 4 5	81 7 10	10 19 8	27 5 0	1199 16 11	5 19 11¼	31 ,,
13 ,,	Port Jackson	809	200 2 2 26									,,	5 8 0	1080 14 9	77 11 0	8 9 9	28 8 11	1195 4 5	5 19 5½	12 Oct
23 ,,	Orient	405	100 14 3 2									,,	5 8 0	543 19 9	41 3 2	5 10 9	13 1 6	603 15 2	5 19 10½	13 Aug
13 ,,	,,	399	100 1 1 13									,,	5 8 0	540 7 4	40 10 10	5 9 9	12 19 1	599 7 0	5 19 9½	13 ,,
6 July	Garonne	207	50 6 0 12									,,	5 8 0	271 12 11	20 9 4	2 17 5	6 10 6	301 10 2	5 19 11	28 ,,
6 ,,	General R	417	100 2 2 16									,,	5 8 0	540 14 3	38 16 0	4 6 5	14 4 10	598 1 6	5 19 5¼	3 Nov
27 June	Sorata	1221	300 8 2 5									,,	5 8 0	1622 6 1	122 4 9	16 8 5	38 18 3	1799 17 6	5 19 10	7 Sept
20 July	Tiverton	810	200 2 2 24									,,	5 8 0	1080 14 8	81 8 8	10 19 10	27 5 6	1200 8 8	5 19 11¾	9 Oct
27 June	,,			13392	62 10 3 13							,,	7 8 6	464 7 8	36 3 1	5 12 7	10 0 0	516 3 4	8 5 1	9 ,,
31 July	,,	404	100 0 2 25									,,	5 8 0	540 4 0	40 14 0	5 11 4	13 12 6	600 1 10	5 19 11¾	9 ,,
31 ,,	John Elder	806	200 8 1 0									,,	5 8 0	1082 4 7	81 10 9	11 0 1	25 19 5	1200 14 10	5 19 10¼	1 ,,
6 July	Pericles	616	149 7 1 1									,,	5 8 0	806 11 2	57 17 6	6 7 5	21 5 6	892 1 7	5 19 5½	13 Oct
1 Aug	Abergeldie	405	100 2 0 0									,,	5 8 0	540 10 10	38 15 10	4 6 5	14 4 10	597 17 11	5 19 5¾	11 Nov
24 July	Hahnemann									60164	26 14 0 0	Patent Nut and Bolt Co	19 10 0	520 13 0	15 2 2	5 6 1	7 11 4	548 12 7	20 10 11½	1 Dec
24 ,,	,,					22962	13 7 0 0					,,	15 10 0	206 18 6	7 11 1	2 2 4	3 5 9	219 17 8	16 9 5	1 ,,
6 Aug	Cumberland	1204	295 16 2 14									C Cammell & Co	5 8 0	1597 9 10	114 12 8	12 9 7	42 0 11	1766 13 0	5 19 5¼	28 ,,
25 ,,	Dallam Tower	617	152 3 3 12									,,	5 8 0	821 16 10	58 19 6	6 9 9	21 12 8	908 18 9	5 19 5½	22 Nov
31 July	Brilliant	793	200 0 3 7									,,	5 8 0	1080 4 4	77 10 4	8 9 8	28 8 9	1194 13 1	5 19 5¼	29 ,,
2 Sept	Dallam Tower			15120	70 16 1 26							,,	7 8 6	525 17 5	38 19 9	5 8 2	11 18 10	582 4 2	8 4 4½	22 ,,
25 Aug	Aberdeen	405	100 3 1 3									,,	5 8 0	540 17 8	40 15 2	5 12 5	12 19 7	600 4 10	5 19 10½	25 Oct
25 ,,	Parramatta	395	100 0 0 10									,,	5 8 0	540 0 5	38 15 2	4 4 10	14 3 4	597 3 9	5 19 5¼	25 Dec
27 ,,	,,	402	100 0 2 25									,,	5 8 0	540 3 10	38 15 2	4 4 11	14 5 4	597 9 3	5 19 5¼	25 ,,
12 Sept	Liguria	421	100 0 0 9									,,	5 8 0	540 0 5	40 13 10	5 11 4	12 19 4	599 4 11	5 19 10½	4 Nov
27 Aug	Gretna	829	200 4 2 15									,,	5 8 0	1081 5 0	77 16 8	8 8 10	28 9 11	1196 0 5	5 19 5¾	18 Dec
8 Sept	,,	410	99 19 1 22									,,	5 8 0	539 17 0	38 9 11	4 4 3	14 3 7	596 14 9	5 19 4¾	18 ,,
17 ,,	Gulf of Mexico	413	99 18 3 6									,,	5 8 0	539 13 6	40 13 4	5 11 3	13 12 0	599 10 1	5 19 11½	29 Nov
22 ,,	Iberia	1255	300 2 3 5									,,	5 8 0	1620 15 1	122 2 5	16 18 1	38 17 9	1798 3 4	5 19 10	22 ,,
13 Oct	Chimborazo	404	99 13 0 7									,,	5 8 0	538 2 6	40 11 0	5 11 1	12 18 2	597 2 9	5 19 10	6 Dec
20 ,,	Potosi	406	100 1 1 13									,,	5 8 0	540 7 4	40 18 4	5 11 5	14 4 5	601 1 6	6 0 1¾	14 ,,
19 ,,	,,	401	99 16 1 11									,,	5 8 0	539 0 3	40 8 3	5 11 4	14 3 9	599 3 7	6 0 0½	14 ,,
6 Nov	Orient	412	99 19 1 22									,,	5 8 0	539 17 0	40 13 6	5 11 4	14 3 11	600 5 9	6 0 1	29 ,,
1884																				
1 Aug	Sherwood			7200	35 6 2 9							,,	7 8 6	262 5 11	26 19 1	1 12 5	3 17 9	294 15 2	8 6 10	15 Jan
6 ,,	,,	820	201 1 3 14									,,	5 8 0	1085 18 2	118 2 10	8 10 6	16 2 10	1228 14 4	6 2 2¼	15 ,,
7 ,,	,,					34314	19 19 0 0					Patent Nut and Bolt Co	15 10 0	309 4 6	15 13 11	3 2 10	4 11 10	332 13 1	16 13 5¼	15 ,,
7 ,,	,,									67600	30 0 0 0	,,	19 10 0	585 0 0	23 12 0	5 19 0	8 13 10	623 4 10	20 15 6	15 ,,
31 Oct	Silverhow	260	815 7 0 12									C Cammell & Co	5 2 0	4158 6 3	794 19 6	34 6 5	87 13 0	5075 5 2	6 4 5	14 Feb
4 Dec	Aberestwyth Castle	347	84 17 1 25									,,	5 8 0	458 6 4	49 17 4	3 13 8	4 5 8	516 3 0	6 1 7⅝	11 May
4 ,,	Rokeby Hall	185	46 10 0 15									,,	5 8 0	251 2 8	27 6 6	2 1 9	2 7 0	282 17 11	6 1 7¾	1 April
1885																				
28 Jan	Jessie Jamieson	158	38 18 3 10									,,	5 8 0	210 5 9	23 1 5	2 1 1	1 12 5	237 0 8	6 1 8¾	27 June
14 Feb	,,	203	50 15 2 20									,,	5 8 0	274 4 8	29 12 10	2 3 9	2 10 9	308 12 0	6 1 6¼	27 ,,
27 ,,	Juno			5688	27 5 3 22							,,	7 8 6	202 13 8	20 17 2	1 5 8	2 10 8	227 7 2	8 6 6¾	23 ,,
8 April	Bombay	448	100 2 0 0									,,	5 8 0	540 10 10	61 15 0	5 11 6	5 1 4	612 18 8	6 2 5¾	5 ,,
16 ,,	Colwyn	640	150 13 0 24									,,	5 8 0	813 11 5	88 10 4	6 8 6	7 12 4	916 2 7	6 1 7¼	21 Aug
23 ,,	Loch Carron	1610	408 2 1 27									,,	5 2 0	2081 8 9	341 16 1	17 6 1	19 9 8	2460 0 7	6 0 6¾	6 Sept
29 June	Glenmore	171	41 0 1 9									,,	5 8 0	221 9 9	24 1 11	1 17 2	2 1 6	249 10 4	6 1 8½	25 ,,
29 ,,	Abergeldie	1237	299 8 0 14									,,	5 8 0	1616 15 11	185 12 9	16 6 2	13 6 11	1832 1 9	6 2 4½	9 ,,
23 ,,	,,	826	200 2 0 10									,,	5 8 0	1080 11 3	122 10 0	10 17 11	8 18 3	1222 17 5	6 2 2¾	9
29 ,,	Decapolis	246	59 2 1 6									,,	5 8 0	319 4 5	34 14 6	2 12 3	2 19 10	359 11 0	6 1 7¾	7 Nov
20 July	Belgic	407	100 0 2 25									,,	5 8 0	540 3 10	61 14 2	5 11 4	5 4 4	612 13 8	6 2 6	1 Oct
17 ,,	Gulf of St Vincent			16848	78 13 2 18							,,	7 8 6	584 4 5	63 4 10	4 9 9	5 15 6	657 14 6	8 7 2½	25 Sept
6 ,,	,,	1253	300 7 3 18									,,	5 8 0	1622 2 8	185 7 9	16 8 11	15 14 5	1839 13 9	6 2 6	25 ,,
26 July	Gulf of St Vincent	407	100 2 2 15									,,	5 8 0	540 14 2	61 13 9	5 8 11	5 2 1	612 18 11	6 2 5	25 Sept
13 Aug	Gogoburn	409	100 2 2 16									,,	5 8 0	540 14 3	58 16 8	4 6 5	5 0 3	608 17 7	6 1 7	25 Dec
1 ,,	Gulf of Venice	401	100 0 2 25									,,	5 8 0	540 3 11	62 5 1	5 8 8	5 17 9	613 15 5	6 2 8	10 Oct
6 ,,	,,	1641	404 10 3 26									,,	5 8 0	2184 11 4	249 0 3	22 0 11	24 1 10	2479 14 4	6 2 7	10 ,,

No 6—*continued*—Return of Permanent-way Material imported during the year 1885.

Date of Invoice	Name of Ship	Rails No	Rails Tonnage	Fishplates No	Fishplates Tonnage	Bolts and Nuts No	Bolts and Nuts Tonnage	Spikes No	Spikes Tonnage	Screws No	Screws Tonnage	Name of Contractor	Rate per ton	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost per ton	Date of Arrival
1885			T c q lb		T c q lb		T c q lb		T c q lb		T c q lb		£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	1885
29 July	Gulf of Venice					22962	13 7 0 0					Patent Nut and Bolt Co	15 10 0	206 18 6	12 1 7	2 5 10	2 5 2	223 11 1	16 14 11	10 Oct
29 ,,	,,									60164	26 14 0 0	,,	19 10 0	520 13 0	21 0 1	5 13 8	5 14 10	553 1 7	20 14 3⅛	10 ,,
17 ,,	Port James	1777	449 19 1 19									C Cammell & Co	5 2 0	2294 17 0	376 17 0	18 17 11	28 7 11	2718 19 10	6 0 10	13 Dec
5 Sept	Gogoburn	415	100 0 0 9									,,	5 8 0	540 0 5	58 15 1	4 6 4	5 1 8	608 3 6	6 1 7¼	26 ,,
3 Oct	Florida	1611	400 6 2 25									,,	5 8 0	2161 16 3	246 19 1	21 16 7	17 17 0	2448 8 11	6 2 3¾	20 ,,
		73065	18061 12 0 11	116388	551 7 1 5	187824	109 4 0 0			596908	264 8 0 0			107921 17 9	9240 6 11	964 2 6	2224 19 5	120351 6 7		

Indent for Permanent-way Materials for Renewals, Great Southern, Western, and Richmond Railways, 10th April, 1884

1884																				1885
15 Aug	Henry James	878	200 2 0 10									West Cumberland Iron and Steel Co	5 0 0	1000 10 6	127 11 4	8 11 9	27 13 10	1164 7 5	5 16 4¼	12 Jan
16 Oct	British Army	1113	250 2 1 22									,,	5 0 0	1250 12 2	159 9 1	10 11 5	34 13 7	1455 5 9	5 16 4½	26 Feb
16 ,,	Candia	1119	250 16 1 27									,,	5 0 0	1254 2 6	159 18 0	10 12 0	34 14 5	1459 6 11	5 16 4½	19 Jan
22 ,,	Teviotdale	3216	700 12 0 11									,,	5 0 0	3503 0 6	446 12 8	29 6 10	96 9 1	4075 9 1	5 16 5	3 Feb
10 Nov	Lady Isabella	1087	245 12 1 20									,,	5 0 0	1228 2 2	156 11 8	10 8 8	34 0 1	1429 2 7	5 16 4¼	30 Mar
27 Sept	Kestna									47320	21 0 0 0	Bayliss Jones and Bayliss	18 5 0	383 5 0	11 19 7	3 18 8	5 14 6	404 17 9	19 5 7¼	27 Jan
27 ,,	,,							26460	10 10 0 0			,,	12 17 6	135 3 9	5 17 3	1 8 0	2 6 4	144 15 4	13 15 9	27 ,,
9 Oct	Centurion									43320	19 5 2 15	,,	18 5 0	351 17 10	11 0 0	3 12 4	5 5 3	371 15 5	19 5 7½	21 ,,
9 ,,	,,							23700	9 8 0 10			,,	12 17 6	121 1 8	5 5 1	1 5 3	2 1 4	129 13 4	13 15 9	21 ,,
		7413	1647 5 2 6					50160	19 18 0 10	90640	40 5 2 15			9227 16 1	1084 4 8	79 14 11	242 17 11	10634 13 7		

Indent for Permanent-way Materials for Renewals, double-headed Rails, Great Southern, Western, and Richmond Railways, 9th December, 1884

1885											Chairs									1885
3 July	Dolbaden Castle	5296	1330 14 1 11									Guest and Co	4 15 6	6354 3 6	1297 9 3	55 18 0	256 17 6	7964 8 3	5 19 8½	24 Oct
14 ,,	Parthena	4304	1060 2 2 26									,,	4 15 6	5062 3 1	1033 12 8	44 10 5	204 11 2	6344 17 4	5 19 8½	3 Nov
3 ,,	Centurion and Roman Empire									17231	200 0 0 6	Anderston Foundry Co	3 4 6	645 0 2	77 10 0	6 15 0	24 7 8	753 12 10	3 15 4⅛	12 ,,
24 April	Chist Thomson							68886	40 1 0 0			Phoenix Bolt & Nut Co	11 0 0	440 11 0	22 4 9	4 11 1	8 1 11	475 8 9	11 17 4½	23 Sept
6 May	Illawarra							73114	42 10 0 21			,,	11 0 0	467 12 1	23 12 1	4 16 6	8 12 2	504 12 10	11 17 5	23 ,,
30 June	Euphrates			5256	26 10 2 6							Ibbotson Bros & Co	7 15 0	205 11 10	14 15 4	2 3 5	4 11 2	227 1 9	8 11 2	6 Nov
30 ,,	,,					10500	7 7 3 0					,,	25 10 0	188 7 8	4 6 1	1 18 4	2 10 5	197 2 6	26 13 8	6 ,,
13 July	The Hahnemann					10500	7 9 1 0					,,	25 10 0	190 5 11	4 6 1	1 18 9	2 11 1	199 1 10	26 13 6¾	1 Dec
13 ,,	,,			5256	26 13 0 18							,,	7 15 0	206 12 0	14 15 4	2 3 8	4 11 3	228 2 3	8 11 2¼	1 ,,
12 Aug	Aberdeen			10488	52 19 0 18							,,	7 15 0	410 7 10	31 6 7	4 17 6	8 2 9	454 14 8	8 11 8¾	25 Oct
12 ,,	,,					21000	14 14 0 0					,,	25 10 0	374 17 0	8 12 2	4 0 0	4 3 6	391 12 8	26 12 10	25 ,,
		9600	2390 17 0 9	21000	106 2 3 14	42000	29 11 0 0	14200	82 11 0 21	17231	200 0 0 6			14545 12 1	2532 10 4	133 12 8	529 0 7	17740 15 8		

Indent for Cast Steel Switches and Crossings for the proposed Railway Extensions, dated 6th February, 1884.

1884								Crossings		Switches			Rate						Cost each	1885
12 Sept	Peterborough							100	58 8 1 14			Vickers, Sons, & Co	12 17 3¾	1286 11 3	29 18 10	13 0 3	17 7 10	1346 18 2	13 9 4½	14 Feb
17 Oct	Benares							100	65 10 1 12			,,	12 18 1¼	1290 10 0	33 11 6	13 1 1	18 1 7	1355 4 2	13 11 0½	14 ,,
14 Nov	Gulf of Venice							100	60 15 3 26			,,	12 19 11½	1299 15 0	32 14 5	13 18 1	16 5 9	1362 13 3	13 12 7	3 ,,
6 Dec	Thos M'Lellan							50	30 16 1 1			,,	13 4 9¾	662 1 3	15 15 10	6 15 5	9 0 3	693 12 9	13 17 5½	21 April
13 Nov	Helensburgh									50	69 0 2 22	Ransomes & Rapier	16 9 0	822 10 0	35 7 7	8 7 6	14 0 2	880 5 3	17 12 1¼	22 Mar
1885																				
11 Feb	Bay of Cadiz									50	69 0 2 22	,,	16 9 0	822 10 0	35 7 7	8 7 6	14 0 2	880 5 3	17 12 1¼	24 May
28 Jan	Patriarch									50	69 0 2 22	,,	16 9 0	822 10 0	35 7 7	8 7 6	14 0 3	880 5 4	17 12 1¼	24 ,,
2 Mar	Saml Plimsoll									40	58 15 3 13	,,	16 9 0	658 0 0	30 2 8	6 14 7	10 10 6	705 7 9	17 12 8¼	21 June
7 April	Carleton									10	13 17 3 14	,,	16 9 0	164 10 0	7 2 5	1 15 10	2 16 1	176 4 4	17 12 5¼	5 Aug
								350	215 10 3 25	200	279 15 3 9			7828 17 6	255 8 5	80 7 9	116 2 7	8280 16 3		

No. 6—*continued*—Return of Permanent-way Material imported during the year 1885.

Date of Invoice	Name of Ship	Switches No	Switches Tonnage	Crossings No	Crossings Tonnage	Bolts and Nuts No	Bolts and Nuts Tonnage	Spikes No	Spikes Tonnage	Screws No	Screws Tonnage	Name of Contractor	Rate per ton	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost per ton	Date of Arrival
Indent for Permanent-way Materials for Renewals (double-headed rails), Great Southern, Western, and Richmond Railways, 12th September, 1884																				
1885			T c q lb		T c q lb		T c q lb		T c q lb		T c q lb		£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	1885
4 April	Ethiopian	36	37 18 2 19									Anderston Foundry Co	12 7 7½	445 15 0	19 8 10	4 12 1	7 13 2	477 9 1	13 5 3	11 Aug
23 ,,	Trafalgar			95	87 19 3 22							Vickers, Sons, & Co	11 5 3	1545 0 0	45 2 0	15 12 0	22 10 4	1628 4 4	17 2 9¼	30 ,,
13 July	Duke of Athole			110	101 19 2 23							do	16 10 2½	1816 2 6	52 5 4	18 6 2	26 6 11	1913 0 11	17 7 10¾	29 Nov
28 Aug / 31 ,,	Aberdeen and Gulf of Mexico	73	93 7 3 14									Patent Shaft & Axle tree Co	16 10 0	1204 10 0	50 5 2	13 10 10	18 6 1	1286 12 1	17 12 6	25 Oct & 29 Nov
		109	131 6 2 5	205	189 19 2 17									5011 7 6	167 1 4	52 1 1	74 16 6	5305 6 5		
Indent for Permanent-way Materials for Quadrupling Line through Sydney Tunnel, 5th August, 1884.																				
1885			Rails				Switches													1885
23 Feb	Cambrian Chieftain			40	25 15 0 22							Vickers, Sons, & Co	13 18 3	556 10 6	13 4 1	5 14 3	7 11 3	583 0 1	14 11 6	13 July
28 ,,	Sorata	1068	238 12 2 14									North Eastern Steel Co	5 4 3	1243 17 3	97 1 10	13 1 6	30 11 11	1384 12 6	5 16 0½	20 May
14 ,,	Romsdal					15	20 16 1 24					Anderston Foundry Co	16 5 0	243 15 0	10 13 5	2 11 9	4 3 9	261 3 11	17 8 3	21 ,,
		1068	238 12 2 14	40	25 15 0 22	15	20 16 1 24							2044 2 9	120 19 4	21 7 6	42 6 11	2228 16 6		
Indent for Permanent Way Materials for Renewals, Great Southern, Western, and Richmond Railways, 6th May, 1884																				
1884					Fishplates		Bolts & Nuts													1885
6 Oct	Centurion	769	170 13 1 27									West Cumberland Iron and Steel Co	5 5 6	900 5 10	66 2 9	7 5 2	24 1 7	997 15 4	5 16 11	21 Jan
4 ,,	Kestna	1620	361 12 3 26									,,	5 5 6	1907 14 0	140 2 10	15 4 4	50 19 7	2114 0 9	5 16 11	27 ,,
4 ,,	Stirlingshire	445	100 2 2 16									,,	5 5 6	528 3 10	38 16 0	4 6 5	14 2 2	585 8 5	5 16 11	12 ,,
6 ,,	Duke of Athole	450	100 9 2 18									,,	5 5 6	530 1 2	38 18 9	4 6 8	14 3 5	587 10 0	5 16 11	12 ,,
6 ,,	General Picton	901	200 7 3 10									,,	5 5 6	1057 1 3	77 13 0	8 9 11	28 5 1	1171 9 3	5 16 11	2 Feb
17 ,,	,,	224	50 11 0 24									,,	5 5 6	266 14 0	19 11 10	2 5 1	7 2 6	295 13 5	5 16 11¼	2 ,,
17 ,,	City of Benares	1349	301 1 3 24									,,	5 5 6	1588 5 9	116 3 7	12 13 10	14 17 2	1732 0 4	5 15 0½	21 ,,
5 Nov	Benares	862	189 15 3 15									,,	5 5 6	1001 3 2	73 10 11	8 1 1	9 7 8	1092 2 10	5 15 1	14 ,,
8 ,,	Gretna	700	152 15 3 26									,,	5 5 6	805 19 10	59 4 3	6 5 3	21 11 0	893 0 4	5 16 10½	14 ,,
27 Sept	Centurion									45010	19 19 2 0	Patent Nut & Bolt Co	18 0 0	359 11 0	11 6 0	3 13 11	5 8 4	379 19 3	19 0 5	21 Jan
27 ,,	,,							25000	10 2 3 0			,,	12 10 0	126 14 5	5 14 10	1 6 4	2 3 8	135 19 3	13 8 2¾	21 ,,
		7320	1627 11 2 18					25000	10 2 3 0	45010	19 19 2 0			9071 14 3	647 4 9	73 18 0	192 2 2	9984 19 2		
Indent for Permanent Way Material for New Sidings, Great Southern Railway, 5th August, 1884																				
1885					Switches		Crossings													1885
9 June	Bedfordshire	266	59 8 2 21									West Cumberland Iron and Steel Co	4 19 6	295 13 9	37 17 10	2 12 6	8 4 0	344 8 1	5 15 10¾	7 June
2 Feb	Romsdal			5	6 18 1 0							Anderston Foundry Co	16 5 0	81 5 0	3 10 10	0 19 3	1 8 4	87 3 5	17 8 8	21 May
21 ,,	Allerton			2	3 3 2 25							,,	15 10 0	31 0 0	1 12 8	0 9 2	0 12 0	33 13 10	16 16 11	3 June
23 ,,	Sir Walter Raleigh					5	3 3 0 12					Vickers, Sons, & Co	13 11 3½	67 16 6	1 12 4	0 16 6	0 18 8	71 4 0	14 4 9¾	22 ,,
		266	59 8 2 21	7	10 1 3 25	5	3 3 0 12							475 15 3	44 13 8	4 17 5	11 3 0	536 9 4		
Indent for Permanent Way Material for Doubling the line, Parramatta to Penrith, 24th January, 1884																				
1884																				1885
30 Sept	Peterborough			38	52 19 2 0							Ransomes & Rapier	16 9 0	625 2 0	27 3 0	6 8 0	10 14 1	669 7 1	17 12 3½	14 Feb

No. 6—*continued*—Return of Permanent-way Material imported during the year 1885.

Indent for Permanent Way Material for Renewals, Great Northern Railway, 5th August, 1884.

Date of Invoice	Name of Ship	Rails No	Rails Tonnage	Switches No	Switches Tonnage	Crossings No	Crossings Tonnage	Spikes No	Spikes Tonnage	Screws No	Screws Tonnage	Name of Contractor.	Rate per ton	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost per ton	Date of Arrival
			T c q lb		T c q lb		T c q lb		T c q lb		T c q lb		£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	
1884 25 Nov	Lady Isabella	776	170 0 2 25									West Cumberland Iron and Steel Co	4 19 6	845 18 7	108 8 0	7 4 8	23 10 1	985 1 4	5 15 10½	1885 30 Mar
18 ,,	Blairhoyle	1589	350 5 0 10									,,	4 19 6	1742 10 4	223 5 9	14 16 10	48 7 10	2029 0 9	5 15 10½	21 ,,
25 ,,	Midlothian	659	145 14 1 2									,,	4 19 6	724 18 4	92 17 10	6 4 5	20 3 1	844 3 8	5 15 10½	11 April
31 Dec	Lochee	886	190 2 3 18									,,	4 19 6	945 19 8	121 4	8 1 5	8 16 10	1084 2 3	5 14 0½	8 June
1885 9 Jan	Bedfordshire	797	172 6 2 21									,,	4 19 6	857 7 4	109 17 4	7 6 7	23 16 4	998 7 7	5 15 10½	7 ,,
7 ,,	Clan McKenzie	1293	280 4 1 23									,,	4 19 6	1394 2 0	178 12 11	11 16 6	38 14 10	1623 6 3	5 15 10½	21 ,,
6 Feb	Romsdal			20	27 13 3 12							Anderston Foundry Co	16 5 0	325 0 0	14 3 6	3 8 0	5 11 11	348 3 5	17 8 2	21 ,,
23 ,,	Sir Walter Raleigh					20	12 3 3 9					Vickers, Sons, & Co	12 17 10½	257 17 6	6 5 0	2 14 7	3 10 7	270 7 8	13 10 4½	22 ,,
23 ,,	,, ,,					50	45 18 0 26					,, ,,	15 19 9¼	799 10 6	23 10 7	8 2 11	11 13 9	842 17 9	16 17 2	22 ,,
		6000	1308 14 0 15	20	27 13 3 12	70	58 2 0 7							7893 4 3	878 5 3	69 15 11	184 5 3	9025 10 8		

Indent for Permanent Way Materials for Renewals T. Rails, Great Southern, Western, and Richmond Railways, 12th September, 1884

Date of Invoice	Name of Ship	C S Crossings No	C S Crossings Tonnage	Switches No	Switches Tonnage	Name of Contractor.	Rate per ton	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost each	Date of Arrival
							Each							
1885 8 June	Euphrates	150	95 0 2 15			Vickers, Sons, & Co	13 6 7	1999 10 0	48 14 1	20 2 11	27 8 3	2095 15 3	13 19 5	1885 6 Nov
14 Mar	Ethiopian	120	74 10 0 17			,, ,,	13 3 7	1581 10 0	38 3 9	15 19 3	21 12 5	1657 5 5	13 16 2½	11 Aug
23 April	Christiana Thompson	65	40 2 1 19			,, ,,	13 0 6½	846 15 0	20 11 4	8 12 4	11 12 0	887 10 8	13 13 1	23 Sept
30 May	Australasian			51	71 8 0 8	Patent Shaft and Axle tree Co	16 10 0	841 10 0	38 8 7	9 9 1	12 9 3	901 16 11	17 13 7¾	17 Aug
6 July	Euphrates			51	71 10 2 10	,, ,,	16 10 0	841 10 0	36 13 2	8 11 4	14 8 11	901 3 5	17 13 4¾	6 Nov
14 ,,	Centurion			51	71 11 3 12	,, ,,	16 10 0	841 10 0	36 13 2	8 11 4	14 8 11	901 3 5	17 13 4¾	18 ,,
10 Aug	Parramatta	120	76 2 1 11			Vickers, Sons, & Co	13 10 7½	1623 12 6	39 0 2	16 7 8	22 3 6	1701 3 10	14 3 6¼	25 Dec
		455	285 15 2 6	153	214 10 2 2			8575 17 6	258 4 3	87 13 11	124 3 3	9045 18 11		

Indent for Permanent-way Materials for Renewals of Tramways, dated 18th March, 1885.

Date of Invoice	Name of Ship	Rails	Rails Tonnage	Fishplates	Fishplates Tonnage	Bolts and Nuts	Bolts and Nuts Tonnage	Steel Bolt Nuts	Steel Bolt Nuts Tonnage	Screws	Screws Tonnage	Name of Contractor.	Rate per ton	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost per ton	Date of Arrival
1885 12 Sept	Catania	2370	308 11 1 12									Darlington Steel and Iron Co	6 0 6	1809 2 5	130 10 7	16 18 1	43 17 11	2050 9 0	6 12 11	1885 20 Nov
12 ,,	,,			85000	22 5 0 18							,,	6 19 6	155 5 0	9 9 5	1 17 2	3 7 0	169 18 7	7 12 9	20 ,,
23 ,,	Iberia					18500	4 19 0 12					Simpson and Wood	16 15 0	83 0 0	7 18 9	0 18 6	1 1 9	92 19 0	18 15 1	22 ,,
23 ,,	,,							50000	11 14 0 1			,,	17 0 0	198 18 2	18 15 1	2 4 5	2 11 7	222 9 3	19 0 3	22 ,,
23 ,,	,,									40000 W I	7 18 3 21	,,	19 10 0	154 19 3	12 15 0	1 14 2	1 18 0	171 6 5	21 11 2	22 ,,
23 ,,	,,									12500	Ferrules— 0 17 0 14	,,	25 0 0	21 5 11	1 7 3	0 4 7	0 4 9	23 2 6	27 0 0	22 ,,
		2370	308 11 1 12	85000	22 5 0 18	18500	4 19 0 12	50000	11 14 0 1	40000 screws 12500 ferrules	8 16 0 7			2472 10 9	180 16 1	23 16 11	53 1 0	2730 4 9		

Indent for Material for North Shore Tramway, dated 8th June, 1885.

Date of Invoice	Name of Ship	C I Fish Blocks	C I Fish Blocks Tonnage			Bolts and Nuts	Bolts and Nuts Tonnage	Steel Bolt Nuts	Steel Bolt Nuts Tonnage	Screws	Screws Tonnage	Name of Contractor.	Rate per ton	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost per ton	Date of Arrival
1885 27 Oct	Orient	22600	16 2 1 19									Patent Nut and Bolt Co	8 18 5¼	143 16 4	9 10 1	1 11 9	2 12 4	157 10 6	9 15 6	1885 29 Dec
26 ,,	,,					57000	1 10 2 7					Simpson and Wood	16 15 0	25 11 11	0 18 4	0 5 5	0 6 8	27 2 4	17 14 11	29 ,,
26 ,,	,,							22600	5 5 3 5			,,	17 0 0	89 18 6	3 4 10	0 19 5	1 3 6	95 6 3	18 0 8	29 ,,
26 ,,	,,									24000	4 15 1 11	,,	19 10 0	92 19 3	2 17	0 19 10	1 2 11	97 19 8	20 11 1	29 ,,
		22600	16 2 1 19			57000	1 10 2 7	22600	5 5 3 5	24000	4 15 1 11			352 6 0	16 10 11	3 16 5	5 5 5	377 18 9		

No. 6—*continued*—Return of Permanent-way Material imported during the year 1885.

Date of Invoice.	Ship	From whom purchased	Description.	Tonnage.	Cost per ton.	Cost each.	Invoice Cost.	Freight.	English Charges.	Colonial Charges	Total Cost.	Cost per Ton.	Cost each.	Date of Arrival.
Indent for the Wrought Ironwork and Cast Iron Bed Plates required for 7 Bridges to be constructed on the Railway from Homebush to Waratah, dated 6th February, 1884														
1885				T. c. q. lb.	£ s. d.	£ s. d.	£ s. d	£ s. d	£ s. d.	£ s. d.	£ s. d	£ s. d	£ s. d.	1885.
23 Mar. ...	Maude ..	The Butterley Co. ...	Wrot. ironwork	156 6 3 2	12 13 6	.....	1981 11 10	227 13 4	39 17 6	43 9 3	2292 11 11	14 13 3½	.....	29 June.
23 „	„	„	C I. bedplates	2 5 0 2	9 7 8¼	. .....	21 2 6	2 19 0	0 8 7	0 10 3	25 0 4	11 2 3¼	. .....	29 „
8 June	Glenmore	„	Wrot. ironwork	168 8 3 21	12 13 6	.....	2135 1 3	276 15 10	32 3 3	19 14 8	2463 15 0	14 12 6¼	... .	25 Sept.
8 „	„	„	C I. bedplates	2 5 0 17	9 7 8¼	..... .	21 3 9	3 13 11	0 6 7	0 3 10	25 8 1	11 5 0¼	... ..	25 „
25 July ..	Belgic	„	Wrot ironwork	168 16 1 18	12 13 6	. ...	2139 15 10	290 6 4	35 7 4	21 1 9	2486 11 3	14 14 7	.	1 Oct.
25 „	„	„	C.I. bedplates	2 5 2 7	9 7 8¼	....	21 7 8	3 17 4	0 7 2	0 4 4	25 16 6	11 6 8¼	....	1 „
8 Sept.	Gogoburn	„	Wrot ironwork	168 11 0 25	12 13 6	... .	2136 10 3	300 9 9	32 4 0	19 19 4	2489 3 4	14 15 4	... .	25 Dec.
8 „	„ . ..	„	C.I. bedplates	2 5 2 26	9 7 8¼	. .....	21 9 1	4 0 2	0 7 4	0 3 11	26 0 6	11 7 7½	. .. .	25 „
15 April	Moresby .. .	„	Wrot. ironwork	181 7 1 1	12 13 6	. .....	2298 16 7	279 16 6	34 10 0	48 13 1	2661 16 2	14 13 6¼	.....	22 Aug.
15 „	„ . ..	„	C I. bedplates	2 5 1 27	9 7 8¼	..... .	21 7 0	3 9 4	0 11 0	0 11 8	25 19 0	11 8 2	.	22 „
				854 17 2 6	.....	... .	10798 5 9	1393 1 6	176 2 9	154 12 1	12522 2 1	.	.....	
Indent for Material Cylinders, &c., for Bridge over the Parramatta River, dated 15th March, 1883.														
2 Feb	Patriarch	Andrew Handyside & Co	Wrot ironwork in main girders	194 6 2 27	14 2 6	.. . .	2745 0 3	193 3 7	55 0 9	54 16 3	3048 0 10	15 13 8	. .. .	24 May
2 „	„	„ .	Cast bed-plates .	4 16 0 14	9 6 0	..	44 14 0	3 6 8	0 17 11	1 2 1	50 0 8	10 8 2	. . .	24 „
2 „	„ ...	„	Turned steel rollers	0 13 1 9	26 5 0	... . ..	17 10 0	0 13 3	0 7 2	0 5 5	18 15 10	28 3 10½	. ....	24 „
2 „	„ ...	„	Cast-steel rocker plates	2 0 0 21	38 5 0	.....	76 17 2	1 19 6	1 10 9	1 0 6	81 7 11	40 10 2½	....	24 „
25 „ .	Allerton	„	Wrot ironwork in main girder	210 16 3 27	14 2 6	. ... ..	2978 5 0	205 14 5	59 14 0	59 13 9	3303 7 2	15 13 4½	.....	3 June.
25 „	„	„	Cast bed-plates	4 17 0 16	9 6 0	.....	45 3 6	4 14 7	0 18 5	1 3 0	51 19 6	10 14 0½	... .	3 „
25 „	„	„	Turned steel rollers	0 11 1 18	26 5 0	.. ..	14 19 7	0 10 9	0 5 11	0 4 4	16 0 7	28 1 10½	. .. .	3 „
25 „	„	„	Cast-steel rocker plates ...	2 1 0 4	38 5 0	....	78 9 7	2 0 0	1 11 5	1 0 5	83 1 5	40 9 9	....	3 „
2 April...	Yarkand	Stockton Forge Co....	Cylinder segments	66 19 1 0	5 12 6	.. ..	376 13 3	57 18 8	5 13 7	13 12 6	453 18 0	6 15 6¾	... ...	9 Aug.
2 „ ...	„ .. .	„	Cap base and body do. &c	62 19 0 0	11 0 0	..... .	692 9 0	54 9 6	10 8 2	15 18 8	773 5 4	12 5 8	. ... ..	9 „
2 „	„	„ ...	W-1. plates, girders, &c .	123 14 3 13	20 0 0	.. ..	2474 17 4	107 1 7	37 4 5	41 15 3	2660 18 7	21 10 1	. ...	9 „
19 Mar...	Carleton . ..	Andrew Handyside & Co	Wt ironwork in cross girders, &c	100 2 1 7	14 2 6	... .	1414 2 8	140 12 9	28 8 8	28 6 2	1611 10 3	16 1 11¼	.	5 „
11 „ ..	Cambrian Chieftain.	„	„ „ . . .	123 16 2 5	14 2 6	..	1749 1 2	92 12 4	35 3 7	32 9 3	1909 6 4	15 8 4½	... .	13 July.
21 May	Cairnbulg	Stockton Forge Co	Cap base and body segments, &c	19 5 1 0	11 0 0	... . ..	211 17 9	24 7 11	3 6 0	4 8 10	244 0 6	12 13 4¼	. . .	30 Aug.
21 „ ..	„ .	„ .	Wrot.-iron plates, washers	3 11 1 25	20 0 0	.....	71 9 6	4 10 7	1 2 0	1 1 2	78 3 3	21 17 11	.....	30 „
17 June	John Duthie . .	Andrew Handyside & Co	Wrot -iron roller frames,&c	0 3 2 3	14 2 6	.....	2 9 10	0 4 11	0 0 9	0 1 0	2 16 6	16 0 4	. ...	20 Oct.
17 „ ...	„ .	„	Cast-iron bed-plates . ..	3 7 1 6	9 6 0	.....	31 5 11	4 15 0	0 9 4	0 16 1	37 6 4	11 1 9¼	..	20 „
17 „ . .	„	„	Cast-steel rocker-plates ..	2 0 3 15	38 5 0	.....	78 3 10	2 18 2	1 3 5	1 0 10	83 6 3	40 15 0	. ...	20 „
17 „ ...	„ ...	„	Turned steel rollers	0 12 2 16	26 5 0	. .	16 11 11	0 18 0	0 5 0	0 4 8	17 19 7	28 9 2	... . .	20 „
8 „	„ ..	„	Wrot. ironwork in main girder	194 19 2 4	14 2 6	...	2754 1 0	188 10 9	41 9 2	55 0 8	3039 1 7	15 11 8¾	.	20 „
24 „	Port Jackson	„ ..	„ „ . ..	211 16 2 19	14 2 6	. .....	2992 3 0	192 14 10	45 3 4	59 15 1	3289 16 3	15 10 7¼		12 Oct.
24 „	„ .	„	Cast-iron bed-plates.....	3 7 2 10	9 6 0	.. .	31 8 7	3 1 7	0 9 6	0 16 0	35 15 8	10 11 9¼	...	12 „
24 „	„	„	Cast-steel rocker-plates	2 0 3 26	38 5 0	.. .	78 7 7	1 17 3	1 3 7	1 0 7	82 9 0	40 4 4½	...	12 „
24 „ ..	„	„	Turned steel rollers ...	0 12 2 1	26 5 0	..... .	16 8 4	0 11 6	0 5 0	0 5 3	17 10 1	28 0 1¼	. .	12 „
11 July	General Roberts and the Hahneman	„	Wrot.-ironwork in cross girders, rail bearers, &c.	223 0 2 4	14 2 6	...	3150 5 1	247 17 0	47 11 1	69 18 9	3515 11 11	15 15 3	. .	3 Nov.
				1562 13 3 10	... .	....	22142 14 10	1537 5 1	379 12 11	445 16 6	24505 9 4	.....	. .	.....

No. 6.—*continued.*

RETURN OF MISCELLANEOUS Articles imported for the Great Northern Line during the year 1885.

Date of Invoice.	Ship.	From whom purchased.	Description.	Tonnage.	Cost per Ton.	Cost each	Invoice Cost	Freight.	English Charges.	Colonial Charges.	Total Cost.	Cost per ton.	Cost each.	Date of Arrival.
1884.				T. c. q. lb.	£ s. d	£ s. d.	£ s. d	£ s. d	£ s. d	£ s. d	£ s. d.	£ s. d.	£ s. d.	1885.
15 July	Sherwood	Craven Brothers	1 steam spring testing machine	.		160 0 0	160 0 0	6 6 10	2 11 0	2 7 7	171 5 5	..	171 5 5	— Jany.
18 Sept	Jessie Jamieson	Vickers, Sons, & Co	C.'s. tires	33 17 1 17	24 0 0	. .	812 17 8	32 12 0	16 8 2	7 12 4	869 10 2	25 13 5	.	27 June.
20 Dec....	,, ...	Thomas Turton & Sons	1200 c.-s. volute springs	.	.. . ..	0 1 11	115 0 0	5 11 10	2 9 0	1 1 9	124 2 7	.	0 2 0¾	27 ,,
31 ,, ...	,, . .	,, . . .	100 nests c -s. spiral springs	..	.	0 16 10	84 3 4	2 10 9	1 16 8	0 15 7	89 6 4	.	0 17 10¼	27 ,,
1885.														
20 Jan . .	Juno . . .	Cowans, Sheldon, & Co	1 10-ton accident crane	.	. .	582 15 0	582 15 0	46 15 1	11 16 1	7 0 10	648 7 0	. .	648 7 0	23 ,,
14 Feb..	Lucipara . .	Beyer, Peacock, & Co	5 bogie goods-engines		.... .	2840 0 0	14200 0 0	.. .	284 0 0	.	14484 0 0	.	2896 16 0	28 May.
14 March	Bombay	Patent Shaft & Axletree Co	100 pairs wrot.-iron wheels	.		7 7 6								
16 April..	,, ...	Vickers, Sons, & Co	200 c.-s tires for above	38 16 3 4	18 0 0		1777 6 6	193 10 10	26 13 1	16 12 6	2014 2 11	. . .	20 2 10	5 June.
16 ,, ..	,, ..	,,	100 c.-s. axles for above	18 18 2 8	18 0 0									
10 ,,	John R. Worcester	Samuel Fox & Co.	400 wagon bearing-springs	.		0 11 4½	227 10 0	13 19 11	3 11 3	2 2 10	247 4 0	.	0 12 4¼	8 Aug.
9 ,,	,, ...	Patent Shaft & Axletree Co	50 pairs wrot.-iron wheels			7 7 6								
14 May	,, ...	Vickers, Sons, & Co	100 c.-s tires for above	19 8 1 16	18 0 0		888 13 3	39 8 6	13 9 6	8 5 11	949 17 2	.	18 19 11¼	8 ,,
14 ,,	,, .	,,	50 c -s axles for above	9 9 1 4	18 0 0									
1 April .	,,	Owen & Dyson	50 pairs wheels			7 4 0								
4 May	,, .	Vickers, Sons, & Co	100 c -s tires for above	19 8 1 16	18 0 0	.	879 18 3	38 10 0	13 6 11	8 4 7	939 19 9		18 15 11¾	8 ,,
4 ,,	,, ...	,,	50 c.-s axles for above	9 9 1 4	18 0 0									
21 April...	Colwyn	Patent Shaft & Axletree Co	50 pairs wrot.-iron wheels			7 7 6								
14 May	,, ...	Vickers, Sons, & Co.	100 c -s tires for above	19 8 1 16	18 0 0	...	888 13 3	39 8 6	13 9 6	8 6 3	949 17 6		18 19 11½	21 ,,
14 ,,	,, ...	,, ...	50 c -s. axles for above	9 9 1 4	18 0 0									
21 April..	,, .	Owen & Dyson	50 pairs wheels			7 4 0								
14 May	,, .	Vickers, Sons, & Co	100 c -s tires for above	19 8 1 16	18 0 0	.	879 18 3	38 10 0	13 6 11	8 4 7	939 19 9	.	18 15 11¾	21 ,,
14 ,,	,, ..	,	50 c -s axles for above	9 9 1 4	18 0 0									
1 April..	,, ...	Samuel Fox & Co.	200 wagon bg -springs	...	.	0 11 4½	113 15 0	7 0 0	1 17 1	1 1 1	123 13 2		0 12 4¼	21 ,,
14 May	,, ...	Patent Shaft & Axletree Co	50 prs. wrot -iron wheels			7 7 6								
28 ,,	,, .	Vickers, Sons, & Co	100 c -s. tires for above	19 8 1 16	18 0 0		888 13 3	39 8 6	13 9 6	8 6 3	949 17 6	.	18 19 11½	21 ,,
28 ,, .	,,	,,	50 c.-s. axles for above	9 9 1 4	18 0 0									
5 ,,	Loch Carron	Dubs & Co.	4 passenger loco. engines			2665 0 0	10660 0 0	740 0 0	160 7 0	99 13 10	11660 0 10	.	2915 0 2½	6 Sept.
11 ,,	Glenmore	Owen & Dyson	50 pairs wheels			7 4 0								
23 ,,	,, ...	Vickers, Sons, & Co	100 c -s. tires for above	19 8 1 16	18 0 0	...	879 18 3	39 8 6	13 6 11	8 4 9	940 18 5	. .	18 16 4½	25 ,,
23 ,, ..	,,	,, .	50 c -s. axles for above	9 9 1 4	18 0 0									
25 ,,	Colwyn	Owen & Dyson	150 pairs wheels			7 4 0								
3 June	,, ...	Vickers, Sons, & Co	300 c -s. tires for above	58 5 0 20	18 0 0	..	2639 14 9	115 10 0	39 16 10	24 13 9	2819 15 4		18 15 11½	21 Aug.
			150 c s. axles for above	28 7 3 12	18 0 0									
23 May . .	Colwyn . . .	Beyer, Peacock, & Co	1 cylinder boring machine	. . .	.....	65 0 0	65 0 0	0 10 6	1 2 6	0 12 3	67 5 3	... .	67 5 3	21 Aug,
13 ,,	Glenmore	Samuel Fox & Co. .	200 wagon bearing springs			0 11 4½	113 15 0	6 19 11	1 17 1	1 1 5	123 13 5		0 12 4	25 Sept.
12 ,,	,, ...	Patent Shaft & Axletree Co	50 pairs wrot -iron wheels			7 7 6								
11 June	,, ...	Vickers, Sons, & Co	100 c -s. tires for above ..	19 8 1 16	18 0 0		888 13 3	38 10 0	13 9 6	8 5 11	948 18 8	..	18 19 6¾	25 ,,
11 ,,	,, ...	,, .	50 c -s axles for above	9 9 1 4	18 0 0									
18 ,,	,, ...	Samuel Fox & Co. .	200 wagon bearing springs			0 11 4½	113 15 0	6 19 9	1 17 1	1 1 5	123 13 3		0 12 4	25 ,,
23 ,, .	,, ...	Taylor Brothers & Co	Bar iron	3 8 1 0	16 1 9		54 18 0	2 8 9	0 19 5	0 10 3	58 16 5	17 4 8¾		25 ,,
17 ,, ..	,, ...	Craven Brothers	1 tube cutting and coning machine.			40 0 0	40 0 0	1 5 3	0 15 0	0 7 6	42 7 9	..	42 7 9	25 ,,
22 ,, .	,, ..	Owen & Dyson ..	40 pairs wheels ..			7 4 0								
3 July ..	,, ...	Vickers, Sons, & Co	80 c -s. tires for above	15 10 2 24	18 0 0		703 18 7	30 16 0	10 15 2	6 11 9	752 1 6	. . .	18 16 0¼	25 ,,
3 ,,	,, ...	,,	40 c -s axles for above .	7 11 1 20	18 0 0									
9 June. .	,, ...	Charles Churchill & Co	1 set Morse shank drills			34 15 5	34 15 5	0 10 6	0 13 5	0 7 8	36 7 0	.	36 7 0	25 ,,
19 ,, ...	Abergeldie	Vickers, Sons, & Co .	C.-s. wagon tires	9 8 3 25	18 0 0		170 1 6	9 11 0	2 14 6	1 8 0	183 15 0	19 8 11		9 ,,
19 ,, ..	,, ...	,, . .	C.-s. engine tires	24 13 2 27	24 0 0		592 9 10	24 19 0	9 6 10	4 18 1	631 13 9	25 11 9	.	9 ,,
22 ,,	Decapolis	Samuel Fox & Co. .	200 wagon bearing springs			0 11 4½	113 15 0	6 19 9	1 17 1	1 1 1	123 12 11	.	0 12 4¼	7 Nov.

No. 6—*continued.*

Return of Miscellaneous Articles imported for the Great Northern Line during the Year 1885—*continued.*

Date of Invoice	Ship.	From whom purchased.	Description.	Tonnage.	Cost per Ton.	Cost each.	Invoice Cost.	Freight.	English Charges.	Colonial Charges.	Total Cost.	Cost per Ton.	Cost each.	Date of Arrival.
1885.				T. c. q. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	1885.
9 July	Decapolis	Owen & Dyson	10 pairs wheels	.		7 4 0	175 19 8	7 14 0	2 15 9	1 12 8	188 2 1		18 16 2½	7 Nov.
9 ,,	,,	Vickers, Sons, & Co	20 c.-s. tires for above	3 17 2 20	18 0 0	.								
9 ,,	,,	,,	10 c.-s. axles for above	1 17 3 12	18 0 0									
23 June	,,	Hird, Dawson, & Hardy	L. M iron boiler plates	9 15 3 22	29 3 9	.	286 0 0	6 19 7	4 8 9	2 13 9	300 2 1	30 12 7	. .	7 ,,
20 July	,,	Fairbairn, Naylor, M'Pherson, & Co.	1 10″ screw cutting lathe	..		143 0 0	143 0 0	5 3 10	2 5 11	1 6 6	151 16 3	.. .	151 16 3	7 ,,
23 ,,	Belgic	Owen & Dyson	79 pairs wheels	.		7 4 0	1390 5 2	63 17 5	21 17 6	13 8 2	1489 8 3	..	18 17 0¾	1 Oct.
4 Aug.	,,	Vickers, Sons, & Co	158 c.-s. tires for above	30 13 2 18	18 0 0	.								
4 ,,	,,	,,	79 c.-s. axles for above	14 19 0 18	18 0 0									
4 ,,	Fort James	Dubs & Co.	3 passenger loco. engines	.		2655 0 0	7965 0 0	555 0 0	107 13 6	98 11 11	8726 5 5		2908 15 2	13 Dec.
14 July	Gulf of Venice	Pascoe, Grenfell, & Sons	Iron boiler plates	4 17 2 0	58 0 3		279 18 2	3 16 10	4 9 11	3 1 7	291 6 6	59 15 2	. . . .	10 Oct.
7 Aug.	,,	Owen & Dyson	26 pairs wheels	.	.	7 4 0	457 11 1	21 0 6	7 5 7	5 0 10	490 18 0	.. .	18 17 7¼	10 ,,
22 ,,	,,	Vickers, Sons, & Co.	52 c.-s. tires for above	10 1 3 24	18 0 0									
22 ,,	,,	,,	26 c.-s. axles for above	4 18 1 20	18 0 0									
18 ,,	Gogoburn	Robey & Co.	1 30-h.p. engine and boiler	.		543 0 0	543 0 0	47 15 4	8 6 11	5 2 0	604 4 3		604 4 3	25 Dec.
15 ,,	Aberdeen	Vickers, Sons, & Co	C.-s. engine and tender tires	26 1 0 2	23 17 2		621 10 6	54 14 1	9 15 11	4 7 3	690 7 9	26 10 0		13 Nov.
26 ,,	Gogoburn	Beyer, Peacock, & Co	3 emery wheels	.		6 6 0	18 18 0	0 10 6	0 8 8	0 3 5	20 0 7		6 13 6	25 Dec.
7 Sept.	,,	Farnley Iron Co.	Bar iron	19 10 3 11	15 12 0		304 17 3	13 18 5	4 14 5	2 17 1	326 7 2	16 14 0	.	25 ,,
27 ,,	,,	Howell & Co	5000 block steel ferrules	.		16 0 0 ℔ 1000	80 0 0	0 8 3	1 6 3	0 17 8	82 12 2	. .	16 10 5¼ ℔ 1000	25 ,,
27 ,,	,,	,,	5000 turned ,,	. .	... .. .	17 0 0 ℔ 1000	85 0 0	0 8 3	1 6 3	0 17 9	87 12 3		17 10 5½ ℔ 1000	25 ,,
11 ,,	,,	Sir Joseph Whitworth & Co.	1 B size vertical drilling machine.	. .	.	66 10 0	66 10 0	1 14 7	1 2 11	0 12 3	69 19 9		69 19 9	25 ,,
29 Aug.	,,	Broughton Copper Co	Copper rods	4 19 3 26	55 1 9		275 7 10	3 18 5	4 5 5	2 11 8	286 3 4	57 4 10	.	25 ,,
29 ,,	,,	,,	,, rivets	0 10 0 0	80 7 0		40 3 6	0 7 8	0 12 3	0 7 6	41 10 11	83 1 10	.	25 ,,
15 Sept.	,,	Owen & Dyson	45 pairs wheels			7 4 0	791 18 5	34 13 0	12 0 7	7 8 3	846 0 3	. .	18 16 0	25 ,,
23 ,,	,,	Vickers, Sons, & Co.	90 c.-s. tires	17 9 2 6	18 0 0									
23 ,,	,,	,,	45 C.-s. axles	8 10 1 12	18 0 0									
3 ,,	Port Darwin and Catania.	M'Kenzie & Holland	Interlocking signal apparatus.	.			425 7 4	31 17 3	7 5 3	1 12 8	466 2 6		.	... .
			Total	..	.	.	53520 5 3	2381 19 7	879 4 9	391 12 8	57173 2 3	.	.	

Return of Miscellaneous Articles imported for the Tramways during the year 1885.

1884.														1885.
18 Sept.	Peterborough	Hadfield's Steel Foundry Co.	100 tram car wheels	.. ..	.... . .	2 11 6	257 10 0	4 19 10	4 0 3	3 16 11	270 7 0	.	2 14 0¾	14 Feb.
22 Oct.	City of Benares	Turton Brothers & Matthews.	300 Timmins' patent springs	. . ....	. . . .	0 13 6	202 10 0	4 2 1	4 3 6	3 1 1	213 16 8	... . .	0 14 3	21 ,,
22 ,,	,,	,,	300 c.-s. spiral springs	... .	. . . .	0 2 3	32 10 0	0 13 2	0 13 6	0 9 8	34 6 4	..	0 2 3½	21 ,,
21 Nov.	St. Mildred	R. W. Cameron & Co	300 No. 4 diaphragm rubbers.	. .	.....	0 18 7½	279 10 1	1 10 11	10 13 4	0 5 2	291 19 6	. . .	0 19 5½	14 Mar.
21 ,,	,,	,,	200 pcs. hose, 1¼ x 22	... .	..... .	0 6 2½	62 2 4	0 6 6	2 7 4	0 1 3	64 17 5	. .....	0 6 5¼	14 ,,
21 ,,	,,	,,	100 ,, complete	... .	. . . .	0 19 8	98 6 10	0 10 7	3 14 11	0 1 9	102 14 1	... .	1 0 6½	14 ,,
24 ,,	Gulf of Venice	Vickers, Sons, & Co.	Steel axles for motors	11 13 3 5	....	33 4 0	388 0 6	11 2 0	7 15 2	5 16 3	412 13 11	35 6 2	.. .	3 Feb.
17 Sept.	Windsor Castle	George Spencer & Co	100 No. 3 patent cylinder springs	. .... .	.....	0 11 9	58 15 0	0 10 6	1 3 6	0 11 9	61 0 9	... .	0 12 2½	16 April.
19 Jan.	Otterspool	Patent Woollen Cloth Co.	112½ yards saddle felt	... .	.....	0 8 9½	49 9 5	1 5 9	1 2 9	0 12 9	52 20 8	... . .	0 9 4	13 May.
19 ,,	Australia	Burnham, Parry, Williams, & Co.	5 motors	.....	... .	1150 0 0	5750 0 0	857 5 4	731 12 0	25 19 5	7364 16 9	... .. .	1472 19 4¼	13 Mar.

No. 6—*continued.*

Return of Miscellaneous Articles imported for the Tramways during the year 1885—*continued.*

Date of Invoice	Ship	From whom purchased	Description.	Tonnage	Cost per Ton.	Cost each.	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost per Ton.	Cost each.	Date of Arrival.
1885.				T. c. q. lb.	£ s. d	£ s. d.	£ s. d	£ s. d.	£ s. d	£ s. d	£ s. d	£ s. d	£ s. d.	1885.
19 Jan.	Luxor	Burnham, Parry, Williams, & Co.	10 motors	...	.....	1150 0 0	11500 0 0	753 17 8	298 0 0	34 12 6	12586 10 2		1258 13 0	11 June.
16 Feb.	Zealandia	"	5 "	..	.	1150 0 0	5750 0 0	868 17 10	721 0 0	12 10 9	7352 8 7		1470 9 8¾	9 April.
14 "	Sir Walter Raleigh	Vickers, Sons, & Co	C-s tires	27 14 0 10	40 0 0		1108 3 7	23 17 11	22 6 3	16 5 2	1170 12 11	42 5 2½		22 June.
1 April	Rembrandt	R. W. Cameron & Co	6 Eames' ejectors	...		22 15 6	136 12 10	0 13 0	2 16 8	0 1 2	140 3 8		23 7 3½	22 July.
1 "	"	"	50 mufflers	.		5 3 6¼	258 16 4	2 16 4	12 5 2	0 4 1	274 1 11		5 9 7¾	22 "
13 May	Zealandia	Burnham, Parry, Williams, & Co.	2 boilers	.....		303 5 8½	606 11 5	71 12 0	62 12 7	1 8 4	742 4 4		371 2 2	3 "
13 "	"	"	1 boiler	.		303 7 4	303 7 4	35 12 0	31 3 6	0 14 0	370 16 10		370 16 10	3 "
13 "	"	"	1 set motor wheels	.	...	102 12 7	102 12 7	12 0 0	10 9 5	0 4 8	125 6 8		125 6 8	3 "
27 "	Edward Kidder	"	8 boilers	.		300 8 3¾	2403 6 5	127 15 5	39 12 3	12 10 8	2583 4 9		322 18 1	25 Sept.
11 June	City of Sydney	"	2 sets driving wheels for compound motors	.....	.....	102 15 6	205 11 0	23 13 9	19 7 4	0 13 2	249 5 3		124 12 7½	2 Aug.
10 Aug	Fred P. Litchfield	Joseph Sharp	100 feet single belting, 3″	...	.	0 0 9¼	3 17 2	0 2 6	0 3 2	0 0 1	4 2 11		0 0 9¾	7 Dec.
10 "	"	"	" double " 5″	...	..	0 2 8¼	13 8 10	0 2 6	0 8 10	0 0 1	14 0 3		0 2 9½	7 "
12 "	Brilliant	Brown, Bailey, Dixon, & Co	2 sets best toughened steel tires	18 0 8	11 14 0	... .	10 11 5	1 3 5	0 3 0	0 7 9	12 5 7	13 11 10		29 Nov.
6 Oct.	Australia	R. W. Cameron & Co	500 No 4 diaphram rubbers		.....	0 18 7½	465 16 9	17 5 1	17 6 6	0 4 5	500 12 9		1 0 0¼	18 "
6 "	"	"	250 pcs hose, complete	.	...	0 19 8	245 17 2	8 19 6	9 4 6	0 2 2	264 3 4		1 1 1½	18 "
6 "	"	"	125 doz. coupling gaskets	.....	... .	0 6 2½	38 16 4	1 7 9	1 7 6	0 0 3	41 11 10		0 6 7¼	18 "
6 "	"	"	250 hose clips, 1¼″ plain	.	... ..	0 0 8¼	8 12 6	0 5 10	0 6 0	0 0 1	9 4 5		0 0 8¾	18 "
6 "	"	"	250 " 1¼″ eye	..	.	0 0 10¼	10 15 8	0 7 4	0 7 6	0 0 1	11 10 7		0 0 11	18 "
6 "	"	"	500 " 1″ plain	. . . .	...	0 0 8¼	17 5 0	0 12 5	0 12 9	0 0 2	18 10 4		0 0 8¾	18 "
			Total	.			30368 16 6	2833 8 11	2016 19 2	120 15 7	35340 0 2			

Return of Miscellaneous Articles imported for the Great Southern and Western Lines during the year 1885.

Date of Invoice	Ship	From whom purchased	Description.	Tonnage	Cost per Ton.	Cost each.	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost per Ton.	Cost each.	Date of Arrival.
1884.														
11 Sept.	Kestna	M'Kenzie & Holland	Interlocking signal apparatus	.. .	.....	.	870 9 7	26 0 1	16 4 7	12 12 9	925 7 0			27 Jan.
20 "	"	P. W. M'Lellan	2,000 Wheatley's carriage locks	..... .	... . .	0 5 3	525 0 0	1 11 6	8 0 6	5 5 1	539 17 1		0 5 4¾	27 "
4 Oct.	Peterborough	Patent Shaft & Axletree Co	50 prs wagon wheels and axles		. . .	18 7 6	918 15 0	31 4 8	13 18 7	14 14 10	978 13 1	..	19 11 5½	14 Feb.
30 Sept.	"	Ibbotson Bros. & Co.	250 buffers	....	... ..	2 13 9	671 17 6	8 16 2	13 11 9	9 0 9	703 6 2	.	2 16 3	14 "
30 "	Stirlingshire	G D. Peters & Co.	402½ yds. green velvet	.... .	.. ....	0 5 6	110 13 9	0 10 6	2 7 3	1 1 11	114 13 5		0 5 8¾	12 Jan.
15 "	Kestna	C. Cammell & Co.	152 tires	28 16 1 26	20 0 0	... .	576 9 8	21 19 7	8 15 11	10 1 10	617 7 0	21 8 4	.	27 "
30 "	"	M'Kenzie & Holland	Interlocking signal apparatus		. .		653 15 7	17 1 5	13 7 5	9 7 8	693 12 1			27 "
30 "	Centurion	Patent Shaft & Axletree Co	50 prs wagon wheels and axles	... .	. . ..	18 7 6	918 15 0	35 6 7	13 18 8	14 14 11	982 15 2	.	19 13 1	21 "
3 Oct.	Peterborough	Thomas Turton & Sons	Spring steel	1 0 3 6	51 6 8		53 7 11	0 17 4	1 4 4	0 13 7	56 3 2	53 19 9		14 Feb.
8 "	"	Craven Brothers	1 duplex drilling machine	.. .	.... ..	52 0 0	52 0 0	1 15 11	1 3 9	0 12 10	55 12 6		55 12 6	14 "
14 Aug.	"	J M'Ilwraith & Co.	300 yds. wax cloth	. .	. .	0 2 4	35 0 0	0 11 6	0 13 6	0 9 3	36 14 3	.	0 2 5¼	14 "
29 Sept.	Iceberg	Burnham, Parry, Williams, & Co.	10 loco. engines	. .	....	2600 0 0	26000 0 0	2166 19 1	431 4 8	283 10 5	28881 14 2	..	2888 3 5	25 Jan.
21 Oct.	Peterborough	Thos Piggott & Co.	1 saw sharpening machine	.	. . .	8 15 0	8 15 0	0 10 6	0 6 6	0 2 2	9 14 2	. ..	9 14 2	14 Feb.
25 "	City of Benares	G. D. Peters & Co	5,400 sq ft. buffalo hides	. .	. .	0 1 0⅛	272 10 0	0 19 7	5 12 0	2 19 5	282 1 0	.	0 1 0½	21 Jan.
29 "	Oronsay	Patent Shaft & Axletree Co	50 prs. wagon wheels and axles	. . .	. ..	18 7 6	918 15 0	35 6 7	18 10 6	14 14 10	987 6 11	. ..	19 14 11¼	21 Feb.
21 "	Benares	Owen & Dyson	50 " "	. .. ..	... .	17 5 0	862 10 0	34 10 0	17 8 0	14 1 2	928 9 2	.. . ..	18 11 4½	14 "
31 "	"	Patent Shaft & Axletree Co.	50 " "	... .	.. ..	18 7 6	918 15 0	35 6 7	18 10 6	14 14 10	987 6 11	. . .	19 14 11¼	14 "
18 Nov.	Port Adelaide	Owen & Dyson	50 " "	.. . .	.....	17 5 0	862 10 0	34 10 0	17 8 0	13 11 2	927 19 2	. .	18 11 2	9 "
13 Oct.	Austral	Vickers, Sons, & Co.	2 c.-s crank axles	. . ..	... .	87 2 10	174 5 8	6 12 0	2 18 3	1 9 10	185 5 9	... .	92 12 10½	3 Jan.

No. 6—*continued.*

Return of Miscellaneous Articles imported for the Great Southern and Western Lines during the year 1885—*continued.*

Date of Invoice.	Ship.	From whom purchased.	Description.	Tonnage.	Cost per Ton.	Cost each.	Invoice Cost.	Freight.	English Charges.	Colonial Charges	Total Cost.	Cost per Ton.	Cost each.	Date of Arrival.
1884.				T. c. q. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	1885.
29 Oct.	Gretna	Ibbotson, Bros., & Co.	250 buffers	. . . .	. .	2 13 9	671 17 6	8 16 2	13 11 9	8 17 4	703 2 9	.	2 16 3½	14 Feb.
12 Nov.	Benares	Vickers, Sons, & Co.	8 c.-s. crank axles	. . .	. .	87 2 10	697 2 8	6 18 2	10 12 2	7 14 8	722 7 8	.	90 5 11½	14 „
5 „	„	Selig, Sommenthal, & Co	2 slide valve apparatus	. .	.	15 0 0	30 0 0	0 10 6	0 15 0	0 6 8	31 12 2	.	15 16 1	14 „
30 Oct.	„	Patent Woollen Cloth Co	Saddle felt	1 6 0 2	... .	1/11 ℔ lb	296 0 2	7 14 2	6 1 5	3 9 4	313 5 1	.	0 2 1¾	14 „
4 „	General Picton	Patent Shaft & Axletree Co	50 prs. wagon wheels and axles	. .. .	.	18 7 6	918 15 0	35 6 7	18 10 6	14 14 10	987 6 11		19 14 11¼	2 „
10 „	City of Benares.	„	50 „ „	. . .	.	18 7 6	918 15 0	35 6 7	18 10 6	14 14 11	987 7 0		19 14 11¼	21 „
12 Nov.	Cambrian Monarch	Vickers, Sons, & Co.	100 c.-s. axles	15 2 3 22	26 16 9½	.	406 10 11	13 9 0	8 5 7	6 3 0	434 8 6	28 13 7		21 Mar.
12 „	„	Patent Shaft & Axletree Co	50 prs. wagon wheels and axles	. . . . .	. . . .	18 7 6	918 15 0	35 6 7	18 10 6	14 10 10	987 2 11	. .	19 14 10	21 „
14 „	Manx King	„	50 „ „	. . . . .	. .	18 7 6	918 15 0	35 6 7	18 10 6	8 12 0	981 4 1	.	19 12 5¾	16 „
9 Oct.	„	Vickers, Sons, & Co.	100 c.-s. tires	18 16 1 22	22 0 0	. .	414 1 10	16 4 8	8 8 7	6 14 0	445 9 1	23 13 3	. .	16 „
21 Nov.	Cuzco	Patent Shaft & Axletree Co	50 prs. wheels	... . . .	.. .	}								
29 „	„	Vickers, Sons, & Co.	100 c.-s. tires	19 8 1 16	18 0 0	} 7 7 6	888 13 3	389 11 2	19 1 7	12 7 11	1309 13 11	. . . .	26 3 10½	12 Jan.
29 „	„	„	50 c.-s. axles	9 9 1 4	18 0 0	}								
5 „	Gretna	„	100 c.-s. axles	15 2 3 22	26 16 9½	...	406 10 11	13 9 0	8 5 7	6 3 0	434 8 6	28 13 7		14 Feb.
22 „	Manx King	Henry Carr	1,000 lubricators	. .		0 1 6¼	75 16 8	1 6 7	1 13 4	0 17 6	79 14 1	.	0 1 7⅛	16 Mar.
22 „	Gulf of Venice	Vickers, Sons, & Co.	100 cast steel axles	15 2 3 22	26 16 9½	...	406 10 11	14 2 6	8 9 6	5 13 11	434 16 10	28 13 8		3 Feb.
1 „	Port Adelaide	C. Cammell & Co.	208 flanged hoop tires	39 9 1 2	20 0 0	.. ...	789 5 4	34 0 9	15 18 8	13 6 0	852 10 9	21 12 0		9 „
22 „	Manx King	Vickers, Sons, & Co	4 c.-s. crank axles	. .		87 2 10	348 11 4	3 10 6	7 2 5	3 17 6	363 1 9	. .	90 15 5¼	16 Mar.
22 „	„	William Collier & Co.	1 100-lb. patent power hammer	....	...	117 0 0	117 0 0	2 12 9	2 9 9	1 8 8	123 11 2	. ...	123 11 2	16 „
26 „	Gulf of Venice	Patent Shaft & Axletree Co	50 pairs wheels	. .	... .	7 7 6	}							
4 Dec.	„	Vickers, Sons, & Co	100 c.-s. tires for above	19 8 1 16	18 0 0	.	} 888 13 3	242 10 9	19 1 6	13 9 3	1163 14 9	... .	23 5 5¾	3 Feb.
4 „	„	„	50 c.-s. axles „	9 9 1 4	18 0 0	. ..	}							
21 Nov.	Manx King	Schulze Bros	201 yards cane web	. . . . .	.....	0 15 2¼	152 14 0	0 11 2	3 1 1	1 12 9	157 19 0	. ... .	0 15 8½	16 Mar.
29 „	„	Vickers, Sons, & Co	100 c.-s axles	15 2 3 22	26 16 9½	... ...	406 10 11	13 8 0	8 5 7	6 2 9	434 7 3	28 13 7	...	16 „
17 „	„	Craven Bros	1 10-ton rope-power crane	... . .	... .	580 0 0	580 0 0	22 6 1	12 12 10	6 16 11	621 15 10	.. ..	621 15 10	16 „
17 „	„	„	1 16 „ „	... . .	. ..	720 0 0	720 0 0	27 12 10	15 8 10	8 9 6	771 11 2	.	771 11 2	16 „
17 „	„	„	3 25 „ „	. ... ..	... .	933 6 8	2800 0 0	109 0 4	53 2 6	31 15 8	2993 18 6	. ... .	997 19 6	16 „
8 Oct.	„	„	3 5 „ „	..... .		463 6 8	1390 0 0	48 1 0	28 18 10	15 14 1	1482 13 11	.	494 4 7¾	16 „
16 „	„	„	2 pairs direct-acting coupled engines.	... . .	... .	350 0 0	700 0 0	38 13 0	14 0 0	8 9 11	761 2 11	. . . .	380 11 5½	16 „
17 Nov.	„	„	1 45-ton ground traverser	... .	. . .	800 0 0	800 0 0	56 17 3	16 0 0	10 10 9	883 8 0	. ..	883 8 0	16 „
17 „	„	„	1 70 „ „	.. . . .	.	1200 0 0	1200 0 0	56 17 3	24 0 0	14 2 4	1294 19 7	....	1294 19 7	16 „
16 Oct.	„	„	1 pair direct-acting coupled engines.	. . .	. .	300 0 0	300 0 0	19 6 11	6 0 0	3 16 1	329 3 0	.....	329 3 0	16 „
16 Dec.	Derwent	Beyer, Peacock, & Co.	4 bogie goods engines	... . . .	. .. ..	2815 0 0	11260 0 0	... .. .	225 4 0	..... .	11485 4 0	....	2871 6 0	17 April.
17 „	Commonwealth	R. H. Tweddell	2 strut rivetter cranes	. .... .	.....	115 0 0	230 0 0	5 15 2	2 6 6	5 6 1	243 7 9	... . ..	121 13 10½	20 Mar.
8 „	Procida	Owen & Dyson	50 pairs wheels and axles	. ....	... .	17 5 0	862 10 0	218 5 7	18 11 1	13 5 1	1112 11 9	... .	22 5 0¼	28 Feb.
5 Nov.	Commonwealth	McKenzie & Holland	Interlocking signal apparatus	. ...	... . .	. ... . .	4430 19 2	112 10 10	88 15 4	59 18 5	4692 3 9	. ..	4692 3 9	20 Mar.
6 „	Thomasina McLellan	Ibbotson Bros. & Co.	250 buffers	. .. .	..... .	2 13 9	671 17 6	8 16 2	13 11 9	8 17 5	703 2 10	.....	2 16 3	21 April.
9 Dec.	Procida	Patent Shaft & Axletree Co.	100 pairs wheels	... .	... .. .	7 7 6	}							
30 Dec.	„	Vickers, Sons, & Co.	200 c.-s. tires for above	38 16 3 4	18 0 0	... .	} 1777 6 6	436 11 4	38 0 1	26 19 1	2278 17 0	.....	22 15 9	28 Feb.
30 „	„	„	100 c.-s. axles „	18 18 2 8	18 0 0	... .	}							
16 „	Helensburgh	Henry Carr	1,000 lubricators	....	... .	0 1 6¼	75 16 8	1 5 2	1 13 4	0 17 6	79 12 8	... .	0 1 7⅛	22 Mar.
16 „	Thomasina McLellan	John Brown & Co.	200 brake van springs	... .	... .	0 12 6	125 0 0	8 2 10	2 13 0	2 15 11	138 11 9	... ..	0 13 10¼	21 April.
29 Nov.	„	Vickers, Sons, & Co.	100 c.-s. axles	15 2 3 22	26 16 9½	....	406 10 11	13 8 7	8 5 7	6 3 0	434 8 1	28 13 7	... .	21 „
2 Dec.	„	„	3 s.-s. crank axles	.. ..	... .	87 2 11	261 8 9	2 10 11	4 1 5	2 17 10	270 18 11	....	90 6 3¾	21 „
21 Nov.	„	Charles Cammell & Co.	100 flanged hoop tires	18 18 3 9	20 0 0	....	378 16 7	16 6 9	7 14 6	6 7 6	409 5 4	21 12 1	... .	21 „

No. 6—*continued.*

RETURN of Miscellaneous Articles imported for the Great Southern and Western Lines during the year 1885—*continued.*

Date of Invoice.	Ship	From whom purchased.	Description.	Tonnage.	Cost per Ton.	Cost each.	Invoice Cost.	Freight.	English Charges.	Colonial Charges	Total Cost.	Cost per Ton.	Cost each.	Date of Arrival.
				T. c. q. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
1884.														1885.
31 Dec. ...	Chimborazo ...	Patent Shaft & Axletree Co	100 pairs wheels	.. . ...	... ...	. ..								
1885.														
7 Jan.	„ .	Vickers, Sons, & Co	200 c.-s. tires for above	38 16 3 4	18 0 0	7 7 6	1777 6 6	679 2 2	35 13 11	24 13 2	2516 15 9	.. . .	25 3 4¼	27 Feb.
7 „	„	„ ...	100 c.-s. axles „	18 18 2 8	18 0 0	.....								
1884.														
12 Dec.	Windsor Castle .	„ ...	100 c.-s. axles	15 2 3 22	26 16 9½	.	406 10 11	13 9 0	8 5 7	6 2 11	434 8 5	28 13 7	.	16 April.
22 „	„ . .	Brown, Bailey, Dixon, & Co	250 bearing springs ...	. . ..	..	0 11 3	140 12 6	7 16 6	2 19 3	2 17 4	154 5 7	.	0 12 4	16 „
20 „	„ ...	George Salter & Co	100 nests spiral bearing springs	. .		0 17 3	86 5 0	2 10 6	1 17 6	1 6 3	91 19 3	. .	0 18 4¾	16 „
22 „ ...	Gulf of Mexico	Charles Cammell & Co.	142 flanged hooped tires ...	26 16 1 24	20 0 0	.	536 9 3	24 5 11	10 17 7	8 9 3	580 2 0	21 12 6	... ...	25 Mar.
29 „ ...	„ ..	Thomas Turton & Sons	500 c.-s. volute springs ...	.. ..	. .	0 1 11	47 18 4	2 2 11	1 2 2	0 15 9	51 19 2	... .	0 2 0⅞	25 „
1885.														
20 Jan. ..	„ ...	George Salter & Co...	300 nests spiral bearing springs	.. ..	.	0 17 3	258 15 0	7 18 8	5 9 6	3 14 3	275 17 5	... . .	0 18 4¾	25 „
1884.														
22 Dec.	Ulrica	Owen & Dyson	50 pairs wheels and axles	. ...	.. .	17 5 0	862 10 0	33 12 9	17 8 0	13 18 1	927 8 10	..... .	18 10 11¾	8 May.
1885.														
5 Jan. ...	„	Brown, Bailey, Dixon, & Co.	1,000 c.-s. volute springs...	. .	. .	0 3 10	191 13 4	9 1 1	3 19 8	3 11 8	208 5 9	... . ..	0 4 1⅞	8 „
1884.														
23 Dec. ...	Gulf of Mexico	Vickers, Sons, & Co...	200 c.-s. axles	30 6 1 8	26 16 4	. ...	813 1 10	28 4 11	16 8 2	11 8 0	869 2 11	28 13 4	.	25 Mar.
1885.														
14 Jan. .	„ ...	Brown, Bailey, Dixon, & Co	500 c.-s. volute springs ...	..... .	..... .	0 3 10	95 16 8	4 15 1	2 1 4	1 13 5	104 6 6	...	0 4 2	25 „
14&16 „ ...	Potosi	Patent Shaft & Axletree Co	70 pairs wrought-iron wheels	... .	... .	7 7 6								
27 „	„	Vickers, Sons, & Co	140 c.-s. tires for above	27 3 3 0	18 0 0	. . .	1244 2 6	475 7 6	25 0 8	17 5 10	1761 16 6	... .	25 3 4½	9 „
27 „	„	„ ..	70 c.-s. axles „	13 5 0 0	18 0 0	. . ..								
9 „	„ . .	Garnham & Co.	150 L.-r. couplings	.	.. .	0 3 5	25 12 6	1 1 0	0 13 3	0 3 9	27 10 6	... .	0 3 8	9 „
3 „ ...	Ulrica	Henry Carr	1,000 lubricators . ..	.	... .	0 1 6¼	75 16 8	1 5 2	1 13 4	0 17 3	79 12 5	..... .	0 1 7	8 May.
19 „ .	Middlesex	Beyer, Peacock, & Co.	4 bogie goods engines ...	. .	.. .	2815 0 0	11260 0 0	..... .	225 4 0	... .	11485 4 0	... .	2871 6 0	7 „
2 Feb.	Gulf of Mexico and Pathan.	W. Pope & Son	Steel plates for carriage gas-holders.	14 12 2 22	13 15 0	. .. .. .	201 4 6	7 17 6	4 7 1	3 17 6	217 6 7	14 7 0	....	25 Mar.
2 „ .	Gulf of Mexico and Pathan.	„	400 bossed circular end plates	..... .	.. . .	0 13 0	260 0 0	36 13 4	5 7 1	3 0 9	305 1 2	..... .	0 15 3	25 „
1884.														
10 Dec. .	Otterspool	McKenzie & Holland	Interlocking signal apparatus..	. .. . .	.....	. . . . ..	104 17 6	1 17 1	2 4 11	1 6 10	110 6 4	... .	. . . ..	13 May.
1885.														
27 Jan. .	„	George Salter & Co ..	100 nests spiral bearing springs	. . .. . .	..... .	0 17 3	86 5 0	2 10 5	1 17 6	1 4 7	91 17 6	....	0 18 4½	13 „
19 „ ...	„	Patent Woollen Cloth Co.	507 yards 60-in. saddle-cloth	... .	.....	0 3 5	86 14 7	1 11 2	1 17 8	1 0 4	91 3 9	. .....	0 3 7⅜	13 „
24 „ ..	McDiarmid	Owen & Dyson.....	75 pairs wheels and axles...	. . .. . .	... . ..	17 5 0	1293 15 0	50 9 2	26 0 6	19 0 11	1389 5 7	... .. .	18 10 5½	2 June.
1884.														
9 Dec. ..	Otterspool.....	Vickers, Sons, & Co	4 c.-s. crank axles.....	....	.....	87 2 11	348 11 7	3 8 3	7 2 5	3 17 1	362 19 4	... .	90 14 10	13 May.
1885.														
26&29 Jan.	Orient	Patent Shaft & Axletree Co.	80 pairs wrought iron wheels	. . . .	... .. .	7 7 6								
9 Feb. ...	„	Vickers, Sons, & Co	160 c.-s. tires for above	31 1 1 20	18 0 0	.. ..	1421 17 2	349 5 2	30 8 9	18 18 1	1820 9 2	... .	22 15 1⅜	26 Mar.
9 „ ...	„	„ ...	80 c.-s. axles „ ...	15 2 3 12	18 0 0	. . . .								
8 Jan. .	Otterspool...	Andrew Handyside & Co	13 smith's hearths	....	... .	21 16 11	284 0 0	17 11 1	5 15 7	5 12 9	312 19 5	.....	24 1 6	13 May.
8 „ ...	„	„ .	6 forges	... .	.....	6 19 4	41 16 0	2 11 8	0 17 8	0 16 1	46 1 5	.....	7 13 7	13 „
20 „ ..	McDiarmid	Cowans, Sheeldon, & Co.	1 10-ton accident crane ...	....	.....	582 15 0	582 15 0	43 5 4	11 16 1	8 18 9	646 15 2	.....	646 15 2	2 June.
1884.														
22 Dec. ..	Romsdal	Craven Bros.....	4 8-in. screw cutting lathes	... .	....	110 0 0	440 0 0	20 12 8	8 19 0	5 6 7	474 18 3	.....	118 14 6¾	21 May.
31 „ ..	„	„	1 12-in. slotting machine ..	....	.....	170 0 0	170 0 0	11 18 4	3 11 0	2 4 4	187 13 8	.....	187 13 8	21 „
22 „ ...	„	„	1 plate-edge planing machine	.....	.....	98 0 0	98 0 0	2 1 8	2 2 2	1 4 7	103 8 5	.....	103 8 5	21 „

No. 6—*continued.*

RETURN of Miscellaneous Articles imported for the Great Southern and Western Lines during the year 1885—*continued.*

Date of Invoice.	Ship	From whom purchased	Description	Tonnage.	Cost per Ton.	Cost each	Invoice Cost	Freight.	English Charges	Colonial Charges	Total Cost	Cost per Ton	Cost each.	Date of Arrival.
				T. c. q. lb.	£ s. d.	£ s d.	£ s d.	£ s. d.	£ s. d	£ s. d	£ s. d	£ s d	£ s. d.	
1885.														1885.
23 Jan.	Romsdal ...	Thomas Turton & Sons	500 c.-s volute springs	... .	...	0 1 11	47 18 4	2 0 9	1 0 8	0 16 9	51 16 6	....	0 2 0¾	21 May.
4 Feb.	„ ..	Owen & Dyson	50 pairs wheels and axles	.....	...	19 8 0	970 0 0	40 19 5	19 11 0	16 4 1	1046 14 6	. .	20 18 8½	21 „
2 „ ..	„ ...	Samuel Osborne & Co	100 brake-van springs	.	.. . ..	0 10 6	52 10 0	3 5 3	1 4 0	1 3 1	58 2 4	.	0 11 7½	21 „
6 „	Juno	McKenzie & Holland	Interlocking signal apparatus		. . ...	.. ...	808 8 2	18 15 10	16 6 4	11 2 7	854 12 11	..	... . ..	21 June.
12 „	Garonne	Vickers, Sons, & Co	1 c. s. crank axle	. ....	...	84 10 6	84 10 6	3 2 3	1 19 9	0 14 3	90 6 9	.	90 6 9	10 April.
7 „	„	Patent Shaft & Axletree Co	50 pairs wrought iron wheels	. . ...	...	7 7 6	888 13 3	339 11 2	19 1 6	12 7 9	1259 13 8	..	25 3 10¼	10 „
12 „ ...	„ .	Vickers, Sons, & Co	100 c.-s. tires for above	19 8 1 16	18 0 0	... .								
12 „	„	„	50 c -s. axles „ ...	9 9 1 4	18 0 0	.....								
1884.														
10 Dec.	Otterspool	McKenzie & Holland	Interlocking signal apparatus	...	..	. ...	2374 7 2	61 10 10	47 12 9	31 12 11	2515 3 8	...		13 May.
24 „ . .	Gulf of Mexico	Turton Bros & Matthews	500 draw and buffer springs	... .	.	0 11 3¾	283 5 8	3 6 7	5 16 3	2 19 3	295 7 9	.	0 11 9¾	25 Mar.
1885.														
9 Feb. ...	Bay of Cadiz . .	Brown, Bailey, Dixon, & Co	500 volute springs	...	. . ..	0 3 10	95 16 8	4 10 8	2 1 4	1 15 6	104 4 2	...	0 4 2	24 May.
9 „ .	„ .	„	250 bearing springs	... .	. . .	0 11 3	140 12 6	7 15 7	2 19 3	2 17 1	154 4 5	... .	0 12 4¾	24 „
10 „	„	Owen & Dyson ...	50 pairs wheels and axles			17 5 0	862 10 0	33 12 9	17 8 0	13 4 6	926 15 3	. .	18 10 8¼	24 „
12 „	„	Thomas Turton & Sons	200 nests steel spiral springs	. .	...	0 16 10	168 6 8	4 8 11	3 10 4	2 5 11	178 11 10	...	0 17 10¼	24 „
6 „	„ ...	George Salter & Co.	100 nests spiral bearing springs	. .	.....	0 17 3	86 5 0	2 10 5	1 17 6	1 4 7	91 17 6		0 18 4½	24 May.
13 „	Aberdeen ...	L. Sterne & Co. .	500 draw-bar volute springs	....	...	0 11 3¾	283 5 8	9 3 0	5 19 3	2 12 10	301 0 9		0 12 0¼	13 April
5 „ .	Juno .. .	Thomas Turton & Sons	500 c -s. volute springs	.	...	0 1 11	47 18 4	2 0 7	1 2 2	0 16 9	51 17 10	. .	0 2 0¾	21 June.
12 „	„	M'Kenzie & Holland .	Interlocking signal apparatus	. .			1336 3 9	33 16 8	26 17 5	18 7 0	1415 4 10	.	.	21 „
19 „	„	Henry Carr	1,000 lubricators	...	.	0 1 6	75 0 0	1 16 5	1 13 0	0 17 6	79 6 11		0 1 7	21 „
12 „ .	„ ..	A. Ransome & Co. .	1 combined ver. horz. boring machine.	.		125 0 0	125 0 0	3 10 2	2 11 6	1 10 8	132 12 4		132 12 4	21 „
12 „	„ .	„	1 3 spindle ver. drilling machine	.	..	125 0 0	125 0 0	3 10 2	2 11 6	1 10 9	132 12 5		132 12 5	21 „
1884.														
31 Dec.	„	Craven Brothers .	2 10″ shaping machines	.		110 0 0	220 0 0	8 10 7	4 11 0	2 8 2	235 9 9		117 19 10½	21 „
1885.														
12 Feb	„ ...	A Ransome & Co.	1 complete joiner . . .	...		295 0 0	295 0 0	5 16 5	5 18 0	3 5 6	309 19 11	... ..	309 19 11	21 „
12 „	„ ...	„	1 c & w tenoning machine		. .. .	195 0 0	195 0 0	3 17 0	3 18 0	2 3 7	204 18 7		204 18 7	21 „
12 „ ...	„	„	1 joiners' tenoning machine	... .	.	77 0 0	77 0 0	1 10 4	1 10 9	0 16 11	80 18 0	.	80 18 0	21 „
12 „	„ .	„	1 panel planing machine	.. .	..	165 10 0	165 10 0	3 5 6	3 6 2	1 17 1	173 18 9		173 18 9	21 „
12 „	„	„	1 combined mortice boring and boxing machine.	..	..... .	330 0 0	330 0 0	6 10 2	6 15 0	3 13 8	346 18 10	....	346 18 10	21 „
12 „ ...	„	„	1 mitring machine ...	... .	. . . .	6 0 0	6 0 0	0 2 4	0 2 4	1 10 0	6 6 6	....	6 6 6	21 „
12 „	„	„ ...	1 fly-press, for saws ..	... .	..... .	24 10 0	24 10 0	0 9 6	0 9 9	0 4 10	25 14 1	.	25 14 1	21 „
12 „	„ ..	„	1 sawmaker's anvil ..	.. .. .	...	7 10 0	7 10 0	0 2 9	0 3 0	0 1 7	7 17 4	.....	7 17 4	21 „
4 „	„	P. Adie	1 cement testing machine..	... .	... ..	59 7 4	59 7 4	0 10 6	1 6 8	0 11 9	61 16 3	.. .	61 16 3	21 „
1884														
22 Dec. ...	„ ...	Craven Brothers	2 18″ screw cutting lathe..	. ....		380 0 0	760 0 0	28 2 5	15 7 0	10 7 9	813 17 2		406 18 7	21 „
1885.														
31 Jan.	Romsdal ...	Thomas Turton & Sons	500 c -s. volute springs ..	. ...	.. ..	0 1 11	47 18 4	2 0 8	1 0 8	0 16 10	51 16 6	.	0 2 0¾	21 May.
12 Feb.	Bay of Cadiz ..	„	500 „ „	....	.. .. ..	0 1 11	47 18 4	2 0 6	1 2 2	0 16 9	51 17 9	.	0 2 0¾	24 „
18 „ .	Allerton	Broughton Copper Co	Seamless copper tubes .	0 15 1 19	83 1 9	.	64 1 2	0 11 3	1 8 7	0 14 11	66 15 11	86 12 9¼	. . .	3 June.
24 „	„	Ashbury Railway Carriage and Iron Co.	50 pairs wheels	.. ....	. . .	6 19 0	867 8 3	35 16 2	17 9 11	14 4 11	934 19 3	. . ...	18 13 11¾	3 „
12 Mar. ...	„	Vickers, Sons, & Co .	100 c.-s. tires for above ...	19 8 1 16	18 0 0	. . .								
12 „ ...	„	„ ...	50 c -s. axles for above ...	9 9 1 4	18 0 0	.. ..								

No. 6—*continued.*

Return of Miscellaneous Articles imported for the Great Southern and Western Lines during the year 1885—*continued.*

Date of Invoice	Ship	From whom purchased	Description.	Tonnage	Cost per ton	Cost each.	Invoice Cost.	Freight	English Charges.	Colonial Charges	Total Cost.	Cost per Ton.	Cost each	Date of Arrival.
				T c q. lb.	£ s. d.	£ s. d	£ s. d	£ s. d.	£ s. d.	£ s. d	£ s d	£ s. d.	£ s. d	
1884.														1885.
22 Dec	Allerton . . .	Craven Brothers	1 ground traverser		.	800 0 0	800 0 0	26 8 1	16 3 0	10 7 3	852 18 4		852 18 4	3 June.
23 ,,	,, ...	George Richards & Co.	Surface plates and straight edges.				23 18 9	0 10 6	0 12 7	0 5 6	25 7 4			3 ,,
1885														
4 Mar.	Siren .	Patent Shaft & Axletree Co	50 pairs wheels and axles.			18 7 6	918 15 0	35 6 7	18 10 6	14 14 11	987 7 0		19 14 11¼	3 ,,
7 ,, ...	,,	Owen & Dyson .	25 ,, ,,			17 5 0	431 5 0	16 16 5	8 15 6	6 19 5	463 16 4		18 11 0½	8 ,,
6 ,,	,, ...	Brown, Bailey, Dixon, & Co	250 bearing springs			0 11 3	140 12 6	7 16 7	2 19 3	2 17 3	154 5 7		0 12 4	8 ,,
21 Feb	Pengwern .	Patent Shaft & Axletree Co	50 pairs wheels and axles			18 7 6	918 15 0	35 6 7	18 10 6	14 14 11	987 7 0		19 14 11¼	21 ,,
2 Mar.	,, ...	Craven Brothers	1 horz cylinder boring machine		.	165 0 0	165 0 0	3 19 8	3 9 0	2 4 6	174 13 2		174 13 2	21 ,,
26 Feb	,,	Hunt & Sacre	2 6″ screw cutting lathes. .			92 0 0	184 0 0	2 19 0	3 16 7	2 3 8	192 19 3		96 9 7½	21 ,,
26 ,,	,,	Brown, Bailey, Dixon, & Co	250 bearing springs			0 11 3	140 12 6	7 16 1	2 19 3	2 17 2	154 5 0		0 12 4	21 ,,
26 ,,	,, .	,,	500 steel volute springs .			0 3 10	95 16 8	4 9 5	2 1 4	1 15 3	104 2 8		0 4 1⅞	21 ,,
23 ,,	,,	Beuther's Patent Railway Axle-box Co	400 Attock's axle boxes			1 12 3	645 0 0	18 12 2	13 1 0	10 8 8	687 1 10		1 14 4¼	21 ,,
24 ,,	Samuel Plimsoll	Owen & Dyson	25 pairs wheels and axles			17 5 0	431 5 0	16 16 5	8 15 6	6 19 5	463 16 4		18 11 0½	21 ,,
20 ,,	,,	,, ...	25 pairs carriage wheels and axles			19 8 0	485 0 0	20 9 8	9 17 0	8 2 5	523 9 1		20 18 9	21 ,,
27 ,,	Allerton .	Beyer, Peacock, & Co	2 loco boilers ...		.	950 0 0	1900 0 0	128 6 1	38 3 0	23 5 11	2089 15 0		1044 17 6	3 ,,
27 ,,	,, ..	Craven Brothers	2 7′ wheel turning lathes	... .	.	800 0 0	1600 0 0	118 14 7	32 3 0	22 5 7	1773 3 2	...	886 11 7	3 ,,
10 Mar	Siren	Dubs & Co .. .	4 sets engine and tender springs	... .		48 15 0	195 0 0	4 2 10	4 1 0	2 13 1	205 16 11		51 9 2¾	8 ,,
16 Feb	Pengwern ...	Henry Carr	1,000 lubricators	. ..		0 1 6	75 0 0	1 4 9	1 13 0	0 17 6	78 15 3	..	0 1 6⅞	21 ,,
26 ,,	,,	George Salter & Co	100 nests spiral bearing springs	.	...	0 17 3	86 5 0	2 10 5	1 17 6	1 6 3	91 19 2	... .	0 18 4¾	21 ,,
10 Mar.	Cutty Sark ...	Owen & Dyson	25 pairs carriage wheels and axles		..	19 8 0	485 0 0	20 9 8	9 17 0	8 2 4	523 9 0		20 18 9	20 ,,
20 Feb	Sir Walter Raleigh	Staffordshire Wheel and Axle Co	50 pairs wheels		.	6 17 6								
23 Mar.	,,	Vickers, Sons, & Co	100 c.-s tyres for above	19 8 1 16	18 0 0		863 13 3	36 13 2	14 16 5	14 9 4	929 12 2		18 11 10	22 ,,
23 ,,	,,	,, ...	50 c -s. axles for above	9 9 1 4	18 0 0	.. .								
26 Feb. .	Pengwern	Staffordshire Wheel and Axle Co.	50 pairs wheels	... ..		6 17 6								
23 Mar .	,,	Vickers, Sons, & Co	100 c s tyres for above	19 8 1 16	18 0 0	.	863 13 3	36 13 1	17 8 5	14 9 4	932, 4 1	..	18 12 10½	21 ,,
23 ,, .	,,	,,	50 c -s axles for above	9 9 1 4	18 0 0									
14 ,, .	,, ..	Ashbury Railway Carriage and Iron Co	50 pairs wheels	. ..	.	6 19 0								
31 ,, ..	,,	Vickers, Sons, & Co	100 c -s tyres for above	19 8 1 16	18 0 0	.	867 8 3	35 16 3	14 17 11	14 7 1	932 9 6		18 12 11¾	21 ,,
31 ,,	,, .	,,	50 c -s axles for above	9 9 1 4	18 0 0									
26 Feb.	,, ...	Hunt & Sacre	1 punching and shearing machine			445 0 0	445 0 0	33 11 4	9 1 0	5 19 8	493 12 0		493 12 0	21 ,,
26 ,,	,, ...	,,	1 vertical boring machine			455 0 0	455 0 0	14 10 5	9 3 6	4 17 6	483 11 5		483 11 5	21 ,,
26 ,, ..	,, ...	,,	1 circular shearing machine			87 0 0	87 0 0	2 15 6	1 15 3	0 18 9	92 9 6		92 9 6	21 ,,
26 ,,	,, . ..	,, . ..	1 Elliott's screwing and tapping machine			105 0 0	105 0 0	3 7 5	2 3 0	1 2 9	111 13 2		111 13 2	21 ,,
2 Mar.	,, ...	Craven Brothers .	1 7′ wheel turning lathe .			800 0 0	800 0 0	59 3 7	16 3 0	12 12 4	887 18 11		887 18 11	21 ,,
18 Feb	Juno	Thomas Turton & Sons	500 c.-s. volute springs			0 1 11	47 18 4	2 0 6	1 2 2	0 16 9	51 17 9		0 2 1	21 ,,
24 Mar.	Cutty Sark	George Salter & Co	100 nests spiral bearing springs	.		0 17 3	86 5 0	2 10 5	1 17 6	1 6 3	91 19 2		0 18 4¾	20 ,,
21 ,, .	Nosshead	Beyer, Peacock, & Co.	4 bogie goods engines			2815 0 0	11260 0 0		225 4 0		11485 4 0		2871 6 0	28 July.
19 ,, .	Sorata	William Whittam & Co.	1 12′ standard steel rule			28 10 0	28 10 0	0 14 0	0 15 5	0 5 0	30 4 5		30 4 5	20 May.
19 ,, .	,, ...	,,	1 6′ ,, ,,			13 10 0	13 10 0	0 7 0	0 7 4	0 2 7	14 6 11		14 6 11	20 ,,
28 ,,	,, ...	M'Kenzie & Holland..	Interlocking signal apparatus				1175 13 4	99 17 6	18 6 3	13 10 8	1307 7 9		1307 7 9	20 ,,
18 ,,	Cutty Sark	Owen & Dyson	50 pairs wheels and axles .	.		17 5 0	862 10 0	33 12 10	15 7 10	12 18 8	924 9 4		18 9 9¼	20 June.

No. 6—*continued.*

Return of Miscellaneous Articles imported for the Great Southern and Western Lines during the year 1885—*continued.*

Date of Invoice.	Ship.	From whom purchased.	Description.	Tonnage.	Cost per ton.	Cost each.	Invoice Cost.	Freight.	English Charges.	Colonial Charges.	Total Cost.	Cost per ton.	Cost each.	Date of Arrival.
1885.				T. c. q. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	1885.
14 Feb. ...	Cambrian Chieftain	Ashbury Railway Carriage and Iron Co.	50 pairs wheels	.....	..	6 19 0	867 8 3	35 16 2	15 15 2	14 7 1	933 6 8	... ..	18 13 4	13 July.
1 April ..	„ .	Vickers, Sons, & Co	100 c.-s. tyres for above .	19 8 1 16	18 0 0	.....								
1 „ ...	„ ...	„	50 c.-s. axles for above	9 9 1 4	18 0 0	.. .								
28 Feb. ...	The Tweed	Ashbury Railway Carriage and Iron Co.	50 pairs wheels	... ...	.....	6 19 0	867 8 3	35 16 2	14 17 11	14 7 1	932 9 5	....	18 12 11¾	7 Aug.
1 April...	„	Vickers, Sons, & Co	100 c.-s. tires for above ..	19 8 1 16	18 0 0	. . ..								
1 „ ...	„	„ .	50 c.-s. axles for above	9 9 1 4	18 0 0	.... .								
19 Mar....	Carleton	Owen & Dyson .. .	75 pairs wheels and axles..	....	.	17 5 0	1293 15 0	50 9 2	26 0 6	20 17 7	1391 2 3	.. . .	18 10 11½	5 „
27 „ .	Cambrian Chieftain	Beyer, Peacock, & Co.	2 loco. boilers	. .	....	890 0 0	1780 0 0	116 0 4	26 17 0	21 12 8	1944 10 0	. .....	972 5 0	13 July.
19 Mar....	Hawkesbury ...	Staffordshire Wheel & Axle Co.	50 pairs wheels	....	....	6 17 6	863 13 3	36 13 1	14 16 5	14 9 4	929 12 1	.. .. .	18 11 10	12 Aug.
15 April .	„ ...	Vickers, Sons, & Co .	100 c.-s. tyres	19 8 1 16	18 0 0	....								
15 „ ...	„ ...	„ ..	50 c.-s. axles...	9 9 1 4	18 0 0	....								
27 Mar....	Cambrian Chieftain..	Thomas Robinson & Son..	1 self-acting grinding machine.	.....	.....	25 0 0	25 0 0	1 0 9	0 7 9	0 6 9	26 15 3	.. ...	26 15 3	13 July.
27 „ ...	„ ...	„ ..	1 circular moulding machine, complete.	.....	.....	45 0 0	45 0 0	1 17 7	0 14 3	0 11 4	48 3 2	.. .. ..	48 3 2	13 „
27 „ ...	„ .	„ .	1 planing, surfacing, and squaring machine, &c.	.. ..	... .	160 0 0	160 0 0	6 12 10	2 10 0	2 4 0	171 6 10	... .	171 6 10	13 „
27 „ ..	„ ...	. „ ...	1 glue-heating apparatus .	.....	.....	12 10 0	12 10 0	0 12 6	0 5 9	0 3 8	13 11 11	.. .. ..	13 11 11	13 „
27 „ ...	„ ...	„ ...	1 brazing apparatus	.....	.....	5 17 0	5 17 0	0 6 4	0 2 9	0 1 1	6 7 2	.. .	6 7 2	13 „
10 April..	„	Henry Carr	1,000 lubricators	..... .	... .	0 1 6	75 0 0	1 5 2	1 5 6	0 17 6	78 8 2	.. . .	0 1 6¾	13 „
2 „ ..	The Tweed	Brown, Bailey, Dixon, & Co.	500 volute springs	.....	.....	0 3 10	95 16 8	4 9 8	1 11 9	1 15 4	103 13 5	.. ..	0 4 1¼	7 Aug.
2 „ ...	„	„ ...	300 bearing springs	. .....	... .	0 11 3	168 15 0	9 6 3	2 13 7	3 7 11	184 2 9	. . .	0 12 3¼	7 „
23 Mar...	„	Thomas Turton & Sons	100 nests spiral springs ..	.....	. . ..	0 16 10	84 3 4	2 6 0	1 16 8	1 4 9	89 10 9	..	0 17 10¼	7 „
1 April...	„	Beyer, Peacock, & Co	Springs for express engines	... .	.. . .	.. . .	110 0 0	0 19 2	1 16 0	1 7 5	114 2 7	.....	114 2 7	7 „
9 „ ...	Carleton	Thomas Turton & Sons	200 nests spiral springs .	.....	..... .	0 16 10	168 6 8	4 12 8	2 13 6	2 9 6	178 2 4	. . .	0 17 9¾	5 „
3 „ ..	Rembrandt	R. W. Cameron & Co.	300 conductors' punches	... .	... .	0 6 10¾	103 10 5	. . .	4 12 11	0 0 3	108 3 7	. . ..	0 7 2½	22 July.
31 Mar....	The Tweed	G. D. Peters & Co. ..	144 sets patent clip spring seats.	....	. .....	0 16 8	120 0 0	7 18 7	1 19 0	1 8 6	131 6 1	. .	0 18 2¾	7 Aug.
4 April...	Deveron	Beyer, Peacock, & Co.	3 bogie goods engines	. .. ..	.. .. ..	2815 0 0	8445 0 0	.. ..	126 13 6	. . . .	8571 13 6	... . .	2857 4 6	21 July.
22 Jan. ..	Gladstone	Bowling Iron Co.....	Bar iron	84 4 0 5	16 6 7½	. . .	1375 2 7	43 3 1	27 13 0	25 9 8	1471 8 4	17 9 6	. . . ..	31 Aug.
14 & 20 Ma	The Tweed	Ashbury Railway Carriage and Iron Co.	75 pairs wagon wheels ..	. . ..	.. . .	6 19 0	1301 2 4	53 14 2	19 16 2	21 10 11	1396 3 7	.. .. .	18 12 3¾	7 „
23 & 30 Ap.	„	Vickers, Sons, & Co...	150 c.-s. tires for above ...	29 2 2 10	18 0 0	.. ..								
23 & 30 „	„ .. .	„ ..	75 c.-s axles for above...	14 3 3 20	18 0 0	. ...								
18 May .	Edward Kidder	R. W. Cameron & Co.	1 oil-testing machine	. . ..	.. ..	113 8 1	113 8 1	2 8 1	4 5 11	0 2 4	120 4 5	.. .. .	120 4 5	25 Sept.
27 Mar...	Orontes	Ashbury Railway Carriage and Iron Co.	50 pairs wagon wheels.....	. .....	.. . ..	6 19 0	867 8 3	35 16 2	13 3 2	14 7 1	930 14 8	. . ..	18 12 3½	31 Aug.
16 May ...	„	Vickers, Sons, & Co.	100 c.-s. tires for above ..	19 8 1 16	18 0 0	. . . ..								
16 „ ..	„	„ ..	50 c.-s. axles for above ..	9 9 1 4	18 0 0	.								
14 Mar....	Ethiopian	Ashbury Railway Carriage and Iron Co.	25 pairs wagon wheels.....	. .	... .	6 19 0	433 14 1	17 17 11	6 13 1	7 3 10	465 8 11	... .	18 12 4¼	11 „
4 May ...	„	Vickers, Sons, & Co...	50 c.-s. tires	9 14 0 2	18 0 0	. . . . .								
4 „ ...	„	„ ...	25 c.-s. axles	4 14 2 16	18 0 0	. . .. . .								

No. 6—*continued.*

Return of Miscellaneous Articles imported for the Great Southern and Western Lines during year 1885—*continued.*

Date of Invoice	Ship	From whom purchased	Description	Tonnage.	Cost per Ton	Cost each	Invoice Cost	Freight.	English Charges	Colonial Charges	Total Cost	Cost per Ton	Cost each	Date of Arrival.
1885.				T. c q. lbs	£ s. d	£ s. d.	£ s. d	£ s. d	£ s. d	£ s. d	£ s. d	£ s. d	£ s. d.	1885.
28 Mar.	Gladstone	Staffordshire Wheel & Axle Co.	50 pairs wheels . . .	.	.	6 17 6	863 13 3	36 13 1	13 2 0	14 9 4	927 17 8		18 11 1¾	31 Aug.
14 May	,, .	Vickers, Sons, & Co	100 c-s tires	19 8 1 16	18 0 0									
14 ,,	,,	,,	50 c-s axles ...	9 9 1 4	18 0 0									
23 April	,,	Brown, Baily, Dixon, & Co	200 bearing springs			0 11 3	112 10 0	6 4 10	1 16 9	2 5 8	122 17 3		0 12 3½	31 ,,
21 ,,	Loch Moidart	Beyer, Peacock, & Co	1 plate bending roll			80 0 0	80 0 0	1 6 11	1 5 6	0 19 5	83 11 10		83 11 10	31 ,,
21 ,, ...	,,	,,	1 circular sawing machine			72 0 0	72 0 0	1 10 3	1 3 1	0 18 5	75 11 9		75 11 9	31 ,,
21 ,,	,,	,,	3 wheel lathes		.	380 0 0	1140 0 0	74 7 3	17 5 0	18 2 0	1249 14 3		416 11 5	31 ,,
24 ,,	Gladstone	George Salter & Co	100 nests spiral bearing springs			0 17 3	86 5 0	2 10 5	1 8 10	1 6 3	91 10 6		0 18 3¾	31 ,,
17 Mar	Cimba ...	Vickers, Sons, & Co	c-s tyres ...	79 15 1 22	24 0 0		1914 10 9	76 6 8	28 15 10	31 16 9	2051 10 0	25 14 4		31 ,,
11 April	,,	,, .	,, .	39 5 0 2	24 0 0		942 0 5	26 6 5	14 4 1	12 14 9	995 5 8	25 7 1		31 ,,
1 May .	Liguria ...	Beyer, Peacock, & Co	6 flanged copper tube plates .			31 10 0	189 0 0	4 1 6	3 2 8	1 11 8	197 15 10		32 19 3½	30 June.
5 Mar ..	Cumbulg	Vickers, Sons, & Co	100 c-s tender tires .	33 1 0 27	24 0 0		793 9 10	28 10 4	12 1 0	12 7 5	846 8 7	25 12 0		30 Aug.
1 May	,, ...	Beyer, Peacock, & Co	2 locomotive boilers ...			950 0 0	1900 0 0	141 13 3	28 14 0	25 13 11	2096 1 2		1048 0 7	30 ,,
6 ,,	,, ...	,,	1 fire-box tapping machine			300 0 0	300 0 0	4 8 11	4 13 0	3 8 7	312 10 6		312 10 6	30 ,,
6 ,,	,,	,,	1 complete set engine wheels and axles			788 0 0	788 0 0	17 17 8	11 19 4	9 13 10	827 10 10		827 10 10	30 ,,
20 April	,,	Ashbury Railway Carriage and Iron Co	50 pairs wagon wheels			6 19 0	867 8 3	35 16 2	13 3 2	14 7 1	930 14 8		18 12 3½	30 ,,
23 May	,,	Vickers, Sons, & Co .	100 c s. tires for above ..	19 1 8 16	18 0 0									
23 ,,	,, .	,,	50 c-s. axles for above ..	9 9 1 4	18 0 0									
4 ,,	Cimba	Beyer, Peacock, & Co	2 pairs 18″ outside cylinders			120 0 0	240 0 0	4 8 7	3 15 0	3 1 5	251 5 0		125 12 6	31 ,,
21 April	Christiana Thompson	Staffordshire Wheel & Axle Co	50 pairs wheels			6 17 6	863 13 3	36 13 1	13 2 0	14 9 4	927 17 8		18 11 1½	23 Sept.
23 May	,,	Vickers, Sons, & Co	100 c-s tires for above	19 8 1 16	18 0 0									
23 ,,	,,	,, .	50 c-s axles for above	9 9 1 4	18 0 0									
20 ,,	Girvan	Dubs & Co. .	4 passenger locomotive engines			2665 0 0	10660 0 0	640 0 0	160 3 0	140 15 6	11600 18 6		2900 4 7½	3 ,,
8 April	Illawarra ...	Ashbury Railway Carriage and Iron Co	50 pairs wagon wheels			6 19 0	867 8 3	36 13 1	13 3 2	14 10 1	931 14 7		18 12 8¼	23 ,,
1 June	,,	Vickers, Sons, & Co	100 c. s tires for above	19 8 1 16	18 0 0									
1 ,,	,, ...	,,	50 c-s axles for above .	9 9 1 4	18 0 0									
6 May	Cumbulg ...	Thomas Turton & Sons	200 nests spiral springs			0 16 10	168 6 8	4 13 1	2 13 6	2 9 6	178 2 9		0 17 9¾	30 Aug.
17 April	Haddon Hall	Ashbury Railway Carriage and Iron Co	50 pairs wagon wheels			6 9 0	842 8 3	51 7 7	12 16 8	14 2 3	920 14 9		18 8 3½	24 Sept.
5 June .	,,	Vickers, Sons, & Co	100 c-s tires for above	19 8 1 16	18 0 0									
5 ,,	,,	,,	50 c-s axles for above	9 9 1 4	18 0 0									
27 April	Cimba	Ashbury Railway Carriage and Iron Co	50 pairs wagon wheels ...			6 19 0	867 8 3	35 16 2	13 3 1	14 7 1	930 14 7		18 12 3½	31 Aug
3 June	,, ..	Vickers, Sons, & Co	100 c-s tires for above .	19 8 1 16	18 0 0									
3 ,,	,, .	,,	50 c-s axles for above	9 9 1 4	18 0 0									
12 May ..	Christiana Thompson	Brown, Bailey, Dixon & Co	250 bearing springs .			0 11 3	140 12 6	7 17 8	2 5 2	2 17 6	153 12 10	.	0 12 3 1/11	23 Sept.
22 ,,	Cimba ..	Hyde, Archer, & Co	516 yards olive green Utrecht		..	0 6 6½	168 14 0	0 13 8	2 13 7	1 16 4	173 17 7		0 6 8¼	31 Aug
7 ,,	Trafalgar	Sharp, Stewart, & Co	1 double geared radial drill			215 0 0	215 0 0	8 8 9	3 7 6	2 16 9	229 13 0		229 13 0	1 Sept
9 ,,	Illawarra	Staffordshire Wheel & Axle Co	50 pairs wheels		.	6 17 6	863 13 3	35 16 2	13 2 0	14 6 4	926 17 9	..	18 10 9	23 ,,
12 June	,,	Vickers, Sons, & Co	100 c.-s tires for above .	19 8 1 16	18 0 0									
12 ,,	,,	,, .	50 c-s. axles for above ..	9 9 1 4	18 0 0	.								

No. 6—*continued.*

Return of Miscellaneous Articles imported for the Great Southern and Western Lines during year 1885—*continued.*

Date of Invoice	Ship	From whom purchased	Description	Tonnage.	Cost per Ton.	Cost each	Invoice Cost	Freight	English Charges	Colonial Charges	Total Cost	Cost per Ton	Cost each	Date of Arrival
1885.				T. c. q. lbs	£ s d	£ s. d.	£ s d.	£ s. d	£ s d	£ s d	£ s. d	£ s d	£ s. d.	1885.
14 May ..	Illawarra	Brown, Bailey, Dixon, & Co	250 bearing springs .			0 11 3	140 12 6	7 17 8	2 5 2	2 17 6	153 12 10		0 12 3¼	23 Sept.
28 ,,	Loch Rannock	,,	250 ,,			0 11 3	140 12 6	7 19 0	2 5 2	2 17 9	153 14 5		0 12 3½	8 Oct.
20 ,,	,,	Staffordshire Wheel & Axle Co.	50 pairs wheels ...			6 17 6	863 13 3	36 13 1	13 2 0	13 8 1	926 16 5		18 10 8½	8 ,,
12 June	,,	Vickers, Sons, & Co	100 c -s tires for above	19 8 1 16	18 0 0									
12 ,,	,,	,,	50 c -s. axles for above	9 9 1 4	18 0 0									
2 June	Salamanca	Beyer, Peacock, & Co	6 loco tank engines			2250 0 0	13500 0 0		202 10 0		13702 10 0		2283 15 0	16 Sept.
12 May	Christiana Thompson	George Salter & Co	100 nests spiral bearing springs			0 17 3	86 5 0	2 10 5	1 8 10	1 6 3	91 10 6		0 18 4	23 ,,
13 ,,	Salamanca	Dubs & Co	2 pairs bogie wheels & axles			45 7 8½	90 15 5	7 11 9	1 8 3	1 7 6	101 2 11		50 11 5½	16 ,,
13 ,,	,,	,,	1 ,, driving ,,			251 6 0	251 6 0	5 14 10	3 16 5	2 14 11	263 12 2		263 12 2	16 ,,
13 ,,	,, ...	,,	1 ,, trailing ,, ..			115 12 3	115 12 3	5 4 0	1 15 7	1 8 8	124 0 6		124 0 6	16 ,,
13 ,,	,, ..	,,	6 ,, tender ,,			45 7 8¾	272 6 4	15 18 7	4 2 9	3 14 8	296 2 4		49 7 1	16 ,,
23 ,,	Cimba	Beyer, Peacock, & Co.	1 portable cylinder boring machine			65 0 0	65 0 0	0 10 6	1 2 6	0 13 8	67 6 8		67 6 8	31 Aug
28 ,,	Loch Rannock	Thos. Turton & Sons.	300 nests c s spiral springs			0 16 10	252 10 0	7 0 0	3 18 9	3 15 1	267 3 10		0 17 9¾	8 Oct.
30 ,,	John Duthie	Brown, Bailey, Dixon, & Co	250 bearing springs ...			0 11 3	140 12 6	7 18 10	2 3 8	2 17 10	153 12 10		0 12 3¼	20 ,,
9 June	,,	,,	250 ,, ,,			0 11 3	140 12 6	7 18 11	2 3 8	2 17 9	153 12 10		0 12 3¼	20 ,,
22 May	Australasian...	Vickers, Sons, & Co	200 c s. tires	61 10 2 13	24 0 0		1476 14 10	55 14 6	23 1 5	19 11 7	1575 2 4	25 11 11		17 Aug.
25 ,,	Argonaut	Ashbury Railway Carriage and Iron Co	100 pairs wagon wheels			6 9 0	1684 16 6	102 15 2	25 9 5	26 2 5	1839 2 6		18 7 10	31 ,,
24 June	,, ...	Vickers, Sons, & Co.	200 c s tires, for above	38 16 3 4	18 0 0									
24 ,,	,,	,,	100 c.s axles, for above	18 18 2 8	18 0 0									
10 ,,	Marsala	,,	50 c s tires .	11 4 2 4	18 0 0		202 1 8	17 13 8	3 7 7	3 7 3	226 10 2	20 3 6		17 ,,
17 ,,	John Duthie	Craven Brothers	1 cutting & coning machine			40 0 0	40 0 0	1 2 8	0 15 0	0 9 11	42 7 7		42 7 7	20 Oct.
16 ,,	,,	Charles Cammell & Co	Ribbon steel	0 8 2 10	84 0 0		36 1 6	0 10 6	0 13 9	0 9 3	37 15 0	87 18 0		20 ,,
10 ,,	,,	Staffordshire Wheel & Axle Co	50 pairs wheels			6 17 6	863 13 3	36 13 1	13 2 0	14 9 4	927 17 8		18 11 1¾	20 ,,
7 July	,,	Vickers, Sons, & Co	100 c s tires	19 8 1 16	18 0 0									
7 ,,	,,	,,	50 c s axles	9 9 1 4	18 0 0									
9 June	,	Charles Churchill & Co.	6 sets Morse drills, 1¼ to 1¼ x 32			8 11 8	51 10 1	0 5 3	0 16 11	0 11 1	53 3 4		8 17 3	20 ,,
9 ,,	,, ...	,,	6 ,, ,, 1 5/16 to 2 x 1/16			13 4 10	79 9 0	0 5 3	1 5 4	0 17 5	81 17 0		13 12 10	20 ,,
23 ,,	Abergeldie	Brown, Bailey, Dixon, & Co	500 bearing springs			0 11 3	281 5 0	16 13 7	4 12 7	5 2 3	307 13 5		0 12 3½	24 Aug
20 May	Smyrna	Beyer, Peacock, & Co	4 12″ screw cutting lathes			190 0 0	760 0 0	26 6 9	11 11 0	10 2 8	808 0 5		202 0 1¼	19 Sept.
18 July	Columbia	R. W Cameron & Co.	12 20-ton jacks		...	21 7 6	256 10 0	1 5 5	6 19 4	0 5 5	265 0 2		22 1 8¼	2 Nov.
18 ,,	,,	,,	Stow flexible shafting, tools and machines, complete				74 7 9	0 14 7	3 11 2	0 1 9	78 15 3		78 15 3	2 ,,
3 ,,	Edinburgh	Beyer, Peacock, & Co	6 tank loco engines			2250 0 0	13500 0 0		202 10 0		13702 10 0		2283 15 0	11 ,,
25 June .	Ophelia .	Howell & Co.	Electro copper coated steel tubes	4 16 1 10	60 13 4		292 4 7	3 16 6	4 10 8	3 13 0	304 4 9	63 3 2		24 Oct
12 ,,	General Roberts	Craven Brothers	2 self acting planing machines			275 0 0	550 0 0	21 3 3	8 8 0	7 6 4	586 17 7		293 8 9½	3 Nov
4 July	Euphrates	Brown, Bailey, Dixon, & Co	250 bearing springs			0 11 3	140 12 6	7 19 2	2 5 2	2 17 10	153 14 8		0 12 3½	6 ,,
15 ,,	,,	Craven Brothers	Rope-power driving motion for cranes				200 0 0	25 3 8	4 3 0	9 13 2	238 19 10		238 19 10	6 ,,
5 June	City of Manchester	B Zimmermann	100 rolls roofing felt			0 4 4	21 13 4	8 5 0	0 9 6	0 16 8	31 4 6		0 6 2¾	13 Sept
24 ,,	Euphrates	Staffordshire Wheel & Axle Co	50 pairs wheels	..		6 17 6	863 13 3	36 13 1	13 2 0	14 9 4	927 17 8	. .	18 11 1¾	6 Nov
24 July	,,	Vickers, Sons, & Co	100 c s tires for above	19 8 1 16	18 0 0									
24 ,,	,,	,,	50 c s. axles for above	9 9 1 4	18 0 0									

No. 6—*continued.*

Return of Miscellaneous Articles imported for the Great Southern and Western Lines during year 1885—*continued.*

Date of Invoice.	Ship.	From whom purchased.	Description.	Tonnage.	Cost per ton.	Cost each.	Invoice Cost.	Freight.	English Charges.	Colonial Charges.	Total Cost.	Cost per ton.	Cost each.	Date of Arrival.
1885.				T. c. q. lb.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	1885.
3 June ..	Euphrates	Indiarubber Gutta Percha & Telegraph Works Co.	50 4-cell agglomerated batteries	.....	..	1 5 0	62 10 0	0 16 8	0 19 8	0 14 11	65 1 3	.	1 6 0	6 Nov.
3 „ ...	„ . .	„ .	36 Precce's electric signal repeaters.	.. .	.....	4 0 0	144 0 0	1 18 6	2 5 3	1 14 6	149 18 3		4 3 3¼	6 „
2 July ...	„ ..	Beyer, Peacock, & Co.	18 flanged copper tube plates	.....	.....	18 10 0	567 0 0	2 13 0	8 13 1	6 1 7	584 7 8		32 9 3¾	6 „
8 „ ...	„ ...	Vickers, Sons, & Co	1 c.s. tire and axle testing tup ..	.....	.....	150 0 0	150 0 0	3 12 9	2 8 0	2 0 10	158 1 7	. .	158 1 7	6 „
20 „ ...	Belgic	„	C.s. tires	108 6 2 6	24 0 0		2599 17 4	98 2 1	40 11 0	34 9 8	2773 0 1	25 11 11	. .	12 Sept.
16 „	Ruthwell .	Dubs & Co. ..	6 passenger loco. engines ..	....	.. ..	2655 0 0	15930 0 0	960 0 0	239 5 0	212 15 5	17342 0 5		2915 6 9	12 Nov.
16 „ ..	„ .	„	Reversing shafts for slides & metallic packing for do.	.... ..	.. . ..		150 0 0				150 0 0			
30 June .	Euphrates .. .	Statham & Co.	Patent packing	3 0 0 0	135 6 8		406 0 0	5 2 2	6 4 9	4 7 4	421 14 3	140 11 5	. .. .	6 „
27 July	John Elder .	Vickers, Sons, & Co	3 c.s. crank axles .. .	... .	..... .	48 18 9	146 16 3	5 1 6	2 10 0	1 7 10	155 15 7	.. .	51 18 6½	1 Oct.
25 „ .	Roman Empire	Brown, Bailey, Dixon, & Co	250 bearing springs	. . . .	.....	0 11 3	140 12 6	7 18 9	2 5 2	2 17 8	153 14 1	.. . .	0 12 3½	12 Nov.
25 „ ...	„ ...	Pontifex Wood .. .	Flanged copper tube plates	0 19 2 18	72 4 6	. ..	71 0 0	1 0 4	1 2 8	0 16 2	73 19 2	75 4 8	.....	12 „
25 „ ...	„ ..	„ .	Flanged back plates	0 14 2 23	63 15 11	...	46 18 2	0 15 4	0 15 8	0 11 5	49 0 7	66 13 7	... .	12 „
31 „ ...	Abergeldie	Brown, Bailey, Dixon, & Co	250 wagon springs	.. . ..	... .	0 11 3	140 12 6	7 19 2	2 5 2	3 15 3	154 12 1	..... .	0 12 4¾	11 „
21 „	Centurion	„ .	250 bearing „ ..	... .	. ..	0 11 3	140 12 6	7 19 3	2 3 8	3 16 10	154 12 3	.. .	0 12 4¼	18 „
13 „ ...	„ . ..	„	250 „ „	....	.. .	0 11 3	140 12 6	7 19 2	2 3 8	3 17 1	154 12 5	. ...	0 12 4¾	18 „
28 „ .	The Hahnemann	Ashbury Railway Carriage and Iron Co.	50 pairs wagon wheels	. . . .	.. ..	6 19 0	867 8 3	35 16 2	13 3 2	14 7 1	930 14 8	. .	18 12 3½	1 Dec.
15 Aug. ...	„	Vickers, Sons, & Co...	100 c.s. tires for above ..	19 8 1 16	18 0 0	. .								
15 „ ..	„	„	50 c.s. axles for above .. .	9 9 1 4	18 0 0	.								
6 „ ...	Austral .	„ ...	5 c.s. crank axles	. ... ..	.....	88 6 3	441 11 3	9 14 3	6 18 5	3 15 9	461 19 8	... .	92 7 11¼	6 Oct.
27 July .	Abergeldie	„ .	2 „	... .	. . .	84 10 6	169 1 0	1 9 4	2 13 8	1 19 11	175 3 11	. .	87 11 11½	11 Nov.
30 „ ...	„ ..	Dalton, Barton, & Co.	1,500 gross A. cloth buttons	... .	... .	0 0 7½	46 17 6	0 10 6	0 15 1	0 12 1	48 15 2	. .. .	0 0 7¾	11 „
4 Sept..	Francis Fisher	James R. Rennie . ..	15 compensating signal wheels .	.... . .	..... .	3 5 0	48 15 0	2 9 4	4 4 2	0 11 1	55 19 7	..... .	3 14 7¼	26 Dec.
31 July ...	Dallam Tower ...	Staffordshire Wheel & Axle Co.	50 pairs wheels	.. .. ..	... .	6 17 6	863 13 3	36 13 2	13 2 0	14 9 4	927 17 9	... ...	18 11 1¾	22 Nov.
29 Aug. ...	„ .	Vickers, Sons, & Co .	100 c.s. tires for above	19 8 1 16	18 0 0	. . . .								
29 „ ...	„ ..	„ ..	50 c.s. axles for above ...	9 9 1 4	18 0 0	... .								
24 „ ...	Aberdeen	„ .	C.s. tires	11 4 3 15	18 0 0	.. . .	202 7 11	20 13 2	4 6 8	3 2 4	230 10 1	20 9 11	. . .	25 Oct.
19 „	Etna	Heiman Kohnstamm.	1 American morocco hide .	... .	. .....	2 13 3	2 13 3	... .. .	.. ..	0 0 1	2 13 4	....	2 13 4	1 Nov.
19 „ ...	„	„ ...	1 „ „ .	....	..... .	2 9 6	2 9 6	.....	... .	... .	2 9 6	.. ....	2 9 6	1 „
29 „ ...	Cumberland	Vickers, Sons, & Co...	4 c.s. crank axles . ..	.. .. ..	. .... .	83 15 11¼	335 3 9	2 15 8	5 2 6	3 15 1	346 17 0	....	86 14 3	28 Dec.
6 „ .	„	„	2 „	. .... .	... . .	90 0 0	180 0 0	1 7 10	2 15 0	1 18 2	186 1 0	.... .	93 0 6	28 „
31 „ .	„ . ..	Brown, Bailey, Dixon, & Co	250 bearing springs	.. . .	.....	0 11 3	140 12 6	7 19 4	2 5 2	2 17 10	153 14 10	. .... .	0 12 3½	28 „
31 „ ...	Parramatta	Ashbury Railway Carriage and Iron Co.	50 pairs wagon wheels .	. ...	..... .	6 19 0	867 8 3	35 16 3	13 3 2	14 7 1	930 14 9	.....	18 12 3½	25 „
16 Sept. .	„	Vickers, Sons, & Co...	100 c.s. tires for above ..	19 8 1 16	18 0 0	. . . .								
16 „ . .	„ .	„ ...	50 c.s. axles for above ..	9 9 1 4	18 0 0	.								
31 Aug. .	Gretna	Brown, Bailey, Dixon, & Co.	250 bearing springs ...	. .....	. . .	0 11 3	140 12 6	7 19 0	2 5 2	2 17 6	153 14 2	. .. .	0 12 3½	18 „
9 Sept. .	„	The Leather Cloth Co.	250 pieces leather cloth .	. .....	.....	1 7 2¼	339 17 5	4 4 5	5 4 11	4 1 6	353 8 3	....	1 8 3¼	18 „
16 „ ...	„	Woodward, Gosvenor & Co	1,800 yds. Brussels carpet	....	....	0 3 5½	311 2 0	3 8 3	4 16 4	3 4 1	322 10 8	... .. .	0 3 7	18 „
26 Aug. ...	Cumberland	Beyer, Peacock, & Co.	3 emery wheels	.....	.....	6 6 0	18 18 0	0 10 6	0 8 8	0 3 9	20 0 11	... .. .	6 13 7½	28 „
7 Sept....	Gretna	Vickers, Sons, & Co...	3 c.s. crank axles	. .. .	.....	78 14 2	236 2 6	1 17 5	3 13 10	2 10 9	244 4 6	....	81 8 2	18 „
9 Oct. ...	Florida	Howell & Co.	6,000 black ferrules..... ..	....	.....	£16 ℔ 1000	96 0 0	2 0 11	1 10 3	0 18 7	100 9 9	... .	£16/14/11½ ℔ 1000	6 „
9 „ ...	„	„	6,000 turned „	....	.....	£17 ℔ 1000	102 0 0	2 0 11	1 12 1	0 19 7	106 12 7	... .	£17/15/5⅓ ℔ 1000	6 „
			Total	.....	.....	.....	247004 17 10	11481 13 10	4350 7 10	2450 9 11	265287 9 5	.....	.....	

No. 7.

Return of Rolling Stock on Railways of New South Wales, 31st December, 1885.

Name of Railway	Locomotives: Tank: Suburban	Tank: Small	Passenger: Bogie 4 wheels coupled	Passenger: Express Bogie, 4 wheels coupled	Passenger: Express, single wheels	Passenger: Mogul Bogie, 6 wheels coupled	Goods: For Mixed Traffic	Goods: Consolidation, 8 wheels coupled	Goods: Mogul Bogie, 6 wheels coupled	Goods: Ordinary, 6 wheels coupled	Obsolete, unfit for ordinary Traffic	Total Engines	Passenger Stock: State Carriages	Dining Carriage	Sleeping Carriages on Bogies	First Class: American, on Bogies	First Class: Ordinary, on Bogies	First Class: 8 Wheels	First Class: 6 Wheels	First Class: 4 Wheels	Composite: American, on Bogies	Composite: Ordinary, on Bogies	Composite: Ashbury, on Bogies	Composite: 6 Wheels	Composite: 4 Wheels	Second Class: American, on Bogies	Second Class: Ordinary, on Bogies	Second Class: 6 Wheels	Second Class: 4 Wheels.	Vans: Mail, on Bogies	Vans: Mail, on 4 Wheels	Vans: Prison	Vans: Workmen's	Brake vans	Hearses	Horse boxes	Carriage Trucks	Total Passenger.	Goods Stock: Accident Vans	Wagons: A.	Wagons: B	Wagons: D	Wagons: E	Wagons: F	Wagons: G	Wagons: Water	Wagons: Loco Coal	Wagons: Ballast	Vans: C (covered goods)	Vans: Powder	Vans: Sheep	Vans: Cattle	Vans: Meat	Vans: Refrigerating	Vans: Composite Cattle and Goods	Vans: Combination	(H) Dump cars	Brake vans	Total Goods.	Grand Total of Goods and Passenger Stock
1885																																																															
Southern and Western	26	7	68	30	3	10	17	11	63	78	.	313	2	1	11	36	22	6	10	22	18	17	6	8	32	37	12	7	126	2	7	4	28	86	6	73	38	617	7	132	156	3710	218	3	243	36	250	192	220	21	272	300	10	1	..	14	201	118	6104	7034
Northern		4	12	8		..	8		17	25	3	77			1		6		5	14			10	4	14		...		78		9	3	.	28	3	44	20	239	..	104	78	977	116	..		6		106	126	15	150	126	14					46	1864	2180
Total to 31st December, 1885	26	11	80	38	3	10	25	11	80	103	3	390	2	1	12	36	28	6	15	36	18	17	16	12	46	37	12	7	204	2	16	7	28	114	9	117	58	856	7	236	234	4687	334	3	243	42	250	298	346	36	422	426	24	1	..	14	201	164	7968	9214
1884																																																															
Southern and Western	20	7	68	26	3		17	11	38	78		268	2	1	9	33	19	6	10	16	16	12	6	8	32	34	3	7	126	2	7	4	22	74	6	64	38	557	6	132	156	3446	200	3	125	17	250	44	209	17	251	271	10	1	1	...	23	113	5275	6100
Northern		4	12	4	3		8		12	25		68			1		3		5	14			8	4	14				78		7	3		25	3	34	20	219	.	96	68	855	104	...	..	6		106	102	9	144	119	8		.			46	1663	1950
Total to 31st December, 1884.	20	11	80	30	6		25	11	50	103		336	2	1	10	33	22	6	15	30	16	12	14	12	46	34	3	7	204	2	14	7	22	99	9	98	58	776	6	228	224	4301	304	3	125	23	250	150	311	26	395	390	18	1	1		23	159	6938	8050
Increase	6			8		10			30		3	57			2	3	6			6	2	5	2		.	3	9				2		6	15		19	.	80	1	8	10	386	30	.	118	19		148	35	10	27	36	6			14	178	5	1031	1168
Decrease	.	..		..	*3		.	...				3	.	..	.	.		.			..	.				...			..	.			.	.	.		..	...		.	...	.		...			...	.	...	.	..	...	.	†1	..	...	...		4

* Now obsolete. † No 1 composite (cattle and goods) converted into sheep-van No. 276, during this year.

No. 8.

PUBLIC DEBT FOR RAILWAYS.

STATEMENT showing the amounts appropriated for Railway Services to 31st December, 1885; the Amount expended to same date; and the Balances retained or written off in the books of the Treasury.

Appropriations.	Particulars.	Expended.	Balances	
			Retained.	Written off.
£ s. d.	16 VICTORIA, No. 39.	£ s. d.	£ s. d.	£ s. d.
217,500 0 0	Loan to the Sydney Railway Company	217,500 0 0	.....	.....
	18 VICTORIA, No. 40.			
400,000 0 0	Construction of Railways	400,000 0 0	.....	.....
224,733 18 8	Purchase of the properties of the Sydney Railway and of the Hunter River Railway Companies	224,733 18 8	.....	.....
624,733 18 8		624,733 18 8	.....	.....
	19 VICTORIA, Nos. 38 & 40.			
62,500 0 0	Railway, Sydney to Liverpool; and Railway, Newcastle to Maitland	62,499 10 0	0 10 0	.....
50,000 0 0	Surveys, experiments, and preparations for the extension of Railways	49,997 19 7	2 0 5	.....
112,500 0 0		112,497 9 7	2 10 5	.....
	20 VICTORIA, No. 1.			
200,000 0 0	Railway works	200,000 0 0	.....	.....
	20 VICTORIA, No. 34.			
300,000 0 0	Railway works	299,927 9 4	72 10 8	.....
	22 VICTORIA, No. 22.			
712,000 0 0	Extension of existing Railways	711,999 18 0	.....	0 2 0
8,000 0 0	Railway Trial Survey	8,000 0 0	.....	.....
720,000 0 0		719,999 18 0	.....	0 2 0
	23 VICTORIA, No. 10.			
1,300 0 0	Valuation of Land	1,296 0 0	.....	4 0 0
9,021 0 0	Works in progress—Authorized Extensions	8,645 2 8	.....	375 17 4
23,949 0 0	Trial Surveys	23,941 1 8	.....	7 18 4
54,100 0 0	New Works	51,825 1 11	2,274 18 1	.....
88,370 0 0		85,707 6 3	2,274 18 1	387 15 8
	24 VICTORIA, No. 24.			
1,300 0 0	Valuation of Land	1,300 0 0	.....	.....
7,020 0 0	Works in progress—Authorized Extensions	6,718 9 5	.....	301 10 7
8,320 0 0		8,018 9 5	.....	301 10 7
	25 VICTORIA, No. 19.			
675 0 0	Valuation of Land	671 1 8	.....	3 18 4
9,184 0 0	Works in progress—Authorized Extensions	8,168 13 2	.....	1,015 6 10
20,000 0 0	Northern Line to Terminus to Morpeth	20,000 0 0	.....	.....
5,000 0 0	Carriage-shed and Machine-shop, and fixing Engine Turn-table, &c., Northern Line	4,578 19 3	421 0 9	.....
40,000 0 0	Bridge over Hunter River, at Singleton	40,000 0 0	.....	.....
70,000 0 0	Bridge over the Nepean, at Penrith	70,000 0 0	.....	.....
688,000 0 0	Great Southern Line to Goulburn	687,999 8 0	0 12 0	.....
16,200 0 0	Land for Great Southern Railway to Goulburn	16,200 0 0	.....	.....
20,000 0 0	Engines for Southern Extensions	20,000 0 0	.....	.....
7,000 0 0	Trial Surveys	7,000 0 0	.....	.....
30,000 0 0	Great Western Line to the Nepean	30,000 0 0	.....	.....
250,000 0 0	Great Western Line from Penrith towards Bathurst	250,000 0 0	.....	.....
250,000 0 0	Great Northern Line towards Armidale	250,000 0 0	.....	.....
60,000 0 0	Horse Railway Line from Blacktown to Windsor and Richmond	60,000 0 0	.....	.....
10,000 0 0	Additions and Alterations to Workshops and Stations	9,998 7 6	1 12 6	.....
1,476,059 0 0		1,474,616 9 7	423 5 3	1,019 5 2
3,747,482 18 8	Carried forward £	3,743,001 0 10	2,773 4 5	1,708 13 5

No 8—*continued*

Appropriations £ s d	Particulars	Expended £ s d	Balances Retained £ s d	Balances Written off £ s d.
3,747,482 18 8	Brought forward	3,743,001 0 10	2,773 4 5	1,708 13 5
	26 VICTORIA, No 14			
700 0 0	Valuation of Land	696 0 0		4 0 0
11,182 0 0	Works in progress—Authorized Extensions	10,523 3 5		658 16 7
1,000 0 0	Bridge over the Railway, near Newcastle	1,000 0 0		
16,000 0 0	Additional Line from Newcastle to Wallsend Junction	14,684 8 6	1,315 11 6	
350 0 0	Additional Telegraph Wire for Railway purposes from Parramatta to Penrith	336 5 6		13 14 6
675 0 0	Additional Telegraph Wire for Railway purposes from Campbelltown to Picton	514 16 8	160 3 4	
29,907 0 0		27,754 14 1	1,475 14 10	676 11 1
	27 VICTORIA, No 14			
215,414 3 1	Extension to Goulburn	215,414 3 1		
3,932 2 8	Workshops, Southern Line	3,932 2 8		
2,480 14 3	Workshops, Northern Line	2,431 7 6	49 6 9	
13,000 0 0	Rolling Stock, Northern Line	13,000 0 0		
23,000 0 0	Locomotive Engines, Western Line	23,000 0 0		
20,000 0 0	Carriages, Break vans, Western Line	20,000 0 0		
35,000 0 0	Locomotive Engines, Northern Line			
1,000 0 0	Traverses for Coal Sidings, Newcastle			
4,000 0 0	Ballast waggons for Northern, Southern, and Western Lines	37,659 10 9	2,340 9 3	
50,000 0 0	Extension into Goulburn	50,000 0 0		
150,000 0 0	Extension into Bathurst	150,000 0 0		
15,000 0 0	Richmond and Windsor Lines ..	15,000 0 0		
7,500 0 0	Purchase of Land for Morpeth Railway	7,495 13 4	4 6 8	
5,000 0 0	Siding into Cemetery at Haslem's Creek	4,821 5 6	178 14 6	
900 0 0	Wharf, Carriage Dock, and Siding, Newcastle Station and West Maitland	900 0 0		
970 0 0	New Passenger Station, Platform, and Station at Hexham	970 0 0		
3,500 0 0	Coal Sidings at Newcastle	566 13 9	2,933 6 3	
400 0 0	Passenger Station and Platform at Rooty Hill, Western Line	400 0 0		
900 0 0	Three Gate houses on Western Line	831 10 5	68 9 7	
110 0 0	Stables at Newcastle	110 0 0		
552,107 0 0		546,532 7 0	5,574 13 0	
	29 VICTORIA, No 9			
650 0 0	Station at Riverstone	650 0 0		
650 0 0	Station at Mulgrave	650 0 0		
9,000 0 0	Additional Ballast and Goods Trucks	9,000 0 0		
10,000 0 0	Windsor and Richmond Line	10,000 0 0		
850 0 0	Land at Newtown for Siding	820 17 8	29 2 4	
10,000 0 0	Additional Rolling Stock	10,000 0 0		
20,000 0 0	Additional Goods accommodation, Sydney Station	19,999 18 0		0 2 0
12,000 0 0	Railway sheds	12,000 0 0		
5,000 0 0	Additional accommodation Stations	5,000 0 0		
6,000 0 0	Claims for Land on the Penrith, Picton, and Singleton Extensions	3,856 2 2	2,143 17 10	
650 0 0	Station at Douglas Park	640 14 3	9 5 9	
20,000 0 0	Extension of Great Northern Line to Terminus at Morpeth	19,995 2 11	4 17 1	
94,800 0 0		92,612 15 0	2,187 3 0	0 2 0
	29 VICTORIA, No 23			
200,000 0 0	Extension of the Great Western Line	200,000 0 0		
400 000 0 0	Extension of the Great Northern Line	398,677 2 3	1,322 17 9	
20,000 0 0	Relaying the Line from Sydney to Parramatta Junction	20,000 0 0		
4,000 0 0	Enlarging Railway Bridges at East Maitland	2,508 17 2	1,491 2 10	
5,000 0 0	Additional Accommodation to Stations	5,000 0 0		
10,000 0 0	Additional Goods Waggons	10,000 0 0		
639,000 0 0		636,185 19 5	2,814 0 7	
	30 VICTORIA, No 23			
3,000 0 0	Engine-shed, Windsor and Richmond Line	1,054 9 6	1,945 10 6	
5,000 0 0	Trial Surveys for the Extension of the Great Southern and Western Railways	5,000 0 0		
25,000 0 0	Compensation for Land taken on the Ultimo Estate	25,000 0 0		
33,000 0 0		31,054 9 6	1,945 10 6	
5,096,296 18 8	Carried forward £	5,077,141 5 10	16,770 6 4	2,385 6 6

No. 8—*continued.*

Appropriations.	Particulars	Expended.	Balances Retained.	Balances Written off.
£ s. d.		£ s d.	£ s. d.	£ s. d.
5,096,296 18 8	Brought forward	5,077,141 5 10	16,770 6 4	2,385 6 6
	31 VICTORIA, No 11.			
1,000,000 0 0	Railway Works—Extension to Bathurst and Goulburn	999,409 12 10	590 7 2	....
	31 VICTORIA, No 27.			
3,412 0 0	Half the Cost of the Telegraph Line from Picton to Goulburn, along the line of Railway—chargeable to Railways	3,411 2 0	0 18 0	....
3,719 0 0	Half the cost of Telegraph Line from Penrith to Bathurst, along the line of Railway—chargeable to Railways	3,511 0 10	207 19 2	....
7,131 0 0		6,922 2 10	208 17 2	.....
	32 VICTORIA, No. 13.			
60,000 0 0	Towards cost of additional Rolling Stock for Railway purposes	60,000 0 0	....	. ...
10,000 0 0	Compensation for Land taken at Honeysuckle Point	9,852 7 2	147 12 10	....
70,000 0 0		69,852 7 2	147 12 10	... .
	34 VICTORIA, No. 2.			
13,000 0 0	New Machine-shop, running shed, erecting shop and stores at Newcastle, including roads connected therewith	12,917 4 5	82 15 7	.....
2,000 0 0	Additional Machinery	1,674 4 2	325 15 10	....
30,500 0 0	New Station, Workshops for carriage and waggons department, carriage-shed, roofing, steam hammer, furnaces and machinery, Redfern, including roads connected therewith	30,420 19 11	79 0 1	... .
5,000 0 0	Excavating Station-yard, Redfern	4,902 14 10	97 5 2	....
3,500 0 0	Additional Machinery	3,500 0 0	. ... ..	....
6,000 0 0	New Passenger Station and Platforms, Newcastle, including road approaches	5,965 0 5	34 19 7	....
60,000 0 0	Construction of Rolling Stock.	59,998 3 6	1 16 6	....
35,000 0 0	Completion of the relaying of the Line from Sydney to Parramatta	30,402 14 5	4,597 5 7	... .
17,000 0 0	Completion of new Goods-shed, Sydney, and Roads and Sidings in connection with same	14,518 9 10	2,481 10 2	.. ..
5,000 0 0	Extension to Morpeth	4,994 10 0	5 10 0	.....
2,000 0 0	Land for Windsor and Richmond Line	1,340 18 11	659 1 1	..... .
179,000 0 0		170,635 0 5	8,364 19 7	.....
	35 VICTORIA, No. 5.			
124 0 0	Construction of Railway sheds	122 9 5	1 10 7	....
230,000 0 0	Completion of Lines already sanctioned	229,942 14 2	57 5 10	... .
70,000 0 0	Construction of Rolling Stock manufactured in the Colony	65 580 13 9	4,419 6 3	.. ..
300,124 0 0		295,645 17 4	4,478 2 8	..... .
	36 VICTORIA, No. 2.			
60,000 0 0	Rolling Stock manufactured in the Colony .	60,000 0 0	..	. ...
2,000 0 0	Station Buildings—West Maitland .	1,876 10 2	123 9 10	. ...
257 0 0	Station-master's House at Newtown ..	257 0 0	. .. ..	....
62,257 0 0		62,133 10 2	123 9 10	... ...
	36 VICTORIA, No. 17			
60,000 0 0	Rolling Stock manufactured in the Colony . .	60,000 0 0	..... .	.. . .
10,000 0 0	Trial Surveys	9,999 18 11	0 1 1	.. ...
1,131,000 0 0	Towards the construction of a Line from Goulburn to Wagga Wagga	1,131,000 0 0	...	.. ..
60,000 0 0	Construction of a Line—Kelso to Bathurst	60,000 0 0	.	. .. .. .
279,000 0 0	Construction of a Line—Bathurst to Orange	279,000 0 0	.	...
361,500 0 0	Construction of a Line—Murrurundi to Tamworth	361,500 0 0	... .	.. ...
1,901,500 0 0		1,901,499 18 11	0 1 1	.. ... .
8,616,308 18 8	Carried forward .....£	8,583,239 15 6	30,683 16 8	2,385 6 6

No. 8—*continued.*

Appropriations.	Particulars.	Expended.	Balances Retained.	Balances Written off.
£ s. d.		£ s. d	£ s. d.	£ s. d.
8,616,308 18 8	Brought forward	8,583,239 15 6	30,683 16 8	2,385 6 6
	38 VICTORIA, No 2.			
20,000 0 0	Trial Surveys	19,988 3 4	11 16 8	.....
100,000 0 0	Rolling Stock	100,000 0 0	.....	.....
25,000 0 0	Towards purchasing Land, laying Sidings, and erecting Sheds, Darling Harbour Wharf	24,998 13 4	1 6 8	.....
10,000 0 0	Engine-sheds	9,953 14 1	46 5 11	.....
8,000 0 0	Enlarging Machine-shop, Sydney	7,745 3 3	254 16 9	.....
2,000 0 0	Additional Machinery, Sydney	2,000 0 0	.....	.....
6,000 0 0	Completion of New Station, Redfern ...	5,931 13 7	68 6 5	.....
45,000 0 0	To complete Western Line to Kelso, &c.	44,980 18 9	19 1 3	.....
1,000 0 0	Unadjusted Land Claims	239 6 10	760 13 2	.....
50,000 0 0	To connect Great Northern Railway with the New Wharfage Accommodation at Bullock Island .	44,451 2 9	5,548 17 3	.....
50,000 0 0	Purchase of twelve Passenger Locomotive Engines for extensions beyond Murrurundi, Goulburn, and Bathurst	50,000 0 0	.....	.....
317,000 0 0		310,288 15 11	6,711 4 1	.....
	39 VICTORIA, No. 18.			
20,000 0 0	Trial Surveys	20,000 0 0	.....	.....
50,000 0 0	Rolling Stock	50,000 0 0	.....	.....
5,000 0 0	Additional Machinery	5,000 0 0	.....	.....
75,000 0 0		75,000 0 0	.....	.....
	40 VICTORIA, No. 12.			
350,000 0 0	Orange to Wellington	350,000 0 0	.....	.....
260,000 0 0	Wellington to Dubbo	260,000 0 0	.....	.....
384,000 0 0	Junee to Narandera	348,468 18 1	35,531 1 11	.....
600,000 0 0	Tamworth to Armidale	600,000 0 0	.....	.....
220,000 0 0	Werris Creek to Gunnedah	220,000 0 0	.....	.....
25,000 0 0	Trial Surveys	25,000 0 0	.....	.....
150,000 0 0	Additional Rolling Stock	150,000 0 0	.....	.....
10,000 0 0	For strengthening the Bridge and improving the gradients on the Windsor and Richmond Line	10,000 0 0	.....	.....
1,999,000 0 0		1,963,468 18 1	35,531 1 11	.....
	41 VICTORIA, No. 4.			
30,000 0 0	To complete line from Goulburn to Wagga Wagga	30,000 0 0	.....	.....
20,352 0 0	To complete the extension into Bathurst	8,011 2 4	12,340 17 8	.....
77,000 0 0	To complete the line from Bathurst to Orange	67,335 5 5	9,664 14 7	.....
80,000 0 0	To complete line from Murrurundi to Tamworth ..	74,108 15 7	5,891 4 5	.....
207,352 0 0		179,455 3 4	27,896 16 8	.....
	41 VICTORIA, No. 7.			
680,000 0 0	For the extension of the Great Southern Railway from the end of No. 3 Contract near Wagga Wagga to Albury, including the Viaduct over the Murrumbidgee River	680,000 0 0	.....	.....
20,000 0 0	Trial Surveys	20,000 0 0	.....	.....
20,000 0 0	To double the line from Wallsend Junction to Hexham	20,000 0 0	.....	.....
240,000 0 0	Rolling Stock, including Engines	240,000 0 0	.....	.....
960,000 0 0		960,000 0 0	.....	.....
	43 VICTORIA, No. 11.			
1,611,000 0 0	Tamworth to Tenterfield	1,610,522 3 3	477 16 9	.....
1,450,000 0 0	Dubbo to the vicinity of Bourke	1,255,083 9 0	194,916 11 0	.....
370,000 0 0	Gunnedah to a point opposite Narrabri	302,483 15 9	67,516 4 3	.....
735,000 0 0	Wallerawang to Mudgee	735,000 0 0	.....	.....
735,000 0 0	Narrandera to Hay	575,014 18 9	159,985 1 3	.....
100,000 0 0	Goulburn to Wagga Wagga, to complete the line .	96,972 16 3	3,027 3 9	.....
20,000 0 0	Trial Surveys	20,000 0 0	.....	.....
620,000 0 0	Rolling Stock required during four years ending 1882	620,000 0 0	.....	.....
5,641,000 0 0		5,215,077 3 0	425,922 17 0	.....
17,815,660 18 8	Carried forward ..... £	17,286,529 15 10	526,745 16 4	2,385 6 6

No. 8—*continued.*

Appropriations.	Particulars.	Expended.	Balances. Retained.	Balances. Written off.
£ s. d.		£ s. d.	£ s. d.	£ s. d.
17,815,660 18 8	Brought forward	17,286,529 15 10	526,745 16 4	2,385 6 6
	44 VICTORIA, No. 12.			
40,000 0 0	Orange to Dubbo	24,714 4 0	15,285 16 0	.....
22,000 0 0	Werris Creek to Gunnedah	20,419 16 11	1,580 3 1	.....
250,000 0 0	Site and erection of New Workshops, Machinery, and Sidings, in connection therewith	250,000 0 0	.....	.....
100,000 0 0	Doubling Line between Parramatta Junction, &c.	99,988 13 4	11 6 8	.....
412,000 0 0		395,122 14 3	16,877 5 9	.....
	44 VICTORIA, No. 28.			
2,000,000 0 0	Southern and Northern Junction Railway—From Homebush to Waratah (double line) 95 miles	990,501 6 1	1,009,498 13 11	.....
1,020,000 0 0	Sydney to Wollongong and Kiama, 68 miles	925,672 0 6	94,327 19 6	.....
1,430,000 0 0	Goulburn to Cooma *viâ* Tarago, Bungendore, and Queanbeyan, 130 miles	645,068 13 9	784,931 6 3	.....
80,000 0 0	Albury to the river Murray (double line) including moiety of cost of constructing the Bridge 1¼ mile	80,000 0 0	.....	.....
518,000 0 0	Narrandera to Jerilderie, 63 miles	403,065 9 7	114,934 10 5	.....
218,000 0 0	Cootamundra to Gundagai, 34 miles	191,595 18 9	26,404 1 3	.....
1,260,000 0 0	Murrumburrah to Blayney, 108 miles	563,215 18 4	696,784 1 8	.....
95,000 0 0	From Wagga Wagga to Albury, to complete the line	95,000 0 0	.....	.....
300,000 0 0	Alterations and additions to Station Buildings, and Siding accommodation to meet increasing traffic, inclusive of payments made in 1880 in anticipation of this vote	300,000 0 0	.....	.....
6,921,000 0 0		4,194,119 7 0	2,726,880 13 0	.....
	45 VICTORIA, No. 22.			
500,000 0 0	Additional Rolling Stock	500,000 0 0	.....	.....
500,000 0 0		500,000 0 0	.....	.....
	46 VICTORIA, No. 23.			
580,000 0 0	For providing additional Rolling Stock and the purchase of Machinery, Tools, &c.	544,401 13 11	35,598 6 1	.....
40,000 0 0	Trial Surveys	40,000 0 0	.....	.....
400,000 0 0	Alterations, additions, and improvements at Stations, increased siding accommodation, and other purposes	400,000 0 0	.....	.....
140,000 0 0	Towards construction of a line from North Shore to Junction with Southern and Northern Junction Railway	3,881 12 5	136,118 7 7	.....
85,000 0 0	Doubling line from Parramatta to Penrith	84,880 13 10	119 6 2	.....
1,245,000 0 0		1,073,164 0 2	171,835 19 10	.....
	48 VICTORIA, No. 26.			
356,000 0 0	Erection of new Workshops, and for Machinery and sidings in connection therewith	173,481 18 1	182,518 1 11	.....
25,000 0 0	Trial Surveys, further sum	24,928 17 11	71 2 1	.....
157,000 0 0	Wallerawang to Mudgee, further sum	157,000 0 0	.....	.....
450,000 0 0	City Extension, 1 mile 76 chains	2,063 11 1	447,936 8 11	.....
195,000 0 0	Perth to near Rockley, 17 miles	678 6 10	194,321 13 2	.....
578,000 0 0	Inverell to Glen Innes, 45 miles	2,111 6 6	575,888 13 6	.....
2,000,000 0 0	South Grafton to Glen Innes, 103 miles	3,751 0 2	1,996,248 19 10	.....
1,980,000 0 0	Grafton to the Tweed River *viâ* Casino, Lismore, and the Brunswick, 165 miles	110 9 4	1,979,889 10 8	.....
700,000 0 0	Musclebrook to Cassilis, 70 miles	805 18 4	699,194 1 8	.....
310,000 0 0	Tarago to Braidwood, 31 miles	1,651 10 1	308,348 9 11	.....
500,000 0 0	Gundagai to Tumut *viâ* Adelong, including Iron Bridge over the River Murrumbidgee, 33 miles	21,802 7 6	478,197 12 6	.....
804,000 0 0	Kiama to Jervis Bay, 41 miles	64 6 8	803,935 13 4	.....
606,000 0 0	Bega to Eden, 40 miles	899 15 5	605,100 4 7	.....
259,500 0 0	Goulburn to Crookwell, 25 miles	681 6 4	258,818 13 8	.....
144,000 0 0	Galong to Burrowa, 18 miles	909 9 0	143,090 11 0	.....
710,000 0 0	Wagga to Tumberumba, 68 miles	880 15 7	709,119 4 5	.....
173,500 0 0	Tenterfield to the Queensland Border, 12 miles	565 3 11	172,934 16 1	.....
705,500 0 0	Orange to Molong *viâ* Borenore, 21 miles; Borenore to Forbes *viâ* Cudal, 60 miles	255,490 16 1	450,009 3 11	.....
500,000 0 0	Alterations, additions, and improvements at Stations, increased siding accommodation, and other purposes	320,828 16 2	179,171 3 10	.....
	Light Lines—			
1,050,000 0 0	Forbes to Wilcannia, 340 miles	503 16 8	1,049,496 3 4	.....
263,500 0 0	Nyngan to Cobar, 82 miles	1,115 6 5	262,384 13 7	.....
336,500 0 0	Narrabri to Moree, 61 miles	1,970 15 0	334,529 5 0	.....
210,000 0 0	Culcairn to Corowa, 45 miles	290 3 0	209,709 17 0	.....
13,013,500 0 0		972,585 16 1	12,040,914 3 11	.....
39,907,160 18 8	TOTAL SERVICES	£24,421,521 13 4	15,483,253 18 10	2,385 6 6

No. 8—*continued.*

Appropriations.	Particulars.	Expended.	Balances. Retained.	Balances. Written off.
£ s. d.		£ s. d.	£ s. d.	£ s. d.
39,907,160 18 8	Brought forward.....	24,421,521 13 4	15,483,253 18 10	2,385 6 6
	ADVANCES FOR STORES.			
	36 VICTORIA, No. 2.			
75,000 0 0	Purchase of Railway stores and materials which cannot properly be charged to the Appropriations of Parliament until actually issued for use—the vote to be recouped as issues take place	75,000 0 0	.....	.....
	43 VICTORIA, No. 11.			
225,000 0 0	Do. do. do.	225,000 0 0	.....	.....
300,000 0 0	TOTAL STORES .....£	300,000 0 0	.....	.....
40,207,160 18 8	GRAND TOTAL .....£	24,721,521 13 4	15,483,253 18 10	2,385 6 6

The Treasury, New South Wales,
31st March, 1886.

JAMES PEARSON,
Accountant.

PUBLIC DEBT FOR TRAMWAYS.

STATEMENT showing the amounts appropriated for Tramway Services to 31st December, 1885; the Amount expended to same date; and the Balances retained or written off in the books of the Treasury.

Appropriations.	Particulars.	Expended.	Balances. Retained.	Balances. Written off.
£ s. d.	44 VICTORIA No. 12.	£ s. d.	£ s. d.	£ s. d.
600,000 0 0	Construction of the Tramways authorized by the Act 43 Victoria No. 25	599,995 15 4	4 4 8	.....
	46 VICTORIA No. 23.			
400,000 0 0	Construction of Tramways including Motors, Rolling Stock, Machinery, &c.....	267,952 8 11	132,047 11 1	.....
1,000,000 0 0	Total..... £	867,948 4 3	132,051 15 9	.....

Treasury, N.S.W.,
31st March, 1883.

JAMES PEARSON,
Accountant.

No. 9.

STATEMENT showing the Amount authorized to be raised by LOAN for RAILWAY PURPOSES; the Amount of DEBENTURES and INSCRIBED STOCK sold, and the INTEREST to the 31st December, 1885, on LOANS already negotiated.

Act.	Amount authorized to be raised.	Debentures and Inscribed Stock sold—Amount.	Short-issued.	Over-issued and to raise amounts short-raised.	Interest. Rate.	Interest. Annual Interest on Authorized Loans.	Interest. Interest to 31st December, 1885, on Loans already negotiated.	Remarks.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	
16 Victoria, No. 39	217,500 0 0	217,500 0 0	.....	.....	5 per cent.	10,875 0 0	340,266 4 9*	* 2¾d. and 3¼d. per diem were the rates of interest of original Loan, but renewals were at the rate of 5 per cent. per annum.
18 „ No. 40	624,733 18 8	666,800 0 0	.....	42,066 1 4	„ ...	33,340 0 0	1,007,142 6 5†	† Some of these Debentures have been renewed as they fell due.
19 „ Nos. 38 & 40	112,500 0 0	112,500 0 0	.....	.....	„ ...	5,625 0 0	154,687 10 0	
20 „ No. 1	200,000 0 0	203,000 0 0	.....	3,000 0 0	„ ...	10,150 0 0	289,275 0 0	
20 „ No. 34	300,000 0 0	299,000 0 0	1,000 0 0	.....	„ ...	14,950 0 0	410,275 0 0	
22 „ No. 22	720,000 0 0	720,000 0 0	.....	.....	„ ...	36,000 0 0	972,000 0 0	
23 „ No. 10	88,370 0 0	88,300 0 0	70 0 0	.....	„ ...	4,415 0 0	112,582 10 0	
24 „ No. 24	8,320 0 0	8,300 0 0	20 0 0	.....	„ ...	415 0 0	10,167 10 0	
25 „ No. 19	1,476,059 0 0	1,476,000 0 0	59 0 0	.....	„ ...	73,800 0 0	1,771,200 0 0	
26 „ No. 14	29,907 0 0	29,900 0 0	7 0 0	.....	„ ...	1,495 0 0	31,395 0 0	
27 „ No. 14	552,107 0 0	552,100 0 0	7 0 0	.....	„ ...	27,605 0 0	579,705 0 0	
29 „ No. 9	94,800 0 0	94,800 0 0	.....	.....	„ ...	4,740 0 0	87,690 0 0	
29 „ No. 23	639,000 0 0	639,000 0 0	.....	.....	„ ...	31,950 0 0	626,662 10 0	
30 „ No. 23	33,000 0 0	33,000 0 0	.....	.....	„ ...	1,650 0 0	31,350 0 0	
31 „ No. 11	1,000,000 0 0	1,000,000 0 0	.....	.....	„ ...	50,000 0 0	893,800 0 0‡	‡ The interest on the original Loan is inserted in this column, notwithstanding the following Debentures have been finally paid off, viz.:—
31 „ No. 27	7,131 0 0	7,100 0 0	31 0 0	.....	„ ...	355 0 0	6,212 10 0	
32 „ No. 13	70,000 0 0	70,000 0 0	.....	.....	„ ...	3,500 0 0	59,500 0 0	
34 „ No. 2	179,000 0 0	179,000 0 0	.....	.....	„ ...	8,950 0 0	136,487 10 0	
Proportion of Issue under various Loan Acts to make good the amount short-raised under the same	.....	228,700 0 0	.....	228,700 0 0	„ ...	11,435 0 0	177,242 10 0	
35 Victoria No. 5	300,124 0 0	300,100 0 0	24 0 0	.....	„ ...	15,005 0 0	217,572 10 0	
36 „ No. 2	137,257 0 0	137,200 0 0	57 0 0	.....	„ ...	6,860 0 0	92,610 0 0	
36 „ No. 17	1,901,500 0 0	1,901,500 0 0	.....	.....	4 per cent	76,060 0 0	800,600 0 0	
38 „ No. 2	317,000 0 0	317,000 0 0	.....	.....	„ ...	12,680 0 0	88,760 0 0	
39 „ No. 18	75,000 0 0	75,000 0 0	.....	.....	„ ...	3,000 0 0	30,000 0 0	
40 „ No. 12	1,999,000 0 0	1,999,000 0 0	.....	.....	„ ...	79,960 0 0	559,720 0 0	
41 „ No. 4	207,352 0 0	207,300 0 0	52 0 0	.....	„ ...	8,292 0 0	58,044 0 0	
41 „ No. 7	960,000 0 0	960,000 0 0	.....	.....	„ ...	38,400 0 0	172,800 0 0	
43 „ No. 11	5,866,000 0 0	5,866,000 0 0	.....	.....	„ ...	234,640 0 0	809,320 0 0	
44 „ No. 12	412,000 0 0	412,000 0 0	.....	.....	„ ...	16,480 0 0	32,960 0 0	
44 „ No. 28	6,921,000 0 0	*5,815,300 0 0	.....	.....	3½ & 4 per cent.	205,112 0 0	265,849 0 0	
45 „ No. 22	500,000 0 0	.....	.....	.....	3½ per cent.	17,500 0 0	.....	
46 „ No. 23	1,245,000 0 0	.....	.....	.....	„ ...	43,575 0 0	.....	
48 „ No. 26	13,013,500 0 0	.....	.....	.....	„ ...	455,472 0 0	.....	
Total.....£	40,207,160 18 8	24,615,400 0 0	1,327 0 0	273,766 1 4		1,544,286 0 0	10,825,876 11 2	

31 December, 1872	£20,000
31 „ 1873	21,000
31 „ 1874	22,000
31 „ 1875	23,200
31 „ 1876	24,300
31 „ 1877	28,500
31 „ 1878	10,500
31 „ 1879	27,900
31 „ 1880	30,500
31 „ 1881	34,100
31 „ 1882	28,800
31 „ 1883	35,900
31 „ 1884	35,500
31 „ 1885	37,700
Amounting to	£379,900

The total amount of the Debentures issued to 31st December, 1885, was		£24,615,400 0 0
Add the Debentures authorized but not then issued, amounting to		15,864,200 0 0
Making a total of		£40,479,600 0 0
Deduct Debentures issued in excess of amount authorized	£273,766 1 4	
Less amount authorized in excess of issue	1,327 0 0	
		272,439 1 4
Total, as above shown		£40,207,160 18 8

The Treasury, New South Wales,
31st March, 1886.

JAMES PEARSON,
Accountant.

NOTE.—The debt on account of Tramways, viz., £1,000,000 is not included in the above Statement.

* £315,300 @ 4 per cent.; £5,500,000 @ 3½ per cent.

No. 10.

RETURN showing the CAPITAL EXPENDITURE on the Government Railways of New South Wales, to the 31st December, 1884, and subsequent Expenditure to the 31st December, 1885.

Lines and Sections.	Total Expenditure to 31 December, 1884.	Amount Expended in 1885.	Total Expenditure to 31 December, 1885.
Trunk Line—	£ s. d.	£ s. d.	£ s. d.
Darling Harbour Branch	173,236 2 8	26,832 5 5	200,068 8 1
City Extension	3,624 17 6	1,958 1 6	5,582 19 0
Sydney to Granville	1,000,180 2 1	34,273 4 11	1,034,453 7 0
Tramway	4,878 7 1	.....	4,878 7 1
Total, Trunk Line £	1,181,919 9 4	63,063 11 10	1,244,983 1 2
Great Southern Line—			
Granville to Liverpool	157,316 12 8	1,198 10 11	158,515 3 7
Liverpool to Campbelltown	141,679 15 6	2,398 0 5	144,077 15 11
Campbelltown to Menangle	84,398 14 2	120 6 0	84,519 0 2
Menangle to Picton ... 337,378 12 6			
Deduct Excess Credit ... 74 0 0			
	337,304 12 6	9 19 7	337,314 12 1
Picton to Goulburn	1,110,480 1 5	19,062 0 2	1,129,542 1 7
Goulburn to Yass	440,649 6 6	434 4 10	441,083 11 4
Yass to Cootamundra	552,120 8 5	2,939 14 8	555,060 3 1
Cootamundra to North Wagga Wagga	409,889 3 9	11,272 13 2	421,161 16 11
North Wagga Wagga to Albury	800,852 2 3	1,914 14 1	802,766 16 4
Albury to the River Murray	100,203 7 3	68 9 6	100,271 16 9
Junee to Narrandera	354,078 18 2	638 4 0	354,717 2 2
Narrandera to Hay	580,782 18 5	1,313 1 1	582,095 19 6
Narrandera to Jerilderie	385,876 0 7	19,945 6 2	405,821 6 9
Sydney to Wollongong and Kiama	552,993 19 5	365,435 13 2	918,429 12 7
Goulburn to Cooma	320,186 14 0	295,639 15 4	615,826 9 4
Cootamundra to Gundagai	115,797 2 9	78,539 14 7	194,336 17 4
Murrumburrah to Blayney	184,963 19 6	311,341 7 4	496,305 6 10
Tarago to Braidwood	683 2 0	1,701 9 6	2,384 11 6
Gundagai to Tumut	1,282 13 9	21,911 6 11	23,194 0 8
Kiama to Jervis Bay	425 12 11	64 16 11	490 9 10
Bega to Eden	612 9 5	936 19 3	1,549 8 8
Goulburn to Crookwell	2,071 9 9	671 10 1	2,742 19 10
Galong to Burrowa	140 12 4	874 14 5	1,015 6 9
Wagga Wagga to Tumberumba	2,296 14 7	898 7 5	3,195 2 0
Culcairn to Corowa	567 2 9	295 5 10	862 8 7
Total, Southern Line £	6,637,653 14 9	1,139,626 5 4	7,777,280 0 1
Great Western Line—			
Granville to Penrith	451,027 8 7	106,459 19 10	557,487 8 5
Blacktown to Richmond	167,938 17 10	1,757 1 11	169,695 19 9
Penrith to Bathurst	2,072,619 11 0	19,491 15 7	2,092,111 6 7
Bathurst to Orange	386,844 7 2	6,652 0 10	393,496 8 0
Orange to Wellington	435,655 10 7	6,194 2 5	441,849 13 0
Wellington to Dubbo	231,230 5 1	1,747 2 3	232,977 7 4
Dubbo to vicinity of Bourke	1,100,462 11 0	173,377 12 7	1,273,840 3 7
Wallerawang to Mudgee	932,317 8 5	13,606 8 3	945,923 16 8
Orange to near Forbes	91,287 3 0	129,599 14 11	220,886 17 11
Perth to Rockley	674 1 5	678 4 11	1,352 6 4
Forbes to Wilcannia	10,325 10 2	422 3 7	10,747 13 9
Nyngan to Cobar	2,978 7 4	799 5 6	3,777 12 10
Total, Western Line £	5,883,361 1 7	460,785 12 7	6,344,146 14 2

No. 10—*continued.*

Lines and Sections.	Total Expenditure to 31 December, 1884.	Amount Expended in 1885.	Total Expenditure to 31 December, 1885.
	£ s. d.	£ s. d.	£ s. d.
Great Northern Line—			
Newcastle to West Maitland	639,420 15 1	18,731 2 10	658,151 17 11
Morpeth Branch	57,602 0 11	.....	57,602 0 11
West Maitland to Singleton	347,522 16 10	1,620 0 9	349,142 17 7
Singleton to Murrurundi	735,879 13 5	2,015 16 7	737,895 10 0
Murrurundi to Tamworth	455,526 8 3	5,779 12 3	461,306 0 6
Werris Creek to Gunnedah	247,608 5 8	374 7 4	247,982 13 0
Tamworth to Uralla	942,441 13 10	2,985 12 5	945,427 6 3
Uralla to Glen Innes	691,399 18 7	41,812 12 4	733,212 10 11
Glen Innes to Tenterfield	488,874 12 1	181,982 17 2	670,857 9 3
Gunnedah to Narrabri	304,404 16 4	602 9 3	305,007 5 7
Homebush to Waratah	370,040 16 11	546,873 18 6	916,914 15 5
North Shore to S. and N. Junction Railway	2,031 6 3	2,020 16 1	4,052 2 4
Inverell to Glen Innes	3,167 12 5	2,171 8 5	5,339 0 10
South Grafton to Glen Innes	23,044 10 11	3,708 0 5	26,752 11 4
Grafton to Tweed River	2,144 18 5	17 19 7	2,162 18 0
Musclebrook to Cassilis	1,197 19 4	735 5 4	1,933 4 8
Tenterfield to Queensland Border	806 14 2	262 1 6	1,068 15 8
Narrabri to Moree	448 5 6	1,886 3 6	2,334 9 0
Total, Northern Line £	5,313,563 4 11	813,580 4 3	6,127,143 9 2
Total cost of Construction £	19,016,497 10 7	2,477,055 14 0	21,493,553 4 7
Rolling Stock—			
South and West	*2,028,991 7 0	271,728 13 11	2,300,720 0 11
Richmond Line	5,226 1 1	.....	5,226 1 1
North	497,700 12 9	47,851 1 2	545,551 13 11
Tramway	1,712 12 3	.....	1,712 12 3
Total, Rolling Stock £	2,533,630 13 1	319,579 15 1	2,853,210 8 2
Machinery—			
South and West	100,028 19 1	17,547 3 6	117,576 2 7
North	23,000 11 8	380 19 11	23,381 11 7
Total, Machinery	123,029 10 9	17,928 3 5	140,957 14 2
Workshops—			
Redfern and Eveleigh	332,112 10 2	81,463 8 4	413,575 18 6
Furniture—			
South and West	3,680 13 6	1,041 7 0	4,722 0 6
North	845 15 8	.....	845 15 8
Total, Furniture £	4,526 9 2	1,041 7 0	5,567 16 2
Trial Surveys	43,385 12 9	12,720 18 7	56,106 11 4
Grand total £†	22,053,182 6 6	2,909,789 6 5	24,962,971 12 11

* Railway vehicles were used on the Camden Line and their value is included here—£3,223.

† Reduced by £74. Credits during 1885 as marked above—thus †.

No. 10*a*.

DETAIL of Cost of Additions and Improvements to Stations and Buildings, and Siding Accommodation, to meet increasing traffic, &c., charged to Capital Account during 1885.

NORTH AND NORTH-WESTERN LINE.

NEWCASTLE TO WEST MAITLAND.

	£	s.	d.
Newcastle—			
Traffic Manager's house	1,614	7	8
Station-master's „	1,828	4	10
Additional goods-shed on wharf...	1,720	18	10
„ siding...	628	16	2
Additions to stock-yards... ...	72	6	0
Bullock Island Branch—			
Interlocking apparatus	95	19	7
Additional water supply	1,359	17	9
„ siding...	2,887	15	11
Office for overseer of coal traffic..	25	4	7*
Additions to Berthing-master's house	19	15	8*
Honeysuckle Point—			
Interlocking station	14	11	8*
Additional boilermakers' shop ...	4,319	3	1
„ waiting-room... ...	191	3	8
„ parcels-room... ...	149	13	10
„ office, new store ...	19	7	11*
„ siding to store ...	188	10	6
Hamilton—			
Additions to station	250	4	10
Additional water supply	8	1	7*
New coal siding	4	7	3*
Office for overseer of coal traffic..	190	0	11
Waratah—			
Interlocking apparatus at station and junction at colliery crossing	102	15	9
Additional waiting-room... ...	12	12	1*
Bridge near Throsby's Creek ...	505	1	0
Wallsend—			
Interlocking junction signal-box at junction	62	14	8
Hexham—			
Additional waiting-room, w.-c., and urinal	98	7	4
Interlocking signals at station crossing...	362	1	5
Tarro—			
Additional signals	33	9	0
„ lamps on platform ...	7	19	1*
Woodford—			
Level crossing	16	16	6*
Extending platform	103	4	6
East Maitland—			
Additional water supply	805	15	11
„ w.-c. and urinal ...	88	3	2
Extending King-street	245	13	10
Additions to Station-master's house	2	0	0*
West Maitland—		s.	d.
Additional rooms, Station-master's house	27	17	10
Bridge at Rose-street	4	4	8*

WEST MAITLAND TO SINGLETON.

Farley—			
Additional siding	371	9	4
Extending platform	65	2	11
Lochinvar—			
Extending siding	133	11	0
Allandale—			
Erecting ladies' waiting-room ...	133	14	8
Greta—			
Additional siding accommodation.	517	15	11
Underground tank	86	2	4
Singleton—			
Additional water supply	101	12	6
„ refreshment-room ...	210	12	1

SINGLETON TO MURRURUNDI.

Rex Creek—			
Platform and waiting-shed ...	166	11	1
Glennie's Creek—			
Erection of porter's house ...	591	13	11
„ w.-c. and urinal ...	29	18	11*
Interlocking signals	78	2	5
Musclebrook—			
Additional loading platform ...	129	6	10
Extending cattle siding	145	10	0
Aberdeen—			
Connecting platforms	14	16	6*
Verandah to Station-master's house	33	16	1
Scone—			
Additional siding	7	10	0*
Wingen—			
Ladies' waiting-room and w.-c. ...	24	16	1
Parcels office	78	15	10
Excavating for foundations of booking office	21	14	9
Additional closet and urinal ...	8	13	6*
Murrurundi—			
Additional water supply	86	9	4
House for engine-man	85	19	0
Additional siding...	474	12	6
Coal-stage...	27	2	10*
Wiring fence	10	7	0*

* Part cost only.

MURRURUNDI

No. 10*a*—*continued.*

MURRURUNDI TO TAMWORTH.

	£	s.	d.
Doughboy Hollow—			
Station-master's house	433	17	6
Quirindi—			
Additions to office	26	4	7
Quipolly—			
Laying siding	121	4	7
Werris' Creek—			
Refreshment and accommodation rooms	1,695	16	11
Additional platform	69	7	6
Passenger station	2,234	5	2
Additional fencing	8	18	2*
Currabubula—			
Waiting-room	112	12	10
Duri—			
Laying siding	113	1	11
Tamworth—			
Additional tank at Station-master's house	20	17	8
Additional lamps, Denison-street crossing	1	5	6*
Underground tank at gatehouse, White-street crossing	36	1	5
Metalling Mamans-street... ...	20	10	7
Additional water supply	632	17	0

WERRIS' CREEK TO GUNNEDAH.

Breeza—			
Extending cattle siding	30	4	6
Curlewis—			
Additional signals...	2	17	0*
Do closet and urinal ...	29	3	10
Additions to porter's house ...	96	8	10
Do Station-master's do...	11	10	6*

GUNNEDAH TO NARRABRI.

Baan Baa—			
Closet and urinal	30	17	1
Goods-shed and ticket office ...	138	16	7
Narrabri—			
House for engine-men	5	9	2*

TAMWORTH TO URALLA.

	£	s.	d.
203 *miles* 40 *chains*—			
Safety switches	2	15	0*
Tenterhill—			
Platform and waiting-shed ...	127	6	1
208 *miles*—			
Erecting signalman's house ...	303	3	4
Signal-box and signals	217	12	9
Laying siding	588	12	7
Reservoir	26	16	2
M'Donald River—			
House for porter	271	15	1
Platform and waiting-shed ...	120	6	5
Signals	75	3	7
Booking-office	98	9	8
Closet and urinal	31	9	4
Walcha Road—			
Stock-yard and improvements ...	59	15	3

URALLA TO GLEN INNES.

Kelly's Plains—			
Extending platform	11	5	0*
Armidale—			
House for engineman	66	3	3
Loading-stage	6	13	6*
Additional fencing	8	18	6*
Glen Innes—			
House for enginemen	77	18	9
Do guard	70	2	8
Supplying gate-houses with tanks, Tamworth	58	18	8
Erecting foundry crane	0	17	11*
Interlocking	66	9	2
Total	£30,111	7	10

RICHMOND LINE.

Riverstone—			
Additional platform	698	7	8
Windsor—			
New station-house for Station-master	1,058	14	3
Total	£1,757	1	11

ILLAWARRA LINE.

Starting signals	398	11	3
Marrickville—			
Box for gate-keeper	15	12	5*
Kogarah—			
Siding	2	2	0*
Hurstville—			
Cross-over road, compo. crossing...	133	11	4
Fence Station-master's house ...	31	6	3
Total	£581	3	3

* Part cost only.

SOUTHERN

No. 10*a*—*continued.*

SOUTHERN LINE.

	£	s.	d.
Darling Harbour—			
Meat store, basement storey ...	6,303	13	5
Extending new sidings, approach, laying in siding junction for N. S. W. Shale and Oil Co., and approach to siding ...	18,563	19	10
Additional crane	50	15	10
Lengthening bridge	77	1	3
Additional offices	1,375	18	9
Do weighbridge and offices	221	14	0
Draining yard	217	7	6
Overbridge, William Henry-street	28	7	6*
Additional lamps	44	3	2
SYDNEY TO GRANVILLE.			
Sydney—			
Additional interlocking	95	10	2
Do permanent way shops	118	5	7
Do through road, siding, and 5-ton crane...	631	12	10
Additional water supply	16	10	6*
Do platform	786	1	1
Do parcels-room	1,069	8	6
Eveleigh—			
Additional platform walls ...	834	13	0
Interlocking boxes, A and B apparatus (shed)	47	19	8
New workshops for interlocking apparatus	315	8	7
M'Donald Town—			
New entrance, Robey-street ...	145	2	2
Bridge, Burram-street	221	18	4
Newtown—			
Footpath	41	5	2*
Subway, Phillip-street	2,148	17	9
Stanmore—			
Subway	1,552	11	8
Additional platform, land taken, additional accommodation, station buildings	7,877	0	4
Interlocking box and apparatus ...	76	9	7
Petersham—			
Erection of footbridge	851	13	11
Interlocking signals and box ...	500	19	4
Additional siding accommodation	1,706	16	4
Kerbing and guttering approach to overbridge, Canterbury Road	77	5	7
Improvements to station	2,928	0	10
Extending platform	1,185	13	8
Additional ticket office	52	7	5
Do waiting-shed	7	5	0*
Summer-hill—			
Interlocking signals	36	4	11
New station and platform ...	2,332	3	2
Ashfield—			
Additional w.c. accommodation ...	56	15	0
Interlocking apparatus and signals	22	3	1
Croydon—			
Interlocking apparatus and signals	521	15	2
Burwood—			
Additions, Station-master's house	307	18	7
Redmyre—			
Erecting signal-box	48	11	6
New station arrangements and platforms	458	4	11
Homebush—			
Extending siding and costs Pennington's land claim	104	9	1
Costs *re* Underwood's estate, near cattle-yards	8	19	4
Additional water supply for washing trucks at cattle-yards ...	1,684	0	5
Additional w.c. and urinals ...	109	5	10
Interlocking apparatus, cattle-yards, &c.	344	12	0
Rookwood—			
Interlocking apparatus and gates	1,437	9	11
Extending Mortuary loop and siding	614	3	1
Auburn—			
Interlocking apparatus	525	13	9
Lengthening platform	286	11	5
Clyde—			
Interlocking signals	483	6	8
Ticket office and enclosed waiting-shed	11	2	11*
12 *miles* 10 *chains*—			
Through road, 12 miles 10 chains	74	3	3
Ritchie's Siding—			
Interlocking apparatus	25	5	8
Granville—			
Additional sidings	624	0	7
Interlocking apparatus	101	17	9
Additional water supply and crane	857	5	7
Lengthening coal-stage	76	9	11
Additional turntable	125	0	0
GRANVILLE TO LIVERPOOL.			
Pottery Siding—			
Interlocking apparatus	223	13	7
Merrylands—			
Interlocking apparatus	400	9	4
Guildford—			
Interlocking apparatus	150	19	11
Fairfield—			
5-ton crane	47	18	5
Cabramatta—			
Interlocking	150	1	1
Liverpool—			
Additional water supply	270	19	4

* Part cost only.

No. 10*a*—*continued.*

SOUTHERN LINE—*continued.*

	£	s.	d.
Liverpool to Campbelltown.			
Bridges—20 miles 54 chains, 22½ miles, and 24 miles 10 chains ...	270	5	10
Glenfield—			
Porter's house and gate	347	12	1
Interlocking	230	14	7
Ingleburn—			
Additional siding and level crossing	390	19	11
Interlocking signals	203	0	0
Minto—			
Interlocking signals	214	18	2
Campbelltown—			
Land for Station-master's house...	740	9	10
Campbelltown to Menangle.			
Menangle—			
Extending loop and slip points ...	118	0	0
Water supply	2	5	8*
Menangle to Picton.			
Interlocking apparatus, signals, &c.	9	19	7
Crane, Picton Lakes	1	10	0*
Picton to Goulburn.			
Redbank—			
Additional signals...	94	7	9
Picton—			
Additional station accommodation	667	3	0
" waiting-shed and office	177	16	6
Hill Top—			
Additional signals	76	3	4
New platform and office	148	0	5
Colo Vale—			
Additional signals	91	17	2
Mittagong—			
Additional water supply	15	2	6*
Burradoo—			
New signals	1	17	4*
Moss Vale—			
5-ton crane	24	6	0*
Additional overbridge	4	16	8*
Bundanoon—			
New home-signal	33	15	9
Wingello—			
Additional signal	90	9	4
Morrice's Siding—			
Interlocking signals	15	11	0*
Marulan—			
Additions to stock-yards... ...	24	7	10
Wiring fences, south—			
Wiring fence, 127 miles to 131 miles 20 chains...	164	0	9
North Goulburn—			
Hydraulic signals	67	14	3
Loading platform...	60	4	11
Extending cattle siding	166	7	5
Goulburn—	£	s.	d.
Permanent workshops	10,118	6	3
Interlocking apparatus and signal-box	402	7	3
Overbridge and approach ...	228	2	10
Additions to District Engineer's office	217	16	4
Additions, turn-table and ash-pits	946	5	7
Additional water supply	161	1	2
Running-shed and laying rails in ditto	4,666	7	5
Ladies' w.-c.	161	19	6
Additional roads	349	0	5
New steam Traverser	7	15	5*
Goulburn to Cooma.			
Bangalore—			
New platform	19	1	4
Lake Bathurst—			
Ballast pits and siding	525	17	3
Platform and waiting-shed ...	258	5	4
Tarago—			
Goods-shed approach	6	0	0*
Bungendore—			
Cottage for drivers and fireman...	137	4	11
Pumper's cottage	248	15	11
Goulburn to Yass.			
Breadalbane—			
Additional siding	87	2	8
" waiting, and shed, and office	120	6	1
Fish River—			
Additional water supply	69	18	9
" " 163 miles 5 chains	69	17	5
Jerrawa—			
Additional signals	85	14	9
Yass to Cootamundra.			
Yass—			
Additional siding accommodation.	724	13	7
Additions to stock-yards	2	17	4*
Rocky Ponds—			
Home-signals	104	8	8
Harden—			
Additions to refreshment-room ...	282	8	2
Additional sidings	25	4	3*
Improvements to station, Post and Telegraph Office	27	14	10
Loco. Inspector's Office	677	19	5
Additional water supply	429	14	4
Murrumburrah—			
Porter's cottage	11	19	6*
Nubba—			
Waiting-shed	61	15	8
Cart, weighbridge, and office ...	76	13	8

* Part cost only.

No. 10*a*—*continued.*

SOUTHERN LINE—*continued.*

	£	s.	d.
Wallenbeen—			
Interlocking signals	39	15	5
Cootamundra—			
Extending siding	70	2	9
Murrumburrah to Blayney.			
Demondrelle—			
Improvements	84	11	6
Young—			
5-ton crane	288	19	3
Cootamundra to Gundagai.			
Gundagai—			
Signals	52	8	2
Cootamundra to North Wagga Wagga.			
Wiring fences—			
Wiring fences, 251 miles to 256 miles 40 chains and 257 miles 15 chains	26	15	8
Illabo—			
Room for operators	59	11	5
Widening bridge 286 miles 26 chains	64	7	3
Junee Junction—			
Approach road to station ...	354	18	10
New station and improvements ...	3,343	10	11
Additional sidings	4,293	19	6
Sand furnace	37	5	8
Stock and sheep yards	140	11	11
New turntable and widening culvert	493	19	6
W.-c. for employés	416	3	4
Additional water supply	178	14	5
Interlocking apparatus, &c. ...	1,468	15	5
Additional workshops	197	10	10
Guard rail	4	16	8*
Kerbing and channelling at Junction	81	0	0
Wagga Wagga—			
Additional water supply	63	1	9
Interlocking apparatus	45	6	6
Wagga Wagga to Albury.			
Connorton—			
Approach to Dr. O'Connor's siding	3	3	0
Dudal Cooma—			
Platform	28	4	6
Siding	198	18	2
Yambla—			
Loading stage	12	19	6*
Albury—			
Interlocking apparatus	1,636	10	8
Additional water supply	15	10	10*

	£	s.	d.
Junee to Narrandera.			
Old Junee—			
Additional water supply	442	17	5
Marrar—			
Gate	10	12	8*
New kitchen, gate-house... ...	13	0	11*
Grong Grong—			
Box drain	9	9	9*
Culverts—			
New 2 ft. culvert 56 miles 78 chains	47	11	6
Narrandera—			
Sheep and drafting yards... ...	51	3	2
Gate-house	18	3	1
Water supply	31	7	7
Narrandera to Hay.			
Yanko—			
Connecting siding into loop ...	246	11	3
Level Crossing—			
Level crossing 74 miles 31 chains	9	10	10*
Darlington—			
Additional water supply	242	2	11
Carrathool—			
Porter's cottage	552	8	0
Hay—			
Water supply	23	19	5*
Narrandera to Jerilderie.			
Colombo—			
Drain for Loco. Department ...	42	7	6*
Stock-yards	35	0	5
Widgiewa—			
Waiting-shed	40	12	6
Ballasting approach to wool stage	35	19	8
Coonong—			
Wool stage...	176	3	5
Bundure—			
Wool stage	181	4	2
Approach to siding	46	2	6
Gate	2	6	8*
Gillenbah—			
Siding	396	16	9
Entrance gate	5	12	4
Water supply generally	100	13	4
	£105,505	1	4
Credits in matters not previously settled, now brought to account:—			
Campbelltown to Menangle... ... £ 74 0 0			
Picton to Goulburn ... 83 13 0			
Murrumburrah to Blayney 113 14 11			
	271	7	11
	£105,233	13	5

* Part cost only

No. 10*a*—*continued.*

WESTERN LINE.

Granville to Penrith.

	£	s.	d.
Parramatta—			
Interlocking apparatus and signal-box	930	1	3
Additional crane	3	10	0*
Through road (gates Harris Park)	7	9	9*
Piers and superstructure of overbridge	108	0	0
Additional waiting-room... ...	22	12	7*
Harris Park—			
Overbridge, abutment piers, and erection of	3,010	18	4
Additional lamps on platform ...	87	3	6
Waiting-shed, &c., and platform	1,200	11	5
Seven Hills—			
Additional accommodation ...	94	17	6
Blacktown—			
Station	129	5	7
Forming and draining approach to station	150	5	8
Stock-yards	66	14	6
Rooty Hill—			
Cost of land for loop siding ...	21	2	0*
Home-signals	0	17	3*
New weighbridge and office ...	11	18	2*
South Creek—			
Additional crossing	14	14	6*
Additional office	7	10	7*
Additional siding	140	8	4
Penrith—			
Through road and cross roads ...	40	18	3
Draining land	352	12	7

Penrith to Bathurst.

	£	s.	d.
Emu Plains—			
Yard fencing	16	19	11*
New goods-shed	26	11	1*
Additional fence on platform and gate	26	3	11
Additional fencing and draining Station-master's house, shed over copper	25	7	0
Road forming, pitching, and new station	108	17	2
Laying in new loop	58	14	2
Springwood—			
New station, land taken, platform and fencing	506	10	0
New siding (loop)	1,089	19	5
Approach road	10	13	6*
Underground tank and w.-c. ...	141	1	4
Faulconbridge—			
Station buildings and platform accommodation	567	10	5
Linden—			
Additional water supply	595	7	8
Lawson—			
Additional ash-pits	140	17	0
Wentworth Falls—			
Additional water supply	142	10	0
Additional siding and platform ...	332	11	10
Katoomba—			
5-ton crane	15	14	7*
Additional signals...	56	8	4
Blackheath—			
Goods-shed and loading-stage ...	162	11	2
Mount Victoria—			
Addition and alterations to station and yards	2,951	0	11
New siding...	49	1	9
Hartley Vale—			
Additional signals and interlocking	210	10	2
New siding	136	3	0
Mount Wilson—			
Erecting goods-shed, and for carriage shelter	196	7	4
New gatehouse	7	6	9*
New siding	172	19	4
Vale of Clwydd—			
Interlocking apparatus signals ...	84	16	0
Mort's Siding—			
Interlocking apparatus (signal-box)	55	17	10
Eskbank—			
House for Station-master ...	1,012	7	2
Interlocking apparatus and box...	730	13	9
New siding	133	14	3
Additional water supply	8	1	0*
Lithgow—			
Interlocking apparatus and signals	486	14	2
New signals at Colliery siding ...	16	16	1*
Interlocking bottom points, Lithgow Zig-zag	194	0	11
Bowenfels—			
Interlocking apparatus, Coal Co.'s siding	0	19	3*
Marangaroo—			
New stage shoot and platform ...	29	16	3
Additional water supply	368	11	6
Wallerawang—			
Interlocking apparatus and signal-box	2,323	3	2
New siding	80	5	4
Additional w.-c. accommodation...	5	18	6*
New ash-pit	206	15	0
Additional water supply	66	8	3
Rydal—			
New cart weighbridge	9	11	5
Brewongle—			
Additions to Station-master's house	78	13	9

* Part cost only.

No. 10*a*—*continued.*

WESTERN LINE—*continued.*

Bathurst—	£	s.	d.
Additional water supply and combined fire and Loco. tanks ...	2,303	19	0
Loco. shops, blacksmiths' shop, additions to foundry workshops	599	16	7
Enlarging yard	2,065	16	5
Interlocking apparatus and box ...	123	13	1
New carriage dock and ash-pits ...	199	0	3
Additional w.-c. accommodation...	105	8	2
Gas to engine-shed and station ...	438	13	10
Additions to ladies' room... ...	23	6	3*
Wallerawang to Mudgee.			
Mudgee—			
New 10-ton crane...	14	14	6*
New cart weighbridge and office	19	12	3*
Fencing water reserve (reservoir)	24	5	1
Bathurst to Orange.			
Perth—			
New siding	56	18	11
New signals	89	16	5
Wimbledon—			
Additions to station	182	7	9
Newbridge—			
Fencing Commissioner's land ...	7	14	6*
Reedy Creek—			
Additional station accommodation	5	10	9*
Blayney—			
Pumping machinery and additional water supply	1,143	0	10
New stage and approach	184	12	1
New siding and approach ...	168	7	5
Additions to Station-master's house —new house	432	3	9
Boiler and engine-shed improvements	11	9	1*
Milthorpe—			
Gatekeeper's residence, No. 8 gate (improvements)	50	0	0
Springhill—			
New station and office fittings and improvements	2,178	15	7
Orange—			
New footbridge, and approach to	266	8	3
Lengthening and widening platform	113	1	4
New approach road and fencing...	31	10	1
Additional water supply and pumping machinery	425	7	6
New truck weighbridge	7	8	6*
Additional home signals	40	4	6

Orange to Molong.	£	s.	d.
Surveying for double line, Orange to Molong Junction	69	1	9
Orange to Wellington.			
Kerr's Creek—			
Additional loading stage	44	10	4
Warne—			
New cattle and sheep yards ...	379	1	2
New house for porter in charge...	26	6	0
Store Creek—			
New station accommodation ...	398	8	6
Additions to porter's house ...	4	18	6*
New siding	13	10	0*
Dam	9	13	4*
Ironbarks—			
New stock-yards	45	4	11
Mumbel—			
New station, crossing, and gates	158	15	9
Additions house, porter in charge	15	9	6*
Burrandong—			
New signals	418	19	3
New siding	241	15	10
New crossing	4	0	10*
Springs—			
Improvements to approach road wicket-gates	57	6	6
Wellington—			
New overbridge	96	1	6
Additional w.-c.'s	51	18	10
New drivers' barracks	1,409	3	8
New signals	95	11	2
New stock-yards	11	8	0*
New engine-shed and pits ...	669	4	3
New siding coal stage	749	18	4
New refreshment-room	773	4	0
Improving station-yard	7	9	2*
Additional water supply	217	11	5
New siding (improvements) ...	1	12	5*
Wellington to Dubbo.			
Bridge at 248 miles 44 chains ...	445	9	6
Mary Vale—			
Laying drain-pipes, 255 miles ...	23	13	9
Ponto—			
Additional station accommodation and platform	465	11	2
Home and distant signals ...	1	5	0*
New siding	196	19	8
Dubbo—			
Improvements, store for Locomotive Department	7	0	3*
Interlocking	163	7	8
Water crane and water supply ...	412	2	3

* Part cost only.

No. 10*a*—*continued.*

WESTERN LINE—*continued.*

DUBBO TO BOURKE.

	£	s.	d.
Narramine—			
New siding	37	3	7
Trangie—			
New platform	240	17	8
New water supply, tank, well, drain for loco., and new house for pumper	1,104	19	3
New goods-shed	235	1	11
New siding	263	17	7
New stock-yards	64	15	10
Mullengudgerie—			
Additional station accommodation, w.-c, and urinals	616	0	8
New underground tank	85	13	9
Fence, Station-master's house ...	24	11	0
Approach to siding	34	4	4
Fencing house, porter in charge...	19	12	7*
Nyngan—			
Additional water supply, cartage of boilers and pumps from railway station to engine-house ...	9	13	0*
New refreshment-room	3,109	0	8
Additions to loco. cottage (fencing)	90	7	5
Coolabah—			
Station accommodation	313	15	7
New sidings, 426 miles 30 chains	0	9	9*
Byrock—			
New 10-ton crane...	5	1	2*
Improvements carriage-shed ...	0	8	8
Bourke—			
Station-yard	424	14	7
	£45,721	18	11

CREDITS.

	£	s.	d.	£	s.	d.
Picton to Goulburn	£24	0	0			
Wallerawang to Mudgee	9	10	6			
				33	10	6
				£45,688	8	5

* Part cost only.

SUMMARY.

	£	s.	d.
North and North-western Line...	30,111	7	10
Richmond Line	1,757	1	11
South and South-western Line, including Cooma, Young, and Illawarra branches	105,233	13	5
Western Line, including Mudgee branch	45,688	8	5
	£182,790	11	7

No. 11.

STATEMENT showing the COST OF CONSTRUCTION and COST PER MILE open on different Sections of the Railway Lines, to 31st December, 1885.

Lines opened for Traffic	Length in Miles	Total Cost.	Cost per Mile.
	No.	£	£
Darling Harbour Branch	1	200,069	200,069*
Sydney to Granville	13	1,027,995	79,077*
Haslem's Creek Branch	½	6,459	12,918
Granville to Wodonga	374½	4,174,313	11,146
Junee to Hay	167	936,813	5,610
Narrandera to Jerilderie	65	405,821	6,243
Granville to Bourke	490	4,991,762	10,187
Wallerawang to Mudgee	85	945,924	11,129
Blacktown to Richmond	16	169,696	10,606
Goulburn to Bungendore	40	440,000	11,000
Orange to Molong	22	191,620	8,710
Murrumburrah to Young	18	209,988	11,666
Sydney to Sutherland	15	225,000	15,000
Newcastle to Glen Innes	323	3,826,526	11,847
Werris Creek to Narrabri	97	552,990	5,701
Bullock Island Branch	1½	58,610	39,073†
Morpeth Branch	4	57,602	14,401
Average cost of construction	1,732½	18,421,188	10,633
£			
Pitt-street Tramway 4,878			
Rolling Stock 2,853,210			
Machinery 140,958			
Workshops—Redfern and Eveleigh 413,576			
Furniture 5,568			
	.....	3,418,190	.....
Average cost per mile, including all charges	1,732½	21,839,378	12,606

In rolling stock the cost of the Carriages and Waggons used on the Camden Line is included, as the vehicles were those originally provided for Railway service. Total value of stock so used, £3,223

* Between Sydney and Granville, including the Darling Harbour Branch, there are 47½ miles of sidings, the cost of which is included in the amounts shown

† On the Bullock Island Branch there are 6½ miles of sidings, the cost of which is included

No. 12.

TABLE showing the number of MILES OPENED per annum, and the annual and average daily MILEAGE of TRAINS, from the commencement, on 26th September, 1855, to 31st December, 1885.

Year.	Opened per annum.	Total opened	Total Train Mileage	Average Daily Mileage.
1855	14	14	14,107	147
1856	9	23	68,371	187
1857	17	40	107,822	295
1858	15	55	141,495	388
1859	Nil	55	147,618	404
1860	15	70	179,249	491
1861	3	73	214,881	589
1862	24	97	274,565	752
1863	27	124	315,177	863
1864	19	143	415,422	1,138
1865	Nil	143	483,446	1,324
1866	Nil	143	490,475	1,344
1867	61	204	600,751	1,646
1868	43	247	768,529	2,106
1869	71	318	893,552	2,448
1870	21	339	901,139	2,469
1871	19	358	931,333	2,552
1872	40	398	1,036,255	2,839
1873	5	403	1,109,879	3,041
1874	Nil	403	1,249,233	3,423
1875	34	437	1,472,204	4,033
1876	72	509	1,688,964	4,627
1877	89	598	2,106,802	5,772
1878	90½	688	2,655,176	7,274
1879	46	734	2,932,463	7,572
1880	115	849	3,239,472	8,851
1881	146	995	3,923,920	10,750
1882	273	1,268	4,851,127	13,291
1883	52	1,320	5,937,261	16,266
1884	298	1,618	6,403,041	17,543
1885	116	1,732	6,638,399	18,197

An average length of 58 miles opened per annum.

No. 13.

Return of Earnings from Traffic in Passengers and Goods during year 1885.

Year and Name of Railway.	Miles open for Traffic.	Gross Earnings from Coaching.							Gross Earnings from Goods.						Gross Earnings from all sources.
		Passengers.			Excess-Luggage, Parcels, Cloak Room, Horses, Carriages, and Dogs.	Mails.	Miscellaneous.	Total from Coaching.	Live Stock.	Minerals.	Wool.	General Merchandise	Miscellaneous.	Total from Goods.	
		1st and 2nd Class Passengers.	Holders of Season Tickets	Total from Passengers.											
1885.		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
South and West	1,307	557,301 14 10	43,000 3 5	600,301 18 3	54,283 7 2	23,764 10 0	12,958 1 8	691,307 17 1	136,891 13 9	63,005 14 10	126,418 7 2	685,141 14 3	4,207 10 7	1,015,665 0 7	1,706,972 17 8
North	425½	107,340 7 0	1,979 9 9	109,319 16 9	16,278 18 10	8,528 0 0	5,469 3 5	139,595 19 0	22,308 19 3	77,603 6 5	38,330 14 5	187,680 9 11	1,875 17 4	327,799 7 4	467,395 6 4
Total.....	1,732½	664,642 1 10	44,97 13 2	709,621 15 0	70,562 6 0	32,292 10 0	18,427 5 1	830,903 16 1	159,200 13 0	140,609 1 3	164,749 1 7	872,822 4 2	6,083 7 11	1,343,464 7 11	2,174,368 4 0
1884.															
South and West	1,193	498,730 1 0	34,461 9 10	53 ,191 10	45,615 0 10	21,491 5 2	13,297 6 9	613,595 3 7	126,314 6 1	55,528 5 0	98,779 11 7	718,797 15 11	4,538 16 3	1,003,958 14 10	1,617,553 18 5
North	425½	101,520 16 3	1,450 19 0	102,971 15 3	15,669 16 10	8,043 7 1	5,384 16 2	132,069 15 4	29,112 15 4	75,840 6 8	39,829 4 11	189,598 5 4	2,232 16 3	336,613 8 6	468,683 3 10
Total.....	1,618½	600,250 17 3	35,912 8 10	636,163 6 1	61,284 17 8	29,534 12 3	18,682 2 11	745,664 18 11	155,427 1 5	131,368 11 8	138,608 16 6	908,396 1 3	6,771 12 6	1,340,572 3 4	2,086,237 2 3
Increase.....1885	114	64,391 7	9,067 4 4	73,458 8 11	9,277 8 4	2,757 17 9	.....	85,238 17 2	3,773 11 7	9,240 9 7	26,140 5 1	.....	.....	2,892 4 7	88,131 1 9
Decrease 1885	....	.....	.....	.....	.....	.....	254 17 10	.....	.....	.....	.....	35,573 17 1	688 4 7	.....	.....

No. 14.

RETURN of the TRAFFIC in Passengers and Goods, the number of Trains run, and the number of miles travelled by Trains, 1885.

Year and Name of Railway.	Miles open for Traffic.	Coaching Traffic.							Goods Traffic.							Number of Trains.			Number of miles travelled by Trains.				
		Passengers.				Carriages.	Horses conveyed in Passenger Trains.	Dogs.	Horses conveyed in Goods Trains.	Cattle.	Sheep.	Pigs.	Mineral.	Wool.	General Merchandise.	Passenger.	Goods.	Total.	Passenger.	Goods.	Total Train miles.	Ballasting, Shunting, &c.	Total.
		First Class.	Second Class.	Total 1st and 2nd Class.	Season Tickets.																		
1885.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	Tons.	Bales.	Tons.	No.	No.	Nc.	No.	No.	No.	No.	No.
South and West..	1307	4,195,530	8,271,803	12,467,333	21,279	3,709	8,512	14,014	8,121	91,789	1,663,173	15,137	336,390	276,694	955,351	73,553	40,066	113,619	2,261,985	3,064,613	5,326,598	1,126,313	6,452,911
North	425½	243,686	795,327	1,039,013	964	1,119	2,629	3,553	2,148	26,587	297,601	16,399	1,660,158	84,424	184,373	9,928	34,455	44,383	442,460	869,341	1,311,801	493,003	1,804,804
Total	1732½	4,439,216	9,067,130	13,506,346	22,243	4,828	11,141	17,567	10,269	118,376	1,960,774	31,536	1,996,548	361,118	1,139,724	83,481	74,521	158,002	2,704,445	3,933,954	6,638,399	1,619,316	8,257,715
1884.																							
South and West..	1193	3,476,364	6,864,413	10,340,777	17,514	3,503	7,072	13,363	7,337	79,035	1,601,486	13,325	300,792	231,479	885,337	64,544	30,654	95,198	2,021,425	3,108,749	5,130,174	979,033	6,109,207
North	425½	196,921	715,411	912,332	788	1,202	2,594	4,002	3,837	33,843	417,726	12,401	1,630,813	88,170	178,294	9,129	26,313	35,442	416,830	856,037	1,272,867	508,374	1,781,241
Total	1618½	3,673,285	7,579,824	11,253,109	18,302	4,705	9,666	17,365	11,174	112,878	2,019,212	25,726	1,931,605	319,649	1,063,631	73,673	56,967	130,640	2,438,255	3,964,786	6,403,041	1,487,407	7,890,448
Increase, 1885...	114	765,931	1,487,306	2,253,237	3,941	123	1,475	202	...	5,498	.....	5,810	64,943	41,469	76,093	9,808	17,554	27,362	266,190	.....	235,358	131,909	367,267
Decrease, 1885...	...	.....	.....	.....	...	...	...	...	905	...	58,438	...	.....	.....	.....	.....	.....	.....	.....	30,832	.....	.....	.....

No. 15.

Return of Working Expenses and Rolling Stock during Year 1885.

Year and Name of Railway.	Miles open, 31 December.	Locomotive Power.	Carriage and Waggon Repairs.	Maintenance and Renewal of Way.	Traffic Charges, Coaching and Merchandise.	Compensation—Personal Injury, &c.	Compensation—Damage to and Loss of Goods.	Miscellaneous Working Expenditure and General Establishment.	Total Working Expenses.	Total Earnings.	Net Earnings.	Proportion per cent. of Expenditure to Total Earnings.	Rolling Stock on 31st Dec., 1885. Locomotives.	Passenger Stock.	Goods Stock.	Total Vehicles
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.					
1885.																
South and West...	1,307	350,447 8 11	60,108 19 1	360,351 8 9	304,497 18 9	6,895 6 0	890 1 6	69,033 5 6	1,152,224 8 6	1,706,972 17 8	554,748 9 2	67·50	313	617	6,104	7,034
North	425½	81,702 15 3	13,178 17 11	74,295 15 7	108,090 5 0	210 0 0	185 1 0	28,266 6 7	305,929 1 4	467,395 6 4	161,466 5 0	65·45	77	239	1,864	2,180
Total	1,732½	432,150 4 2	73,287 17 0	434,647 4 4	412,588 3 9	7,105 6 0	1,075 2 6	97,299 12 1	1,458,153 9 10	2,174,368 4 0	716,214 14 2	67·06	390	856	7,968	9,214
1884.																
South and West...	1,193	349,131 4 1	66,235 11 0	295,876 8 9	277,718 2 1	2,366 1 0	797 19 4	30,461 15 2	1,022,587 1 5	1,617,553 18 5	594,966 17 0	63·22	268	557	5,275	6,100
North	425½	80,589 5 1	13,597 14 3	71,440 12 6	98,845 7 9	436 4 0	117 18 1	13,645 6 5	278,672 8 1	468,683 3 10	190,010 15 9	59·46	68	219	1,663	1,950
Total	1,618½	429,720 9 2	79,833 5 3	367,317 1 3	376,563 9 10	2,802 5 0	915 17 5	44,107 1 7	1,301,259 9 6	2,086,237 2 3	784,977 12 9	62·37	336	776	6,938	8,050
Increase, 1885..	114	2,429 15 0	.....	67,330 3 1	36,024 13 11	4,303 1 0	159 5 1	53,192 10 6	156,894 0 4	88,131 1 9	.....	4·69	54	80	1,030	1,164
Decrease, 1885	...	.....	6,545 8 3	.....	.....	.....	.....	.....	.....	.....	68,762 18 7	.....	...	...	...	...

Note.—An improved distribution of Expenditure was adopted in 1885, and consequently the comparison given above between 1884 and that year is not exact except in the gross amounts. On the basis of the 1884 distribution of expenditure the comparison would show as under :—

Year and Name of Railway.	Miles open, 31st December.	Locomotive Power.	Carriage and Waggon Repairs.	Maintenance and Renewal of Way.	Traffic Charges, Coaching and Merchandise.	Compensation—Personal Injury, &c.	Compensation—Damage to and Loss of Goods.	Miscellaneous Working Expenditure and General Establishment.	Total Working Expenses.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1885.									
South and West	1,307	360,730 9 10	61,807 11 10	374,790 18 4	307,105 3 2	6,895 6 0	890 1 6	40,004 17 10	1,152,224 8 6
North.....	425½	85,057 1 8	13,583 8 0	78,293 16 0	110,001 1 5	210 0 0	185 1 0	18,598 13 3	305,929 1 4
Total	1,732½	445,787 11 6	75,390 19 10	453,084 14 4	417,106 4 7	7,105 6 0	1,075 2 6	58,603 11 1	1,458,153 9 10
1884.									
South and West	1,193	349,131 4 1	66,235 11 0	295,876 8 9	277,718 2 1	2,366 1 0	797 19 4	30,461 15 2	1,022,587 1 5
North.....	425½	80,589 5 1	13,597 14 3	71,440 12 6	98,845 7 9	436 4 0	117 18 1	13,645 6 5	278,672 8 1
Total	1,618½	429,720 9 2	79,833 5 3	367,317 1 3	376,563 9 10	2,802 5 0	915 17 5	44,107 1 7	1,301,259 9 6
Increase, 1885.....	114	16,067 2 4	.....	85,767 13 1	40,542 14 9	4,303 1 0	159 5 1	14,496 9 6	156,894 0 4
Decrease, 1885	.....	.....	4,442 5 5	.....	.....	.....	.....	.....	.....

No. 16.

TRAMWAY LINES OPENED FOR TRAFFIC (CITY AND SUBURBAN).

RETURN showing the Working Expenses, Number of Passengers, Earnings, and Rolling Stock for years 1885 and 1884.

Year.	Miles opened for Traffic.	Miles travelled by Trains.	Working Expenses.							No. of Passenger Fares collected.	Earnings.			Net Earnings.	Proportion per cent. of Expenditure to Earnings.	Rolling Stock, 31 December, 1885.			
			Locomotive Power.	Carriage Repairs.	Maintenance and Renewal of Way.	Traffic Charges.	Compensation.	General Charges.	Total.		Passenger.	Miscel-aneous.	Total.			Motors.	Cars.	Trucks.	Total.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.	£ s. d.		No.	No.	No.	No.
1885	27½	1,220,500	110,915 16 4	9,790 2 9	37,297 12 11	37,244 7 6	3,320 15 3	9,426 1 9	207,994 16 6	39,594,753	218,464 4 7	4,875 19 2	223,340 3 9	15,345 7 3	93·13	95	108	18	221
1884	27½	1,242,491	115,222 4 3	11,238 3 10	37,926 2 9	37,920 14 0	9,508 9 8	3,351 8 7	215,167 3 1	30,202,303	216,980 2 4	2,961 18 10	219,942 1 2	4,774 18 1	97·83	75	108	15	198
Increase 1885	...	.....	.....	.....	.....	.....	.....	6,074 13 2	.....	9,392,450	1,484 2 3	1,914 0 4	3,398 2 7	10,570 9 2	...	20	...	3	23
Decrease 1885	...	21,991	4,306 7 11	1,448 1 1	628 9 10	676 6 6	6,187 14 5	.....	7,172 6 7	.....	.....	.....	.....	.....	4·70	...	...	...	...

NOTE.—An improved distribution of Expenditure was adopted in 1885, and consequently the comparison given above between 1884 and that year is not exact except in the gross amounts. On the basis of the 1884 distribution of expenditure the comparison would show as under :—

Year.	Miles opened for Traffic.	Miles travelled by Trains.	Working Expenses.						
			Locomotive Power.	Carriage Repairs.	Maintenance and Renewal of Way.	Traffic Charges.	Compensation.	General Charges.	Total.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1885	27½	1,220,500	114,401 5 7	10,098 10 3	38,220 7 3	38,243 6 9	3,320 15 3	3,710 11 5	207,994 16 6
1884	27½	1,242,491	115,222 4 3	11,238 3 10	37,926 2 9	37,920 14 0	9,508 9 8	3,351 8 7	215,167 3 1
Increase, 1885	.....	.....	.....	.....	294 4 6	322 12 9	.....	359 2 10	.....
Decrease, 1885	.....	21,991	820 18 8	1,139 13 7	.....	.....	6,187 14 5	.....	7,172 6 7

No. 17.

CAMDEN TRAMWAY.

RETURN of EARNINGS from Traffic in Passengers and Goods during the year 1885.

Year.	Miles open for Traffic.	Gross Earnings from Coaching Traffic. Passengers. 1st and 2nd Class Passengers.	Holders of Season Tickets.	Total from Passengers.	Excess-Luggage, Parcels, Cloak-room, Horses, Carriages, and Dogs.	Mails.	Total from Coaching.	Gross Earnings from Goods Traffic. Live Stock.	Minerals.	Wool.	General Merchandise.	Total from Goods.	Gross Earnings from these Sources.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1885	7½	1,292 9 4	Nil	1,292 9 4	479 4 11	96 0 0	1,867 14 3	48 17 0	4 0 8	8 11 6	1,874 18 9	1,936 7 11	3,804 2 2
1884	7½	1,353 10 11	,,	1,353 10 11	454 19 0	96 0 0	1,904 9 11	79 7 6	2 8 8	6 7 0	1,519 3 7	1,607 6 9	3,511 16 8
Increase, 1885	...	.....	.....	.....	24 5 11	.....	.....	.....	1 12 0	2 4 6	355 15 2	329 1 2	292 5 6
Decrease, 1885	...	61 1 7	.....	61 1 7	.....	.....	36 15 8	30 10 6	.....	.....	.....	.....	.....

CAMDEN TRAMWAY.

RETURN of the TRAFFIC in Passengers and Goods, the number of Trains run, and the number of miles travelled by Trains, 1885.

Year.	Miles open for Traffic.	Coaching Traffic. Passengers. First Class.	Second Class.	Total 1st and 2nd Class.	Season Tickets.	Carriages.	Horses conveyed in Passenger Trains.	Dogs.	Goods Traffic. Horses conveyed in Goods Trains.	Cattle.	Sheep.	Pigs.	Minerals.	Wool.	General Merchandise.	Number of Trains. Passenger.	Goods.	Total.	Number of miles travelled by Trains. Passenger.	Goods.	Total Train miles	Ballasting, Shunting, &c.	Total.
		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	Tons.	Bales.	Tons.	No.	No.	No.	No.	No.	No.	No.	No.
1885	7½	4,179	21,682	25,861	Nil	36	148	67	57	315	734	2,003	15	39	13,984	1,286	1,936	3,222	11,849	11,721	23,570	6,211	29,781
1884	7½	3,823	25,256	29,079	.....	49	149	46	125	731	2,402	1,855	9	28	9,595	1,913	1,610	3,523	16,044	11,642	27,686	6,355	34,041
Increase, 1885	...	356	.....	.....	.....	...	...	21	...	...	...	148	6	11	4,389	.....	326	.....	.....	79	.....	.....	.....
Decrease, 1885	...	.....	3,574	3,218	.....	13	1	...	68	416	1,668	...	...	...	.....	627	.....	301	4,195	.....	4,116	144	4,260

CAMDEN TRAMWAY.

RETURN of Working Expenses and Rolling Stock, during the year 1885.

Year.	Miles open for Traffic.	Locomotive Power.	Carriage and Wagon repairs.	Maintenance and Renewal of Way.	Traffic Charges.	Compensation.	General Charges.	Total Working Expenses.	Total Earnings.	Net Earnings.	Proportion per cent. of Expenditure to total Earnings.	Rolling Stock on 31 December. Engines.	Cars.	Trucks.	Total.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.					
1885	7½	908 1 11	187 2 10	772 10 4	468 16 8	16 15 0	110 17 11	2,464 4 8	3,804 2 2	1,339 17 6	64·77	2	2	Railway	4
1884	7½	1,138 8 5	69 4 8	850 14 9	377 19 6	43 5 6	.....	2,479 12 10	3,511 16 8	1,032 3 10	70·61	2	0	Stock used.	2
Increase, 1885	.....	.....	117 18 2	.....	90 17 2	.....	110 17 11	.....	292 5 6	307 13 8	.....	.....	2	.....	2
Decrease, 1885	.....	230 6 6	.....	78 4 5	.....	26 10 6	.....	15 8 2	.....	.....	5·84	.....	.....	.....	...

No. 17—*continued.*

CAMDEN TRAMWAYS.

LIST and condition of Locomotive Engines and Tenders on 31st December, 1885.

Stock No.	Makers' Names.	Makers' No.	Class.	Description.	Cylinders. Position.	Cylinders. Diameter.	Cylinders. Length of Stroke.	No. of wheels on Engine.	Coupled or Single wheels.	Diameter of Wheels. Leading.	Diameter of Wheels. Driving.	Diameter of Wheels. Trailing.	Commenced to run.	Condition.
						inches.	inches.			ft. in.	ft. in.	ft. in.		
292	Manning, Wardle, & Co.....	918	Passenger ...	Tank Engine	Inside ...	12	17	6	All coupled	3 0	3 0	3 0	July, 1884.....	In good order.
293	Do	919	do ...	do	do ...	12	17	6	do	3 0	3 0	3 0	do	do

WEIGHT of Locomotive Engines and Tenders, Empty and Loaded.

No. Engine.	Empty. Leading.	Empty. Driving.	Empty. Trailing.	Empty. Total.	In Steam. Leading.	In Steam. Driving.	In Steam. Trailing.	In Steam. Total.	Remarks.
	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	
292 } 293 }	4 19 3	4 17 0	4 16 2	14 13 1	5 14 2	5 17 2	6 6 2	17 18 2	No Tenders.

RETURN of Rolling Stock on hand on 31st December, 1885.

	Tank Engines.	Composite carriages.	Total.
Totals, 31st December, 1884	2	.....	2
Received during 1885	.....	2	2
Total to 31st December, 1885.....	2	2	4
Increase	.....	2	2
Decrease	.....	.....	.....

NOTE.—The Goods Rolling Stock in use on the Camden Tramway is borrowed from the Railways.

WEIGHT of Locomotive Engines and Tonnage carried during the year 1885.

No. of Engine.	Weight of Engine and Tender for whole journey.	Mileage of each Engine and Tender.	Total tons carried.
	Tons. cwt. qrs.		
292	16 16 3	15,309	.....
293	16 16 3	14,044	.....
Total	33 13 2	29,353	519,740
Average	16 16 3	14,676	259,870

No. 18.

MOTORS received during the year 1885.

No.	Description of Motor.	Diameter and position of Cylinders.	Diameter of Wheels. Leading.		Diameter of Wheels. Driving.		Diameter of Wheels. Trailing.		Coupled or Single.	Length of Stroke.		Wheel Base.		Maker's Name.	Commenced to run.
			ft.	in.	ft.	in.	ft.	in.		ft.	in.	ft.	in.		
77	4 Wheels	Horizontal, 11″ diameter	2	11	2	11	.....		Coupled.....	1	4	6	0	Baldwin Company	29 August, 1885.
78	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	20 „ „
79	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	22 „ „
80	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	20 „ „
81	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	22 „ „
82	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	24 May, „
83	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	24 „ „
84	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	24 „ „
85	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	6 April, „
86	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	6 „ „
87	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	6 „ „
88	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	6 „ „
89	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	6 „ „
90	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	29 August, „
91	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	15 „ „
92	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	15 „ „
93	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	22 „ „
94	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	22 „ „
95	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	24 May, „
96	do	do 11″ do	2	11	2	11	.....		do	1	4	6	0	do	24 „ „

No. 19.

LIST OF TRAMWAY ROLLING STOCK (exclusive of Motors) received during the year 1885.

Description and Class.	No.	Name of Maker.	Carrying capacity.	Weight.	Diameter of Wheels.	No. of Wheels.	Commenced to run.
					ft. in.		
Truck	14	Tram Works, Randwick.	10 tons ...	4 tons ...	2 0	8	21 March, 1885.
Do	15	do do ...	10 do ...	4 do ...	2 0	8	21 „ „
Do	16	do do ...	10 do ...	4 do ...	2 0	8	21 „ „

No. 20.

TOTAL number of Miles run by each Motor during the year 1885.

No. of Motor.	Number of Miles run.	No. of Motor.	Number of Miles run.	No. of Motor.	Number of Miles run.	No. of Motor.	Number of Miles run.
	m. ch.		m. ch.		m. ch.		m. ch.
1	17,356·18	26	15,305·59	51	23,264·23	76	10,609·54
2	22,230·10	27	9,611·77	52	20,488·16	77	11,209· 2
3	20,197·68	28	7,228·58	53	23,462·75	78	12,579·49
4	16,955·44	29	6,191·56	54	21,240·56	79	10,767·62
5	24,875·31	30	8,912·62	55	2,736·35	80	12,509·15
6	23,046·45	31	158·55	56	23,868· 8	81	12,228·56
7	20,299·53	32	7,803·76	57	20,584·32	82	18,043·34
8	21,352·78	33	9,947	58	6,628·74	83	16,784·27
9	14,123·14	34	12,873· 2	59	15,318·37	84	21,042·61
10	10,200·20	35	17,246· 6	60	27,504· 5	85	25,214· 1
11	16,532·20	36	5,694·28	61	22,583·46	86	20,195·70
12	7,439·76	37	10,389·11	62	24,843· 2	87	22,384· 8
13	15,132·32	38	4,128·46	63	22,816·70	88	17,236· 1
14	6,946·46	39	14,372·21	64	21,382· 1	89	14,202·43
15	15,987·59	40	13,076·70	65	17,694·49	90	10,791·23
16	7,720·72	41	16,634·40	66	29,098·68	91	13,385·67
17	25,039·69	42	4,635·34	67	25,784·46	92	9,974·25
18	8,256·19	43	6,339·23	68	19,541·38	93	11,306·37
19	27,226·16	44	6,386· 8	69	20,453·65	94	11,725·64
20	12,938·30	45	18,208·42	70	9,557·62	95	19,561·17
21	15,280·66	46	23,359·78	71	12,400·38	96	20,465·53
22	13,324·72	47	23,450·71	72	8,854·10	97 on trial	31·66
23	14,954· 9	48	20,711·26	73	12,341·35	"John Bull," on trial	1,356·22
24	15,906·45	49	19,364·65	74	7,916·73		
25	25,368·25	50	Unserviceable.	75	8,552·21	Total...	1,473,248·44

No. 21.

WORKING EXPENSES.

SCHEDULES of Expenditure in Revenue Account, during the year ending 31 December, 1885.

Schedules.	Northern.	South, Western, and Richmond.	Total.
LOCOMOTIVE BRANCH.	£ s. d.	£ s. d.	£ s. d.
GENERAL EXPENSES—			
Schedule No.			
1. Superintendence and office expenses	7,994 5 2	28,852 1 3	36,846 6 5
2. Repairs of offices, workshops, and buildings	369 19 8	1,132 5 5	1,502 5 1
3. Renewals of do do do	20 14 2	2,521 9 10	2,542 4 0
4. Repairs of machinery, tools, and implements	1,922 10 5	6,944 16 2	8,867 6 7
5. Renewals of machinery	0 14 0	500 19 7	501 13 7
6. Lighting buildings and depôts	397 2 11	3,189 4 9	3,586 7 8
7. Casualties	3 14 10	389 14 1	393 8 11
8. Sundries	794 16 3	4,294 8 1	5,089 4 4
RUNNING EXPENSES—			
10. Wages of enginemen and firemen	24,926 14 3	114,199 8 9	139,126 3 0
11. Wages of cleaners, fuelmen, and shed labourers	8,235 16 7	40,860 18 6	49,096 15 1
12. Fuel	15,521 5 9	33,885 5 6	49,406 11 3
13. Running stores, exclusive of fuel	3,813 0 3	20,353 19 1	24,166 19 4
14. Cleaners' stores	941 10 0	4,910 0 11	5,851 10 11
15. Water supply	1,848 11 10	11,121 19 2	12,970 11 0
16. Renewals for water supply	89 13 6	1,919 1 1	2,008 14 7
REPAIRING EXPENSES—			
20. Repairs of engines	11,732 12 4	60,101 9 5	71,834 1 9
21. Renewals of engines	3,032 18 11	14,255 0 3	17,287 19 2
22. Improvements to engines	16 12 1	282 1 5	298 13 6
23. Casualties	40 2 4	733 5 8	773 8 0
CARRIAGES—			
30. Repairs of carriages	6,381 6 7	21,675 0 0	28,056 6 7
31. Renewals of carriages	160 17 2	7,027 1 11	7,187 19 1
32. Improvements to carriages	29 13 5	770 12 8	800 6 1
33. Casualties	0 6 7	778 4 10	778 11 5
WAGGONS—			
40. Repairs to waggons	5,509 2 5	18,172 0 4	23,681 2 9
41. Renewals of waggons	607 15 6	9,805 18 8	10,413 14 2
42. Improvements to waggons	460 16 11	1,009 19 6	1,470 16 5
43. Casualties	28 19 4	870 1 2	899 0 6
Total, Locomotive Branch £	94,881 13 2	410,556 8 0	505,438 1 2
PERMANENT WAY BRANCH.			
GENERAL EXPENSES—			
50. Superintendence and office expenses	6,477 2 2	27,673 9 7	34,150 11 9
51. Repairs of offices, workshops, and buildings	37 2 9	493 4 7	530 7 4
52. Renewals of ditto	2 11 0	2,219 8 9	2,221 19 9
53. Repairs of machinery and tools and implements	2,129 14 6	6,178 10 6	8,308 5 0
54. Renewals of machinery	.....	228 19 8	228 19 8
55. Lighting workshops and buildings	187 9 1	42 10 7	229 19 8
56. Casualties	190 15 5	502 14 0	693 9 5
57. Sundries	266 16 9	6,051 6 11	6,318 3 8
MAINTENANCE—			
60. Repairs of line, sidings, &c.	45,385 7 6	173,513 10 8	218,898 18 2
61. Renewal of ditto	7,176 4 5	64,536 19 3	71,713 3 8
62. Repairs of station buildings, platforms, gate-houses, wharves, signals, &c.	6,003 6 11	17,574 8 1	23,577 15 0
63. Renewals of station buildings, platforms, gatehouses, wharves, signals, &c.	637 12 10	10,496 1 6	11,133 14 4
64. Repairs of tunnels, viaducts, bridges, culverts, gates, fences, &c.	4,163 0 9	18,055 13 10	22,218 14 7
65. Renewals of tunnels, viaducts, bridges, culverts, gates, fences, &c.	1,184 3 6	22,344 14 2	23,528 17 8
66. Slips and flood repairs	454 8 0	10,439 16 8	10,894 4 8
Total, Permanent Way Branch £	74,295 15 7	360,351 8 9	434,647 4 4
TRAFFIC BRANCH.			
GENERAL EXPENSES—			
70. Management and office expenses	23,356 1 1	52,085 12 1	75,441 13 2
71. Wages of signalmen, switchmen, gatekeepers, &c.	11,888 5 4	19,036 19 4	30,925 4 8
72. Greasing and oiling goods and passenger stock	2,912 11 11	6,502 10 2	9,415 2 1
73. Line telegraphs	6,271 14 4	21,953 11 10	28,225 6 2
74. Repairs of station furniture, fittings, and implements (includes cranes and weighing machines)	260 18 11	2,187 19 10	2,448 18 9
75. Renewals of station furniture, fittings, and implements (includes cranes and weighing machines)	872 17 7	7,220 2 1	8,092 19 8
76. Fuel and lighting (includes lamps, gas, &c.)	3,583 2 0	17,396 1 5	20,979 3 5
77. Casualties	67 15 9	292 12 1	360 7 10
78. Sundries	3,481 5 6	10,957 0 1	14,438 5 7

No. 21—*continued.*

Schedules.	Northern.			South, Western, and Richmond.			Total.		
TRAFFIC BRANCH—*continued.*	£	s.	d.	£	s.	d.	£	s.	d.
COACHING CHARGES—									
80. Wages of clerks, guards, conductors, porters, &c.	9,202	2	2	62,099	14	0	71,301	16	2
81. Compensation for personal injury	210	0	0	6,895	6	0	7,105	6	0
82. Sundries	593	19	0	718	1	0	1,312	0	0
GOODS CHARGES—									
90. Wages of clerks, guards, wharfingers, porters, &c.	29,140	16	6	90,316	7	3	119,457	3	9
91. Compensation for loss of, or damage to, goods	185	1	0	890	1	6	1,075	2	6
92. Steam cranes and staiths	14,215	15	1	216	8	4	14,432	3	5
93. Repairing tarpaulins	789	0	2	2,767	16	0	3,556	16	2
94. Renewing tarpaulins	934	7	5	5,716	0	9	6,650	8	2
95. Sundries	519	12	3	5,031	2	6	5,550	14	9
Total, Traffic Branch £	108,485	6	0	312,283	6	3	420,768	12	3
GENERAL CHARGES.									
100. Proportion of general establishment	3,314	8	5	9,709	18	4	13,024	6	9
101. Auditing	2,548	14	9	7,084	13	2	9,633	7	11
102. Store expenses	3,007	4	11	10,763	9	5	13,770	14	4
103. Office expenses and contingencies	225	2	4	2,741	17	5	2,966	19	9
104. Advertising and stationery, printing, &c.	31	0	4	839	7	11	870	8	3
105. Holidays	7,316	2	9	24,872	17	5	32,189	0	2
106. Half-pay	252	17	4	674	8	9	927	6	1
107. Compensation	1,991	11	8	1,003	7	10	2,994	19	6
108. Sundries	9,579	4	1	11,343	5	3	20,922	9	4
Total, General Charges £	28,266	6	7	69,033	5	6	97,299	12	1
Grand total, Working Expenditure £	305,929	1	4	1,152,224	8	6	1,458,153	9	10

SUMMARY OF EXPENDITURE—1885.	£	s.	d.
Locomotive branch	505,438	1	2
Permanent way branch	434,647	4	4
Traffic branch	420,768	12	3
General charges	97,299	12	1
	£1,458,153	9	10
Expenses of Royal Commission on Railway Bridges, temporarily charged to working expenses pending report and decision thereon	2,954	5	9
Total Expenditure	£1,461,107	15	7

No. 22.

ABSTRACT of the amount of WORKING EXPENSES on the different Lines during 1885 and 1884, and Increase and Decrease in 1885.

Heads of Expenditure.	1884.			1885.			Increase.			Decrease.		
	South and West.	North.	Total.	South and West.	North.	Total.	South and West.	North.	Total.	South and West.	North.	Total.
	£	£	£	£	£	£	£	£	£	£	£	£
Locomotive power and repairing engines	349,131	80,589	429,720	350,447	81,703	432,150	1,316	1,114	2,430	.....	.....	.....
Carriage and waggon repairs	66,236	13,597	79,833	60,109	13,179	73,288	.....	.....	.....	6,127	418	6,545
Maintenance and renewal of way	295,876	71,441	367,317	360,351	74,296	434,647	64,475	2,855	67,330	.....	.....	.....
Traffic charges	277,718	98,846	376,564	304,498	108,090	412,588	26,780	9,244	36,024	.....	.....	.....
Compensation, personal	2,366	436	2,802	6,896	210	7,106	4,530	.....	4,530	.....	226	226
Compensation, goods	798	118	916	890	185	1,075	92	67	159	.....	.....	.....
Miscellaneous	30,462	13,645	44,107	69,033	28,266	97,299	38,571	14,621	53,192	.....	.....	.....
Total £	1,022,587	278,672	1,301,259	1,152,224	305,929	1,458,153	135,764	27,901	163,665	6,127	644	6,771

No. 22*a*.

ASBTRACT of the Amount of WORKING EXPENSES on the different Lines during 1884 and 1885, and Increase and Decrease in 1885.

1885.—Shown on the basis of the 1884 Distribution of Working Expenditure.

Heads of Expenditure.	1884.			1885.			Increase.			Decrease.		
	South and West.	North.	Total.	South and West.	North.	Total.	South and West.	North.	Total.	South and West.	North.	Total.
	£	£	£	£	£	£	£	£	£	£	£	£
Locomotive power and repairing engines	349,131	80,589	429,720	360,730	85,057	445,787	11,599	4,468	16,067	.....	.....	.....
Carriage and waggon repairs	66,236	13,597	79,833	61,808	13,583	75,391	.....	.....	.....	4,428	14	4,442
Maintenance and renewal of way	295,876	71,441	367,317	374,791	78,294	453,085	78,915	6,853	85,768	.....	.....	.....
Traffic charges	277,718	98,846	376,564	307,105	110,001	417,106	29,387	11,155	40,542	.....	.....	.....
Compensation personal	2,366	436	2,802	6,896	210	7,106	4,530	.....	4,530	.....	226	226
Compensation goods	798	118	916	890	185	1,075	92	67	159	.....	.....	.....
Miscellaneous	30,462	13,645	44,107	40,004	18,599	58,603	9,542	4,954	14,496	.....	.....	.....
Total £	1,022,587	278,672	1,301,259	1,152,224	305,929	1,458,153	134,065	27,497	161,562	4,428	240	4,668

No. 23.

TRAMWAYS—CITY AND SUBURBAN.

WORKING EXPENDITURE of City and Suburban Tramways during the Twelve Months ending December 31, 1885.

LOCOMOTIVE BRANCH.	£	s.	d.
GENERAL EXPENSES.			
Schedule No.			
1. Superintendence and office expenses ..	7,572	2	7
2. Repairs of offices, workshops, and buildings	737	2	0
3. Renewals of offices, workshops, and buildings	311	9	9
4. Repairs of machinery, tools, and implements	1,639	6	5
5. Renewals of machinery	8	13	8
6. Lighting buildings and depots	1,016	14	8
7. Casualties	1	12	6
8. Sundries	388	15	8
RUNNING EXPENSES.			
10. Wages of enginemen and firemen	33,900	19	11
11. Wages of cleaners, fuelmen, and shed labourers	11,090	1	5
12. Fuel	13,512	18	3
13. Running stores, exclusive of fuel	2,562	13	8
14. Cleaner's stores	887	11	8
15. Water supply	2,528	11	1
16. Renewals for water supply	65	18	11
REPAIRING EXPENSES.			
20. Repairs of engines	29,564	19	5
21. Renewals of engines	4,835	3	7
22. Improvements to engines	152	13	3
23. Casualties	138	7	11
CARRIAGES.			
30. Repairs of carriages	6,365	13	6
31. Renewals of carriages	2,433	8	6
32. Improvements to carriages	650	11	5
33. Casualties	225	17	3
WAGGONS.			
40. Repairs to waggons	111	5	3
42. Improvements to waggons	1	8	0
43. Casualties	1	18	10
Total, Locomotive Branch ...£	120,705	19	1

PERMANENT WAY BRANCH.	£	s.	d.
GENERAL EXPENSES.			
50. Superintendence and office expenses ..	1,181	9	2
51. Repairs of offices, workshops, and buildings	29	18	11
52. Renewals of offices, workshops, and buildings	0	2	0
53. Repairs of machinery and tools and implements	56	19	10
55. Lighting workshops and buildings	1	17	10
56. Casualties	1	8	6
57. Sundries	75	4	4

PERMANENT WAY BRANCH—*contd.*	£	s.	d.
MAINTENANCE.			
Schedule No			
60. Repairs of line, sidings, &c.	27,838	17	2
61. Renewal of line, sidings, &c.	4,690	17	0
62. Repairs of station buildings, platforms, gate-houses, wharves, signals, &c.	560	13	5
63. Renewals of station buildings, platforms, gate-houses, wharves, signals, &c.	213	11	4
64. Repairs of tunnels, viaducts, bridges, culverts, gates, fences, &c.	48	5	3
65. Renewals of tunnels, viaducts, bridges, culverts, gates, fences, &c.	37	4	10
Total, Permanent Way Branch ...£	34,736	9	7

TRAFFIC BRANCH.	£	s.	d.
GENERAL EXPENSES.			
70. Management and office expenses	5,100	10	1
71. Wages of signalmen, switchmen, gate-keepers, &c.	6,959	4	6
72. Greasing and oiling goods and passenger stock	649	2	3
73. Line telegraphs	1	2	3
74. Repairs of station furniture, fittings, and implements (includes cranes and weighing-machines)	118	18	11
75. Renewals of station furniture, fittings, and implements (includes cranes and weighing-machines)	21	9	11
76. Fuel and lighting (includes lamps, gas, &c.)	1,271	0	7
77. Casualties	119	18	9
78. Sundries	1,648	10	3
COACHING CHARGES.			
80. Wages of clerks, guards, conductors, porters, &c.	21,331	10	3
81. Compensation for personal injury	3,320	15	3
82. Sundries	22	19	9
Total, Traffic Branch...£	40,565	2	9

GENERAL CHARGES.	£	s.	d.
100. Proportion of general establishment ..	1,075	17	4
101. Auditing	159	0	6
102. Store expenses	1,932	4	11
103. Office expenses and contingencies	206	17	7
104. Advertising and stationery, printing, &c.	0	6	4
105 Holidays	5,075	14	0
106. Half-pay	207	17	11
107 Compensation	6	0	0
108. Sundries	762	3	2
Total, General Charges.....£	9,426	1	9
Grand Total, Working Expenses .....£	205,433	13	2

SUMMARY OF EXPENDITURE.

	£	s.	d.
Locomotive Branch	120,705	19	1
Permanent Way Branch	34,736	9	7
Traffic Branch	40,565	2	9
General Charges	9,426	1	9
Total Expenditure .....£	205,433	13	2

Adjustments to be made:—

	£	s.	d.
Total expenditure .....£	205,433	13	2
Add ⅓ of relaying Redfern Line, 1882	2,387	10	0
Add ⅓ of relaying Crown-street Line, 1883	173	13	4
£	207,994	16	6

No. 24.

No. 24.

CAMDEN TRAMWAYS.

WORKING EXPENDITURE during the Year ending December 31, 1885.

LOCOMOTIVE BRANCH.	£	s.	d.
GENERAL EXPENSES.			
Schedule No			
1. Superintendence and office expenses	22	8	11
4. Repairs of machinery, tools, and implements	2	6	5
8. Sundries	0	15	0
RUNNING EXPENSES.			
10. Wages of enginemen and firemen	491	13	7
11. Wages of cleaners, fuelmen, and shed labourers	110	2	6
12 Fuel	74	11	2
13. Running stores, exclusive of fuel	58	2	6
14. Cleaners' stores	13	12	1
15. Water supply	58	14	11
REPAIRING EXPENSES.			
20. Repairs of engines	75	14	10
CARRIAGES.			
30. Repairs of carriages	6	13	4
31. Renewals of carriages	179	4	6
WAGGONS			
40. Repairs to waggons	1	5	0
Total, Locomotive Branch ... £	1,095	4	9
PERMANENT WAY BRANCH.			
MAINTENANCE.			
60. Repairs of line, sidings, &c.	736	17	7
61. Renewal of line, sidings, &c.	14	7	11
62. Repairs of station buildings, platforms, gatehouses, wharves, signals, &c.	18	4	5

PERMANENT WAY BRANCH—*contd.*	£	s.	d.
MAINTENANCE—*continued.*			
Schedule No			
64. Repairs of tunnels, viaducts, bridges, culverts, gates, fences, &c.	1	19	7
65. Renewals of tunnels, viaducts, bridges, culverts, gates, fences, &c.	0	4	4
66. Slips and flood repairs	0	16	6
Total, Permanent Way Branch ... £	772	10	4
TRAFFIC BRANCH.			
GENERAL EXPENSES.			
70. Management and office expenses	164	10	3
71. Wages of signalmen, switchmen, gatekeepers, &c.	29	4	0
75 Renewals of station furniture, fittings, and implements (includes cranes and weighing machines)	8	19	3
76. Fuel and light (includes lamps, gas, &c.)	20	16	5
78. Sundries	10	2	10
COACHING CHARGES.			
80. Wages of clerks, guards, conductors, porters, &c.	235	3	11
81. Compensation for personal injury	16	15	0
Total, Traffic Branch	485	11	8
GENERAL CHARGES.			
100. Proportion of general establishment	91	7	3
105. Holidays	19	10	8
Total, General Charges ... £	110	17	11
Grand Total, Working Expenses ... £	2,464	4	8

SUMMARY OF EXPENDITURE.

	£	s.	d.
Locomotive Branch	1,095	4	9
Permanent Way Branch	772	10	4
Traffic Branch	485	11	8
General Charges	110	17	11
Total Expenditure	£2,464	4	8

No. 25.

STATEMENT of the Number and Class of Rolling Stock manufactured by different Contractors during the year 1885, Great Southern, Western, Richmond, and Northern Lines.

Locomotives.

Lines and Contractor.	Passenger.	Tank.	Goods.	Total.
SOUTHERN AND WESTERN.				
Beyer, Peacock, & Co.	.....	6	15	21
Baldwin Loco. Works	10	...	10	20
Dûbs & Co.	4	...	...	4
Total, Southern and Western	14	6	25	45
NORTHERN.				
Beyer, Peacock, & Co.	...	...	5	5
Dûbs & Co.	4	...	...	4
Total, Northern	4	...	5	9
Total, all lines, during 1885	18	6	30	54

Passenger Traffic.

	Sleeping Carriages.	First class Carriages (American type).	First-class Carriages, Ordinary, on Bogies.	First-class Carriages (four wheels).	Composite Carriages (American type).	Composite Carriages, Ordinary, on Bogies.	Composite Brake-vans (eight wheels).	Composite Brake-vans (six wheels).	Composite Brake-vans (four wheels).	Second-class Carriages (American type).	Second class Carriages, Ordinary, on Bogies.	Workmen's-vans.	Horse-boxes.	Mail-vans.	Total.
SOUTHERN AND WESTERN.															
Hudson Bros. (Limited)	2	3	3	6	2	5	2	8	2	3	9	6	9	...	60
Total, Southern and Western	2	3	3	6	2	5	2	8	2	3	9	6	9	...	60
NORTHERN.															
Hudson Bros. (Limited)	...	...	3	...	...	2	3	...	...	...	...	...	10	2	20
Total, Northern	...	...	3	...	...	2	3	...	...	...	...	...	10	2	20
Total, all lines, during 1885	2	3	6	6	2	7	5	8	2	3	9	6	19	2	80

Goods Traffic.

	Brake-vans.	Accident Van.	A Waggons.	B Waggons.	D Waggons.	E Waggons	G Waggons.	(H) Dump-cars.	Powder-vans.	Sheep-vans.	Cattle Waggons.	Meat-vans.	Water Trucks.	Ballast Waggons	Combination Cars	C (Covered Goods) Vans.	Total.
SOUTHERN AND WESTERN.																	
Hudson Bros. (Limited)	5	1	...	...	..	.	30	...	4	20	29	...	19	148	14	10	280
Stephen Glasson	...	...	...	..	264	18	88	...	...	...	...	...	...	...	...	...	370
Swansea Company	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Carson Woods & Co.	...	...	...	...	...	...	...	178	...	...	...	...	...	...	...	...	178
Total, Southern and Western	5	1	...	...	264	18	118	178	4	20	29	...	19	148	14	11	829
NORTHERN.																	
Hudson Bros. (Limited)	..	...	8	10	122	10	...	...	6	6	7	6	...	...	...	24	199
Locomotive Dept., H.-S. Pt.	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
Total, Northern	...	...	8	10	122	12	...	..	6	6	7	6	...	...	...	24	201
Total, all lines, during 1885	5	1	8	10	386	30	118	178	10	26	36	6	19	148	14	35	1030

No. 26.*

RETURN showing the descriptions and quantities of GOODS, LIVE STOCK, &c., carried on Great Southern, Western, and Northern Railways, for the year 1885.

Description of Goods.	Great Southern and Western.				Great Northern.			
	Tons.	Freight.			Tons.	Freight.		
SUMMARY.		£	s.	d.		£	s.	d.
A Class	189 825	80,443	16	0	60,082	17,989	2	7
B ,,	48,148	60,179	6	5	13,964	17,566	10	2
1st Class	42,992	88,952	7	2	16,734	36,377	0	6
2nd ,,	28,274	55,325	12	8	14,200	25,861	3	5
3rd ,,	52,506	202,920	15	1	19,883	68,800	8	6
4th ,,	2,745	10,909	6	11	893	3,313	8	5
Miscellaneous Class	357,781	59,493	0	4	32,858	3,029	19	9
,, ,, in truck loads	1,579	1,081	7	2	377	289	11	2
A ,, ,,	65,423	46,186	4	6	7,197	5,734	9	11
Mixed Goods ,,	7,441	24,709	10	8	.....	.....		
Coal	184,750	63,009	15	6	1,640,601	77,603	6	5
Gunpowder	793	6,432	9	3	135	1,107	0	5
Hay, straw, and chaff in trucks	71,123	33,016	13	3	11,161	3,875	1	11
Meat, in trucks	9 503	2,407	13	8	132	223	18	3
Milk	1,821	2,137	4	8	.....	0	4	0
Shale	21,293	7,141	9	2	26	3	11	10
Sugar, by truck	4,520	14.344	13	9	1,889	5,405	0	9
Wool, by bale	47,377	126,426	18	8	15,813	38,330	14	5
	1,137,894	885,118	4	10	1,835,945	305,510	12	5
Less difference over-charges and special credits	.....	8,664	17	8	.....	1,896	1	8
	.....	876,453	7	2	.....	303,614	10	9
Live stock	59,937	136,940	10	9	13,606	22,308	19	3
Demurrage, storage, weighing, use of cranes, &c.	.....	4,207	10	7	.....	2,116	12	2
Total	1,197,831	1,017,601	8	6	1,849,551	328,040	2	2
Departmental—								
Coal	151,640	68,322	6	7	19,556	6,529	17	4
General	49,867	35 301	6	8	4,842	4,618	7	11
Grand total	1,399 388	1,121,225	1	9	1,873,949	339,188	7	5

* Includes Camden Line.

No. 27.

REVENUE and EXPENDITURE of each Station, with other particulars, for the year ending 31st December, 1885.

Stations	No of hands employed, including Station masters	Total Expenditure	No of Tickets issued	Revenue from Tickets and Coaching Traffic	Goods		Coal		Hay, Straw, & Chaff		Wool		Earnings from Goods Traffic	Total Earnings
					Tonnage outwards	Tonnage inwards	Tonnage outwards	Tonnage inwards	Trucks outwards	Trucks inwards	Bales outwards	Bales inwards		
				SUBURBAN AND ILLAWARRA RAILWAY, INCLUDING SYDNEY.										
		£ s d		£ s d									£ s. d	£ s. d.
Central	8	1 293 6 0	23,163	42,099 14 2	. .			... .	.		...	.. ..	....	42,099 14 2
Darling Harbour	156	18,564 7 1	.....	. . ..	84,615	269,179	13,720	18,935	1,659	12,841	6,724	252,717	202,746 13 2	202,746 13 2
Sydney	345	41,629 4 5	1,523,059	177,075 6 7	175,879	4,426	1,712	1,280	162	..	7,636		21,290 2 9	198,365 9 4
Eveleigh	17	1,720 11 0	154,396	2,593 18 7			.	...			.			2,593 18 7
M'Donald Town	4	1,065 4 0	137,909	2,242 0 9	. .	. . ..	. .		...	...	. ..			2,242 0 9
Newtown	20	2,731 2 2	375,779	7,235 19 8	1,813	53,365	176	47,629	5	67	.	61	26,165 5 11	33,401 5 7
Stanmore	6	848 8 0	101,266	2,958 13 9	...	..	...	. .	...	...		.		2,958 13 9
Petersham	16	2,396 10 3	534,224	14,888 16 4	638	23,826	45	17,493	6	97		.	11,085 17 8	25,974 14 0
Summer Hill	8	980 11 8	233,560	8,131 9 9	...	15	.... .	6			. ...		18 5 5	8,149 15 2
Ashfield	12	1,642 6 0	254,449	10,893 2 6	904	14,856	39	6,259	3	107	. .		4,669 10 11	15,562 13 5
Croydon	8	789 11 7	136,852	5,895 2 1	2	18		6	..		.	... .	13 14 1	5,908 16 2
Burwood	13	1,756 17 5	271,785	13,058 15 3	1,239	16,549	20	8,010	11	372			5 406 5 11	18,465 1 2
Strathfield	4	570 9 1	48,199	3,103 3 1			.		. . .			. .	... .	3,103 3 1
Homebush and Platforms	18	2,485 14 5	71,879	4,207 11 2	1,725	5,032		1,326	1	33		...	97,277 3 6	101,484 14 8
Rookwood	7	1,228 19 7	73,898	2,935 17 2	3,201	5,378	...	1,817	1	60	41	23	1,562 3 3	4,498 0 5
Auburn	8	826 18 6	44,010	1,633 3 6	505	3,717		1,227		2			1,140 14 6	2,773 18 0
Granville and Platforms	35	4,503 6 9	159,713	8,563 3 0	8,669	22,003		5,698	1	128	1,268	2,014	21,154 13 11	29,717 16 11
Erskineville	3	136 6 4	16,455	321 3 8	...	.		.	.		.		.	321 3 8
St Peter's	5	630 16 9	106,617	1,852 9 2						.	...	.	.	1,852 9 2
Marrickville	6	788 1 10	83,081	1,803 9 3	1,798	4,415	..	15,294	.....	11	. ....	.	5,950 1 11	7,753 11 2
Tempe	3	366 13 3	42,051	1,117 18 10	.	4		.			. .		. .	1,117 18 10
Arncliffe	5	537 8 7	31,119	760 8 6	3	16	.	...	...			. ....	1 18 0	762 6 6
Rockdale	5	545 10 5	53,423	1,542 11 3	109	6,418	...	553	...	22	. .	...	1,346 14 2	2,889 5 5
Kogarah	3	463 9 0	49,556	1,661 8 2	1	102			..	1	...	. ...	12 11 3	1,673 19 5
Hurstville	6	901 19 0	56,449	1,916 5 7	1,457	9,703	19	776	1	97			1,937 18 1	3,854 3 8
Sutherland	...	... .	490	11 18 6	.....	...		... ...	. .		...	. ...	.. ..	11 18 6
Total . . 1885	721	89,403 13 1	4,583,382	318,503 10 3	282,558	439,022	15,731	126,309	1,850	13,838	15,669	254,815	401,779 14 5	720,283 4 8
Total 1884	669	77,973 17 0	3,656,712	279,487 7 10½	277,696	390,227	11,592	104,265	2,056	9,916	19,077	208,963	426,220 19 10	705,708 7 8½

No. 27—*continued.*

Stations.	Number of hands employed, including Station-masters.	Total Expenditure.	Number of Tickets issued.	Revenue from Tickets and Coaching Traffic.	Goods.		Coal.		Hay, Straw, and Chaff.		Wool.		Earnings from Goods Traffic.	Total Earnings
					Tonnage outwards.	Tonnage inwards.	Tonnage outwards.	Tonnage inwards.	Trucks outwards.	Trucks inwards.	Bales outwards.	Bales inwards.		
GREAT SOUTHERN RAILWAY.														
		£ s. d.		£ s. d.									£ s. d.	£ s. d.
Merrylands	1	142 4 4	6,239	401 7 6	15,109	1,766	...	2,898	...	6	...	...	1,619 3 10	2,020 11 4
Guildford	1	143 0 4	9,836	502 9 7	1,849	2,376	...	306	...	3	...	...	370 0 4	872 9 11
Fairfield	5	514 16 9	35,718	2,597 5 5	6,457	3,715	...	267	6	70	3	...	903 17 11	3,501 3 4
Cabramatta and Platforms	1	137 11 0	6,916	360 15 11	4,081	816	...	69	3	15	...	...	204 10 5	565 6 4
Liverpool	10	1,388 6 7	40,250	4,432 17 7	31,732	6,058	...	7,140	97	90	9,814	12,819	6,665 15 10	11,098 13 5
Minto and Platforms	1	161 15 2	5,407	456 1 2	11,180	631	...	...	29	18	15	...	120 0 0	576 1 2
Campbelltown	9	1,190 16 2	34,702	6,019 5 3	2,688	6,296	...	69	109	56	30	...	2,501 1 0	8,520 6 3
Menangle and Platforms	4	600 16 3	3,183	535 17 9	787	437		...	258	4	4	...	164 4 0	700 1 9
Douglas Park	3	346 2 9	3,360	805 14 9	684	858	...	13	43	11	12	82	415 7 9	1,221 2 6
Picton	12	1,434 2 5	7,592	2,165 11 1	1,749	2,588	...	31	114	32	3	...	1,759 15 7	3,925 6 8
Colo Vale and Platforms	8	1155 6 0	3,419	303 5 0	11,013	585	...		9	48	...	...	114 15 10	418 0 10
Mittagong ,,	8	1064 11 11	11,247	3,093 4 11	17,231	3,538	2,943	216	23	37	86	...	9,457 15 2	12,551 0 1
Bowral	5	646 16 4	9,023	2,463 3 10	817	3,574	7	259	7	67	7	...	3,144 3 0	5,607 6 10
Moss Vale and Platforms	7	885 4 4	12,266	5,036 7 2	2,670	4,025	1,807	346	2	95	68	...	4,247 17 9	9,284 4 11
Bundanoon ,,	3	313 0 4	3,554	629 9 8	2,445	372	196	112	...	4	5	...	313 18 5	943 8 1
Wingello ,,	2	245 8 6	1,269	216 19 3	2,439	62	2,463		...	...	...	...	97 16 1	314 15 4
Marulan ,,	5	673 17 3	5,157	1,381 8 5	10,691	1,213	...	1,343	296	29	743	...	1,228 11 2	2,609 19 7
Towrang ,,	2	233 4 10	1,559	170 8 9	3,870	85	...	...	1	...	55	7	40 2 9	210 11 6
Goulburn ,,	40	5,178 16 7	39,178	21,212 7 7	28,169	36,867	2	6,480	356	60	7,152	325	43,123 0 4	64,335 7 11
Breadalbane ,,	3	329 17 0	2,436	597 3 0	912	305	...	...	48	...	401	...	324 5 10	921 8 10
Gunning ,,	5	479 14 10	3,880	1,458 3 0	1,283	776	...	...	38	...	1,712	...	1,619 4 0	3,077 7 0
Jerrawa	2	253 1 2	668	153 9 1	118	42	...	...	42	...	42	...	52 8 0	205 17 1
Yass	5	641 4 2	6,707	4,349 10 4	1,385	2,504	...	12	25	...	3,485	...	5,554 6 6	9,903 16 10
Bowning and Platforms	6	726 0 10	1,663	637 19 4	751	1,416	...		40	...	2,165	...	4,831 1 10	5,469 1 2
Binalong	5	573 7 2	3,491	1,922 4 2	808	1,062	...	...	7	1	2,738	...	3,156 7 2	5,078 11 4
Rocky Ponds and Platforms	2	263 18 9	361	61 0 6	388	49		...	1	...	...	...	3 8 9	64 9 3
Harden ,,	12	1,676 2 6	7,537	3,195 1 5	1,569	2,775	235	274	202	...	2,558	...	7,269 6 7	10,464 8 0
Murrumburrah ,,	2	249 9 11	8,152	3,520 9 9	2,517	2,723	50	287	66	14	24	...	4,249 11 10	7,770 1 7
Wallendbeen ,,	5	594 14 7	2,283	770 7 6	2,898	862	...	135	203	1	1,601		640 14 9	1,411 2 3
Cootamundra ,,	10	1,527 11 3	12,958	10,404 15 4	5,115	9,335	50	1,097	159	4	6,657	...	22,988 12 0	33,393 7 4
Bethungra ,,	3	361 7 2	1,572	521 13 11	2,320	332	...	...	18	2	734	...	282 17 7	804 11 6
Illabo	3	323 1 8	1,227	404 9 3	1,106	272		...	20	...	1,371	...	387 0 11	791 10 2
Junee Junction	13	2,234 10 5	13,299	7,600 15 6	1,097	3,889	9	92	74	26	953	4	4,346 19 8	11,947 15 2
Harefield	2	200 13 8	567	128 14 3	577	72	...	...	37	...	492	...	72 14 11	201 9 2
Bomen	3	250 3 9	629	358 4 9	51	48	...	...	12	...	849	...	145 8 8	503 13 5
South Wagga	13	1,704 1 2	19,186	12,636 14 5	4,990	11,200	...	878	174	14	6,342	3	22,329 8 4	34,966 2 9
Sandy Creek and Platforms	2	230 9 3	1,084	195 13 10	368	118		...	5	...	154	...	75 17 3	271 11 1
The Rock	3	404 3 8	2,646	765 15 9	305	602	...	...	...	4	2,792	...	603 4 11	1,369 0 8
Yerong Creek	3	351 5 0	3,044	1,109 15 6	257	732	...	...	1	4	1,840	...	677 17 4	1,787 12 10
Culcairn	5	536 18 10	3,514	1,399 14 5	660	843		...	17	2	1,238	...	1,622 14 8	3,022 9 1
Gerogery	5	486 7 9	2,038	452 17 1	3,766	441	...	12	97	...	451	...	408 4 4	861 1 5
Yambla	1	240 0 4	1,012	279 0 9	588	146	...	...	75	...	903	...	203 15 11	472 16 8
Albury and Platforms	24	3,251 8 8	29,199	17,847 3 3½	7,816	12,779	...	436	188	9	128	6,286	8,774 14 2	26,621 17 5½
Tarago ,,	5	780 7 8	6,043	3,193 1 5	2,787	2,823	29	130	189	3	3,186	...	4,651 11 2	7,844 12 7
Bungendore	8	628 0 9	7,007	5,643 5 2	517	16,107	...	231	6	22	4,744	...	23,883 16 10	29,527 2 0
Young and Platforms	5	687 16 2	7,251	5,665 19 5	2,184	8,681	...	206	13	13	12,435	...	24,632 5 2	30,308 4 7

No. 27—*continued.*

Stations.	No. of hands employed, including Station-masters.	Total Expenditure.	No of Tickets issued.	Revenue from Tickets and Coaching Traffic.	Goods. Tonnage outwards.	Goods. Tonnage inwards.	Coal. Tonnage outwards.	Coal. Tonnage inwards.	Hay, Straw, and Chaff. Trucks outwards	Hay, Straw, and Chaff. Trucks inwards	Wool. Bales outwards.	Wool. Bales inwards.	Earnings from Goods Traffic.	Total Earnings.
GREAT SOUTHERN RAILWAY—*continued.*														
		£ s. d.		£ s. d.									£ s. d.	£ s d.
Old Junee	2	285 7 5	1,586	374 18 0	876	545	3	.....	100	5	4,339	...	2,420 8 11	2,795 6 11
Coolaman and Platforms	2	344 5 5	3,035	1,114 14 11	4,137	1,408	...	6	50	15	2,685	.....	2,901 19 7	4,016 14 6
Grong Grong ,,	1	130 0 0	2,045	489 15 1	1,722	534	.....	6	3	32	3,113	.....	273 5 6	763 0 7
Narrandera	8	1,272 9 2	9,846	6,266 2 3	4,760	4,036	5	43	181	274	3,025	58	11,141 8 1	17,407 10 4
Yanco	1	155 2 1	461	101 19 10	21	125	...	...	4	14	796	...	158 19 6	260 19 4
Whitton	4	530 3 6	2,099	1,344 9 5	174	1,377	...	.....	3	54	6,223	...	3,918 9 11	5,262 19 4
Darlington	2	341 19 1	1,097	693 3 6	13	268	...	.	.....	13	2,200	.....	1,446 0 8	2,139 4 2
Bringagee and Platforms	1	130 0 0	617	213 3 10	11	207	...	...	3	65	1,005	...	281 3 5	494 7 3
Carrathool ,,	3	503 19 3	3,534	1,864 7 1	578	1,625	. .	.	27	250	3,472	.....	5,655 13 9	7 520 0 10
Hay ,,	7	1,147 1 5	5,909	7,786 2 4	687	7,215	...	207	22	559	8,877	.....	21,243 0 11	29,029 3 3
Colombo ,,	1	214 6 5	2,616	663 8 6	1,062	514	..	...	8	19	1,436	.....	1,254 1 1	1,917 9 7
Jerilderie ,,	4	429 0 0	1,805	1,265 16 3	291	3,186	...	36	13	155	6,067	34	5,118 14 7	6,384 10 10
Victorian Railways	...	.....	22,407	26,575 16 5½	9,496	1,730	. .	.....	...	.....	.....	427	472 0 9	27,047 17 2½
Camden and Platforms	2	287 6 5	11,894	1,465 18 2	7,019	3,647	...	37	939	25	39	21	1,779 14 6	3,245 12 8
1885	322	42,539 13 9	458,280	188,276 18 4	233,641	183,213	7,799	23,674	4,457	2,244	121,269	20,066	278,344 17 5	466,621 15 9
1884	319	39,221 17 7	438,298	174,833 12 6½	201,003	190,293	10,083	23,011	4,586	3,054	104,948	20,425	257,492 17 5	432,326 9 11½
GREAT WESTERN RAILWAY.														
		£ s. d.		£ s. d.									£ s d.	£ s. d.
Parramatta	25	3,323 14 6	282,625	18,189 1 4	12,288	27,534	70	6,822	18	705	9	127	8,815 8 4	27,004 9 8
Seven Hills and Platforms	2	282 14 2	10,092	553 12 3	4,659	4,815	.....	546	...	8	...	...	728 15 4	1,282 7 7
Blacktown	7	1,016 5 6	12,238	1,289 5 7	6,536	5,444	.....	36	1	53	.....	...	4,012 0 6	5 301 6 1
Rooty Hill and Platforms	5	534 9 4	10,180	1,238 19 3	15,035	2,193	...	18	148	200	.....	...	896 8 3	2,135 7 6
St Mary's ,,	6	606 7 4	14,882	1,535 12 0	32,151	5,613	18	683	34	20	5	.....	1,610 0 0	3,145 12 0
Penrith ,,	26	3,397 4 10	24,820	5,148 9 6	16,409	6,561	13	623	386	35	17	...	3,399 12 3	8,548 1 9
Emu Plains	5	587 8 6	3,856	507 16 9	72,395	321	.....	851	72	4	.....	...	1,643 4 4	2,151 1 1
Glenbrook and Platforms	5	629 1 0	851	146 3 9	300	142	...	6	...	3	.....	.....	52 0 5	198 4 2
Springwood ,,	4	508 17 5	3,726	685 13 10	1,536	762	.....	60	.....	1	...	...	335 1 3	1,020 15 1
Linden ,,	2	267 5 1	527	24 1 1	...	...	...	.....	..	.....	.....	.....	.....	24 1 1
Lawson ,,	3	380 4 6	2,498	443 7 0	8	1,617	. .	238	1	8	...	.....	433 10 2	876 17 2
Wentworth Falls	2	239 14 6	2,078	217 17 10	13	91	1	6	. .	.....	.....	...	82 12 1	300 9 11
Katoomba and Platforms	6	728 11 3	7,334	1,507 6 2	1,337	1,965	762	109	...	10	.....	...	1,440 0 11	2 947 7 1
Blackheath ,,	3	277 8 8	4,584	631 3 2	430	901	26,507	214	.	18	.		763 14 4	1,394 17 6
Mount Victoria ,,	9	1,236 7 2	10,409	2,597 10 8	9,512	2,415	821	382	. .	22	242	...	1,377 1 2	3,974 11 10
Mount Wilson ,,	3	264 19 4	980	282 9 9	281	177	.....	.....	.	.....	.....	.....	134 13 7	417 3 4
Clarence	2	280 18 3	621	74 3 2	1,060	109	...	2	.	12	...	.....	41 5 4	115 8 6
Zig Zag	4	369 14 0	476	29 1 10	...	.....	.	.....	...	...	...	...	.....	29 1 10
Esk Bank and Platforms	17	2,291 0 2	8,775	2,351 5 0	6,992	5,873	131,263	6	4	89	5	...	6,458 4 7	8,809 9 7
Lithgow	2	390 9 3	5,774	1,647 4 11	...	.....	...	.....	...	...	.....	...	.....	1,647 4 11
Bowenfels	4	481 13 8	2,412	676 8 6	337	510	5	12	. .	6	24	309	795 16 10	1,472 5 4
Wallerawang and Platforms	15	1,435 7 6	9,884	2,611 14 8	1,149	1,425	2	244	36	26	73	14	1,279 14 10	3,891 9 6

No. 27—*continued.*

GREAT WESTERN RAILWAY—*continued.*

Stations	No of hands employed, including Station masters.	Total Expenditure	No of Tickets issued	Revenue from Tickets and Coaching Traffic	Goods		Coal		Hay, Straw, and Chaff		Wool.		Earnings from Goods Traffic	Total Earnings.
					Tonnage outwards.	Tonnage inwards	Tonnage outwards	Tonnage inwards	Trucks outwards	Trucks inwards.	Bales outwards	Bales inwards.		
		£ s d.		£ s. d.									£ s d.	£ s. d
Rydal	9	1,024 6 6	5,846	2,079 19 6	1,180	10,961	...	1,286	37	60	37	...	13,503 7 7	15,583 7 1
Tarana	4	537 12 5	3,593	1,136 19 0	565	801	...	...	96	1	465	...	865 6 6	2,002 5 6
Locksley	2	218 11 8	1,088	207 0 9	295	40	...	...	186		23	...	24 17 6	231 18 3
Brewongle	6	626 18 6	3,426	673 11 11	1,297	622	...	178	845		242	...	634 16 3	1,308 8 2
Raglan	2	233 2 8	879	191 6 2	61	263	...	99	872	1	95	...	260 9 9	451 15 11
Kelso	7	1,153 0 10	2,209	916 9 10	135	845	...	364	1,556	4	537	...	3,088 14 3	4,005 4 1
Bathurst	40	4,212 7 1	39,260	17,851 14 8	9,194	27,197	...	10,748	1,231	16	1,654	119	27,727 10 9	45,579 5 5
Perth and Platforms	2	235 6 0	4,632	424 4 8	3,126	346	...	30	487	...	779	...	441 3 11	865 8 7
George's Plains	4	458 5 10	4,503	492 4 10	1,136	423	...	6	334	...	64	...	624 9 5	1,116 14 3
Wimbledon	2	267 16 9	1,533	201 1 2	3,825	98	...	...	58	...	116	...	36 9 6	237 10 8
Newbridge	5	619 13 11	5,619	1,156 16 1	2,771	749	...	...	482	...	704	...	1,361 2 8	2,517 18 9
Blayney and Platforms	15	1,735 14 11	16,747	7,310 10 4	3,255	16,621	69	695	454	10	4,513	...	21,771 3 5	29,081 13 9
Millthorpe "	4	635 19 4	5,905	1,022 14 6	3 868	1,740	...	1,544	1,039	...	789	...	1,176 2 1	2,198 16 7
Spring Hill	5	555 3 5	6,133	849 19 7	507	1,056	...	31	648	3	16	...	611 3 10	1,461 3 5
Orange and Platforms	33	3,861 1 4	28,355	15,716 1 3	13,094	25,178	...	3,724	1,196	60	14,246	2	48,033 13 2	63,749 14 5
Mullion Creek	2	316 3 0	1,655	220 15 7	3,603	75	...	...	2	...	238	...	76 9 0	297 4 7
Kerr's Creek	2	311 2 10	1,214	191 8 7	2,887	32	...	...	7	...	9	...	17 11 8	209 0 3
Warne	3	359 16 7	2,133	613 5 9	1,319	250	...	...	99	...	586	...	293 6 7	906 12 4
Ironbarks and Platforms	5	598 18 6	2,481	709 15 6	419	493	...	61	18	...	66	...	759 15 10	1,469 11 4
Springs "	4	311 4 4	2,243	491 11 9	902	211	...	...	78	...	737	...	243 2 0	734 13 9
Wellington "	13	1,819 4 10	8,683	4,395 17 8	3,812	3,412	...	210	181	2	2,149	...	6,925 3 6	11,321 1 2
Mary Vale	2	240 9 4	1,651	256 19 2	581	118	...	13	154	...	75		130 17 4	387 16 6
Murrumbidgerie and Platforms	5	371 0 5	2,085	472 18 9	1,490	213	...	...	118	...	886	...	138 14 0	611 12 9
Dubbo "	34	4,092 13 6	15,479	15,226 8 3	4,802	6,987	...	726		52	11,483	159	25,311 7 7	40,537 15 10
Narromine "	4	498 12 0	1,818	700 10 8	1,162	308	...	...	26		1,494	...	595 4 7	1,295 15 3
Trangie "	4	436 10 1	1,945	1,224 5 5	1,122	717	...	...	5	18	6,470		3,470 16 11	4,695 2 4
Nevertire	9	1,011 2 0	3,398	3,621 9 7	122	2,332		7	3	36	10,992	...	9,602 14 8	13,224 4 3
Mullengudgery and Platforms	2	230 7 2	378	208 6 2	5	66	...	...	5	...	617	...	214 15 5	423 1 7
Nyngan	14	1,756 10 9	6,849	8,514 5 7	4,824	9,362	...	53	...	399	17,321	...	29 312 6 10	37,856 12 5
Girilambone	3	521 19 8	1,346	881 6 4	360	234	...	...	1	3	1,940	...	1,060 17 1	1,942 3 5
Wilga	2	236 17 8	1,273	741 13 8	137	215	...	1,850	...	31	1	...	1,763 7 2	2,505 0 10
Coolabah and Platforms	3	348 8 1	1,300	1,042 0 0	42	393	...	...	1	5	2,805	...	1,876 7 2	2,918 7 2
Byrock "	16	1,965 17 8	4,710	7,853 16 1	512	11,008	...	30	7	277	20,459	...	48,716 5 13	56,570 1 4
Mooculta	2	65 2 0	92	27 3 2		9		...	...	...	...	...	5 10 7	32 13 9
Bourke	26	940 9 10	2,794	6,132 11 1	129	3,440		19	2	166	24,489		29,570 5 2	35,702 16 3
Piper's Flat and Platforms	2	185 19 2	1,543	291 19 6	148	401	1,270	...	9	...	15	...	487 16 7	779 16 1
Capertee "	1	171 4 2	1,460	567 1 1	3,414	609	94	6	2	4	407	...	473 15 11	1,040 17 0
Rylstone "	4	601 15 8	3,905	1,743 10 11	800	742	325	50	20	2	833	...	1,295 2 3	3,038 13 2
Mudgee "	10	1,621 19 8	8,708	7,639 9 5	4,108	4,985	...	1,011	377	...	9,263	...	17,993 19 2	25,633 8 7
Borenore "	...	...	129	10 3 5	...	196	...	...	...	...	...	...	0 1 0	10 4 5
Molong "	...	21 16 3	250	85 10 1	38	...	...	...	...	...	21	...	84 17 3	170 7 4
1885	*49*	*5930 2 3*	628,872	156,483 5 5	263,475	202,216	161,220	33,599	11,336	2,370	138,011	730	334,910 5 7	491,393 11 0
1884	*469*	*51,587 5*	*581,767*	*139,833 1 9*	*255,767*	*199,763*	*138,093*	*31,536*	*9,845*	*4,579*	*105,645*	*733*	*315,589 1 7*	*455,423 0 4*

No. 27—*continued.*

Stations.	No. of hands employed, including Station-masters	Total Expenditure.	No. of Tickets issued.	Revenue from Tickets and Coaching Traffic.	Goods		Coal.		Hay, Straw, and Chaff.		Wool.		Earnings from Goods Traffic.	Total Earnings.
					Tonnage outwards.	Tonnage inwards.	Tonnage outwards	Tonnage inwards.	Trucks outwards.	Trucks inwards.	Bales outwards.	Bales inwards.		
WINDSOR AND RICHMOND RAILWAYS.														
		£ s. d.		£ s. d.									£ s. d.	£ s. d.
Riverstone and Platforms	2	224 2 1	10,414	995 4 4	32,184	2,090	.....	516	33	15	997	910	6,284 1 7	7,279 5 11
Mulgrave	2	234 16 2	2,942	512 3 3	6,429	539	.....	92	250	12	719	167	376 7 4	888 10 7
Windsor	5	661 18 9	19,903	3,259 1 5	9,030	4,645	.....	445	481	44	7	6	2,185 1 1	5,444 2 6
Clarendon	1	144 8 0	2,018	398 2 4	135	298	.....	...	26	1	1	.....	77 16 11	475 19 3
Richmond	5	628 3 8	14,022	2,933 13 1	7,192	2,621	.....	115	113	22	1	.....	1,590 4 3	4,523 17 4
1885	*15*	*1,893 8 8*	49,299	8,098 4 5	54,970	10,193	..	1,168	903	94	1,745	1,083	10,513 11 2	18,611 15 7
1884	*15*	*1,844 19 10*	*48,119*	*7,545 17 0*	*55,711*	*9,897*	.....	*893*	*1,126*	*64*	*1,837*	*1,656*	*9,645 5 5*	*17,191 2 5*
GREAT NORTHERN RAILWAY.														
Central Office		.....	629	2,227 11 11	.....	....	.....	..	.....	.....	.....	.....	.....	2,227 11 11
Newcastle	159	20,162 19 3	117,904	25,827 3 6	61,465	37,381	142	1,612,160	378	970	96	57,176	113,383 2 1	139,210 5 7
Honeysuckle Point	17	2,186 18 2	49,324	2,413 2 11	3,478	6,070	16	594	7	138	.....	... .	1,517 8 0	3,930 10 11
Bullock Island	17	1,986 13 0	.	13 1 7	8,557	4,446	765	724	4	5	.....	.....	8,741 8 2	8,754 9 9
Hamilton	10	1,373 6 2	51,489	1,637 8 3	717	7,447	.	143	1	54	1	6	305 6 1	1,942 14 4
Hamilton Weighbridge	...	.....	.....	.....	12,466	... ...	1,611,334	...	... ..	.....	...	.....	.....	.....
Waratah	13	1,504 4 4	63,468	3,001 11 4	12,209	7,733	6,278	2,081	4	216	1	.... .	675 15 2	3,677 6 6
Hexham	8	590 2 3	19,032	1,123 0 3	432	1,586	40	1,711	48	35	1	...	464 10 4	1,587 10 7
Tarro	1	130 0 2	5,485	344 13 4	771	218	... .	... .	32	1	.... .	.. ..	71 19 9	416 13 1
Woodford	1	130 0 2	3,567	183 5 10	1,437	687	.....	... .	14	. .	.....	... ..	24 14 11	208 0 9
East Maitland	12	1,105 10 5	35,159	2,878 16 8	3,204	1,411	6	63	188	44	.....	...	3,650 8 11	6,529 5 7
High-street	2	385 8 6	30,156	2,895 17 8	7	1,962	.....	..	.....	.....	..	.....	192 0 4	3,087 18 0
West Maitland	26	3,746 4 0	37,332	6,995 10 5	10,696	10,668	1	1,717	660	247	66	218	11,116 2 8	18,111 13 1
Farley	5	436 4 8	2,141	165 12 10	1,040	159	.. ..	15	2	2	1	.	481 5 2	646 18 0
Lochinvar	6	499 8 4	3,514	471 14 10	224	318	. ...	23	154	... ..	24	.....	173 5 5	645 0 3
Allandale	1	130 0 0	2,987	306 19 10	1,138	150	.....	... . .	15	... ..	.. . ..	... .	67 2 5	374 2 3
Greta	6	508 18 7	7,244	1,034 4 2	270	1,243	11,849	39	8	13	2	....	544 13 9	1,578 17 11
Branxton	5	502 18 8	7,481	1,185 17 10	2,528	953	2	59	128	1	174	3	435 6 8	1,621 4 6
Singleton	34	3,734 8 9	16,999	6,064 8 7	3,018	4,153	768	9,447	197	17	306	5	4,988 6 0	11,052 14 7
Glennie's Creek	1	215 17 4	1,647	256 13 6	491	280	9,383		49	...	28	. .....	153 3 0	409 16 6
Ravensworth	8	381 4 2	1 967	359 14 2	144	131	...	..	9	9	515	. .	185 11 7	545 5 9
Musclebrook	20	1,669 4 4	9,846	3,572 5 0	1,415	3,357	...	110	34	12	3,356	.... .	4,679 4 3	8,251 9 3
Aberdeen	7	493 6 9	1,674	407 16 10	249	444	. ... ..	5	12	1	231	... .	551 1 8	958 18 6
Scone	8	923 0 3	5,906	2,219 7 10	696	1,814	. .	68	17	2	3,315	3	2,364 18 9	4,584 6 7
Wingen	7	395 10 10	1,174	280 3 6	188	160	. . .	... .	27	.....	420	... ..	150 10 7	430 14 1
Blandford	3	208 4 4	946	377 1 8	53	274	....		17	.....	1,141	... .	307 2 3	684 3 11
Murrurundi	33	4,030 16 8	5,625	2,561 9 9	682	1,837	...	161	84	16	260	....	3,124 7 11	5,685 17 8
Doughboy Hollow	5	329 8 1	1,079	120 13 3	36	236	.....	..	..	.....	576	... ..	119 7 8	240 0 11
Willow-tree	7	649 17 4	2,977	804 9 11	198	385	. .	...	35	5	2,407	... .	588 13 5	1,393 3 4
Quirindi	18	1,488 3 5	7,057	2,451 16 8	1,540	2,431	1	150	49	18	5,377	. .... .	4,823 3 10	7,275 0 6
Werris Creek	11	1,050 2 6	4,118	1,980 6 7	366	1,510	.....	. .....	12	4	322	. .....	1,070 14 0	3,051 0 7
Currabubula	5	355 14 4	1,651	433 7 0	676	248	. .....	13	12	1	204	.....	259 7 7	692 14 7
West Tamworth	20	2,344 3 7	5,087	1,461 6 11	1,429	4,454	1	42	22	23	8,775	..... .	12,960 16 1	14,422 3 0
Tamworth	19	1,888 5 11	11,913	8,303 7 10	4,631	7,498	14	627	74	23	235	10	14,833 15 0	23,137 2 10
Moonbi	11	674 15 9	4,326	789 11 11	489	727	.....	2	8	6	592	26	835 1 6	1,624 13 5
M'Donald River	3	267 2 11	539	126 6 8	36	142	.....	.. ..	.....	8	437	48	36 3 5	162 10 1
Walcha Road	9	729 16 6	2,857	1,584 5 7	335	1,102	.....	5	.....	4	3,835	.....	4,001 13 1	5,585 18 8

No. 27—*continued.*

Stations	No of hands employed, including Station masters	Total Expenditure	No of Tickets issued	Revenue from Tickets and Coaching Traffic	Goods		Coal		Hay, Straw, and Chaff		Wool		Earnings from Goods Traffic	Total Earnings
					Tonnage outwards	Tonnage inwards	Tonnage outwards	Tonnage inwards	Trucks outwards	Trucks inwards	Bales outwards	Bales inwards		
GREAT NORTHERN RAILWAY—*continued.*														
		£ s. d		£ s d.									£ s. d.	£ s. d.
Kentucky ...	2	229 4 4	2,212	370 18 9	160	116		...		..	767	1	277 8 4	648 7 1
Uralla	13	1,000 6 0	6,732	2,603 19 2	987	2,266		29	40	5	4,070	8	5,982 1 10	8,586 1 0
Armidale ...	32	2,796 2 9	13,416	7,993 13 8	5,271	5,778	1	444	669	6	2,678	78	16,222 9 2	24,216 2 10
Eversleigh	14	708 16 7	1,668	237 7 11	43	140					478		295 6 11	532 14 10
Boorolong ..	4	317 1 0	1,696	356 8 2	652	163	. .		5	.	94		134 12 3	491 0 5
Guyra	12	941 18 10	3,874	1,373 2 4	1,870	2,221		1	Nil.	16	1,128	...	7,285 1 11	8,658 4 3
Ben Lomond	7	427 0 10	1,178	327 7 3	300	167	.	...	6		277	... .	306 8 7	633 15 10
Glencoe	14	768 19 8	1,482	398 14 0	1,211	133	.		23	...	118		329 15 5	728 9 5
Glen Innes .	14	2,107 14 7	9,194	11,050 19 11	2,559	15,870		1,039	4	86	6,725	2	40,270 14 9	51,321 14 8
Breeza	9	585 5 4	1,391	588 3 8	47	281			.	5	886	. .	875 4 1	1,463 7 9
Curlewis ...	2	196 3 4	775	212 0 3	1,069	298	.			18	199	...	180 18 4	392 18 7
Gunnedah .	19	1,862 4 9	6,860	4,250 12 8	573	2,742	...	55	10	102	6,277	330	6,537 11 11	10,788 4 7
Boggabri . .	11	731 14 11	2,795	1,177 18 2	504	583	.	.	1	21	1,223		1,370 6 5	2,548 4 7
Baan Baa . ..	2	204 1 4	1,050	258 6 0	1,975	86	..	...		11	54		66 8 10	324 14 10
Narrabri ...	21	2,625 19 3	5 703	7,122 18 1	1,504	10,692	...	83	.....	430	26,507	1	36,459 8 11	43,582 7 0
Morpeth Platform ...	18	3,261 18 4	17,378	1,188 0 2	..		. .				.	...	... ...	1,188 0 2
Morpeth			7,174	571 2 11	14,839	4,272	...	8,750	72	31	236	26,509	10,602 19 1	11,174 2 0
Wallsend	8	844 15 9	49 239	2,340 14 10	1,416	12,868		241	2	328	9	. .	2,570 6 1	4,911 0 11
1885 . .	*720*	*76,817 8 0*	658,117	129,282 14 3	172,291	172,291	1,640,601	1,640,601	3,134	3,234	84,424	84,424	327,644 14 3	456,927 8 6
1884	*711*	*71,217 12 9*	*601,275*	*123,196 11 11*	*164,998*	*164,998*	*1,614,200*	*1,614,200*	*2,587*	*2,587*	*88,170*	*88,170*	*336,658 8 2*	*459,855 0 1*
GRAND SUMMARY.														
Suburban and Illawarra Lines	721	89,403 13 1	4,583,382	318,503 10 3	282,558	439,022	15,731	126,309	1,850	13,838	15,669	254,815	401,779 14 5	720,283 4 8
Southern Line .	322	42,539 13 9	458 280	188,276 18 4	233,641	183,213	7,799	23,674	4,457	2,244	121,269	20,066	278,344 17 5	466,621 15 9
Western Line	469	54,930 2 3	628,872	156,483 5 5	263 475	202,216	161,220	33,599	11,336	2,370	138,011	730	334,910 5 7	491,393 11 0
Richmond Line ...	15	1,893 8 8	49,299	8,098 4 5	54,970	10,193	.	1,168	903	94	1,745	1,083	10,513 11 2	18,611 15 7
	1,527	188,766 17 9	5,719,833	671,361 18 5	834,644	834,644	184,750	184,750	18,546	18,546	276,694	276,694	1,025,548 8 7	1,696,910 7 0
Northern Line	720	76,817 8 0	658,117	129,282 14 3	172,291	172,291	1,640,601	1,640,601	2,100	2,100	84,424	84,424	327,644 14 3	456,927 8 6
1885	*2,247*	*265,584 5 9*	6,377,950*	800,644 12 8	1,006,935†	1,006,935†	1,825,351	1,825,351	20,646	20,646	361,118	361,118	1,353,193 2 10	2,153,837 15 6
1884	*2,183*	*241,845 7 7*	*5,326,171*	*724,897 8 1*	*955,175*	*955,175*	*1,773,905*	*1,773,905*	*20,200*	*20,200*	*319,677*	*319,677*	*1,345,606 12 5*	*2,070,504 0 6*
					1885—Mails, advertising, sale of Old Material, &c , £52,912 10s 7d *Less* Credits, £28,577 19s 11d.									24,334 10 8
					1884— „ „ £42,194 19s. 3d. „ £22,050 9s. 10d. ...									
											1885—Gross Earnings			2,178,172 6 2
											1884— „			2,089,748 18 11

* Includes number of season tickets issued, but not season ticket journeys. † Hay and Wool excluded

No. 28.*

GREAT SOUTHERN, WESTERN, AND RICHMOND RAILWAYS.

RETURN showing Outwards and Inwards Traffic at each Station during 1885.

Stations.	Coaching.		Goods.		Coaching and Goods.		Total Coaching and Goods, Inwards and Outwards.
	Outwards.	Inwards.	Outwards.	Inwards.	Outwards.	Inwards.	
			SUBURBAN AND ILLAWARRA RAILWAY, INCLUDING SYDNEY.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Central	46,048 1 1	718 2 3	.....	.....	46,048 1 1	718 2 3	46,766 3 4
Darling Harbour	.....	.....	77,682 17 3	254,789 18 11	77,682 17 3	254,789 18 11	332,472 16 2
Sydney	174,111 5 10	239,240 14 3	361,200 14 10	1,129 5 11	535,312 0 8	240,370 0 2	775,682 0 10
Eveleigh	2,603 4 1	1,366 8 2	.....	652 7 5	2,603 4 1	2,018 15 7	4,621 19 8
M'Donald Town	2,223 0 5	707 4 7	.....	.....	2,223 0 5	707 4 7	2,930 5 0
Newtown	7,175 17 1	5,112 12 11	1,562 0 6	26,551 2 10	8,737 17 7	31,663 15 9	40,401 13 4
Stanmore	2,909 1 11	1,103 0 10	.....	0 6 11	2,909 1 11	1,103 7 9	4,012 9 8
Petersham	14,982 17 1	7,446 6 6	326 8 8	11,123 1 5	15,309 5 9	18,569 7 11	33,878 13 8
Summer Hill	8,090 7 10	3,624 19 7	0 8 7	37 6 9	8,090 16 5	3,662 6 4	11,753 2 9
Ashfield	10,889 2 8	5,752 14 2	639 5 0	5,011 5 11	11,528 7 8	10,764 0 1	22,292 7 9
Croydon	5,891 7 7	2,757 14 0	1 9 0	21 16 5	5,892 16 7	2,779 10 5	8,672 7 0
Burwood	13,007 7 9	6,618 3 1	321 12 11	5,705 5 11	13,329 0 8	12,323 9 0	25,652 9 8
Strathfield	3,057 13 3	1,112 3 8	.....	16 15 10	3,057 13 3	1,128 19 6	4,186 12 9
Homebush	4,056 5 6	3,398 8 8	2,397 3 3	99,501 18 9	6,453 8 9	102,900 7 5	109,353 16 2
Flemington	64 0 2	118 5 7	..	.	64 0 2	118 5 7	182 5 9
Rookwood	2,924 2 8	6,637 19 10	311 16 4	1,465 7 7	3,235 19 0	8,103 7 5	11,339 6 5
Ritchie's	.....	.....	..	1 8 5	..	1 8 5	1 8 5
Auburn	1,639 17 9	1,503 12 2	327 2 8	1,155 7 4	1,967 0 5	2,658 19 6	4,625 19 11
Clyde	194 10 6	26 1 10	... .	608 8 8	194 10 6	634 10 6	829 1 0
Granville	8,866 2 9	8,676 2 11	17,982 6 1	6,306 4 11	26,848 8 10	14,982 7 10	41,830 16 8
Erskinville	320 11 11	17 16 5	.	..	320 11 11	17 16 5	338 8 4
St. Peters	1,850 0 0	1,057 1 9	.. .	0 3 9	1,850 0 0	1,057 5 6	2,907 5 6
Marrickville	1,790 11 6	808 16 11	195 2 2	5,794 14 7	1,985 13 8	6,603 11 6	8,589 5 2
Tempe	1,109 5 3	672 9 10	.....	1 17 1	1,109 5 3	674 6 11	1,783 12 2
Arncliffe	759 12 1	750 14 3	8 6 11	12 9 7	767 19 0	763 3 10	1,531 2 10
Rockdale	1,527 7 5	1,861 0 2	37 12 11	1,342 2 1	1,565 0 4	3,203 2 3	4,768 2 7
Kogarah	1,621 1 8	2,158 11 0	3 3 5	46 18 8	1,624 5 1	2,205 9 8	3,829 14 9
Hurstville	1,887 9 3	3,449 14 4	144 17 4	2,073 10 10	2,032 6 7	5,523 5 2	7,555 11 9
Como	4 8 8	59 17 7	... .	.	4 8 8	59 17 7	64 6 3
Sutherland	11 1 11	259 17 0	. . ..		11 1 11	259 17 0	270 18 11
	319,615 15 7	307,016 14 3	463,142 7 10	423,349 6 6	782,758 3 5	730,366 0 9	1,513,124 4 2
			GREAT SOUTHERN RAILWAY.				
Merrylands	392 16 6	159 16 7	1,159 12 8	1,183 18 0	1,552 9 2	1,343 14 7	2,896 3 9
Guildford	499 9 7	328 18 8	140 12 5	430 0 3	640 2 0	758 18 11	1,399 0 11
Fairfield	2,317 11 5	1,623 15 5	840 14 3	940 0 6	3,158 5 8	2,563 15 11	5,722 1 7
Canley Vale	297 16 7	252 3 11	-	10 15 9	297 16 7	262 19 8	560 16 3
Cabramatta	351 13 8	288 14 8	435 13 6	199 3 0	787 7 2	487 17 8	1,275 4 10
Liverpool	3,752 15 6	3,672 16 7	4,738 2 4	6,121 6 4	8,490 17 10	9,794 2 11	18,285 0 9
Glenfield	107 17 8	180 7 7	816 18 3	62 15 8	924 15 11	243 3 3	1,167 19 2
Inglebura	172 11 6	314 1 5	28 12 1	40 1 4	201 3 7	354 2 9	555 6 4
Minto	501 4 4	430 9 7	737 1 2	133 10 1	1,238 5 6	563 19 8	1,802 5 2
Campbelltown	5,903 1 1	5,420 9 0	1,094 2 11	2,942 10 10	6,997 4 0	8,362 19 10	15,360 3 10
Menangle Platform	16 10 9	0 3 6	.		16 10 9	0 3 6	16 14 3
Menangle	544 8 4	508 2 4	626 5 2	197 13 11	1,170 13 6	705 16 3	1,876 9 9
Douglas Park	777 6 7	554 11 6	523 4 0	544 11 2	1,300 10 7	1,099 2 8	2,399 13 3
Picton	2,050 5 10	2,756 16 8	1,564 10 11	1,880 15 2	3,614 16 9	4,637 11 10	8,252 8 7
Redbank	69 5 7	218 10 2	2,369 15 3	224 9 11	2,439 0 10	443 0 1	2,882 0 11
Picton Lakes	6 6 0	120 0 3	.	3 14 2	6 6 0	123 14 5	130 0 5
Bargo	10 2 8	24 11 6	9 3 2	15 0 5	19 5 10	39 11 11	58 17 9
Hill Top	51 5 9	156 8 7	390 18 11	47 17 8	442 4 8	204 6 3	646 10 11
Colo Vale	209 6 5	249 12 6	418 17 6	75 13 8	628 3 11	325 6 2	953 10 1
Rush's	4 8 9	83 16 4	.. .	3 4 0	4 8 9	87 0 4	91 9 1
Mittagong	2,790 6 8	3,331 0 10	740 17 8	2,404 11 5	3,531 4 4	5,735 12 3	9,266 16 7
Joadza		0 0 6	7,351 10 6	1,293 9 11	7,351 10 6	1,293 10 5	8,645 0 11
Bowral	2,235 1 11	4,462 17 6	1,198 3 1	3,583 0 2	3,433 5 0	8,045 17 8	11,479 2 8
Burradoo	7 9 2	429 7 4	1 10 6	71 15 2	8 19 8	501 2 6	510 2 2
Austermere	0 4 8	19 10 8	403 17 3	4 12 10	404 1 11	24 3 6	428 5 5
Moss Vale	4,706 6 6	7,359 9 9	4,242 0 10	4,576 11 0	8,948 7 4	11,936 0 9	20,884 8 1
Meryla	1 5 9	21 9 6	143 11 7	12 7 1	144 17 4	33 16 7	178 13 11
Badgery's	0 5 3	3 7 10	3 15 8	6 13 9	4 0 11	10 1 7	14 2 6
Ringwood	...	..	186 3 5	91 0 2	186 3 5	91 0 2	277 3 7
Bundanoon	595 12 6	482 11 0	845 17 5	285 4 4	1,441 9 11	767 15 4	2,209 5 3
Erith	0 3 10	.. . ..	512 5 7	1 6 8	512 9 5	1 6 8	513 16 1
Cable's	0 4 2	8 13 3	38 16 2	1 9 8	39 0 4	10 2 11	49 3 3
Wingello	203 1 4	152 8 3	889 15 5	46 6 4	1,092 16 9	198 14 7	1,291 11 4
Barber's	16 6 7	133 2 11	5 7 4	10 12 0	21 13 11	143 14 11	165 8 10
Morrice's	3 6 0	2 17 9	727 0 4	126 3 1	730 6 4	129 0 10	859 7 2
Marulan	1,261 4 1	1,174 1 1	5,997 16 0	1,193 13 1	7,259 0 1	2,367 14 2	9,626 14 3
Carrick	3 1 8	114 13 4	63 11 10	10 14 7	66 13 6	125 7 11	192 1 5
Towrang	161 16 9	142 9 0	308 10 0	39 3 10	470 6 9	181 12 10	651 19 7
North Goulburn	10 16 2	18 17 11	.. . .. .	442 16 8	10 16 2	461 14 7	472 10 9
Goulburn	20,246 9 7	20,555 4 0	25,045 2 3	37,727 2 8	45,291 11 10	58,282 6 8	103,573 18 6

No. 28—*continued.*

Stations.	Coaching		Goods		Coaching and Goods		Total Coaching and Goods, Inwards and Outwards.
	Outwards	Inwards	Outwards	Inwards	Outwards	Inwards	
			GREAT SOUTHERN RAILWAY—*continued.*				
	£ s d.	£ s d	£ s. d	£ s d.	£ s. d	£ s d.	£ s. d
Joppa ..	38 2 10	36 14 4	44 3 5	4 9 10	82 6 3	41 4 2	123 10 5
Yarra ...	0 11 0	51 11 5		1 3 2	0 11 0	52 14 7	53 5 7
Breadalbane	525 19 6	448 1 5	1,469 17 6	284 1 9	1,995 17 0	732 3 2	2,728 0 2
Cullerin	21 4 6	27 4 5	0 16 2	6 16 0	22 0 8	34 0 5	56 1 1
Fish River .	28 6 0	48 7 1	0 4 6	33 2 7	28 10 6	81 9 8	110 0 2
Gunning	1,322 12 8	1 345 2 8	2,059 4 1	1,790 6 4	3,381 16 9	3 135 9 0	6,517 5 9
Jerrawa	144 7 8	125 15 4	228 19 11	80 3 2	373 7 7	205 18 6	579 6 1
Yass	3,963 18 10	4 082 9 4	4,374 15 11	5 730 9 3	8 338 14 9	9,812 18 7	18,151 13 4
Burrowa ...	....		30 10 10	7 14 3	30 10 10	7 14 3	38 5 1
Bowning	490 12 11	452 5 1	2,233 10 6	4,883 12 6	2,724 3 5	5,335 17 7	8,060 1 0
Binalong .	1,715 3 11	1 524 12 3	2,616 7 10	3,369 16 1	4,331 11 9	4,894 8 4	9,226 0 1
Galong	10 2 1	60 4 5	149 5 4	52 18 8	159 7 5	113 3 1	272 10 6
Rocky Ponds ..	59 10 9	33 2 4	0 16 4	8 10 1	60 7 1	41 12 5	101 19 6
Cunningar	7 2 1	251 1 0	605 13 8	205 17 9	612 15 9	456 18 9	1,069 14 6
Harden	2,546 2 4	2 521 11 8	5 666 6 11	7,285 8 7	8,212 9 3	9,807 0 3	18,019 9 6
Murrumburrah	3,322 9 3	3,545 17 8	1,915 0 4	4,138 9 7	5 237 9 7	7,684 7 3	12,921 16 10
Demondrille	9 6 3	15 4 0	0 3 5	93 5 6	9 9 8	108 9 6	117 19 2
Nubba	92 13 2	64 5 5	475 12 5	99 17 6	568 5 7	164 2 11	732 8 6
Wallendbeen ...	603 19 5	556 9 0	2,517 0 4	689 19 5	3,120 19 9	1,246 8 5	4 367 8 2
Cootamundra	9 522 1 9	9,091 2 0	9 279 14 7	25,534 0 9	18,801 16 4	34,625 2 9	53,426 19 1
Gundagai Junction	...	.		41 15 9		41 15 9	41 15 9
Mullaly's		0 14 5	1,135 19 8	5 7 10	1,135 19 8	6 2 3	1,142 1 11
Cungegong .	13 13 2	77 5 7	137 4 1	42 1 0	150 17 3	119 6 7	270 3 10
Betnungra .	399 5 1	404 6 10	605 17 9	301 8 9	1,005 2 10	705 15 7	1,710 18 5
Illabo .	297 10 5	245 4 1	1,054 5 5	377 4 7	1,351 15 10	622 8 8	1,974 4 6
Junee Junction .	6 385 13 9	5,821 2 11	1,470 15 4	3,864 4 10	7,856 9 1	9,685 7 9	17,541 16 10
Harefield	115 3 3	109 6 9	363 3 3	72 15 1	478 6 6	182 1 10	660 8 4
Bomen .	297 11 11	342 11 4	1,734 16 8	80 16 11	2,032 8 7	423 8 3	2,455 16 10
South Wagga	11,774 15 10½	12,356 10 2	10,908 7 4	21,569 11 0	22 683 3 2½	33,926 1 2	56,609 4 4½
Connorton			16 8 6	93 3 3	16 8 6	93 3 3	109 11 9
Sandy Creek . .	184 0 9	186 13 0	114 16 9	73 18 6	298 17 6	260 11 6	559 9 0
The Rock . . .	684 2 5	650 5 11	1,272 16 9	586 1 6	1,956 19 2	1,236 7 5	3,193 6 7
Yerong Creek	999 12 3	827 7 8	937 19 1	689 2 10	1,937 11 4	1,516 10 6	3,454 1 10
Doodal Cooma		0 11 0		1 0 11		1 11 11	1 11 11
Culcairn	1,294 2 5	1,092 14 1	2,011 17 6	1,144 17 7	3,305 19 11	2,237 11 8	5,543 11 7
Gerogery . ..	434 9 0	327 4 8	2,646 19 3	262 14 8	3,081 8 3	589 19 4	3,671 7 7
Yambla	276 6 5	227 11 4	693 8 10	195 10 7	969 15 3	423 1 11	1,392 17 2
Ettamogah ..	10 10 7	81 19 9	221 9 7	86 19 1	232 0 2	168 18 10	400 19 0
Albury R. C	1 8 3	68 7 1	...		1 8 3	68 7 1	69 15 4
Albury	17 179 9 7½	16,903 15 3½	13,029 11 11	10 139 2 5	30,209 1 6½	27,042 17 8½	57,251 19 3
Wodonga	26,669 12 3	30,179 17 3½	1,208 9 9	531 7 1	27 878 2 0	30,711 4 4½	58,589 6 4½
Bangalore	5 1 8	77 17 4	66 6 9	24 2 5	71 8 5	101 19 9	173 8 2
Lake Bathurst ...	7 17 3	437 7 11	1,164 19 6	131 5 0	1,172 16 9	568 12 11	1,741 9 8
Tarago	3 083 19 4	3 089 9 2	4 220 16 0	4 375 3 6	7 304 15 4	7,464 12 8	14 769 8 0
Bungendore	5,208 12 3	5 460 19 1	4,887 1 8	27 937 19 3	10,095 13 11	33 398 18 4	43,494 12 3
King's Vale	9 7 6	53 12 0	77 12 7	68 1 4	87 0 1	121 13 4	208 13 5
Young	5,231 8 1	4,375 19 8	10,113 12 8	24,504 13 11	15 345 0 9	28,880 13 7	44,225 14 4
Old Junee	298 13 6	219 1 3	4 095 3 9	1 813 11 3	4,393 17 3	2 032 12 6	6,426 9 9
Marrar	6 10 4	94 8 10	0 4 6	18 11 9	6 14 10	113 0 7	119 15 5
Coolaman	974 6 6	800 8 3	3,862 11 10	2,838 5 10	4,836 18 4	3,638 14 1	8,475 12 5
Boggy Creek	26 6 4	86 15 5	0 4 6	3 6 8	26 10 10	90 2 1	116 12 11
Devlin's ...	53 4 10	138 9 10	1,968 15 1	272 14 0	2,021 19 11	411 3 10	2,433 3 9
Grong Grong ..	390 1 9	331 6 8	1,189 11 0	361 4 0	1,579 12 9	692 10 8	2 272 3 5
Narrandera	6,055 11 2	5,561 1 7	6 122 2 10	8,750 8 11	12,177 14 0	14,311 10 6	26,489 4 6
Yanco ..	99 15 2	98 8 9	574 19 2	214 0 3	674 14 4	312 9 0	987 3 4
Whitton	1,210 2 2	929 6 9	4 115 14 7	2 302 13 2	5,325 16 9	3,231 19 11	8 557 16 8
Darlington .	586 16 5	410 12 5	2,850 1 3	546 9 6	3,436 17 8	957 1 11	4,393 19 7
Benerembah	53 4 1	147 2 4	494 8 2	143 15 3	547 12 3	290 17 7	838 9 10
Bringagee .	247 4 9	179 18 4	18 9 9	441 11 10	265 14 6	621 10 2	887 4 8
Kooroongal ..	38 4 0	247 10 1	702 4 4	663 6 0	740 8 4	910 16 1	1,651 4 5
Carrathool .	1,730 16 8	1,010 14 8	4,728 4 5	4,122 2 10	6 459 1 1	5 132 17 6	11,591 18 7
Uardry	3 14 6	61 14 6	350 8 2	157 16 5	354 2 8	219 10 11	573 13 7
Inononga	0 13 1	30 6 3	1 0 7	1 2 9	1 13 8	31 9 0	33 2 8
Beabula .	10 0 2	137 15 10	903 8 5	344 9 7	913 8 7	482 5 5	1,395 14 0
Waradgery .	8 3 7	99 1 6	9 5 5	270 15 11	17 9 0	369 17 5	387 6 5
Hay	7,154 11 7	6,413 18 7	5 843 3 1	17,106 12 9	12,997 14 8	23,520 11 4	36,518 6 0
Gillenbah	. ...	... .	367 4 8		367 4 8	...	367 4 8
Cuddell	27 11 6	60 8 8	239 3 10	78 8 8	266 15 4	138 17 4	405 12 8
Colombo	550 3 11	212 18 0	2,259 2 6	379 1 9	2,809 6 5	591 19 9	3,401 6 2
Widgiewa	21 10 0	67 18 7	798 14 9	124 8 6	820 4 9	192 7 1	1,012 11 10
Coonong .	38 13 4	272 13 10	269 11 1	623 15 3	308 4 5	896 9 1	1,204 13 6
Bundure	34 5 2	89 3 9	1,323 7 3	192 16 7	1 357 12 5	282 0 4	1,639 12 9
Yathong	13 4 8	53 12 10	51 19 6	194 3 2	65 4 2	247 16 0	313 0 2
Jerilderie .	1 151 6 0	1,170 17 2	4,152 18 5	3,007 4 7	5 304 4 5	4,178 1 9	9 482 6 2
Mary Fields .		3 14 9	.	0 1 2		3 15 11	3 15 11
Kenny Hill ..	11 17 3	17 7 8	27 0 11	66 18 5	38 18 2	84 6 1	123 4 3
Curran's Hill	.	.	1 17 7		1 17 7	...	1 17 7
Narellan	357 14 4	203 0 4	1,438 16 2	215 6 6	1,796 10 6	418 6 10	2,214 17 4
Kirkham's Lane	0 0 2	.			0 0 2	...	0 0 2
Camden ..	1 554 5 7	1,340 15 7	2,043 12 0	2,152 17 0	3 597 17 7	3 493 12 7	7,091 10 2
	177,976 0 0	183,926 17 4	209,166 7 5	265,894 8 10	387,142 7 5	449,821 6 2	836,963 13 7

No. 28—*continued.*

Stations.	Coaching.		Goods.		Coaching and Goods.		Total Coaching and Goods, Inwards and Outwards.
	Outwards.	Inwards.	Outwards.	Inwards.	Outwards.	Inwards.	
			GREAT WESTERN RAILWAY.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Harris Park	195 4 3	2 8 6	.. ..	.. ..	195 4 3	2 8 6	197 12 9
Parramatta	17,991 6 0	13,670 16 7	2,792 7 1	8,947 14 3	20,783 13 1	22,618 10 10	43,402 3 11
Westmead	42 6 4	15 18 1	....	... .	42 6 4	15 18 1	58 4 5
Wentworthville	22 9 3	22 18 8	152 8 8	290 5 9	174 17 11	313 4 5	488 2 4
Toongabbie	48 8 3	88 1 6	.....	0 2 1	48 8 3	88 3 7	136 11 10
Seven Hills	553 8 7	368 6 9	662 11 8	633 1 7	1,216 0 3	1,001 8 4	2,217 8 7
Blacktown	1,257 8 3	1,279 18 6	810 2 3	5,450 3 10	2,067 10 6	6,730 2 4	8,797 12 10
Crawford's	.....	0 0 6	67 12 7	5 16 9	67 12 7	5 17 3	73 9 10
Doonside	1 14 7	9 0 2	... .	7 13 5	1 14 7	16 13 7	18 8 2
Rooty Hill	1,078 9 11	988 3 10	2,056 13 4	907 16 4	3,135 3 3	1,896 0 2	5,031 3 5
Mount Druitt	171 18 3	193 5 0	1,042 3 4	184 6 6	1,214 1 7	377 11 6	1,591 13 1
St. Mary's	1,654 11 11	1,161 3 8	4,401 8 4	1,341 12 6	6,056 0 3	2,502 16 2	8,558 16 5
Parkes	27 15 4	28 19 10	.. . .	..... .	27 15 4	28 19 10	56 15 2
Cross Roads	0 3 6	0 1 6	2,388 6 2	465 14 11	2,388 9 8	465 16 5	2,854 6 1
Penrith	4,759 7 3	4,514 10 11	1,262 13 10	3,705 16 5	6,022 1 1	8,220 7 4	14,242 8 5
Emu Plains	471 11 3	672 10 10	2,065 19 5	447 7 3	2,537 10 8	1,119 18 1	3,657 8 9
Hudson's	. ...	..... .	11,131 9 7	....	11,131 9 7	. . .. ..	11,131 9 7
Lucasville	3 19 1	149 18 4	.. ..	4 8 2	3 19 1	154 6 6	158 5 7
Glenbrook	83 8 2	138 10 7	60 10 5	63 4 9	143 18 7	201 15 4	345 13 11
Blaxland	12 11 11	67 1 11	73 1 8	12 13 2	85 13 7	79 15 1	165 8 8
Somers	... .	. .. ..	0 18 5	... .	0 18 5	... .	0 18 5
Karabar	0 7 9	2 2 8	....	0 1 0	0 7 9	2 3 8	2 11 5
Valley	72 19 10	320 18 6	5 15 9	70 1 2	78 15 7	390 19 8	469 15 3
Springwood	554 18 1	796 18 11	310 0 3	372 4 7	864 18 4	1,169 3 6	2,034 1 10
Faulconbridge	40 2 2	226 15 4	5 2 9	57 11 9	45 4 11	284 7 1	329 12 0
Numantia	30 8 5	197 19 2	0 5 2	79 1 4	30 13 7	277 0 6	307 14 1
Alphington	....	.. . .. .	... .	0 3 0	.	0 3 0	0 3 0
Linden	23 15 1	62 10 10	. . ..	10 16 8	23 15 1	73 7 6	97 2 7
Woodford	47 15 8	424 7 1	0 3 0	122 2 11	47 18 8	546 10 0	594 8 8
Hazelbrook	0 16 9	17 15 3	.... ..	6 15 7	0 16 9	24 10 10	25 7 7
Lawson	358 14 3	999 1 5	10 10 0	446 13 8	369 4 3	1,445 15 1	1,814 19 4
Wentworth Falls	207 9 8	822 15 0	9 17 4	97 12 6	217 7 0	920 7 6	1,137 14 6
Gladstone	....	... .	205 14 10	22 19 0	205 14 10	22 19 0	228 13 10
Katoomba	1,427 2 5	2,974 8 2	514 7 1	1,449 2 2	1,941 9 6	4,423 10 4	6,364 19 10
North's	.. ..	0 7 6	7,235 14 4	1 4 11	7,235 14 4	1 12 5	7,237 6 9
Medlow	16 15 2	33 7 3	31 11 5	20 9 1	48 6 7	53 16 4	102 2 11
Blackheath	596 18 8	2,027 1 5	597 5 10	703 16 6	1,194 4 6	2,730 17 11	3,925 2 5
Mount Victoria	2,036 17 3	4,504 15 8	485 19 6	1,361 4 7	2,522 16 9	5,866 0 3	8,388 17 0
Hartley	164 9 9	390 12 10	3,872 17 3	867 18 11	4,037 7 0	1,258 11 9	5,295 18 9
Main Camp	....	2 8 9	265 19 3	0 7 8	265 19 3	2 16 5	268 15 8
Mount Wilson	225 17 9	410 4 1	42 15 1	170 9 2	268 12 10	580 13 3	849 6 1
Clarence	66 17 4	116 17 2	486 0 9	81 6 10	552 18 1	198 4 0	751 2 1
Zig Zag	33 4 6	82 8 6	1 9 6	0 8 3	34 14 0	82 16 9	117 10 9
Vale of Clwydd	. . . .	. .	15,545 13 0	. ...	15,545 13 0	. .....	15,545 13 0
Mort's	.	... . .	11,640 12 7	0 10 0	11,640 12 7	0 10 0	11,641 2 7
Eskbank	2,310 12 7	1,760 17 5	1,437 19 0	5,026 6 9	3,748 11 7	6,787 4 2	10,535 15 9
Eskbank Siding	... .	... . ..	11,596 5 3	.. ..	11,596 5 3	. .. .	11,596 5 3
Lithgow	1,549 5 3	3,588 14 0	13,043 19 5	0 0 11	14,593 4 8	3,588 14 11	18,181 19 7
Bowenfels Siding	.. . ...	.. ... .	151 9 6	1 2 8	151 9 6	1 2 8	152 12 2
Bowenfels	596 16 5	1,312 9 1	167 5 2	759 7 10	764 1 7	2,071 16 11	2,835 18 6
Marrangaroo	10 18 9	54 17 5		10 2 4	10 18 9	64 19 9	75 18 6
Wallerawang	2,578 0 4	2,138 1 7	1,705 1 9	1,337 11 9	4,283 2 1	3,475 13 4	7,758 15 5
Rydal	1,978 3 2	2,142 2 4	773 18 7	13,343 9 7	2,752 1 9	15,485 11 11	18,237 13 8
Sodwalls	3 12 10	95 15 2	47 11 4	17 14 4	51 4 2	113 9 6	164 13 8
Tarana	1,093 17 7	1,119 6 5	1,192 15 1	1,149 5 0	2,286 12 8	2,268 11 5	4,555 4 1
Locksley	203 1 5	231 15 3	407 16 7	29 16 6	610 18 0	261 11 9	872 9 9
Brewongle	631 0 6	621 13 9	2,182 19 6	642 3 0	2,814 0 0	1,263 16 9	4,077 16 9
Raglan	196 12 3	137 8 1	1,904 0 1	259 7 6	2,100 12 4	396 15 7	2,497 7 11
Kelso	916 5 8	612 19 1	5,827 17 5	2,976 1 11	6,744 3 1	3,589 1 0	10,333 4 1
Bathurst	17,244 13 6	17,750 11 5	8,825 3 9	27,897 0 4	26,069 17 3	45,647 11 9	71,717 9 0
Orton Park	0 11 8	102 10 4	... . . .	0 18 6	0 11 8	103 8 10	104 0 6
Perth	417 4 7	373 14 5	1,942 5 9	489 14 7	2,359 10 4	863 9 0	3,222 19 4
George's Plains	459 11 5	426 5 5	1,386 5 10	608 3 5	1,845 17 3	1,034 8 10	2,880 6 1
Wimbledon	184 10 6	167 18 1	485 18 1	40 16 9	670 8 7	208 14 10	879 3 5
Newbridge	1,107 2 11	909 4 10	2,176 16 11	1,398 17 9	3,283 19 10	2,308 2 7	5,592 2 5
Carcoar Junction	... .	..... .	.....	32 5 0	... .	32 5 0	32 5 0
Blayney	6,616 19 6	7,107 13 0	6,885 17 9	31,069 19 3	13 502 17 3	38,177 12 3	51,680 9 6
Lime Siding	0 0 3	0 2 5	1,017 4 8	486 12 9	1,017 4 11	486 15 2	1,504 0 1
Millthorpe	1,011 0 10	803 6 7	3,608 8 1	1,384 0 2	4,619 8 11	2,187 6 9	6,806 15 8
Spring Hill	774 17 8	571 16 3	1,832 16 6	614 3 6	2,607 14 2	1,185 19 9	3,793 13 11
Huntley	65 13 4	105 3 0	40 13 7	23 3 6	106 6 11	128 6 6	234 13 5
O. M. Co. Siding	0 10 4	11 0 7	... . . .	10 5 8	0 10 4	21 6 3	21 16 7
Molong Junction	... .	. ...	....	253 0 0	... .	253 0 0	253 0 0
Orange Stock Yards	.	....	... .	196 19 7	. ...	196 19 7	196 19 7
Orange	14,961 3 11	15,261 4 10	23,198 10 8	41,412 15 9	38,159 14 7	56,674 0 7	94,833 15 2
Lawrence	. ...	. ...	8 0 1	. ...	8 0 1	....	8 0 1
Mullion Creek	207 7 11	187 16 1	435 5 10	74 1 4	642 13 9	261 17 5	904 11 2
Kerr's Creek	173 3 7	124 16 4	437 8 4	13 15 1	610 11 11	138 11 5	749 3 4
Warne	565 15 10	473 4 1	1,188 4 2	265 16 0	1,754 0 0	739 0 1	2,493 0 1
Store Creek	12 2 11	5 10 2	.. . .	0 18 2	12 2 11	6 8 4	18 11 3
Ironbarks	668 9 2	727 13 2	298 9 3	744 9 2	966 18 5	1,472 2 4	2,439 0 9
Mumbil	47 15 10	26 1 11	281 13 10	58 16 8	329 9 8	84 18 7	414 8 3
Springs	429 4 10	305 11 10	550 17 0	225 13 9	980 1 10	531 5 7	1,511 7 5

No. 28—*continued.*

Stations.	Coaching. Outwards.	Coaching. Inwards.	Goods. Outwards.	Goods. Inwards.	Coaching and Goods. Outwards.	Coaching and Goods. Inwards.	Total Coaching and Goods, Inwards and Outwards.
		GREAT WESTERN RAILWAY—*continued.*					
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s d.	£ s. d.
Apsley	0 16 8	39 14 10	.. ...	1 9 6	0 16 8	41 4 4	42 1 0
Wellington	4,088 5 10	4,163 4 3	9,043 12 11	6,328 1 10	13,131 18 9	10,491 6 1	23,623 4 10
Mary Vale	252 4 10	199 2 1	566 10 11	113 16 3	818 15 9	312 18 4	1,131 14 1
Ponto	88 4 0	50 1 10	95 17 1	28 16 6	184 1 11	78 18 4	263 0 3
Murrumbidgerie	354 1 6	297 6 0	1,317 0 3	173 11 1	1,671 1 9	470 17 1	2,141 18 10
Dubbo	15,093 19 0	14,846 11 9	27,697 19 10	21,322 15 11	42,791 18 10	36,169 7 8	78,961 6 6
Bourke Road	.. ...	10 6 3	520 13 8		520 13 8	10 6 3	530 19 11
Narromine	612 12 11	579 4 10	2,511 19 2	488 10 10	3,124 12 1	1,067 15 8	4,192 7 9
Trangie	1,082 11 5	978 9 3	4,536 4 8	1,768 16 6	5,618 16 1	2,747 5 9	8,366 1 10
Nevertire	3,252 17 2	3,214 3 4	20,607 18 10	7,778 17 0	23,860 16 0	10,993 0 4	34,853 16 4
Mullengudgery	195 19 1	154 16 1	353 11 6	238 15 0	549 10 7	393 11 1	943 1 8
Nyngan	8,024 8 9	6,633 2 8	29,092 18 7	35,906 16 6	37,117 7 4	42,539 19 2	79,657 6 6
Girilambone	828 18 11	787 19 1	2,305 18 9	927 1 7	3,134 17 8	1 715 0 8	4,849 18 4
Wilga	655 4 9	255 5 8	266 9 11	1,944 2 0	921 14 8	2,199 7 8	3,121 2 4
Coolabah	988 0 0	696 2 10	1,752 8 5	1,303 0 4	2,740 8 5	1,999 3 2	4,739 11 7
Mann's	....	0 2 2	...	0 6 0	....	0 8 2	0 8 2
Glenariff	7 0 6	44 9 8	. ...	2 13 10	7 0 6	47 3 6	54 4 0
Byerock	7,091 5 7	9,455 4 0	16,540 1 3	42,259 15 8	23 631 6 10	51,714 19 8	75,346 6 6
Mooculta	27 6 3	17 1 4	2 4 3	9 5 7	29 10 6	26 6 11	55 17 5
Bourke	5,534 0 9	4,990 19 2	24,067 11 1	16,493 7 6	29,601 11 10	21,484 6 8	51,085 18 6
Cargo Road	0 0 9	1 16 1	.. . .	0 1 4	0 0 9	1 17 5	1 18 2
Borenore	10 3 5	2 6 3	.. . .	0 1 0	10 3 5	2 7 3	12 10 8
Amaroo	1 8 4	4 12 9	.. ...	14 16 1	1 8 4	19 8 10	20 17 2
Molong	81 8 7	122 6 10	33 17 8	46 3 5	115 6 3	168 10 3	283 16 6
Irondale	.	...	361 6 1	2 2 5	361 6 1	2 2 5	363 8 6
Piper's Flat	287 17 5	202 8 1	50 6 6	507 0 9	338 3 11	709 8 10	1,047 12 9
Cullen Siding	0 0 10	0 9 10	1,424 19 0	63 13 7	1,424 19 10	64 3 5	1,489 3 3
Ben Bullen	13 12 0	63 8 7	98 6 3	24 0 1	111 18 3	87 8 8	199 6 11
Capertee	487 16 8	479 2 6	628 10 11	561 6 5	1,116 7 7	1,040 8 11	2,156 16 6
Carlos Gap	..	0 9 3	88 9 6	7 9 7	88 9 6	7 18 10	96 8 4
Ilford	98 17 10	187 5 9	117 8 1	159 0 4	216 5 11	346 6 1	562 12 0
Rylstone	1,671 14 9	1,295 3 5	5 916 13 9	1,268 18 7	7,588 8 6	2,564 2 0	10,152 10 6
Lue	89 6 1	302 8 7	416 13 1	211 13 2	505 19 2	514 1 9	1,020 0 11
Bumberra	18 1 1	99 0 8	28 10 2	3 11 6	46 11 3	102 12 2	149 3 5
Mudgee	7,235 3 9	6,727 17 10	12,819 16 11	14,901 10 2	20,055 0 8	21,629 8 0	41,684 8 8
	149,471 10 1	153,944 19 0	328,538 19 2	316,127 3 6	478,010 9 3	470,072 2 6	948,082 11 9
		WINDSOR AND RICHMOND RAILWAY.					
Douglas Siding	48 15 6	8 0 4	356 14 9	99 18 8	405 10 3	107 19 0	513 9 3
Schofields	68 18 9	38 16 2	942 10 11	10 15 4	1,011 9 8	49 11 6	1,061 1 2
Riverstone	973 5 5	1,042 4 1	1,924 6 9	2,886 8 1	2,897 12 2	3,928 12 2	6,826 4 4
Richards' Siding	0 9 8	. .....	2,645 10 10	430 18 11	2,646 0 6	430 18 11	3,076 19 5
Mulgrave	486 13 4	400 6 9	1,527 3 0	398 2 7	2,013 16 4	798 9 4	2,812 5 8
Windsor	3,231 13 3	3,277 18 7	2,974 15 4	2,428 7 9	6,206 8 7	5,706 6 4	11,912 14 11
Clarendon	405 14 7	2,375 12 10	63 10 5	111 17 2	469 5 0	2,487 10 0	2,956 15 0
Richmond	2,745 14 9	2,993 1 7	2,111 11 6	1,656 10 7	4,857 6 3	4,649 12 2	9,506 18 5
	7,961 5 3	10,136 0 4	12,546 3 6	8,022 19 1	20,507 8 9	18,158 19 5	38,666 8 2
		GREAT NORTHERN RAILWAY.					
Central Office	3,557 13 9	727 4 8	....	... .	3,557 13 9	727 4 8	4,284 18 5
Newcastle	26,707 14 7	31,208 1 11	75,499 1 1	110,702 19 3	102,206 15 8	141,911 1 2	244,117 16 10
Honeysuckle Point	2,660 11 5	1,402 1 0	4,203 9 5	2,016 10 3	6,864 0 10	3,418 11 3	10,282 12 1
Bullock Island	....	.. ..	9,415 1 1	383 18 4	9,415 1 1	383 18 4	9,798 19 5
Wickham Siding	..... .	... .	78 15 4	234 6 10	78 15 4	234 6 10	313 2 2
Hamilton	1,585 4 10	948 8 4	109 16 4	1,752 19 11	1,695 1 2	2,701 8 3	4,396 9 5
Do Weighbridge	....	. . . .	76,695 18 10	....	76,695 18 10	.....	76,695 18 10
Waratah	2,713 11 6	2,484 15 7	847 18 4	1,055 15 4	3,561 9 10	3,540 10 11	7,102 0 9
Sandgate	99 16 10	251 5 6	0 5 3	5 3 0	100 2 1	256 8 6	356 10 7
General Cemetery	9 5 0	618 6 6	... .	. ...	9 5 0	618 6 6	627 11 6
Hexham	990 2 4	802 0 6	131 15 2	548 6 3	1,121 17 6	1,350 6 9	2,472 4 3
Tarro	410 12 3	205 12 1	111 4 11	42 12 8	521 17 2	248 4 9	770 1 11
Woodford	177 14 1	130 2 3	146 2 9	225 9 3	323 16 10	355 11 6	679 8 4
Victoria-street	197 18 0	22 11 9	.. ..	... .	197 18 0	22 11 9	220 9 9
East Maitland	2,805 15 5	2,739 17 0	919 0 5	5,482 1 9	3,724 15 10	8,221 18 9	11,946 14 7
High-street	3,087 16 8	241 5 6	8 0 11	188 1 0	3,095 17 7	429 6 6	3,525 4 1
West Maitland	7,616 3 5	10,132 16 8	13,637 7 4	4,539 17 0	21,253 10 9	14,672 13 8	35,926 4 5
Morpeth	1,095 17 2	1,689 18 0	51,887 10 0	19,548 19 1	52,983 7 2	21,238 17 1	74,222 4 3
Do Platform	1,180 15 2	30 7 0	. .	0 0 2	1,180 15 2	30 7 2	1,211 2 4
Wallsend	2,035 14 7	1,798 19 2	312 7 2	3,107 5 6	2,348 1 9	4,906 4 8	7,254 6 5
	56,932 7 0	55,433 13 5	234,003 14 4	149,834 5 7	290,936 1 4	205,267 19 0	496,204 0 4
Farley	176 13 0	171 12 2	603 13 4	8,425 3 0	780 6 4	8,596 15 2	9,377 1 6
Lochinvar	535 3 1	395 13 11	281 16 8	119 19 9	816 19 9	515 13 8	1,332 13 5
Allandale	320 6 5	181 6 6	277 4 4	66 18 5	597 10 9	248 4 11	845 15 8
Anvil Creek Siding	. . ..	. .....	21 17 11	. ...	21 17 11	....	21 17 11

No. 28—*continued.*

Stations.	Coaching. Outwards.	Coaching. Inwards.	Goods. Outwards.	Goods. Inwards.	Coaching and Goods. Outwards.	Coaching and Goods. Inwards.	Total Coaching and Goods, Inwards and Outwards.
			GREAT NORTHERN RAILWAY—*continued.*				
	£ s. d.	£ s. d.	£ s. d.	£ s. d	£ s. d.	£ s. d.	£ s. d.
Greta	1,034 14 9	792 8 9	1,217 13 9	317 6 6	2,252 8 6	1,109 15 3	3,362 3 9
Branxton	1,113 17 1	753 6 3	1,625 17 1	355 3 0	2,739 14 2	1,108 9 3	3,848 3 5
Belford	82 2 5	103 7 3	0 10 2	15 1 3	82 12 7	118 8 6	201 1 1
Whittingham	121 7 7	207 9 3	125 6 8	77 9 9	246 14 3	284 19 0	531 13 3
Singleton	5,744 8 0	6,475 10 11	2,884 14 4	5,369 3 11	8,629 2 4	11,844 14 10	20,473 17 2
Do Coal Siding.	... .	....	172 6 1	... ..	172 6 1	.....	172 6 1
Blackwall Siding	. ...	. ..	154 12 6	0 10 9	154 12 6	0 10 9	155 3 3
Rix Creek Siding	10 14 0	9 0 2	249 14 0	Cr. 87 5 5	260 8 0	Cr. 78 5 3	182 2 9
Glennie's Creek	240 17 8	201 14 1	142 2 11	107 6 10	383 0 7	309 0 11	692 1 6
Ravensworth	310 17 8	182 16 7	290 4 8	83 15 5	601 2 4	266 12 0	867 14 4
Liddell	42 11 9	73 4 5	7 5 4	16 0 5	49 17 1	89 4 10	139 1 11
Grass-tree	43 11 8	52 0 6	0 2 0	1 7 0	43 13 8	53 7 6	97 1 2
Musclebrook	3,356 16 2	3,196 18 5	2,476 10 8	4,256 6 3	5,833 6 10	7,453 4 8	13,286 11 6
Aberdeen	388 8 1	321 1 1	569 10 0	341 9 3	957 18 1	662 10 4	1,620 8 5
Scone	2,056 1 6	1,868 7 10	2,056 18 8	2,210 9 6	4,113 0 2	4,078 17 4	8,191 17 6
Park	33 19 4	75 11 11	0 19 1	1 4 3	34 18 5	76 16 2	111 14 7
Wingen	246 12 10	212 8 3	312 2 2	136 7 1	558 15 0	348 15 4	907 10 4
Blandford	381 6 4	317 10 3	496 16 4	365 14 10	878 2 8	683 5 1	1,561 7 9
Murrurundi	2,218 16 5	2,469 4 3	1,165 14 6	2,307 18 0	3,384 10 11	4,777 2 3	8,161 13 2
Temple Court	74 9 2	111 15 5	....	1 15 7	74 9 2	113 11 0	188 0 2
Sewl's Siding	.....	... .. .	365 14 2	1 13 3	365 14 2	1 13 3	367 7 5
Doughboy Hollow	105 18 10	94 19 4	241 10 0	147 2 1	317 8 10	242 1 5	589 10 3
Willow Tree	669 2 9	561 13 4	1,183 11 5	546 11 10	1,852 14 2	1,108 5 2	2,960 19 4
Braefield	8 10 7	18 0 4	0 4 8	0 9 0	8 15 3	18 9 4	27 4 7
Quirindi	2,284 11 5	2,094 17 5	5,999 10 5	3,688 14 8	8,284 1 10	5,783 12 1	14,067 13 11
Quipolly	54 3 7	120 11 3	61 4 7	40 0 8	115 8 2	160 11 11	276 0 1
Werris Creek	1,152 17 8	1,038 14 8	471 13 8	947 19 6	1,624 11 4	1,986 14 2	3,611 5 6
Currabubula	375 6 2	260 3 9	254 2 9	257 0 0	629 8 11	517 3 9	1,146 12 8
Duri	31 18 11	111 8 0	80 19 2	8 9 6	112 18 1	119 17 6	232 15 7
West Tamworth	1,309 1 2	794 8 3	5,846 12 8	10,372 17 9	7,155 13 10	11,167 6 0	18,322 19 10
Tamworth	7,850 2 3	8,398 4 7	3,474 12 10	14,591 12 8	11,324 15 1	22,989 17 3	34,314 12 4
Tintin-hull	21 15 7	15 19 9	. ...	2 17 1	21 15 7	18 16 10	40 12 5
Moonbi	727 2 9	652 6 7	502 6 3	893 13 7	1,229 9 0	1,546 0 2	2,775 9 2
Farquharson's Siding	21 13 11	30 18 8	83 0 9	26 5 0	104 14 8	57 3 8	161 18 4
Macdonald River	114 2 7	158 1 5	130 8 3	40 1 4	244 10 10	198 2 9	442 13 7
Walcha Road	1,403 5 4	1,484 14 6	2,232 19 1	2,757 7 11	3,636 4 5	4,242 2 5	7,878 6 10
Wollun	24 13 3	68 6 3	1 11 11	16 15 8	26 5 2	85 1 11	111 7 1
Kentucky	331 13 11	219 13 2	427 11 10	138 7 8	759 5 9	358 0 10	1,117 6 7
Uralla	2,343 10 11	2,176 6 6	3,184 10 2	5,694 15 8	5,528 1 1	7,871 2 2	13,399 3 3
Kelly's Plains	38 3 9	98 18 11	5 2 11	1 3 0	43 6 8	100 1 11	143 8 7
Armidale	7,315 12 1	8,705 11 10	5,352 3 6	14,959 2 8	12,667 15 7	23,664 14 6	36,332 10 1
Eversleigh	223 12 9	128 14 8	324 10 1	297 16 6	548 2 10	426 11 2	974 14 0
Boorolong	333 16 8	246 13 11	141 12 3	91 17 6	475 8 11	338 11 5	814 0 4
Guyra	1,188 11 10	966 13 9	3,596 15 8	6,554 13 1	4,785 7 6	7,521 6 10	12,306 14 4
Llangothlin	18 15 5	33 2 9	1 12 10	8 18 2	20 8 3	42 0 11	62 9 2
Ben Lomond	297 16 5	218 10 0	245 8 4	268 16 9	543 4 9	487 6 9	1,030 11 6
Glencoe	357 4 6	248 17 10	293 11 1	255 17 3	650 15 7	504 15 1	1,155 10 8
Stonehenge	29 14 1	53 5 1	6 16 2	23 2 10	36 10 3	76 7 11	112 18 2
Glen Innes	9,714 0 6	10,440 7 1	9 662 0 10	55,281 13 10	19,376 1 4	65,722 0 11	85,098 2 3
	56,880 14 6	57,612 11 9	59,305 11 5	142,405 1 9	116,186 5 11	200,017 13 6	316,203 19 5
Gap	17 5 7	66 11 4	4 2 8	19 6 9	21 8 3	85 18 1	107 6 4
Breeza	516 17 4	478 3 1	2,508 12 7	422 8 11	3,025 9 11	900 12 0	3,926 1 11
Curlewis	194 4 8	181 2 3	625 19 2	213 1 6	820 3 10	394 3 9	1,214 7 7
Gunnedah	3,769 5 0	3 596 13 8	5,320 7 2	5 518 14 1	9,089 12 2	9,115 7 9	18,204 19 11
Emerald Hill	82 1 1	104 15 10	23 8 3	20 6 0	105 9 4	125 1 10	230 11 2
Boggabri	975 2 7	862 8 6	1,916 18 0	1,274 17 1	2,892 0 7	2,137 5 7	5,029 6 2
Baan Baa	209 3 9	196 12 9	1,082 8 1	122 2 10	1,291 11 10	318 15 7	1,610 7 5
Turrawan	33 18 2	51 8 5	751 11 5	28 4 5	785 9 7	79 12 10	865 2 5
Narrabri	5,859 16 11	6,886 15 7	20,372 4 2	26,056 8 4	26,232 1 1	32,943 3 11	59,175 5 0
	11,657 15 1	12,424 11 5	32,605 11 6	33,675 9 11	44,263 6 7	46,100 1 4	90,363 7 11
	125,470 16 7	125,470 16 7	325,914 17 3	325,914 17 3	451,385 13 10	451,385 13 10	902,771 7 8
Mails, &c.	..... .	....	... .	.....	16,009 12 6	16,009 12 6	32,019 5 0
					467,395 6 4	467,395 6 4	934,790 12 8
			GRAND SUMMARY.				
Suburban and Illawarra Lines.	319,615 15 7	307,016 14 3	463,142 7 10	423,349 6 6	782,758 3 5	730,366 0 9	1,513,124 4 2
Southern Line	177,976 0 0	183,926 17 4	209,166 7 5	265,894 8 10	387,142 7 5	449,821 6 2	836,963 13 7
Western Line	149,471 10 1	153,944 19 0	328,538 19 2	316,127 3 6	478,010 9 3	470,072 2 6	948,082 11 9
Richmond Line	7,961 5 3	10,136 0 4	12,546 3 6	8,022 19 1	20,507 8 9	18,158 19 5	38,666 8 2
	655,024 10 11	655,024 10 11	1,013,393 17 11	1,013,393 17 11	1,668,418 8 10	1,668,418 8 10	3,336,836 17 8
Northern Line	125,470 16 7	125,470 16 7	325,914 17 3	325,914 17 3	451,385 13 10	451,385 13 10	902,771 7 8
Mails, &c.	... . .	. ..	... .	. ...	58,368 3 6	58,368 3 6	116,736 7 0
	780,495 7 6	780,495 7 6	1,339,308 15 2	1,339,308 15 2	2,178,172 6 2	2,178,172 6 2	4,356,344 12 4

No. 29.*

RETURN showing LIVE STOCK EARNINGS for years 1884 and 1885.

Months.	Year 1884.					Year 1885.				
	Southern.	Western.	Richmond.	Northern.	Total.	Southern.	Western.	Richmond.	Northern.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
January	6,456 18 1	6,998 0 10	21 18 1	4,090 10 2	17,567 7 2	7,043 0 9	4,920 18 2	22 15 7	2,168 16 10	14,155 11 4
February	4,079 12 7	4,612 12 6	21 17 10	2,176 14 4	10,890 17 3	3,591 4 4	3,568 15 8	34 1 1	1,887 9 11	9,081 11 0
March	5,055 17 8	2,828 12 1	37 6 0	2,754 17 8	10,676 13 5	3,503 5 4	3,657 6 6	19 0 9	930 11 6	8,110 4 1
April	5,442 17 2	2,595 8 7	16 6 5	3,126 19 6	11,181 11 8	6,633 2 10	4,052 11 6	68 14 2	1,922 7 9	12,676 16 3
May	8,509 0 2	1,760 12 9	14 3 9	2,503 13 2	12,787 9 10	4,491 12 7	4,532 18 8	21 3 5	1,974 5 4	11,020 0 0
June	6,492 4 1	1,009 6 1	17 8 11	1,745 19 5	9,264 18 6	3,770 12 11	5,829 3 4	24 5 7	1,580 13 7	11,204 15 5
July	9,361 16 0	1,521 8 10	43 5 0	1,216 9 9	12,142 19 7	5,223 4 0	6,322 14 0	24 14 6	980 9 9	12,551 2 3
August	4,890 8 7	1,001 10 10	24 18 8	2,371 12 10	8,288 10 11	3,710 11 5	11,346 9 10	19 11 0	2,028 15 3	17,105 7 6
September	6,899 13 11	2,138 1 5	15 3 3	2,363 2 9	11,416 1 4	3,721 18 9	10,878 2 2	19 5 8	1,452 0 4	16,071 6 11
October	9,375 7 3	4,665 19 10	22 0 4	2,334 10 4	16,397 17 9	4,631 4 9	9,741 2 9	23 7 8	2,129 6 9	16,525 1 11
November	10,517 19 10	4,665 8 8	19 12 3	2,706 18 7	17,909 19 4	3,955 8 5	11,307 17 10	17 4 7	3,415 0 0	18,695 10 10
December	10,019 9 5	5,228 10 10	12 15 1	1,721 6 10	16,982 2 2	3,717 6 7	6,480 2 8	15 11 0	1,839 2 3	12,052 2 6
Totals	87,101 4 9	39,025 13 3	266 15 7	29,112 15 4	155,506 8 11	53,992 12 8	82,638 3 1	309 15 0	22,308 19 3	159,249 10 0

* Includes Camden Line.

No. 30.*

RETURN of the quantity of WOOL carried on the Railways of New South Wales, and the amount received therefrom, in 1884 and 1885.

Months.	1884.									1885.								
	Bales.			Weight.			Freight.			Bales.			Weight.			Freight.		
	S. & W.	North.	Total.	S. & W.	North.	Total.	S. & W.	North.	Total.	S. & W.	North.	Total.	S. & W.	North.	Total.	S. & W.	North.	Total.
	No.	No.	No.	Tons.	Tons.	Tons.	£	£	£	No.	No.	No.	Tons.	Tons.	Tons.	£	£	£
January	22,543	10,017	32,560	3,589	1,709	5,298	8,817	4,585	13,402	11,459	3,588	15,047	1,761	625	2,386	3,683	1,707	5,390
February	9,241	2,686	11,927	1,435	446	1,881	2,907	1,226	4,133	7,086	2,019	9,105	1,059	300	1,359	2,061	937	2,998
March	4,597	1,013	5,610	751	165	916	1,111	471	1,582	3,742	1,242	4,984	575	190	765	1,045	591	1,636
April	3,045	592	3,637	507	102	609	768	262	1,030	2,724	511	3,235	410	76	486	1,022	245	1,267
May	1,826	365	2,191	281	61	342	405	172	577	2,940	380	3,320	428	59	487	1,098	181	1,279
June	1,255	304	1,559	177	51	228	302	130	432	1,996	71	2,067	277	9	286	688	29	717
July	1,894	217	2,111	272	31	303	475	82	557	2,058	120	2,178	290	15	305	577	44	621
August	4,708	1,231	5,939	798	211	1,009	2,119	548	2,667	10,054	2,659	12,713	1,631	501	2,132	4,697	1,218	5,915
September	28,001	9,640	37,641	5,178	1,797	6,975	14,848	4,236	19,084	40,378	12,332	52,710	6,963	2,367	9,330	21,418	5,399	26,817
October	57,160	23,620	80,780	10,087	4,324	14,411	26,669	10,199	36,868	81,441	25,441	106,882	14,411	4,864	19,275	40,371	11,136	51,507
November	60,914	22,005	82,919	10,785	4,110	14,895	26,653	10,071	36,724	75,527	23,042	98,569	13,236	4,366	17,602	34,618	10,647	45,265
December	36,323	16,480	52,803	5,777	2,922	8,699	13,712	7,847	21,559	37,289	13,019	50,308	6,336	2,441	8,777	15,149	6,197	21,346
Total	231,507	88,170	319,677	39,637	15,929	55,566	98,786	39,829	138,615	276,694	84,424	361,118	47,377	15,813	63,190	126,427	38,331	164,758
Increase	.....	.....	.....	.....	.....	.....	.....	.....	.....	45,187	.....	41,441	7,740	.....	7,624	27,641	.....	26,143
Decrease	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,746	.....	.....	116	.....	.....	1,498	.....

* Includes Camden Line.

No. 31.

GREAT SOUTHERN, WESTERN, AND NORTHERN RAILWAY.

RETURN of the number of Bales of WOOL forwarded from the undermentioned Stations, from 1st September, 1884, to 30th April, 1885, and from 1st September, 1885, to 30th April, 1886.

Stations.	1884-1885.	1885-1886.
SOUTHERN AND SOUTH-WESTERN LINES.	Bales.	Bales.
Sydney	7,954	5,924
Darling Harbour	7,202	6,645
Rookwood	28	.....
Granville	1,276	1,391
Fairfield	3	.....
Liverpool	7,179	7,216
Minto	14	13
Campbelltown	45	31
Menangle	25	22
Douglas Park	78	12
Picton	19	.....
Mittagong	46	86
Bowral	.....	7
Moss Vale	61	57
Badgery's Siding	5	9
Wingello	.....	6
Morrice's Siding	.....	2
Marulan	608	760
Carrick	25	28
Towrang	.....	74
Goulburn	6,190	6,927
Breadalbane	198	412
Gunning	1,909	1,494
Jerrawa	66	47
Yass	2,626	3,299
Bowning	2,602	1,824
Binalong	3,632	2,691
Galong	.....	9
Cunningar	654	602
Harden	9,382	1,630
Murrumburrah	156	12
Demondrille	17	.....
Nubba	33	129
Wallendbeen	1,312	1,492
Cootamundra	4,608	7,141
Cungegong	33	286
Bethungra	412	569
Illabo	1,164	1,372
Junee Junction	620	943
Harefield	660	492
Bomen	661	906
South Wagga	5,839	6,450
Connorton Siding	24	.....
Sandy Creek	36	155
The Rock	2,926	2,792
Yerong Creek	2,085	1,414
Culcairn	1,201	1,222
Gerogery	422	449
Yambla	696	844
Albury	367	15
Bangalore	.....	134
Lake Bathurst	94	75
Tarago	5,301	903
Bungendore	192	7,243
Kings Vale	.....	52
Young	.....	12,505
Old Junee	2,420	4,328
Coolaman	2,194	2,827
Devlin's	1,448	1,327
Grong Grong	1,203	1,859
Narrandera	5,880	2,827
Yanko	1,132	796
Whitton	5,827	6,231
Darlington	1,851	2,202
Beneremba	839	786
Bringagee	473	2
Kooroongal	1,115	1,007
Carrathool	1,096	1,973
Uardry	54	561
Tnononga	.....	1
Beabula	1,728	1,882
Hay	8,377	7,315
Gillenbah	.....	669
Cuddell	.....	34
Colombo	1,148	620
Widgiewa	87	1,441
Coonong	31	177
Bundure	69	1,207
Yathong	.....	86
Jerilderie	324	2,229
Narellan	.....	4
Camden	49	21
	118,031	131,225
WESTERN LINES.		
Parramatta	2	1
Blacktown	28	.....
South Creek	5	.....
Penrith	.....	17
Mount Victoria	206	241
Esk Bank	32	6
Bowenfels	37	18
Wallerawang	83	82
Rydal	117	38
Sodwalls	.....	28
Tarana	508	465
Locksley	7	24
Brewongle	297	185
Raglan	.....	95
Kelso	574	493
Bathurst	1,800	1,303
Perth	833	903
George's Plains	62	81
Wimbledon	128	116
Newbridge	551	645
Blayney	4,827	4,497
Millthorpe	798	731
Spring Hill	11	16
Orange	11,112	14,380
Mullion Creek	180	125
Kerr's Creek	.....	11
Warne	547	488
Ironbarks	430	65
Burrendong	.....	502
Springs	185	235
Wellington	1,878	2,014
Mary Vale	79	63
Ponto	.....	173
Murrumbidgerie	746	688
Dubbo	10,231	10,150
Narramine	655	1,390
Trangie	3,230	6,375
Nevertire	5,206	9,707
Mullengudgery	251	617
Nyngan	14,430	17,122
Girilambone	802	1,960
Coolabah	527	2,875
Byerock	24,115	10,856
Bourke	.....	28,717
Douglas Siding	1,196	732
Riverstone	.....	9
Richards	26	33
Mulgrave	282	481
Windsor	3	7
Clarendon	2	1
Amaroo	.....	7
Molong	.....	95
Piper's Flat	11	15
Cullen's Siding	17	13
Ben Bullen	.....	7
Capertee	539	375
Ilford	41	127
Rylstone	716	723
Lue	404	550
Hunt's	560	.....
Mudgee	4,381	8,687
	93,688	130,360

No. 31—*continued.*

Stations.	1884-1885.	1885-1886.	Stations.	1884-1885.	1885-1886.
NORTHERN LINES.	Bales.	Bales.		Bales.	Bales.
Newcastle	55	85	Moonbi	635	608
East Maitland	3	.....	M'Donald River	213	411
West Maitland	197	38	Walcha Road	3,903	4,027
Lochinvar	18	16	Kentucky	668	821
Greta	.....	1	Uralla	3,714	4,269
Branxton	179	183	Armidale	3,096	2,845
Singleton	244	259	Eversleigh	237	531
Glennie's Creek	17	27	Boorolong	161	194
Ravensworth	415	531	Guyra	828	1,269
Musclebrook	3,112	3,481	Ben Lomond	224	315
Aberdeen	211	211	Glencoe	33	132
Scone	2,644	3,102	Glen Innes	6,366	6,969
Wingen	329	420	Breeza	685	687
Blandford	838	1,103	Curlewis	229	53
Murrurundi	165	257	Gunnedah	5,374	6,447
Doughboy Hollow	434	568	Boggabri	1,269	1,217
Willow Tree	1,982	2,381	Baan Baa	186	49
Quirindi	5,572	5,493	Narrabri	26,530	24,349
Werris Creek	333	318	Morpeth	198	280
Currabubula	162	208	Wallsend	2	7
West Tamworth	7,013	8,750		78,807	83,112
Tamworth	333	200			

SUMMARY.

	1884-1885.	1885-1886.
	Bales.	Bales.
Southern and Western Railway	211,719	261,585
Northern Line	78,807	83,112
Total	290,526	344,697

No. 32.

STATEMENT of the Value of LIVE STOCK and other Exports and Imports across the Border during the year 1885.

	Value of Live Stock.						Quantity and Value of Wool.			Other Exports.	Exports—Total Value.	Imports—Total Value.
	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Total.	Bales.	lbs.	Value.	Value.		
	£	£	£	£	£	£	No.		£	£	£	£
Albury to Victoria	70,357	151,708	61,464	297	.....	283,826	21,477	7,517,306	314,327	35,602	633,755	584,201
Corowa do.	3,010	10,549	39,242	95	.....	52,896	12,856	4,636,763	244,718	10,069	307,683	131,638
Euston do.	.....	.....	.....	.....	.....	.....	1,462	436,674	31,161	379	31,540	8,975
Tocumwall do.	1,588	23,12	28,089	6	.....	31,995	2,440	844,378	37,143	1,298	70,436	76,252
Moama do.	7,804	86,708	185,266	745	.....	280,523	23,034	9,501,974	427,846	50,667	759,036	708,661
Wentworth to Victoria	870	.....	1,730	.....	.....	2,600	761	245,946	7,854	971	11,425	13,084
Wentworth to South Australia	785	.....	75,124	.....	.....	75,909	10,871	3,776,047	190,203	2,496	268,608	133,929
Swan Hill (Crossing) to Victoria	1,180	13,717	15,757	.....	.....	30,654	34,643	13,859,494	594,719	1,992	627,365	24,444
Howlong do.	1,679	6,461	332	156	.....	8,628	.....	.....	.....	576	9,204	7,181
Thackaringa to South Australia	640	77,781	68,790	.....	.....	147,211	9,566	3,518,907	91,204	110,583	348,998	215,953
Thackaringa to Queensland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	67,103
Boggabilla do.	.....	.....	.....	.....	.....	.....	440	196,806	4,920	208	5,128	1,356
Barringun do.	4,804	.....	55,872	.....	.....	60,676	.....	.....	.....	27,608	88,284	219,538
Wilcannia do.	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,301	1,301	.....
Tenterfield do.	.....	.....	.....	.....	.....	.....	15	7,500	377	4,494	4,871	6,045
Stanthorpe do.	3,100	.....	.....	.....	.....	3,100	380	143,360	8,138	17,839	29,077	3,432
Total year 1885	95,817	349,236	531,666	1,299	.....	978,018	117,945	44,685,155	1,952,610	266,083	3,196,711	2,201,792
Total year 1884	77,277	229,658	837,300	1,485	.....	1,145,720	150,616	53,594,068	2,998,121	361,145	4,504,986	1,852,622
Increase	18,540	119,578	.....	.....	.....	.....	.....	.....	.....	.....	.....	349,170
Decrease	.....	.....	305,634	186	.....	167,702	32,671	8,908,913	1,045,511	95,062	1,308,275	.....

No. 33.

CENTRAL RAILWAY OFFICE.

STATEMENT of the Business transacted and Revenue received at the Central Railway Office during the year 1885.

Date.	Sleeping-berths.	Parcels.						Passengers.						Value of Time-table Books sold.	Tramway.		Parcels.					Value of Sleeping-berths.	Total Amount.
		Northern.		Southern & Western.			Total.	Northern.			Southern and Western.				Number of Tickets.	Amount.	Northern.		Southern and Western.				
		In.	Out.	Cloak.	In.	Out.		1st Class.	2nd Class.	Amount.	1st Class.	2nd Class.	Amount.				Inwards.	Outwards.	Cloaked.	Inwards.	Outwards.		
1885.										£ s. d.			£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
January ..	576	540	1,581	369	916	8,466	11,872	30	21	307 10 5	1,494	375	4,192 13 8	18 18 3	2,300,594	13,005 10 5	61 10 0	180 11 1	6 18 0	66 18 3	587 0 9	346 12 6	18,774 3 4
February ..	468	517	1,562	302	1,057	7,886	11,324	21	8	177 10 2	1,211	366	3,688 0 1	5 8 9	2,024, 818	12,429 16 8	55 16 1	180 0 0	7 10 0	100 8 6	552 10 2	283 15 0	17,480 15 5
March	536	583	1,625	399	1,090	8,169	11,866	20	4	85 0 9	1,750	308	4,141 14 9	1 17 5	1,876,638	14,124 14 6	61 12 10	182 3 8	7 16 0	76 3 1	605 2 10	321 2 6	19,607 8 4
April	643	546	1,589	356	1,021	8,173	11,685	44	17	69 19 0	1,871	452	4,168 8 10	30 1 9	1,780,816	13,516 1 2	57 18 4	186 9 8	5 10 0	83 8 0	609 9 10	386 10 0	19,113 16 7
May	538	568	1,763	412	1,278	8,905	12,926	30	21	60 5 3	1,280	303	2,615 16 9	3 2 1	1,754,830	13,203 7 8	56 12 7	198 12 11	11 8 0	87 1 8	668 18 11	322 12 6	17,227 18 4
June	588	579	1,707	343	1,206	8,112	11,947	39	27	71 14 8	1,137	242	2,645 8 7	4 19 0	2,384,819	13,061 7 5	53 4 9	192 18 3	8 2 0	102 0 3	587 6 10	355 15 0	17,082 16 9
July	549	645	1,704	330	1,323	9,018	13,020	16	12	77 9 1	1,265	255	3,451 2 9	14 19 10	2,918,227	13,435 17 10	62 6 8	192 10 0	6 18 0	102 16 7	669 1 6	335 17 6	18,348 19 9
August	604	589	1,688	310	1,182	8,812	12,581	19	21	62 17 8	1,041	273	2,991 0 10	4 1 2	3,181,559	14,358 13 3	67 15 5	201 0 4	4 18 0	84 18 5	624 17 0	369 0 0	18,769 2 1
September..	692	586	1,945	424	1,191	8,803	12,949	30	13	49 0 3	1,804	398	3,202 6 9	5 7 3	3,443,610	15,386 7 8	67 9 4	198 12 3	11 0 0	81 8 8	663 0 1	415 7 6	20,079 19 9
October....	766	620	1,757	397	1,071	9,962	13,807	7	18	32 18 10	1,942	304	6,519 3 7	4 0 2	3,532,874	15,565 2 10	63 2 6	222 0 2	7 0 0	77 4 2	724 11 1	465 2 6	23,680 5 10
November..	492	514	1,698	395	1,155	9,255	13,017	12	13	37 2 10	1,246	340	2,843 5 7	3 3 10	3,439,514	15,045 14 11	52 8 8	200 14 7	10 8 0	77 7 5	681 18 1	301 2 6	19,253 6 5
December..	650	773	2,037	474	1,493	10,763	15,540	131	27	188 17 6	2,279	533	5,720 15 10	2 9 10	4,137,362	17,981 15 2	95 14 0	245 17 11	7 0 0	98 7 11	777 17 0	383 2 6	25,521 17 8
	7,102	7,060	20,656	4,511	13,983	106,324	152,534	399	202	1,220 6 5	18,320	4,149	46,179 18 0	98 9 4	32,775,661	171,114 9 6	755 11 2	2,381 10 10	94 8 0	1,038 2 11	7,751 14 1	4,286 0 0	234,920 10 3
1879.	40	....	....	7,812	2,751	44,153	54,716	.....	.....	.....	4,514	3,838	5,260 19 11	18 0 10	.....	.....	.....	.....	69 8 8	108 17 9	2,702 5 0	.....	8,159 12 2

SUMMARY.

	1885.	1884.	1879.
	£ s. d.	£ s. d.	£ s. d.
Freight, &c., Railway Department...	63,806 0 9	56,817 3 6	8,159 12 2
Value of Tramway Tickets	171,114 9 6	145,992 2 3	2,070 2 9
	£234,920 10 3	£202,809 5 9	£10,229 14 11

Increase—£32,111 4 6

	1885.	1884.	1879.
Number of Parcels booked	152,534	135,985	54,716
„ Passengers booked.....	23,070	22,664	8,352
„ Tramway Tickets sold	32,775,661	20,997,482	161,268
„ Sleeping-berths ordered	7,102	6,854	40

No. 34.

RETURN of the quantity of COAL exported from Newcastle to Intercolonial and Foreign Ports in 1884 and 1885, showing the increase and decrease in each.

Countries.	1885.	1884.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.
Victoria	544,005	507,082	36,923	.....
New Zealand	178,707	198,778	.....	20,071
South Australia	139,337	172,314	.....	32,977
Tasmania	45,155	37,198	.....	.....
Western Australia	12,309	16,383	7,957	4,074
Fiji	15,627	11,862	3,765	.....
Queensland	44,205	37,389	6,816	.....
Total, Intercolonial	979,345	981,006	.....	1,661
Foreign—				
United Kingdom	Nil.	5,000	.....	5,000
Tahiti	700	.....	700	.....
Callao	4,651	4,550	101	.....
New Caledonia	4,913	8,376	.....	3,463
India	101,119	86,053	15,066	.....
United States	12,756	16,105	.....	3,349
San Francisco	118,053	128,419	.....	10,366
Hong Kong	104,554	122,022	.....	17,468
China	9,413	22,075	.....	12,662
Mauritius	7,279	14,937	.....	7,658
Japan	3,748	1,942	1,806	.....
Manilla	52,715	40,060	12,655	.....
Valparaiso	59,045	37,587	21,458	.....
Honolulu	15,086	10,363	4,723	.....
Java	55,986	59,815	.....	3,829
Panama	2,118	3,160	.....	1,042
Bankok	914	1,694	.....	780
Guam	10,251	976	9,275	.....
Iquique	2,371	844	1,527	.....
Mexico	1,523	2,890	.....	1,367
San Diego	4,153	871	3,282	.....
New Guinea	700	600	100	.....
South Sea Islands	743	1,050	.....	307
Total, Foreign	572,791	569,389	3,402	.....
Grand Total	1,552,136	1,550,395	1,741	.....

No. 34—continued.

PORT OF NEWCASTLE.

Foreign and Intercolonial Trade.

	1885.		1884.		Increase.	
	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.
Inwards	1,002	779,901	977	708,449	45	71,452
Outwards	1,388	1,076,346	1,433	1,066,462	Decrease. 45	9,884

NUMBER of Tons and Value of COAL Exported.

Foreign and Intercolonial.

1885.		1884.		Increase.	Decrease.
Tons.	Value.	Tons.	Value.	Tons.	Value.
	£		£		£
1,552,136	832,495	1,550,395	835,070	1,741	2,575

Coastwise.

	1885.		1884.	
	No. of Vessels.	Tons.	No. of Vessels.	Tons.
Outwards	1,676	425,281	1,493	420,803

No. 35.

No. 35.

GREAT NORTHERN RAILWAY.

Monthly Return of Coal hauled for the year 1885.

Months	Newcastle Colliery		New Lambton Colliery		Ferndale Colliery		Co operative Colliery		Wallsend Tunnel Colliery		Purified Coke Co *		Minmi Colliery		Greta Colliery		Goose Colliery		Rix's Creek Colliery	
1884	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q lb	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d
January	11019 3 1	463 7 4	2995 2 1	117 15 10	6595 18 1	287 18 10	22214 0 1 20	1217 0 3	39721 1 3	1656 0 5	500 13 1	20 17 3	14736 5 2	737 11 0	2515 2 1	231 7 1	30 0 0	1 5 0	23 11 0	10 16 11
February	13168 10 1	548 14 10	2860 11 1	98 3 9	7243 14 2	301 16 5	21008 0 2 0	1144 13 5	42815 2 3	1786 18 1	348 10 1	14 10 5	16324 3 0	816 4 1	3620 17 0	334 14 5	36 0 0	1 10 0	21 18 0	11 19 4
March	11843 11 3	493 7 4	4568 15 2	161 16 11	5162 19 0	218 2 3	19136 6 0 0	1060 9 9	45852 3 3	1916 9 8	575 11 2	23 19 8	12310 16 2	615 10 10	4412 4 1	413 11 6	24 0 0	1 0 0	105 6 0	24 1 5
April	12802 8 1	532 19 1	4050 5 0	169 0 11	6368 18 2	290 2 5	20523 16 0 0	1148 0 0	35586 11 0	1485 19 8	322 8 0	13 8 8	14819 10 2	740 17 9	4647 11 0	422 17 10	18 0 0	0 15 0	339 9 0	57 13 1
May	14947 12 2	622 14 0	5094 14 2	189 1 7	6837 12 3	287 19 6	19304 9 3 0	1008 3 9	43483 14 1	1814 7 7	359 17 1	14 19 10	18236 3 2	911 16 3	6660 11 1	615 0 5	42 0 0	2 3	6 1563 18 0	48 12 11
June	14661 2 1	613 2 8	4660 7 2	180 4 5	5747 8 0	239 9 5	24715 2 3 0	1335 19 6	43486 9 1	1820 6 11	435 10 2	18 2 11	17403 7 1	870 3 3	7234 8 3	688 12 1	48 0 0	2 0 0	1472 7 0	57 1 3
July	16796 8 0	704 4 3	5310 14 0	217 12 1	6399 4 3	280 3 6	26399 16 2 0	1415 5 8	46811 5 1	1955 16 11	371 9 1	15 9 7	11395 8 2	569 15 6	8286 14 3	770 10 0	42 0 0	1 15	0 1867 1 0	54 3 4
August	17249 14 2	718 14 10	4269 0 2	166 6 6	5167 3 2	215 3 5	23954 1 0 0	1337 10 6	45996 6 3	1916 10 5	333 5 3	13 17 8	11296 15 2	564 16 1	8796 17 2	824 2 4	42 0 0	1 15	0 1439 16 0	42 18 10
September	10238 8 0	426 11 11	5010 14 2	193 5 0	5290 15 1	230 12 9	21175 19 2 0	1126 11 9	36597 13 3	1526 3 11	575 5 1	23 19 4	12546 7 0	627 6 5	7683 9 2	715 6 7	42 0 0	1 15	0 1817 14 0	49 14 4
October	9604 14 1	399 18 6	4147 1 2	164 14 10	3961 1 2	165 1 1	18343 15 2 0	1023 14 0	26495 10 2	1106 0 7	412 17 0	17 4 0	14493 8 2	724 13 5	6896 15 0	656 2 8	24 0 0	1 0 0	755 15 0	24 16 3
November	16585 18 3	691 1 6	6197 16 3	248 19 3	7237 14 1	304 7 4	13466 16 3 0	781 12 3	42220 9 2	1763 13 1	402 19 1	17 10 0	14190 5 2	709 9 11	8403 13 3	765 15 5	36 0 0	1 10 0	202 16 0	6 10 1
December	14383 6 2	599 6 1	5537 16 1	220 11 10	5967 4 2	256 18 8	23470 0 0 0	1258 13 2	36164 19 2	1510 3 3	211 9 2	8 16 3	12233 5 2	611 13 2	5908 14 1	533 18 1	24 0 0	1 0 0	101 9 0	9 9 8
Total	163300 18 1	6814 2 4	54702 19 2	2127 12 11	71979 14 3	3077 15 7	253712 4 2 20	13857 14 0	485231 8 0	20258 10 6	4849 16 3	202 15 7	169985 16 3	8499 17 8	75066 19 1	6971 18 5	408 0 0	17 8 6	9711 0 0	397 17 5

Months	New Park Colliery		Elliott's Colliery		Blackwall Colliery		A A Co		Speedwell Colliery		Sneddon's Wallsend Colliery		Burwood Colliery		Rathluba Colliery		Wallatah Colliery		Lambton Colliery	
	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d
January									34 13 2	1 8 11	1935 7 0	96 15 4	1973 17 2	107 5 10			3561 11 0	148 8 0	19731 0 0	813 15 9
February											1844 14 3	92 4 9	2051 13 0	121 5 3			4565 5 1	190 4 5	22354 10 0	931 8 9
March							11 10 3	0 18 0			1967 8 0	98 7 6	1893 4 1	104 10 7			1391 10 2	57 19 7	24402 13 0	1016 15 5
April											1797 19 3	89 18 0	236 8 0	9 17 0			3668 16 0	152 17 3	21658 8 3	892 5 7
May					12 1 0	5 7 2					2026 16 0	101 6 10	1184 10 0	69 2 1			6391 13 2	282 1 4	25379 0 0	1057 9 1
June	5 9 0	3 16 10			10 6 0	4 18 4					1778 19 1	88 18 10	2895 17 0	155 2 0			5832 10 3	243 0 7	25370 14 3	1077 18 11
July			22 18 0	6 9 4	52 2 0	10 3 8					1982 7 3	99 2 5	4534 2 1	230 13 9			4171 12 2	173 16 3	25845 1 1	1076 17 5
August			16 15 0	4 0 6	35 10 0	9 6 3					1835 15 0	91 15 8	4258 3 1	208 11 3	1 0 0	1 11 7	1353 17 2	56 8 3	22751 9 3	947 19 6
September			5 13 0	1 12 1	76 19 0	35 12 5	5 7 3	0 12 7			1347 1 3	67 7 2	4311 11 1	218 3 1			998 14 2	41 12 3	20851 10 0	868 16 3
October					60 8 0	21 7 8					1154 18 0	57 14 0	4757 0 0	237 19 6			2598 16 0	108 5 8	12614 8 3	525 11 11
November	6 4 0	4 3 6			41 0 0	21 12 6	10 17 0	1 5 4			1639 16 0	81 19 10	6931 4 0	319 5 6			1962 15 2	81 15 8	1214 9 2	50 11 11
December					95 0 0	53 17 5	2352 4 1	98 0 2			1732 16 1	86 11 9	7727 3 2	360 16 5			3483 5 2	145 2 9	866 6 3	36 1 11
Total	11 13 0	8 0 4	45 6 0	12 1 11	383 6 0	162 5 5	2379 19 3	100 16 1	34 13 2	1 8 11	21043 19 2	1052 2 1	42754 14 0	2142 12 3	1 0 0	1 11 7	39980 8 2	1681 12 0	223339 12 2	9295 12 5

Months	Wickham and Bullock Island Colliery		Tulip's Colliery		Leconfield Colliery		Tighe's Hill Colliery		Hill Side Colliery		Maryville Colliery		Marshall's Colliery		South Ferndale Colliery		Total	
	T c q	£ s d	T c p	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c q	£ s d	T c. q lb	£ s d
January																	127387 6 3 20	5911 13 9
February	30 7 0	2 5 7															138293 17 2 0	6396 13 6
March	108 16 3	4 13 10	6 0 0	0 9 0													133772 11 2 0	6212 3 3
April	466 0 2	19 17 4					342 7 3	14 5 4	24 18 3	1 17 5							127673 16 3 0	6042 12 4
May	817 18 0	34 1 7			1 18 2	0 3 11	549 6 1	22 17 9									152893 17 0 0	7087 9 1
June	887 11 1	49 8 10					811 19 0	33 16 7			743 9 0	30 19 7					158700 19 1 0	7513 2 11
July							975 15 2	40 13 1			1689 5 3	70 7 9	0 8 1	1 1 10	435 5 0	18 2 9	163389 0 1 0	7712 4 1
August	15 16 0	0 13 2					630 17 1	26 5 8			1400 17 1	58 7 4			400 11 0	16 13 9	151245 13 0 0	7223 8 6
September	530 1 3	22 1 8					380 13 0	15 17 2			1333 2 0	55 10 11			380 14 1	15 17 3	131199 15 0 0	6204 9 10
October	1125 19 2	46 18 3					462 4 2	19 5 2			1931 17 3	80 9 11			169 7 1	7 1 2	110009 18 2 0	5387 18 7
November	1004 11 1	41 17 2					141 18 0	5 18 3			1408 7 1	58 13 8			239 14 3	9 19 9	123545 7 3 0	5967 11 11
December	654 10 0	27 5 4					9 15 2	0 8 2			1209 2 2	50 7 6			356 10 0	14 17 1	122488 19 1 0	5883 18 8
Total	5641 6 0	249 2 9	6 0 0	0 9 0	1 18 2	0 3 11	4304 16 3	179 7 2	24 18 3	1 17 5	9716 1 2	404 16 8	0 8 1	1 1 10	1982 2 1	82 11 9	1640601 2 2 20	77603 6 5

* Output of Wallsend Tunnel

No. 36.

MONTHLY Return of COAL forwarded from Western Collieries during 1885.

Months	Gladstone.		North's		Main Camp.		Mort's (Zig-Zag).		Vale of Clwydd.		Eskbank.	
	T. c. q.	£ s. d.	T. c q.	£ s d.	T. c. q.	£ s. d	T. c q.	£ s. d.	T. c. q.	£ s d.	T. c. q	£ s. d.
January	...	...	1,429 7 0	388 7 9			1,935 7 0	795 15 0	2,604 15 0	969 8 0	2,023 9 0	814 8 10
February	...	...	1,858 1 0	506 17 0		...	2,327 16 0	852 13 11	2,929 15 0	1,108 15 11	2,728 13 0	1,115 12 5
March		...	2,181 7 0	591 6 8			2,881 15 0	1,121 11 10	3,062 1 0	1,134 11 10	2,018 16 0	820 7 11
April		...	1,580 3 0	427 9 2		... ...	2,381 7 0	894 19 0	2,424 10 0	896 0 2	2,463 12 0	1,021 2 4
May	...		2,016 9 0	545 6 0			2,861 19 0	1,052 6 5	2,620 2 0	985 5 2	2,446 12 3	987 16 5
June		... ...	1,899 1 3	517 2 6			2,802 5 0	1,071 16 5	3,799 19 0	1,471 10 1	2,722 0 0	1,123 10 7
July	755 19 0	204 14 8	3,147 6 0	858 9 6	...		2,992 5 0	1,156 8 11	4,490 17 0	1,707 5 8	1,835 2 3	724 8 4
August			3,272 1 0	898 2 9		.....	2,760 12 0	1,018 2 5	4,813 16 0	1,858 14 0	3,322 6 0	1,366 18 3
September		...	2,902 13 0	812 16 10		...	2,957 1 0	1,062 15 6	3,566 12 0	1,380 7 7	2,578 14 0	995 13 8
October	...		2,523 10 0	706 14 7	173 0 3	58 5 8	2,644 1 0	981 2 8	3,778 5 0	1,454 12 7	2,500 14 0	964 1 3
November			2,035 14 0	576 6 6	327 8 1	107 11 8	2,229 1 0	824 16 10	3,492 3 0	1,304 19 10	2,090 11 0	795 5 11
December	...	...	1,661 16 2	448 12 3	320 14 0	103 19 6	2,116 3 0	807 4 5	3,399 9 0	1,288 1 4	2,248 5 0	877 6 0
	755 19 0	204 14 8	26,507 9 1	7,277 11 6	821 3 0	269 16 10	30,889 12 0	11,639 13 4	40,982 4 0	15,559 12 2	28,978 15 2	11,606 11 11

Months	Lithgow Valley.		Bowenfel's Siding		Irondale		Carlos Gap.		Total	
	T. c. q.	£ s. d.	T. c. q.	£ s d.	T. c. q.	£ s. d	T c. q	£ s. d.	T. c q.	£ s. d
January	2,356 5 3	862 6 11	38 6 0	14 2 2	89 1 0	25 16 8	.	...	10,476 10 3	3,870 5 4
February	1,453 13 0	555 11 1	49 16 0	19 18 2	135 6 0	34 9 8	..		11,483 0 0	4,193 18 2
March	2,589 11 2	1,067 1 0	157 18 0	60 10 8	104 7 0	27 4 5		.	12,995 15 2	4,822 14 4
April	2,569 3 1	948 2 8	43 12 0	16 14 3	206 3 0	46 16 4		...	11,668 10 1	4,251 3 11
May	2,502 1 0	916 17 8	25 2 0	8 19 10	198 15 0	56 1 7	.	.. ..	12,671 0 3	4,552 13 1
June	2,842 7 2	996 8 4	19 4 0	6 13 6	188 10 0	45 16 11	83 13 0	18 17 4	14,357 0 1	5,251 15 8
July	3,373 19 1	1,333 1 6	.	... ...	87 9 0	19 5 6	73 5 0	14 9 9	16,756 3 0	6,018 3 10
August	2,633 15 0	1,022 6 7	....	. ... .	179 14 0	45 4 8	41 17 0	10 15 9	17,024 1 0	6,220 4 5
September	2,806 1 0	1,113 1 0	31 8 0	13 16 6	74 1 0	24 6 10	65 18 0	20 9 5	14,982 8 0	5,423 7 4
October	2,294 14 0	869 14 1	... .	....	73 19 0	23 9 7	45 6 0	12 15 11	14,033 9 3	5,070 16 4
November	2,580 0 3	998 10 4	.....	....	20 13 0	7 15 9	5 19 0	1 10 9	12,781 10 0	4,616 17 7
December	2,051 7 1	791 1 10	....	... .	... ..	....	5 12 0	1 8 6	11,803 6 3	4,317 13 10
	30,052 19 1	11,474 3 0	365 6 0	140 15 1	1,357 18 0	356 7 11	321 10 0	80 7 5	161,032 16 0	58,609 13 10

No. 37.

MONTHLY RETURN of SHALE carried from Joadza Siding and Hartley Vale during the year 1885.

Months.	Joadza Siding.		Hartley Vale.		Total.	
	Tons cwt. qrs.	£ s. d.	Tons cwt. qrs.	£ s. d.	Tons cwt. qrs.	£ s. d.
January	686 0 0	226 16 3	358 16 2	126 15 1	1,044 16 2	353 11 4
February	1,158 8 0	362 9 0	233 16 2	80 11 3	1,392 4 2	443 0 3
March	348 0 0	116 17 2	770 0 1	273 2 11	1,118 0 1	390 0 1
April	1,813 17 2	597 13 3	1,004 6 2	354 3 0	2,818 4 0	951 16 3
May	2,314 12 0	770 16 11	653 1 2	219 2 5	2,967 13 2	989 19 4
June	822 0 0	272 9 8	633 1 1	221 12 11	1,455 1 1	494 2 7
July	2,712 0 0	893 18 0	764 15 0	265 10 8	3,476 15 0	1,159 8 8
August	2,102 2 3	695 10 10	727 7 0	261 11 11	2,829 9 3	957 2 9
September	1,146 0 0	376 2 6	577 17 3	198 16 3	1,723 17 3	574 18 9
October	426 1 3	141 12 6	66 13 2	21 17 11	492 15 1	163 10 5
November	459 2 0	153 7 1	180 6 1	62 14 0	639 8 1	216 1 1
December	486 0 0	158 17 6	808 0 3	276 1 10	1,294 0 3	434 19 4
Total	14,474 4 0	4,766 10 8	6,778 2 3	2,362 0 2	21,252 6 3	7,128 10 10

No. 38.

RETURN of O H M S COAL forwarded from the Western Collieries during the year 1885

Months	Cladstone		North's Siding		Main Camp Siding		Morts Siding		Vale of Clwydd	
	Tons cwt qrs	£ s d	Tons cwt qrs	£ s d.	Tons cwt qrs	£ s d.	Tons cwt qrs	£ s. d.	Tons cwt. qrs	£ s d
January			426 5 2	124 14 3			3,344 13 0	1,928 11 1		
February							2,311 13 0	1,314 3 5		
March			112 9 3	31 17 5			2,878 16 0	1,689 10 1		
April							3,482 19 0	1,969 19 4		
May			172 12 3	48 18 4			4,014 3 0	2,639 8 0		
June							4,016 19 0	2,563 6 5		
July	12 13 0	4 13 5	242 4 0	81 7 5			4,503 12 0	2,298 10 8		
August			1,268 9 0	851 17 4			4,153 18 0	1,615 14 7		
September			654 14 0	433 8 2			4,710 15 0	1,895 19 9		
October			483 4 0	299 17 9			4,690 10 0	1,969 2 10		
November			457 5 0	281 2 7	21 6 3	5 12 0	3,874 14 0	1,536 0 8		
December			529 13 0	301 10 4	5 14 2	1 10 1	4,017 18 0	1,784 5 6	5 15 0	5 12 7
Total	12 13 0	4 13 5	4,346 17 0	2,454 13 7	27 1 1	7 2 1	46,000 10 0	23,204 12 4	5 15 0	5 12 7

Months	Lskbank		Lithgow		Bowenfels Siding		Ilondale		Total	
	Tons cwt qrs	£ s d	Tons cwt qrs	£ s d	Tons cwt. qrs	£ s. d	Tons cwt qrs	£ s d	Tons cwt. qrs	£ s d
January	3,234 1 0	1,432 15 5	3,366 3 0	1,427 12 9	247 18 0	136 19 8	507 4 0	192 10 5	11,126 4 2	5,243 3 7
February	2,608 13 0	1,214 15 0	2,529 6 0	1,030 18 3	455 12 0	261 11 4			7,905 4 0	3,821 8 0
March	3,013 7 0	1,087 16 11	2,320 2 0	870 13 9	611 11 0	180 5 10			8,936 5 3	3,860 4 0
April	3,444 5 0	1,297 5 9	2,761 2 0	1,204 19 9	652 10 0	327 19 6			10,340 16 0	4,800 4 4
May	3,878 19 0	1,426 2 6	3,302 13 0	1,180 13 0	671 2 0	269 2 11			12,039 9 3	5,564 4 9
June	3,778 18 0	1,433 5 7	3,295 16 0	1,084 9 4	629 13 0	265 5 2			11,721 6 0	5,346 6 6
July	2,991 0 0	1,462 2 5	4,055 11 0	1,389 9 4	679 14 0	417 13 6			12,484 14 0	6,653 16 9
August	3,831 0 0	2,098 11 6	3,370 0 0	939 15 7	642 5 0	294 2 2			13,265 12 0	5,800 1 2
September	4,197 13 0	2,700 0 7	4,170 1 0	1,274 13 9	479 19 0	210 10 8			14,213 2 0	6,514 12 11
October	4,684 15 0	3,060 6 6	3,763 4 0	1,258 17 4	501 4 0	171 6 10			14,122 17 0	6,759 11 3
November	3,531 18 0	2,235 17 6	3,293 6 0	963 4 1	649 14 0	278 15 8			11,828 3 3	5,300 12 6
December	3,909 9 0	1,845 0 2	3,543 12 0	1,201 16 3	576 17 0	245 4 10			12,588 18 2	4,384 19 9
Total	43,103 18 0	21,293 19 10	39,770 16 0	13,827 3 2	6,797 19 0	3,058 18 1	507 4 0	192 10 5	140,572 13 1	64,049 5 6

No. 39.

GREAT NORTHERN RAILWAY.

ABSTRACT of the Tonnage and Amount received for carriage of COAL shipped at the Government Cranes and Staiths, Newcastle, during 1884 and 1885.

Companies.	1884		1885		Increase, 1885		Decrease, 1885	
	Tons	Freight	Tons	Freight	Tons	Freight	Tons	Freight
		£		£		£		£
A. A. Company	75	40	2,380	101	2,305	61	.....	.....
Blackwall	..	...	383	162	383	162	.....	.....
Burwood	111	5	42,755	2,142	42,644	2,137		.....
Co-operative	246,729	13,215	253,712	13,858	6,983	643	...	...
Elliots	...	.	45	12	45	12	...	.....
Ferndale	72,191	3,080	71,980	3,078			211	2
Font Hill	27	6	..	.....		....	27	6
Greta	71,128	6,686	75,067	6,972	3,939	286	..	..
Goose	510	21	408	17	...	...	102	4
Hill Side	..	.	25	2	25	2	.	.
Lambton	266,170	11,090	223,339	9,296	....	.....	42,831	1,794
New Lambton	63,578	2,472	54,703	2,127	...		8,875	345
Leconfield	..	.....	2	..	2	.....	.....	...
Minmi	179,309	8,966	169,986	8,500	..	...	9,323	466
Maryville	...	..	9,716	405	9,716	405	...	...
Marshall's	...	.....	1	1	1	1	...	.....
Purified Coke	5,166	215	4,850	203	.	...	316	12
Rix's Creek	515	251	9,711	398	9,196	147	..	.
Rathluba	24	16	1	2		.	23	14
Speedwell	9,185	382	35	1	.	.	9,150	381
Sneddon's	18,345	917	21,044	1,052	2,699	135	.	...
Sunderland	2	1	..	..		.....	2	1
South Ferndale	...	...	1,982	83	1,982	83	...	.....
Thornley	5	5	...	...	.....	...	5	5
Tulip's		.	6	1	6	1	...	.....
Wallsend Tunnels	452,754	18,849	485,231	20,258	32,477	1,409	.	.....
Woodford	3	..	...	.	..	...	3	...
Newcastle	180,598	7,499	163,301	6,814	..		17,297	685
Waratah	47,775	2,124	39,980	1,682	.....	...	7,795	442
New Park	...	.....	12	8	12	8		.....
Wickham & Bullock Island	.		5,641	249	5,641	249	.....	.....
Tighe's Hill			4,305	179	4,305	179		.....
Total	1,614,200	75 840	1,640,601	77,603	122,361	5,920	95,960	4,157
Less local consumption	54,177	3,068	72,180	3 823	18,003	755	..	.

No. 40.

ABSTRACT of the Tonnage and amount received for the carriage of COAL and SHALE from the various Mines on the Great Southern and Western Railways in 1884 and 1885.

	1884		1885		Increase, 1885		Decrease, 1885	
	Tons	Freight	Tons	Freight	Tons.	Freight	Tons	Freight
		£		£		£		£
Joadza	16,352	5,367	17,419	5,822	1,067	455	.	.....
Austermere	3,411	1,046	1,807	413	.	.	1,604	633
Ringwood	960	340	196	99		...	764	241
Erith	1,461	214	2,463	455	1,002	242	...	.....
Gladstone			756	205	756	205	.	.
North's	16,825	4,606	26,507	7,278	9,682	2,672	..	.....
Hartley	8,697	3,014	6,778	2,362	.....		1,919	652
Main Camp	...	..	821	270	821	270	.	...
Lithgow Valley—								
Mort's (Zig Zag)	30,562	11,363	30,890	11,640	328	277	.	..
Vale of Clwydd	34,467	12,689	40,982	15,560	6,515	2,871	..	
Esk Bank	25,659	9,731	28,979	11,606	3,320	1,875	.	..
Lithgow	27,010	11,201	30,053	11,474	3,043	273	..	...
Bowenfels Company	904	282	365	141	.	.	539	141
Irondale	2,106	505	1,358	356	.		748	149
Carlos Gap			321	80	321	80	.	...
Total	168,414	60,358	189,695	67,762	26,855	9,220	5,574	1,816

No. 41.

ABSTRACT of the total quantity of COAL and SHALE carried on Great Southern, Western, and Northern Railways during 1884 and 1885, and the amounts of Freight received therefrom

	1884		1885		Increase, 1885		Decrease, 1885	
	Tons	Freight	Tons	Freight	Tons	Freight	Tons	Freight
COAL		£		£		£		£
Newcastle Lines	1,614,200	75,840	1,640,601	77,603	26,401	1,763		
Great Southern Railway—								
Joadza Siding	4,000	1,249	2,944	1,056			1,056	193
Austermere	3 411	1,046	1,807	413			1,604	633
Ringwood	960	340	196	99			764	241
Erith	1,461	214	2,163	456	1,002	242		...
Great Western Railway —								
Gladstone ..			756	205	756	205		
North's	16,825	4,606	26,507	7,276	9,682	2,670		
Hartley	434	150					434	150
Main Camp			822	270	822	270		
Lithgow Valley Mines	118,602	45,266	131,269	50 422	12,667	5,156		
Irondale	2,106	505	1,358	356			748	149
Carlos Gap			321	80	321	80		
SHALE								
Great Southern Railway—								
Joadza Siding	12,352	4,118	14,474	4,767	2,122	649		... ...
Great Western Railway—								
Hartley Vale	8,623	2,864	6,778	2,362			1,485	502
Total	1,782,614	136,198	1,830,296	145,365	53,773	11,035	6,091	1,868

No. 42.*

RETURN of the numbers and percentage proportion of FIRST and SECOND CLASS PASSENGERS on the Great Southern, Western, and Richmond and Northern Lines, and the amount received from that source during 1885

	First Class	Second Class	Total
Number—			
South and West—	No	No	No
Passengers	2,267,389	5,339,261	7,606,650
Season Tickets	1,930,082	1,259,076	3,189,158
Workmen's Tickets		1,689,276	1,689,276
Northern—			
Passengers	169,756	709,897	879,653
Season Tickets	73,930	85,430	159,360
All Lines	4,441,157	9,082,940	13,524,097
Amount received—			
South and West—	£	£	£
Passengers	273,297	285,297	558,594
Season Tickets	21,405	9,435	30,840
Workmen's Tickets		12,160	12,160
Northern—			
Passengers	40,129	67,211	107,340
Season Tickets	1,328	652	1,980
All Lines	336,159	374,755	710,914
Percentage number—	No	No.	No
South and West	33 62	66 38	100 00
Northern	23 45	76 55	100 00
All Lines	32 84	67 16	100 00
Percentage amount received—	£	£	£
South and West	48 99	51 01	100 00
Northern	37 92	62 08	100 00
All Lines	47 29	52 71	100 00

* Includes Camden Tramway

No. 43.

RETURN of the MILEAGE of SUBURBAN PASSENGERS during the years 1884 and 1885.

Description		1884	1885
No of Passengers	No	4,760,508	5,945,185
„ Workmen's journeys	„	1,314,432	1,688,976
„ Season Ticket-holders' journeys	„	2,575,236	3,036,188
Total Passenger journeys		8,650,176	10,670,349
No of miles travelled .	Miles	43 728,584	53,490,610
Average mileage per passenger	„	5 06	5 01
Amount received for passengers	£	114,640 8 3	141,918 3 8
Average receipts per mile per passenger	d	0 52	0 64

No. 44.

RETURN of the Number of TICKETS issued, and amounts received for same, from Suburban Stations to Suburban Stations, during the year 1885.

Stations	Down. Number issued. Single. 1	Down. Number issued. Single. 2	Down. Number issued. Return. 1	Down. Number issued. Return. 2	Down. Total number issued—Down	Down. Amounts. Single. 1	Down. Amounts. Single. 2	Down. Amounts. Return 1	Down. Amounts. Return 2	Down. Amounts. Total.	Up. Number issued. Single. 1	Up. Number issued. Single. 2	Up. Number issued. Return. 1	Up. Number issued. Return. 2	Up. Total number issued—Up	Up. Amount. Single. 1	Up. Amount. Single. 2	Up. Amount. Return. 1	Up. Amount. Return. 2	Up. Amount. Total.	Total number of Passengers—Down and Up.
						£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.						£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Sydney	199,074	486,948	204,364	343,719	1,234,105	4,613 17 5	8,426 16 7	10,811 1 6	13,397 13 5	37,249 8 11	.	. .		.	.	. . . .	.....	.....	. .	... . .	1,234,105
Eveleigh	11,429	101,596	3,105	20,944	137,074	172 6 3	973 18 4	92 5 5	442 15 9	1,681 5 9	393	6,595	37	75	7,100	3 4 7	27 9 7	0 9 3	0 12 6	31 15 11	144,174
M'Donald Town	4,267	12,508	1,041	2,890	20,706	81 15 1	170 4 10	34 11 5	74 13 8	361 5 0	9,664	57,540	5,209	28,331	100,744	115 18 3	401 9 5	101 9 6	390 2 2	1,008 19 4	121,450
Newtown	31,601	123,842	8,355	27,757	191,555	482 16 1	1,282 18 8	312 4 7	772 18 9	2,850 18 1	22,446	82,321	10,139	39,847	154,753	269 11 1	566 5 1	190 2 9	530 15 0	1,556 13 11	346,308
Stanmore	7,709	8,388	2,753	1,345	20,195	126 19 11	73 2 5	74 10 0	26 0 4	300 12 8	16,787	20,520	25,512	12,525	75,344	233 9 5	188 5 9	700 4 10	235 4 2	1,357 4 2	95,539
Petersham	22,957	49,962	6,410	9,850	89,179	432 16 2	665 6 6	254 15 1	283 2 11	1,636 0 8	53,042	161,912	82,254	107,294	404,502	702 19 9	1,389 4 2	2,281 15 0	2,007 1 2	6,381 0 1	493,681
Summer Hill	7,280	18,555	2,386	4,050	32,271	133 5 10	248 16 3	85 1 8	111 2 8	578 6 5	27,150	68,270	39,942	53,979	189,341	412 14 9	706 19 2	1,346 17 9	1,313 11 10	3,780 3 6	221,612
Ashfield	8,901	19,238	2,918	3,788	34,845	162 4 6	226 18 5	101 9 7	99 17 9	590 10 3	32,134	63,667	47,902	62,256	205,959	574 17 7	793 14 4	1,871 16 4	1,675 19 3	4,916 7 6	240,804
Croydon	6,157	15,091	1,998	2,409	25,655	88 3 9	139 7 11	56 14 2	49 11 5	333 17 3	16,010	34,585	19,507	32,650	102,752	334 10 9	534 0 3	894 14 6	1,040 9 10	2,803 15 4	128,407
Burwood	7,390	22,929	1,841	3,206	35,366	120 3 10	242 0 8	68 3 11	95 18 7	526 7 0	34,171	76,701	44,794	65,008	220,674	769 10 0	1,264 2 3	2,378 3 2	2,399 19 1	6,811 14 6	256,040
Strathfield	1,338	2,880	486	488	5,192	27 7 7	43 18 10	19 8 5	13 7 1	104 1 11	11,040	10,460	11,047	8,373	40,920	237 13 10	163 8 1	561 4 4	310 5 11	1,272 12 2	46,112
Homebush	764	5,108	243	665	6,780	17 18 9	78 14 3	8 9 7	17 16 1	122 18 8	7,800	25,402	6,021	12,717	51,940	168 18 4	335 5 5	332 1 6	419 1 2	1,255 6 5	58,720
Rookwood	1,308	11,426	384	3,515	16,633	23 16 9	156 5 4	10 4 4	66 16 7	257 3 0	4,065	23,990	1,862	21,970	51,887	123 11 9	540 19 5	123 17 5	958 3 7	1,746 12 2	68,520
Auburn	1,101	9,720	501	4,501	15,823	16 15 4	102 18 5	11 16 2	70 6 3	201 16 2	1,535	13,421	1,341	8,863	25,160	61 12 5	357 5 8	106 0 5	428 8 5	953 6 11	40,983
Granville	5,239	44,053	1,605	4,468	55,365	43 17 4	185 8 11	20 1 7	37 11 4	286 19 2	6,145	38,303	4,546	26,656	75,650	262 4 3	1,049 1 6	386 6 0	1,449 19 10	3,147 11 7	131,015
Parramatta	. .	.	..	.		. . .	.		.	... ...	36,772	122,602	29,288	52,816	241,478	1,618 6 11	2,641 19 9	2,718 5 3	3,231 8 8	10,210 0 7	241,478
Erskineville	902	5,080	638	2,316	8,936	22 1 9	80 8 4	24 2 8	57 5 8	183 18 5	587	4,591	176	1,032	6,386	7 1 0	32 11 9	3 5 5	13 13 6	56 11 8	15,322
St. Peter's	5,306	29,196	2,191	8,900	45,593	108 15 10	412 11 0	75 7 1	209 3 4	805 17 3	8,503	28,173	3,900	13,252	53,828	101 11 4	193 9 6	73 18 10	175 16 4	544 16 0	99,421
Marrickville	1,817	11,294	1,000	4,317	18,428	34 15 3	163 15 5	29 14 5	89 1 4	317 6 5	6,592	29,004	5,236	17,902	58,734	100 12 0	275 8 9	140 17 10	319 16 9	836 15 4	77,162
Tempe	1,632	8,220	438	1,482	11,772	25 18 7	95 5 0	10 0 2	26 18 1	158 1 10	5,220	12,812	3,062	6,365	27,459	97 2 4	172 7 8	99 1 6	142 2 6	510 14 0	39,231
Arncliffe	678	3,158	175	340	4,351	9 8 8	26 12 3	3 10 7	5 2 8	44 14 2	4,040	12,691	2,869	6,084	25,684	77 0 0	167 17 2	108 14 11	155 4 0	508 16 1	30,035
Rockdale	365	2,161	265	658	3,449	4 10 4	18 2 5	5 8 6	10 0 6	38 1 9	4,819	26,636	3,144	12,927	47,526	110 7 11	409 11 4	143 8 11	392 6 8	1,055 14 10	50,975
Kogarah	385	1,548	238	409	2,580	4 15 11	12 16 2	3 18 4	5 2 3	26 12 8	6,985	22,449	4,840	10,649	44,923	193 11 7	423 5 0	251 19 6	394 6 2	1,263 2 3	47,503
Hurstville	.	..	.				. . . . .	.. ..		.....	6,006	34,217	2,208	11,199	53,630	202 0 7	815 6 8	141 11 1	479 17 3	1,638 15 7	53,630
Total	327,600	992,901	243,335	452,017	2015853	6,754 10 11	13,826 6 11	12,112 19 2	15,962 6 5	48,656 3 5	321,906	976,862	354,836	612,770	2266374	6,778 10 5	13449 7 8	14956 6 0	18464 5 9	53648 9 10	4,282,227
Return Tickets—Return Journeys	. .	. .	354,836	612,770	967,606	. . ....	. ....	..... .	. ....	.....	.	. ..	243,335	452,017	695,352	.. .	. . .	. ...	.....	.. .	1,662,958
Total	....	....	598,171	1064787	2983459	. . ..	. .	. .... .	....	.....	. ..	.. .	598,171	1064787	2961726	....	. . ..	. .....	.....	..... .	5,945,185

No. 44—*continued.*

RETURN of the number of SEASON TICKETS issued, and Amounts received for same, by each Suburban Station during the year 1885

Stations.	Monthly		Quarterly		Half yearly.		Yearly		Total		Total Amount.	
	1	2	1.	2.	1	2	1.	2	1	2.	1st Class.	2nd Class
1885.											£ s. d.	£ s. d
Sydney	43	67	31	6	8	9	2	4	**208** 84	**187** 86	933 10 9	109 4 1
Eveleigh .		1					...			**1** 1	.. .. .	0 1 8
Macdonald Town ..	50	219	9	31	3	7	2	1	**119** 64	**366** 258	51 0 3	94 16 1
Newtown	290	1,070	105	201	56	59	21	6	**1,193** 472	**2,099** 1,336	480 8 11	489 12 10
Stanmore	402	242	120	30	85	21	31	1	**1,644** 638	**470** 294	749 9 4	149 2 11
Petersham	1,390	2,074	482	397	397	192	96	40	**6,370** 2,365	**4,897** 2,703	2,923 19 6	1,495 18 5
Summer Hill	437	772	223	289	234	125	56	17	**3,182** 950	**2,593** 1,203	1,736 0 7	1,036 2 5
Ashfield	591	551	292	207	301	118	119	17	**4,701** 1,303	**2,084** 893	2,761 9 1	934 14 4
Croydon	328	279	165	127	133	60	33	6	**2,017** 659	**1,092** 472	1,355 14 3	552 4 3
Burwood	595	548	303	151	256	73	96	14	**4,192** 1,250	**1,607** 786	3,031 10 4	898 9 9
Strathfield	228	45	161	25	127	11	38	1	**1,929** 554	**198** 82	1,416 7 3	103 0 11
Homebush	90	69	61	21	89	13	31	3	**1,179** 271	**246** 106	824 12 1	111 19 11
Rookwood	52	159	29	46	15	20	1	6	**241** 97	**489** 231	156 8 0	307 1 0
Auburn	25	69	30	6	2	.		.	**127** 57	**87** 75	106 14 6	64 8 9
Granville	44	164	18	95	16	11	5		**254** 83	**515** 270	767 1 4	322 1 4
Parramatta	258	344	148	118	93	32	10	4	**1,380** 509	**938** 498	1,443 15 8	763 4 6
Erskinville	3	10	1						**6** 4	**10** 10	3 6 9	1 17 6
St. Peters . . .	20	91	20	12	4	5	...		**104** 44	**157** 108	29 13 6	41 13 3
Marrickville	79	192	29	26	19	9			**280** 127	**324** 227	138 6 8	105 2 11
Tempe	41	205	43	36	8	6	3		**254** 95	**349** 247	131 5 7	123 10 3
Arncliffe . ..	14	65	10	8	13	4			**122** 37	**113** 77	80 18 2	46 2 7
Rockdale	36	105	29	30	11	7	1		**201** 77	**237** 142	158 11 4	96 5 1
Kogarah	35	115	18	21	13				**167** 66	**178** 136	146 18 10	64 15 6
Hurstville .. .	5	93	9	18	2	2	1		**56** 17	**159** 113	42 13 0	76 5 11
Total	5,056	7,549	2,336	1,901	1,885	784	546	120	**29,926** 9,823	**19,396*** 10,354	19,469 15 8	7,987 16 2

*All tickets brought into months

No. 44—*continued.*

RETURN of the number of Workmen's Weekly Tickets issued, and Amounts received for same, by each Suburban Station during the year 1885.

	Weekly Tickets issued 2nd Class	Amounts
		£ s. d.
Sydney	27,873	2,840 9 11
Eveleigh	7,518	852 0 11
Macdonald Town	15,321	696 8 11
Newtown	19,257	1,211 11 8
Stanmore	3,770	237 8 7
Petersham	18,701	1,441 1 8
Summer Hill	5,668	494 5 6
Ashfield	5,069	479 11 0
Croydon	3,437	341 8 8
Burwood	4,807	482 19 0
Strathfield	672	69 19 2
Homebush	842	89 4 10
Rookwood...	1,797	201 19 0
Auburn...	2,203	275 0 10
Granville	4,496	589 15 6
Erskinville . .	771	59 4 10
St. Peter's	4,738	364 2 3
Marrickville	4,274	343 17 5
Tempe	1,983	169 12 9
Arncliffe	602	57 10 6
Rockdale	1,258	128 7 3
Kogarah..	737	78 11 4
Hurstville.....	285	39 16 6
Parramatta	4,669	611 10 7
	140,748	12,155 18 7

No. 45.

DETAILED STATEMENT of MILEAGE of ENGINES, for the twelve months ending 31st December, 1885.

Train Miles.	Suburban.	Illawarra.	Southern.	Western.	Richmond.	Murrumburrah to Young.	Northern.	Total.
Passenger	402,309	91,416	949,204	711,867	24,168	6,411	428,107	2,613,482
„ Special	5,854	4,746	29,624	21,824	1,699	100	11,147	74,994
Funeral	12,763	.....	.....	.....	.....	.....	3,206	15,969
Goods	11,577	5,528	1,050,401	1,722,927	32,593	6,979	680,222	3,510,227
„ Special	6,625	44	86,290	140,938	421	290	41,345	275,953
Coal	.....	.....	.....	.....	.....	.....	147,774	147,774
Total Train Miles	439,128	101,734	2,115,519	2,597,556	58,881	13,780	1,311,801	6,638,399
Increase, Train Miles	1,643	83,096	.....	258,973	.....	13,780	38,934	235,358
Decrease, „	.....	.....	159,577	.....	1,491	.....	.....	
OTHER MILES.								
Shunting	66,133	18,562	399,609	321,575	18,487	2,827	431,938	1,259,121
Coal	.....	.....	15,027	.....	.....	.....	.....	15,027
Ballasting	22,372	1,676	67,532	82,857	.....	171	36,547	211,155
Empty	6,871	2,074	16,860	14,671	355	43	23,985	64,869
Water	.....	.....	31,044	37,365	.....	202	533	69,144
Total other Miles	95,376	22,312	530,072	456,468	18,842	3,243	493,003	1,619,316
Grand Total	534,504	124,046	2,645,591	3,054,024	77,723	17,023	1,804,804	8,257,715
Increase, Total Miles	.....	102,561	.....	349,819	1,072	17,023	23,563	367,267
Decrease, „	3,622	.....	123,149	.....	.....	.....	.....	

No. 46.

STATEMENT of MILEAGE, Passenger and Goods Trains, for the years 1884 and 1885.

Lines and Trains—Train miles.	1884.	1885.
Great Southern, Western, and Richmond Railways—Passenger	2,021,425	2,261,985
Great Northern Railway—Passenger	416,830	442,460
Great Southern, Western, and Richmond Railways—Goods	3,108,749	3,064,613
Great Northern Railway—Goods	856,037	869,341
Total Train Miles	6,403,041	6,638,399
OTHER MILEAGE.		
Great Southern, Western, and Richmond Railways—Ballasting, Shunting, &c.	979,033	1,126,313
Great Northern Railway— do do	508,374	493,003
Total other Mileage	1,487,407	1,619,316
TOTAL MILES	7,890,448	8,257,715

No. 47.

ANNUAL and DAILY MILEAGE of TRAINS, including Sundays, 1884 and 1885.

	1884.		1885.	
	Annual.	Daily.	Annual.	Daily.
TRAIN MILES.				
Suburban	437,485	1,196	439,128	1,203
Illawarra	18,638	51	101,734	279
Southern	2,275,096	6,216	2,115,519	5,796
Western	2,338,583	6,390	2,597,556	7,116
Richmond	60,372	165	58,881	161
Murrumburrah to Young	.....	.....	13,780	38
Northern	1,272,867	3,477	1,311,801	3,594
Total Train Miles	6,403,041	17,495	6,638,399	18,187
CLASS OF ENGINE.				
Passenger	2,438,255	6,662	2,704,445	7,409
Goods	3,964,786	10,833	3,933,954	10,778
Total	6,403,041	17,495	6,638,399	18,187
OTHER MILEAGE.				
Suburban	100,641	275	95,376	261
Illawarra	2,847	8	22,312	61
Southern	493,644	1,349	530,072	1,452
Western	365,622	999	456,468	1,251
Richmond	16,279	44	18,842	52
Murrumburrah to Young	.....	.....	3,243	9
Northern	508,374	1,389	493,003	1,351
Total other Mileage	1,487,407	4,064	1,619,316	4,437
CLASS OF WORK.				
Shunting	1,196,438	3,269	1,259,121	3,450
Ballasting	159,657	436	211,155	579
Empty	53,167	145	64,869	178
Water	59,223	162	69,144	189
Fuel	18,922	52	15,027	41
Total	1,487,407	4,064	1,619,316	4,437
Total with shunting, &c.	7,890,448	21,559	8,257,715	22,624
Average daily work per engine	.....	52·07	.....	50·51
Do including shunting, &c.	.....	64·16	.....	62·84
Number of engines	336		360	

No. 48.

DETAIL of MILEAGE of each Engine for the year ending 31st December, 1885.

No.	Class of Engine.	Total Mileage of each Engine.	No.	Class of Engine.	Total Mileage of each Engine.
	GREAT SOUTHERN, WESTERN, AND RICHMOND LINES.				
1	Goods	31,660	91	Passenger	38,254
2	"	33,604	92	"	22,444
3	"	11,271	93	Goods	34,665
4	"	19,333	94	"	20,826
5	Passenger	15,768	95	"	13,495
10	"	25,399	96	"	18,058
13	"	Nil.	97	"	19,747
14	"	39,867	98	"	22,680
15	"	37,529	99	"	21,492
16	"	34,033	100	"	34,854
17	Goods	18,822	101	"	12,175
18	"	9,532	102	"	11,515
19	"	17,445	103	"	20,333
20	"	26,833	104	"	24,207
21	"	24,327	105	"	Nil.
22	"	22,194	106	"	24,179
23	Passenger	Nil.	107	"	20,277
24	"	15,768	108	"	11,231
25	"	Nil.	109	"	15,897
26	"	27,233	110	"	16,757
27	"	19,970	111	"	30,834
28	"	25,084	112	"	24,389
29	"	958	113	"	12,156
30	"	8,077	114	"	16,539
31	"	11,021	115	"	8,656
32	"	17,155	116	"	25,481
33	"	20,548	117	"	20,709
34	"	19,990	118	Passenger	19,343
35	"	25,981	119	"	17,653
36	"	Nil.	120	"	49,130
37	"	4,129	121	"	30,049
38	"	4,139	122	"	22,871
39	"	14,086	123	"	14,339
40	Goods	18,912	124	"	25,006
41	"	21,645	125	"	17,202
42	"	11,074	126	"	28,849
43	"	19,443	127	"	7,135
44	"	15,231	128	"	23,963
45	"	Nil.	129	"	20,774
46	"	25,406	130	"	18,074
47	"	7,565	131	Goods	24,113
48	"	3,314	132	"	8,226
49	"	16,697	133	"	3,709
50	"	17,122	134	"	25,154
51	"	2,546	135	"	13,157
52	"	23,327	136	"	30,012
53	"	10,630	137	"	24,884
54	"	10,003	138	"	22,803
55	"	16,473	139	"	13,185
56	"	12,433	140	"	12,953
57	"	10,243	141	"	10,224
58	"	26,326	142	"	31,206
59	"	18,412	143	Passenger	18,853
60	Passenger	15,816	144	"	10,955
61	"	Nil.	145	"	19,036
62	"	13,109	146	"	22,981
63	"	17,587	147	"	19,522
64	"	23,024	148	"	15,873
65	"	20,500	149	"	29,032
66	"	804	150	"	22,215
67	"	4,877	151	"	27,147
68	"	10,499	152	"	24,758
69	"	19,043	153	"	20,670
70	"	17,926	154	"	18,784
71	"	29,754	155	"	29,142
72	"	14,381	156	"	21,293
73	"	10,476	157	"	10,699
74	"	20,970	158	"	15,316
75	"	10,347	159	"	19,321
76	"	39,197	160	"	37,542
77	"	24,755	161	"	22,740
78	"	35,960	162	"	31,102
79	"	10,971	163	"	28,574
80	"	17,909	164	Goods	33,328
81	"	10,010	165	Passenger	24,441
82	"	25,383	166	"	28,566
83	"	26,480	167	"	26,839
84	"	12,976	168	"	27,603
85	"	18,911	169	"	30,602
86	"	6,646	170	"	23,441
87	"	20,611	171	"	22,490
88	"	22,074	172	"	18,466
89	"	20,123	173	"	33,633
90	"	20,895	174	"	14,255

No. 48—*continued.*

GREAT SOUTHERN, WESTERN, AND RICHMOND LINES—*continued.*

No.	Class of Engine.	Total Mileage of each Engine.	No.	Class of Engine.	Total Mileage of each Engine.
175	Passenger	22,384	266	Passenger	40,705
176	"	21,815	267	"	29,179
177	"	10,239	268	"	17,975
178	"	20,548	269	"	37,036
179	"	20,414	270	"	34,037
180	"	18,719	271	"	20,843
181	"	21,396	272	"	29,827
182	"	21,580	273	"	12,870
183	Goods	13,575	274	"	30,766
184	"	21,416	275	"	30,096
185	"	25,889	276	"	30,925
186	"	23,297	277	"	39,198
187	"	14,052	278	"	35,739
188	"	32,221	279	"	32,218
189	"	24,094	280	"	29,568
190	"	30,170	281	"	26,560
191	"	32,959	282	"	34,311
192	"	31,464	283	"	25,758
193	"	33,070	284	"	35,581
194	"	30,446	285	"	38,583
195	"	35,037	286	"	19,019
196	"	30,233	287	"	18,249
197	"	24,420	288	"	37,939
198	"	30,399	289	"	24,248
199	"	23,111	290	"	9,699
200	"	25,931	292	"	681
201	"	16,671	293	"	834
202	"	24,527	294	Goods	1,6047
203	"	28,163	295	"	18,592
204	"	32,988	296	"	16,974
205	"	29,652	297	"	17,615
206	"	38,538	298	"	20,507
207	"	34,624	299	"	12,105
208	"	32,542	300	"	6,262
209	"	28,618	301	"	13,189
210	"	27,127	302	"	16,160
211	"	34,614	303	"	18,710
212	"	21,691	304	Passenger	13,519
213	"	22,484	305	"	14,777
214	"	30,447	306	"	7,678
215	"	18,366	307	"	10,679
216	"	28,918	308	"	16,058
217	"	24,339	309	"	7,347
218	"	24,363	310	"	16,850
219	"	36,753	311	"	16,041
220	"	35,571	312	"	14,774
225	"	15,106	313	"	20,469
226	"	17,931	314	Goods	23,209
227	"	33,340	315	"	17,880
228	"	26,185	316	"	22,663
229	"	29,300	317	"	15,635
230	"	15,116	318	"	15,845
239	"	24,879	319	"	14,539
240	"	26,580	320	"	14,187
241	"	22,804	321	"	15,114
242	"	29,484	322	"	11,171
243	"	15,753	323	"	9,381
244	"	28,167	324	"	4,147
245	"	27,657	325	"	5,585
246	"	36,319	326	"	10,313
247	"	24,264	327	"	10,997
248	"	20,676	328	"	12,153
249	"	34,935	341	Passenger	1,544
250	"	18,794	342	"	3,018
251	"	24,460	343	"	6,162
252	"	35,554	344	"	2,024
253	"	24,967	351	"	1,462
254	"	27,165	352	"	3,138
255	Passenger	27,650	353	"	2,997
256	"	16,773	354	"	2,140
257	"	38,828	355	"	853
258	"	28,101	356	"	19
259	"	36,151		Contractors	1,014
260	"	35,161			
265	"	36,483		Total mileage	6,453,925

No. 48—*continued.*

GREAT NORTHERN LINE.

No.	Class of Engine.	Total Mileage of each Engine.	No.	Class of Engine.	Total Mileage of each Engine.
1	Passenger	26,657	41	Goods	25,769
2	"	37,333	42	"	25,376
3	"	31,668	43	"	31,984
4	"	32,437	44	"	23,977
5	"	7,071	45	"	34,210
6	Goods	19,085	46	"	19,502
7	"	17,919	47	Passenger	30,702
8	Passenger	13,559	48	"	27,420
9	Goods	15,708	49	"	27,485
10	"	15,824	50	"	21,497
11	"	22,424	51	"	35,097
12	"	30,180	221	Goods	28,226
13	"	22,609	222	"	25,735
14	"	12,928	223	"	23,188
15	"	21,135	224	"	30,187
16	"	18,707	231	"	28,433
17	Passenger	21,339	232	"	26,124
18	Goods	25,712	233	"	24,123
19	"	23,932	234	"	28,165
20	"	18,978	235	"	29,101
21	"	19,281	236	"	26,452
22	"	33,181	237	"	29,046
23	"	20,446	238	"	29,814
24	"	15,792	261	Passenger	26,123
25	"	18,160	262	"	28,475
26	"	22,708	263	"	31,673
27	Passenger	37,748	264	"	32,458
28	"	20,236	291	Goods	28,897
29	"	37,303	329	"	10,096
30	"	18,652	330	"	12,021
31	Goods	27,851	331	"	11,040
32	"	29,359	332	"	10,489
33	"	29,766	333	"	11,594
34	"	28,747	334	Passenger	5,142
35	"	27,889	335	"	6,554
36	"	24,300	336	"	7,485
37	Passenger	27,993	337	"	5,100
38	"	25,137		Contractors	766
39	"	20,869			
40	Goods	25,421		Total mileage	1,805,570

No. 49.

TABULAR ANALYSIS showing WORKING EXPENSES, GROSS EARNINGS, and NET EARNINGS, per Mile open, and Train Mile, 1885.

Mileage.	Miles open—Average.	Train miles.	Miles run, including shunting.
South and West	1,238	5,326,598	6,452,911
North	425½	1,311,801	1,804,804
Total	1,663½	6,638,399	8,257,715

Heads of Expenditure.	Amount.	Per mile open.	Per train mile.
	£	£	d.
Locomotive Power and Repairing Engines—			
South and West	350,447	283·07	15·79
North	81,703	192·02	14·95
Total	432,150	259·78	15·62
Carriage and Waggon Repairs—			
South and West	60,109	48·55	2·71
North	13,179	30·97	2·41
Total	73,288	44·06	2·65
Maintenance and Renewal of Way—			
South and West	360,351	291·08	16·24
North	74,296	174·61	13·59
Total	434,647	261·29	15·71
Traffic Charges, Coaching, and Merchandise—			
South and West	304,498	245·96	13·72
North	108,090	254·03	19·78
Total	412,588	248·02	14·92
Compensation, Personal Injury, &c.—			
South and West	6,896	5·57	0·31
North	210	0·49	0·04
Total	7,106	4·27	0·26
Compensation, Damage to and Loss of Goods—			
South and West	890	0·72	0·04
North	185	0·44	0·03
Total	1,075	0·65	0·04
Miscellaneous Working Expenses and General Establishment—			
South and West	69,033	55·76	3·11
North	28,266	66·43	5·17
Total	97,299	58·49	3·52
Gross Expenditure—			
South and West	1,152,224	930·71	51·92
North	305,929	718·99	55·97
Total	1,458,153	876·56	52·72
Gross Earnings—			
South and West	1,706,973	1,378·82	76·91
North	467,395	1,098·46	85·51
Total	2,174,368	1,307·10	78·61
Net Earnings—			
South and West	554,749	448·11	24·99
North	161,466	379·47	29·54
Total	716,215	430·54	25·89

No. 49*a*.

TABULAR ANALYSIS showing WORKING EXPENSES, GROSS EARNINGS, and NET EARNINGS, per Mile open, and Train Mile, 1885. Showing 1885 on the basis of 1884 distribution of Expenditure for purposes of comparison.

Mileage.	Miles open—Average.	Train miles.	Miles run, including shunting.
South and West	1,238	5,326,598	6,452,911
North	425½	1,311,801	1,804,804
Total	1,663½	6,638,399	8,257,715

Heads of Expenditure.	Amount.	Per mile open.	Per train mile.
	£	£	d.
Locomotive Power and Repairing Engines—			
South and West	360,730	291·38	16·25
North	85,057	199·90	15·56
Total	445,787	267·98	16·12
Carriage and Waggon Repairs—			
South and West	61,808	49·93	2·79
North	13,583	31·92	2·49
Total	75,391	45·32	2·72
Maintenance and Renewal of Way—			
South and West	374,791	302·74	16·89
North	78,294	184·01	14·32
Total	453,085	272·37	16·38
Traffic Charges, Coaching, and Merchandise—			
South and West	307,105	248·06	13·84
North	110,001	258·52	20·13
Total	417,106	250·74	15·08
Compensation, Personal Injury, &c.—			
South and West	6,896	5·57	0·31
North	210	0·49	0·04
Total	7,106	4·27	0·26
Compensation, Damage to and Loss of Goods—			
South and West	890	0·72	0·04
North	185	0·44	0·03
Total	1,075	0·65	0·04
Miscellaneous, Working Expenses and General Establishment—			
South and West	40,004	32·31	1·80
North	18,599	43·71	3·40
Total	58,603	35·23	2·12
Gross Expenditure—			
South and West	1,152,224	930·71	51·92
North	305,929	718·99	55·97
Total	1,458,153	876·56	52·72
Gross Earnings—			
South and West	1,706,973	1,378·82	76·91
North	467,395	1,098·46	85·51
Total	2,174,368	1,307·10	78·61
Net Earnings—			
South and West	554,749	448·11	24·99
North	161,466	379·47	29·54
Total	716,215	430·54	25·89

No. 50.

TABULAR SYNOPSIS of the TOTAL EARNINGS under the different Heads of Traffic, per Mile open and Train Mile for the Year 1885.

Mileage.	Train Miles.		Total Miles run, including shunting.	
	Passenger.	Goods.	Passenger.	Goods.
South and West	2,261,985	3,064,613	2,537,713	3,915,198
North	442,460	869,341	586,439	1,218,365
All Lines	2,704,445	3,933,954	3,124,152	5,133,563

Heads of Traffic.	Miles open for Traffic—average.	Earnings.	Per Mile open.	Per Train mile.
COACHING.		£	£	d.
Passengers, 1st and 2nd Class—				
South and West	1,238	557,302	450·16	59·13
North	425½	107,340	252·27	58·22
All Lines	1,663½	664,642	399·54	58·98
Season Tickets—				
South and West	1,238	43,000	34·73	4·56
North	425½	1,980	4·66	1·07
All Lines	1,663½	44,980	27·04	3·99
Horses, Carriages, Dogs, Parcels, &c.—				
South and West	1,238	54,283	43·85	5·76
North	425½	16,279	38·26	8·83
All Lines	1,663½	70,562	42·42	6·26
Mails—				
South and West	1,238	23,765	19·20	2·52
North	425½	8,528	20·04	4·63
All Lines	1,663½	32,293	19·41	2·87
Miscellaneous—				
South and West	1,238	12,958	10·47	1·38
North	425½	5,469	12·85	2·97
All Lines	1,663½	18,427	11·08	1·64
Total Coaching—				
South and West	1,238	691,308	558·41	73·35
North	425½	139,596	328·08	75·72
All Lines	1,663½	830,904	499·49	73·74
GOODS.				
Live Stock—				
South and West	1,238	136,892	110·58	10·72
North	425½	22,309	52·43	6·16
All Lines	1,663½	159,201	95·70	9·71
Minerals—				
South and West	1,238	64,006	50·89	4·93
North	425½	77,603	182·38	21·42
All Lines	1,663½	140,609	84·52	8·58
Wool—				
South and West	1,238	126,418	102·11	9·90
North	425½	38,331	90·08	10·58
All Lines	1,663½	164,749	99·04	10·05
General Merchandise—				
South and West	1,238	685,142	553·43	53·66
North	425½	187,680	441·08	51·82
All Lines	1,663½	872,822	524·69	53·25
Miscellaneous—				
South and West	1,238	4,207	3·40	0·33
North	425½	1,876	4·41	0·52
All Lines	1,663½	6,083	3·66	0·37
Total Goods—				
South and West	1,238	1,015,665	820·41	79·54
North	425½	327,799	770·38	90·50
All Lines	1,663½	1,343,464	807·61	81·96
Gross Earnings—				
South and West	1,238	1,706,973	1,378·82	76·91
North	425½	467,395	1,098·46	85·51
All Lines	1,663½	2,174,368	1,307·10	78·61

No. 51.

RETURN of the MILEAGE and WEIGHT of PASSENGERS and TONS of GOODS carried during 1885, and the AVERAGE RECEIPTS per mile.

Description.		Southern, Western, and Richmond.	Northern.	Total.
COACHING TRAFFIC.				
Number of 1st and 2nd class passengers	No.	7,588,899	879,653	8,468,552
" Season Ticket-holders' journeys	"	3,189,158	159,360	3,348,518
" Workmen's Ticket "	"	1,689,276	.....	1,689,276
Total Passenger "	.....	12,467,333	1,039,013	13,506,346
Total number of miles travelled	Miles.	142,346,198	28,677,632	171,023,830
Average mileage per passenger	"	11·42	27·60	12·66
Gross amounts received from passengers	£	601,594	109,320	710,914
Average receipts per mile per passenger	d.	1·01	0·91	1·00
Tonnage of passengers carried	Tons.	831,156	69,265	900,421
" horses, carriages, and dogs	"	4,870	1,474	6,344
" mails and parcels	"	5,662	3,381	9,043
		841,688	74,120	915,808
Total mileage of tons	Miles.	10,819,457	2,325,643	13,145,100
Average mileage per ton	"	12·85	31·38	14·35
Gross amount received for above traffic and miscellaneous receipts	£	693,176	139,596	832,772
Average receipts per ton per mile	d.	15·38	14·41	15·20
GOODS TRAFFIC.				
Total tonnage of goods	Tons.	1,339,520	1,835,945	3,175,465
" live stock	"	59,937	13,606	73,543
		1,399,457	1,849,551	3,249,008
Total mileage of tons of goods and live stock	Miles.	141,231,368	32,403,890	173,635,258
Average " "	"	100·92	17·52	53·44
Gross amount received for above traffic and miscellaneous receipts	£	1,017,602	327,799	1,345,401
Average receipts per ton per mile	d.	1·73	2·43	1·86

No. 51*a*.

CAMDEN TRAMWAY.

RETURN of the MILEAGE and WEIGHT of PASSENGERS and TONS of GOODS carried during 1885, and the AVERAGE RECEIPTS per mile.

Description.		Camden Tramway
COACHING TRAFFIC.		
Number of 1st and 2nd class passengers	No.	25,861
Number of miles travelled	Miles.	179,730
Average mileage per passenger	"	6·95
Gross amount received from passengers	£	1,292
Average receipts per mile per passenger	d.	1·73
Tonnage of passengers carried	Tons.	1,724
" horses, carriages, and dogs	"	61
" mails and parcels	"	184
		1,969
Total mileage of tons	Miles.	13,919
Average mileage per ton	"	7·07
Gross amount received for above traffic and miscellaneous receipts	£	1,863
Average receipts per ton per mile	d	32·31
GOODS TRAFFIC.		
Total tonnage of goods	Tons.	13,961
" live stock	"	166
		14,127
Total mileage of tons of goods and live stock	Miles.	91,022
Average " " "	"	6·44
Gross amount received for above traffic and miscellaneous receipts	£	1,936
Average receipts per ton per mile	d.	5·10

No. 52.

WEIGHT of Locomotive Engines and Tenders, empty and loaded, on 31st December, 1885.

Engine	No. of Engines of same weight.	Engines. Empty. Leading.	Engines. Empty. Driving.	Engines. Empty. Trailing.	Engines. Empty. Total.	Engines. In Steam. Leading.	Engines. In Steam. Driving.	Engines. In Steam. Trailing.	Engines. In Steam. Total.	Tenders. Empty. Leading.	Tenders. Empty. Middle.	Tenders. Empty. Trailing.	Tenders. Empty. Total.	Tenders. Full. Leading.	Tenders. Full. Middle.	Tenders. Full. Trailing.	Tenders. Full. Total.
						SOUTHERN, WESTERN, AND RICHMOND											
		tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwts. qrs.
1 to 4	4	9 1 2	10 18 0	10 14 2	30 14 0	9 19 2	12 0 0	11 16 2	33 16 0	4 7 0	3 2 1	4 2 3	11 12 0	7 16 0	7 2 0	7 13 0	22 11 0
5	1	7 5 0	5 19 2	3 6 2	16 11 0	7 13 0	6 0 0	4 0 0	17 13 0	3 15 1	.....	3 9 0	7 4 1	6 15 0	.....	6 3 2	12 18 2
10	1	7 2 0	9 6 3	12 0 0	28 8 3	7 19 0	10 18 0	14 17 0	33 14 0	4 9 3	1 11 3	6 3 2	12 5 0	7 18 0	5 0 0	9 12 0	22 10 0
13	1	8 0 1	10 8 0	4 8 1	22 16 2	10 12 0	7 17 0	7 17 2	26 6 2	4 4 1	.....	4 8 3	8 13 0	6 18 0	.....	7 12 3	14 10 3
14 to 16	3	7 3 2	10 19 2	5 3 1	23 6 1	7 19 0	12 0 0	6 6 0	26 5 0	4 8 0	1 12 0	4 13 0	10 13 0	7 9 0	4 13 0	7 6 0	19 8 0
17 to 22	6	7 3 0	11 7 2	8 1 0	26 11 2	8 8 2	12 6 0	6 10 2	30 5 0	4 9 0	2 9 2	4 11 3	11 10 1	6 12 0	6 3 0	7 12 2	20 7 2
23 to 28	6	8 4 0	11 2 2	9 12 3	28 19 1	9 8 2	11 4 1	11 0 0	31 12 3	4 5 0	2 14 0	4 6 0	11 5 0	7 0 0	5 2 0	7 4 0	19 6 0
29 to 31	3	4 17 1	4 15 3	5 5 2	14 18 2	6 1 0	6 6 0	7 5 0	19 12 0	.....	.....	.....	.....	.....	.....	.....	.....
32 to 35	4	8 1 3	10 19 2	10 4 2	29 5 3	9 10 0	12 0 1	11 6 0	32 16 1	4 5 0	2 14 0	4 6 0	11 5 0	7 19 0	5 16 0	8 1 0	21 16 0
36 to 39	4	10 15 0	8 8 3	5 13 2	24 17 1	12 5 0	9 1 0	6 14 0	28 0 0	4 5 2	3 9 2	4 12 0	12 7 0	8 1 2	7 5 0	8 13 2	24 0 0
40 to 43	4	7 7 2	11 12 0	8 10 0	27 9 2	8 9 0	12 12 0	10 2 0	31 3 0	3 4 0	4 6 2	3 10 2	11 1 0	5 4 0	7 11 2	7 5 2	20 1 0
44 to 47	4	9 0 3	8 11 0	9 3 2	26 15 1	9 14 0	10 17 0	10 6 3	30 17 3	3 16 3	4 5 1	4 3 1	12 5 1	7 8 0	7 1 2	7 12 2	22 2 0
48 to 51	4	11 0 0	10 6 2	10 16 1	32 2 3	12 5 0	11 11 3	12 1 2	35 18 1	4 4 0	4 3 3	4 13 2	13 1 1	8 12 2	7 14 0	8 5 0	24 11 2
52	1	9 0 3	8 11 0	9 3 2	26 15 1	9 14 0	10 17 0	10 6 3	30 17 3	3 16 3	4 5 1	4 3 1	12 5 1	7 8 0	7 1 2	7 12 2	22 2 0
53 to 59	7	11 0 0	10 6 2	10 16 1	32 2 3	12 5 0	11 11 3	12 1 2	35 18 1	4 4 0	4 3 3	4 13 2	13 1 1	8 12 2	7 14 0	8 5 0	24 11 2
60 to 65	6	11 6 0	11 4 3	11 6 0	33 16 3	12 2 1	12 5 1	12 18 1	37 5 3	4 9 1	3 19 1	4 8 2	12 17 0	9 0 2	8 8 3	8 9 2	25 18 3
66	1	5 2 1	4 7 0	5 10 0	14 19 1	6 8 0	5 19 2	6 18 0	19 5 2	.....	.....	.....	.....	.....	.....	.....	.....
67 to 74	8	6 3 2	8 4 2	7 8 2	21 16 2	7 5 3	9 6 0	11 8 1	28 0 0	.....	.....	.....	.....	.....	.....	.....	.....
75 to 78	4	8 7 0	12 18 0	4 9 1	25 14 1	10 15 0	13 15 0	5 3 0	29 13 0	4 5 0	2 17 0	4 5 0	11 7 0	8 6 0	5 12 0	8 8 0	22 6 0
79 to 92	14	11 9 3	12 0 0	11 8 3	34 18 2	12 7 3	13 0 0	12 4 0	37 11 3	4 9 2	3 4 2	4 0 2	11 14 2	7 14 0	6 11 0	7 8 3	21 13 3
93 to 102	10	9 1 2	10 18 0	10 14 2	30 14 0	9 19 2	12 0 0	11 16 2	33 16 0	4 7 0	3 2 1	4 2 3	11 12 0	7 16 0	7 2 0	7 13 0	22 11 0
103	1	9 0 3	8 11 0	9 3 2	26 15 1	9 14 0	10 17 0	10 6 3	30 17 3	3 16 3	4 5 1	4 3 1	12 5 1	7 8 0	7 1 2	7 12 2	22 2 0
104	1	9 1 2	10 18 0	10 14 2	30 14 0	9 19 2	12 0 0	11 16 2	33 16 0	4 7 0	3 2 1	4 2 3	11 12 0	7 16 0	7 2 0	7 13 0	22 11 0
105	1	11 1 2	8 11 0	10 7 2	30 0 0	12 8 0	10 12 3	10 16 1	33 17 0	3 16 0	2 4 0	4 9 2	10 9 2	5 17 0	6 14 0	7 17 0	20 8 0
106 to 117	12	9 1 2	10 18 0	10 14 2	30 14 0	9 19 2	12 0 0	11 16 2	33 16 0	4 7 0	3 2 1	4 2 3	11 12 0	7 16 0	7 2 0	7 13 0	22 11 0
118 to 126	9	11 9 3	12 0 0	11 8 3	34 18 2	12 7 3	13 0 0	12 4 0	37 11 3	4 9 2	3 4 2	4 0 2	11 14 2	7 14 0	6 11 0	7 8 3	21 13 3
127 to 129	3	5 19 0	6 2 0	6 2 0	18 3 0	7 9 0	7 12 2	7 14 2	22 16 0	.....	.....	.....	.....	.....	.....	.....	.....
130	1	11 0 2	10 12 0	9 19 0	31 11 2	11 12 3	11 10 0	11 1 2	34 4 1	6 10 1	.....	6 16 0	13 6 1	12 13 0	.....	12 13 0	25 6 0
131 to 141	11	Bogie 6 2 0; Leading 10 3 2	7 17 1; Intermediate 8 0 2	8 10 3	40 14 0	Bogie 6 10 2; Leading 11 1 0	9 13 0; Intermediate 9 13 0	9 7 0	46 4 2	Bogie 2 8 2; 2 7 3	.....	Bogie 2 12 2; 2 14 2	10 3 1	Bogie 6 1 2; 6 0 2	.....	Bogie 6 18 1; 6 15 2	25 15 3

No. 52 (*continued*).—Weight of Locomotive Engines and Tenders, empty and loaded, on 31st December, 1884.

No. of Engine.	No. of Engines of same weight.	Engines. Empty. Leading.	Engines. Empty. Driving.	Engines. Empty. Trailing.	Engines. Empty. Total.	Engines. In Steam. Leading.	Engines. In Steam. Driving.	Engines. In Steam. Trailing.	Engines. In Steam. Total.	Tenders. Empty. Leading.	Tenders. Empty. Middle.	Tenders. Empty. Trailing.	Tenders. Empty. Total.	Tenders. Full. Leading.	Tenders. Full. Middle.	Tenders. Full. Trailing.	Tenders. Full. Total.
						SOUTHERN, WESTERN, AND RICHMOND—*continued*.											
		tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.
142	1	9 1 2	10 18 0	10 14 2	30 14 0	9 19 2	12 0 0	11 6 2	33 16 0	4 7 0	3 2 1	4 2 3	11 12 0	7 16 0	7 2 0	7 1 0	22 11 0
143 to 157	15	11 9 3	12 0 0	11 8 3	34 18 2	12 7 3	13 0 0	12 4 0	37 11 3	4 9 2	3 4 2	4 0 2	11 14 2	7 14 0	6 11 0	7 3	21 13 3
158 to 163	6	10 11 0	11 3 0	11 1 0	32 15 0	10 0 2	15 1 2	14 19 1	40 1 1	.....	.....	.....	.....	.....	.....	.....	.....
164	1	9 1 2	10 18 0	10 14 2	30 14 0	9 19 2	12 0 0	11 16 2	33 16 0	4 7 0	3 2 1	4 2 3	11 12 0	7 16 0	7 2 0	7 13 0	22 11 0
165 to 182	18	11 9 3	12 0 0	11 8 3	34 18 2	12 7 3	13 0 0	12 4 0	37 11 3	4 9 2	3 4 2	4 0 2	11 14 2	7 14 0	6 11 0	7 8 3	21 13 3
183 to 204	22	9 1 2	10 18 0	10 14 2	30 14 0	9 19 2	12 0 0	11 16 2	33 16 0	4 7 0	3 2 1	4 2 3	11 12 0	7 16 0	7 2 0	7 13 0	22 11 0
205 to 220 225 to 230 239 to 254	38	Bogie 7 5 2 Leading 9 15 2	10 9 0	11 17 0	39 7 0	Bogie 7 14 0 Leading 10 11 3	11 1 2	13 1 0	42 8 1	4 7 1	4 5 1	4 1 1	12 13 3	8 5 0	8 2 2	7 18 3	24 6 1
255 to 260	6	Bogie 5 17 2 5 19 0	11 13 2	11 3 2	34 13 2	Bogie 6 9 0 6 10 0	12 12 0	12 0 0	37 11 0	4 9 0	4 7 0	4 6 2	13 2 2	8 13 0	7 18 0	8 0 0	24 11 0
265 to 284	20	Bogie 6 7 0 6 15 0	11 16 3	11 4 2	36 3 1	Bogie 6 18 1 6 15 3	13 13 0	11 12 0	38 19 0	4 12 2	4 4 0	4 9 1	13 5 3	8 15 0	7 6 3	8 16 0	24 17 3
285 to 290	6	9 1 3	10 14 2	8 5 2	28 1 3	10 9 0	13 0 0	10 10 0	33 19 0	.....	.....	.....	.....	.....	.....	.....	.....
294 to 303	10	Bogie 6 17 1 Leading 11 17 0	9 17 0	9 3 0	37 14 1	Bogie 7 14 1 Leading 12 17 1	10 15 0	10 11 2	41 18 0	Bogie 2 15 1 2 5 1	.....	Bogie 2 12 3½ 2 11 1½	10 4 3	Bogie 6 17 1 6 13 3	.....	Bogie 6 15 1 6 13 2	26 19 3
304 to 313	10	Bogie 8 1 1 Leading 10 12 2	10 14 0	10 4 0	39 11 3	Bogie 8 14 0 Leading 10 7 0	12 2 0	11 8 0	42 11 0	Bogie 3 9 2 3 10 2	.....	Bogie 3 5 3 3 5 0	13 10 3	Bogie 6 14 2 6 10 2	.....	Bogie 6 15 3 6 15 0	26 15 3
314 to 328	15	Bogie 7 5 2 Leading 9 15 2	10 9 0	11 17 0	39 7 0	Bogie 7 14 0 Leading 10 11 3	11 1 2	13 1 0	42 8 1	4 7 1	4 5 1	4 1 1	12 13 3	8 5 0	8 2 2	7 18 3	24 6 1
341 to 344	4	Bogie 7 5 3 7 0 3	11 12 2	11 9 3	37 8 3	Bogie 7 19 0 7 11 0	12 2 1	12 9 1	40 1 2	4 3 2	4 14 1	3 19 2	12 17 1	8 4 3	9 5 0	7 13 2	25 3 1
351 to 356	6	8 4 3	12 9 3	11 2 2	31 17 0	8 12 0	15 10 0	15 2 0	39 4 0	.....	.....	.....	.....	.....	.....	.....	.....
	313																

No. 52 (*continued*).—Weight of Locomotive Engines and Tenders, empty and loaded, on 31st December, 1885.

No. of Engine.	No. of Engines of same weight.	Engines. Empty. Leading.	Engines. Empty. Driving.	Engines. Empty. Trailing.	Engines. Empty. Total	Engines. In Steam. Leading.	Engines. In Steam. Driving.	Engines. In Steam. Trailing.	Engines. In Steam. Total.	Tenders. Empty. Leading.	Tenders. Empty. Middle.	Tenders. Empty. Trailing.	Tenders. Empty. Total.	Tenders. Full. Leading.	Tenders. Full. Middle.	Tenders. Full. Trailing.	Tenders. Full. Total.
Northern Railway.																	
		tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.	tons cwt. qrs.
1 to 3	3	9 1 0	9 0 0	4 11 0	22 12 0	10 5 0	10 10 0	4 15 0	25 10 0	3 14 3	4 3 2	2 18 3	10 17 0	7 7 2	4 17 0	8 3 2	20 8 0
4	1	8 0 0	5 17 0	2 10 0	16 7 0	9 10 0	6 3 0	4 2 0	19 15 0	3 15 0	.....	3 9 0	7 4 0	6 15 0	.....	6 3 2	12 18 2
5 and 17	2	7 12 1	6 9 2	4 0 0	18 1 3	8 0 0	8 12 0	4 0 0	20 12 0	4 2 0	.....	3 12 2	7 14 2	6 9 3	.....	6 5 1	12 15 0
6 and 7	2	9 4 0	9 16 0	11 12 0	30 12 0	10 14 0	12 10 0	11 16 0	35 0 0	.....	.....	.....	.....	.....	.....	.....	.....
8	1	6 8 2	10 8 1	3 8 2	20 5 1	7 8 2	11 8 1	3 17 2	22 14 1	4 4 0	.....	3 14 2	7 18 2	6 9 3	.....	6 9 0	12 18 3
9	1	4 5 3	4 4 2	4 14 1	13 4 2	5 16 3	5 5 3	5 15 2	16 18 0	.....	.....	.....	.....	.....	.....	.....	.....
10	1	8 0 1	10 8 0	4 8 1	22 16 2	10 0 2	11 0 2	5 4 0	26 6 2	4 4 1	.....	4 8 3	8 13 0	6 18 0	.....	7 12 3	14 10 3
11 to 13, 18 and 19, 21 and 22	7	6 13 0	12 7 2	7 11 0	26 11 2	8 18 2	10 2 0	11 4 2	30 5 0	4 9 0	2 9 2	4 11 3	11 10 1	6 12 0	6 3 0	7 12 2	20 7 2
14 to 16	3	8 7 0	10 6 0	9 0 0	27 13 0	9 0 0	10 15 0	10 0 0	29 15 0	4 12 0	3 4 0	3 12 0	11 8 0	7 3 0	5 14 0	7 7 0	20 4 0
20	1	10 0 0	10 0 0	10 0 0	30 0 0	10 10 0	12 6 0	12 4 0	35 0 0	.....	.....	.....	.....	.....	.....	.....	.....
23 to 26	4	9 9 0	9 9 1	9 9 3	28 8 0	10 5 0	10 7 2	10 8 2	31 1 0	4 12 0	3 4 0	3 12 0	11 8 0	7 3 0	5 14 0	7 7 0	20 4 0
27 to 30	4	11 12 0	11 8 1	11 3 2	34 3 3	12 9 0	12 11 0	12 0 0	37 0 0	4 9 2	3 4 2	4 0 2	11 14 2	7 14 0	6 11 0	7 8 3	21 13 3
31 to 36, 40 to 46 and 291	14	9 1 2	10 18 0	10 14 2	30 14 0	9 19 2	12 0 0	11 16 2	33 16 0	4 7 0	3 2 1	4 2 3	11 12 0	7 16 0	7 2 0	7 13 0	22 11 0
37 to 39, 47 to 51	8	11 9 3	12 0 0	11 8 3	34 18 2	12 7 3	13 0 0	12 4 0	37 11 3	4 9 2	3 4 2	4 0 2	11 14 2	7 14 0	6 11 0	7 8 3	21 13 3
221 to 224, 231 to 238, 329 to 333	17	Bogie 7 5 2, Leading 9 15 2	10 9 0	11 17 0	39 7 0	Bogie 7 14 0, Leading 10 11 3	11 1 2	13 1 0	42 8 1	4 7 1	4 5 1	4 1 1	12 13 3	8 5 0	8 2 2	7 18 3	24 6 1
261 to 264	4	Bogie 6 7 0, 6 15 0	11 16 3	11 4 2	36 3 1	Bogie 6 18 1, 6 15 3	13 13 0	11 12 0	38 19 0	4 12 2	4 4 0	4 9 1	13 5 3	8 15 0	7 6 3	8 16 0	24 17 3
334 to 337	4	Bogie 7 5 3, 7 0 3	11 12 2	11 9 3	37 8 3	Bogie 7 19 0, 7 11 0	12 2 1	12 9 1	40 1 2	4 3 2	4 14 1	3 19 2	12 17 1	8 4 3	9 5 0	7 13 2	25 3 1
	77																

No. 52 (*continued.*)—ABSTRACT of Total and Average Weights of Rolling Stock, empty, 1885.

	Southern and Western.			Northern.		
	No. of each Class.	Total Weight, Empty.	Average Weight.	No. of each Class.	Total Weight, Empty.	Average Weight.
PASSENGER STOCK.		tons cwt. qrs.	tons cwt. qrs.		tons cwt. qrs.	tons cwt. qrs.
Carriages, Dining	1	25 11 2	25 11 2	.....	.....	.....
Do. State	2	27 5 2	13 12 3	.....	.....	.....
Do. Sleeping	11	216 19 2	19 14 2	1	18 11 0	18 11 0
Do. First Class	96	1,287 8 2	13 8 1	25	248 0 0	9 18 1½
Do. Composite*	83	997 7 3	12 0 1¼	28	345 14 1	12 6 3¾
Do. 2nd Class	182	1,549 15 2	8 10 1¼	78	530 6 1	6 16 0
Brake Vans, Composite	65	781 2 1	12 0 1½	18	266 18 0	14 16 2
Mail "	9	74 12 0	8 5 3	9	60 3 0	6 13 2¾
Prison "	4	32 19 2	8 4 3½	3	20 18 2	6 19 2
Workmen's Vans	28	152 0 0	5 8 2¼	.....	.....	.....
Horse Boxes	73	429 0 3	5 17 2¼	44	261 1 2	5 18 2½
Carriage Trucks	38	161 8 0	4 4 3½	20	83 12 1	4 3 2½
Hearses	6	30 12 1	5 2 0¼	3	16 14 1	5 11 1½
Brake Vans	21	148 0 0	7 1 0	10	56 6 3	5 12 2¾
Total	619	5,914 3 0	9 11 0¼	239	1,908 5 3	7 19 2¾
GOODS STOCK.						
Brake Vans	118	1,389 15 2	11 15 2¼	46	484 0 2	10 10 2
A Waggons	132	557 12 0	4 4 2	104	445 7 1	4 5 2½
B "	156	707 1 0	4 10 2½	78	385 19 1	4 19 0
C Vans	220	1,229 14 2	5 11 3	126	702 2 2	5 11 2
D Waggons	3,710	17,120 19 1	4 12 1	977	4,407 16 3	4 10 1
E "	218	906 3 0	4 3 0½	116	478 13 0	4 2 2
F "	3	22 12 1	7 10 3	.....	.....	.....
G "	243	2,867 1 3	11 15 3¾	.....	.....	.....
Water Trucks	36	246 13 2	6 17 0¼	6	36 17 3	6 3 0
Loco. Coal Trucks	250	1,187 0 0	4 14 3¾	.....	.....	.....
Powder Vans	21	118 8 2	5 12 3	15	83 19 0	5 12 0
Sheep "	272	1,833 11 0	6 14 3¼	150	1,011 10 0	6 14 3½
Cattle Waggons	300	1,939 12 1	6 9 1¼	126	805 3 0	6 7 3
Meat Vans	10	66 0 0	6 12 0	14	87 16 2	6 5 2
Combination Trucks	14	103 0 1	7 7 0½	.....	.....	.....
Refrigerating Car	1	12 1 3	12 1 3	.....	.....	.....
Ballast Waggons	192	874 0 0	4 11 0	106	432 18 3	4 1 2¾
Dump Cars	201	1,908 12 2	9 9 3½	.....	.....	.....
Accident Vans	7	61 5 0	8 15 0	.....	.....	.....
Coal Waggons	.....	.....	.....	†2,751	13,076 1 2	4 15 0¼
Total	6,104	33,151 4 0	5 8 2½	4,615	22,438 5 3	4 17 1
Total Vehicles, all Lines	6,723	39,065 7 0	.....	4,854	24,346 11 2	.....

* Including two carriages in use on Camden Tramway. † Private.

No. 52—*continued.*

WEIGHT of Locomotive Engines and Tenders, and Tonnage carried, on the Great Southern, Western, and Richmond Lines during Year 1885.

No. of Engine.	Weight of Engine and Tender for whole journey.			Mileage of each Engine and Tender.	Total Tons carried.	No. of Engine.	Weight of Engine and Tender for whole journey.			Mileage of each Engine and Tender.	Total Tons carried.
	t.	c.	q.				t.	c.	q.		
1	52	14	0	31,660	1,668,482	91	55	18	3	38,254	2,138,542
2	52	14	0	33,604	1,770,930	92	55	18	3	22,444	1,255,461
3	52	14	0	11,271	593,982	93	52	14	0	34,665	1,826,846
4	52	14	0	19,333	1,018,849	94	52	14	0	20,826	1,097,530
5	28	13	2	15,768	452,147	95	52	14	0	13,495	711,187
10	52	15	2	25,399	1,340,432	96	52	14	0	18,058	951,657
13	38	18	0	.....	.....	97	52	14	0	19,747	1,040,667
14	42	14	3	39,867	1,703,816	98	52	14	0	22,680	1,195,236
15	42	14	3	37,529	1,603,896	99	52	14	0	21,492	1,132,628
16	42	14	3	34,033	1,454,495	100	52	14	0	34,854	1,836,806
17	47	13	2	18,822	897,339	101	52	14	0	12,175	641,623
18	47	13	2	9,532	427,438	102	52	14	0	11,515	606,841
19	47	13	2	17,445	831,690	103	49	14	1	20,333	1,010,804
20	47	13	2	26,833	1,279,263	104	52	14	0	24,207	1,275,709
21	47	13	2	24,327	1,161,290	105	50	18	0	.....	.....
22	47	13	2	22,194	1,058,099	106	52	14	0	24,179	1,274,233
23	48	5	0	.....	.....	107	52	14	0	20,277	1,068,598
24	48	5	0	15,768	760,806	108	52	14	0	11,231	591,874
25	48	5	0	.....	.....	109	52	14	0	15,897	837,772
26	48	5	0	27,233	1,313,992	110	52	14	0	16,757	883,094
27	48	5	0	19,970	963,553	111	52	14	0	30,834	1,626,952
28	48	5	0	25,084	1,410,303	112	52	14	0	24,389	1,285,300
29	18	0	3	958	17,280	113	52	14	0	12,156	640,621
30	18	0	3	8,077	146,689	114	52	14	0	16,539	871,605
31	18	0	3	11,021	198,791	115	52	14	0	8,656	456,171
32	51	2	0	17,155	876,621	116	52	14	0	25,481	1,342,849
33	51	2	0	20,548	1,050,003	117	52	14	0	20,709	1,091,364
34	51	2	0	19,990	1,021,489	118	55	18	3	19,343	1,081,999
35	51	2	0	25,981	1,327,629	119	55	18	3	17,653	987,465
36	48	2	1	.....	.....	120	55	18	3	49,130	2,748,209
37	48	2	1	4,129	198,657	121	55	18	3	30,049	1,680,866
38	48	2	1	4,139	199,138	122	55	18	3	22,871	1,279,347
39	48	2	1	14,086	677,713	123	55	18	3	14,339	802,088
40	48	4	0	18,912	911,558	124	55	18	3	25,006	1,398,773
41	48	4	0	21,645	1,043,289	125	55	18	3	17,202	962,237
42	48	4	0	11,074	533,767	126	55	18	3	28,849	1,613,741
43	48	4	0	19,443	937,153	127	21	5	0	7,135	151,619
44	49	14	1	15,231	757,171	128	21	5	0	23,963	509,214
45	49	14	1	.....	.....	129	21	5	0	20,774	441,448
46	49	14	1	25,406	1,262,996	130	55	10	1	18,074	1,003,333
47	49	14	1	7,565	376,075	131	68	18	3	24,113	1,662,290
48	56	13	0	3,314	187,738	132	68	18	3	8,226	567,080
49	56	13	0	16,697	945,885	133	68	18	3	3,709	255,689
50	56	13	0	17,122	969,961	134	68	18	3	25,154	1,734,054
51	56	13	0	2,546	144,231	135	68	18	3	13,157	907,011
52	49	14	0	23,327	1,159,352	136	68	18	3	30,012	2,068,952
53	56	13	0	10,630	602,190	137	68	18	3	24,884	1,715,441
54	56	13	0	10,003	566,670	138	68	18	3	22,803	1,571,982
55	56	13	0	16,473	933,195	139	68	18	3	13,185	908,941
56	56	13	0	12,433	704,329	140	68	18	3	12,953	892,947
57	56	13	0	10,243	580,262	141	68	18	3	10,224	704,817
58	56	13	0	26,326	1,491,368	142	52	14	0	31,206	1,644,556
59	56	13	0	18,412	1,043,040	143	55	18	3	18,853	1,054,590
60	58	17	1	15,816	930,969	144	55	18	3	10,955	612,795
61	58	17	1	.....	.....	145	55	18	3	19,036	1,064,826
62	58	17	1	13,109	771,629	146	55	18	3	22,981	1,285,500
63	58	17	1	17,587	1,035,215	147	55	18	3	19,522	1,092,012
64	58	17	1	23,024	1,355,250	148	55	18	3	15,873	887,896
65	58	17	1	20,500	1,206,681	149	55	18	3	29,032	1,623,978
66	17	16	3	804	14,341	150	55	18	3	22,215	1,242,652
67	25	18	3	4,877	126,497	151	55	18	3	27,147	1,518,535
68	25	18	3	10,499	272,318	152	55	18	3	24,758	1,384,901
69	25	18	3	19,043	493,928	153	55	18	3	20,670	1,156,228
70	25	18	3	17,926	464,956	154	55	18	3	18,784	1,050,730
71	25	18	3	29,754	771,744	155	55	18	3	29,142	1,630,131
72	25	18	3	14,381	373,007	156	55	18	3	21,293	1,191,077
73	25	18	3	10,476	271,721	157	55	18	3	16,699	934,100
74	25	18	3	20,970	543,909	158	37	16	1	15,316	579,136
75	48	6	0	10,347	499,760	159	37	16	1	19,321	730,575
76	48	6	0	39,197	1,893,215	160	37	16	1	37,542	1,419,557
77	48	6	0	24,755	1,195,667	161	37	16	1	22,740	859,856
78	48	6	0	35,960	1,736,868	162	37	16	1	31,102	1,176,044
79	55	18	3	10,971	613,690	163	37	16	1	28,574	1,080,455
80	55	18	3	17,909	1,001,785	164	52	14	0	33,328	1,756,386
81	55	18	3	10,010	559,934	165	55	18	3	24,441	1,367,168
82	55	18	3	25,383	1,419,862	166	55	18	3	28,566	1,597,911
83	55	18	3	26,480	1,481,225	167	55	18	3	26,839	1,501,307
84	55	18	3	12,976	725,845	168	55	18	3	27,603	1,544,068
85	55	18	3	18,911	1,057,834	169	55	18	3	30,602	1,711,799
86	55	18	3	6,646	371,761	170	55	18	3	23,441	1,311,231
87	55	18	3	20,611	1,152,928	171	55	18	3	22,490	1,258,034
88	55	18	3	22,074	1,234,764	172	55	18	3	18,466	1,032,942
89	55	18	3	20,123	1,125,630	173	55	18	3	33,633	1,881,346
90	55	18	3	20,895	1,168,814	174	55	18	3	14,255	797,389

No. 52—*continued.*

WEIGHT of Locomotive Engines and Tenders, and Tonnage, &c.—*continued.*

No. of Engine.	Weight of Engine and Tender for whole journey.			Mileage of each Engine and Tender.	Total Tons carried.	No. of Engine.	Weight of Engine and Tender for whole journey.			Mileage of each Engine and Tender.	Tota Tons carried.
	t.	c.	q.				t.	c.	q.		
175	55	18	3	22,384	1,252,105	267	59	19	2	29,179	1,750,011
176	55	18	3	21,815	1,220,277	268	59	19	2	17,975	1,078,051
177	55	18	3	10,239	572,744	269	59	19	2	37,036	2,221,234
178	55	18	3	20,548	1,149,404	270	59	19	2	34,037	2,041,369
179	55	18	3	20,414	1,141,908	271	59	19	2	20,843	1,250,059
180	55	18	3	18,719	1,047,094	272	59	19	2	29,827	1,788,874
181	55	18	3	21,396	1,196,839	273	59	19	2	12,870	771,878
182	55	18	3	21,580	1,207,131	274	59	19	2	30,766	1,845,191
183	52	14	0	13,575	715,403	275	59	19	2	30,096	1,805,008
184	52	14	0	21,416	1,128,623	276	59	19	2	30,925	1,854,727
185	52	14	0	25,889	1,364,350	277	59	19	2	39,198	2,350,900
186	52	14	0	23,297	1,227,752	278	59	19	2	35,739	2,143,447
187	52	14	0	14,052	740,540	279	59	19	2	32,218	1,932,275
188	52	14	0	32,221	1,698,047	280	59	19	2	29,568	1,773,341
189	52	14	0	24,094	1,269,754	281	59	19	2	26,560	1,592,936
190	52	14	0	30,170	1,589,959	282	59	19	2	34,311	2,057,802
191	52	14	0	32,959	1,736,939	283	59	19	2	25,758	1,544,836
192	52	14	0	31,464	1,658,154	284	59	19	2	35,581	2,133,970
193	52	14	0	33,070	1,742,789	285	32	0	0	38,583	1,234,656
194	52	14	0	30,446	1,604,504	286	32	0	0	19,019	608,608
195	52	14	0	35,037	1,846,450	287	32	0	0	18,249	583,968
196	52	14	0	30,233	1,593,279	288	32	0	0	37,939	1,214,048
197	52	14	0	24,420	1,286,934	289	32	0	0	24,248	775,936
198	52	14	0	30,399	1,602,027	290	32	0	0	9,699	310,368
199	52	14	0	23,111	1,217,950	292	16	16	3	681	11,466
200	52	14	0	25,931	1,366,564	293	16	16	3	834	14,042
201	52	14	0	16,671	878,562	294	63	5	3	16,047	1,015,575
202	52	14	0	24,527	1,292,573	295	63	5	3	18,592	1,176,641
203	52	14	0	28,163	1,484,190	296	63	5	3	16,974	1,074,242
204	52	14	0	32,988	1,738,468	297	63	5	3	17,615	1,114,809
205	62	17	0	29,652	1,863,628	298	63	5	3	20,507	1,297,837
206	62	17	0	38,538	2,422,113	299	63	5	3	12,105	766,095
207	62	17	0	34,624	2,176,118	300	63	5	3	6,262	396,306
208	62	17	0	32,542	2,045,265	301	63	5	3	13,189	834,699
209	62	17	0	28,618	1,798,741	302	63	5	3	16,160	1,022,726
210	62	17	0	27,127	1,704,932	303	63	5	3	18,710	1,184,109
211	62	17	0	34,614	2,175,490	304	64	18	2	13,519	877,721
212	62	17	0	21,691	1,363,279	305	64	18	2	14,777	959,397
213	62	17	0	22,484	1,413,119	306	64	18	2	7,678	498,494
214	62	17	0	30,447	1,913,594	307	64	18	2	10,679	693,334
215	62	17	0	18,366	1,154,303	308	64	18	2	16,058	1,042,566
216	62	17	0	28,918	1,817,496	309	64	18	2	7,347	477,004
217	62	17	0	24,339	1,529,706	310	64	18	2	16,850	1,093,986
218	62	17	0	24,363	1,531,215	311	64	18	2	16,041	1,041,462
219	62	17	0	36,753	2,309,926	312	64	18	2	14,774	959,202
220	62	17	0	35,571	2,235,637	313	64	18	2	20,469	1,328,950
225	62	17	0	15,106	949,412	314	62	17	0	23,209	1,458,686
226	62	17	0	17,931	1,126,963	315	62	17	0	17,880	1.123,758
227	62	17	0	33,340	2,095,419	316	62	17	0	22,663	1,424,370
228	62	17	0	26,185	1,645,727	317	62	17	0	15,635	982,660
229	62	17	0	29,300	1,841,505	318	62	17	0	15,845	1,045,858
230	62	17	0	15,116	950,041	319	62	17	0	14,539	913,776
239	62	17	0	24,879	1,563,645	320	62	17	0	14,187	891,653
240	62	17	0	26,580	1,670,553	321	62	17	0	15,114	949,915
241	62	17	0	22,804	1,433,231	322	62	17	0	11,171	702,097
242	62	17	0	29,484	1,853,069	323	62	17	0	9,381	589,596
243	62	17	0	15,753	990,076	324	62	17	0	4,147	260,639
244	62	17	0	28,167	1,770,296	325	62	17	0	5.585	351,017
245	62	17	0	27,657	1,738,242	326	62	17	0	10,313	648,172
246	62	17	0	36,319	2,282,649	327	62	17	0	10,997	691,161
247	62	17	0	24,264	1,524,992	328	62	17	0	12,153	763,816
248	62	17	0	20,676	1,299,487	341	60	12	3	1,544	93,624
249	62	17	0	34,935	2,195,666	342	60	12	3	3,018	183,004
250	62	17	0	18,794	1,181,203	343	60	12	3	6,162	373,648
251	62	17	0	24,460	1,537,311	344	60	12	3	2,024	122.525
252	62	17	0	35,554	2,234,569	351	36	15	0	1,462	53,729
253	62	17	0	24,967	1,569,176	352	36	15	0	3,138	115,322
254	62	17	0	27,165	1,707,320	353	36	15	0	2,997	110,140
255	55	11	0	27,650	1,535,958	354	36	15	0	2,140	78,645
256	58	5	3	16,773	977,656	355	36	15	0	853	31,348
257	58	5	3	38,828	2,263,187	356	36	15	0	19	698
258	58	5	3	28,101	1,637,937						
259	58	5	3	36,151	2,107,151	Total	16,979	18	3	6,452,911	354,657,143
260	58	5	3	35,161	2,049,447						
265	59	19	2	36,483	2,188,068	Average	54	2	3	20,612	1,133,008
266	59	19	2	40,705	2,441,282						

Contractors' Engines not included : Mileage 1,914

No. 52—*continued.*

WEIGHT of Locomotive Engines and Tenders, and Tonnage—*continued.*

GREAT NORTHERN LINE.

No. of Engine.	Weight of Engine and Tender for whole journey.	Mileage of each Engine and Tender.	Total Tons carried.	No. of Engine.	Weight of Engine and Tender for whole journey.	Mileage of each Engine and Tender.	Total Tons carried.
	t. c. q.				t. c. q.		
1	42 14 1	26,657	1,138,587	42	52 14 0	25,376	1,337,315
2	42 14 1	37,333	1,594,586	43	52 14 0	31,984	1,685,557
3	42 14 1	31,668	1,352,619	44	52 14 0	23,977	1,263,588
4	30 15 1	32,437	997,843	45	52 14 0	34,210	1,802,867
5	31 13 2	7,071	223,974	46	52 14 0	19,502	1,027,755
6	33 10 2	19,085	639,825	47	55 19 0	30,702	1,717,777
7	33 10 2	17,919	600,734	48	55 19 0	27,420	1,534,149
8	33 19 2	13,559	460,667	49	55 19 0	27,485	1,537,786
9	15 13 2	15,708	246,223	50	55 19 0	21,497	1,202,757
10	38 18 0	15,824	615,554	51	55 19 0	35,097	1,963,677
11	47 13 1	22,424	1,068,784	221	60 13 3	28,226	1,712 965
12	47 13 1	30,180	1,438,454	222	60 13 3	25,735	1,561,793
13	47 13 1	22,609	1,077,601	223	60 13 3	23,188	1,407,222
14	47 0 1	12,928	607,778	224	60 13 3	30,187	1,831,974
15	47 0 1	21,135	993,609	231	60 13 3	28,433	1,725,528
16	47 0 1	18,707	879,463	232	60 13 3	26,124	1,585,400
17	31 13 2	21,339	675,913	233	60 13 3	24,123	1,463,165
18	47 13 1	25,712	1,225 498	234	60 13 3	28,165	1,709,263
19	47 13 1	23,932	1,140,659	235	60 13 3	29,101	1,766,067
20	33 6 2	18,978	632,442	236	.....	26,452	1,605,306
21	47 13 1	19,281	918,981	237	60 13 3	29,046	1,762,729
22	47 13 1	33,181	1,581,489	238	60 13 3	29,814	1,809,337
23	48 6 1	20,446	987,797	261	59 19 2	26,123	1,566,727
24	48 6 1	15,792	762,951	262	59 19 2	28,475	1,707,788
25	48 6 1	18,160	877,355	263	59 19 2	31 673	1 889 588
26	48 6 1	22 708	1,097,080	264	59 19 2	32,498	1,946,669
27	55 7 1	37,748	2,089,824	291	52 14 0	28 897	1,522 872
28	55 7 1	20,236	1,120,316	329	60 13 3	10 096	612,701
29	55 7 1	37 303	2,065,187	330	60 13 3	12 021	729 524
30	55 7 1	18,652	1,032,621	331	60 13 3	11,040	669,990
31	52 14 0	27,851	1,467,748	332	60 13 3	10,489	636,551
32	52 14 0	29,359	1,547,219	333	60 13 3	11,594	703 611
33	52 14 0	29,776	1,568,668	334	61 2 3	5,142	314,369
34	52 14 0	28,747	1,514 967	335	61 2 3	6,554	400,695
35	52 14 0	27,889	1,469,750	336	61 2 3	7,485	457,614
36	52 14 0	24,300	1,280,610	337	61 2 3	5,100	311,801
37	55 19 0	27,993	1,566,208				
38	55 19 0	25,137	1,406,415	Total	4,002 1 3	1,804,804	94,326,610
39	55 19 0	20,869	1,167,621				
40	52 14 0	25,421	1,339,687	Averages.....	51 19 2	23,439	1,225,021
41	52 14 0	25,769	1,358,026				

Contractor's Engines not included ; Mileage, 766.

No. 52—*continued.*

FROM the figures in the foregoing tables the following results are derived :—

		South and West.	North.	Totals.
LOCOMOTIVES.				
Number of engines and tenders—				
Passenger	No.	161	32	193
Goods	"	152	45	197
Total	"	313	77	390
Gross weight of engines and tenders—				
Passenger	tons	8,087	1,410	9,497
Goods	"	8,859	2,592	11,451
Total	"	16,946	4,002	20,948
Mileage of engines and tenders—				
Passenger	miles	2,537,713	586,439	3,124,152
Goods	"	3,915,198	1,218,365	5,133,563
Total	"	6,452,911	1,804,804	8,257,715
Gross tonnage—				
Passenger	tons	139,490,208	30,649,203	170,139,411
Goods	"	215,166,935	63,677,407	278,844,342
Total	"	354,657,143	94,326,610	448,983,753
PASSENGER AND GOODS STOCK.				
Number of vehicles—				
Passenger	No.	591	239	830
* Goods	"	5,912	4,509	10,421
Total	"	6,503	4,748	11,251
Weight of Do.—				
Passenger	tons	5,762	1,908	7,670
* Goods	"	32,277	22,005	54,282
Total	"	38,039	23,913	61,952
* Total mileage of vehicles—				
Passenger	miles	13,268,250	3,808,643	17,076,893
Goods	"	54,376,514	15,514,007	69,890,521
Total	"	67,644,764	19,322,650	86,967,414
Gross dead weight of vehicles—				
Passenger	tons	126,711,787	30,421,536	157,133,323
Goods	"	294,992,586	75,436,858	370,429,444
Total	"	421,704,373	105,858,394	527,562,767

* The mileage does not include ballast waggons, but merely vehicles used for traffic purposes.

No. 52—*continued.*

		South and West.	North.	Totals.
PASSENGER AND GOODS STOCK—*continued.*				
Tonnage of load carried in vehicles—				
Passenger	No.	831,156	69,265	900,421
Goods	"	1,399,457	1,849,551	3,249,008
Total	"	2,230,613	1,918,816	4,149,429
Total ton mileage of load—				
Passenger	"	10,819,457	2,325,643	13,145,100
Goods	"	141,231,368	32,403,890	173,635,258
Total	"	152,050,825	34,729,533	186,780,358
Total tonnage of vehicles empty and loaded—				
Passenger	tons	137,531,244	32,747,179	170,278,423
Goods	"	436,223,954	107,840,748	544,064,702
Total	"	573,755,198	140,587,927	714,343,125
Total tonnage of engines and vehicles loaded—				
Passenger	"	277,021,452	63,396,382	340,417,834
Goods	"	651,390,889	171,518,155	822,909,044
Total	"	928,412,341	234,914,537	1,163,326,878
Gross earnings—				
Passenger and Coaching	£	691,308	139,596	830,904
Goods	"	1,015,665	327,799	1,343,464
Total	"	1,706,973	467,395	2,174,368
Total working expenses	"	1,152,224	305,929	1,458,153
Net earnings	...	554,749	161,466	716,215
RESULTS:—				
AVERAGE EARNINGS PER TON PER MILE—				
PASSENGER	d.	·594	·528	·585
GOODS	"	·374	·459	·392
ALL TRAFFIC.		·441	·477	·449
WORKING EXPENSES PER TON PER MILE	"	·298	·312	·301
NET EARNINGS PER TON PER MILE	"	·143	·165	·148

No. 53.

MERCHANDISE Traffic Rates, 1884 and 1885, showing rates per ton.

Articles of Traffic.	*1883. JUNE 25.			*1884. FEBRUARY 1.			*1885. OCTOBER 1.		
	Class.	15 miles.	Exceeding 15 miles.	Class.	15 miles.	Exceeding 15 miles.	Class.	15 miles.	Exceeding 15 miles.
		s. d.	per mile. s. d.		s. d.	per mile. s. d.		s. d.	per mile. s. d.
Acids—in cases and carboys...	4	12 0	0 9						
Aerated Waters	2	7 0	0 5						
Agricultural Machines	3	9 0	0 7						
Do. Produce — not otherwise specified.	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „	.....	.....	100 miles and over special truck rates.			
Ale and Porter—in bulk	2	9 0	0 7	2	7 0	0 5			
Ammunition	4	12 0	0 9	4	12 0	0 9			
Bark	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Battens	.. ..	....	....	A	2 0 †25%	0 1⅛ to 75 miles. 0 1 over 75 „ ×25%	A	2 0 +25% not exceeding 14 feet in length.	0 1⅛ to 75 miles. 0 1 over 75 „
							A	2 0 +33⅓% over 14 feet in length	0 1⅛ to 75 „ 0 1 over 75 „
Beet-root	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Bicycles	4	12 0	0 9						
Boards, not exceeding 2 inches	A	2 0 ×50%	0 1⅛ to 75 „ 0 1 over 75 „	.....	... ..	.. ..	A	2 0 +50% not more than 14 feet in length	0 1⅛ to 75 miles. 0 1 over 75 „
Do. over 2 inch s	... .	..	... .		..	....	A	2 0 +66⅔% if more th in 14 feet in length	0 1⅛ to 75 miles. 0 1 over 75 „
Boats—80 cubic feet per ton..	2	7 0	0 5						
Boilers	2	7 0	0 5						
Do. Plates	2	7 0	0 5						
Bones	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „	.....	. .	. ...	A	2 0 in bags, or loose in quantities no' less than 4 tons.	0 1⅛ to 75 miles. 0 1 over 75 „
							B	3 0 loose in quantities under 4 tons.	0 2
Bottles—empty, in cases or crates.	B	3 0	0 2						
Bran	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Bricks —4 ton lots	Mis.	1 6	0 1¼ 15 to 35 „ 0 1 35 to 150 „ 0 0¾ 150 to 250 „ 0 0½ over 250 „	.....	.....	....	‡	... ..	.....
Cabbages...	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Candied Fruit ... ... to Sydney and Newcastle.	B	3 0	0 2						
Carpentry	3	9 0	0 7						
Carrots	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Casks—new, empty	B	3 0	0 2						
Cases do.	B	3 0	0 2						
Cement	B	3 0	0 2						
Chaff. (See page 84.)									
Charcoal and coke—in bags...	B	3 0	0 2						
Chicory Root	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Clay—4 ton lots.....	Mis.	1 6	0 1¼ 15 to 35 „ 0 1 35 to 150 „ 0 0¾ 150 to 250 „ 0 0½ over 250 „	.....	.....	.....	‡.....	.....	.....
Coal. (See page 84.)	.....	... ..	.....	Mis.	1 6	0 1¼ 16 to 35 miles. 0 1 35 to 150 „ 0 0¾ 150 to 250 „ 0 0½ over 250 „			
Do. Waggons — new on whee's to collieries.	.....	.....	0 4 per mile each, minimum, 5s						
Coke	B	3 0	0 2	B	3 0	0 2			
Coke (in owners' trucks)	...	...	... .	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „			

Marked thus * subject to the following allowances:—10 per cent on the rate per mile for every mile beyond 100; 20 per cent. on the rate per mile for every mile beyond 150; 40 per cent. on the rate per mile for every mile beyond 200. † Distances not exceeding 340 miles. ‡ 5-ton lots.

No. 53—*continued.*

MERCHANDISE Traffic Rates—*continued.*

Articles of Traffic.	*1883. JUNE 25. Class.	15 miles.	Exceeding 15 miles.	*1884. FEBRUARY 1. Class.	15 miles.	Exceeding 15 miles.	*1885. OCTOBER 1. Class.	15 miles.	Exceeding 15 miles.
		s. d.	per mile. s. d.		s. d.	per mile. s. d.		s. d.	per mile. s. d.
Colonial Wine	B	3 0	0 2						
Copper Ingots	B	3 0	0 2						
Do Ore—4 ton lots	Mis.	1 6	†0 1¼ 15 to 35 miles 0 1 35 to 150 „ 0 0¾ 150 to 250 „ 0 0½ over 250 „						
Dairy Produce	1	6 0	0 4						
Drain Pipes	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Dynamite—owners' risk, in casks or cases.	.....	.....	1 0 per ton per mile for quantities exceeding 10 cwt. 1 6 per ton per mile for quantities under 10 cwt., minimum 5s.						
Felloes	.....	.....	.....	.....	.....	.....	A	2 0	0 1⅛ to 75 miles. 0 1 over 75 „
Fireclay Blocks	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Firewood (4-ton lots)	Mis.	1 6	0 1¼ 15 to 35 „ 0 1 35 to 150 „ 0 0¾ 150 to 250 „ 0 0½ over 250 „						
Fireworks	4	12 0	0 9						
Fish			Not less than 2cwt., 3d. per ton per mile.						
Flour	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Flower-pots	B	3 0	0 2						
Fruit—Orchard	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Furniture—in cases	3	9 0	0 7						
Do. loose	4	12 0	0 9						
Garden Produce—not otherwise specified.	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Glue Pieces—dry	B	3 0	0 2						
Glue Pieces—wet	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Grain—all kinds	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Green Fodder	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Guano and Artificial Manures	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Gunpowder (owner's risk)—in casks.	.....	.....	1 0 per ton per mile.	.....	.....	1 0 per ton per mile for quantities exceeding 10 cwt. 1 6 per ton per mile if under 10 cwt.			
Hats—in cases	4	12 0	0 9						
Hardware	3	9 0	0 7						
Hay. (See page 84.)									
Hides (wet)	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
„ (dry)	B	3 0	0 2						
Hoofs	A	2 0	0 1⅛ to 75 „	...	...	.....	A	2 0	0 1⅛ to 75 miles In bags or loose in lots of 4 tons. 0 1 over 75 miles
			0 1 over 75 „	...	...	.....	B	3 0	0 2 Loose in quantities less than 4 tons.
Horns	A	2 0	0 1⅛ to 75 „	...	...	.....	A	2 0	0 1⅛ to 75 miles In bags or loose in lots of 4 tons. 0 1 over 75 miles
			0 1 over 75 „	...	...	.....	B	3 0	2 0 Loose in quantities less than 4 tons.
Iron—Bar, Rod, Angle, and T	2	7 0	0 5						
Boiler Plate	2	7 0	0 5						
Corrugated—in cases	1	6 0	0 4						
Girders	2	7 0	0 5						
Pig and Scrap — to smelting works.	Mis.	1 6	0 1¼ to 35 „ 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	...	...	.....	†...	...	.....

Marked thus*, subject to the following allowances:—10 per cent. on the rate per mile for every mile beyond 100; 20 per cent. on the rate per mile for every mile beyond 150; 40 per cent. on the rate per mile for every mile beyond 200. † 5-ton lots.

No. 53—*continued.*

MERCHANDISE Traffic Rates—*continued.*

Articles of Traffic.	*1883. JUNE 25.			*1884. FEBRUARY 1.			*1885. OCTOBER 1.		
	Class.	15 miles.	Exceeding 15 miles.	Class.	15 miles.	Exceeding 15 miles.	Class.	15 miles.	Exceeding 15 miles.
		s. d.	per mile. s. d.		s. d.	per mile. s. d.			
Iron—Pig and Scrap	D	5 0	0 2½	Mis.	1 6	0 1¼ to 35 miles 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	†...	...	.....
Do.—Tanks, 160 c. ft. per ton —Galvanized iron.	2	7 0	0 5						
Do.—Rough Castings	...	...	.....	...	...	.....	2	7 0	0 5
Do.—Wire in bundles	1	6 0	0 4						
Do.—Wheels and Axles—Railway.	2	7 0	0 5						
Do.—Rails and Chairs	1	6 0	0 4						
Do.—Castings	2	7 0	0 5						
Do.—Pig, Pipes, and rough Castings, from the manufactory.	Mis.	1 6	0 1¼ to 35 miles 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	...	...	.....	†...	...	.....
Do.—Pipes—Galvanized	2	7 0	0 5						
Iron Nails	2	7 0	0 5						
Ironmongery	3	9 0	0 7						
Ironstone	Mis.	1 6	0 1¼ to 35 „ 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	...	...	.....	†...	...	.....
Jams, to Sydney and Newcastle	B	3 0	0 2						
Joinery	3	9 0	0 7						
Kerosene Oil, to Sydney and Newcastle.	1	6 0	0 4						
Lead—Pig or Sheet	2	7 0	0 5						
Leather, to Sydney and Newcastle.	1	6 0	0 4	1 2	6 0 7 0	0 4 in bundles. 0 5 loose.			
Do.—Patent or Morocco	...	...	.....	3	9 0	0 7			
Lamps—Street, Door, or Hall	3	9 0	0 7						
Laths	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Lick Blocks	B	3 0	0 2						
Lime—4-ton lots	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Limestone	Mis.	1 6	0 1¼ to 35 „ 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	...	...	.....	†...	...	.....
Lithofracteur or other explosives—owner's risk—in casks or cases.	.....	.....	1 0 per ton per mile if over 10 cwt. 1 6 per ton per mile if under 10 cwt.						
Lucerne—Seed	1	6 0	0 4						
Machinery of all kinds	3	9 0	0 7						
Malt in tanks	1	6 0	0 4						
Malt Tanks—Square & empty	3	9 0	0 7						
Mangold Wurzel	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Manure, loose (4-ton lots)	Mis.	1 6	0 1¼ to 35 „ 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	...	...	.....	†...	...	.....
Manure—Artificial	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Marble—Undressed (4-ton lots.)	Mis.	1 6	0 1¼ to 35 „ 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	...	...	.....	†...	...	.....
Meal	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Measurement Goods, 140 cubic feet to ton.	1	6 0	0 4	.....	.....	.....	3	9 0	0 7
Melons	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Millinery—in cases	4	12 0	0 9						
Mirrors	4	12 0	0 9						
Muriate of Lime	1	6 0	0 4						
Musical Instruments	4	12 0	0 9						
Naphtha	4	12 0	0 9						

Marked thus *, subject to the following allowances :—10 per cent. on the rate per mile for every mile beyond 100 : 20 per cent. on the rate per mile for every mile beyond 150 ; 40 per cent. on the rate per mile for every mile beyond 200. † 5-ton lots.

No. 53—*continued.*

MERCHANDISE Traffic Rates—*continued.*

Articles of Traffic	*1883. JUNE 25. Class.	15 miles.	Exceeding 15 miles.	*1884. FEBRUARY 1. Class.	15 miles.	Exceeding 15 miles.	*1885. OCTOBER 1. Class.	15 miles.	Exceeding 15 miles.
		s. d.	per mile. s. d.					s. d.	per mile. s. d.
Offal	Mis.	1 6	0 1¼ to 35 „ 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	.....	.....	.....	†...	.....	.....
Oil Cake	B	3 0	0 2						
Opium	4	12 0	0 9						
Ores—Crude (4-ton lots)	Mis.	1 6	0 1¼ to 35 „ 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	.....	.....	.....	†...	.....	.....
Ore (Tin or Sulphur)	B	3 0	0 2	.....	.....	.....	B	3 0	0 2
Ore (Silver declared value under £100) per ton.	.....	.....	.....	.....	.....	.....	1	6 0	0 4
Ore (Siver value undeclared or over £100) per ton.	.....	.....	.....	.....	.....	.....	3	9 0	0 7
Oysters	.....	.....	0 3 per ton per mile. 0 1⅛ to 75 miles						
Palings	A	2 0	0 1 over 75 „						
Paper	B under 1 ton 2	3 0 7 0	0 2 0 5	B under 2 tons 2	3 0 7 0	0 2 ..... 0 5	B under 1 ton 2	3 0 7 0	0 2 0 5
Papier-maché Goods	3	9 0	0 7						
Perambulators	4	12 0	0 9						
Perfumery	3	9 0	0 7						
Picture Frames	4	12 0	0 9						
Pier Glasses	4	12 0	0 9						
Pitch	1	6 0	0 4						
Plants (in pots and cases)	3	9 0	0 7						
Plated Goods	3	9 0	0 7						
Plate Glass	4	12 0	0 9						
Pollard	A	2 0	0 1⅛ to 75 miles. 0 1 over 75 „						
Portable Engines	3	9 0	0 7						
Posts and Rails	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Potatoes	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Poultry—Living (in crates)	2	7 0	0 5 In flocks, 6d. per truck per mile to 100 miles; over 100, 4d.	1	6 0	0 4 In flocks, 6d. per single-decked truck per mile up to 100, and 4d. for every additional mile; minimum charge, 12s.			
Preserved Meat.....To Sydney and Newcastle.	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Pumpkins	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Quicksilver	1	6 0	0 4						
Railway Materials	1	6 0	0 4						
Rags and Materials for making paper (not chemicals).	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Regulus (4-ton lots)	Mis.	1 6	Not more than 33 per cent. of copper. 0 1¼ to 35 miles 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	.....	.....	.....	†...	.....	.....
	A	2 0	Containing over 33 per cent. of copper. 0 1⅛ to 75 miles 0 1 over 75 „						
Resin	1	6 0	0 4						
Road Metal	Mis.	1 6	0 1¼ to 35 „ 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	.....	.....	.....	†...	.....	.....
Salt—Rock and Calcutta	B	3 0	0 2						
Salt—Dairy and Meat-curing	B	3 0	0 2						

Marked thus * subject to the following allowances:—10 per cent. on the rate per mile for every mile beyond 100; 20 per cent. on the rate per mile for every mile beyond 150; 40 per cent. on the rate per mile for every mile beyond 200. † 5-ton lots.

No. 53—*continued.*

MERCHANDISE Traffic Rates—*continued.*

Articles of Traffic.	*1883. JUNE 25.			*1884. FEBRUARY 1.			*1885. OCTOBER 1.		
	Class.	15 miles.	Exceeding 15 miles.	Class.	15 miles.	Exceeding 15 miles.	Class.	15 miles.	Exceeding 15 miles.
		s. d.	per mile. s. d.		s. d.	per mile. s. d.		s. d.	per mile. s. d.
Sand	Mis.	1 6	0 1¼ to 35 miles 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	.....	.....	.....	†...	.....	.....
Sawdust	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Scientific Instruments	4	12 0	0 9						
Sewing-Machines (packed)	3	9 0	0 7						
Do. (unpacked)	4	12 0	0 9	.....	.....	.....	4	12 0	0 9
Seed Grass	1	6 0	0 4						
Do. Garden	3	9 0	0 7						
Do. Millet	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Shale—Kerosene	Mis.	1 6	0 1¼ to 35 „ 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	.....	.....	.....	†...	.....	.....
Sheepskins	B	3 0	0 2						
Shingles	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Silk Goods	3	9 0	0 7						
Slate Slabs	4	12 0	0 9						
Slates	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Sleepers—Railway	B	3 0	0 2	.....	.....	.....	A +25%	2 0	0 1⅛ to 75 miles. 0 1 over 75 „
Soap (except scented and fancy)	1	6 0	0 4						
Soda—Crystals and Caustic	B	3 0	0 2						
Spokes and Shafts—Undressed	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Stocks	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Stone undressed	Mis.	1 6	0 1¼ to 35 „ 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „	.....	.....	.....	†...	.....	.....
Do. carved and Gravestones	2	7 0	0 5						
Do. cut for Building or Grindstones.	Mis.	1 6	0 1¼ to 35 miles 0 1 to 150 „ 0 0¾ to 250 „ 0 0½ over 250 „				†...		
Straw (See page 184.)									
Sugar	2	7 0	0 5 In truck loads (6 tons), 2s per truck per mile, subject to discounts beyond 100 miles.						
Sulphuric Acid	1	6 0	0 4						
Tallow	B	3 0	0 2						
Tar	1	6 0	0 4						
Terra-cotta	A	2 0	0 1⅛ to 75 miles 0 1 over 75 „						
Threshing Machines	3	9 0	0 7						
Tiles—Tesselated and Ornamental.	B	3 0	0 2						
Tiles, Earthenware	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Timber—Undressed in logs	A	2 0	0 1⅛ to 75 „ 0 1 over 75 „						
Do. Sawn	A	2 0 +25%	0 1⅛ to 75 „ 0 1 over 75 „						
Do. Undressed (not over 14 feet in length).	...	...	.....	...	...	.....	A +25%	2 0	0 1⅛ to 75 miles. 0 1 over 75 „
Timber—Undressed (exceeding 14 feet in length).	...	...	.....	...	...	.....	A +33⅓%	2 0	0 1⅛ to 75 miles. 0 1 over 75 „
Timber—Dressed (not over 14 feet in length).	...	...	.....	...	...	.....	A +50%	2 0	0 1⅛ to 75 „ 0 1 over 75 „
Timber—Dressed (over 14 feet in length).	...	...	.....	...	...	.....	A +66⅔%	2 0	0 1⅛ to 75 „ 0 1 over 75 „
Tin Ore	B	3 0	0 2						
Tin-plates	2	7 0	0 5						
Tin Smelted	B	3 0	0 2						

Marked thus * subject to the following allowances:—10 per cent. on the rate per mile for every mile beyond 100; 20 per cent. on the rate per mile for every mile beyond 150; 40 per cent. on the rate per mile for every mile beyond 200. † 5-ton lots.

No. 53—*continued.*

MERCHANDISE Traffic Rates—*continued.*

Articles of Traffic.	*1883. JUNE 25.				*1884. FEBRUARY 1.			*1885. OCTOBER 1.		
	Class.	15 miles.		Exceeding 15 miles.	Class.	15 miles.	Exceeding 15 miles.	Class.	15 miles.	Exceeding 15 miles.
		s.	d.	per mile. s. d.		s. d.	per mile. s. d.	s. d.	s. d.	per mile.
Toys in cases	3	9	0	0 7						
Tricycles	4	12	0	0 9						
Turnips	A	2	0	0 1½ to 75 miles 0 1 over 75 "						
Velocipedes	4	12	0	0 9						
Whiting	B	3	0	0 2						
Wire-netting	3	9	0	0 7						
Woolpacks	B	3	0	0 2						
Zinc	2	7	0	0 5						
NOTE—All articles not enumerated above are carried as follows.	3	9	0	0 7						
All goods not described or insufficiently described on consignment notes.	4	12	0	0 9						

Marked thus * subject to the following allowances:—10 per cent. on the rate per mile for every mile beyond 100; 20 per cent. on the rate per mile for every mile beyond 150; 40 per cent. on the rate per mile for every mile beyond 200.

Live Stock Rates and Conditions—1 February, 1884.

SMALL CONSIGNMENTS.

½ Truck, *i.e.*, 4 Cows or Oxen, or 10 Calves, 1 Deck of Sheep, or 30 Pigs.	¼ Truck, *i.e.*, 2 Cows or Oxen, or 5 Calves, or 20 Sheep, or 15 Pigs.	Single Cow or Ox.	Sheep or Pigs, when less than ¼ Truck.	Calves, when less than ¼ Truck.
6d. per mile	4d. per mile	3d. per mile	½d. each per mile	1d. each per mile.
Minimum, 10s	Minimum, 7s. 6d.	Min., 7s. 6d. each	Min., 1s. 6d. each	Minimum, 2s. each.

When the number of animals or the space occupied exceeds the limit for ¼ or ½ truck, each one in excess will be charged at the mileage rates enumerated above for single animals until the ½ or full truck rate, as the case may be, is reached.

In ascertaining what portion of a truck is to be charged for, *i.e.*, ¼, ½, or full truck, regard will be had to the space actually occupied more than to the number of animals; but in no case must the number of animals stated above be exceeded.

Mixed stock will be carried together in the same truck, provided the whole consignment belongs to one person, and the Commissioner is relieved of all responsibility. When mixed stock cannot be loaded together, each kind will be charged for separately, with the following exception:—On Thursdays single animals conveyed to Sydney in the same trucks, although belonging to different owners, will be charged at a proportion of ¼, ½, or full truck rate, plus 25 per cent.; for example, should there be two cows, each owner will be charged half of the ¼ truck rate, plus 25 per cent., and should there be three animals, the owners will be charged the ½ truck rate equally between them, plus 25 per cent. It is absolutely necessary that each animal be legibly addressed.

When the charge per head for live stock exceeds that for ¼ truck, or when the charge for a part truck exceeds that for a full one, only the lesser amount will be collected.

BULLS.

The charge for bulls is 7d. each per mile up to 100 miles, and 4d. for every additional mile, plus the charge for 100 miles; if more than one in a truck, 4d. each per mile; for ½ truck and upwards, cattle rates. Minimum, 12s. 6d.

VALUABLE RAMS AND EWES.

If less than ½ a truck load, will be charged 2d. each per mile; for ½ a truck and upwards, sheep rates. Minimum, 5s.

HORSES.

See full truck rates. No less charge than for a full truck load will be made for any number.

When live stock is returned from Sydney or Homebush to country stations, in those neighbourhoods to which cattle trucks and sheep vans are being sent empty, half the above rates will be charged, provided the owners wait the requirements of the Department, but not otherwise.

No. 53—*continued.*

Live Stock Rates and Conditions—1 February, 1884—*continued.*

Herds, Flocks, &c., when in consignments of not less than one full Truck load.

GREAT SOUTHERN, WESTERN, AND RICHMOND LINES.

CATTLE

Will be conveyed from the undermentioned Stations to Homebush, at the following rates per Truck :—

Stations.	Rate.	Stations.	Rate.
	£ s. d.		£ s. d.
Hay	10 5 4	Breadalbane	4 13 10
Carrathool	9 14 0	Upper Tarago	4 17 10
Darlington	9 2 8	Goulburn	4 4 0
Whitton	8 19 4	Marulan	3 10 8
Narrandera	8 9 8	Moss Vale	2 12 0
Coolaman	7 17 4	Bowral	2 8 0
Albury	9 2 8	Mittagong	2 6 0
Ettamogah	9 1 0	Picton	1 10 0
Yambla	8 19 8	Nyngan	8 19 8
Gerogery	8 16 8	Nevertire	8 7 8
The Rock	8 3 0	Dubbo	7 6 8
Bomen	7 15 4	Wellington	6 16 8
Junee Junction	7 9 8	Orange	5 15 4
Cootamundra	6 18 4	Blayney	5 5 4
Harden	6 10 0	Bathurst	4 11 4
Binalong	6 3 4	Capertee	3 19 4
Bowning	5 16 4	Wallerawang	3 4 8
Yass	5 12 10	Mount Victoria	2 6 0
Gunning	5 1 10		

Other distances to be charged—For the first 140 miles, 8d. per truck per mile; from 140 to 200 miles, 6d. per truck per mile; every additional mile 4d. Minimum charge, 15s. per truck.

SHEEP

Will be conveyed from the undermentioned Stations to Homebush, at the following rates per Truck :—

Stations.	Rate.	Stations.	Rate.
	£ s. d.		£ s. d.
Hay	8 10 6	Breadalbane	3 18 9
Carrathool	8 0 7	Upper Tarago	4 1 9
Darlington	7 10 8	Goulburn	3 13 1
Whitton	7 7 9	Marulan	3 5 7
Narrandera	6 19 3	Moss Vale	2 12 0
Coolaman	6 8 6	Bowral	2 8 0
Albury	7 10 8	Mittagong	2 6 0
Ettamogah	7 9 3	Picton	1 10 0
Yambla	7 8 0	Nyngan	7 8 1
Gerogery	7 5 5	Nevertire	6 17 7
The Rock	6 13 6	Dubbo	5 19 2
Bomen	6 6 9	Wellington	5 10 5
Junee Junction	6 1 10	Orange	4 13 5
Cootamundra	5 11 11	Blayney	4 6 9
Harden	5 4 7	Bathurst	3 17 3
Binalong	4 18 9	Capertee	3 10 6
Bowning	4 14 1	Wallerawang	3 1 10
Yass	4 11 9	Mount Victoria	2 6 0
Gunning	4 4 5		

Other distances to be charged—For first 80 miles, 8d. per truck per mile; from 80 to 100, 6d.; from 100 to 150, 4½d.; and from 150 to 200, 4d. per mile. Every additional mile, 3½d. Minimum charge, 15s. per truck. When single-decked trucks are loaded with sheep two-thirds of the above rates will be charged in all cases, but it is optional for senders to wait for sheep-vans.

GREAT NORTHERN LINE.

CATTLE

Will be conveyed between the undermentioned Stations, at the following rates per Truck :—

From	Newcastle.	East Maitland.	West Maitland.	Farley.	Lochinvar.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Armidale	7 3 4	6 17 4	6 16 8	6 16 0	6 14 8
Narrabri	7 0 8	6 14 8	6 14 0	6 13 4	6 12 0
Boggabri	6 10 0	6 4 0	6 3 4	6 2 4	6 0 4
Gunnedah	6 1 4	5 12 4	5 11 4	5 10 4	5 8 4
Breeza	5 8 4	4 19 4	4 18 4	4 17 4	4 15 4
Tamworth	5 14 4	5 5 4	5 4 4	5 3 4	5 1 4
Werris Creek	5 0 10	4 11 4	4 10 10	4 8 8	4 6 0
Quirindi	4 15 4	4 4 0	4 2 8	4 1 4	3 18 8
Willow-tree	4 9 4	3 17 4	3 16 0	3 14 8	3 12 0
Scone	3 4 0	2 12 0	2 10 8	2 9 4	2 6 8
Musclebrook	2 13 4	2 1 4	2 0 0	1 18 8	1 16 0

Other distances to be charged—For the first 140 miles, 8d. per truck per mile; from 140 to 200 miles, 6d. per truck per mile for every additional mile, 4d. Minimum charge, 15s. per truck.

No. 53—*continued.*

Live Stock Rates and Conditions—1 February, 1884—*continued.*

SHEEP

Will be conveyed between the undermentioned Stations at the following rates per Truck :—

Stations from	Newcastle.	East Maitland.	West Maitland.	Farley.	Lochinvar.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Armidale	5 16 3	5 11 0	5 10 5	5 9 10	5 8 8
Narrabri	5 13 11	5 8 8	5 8 1	5 7 6	5 6 4
Boggabri	5 4 7	4 19 4	4 18 9	4 18 1	4 16 9
Gunnedah	4 17 5	4 11 5	4 10 9	4 10 1	4 8 9
Breeza	4 8 9	4 2 9	4 2 1	4 1 4	3 19 10
Tamworth	4 12 9	4 6 9	4 6 1	4 5 5	4 4 1
Werris Creek	4 3 9	3 17 3	3 16 6	3 15 9	3 14 3
Quirindi	3 19 10	3 13 1	3 12 4	3 11 7	3 10 1
Willow-tree	3 16 1	3 9 4	3 8 7	3 7 10	3 6 4
Scone	3 1 4	2 12 0	2 10 8	2 9 4	2 6 8
Musclebrook	2 13 4	2 1 4	2 0 0	1 18 8	1 16 0

Other distances to be charged—For the first 80 miles, 8d. per truck per mile; from 80 to 100 miles, 6d. per truck per mile; for every mile exceeding 100 and not exceeding 150, 4½d. per truck per mile; for every mile exceeding 150 and not exceeding 200, 4d. per truck per mile; for every mile over 200, 3½d. per truck per mile. For single-decked truck only two-thirds of these rates will be charged. Minimum charge, 15s. per truck.

GREAT SOUTHERN, WESTERN, AND RICHMOND, AND NORTHERN LINES.

HORSES.

The Commissioner will carry horses in cattle trucks if requested to do so, but only under special contract, relieving him of all responsibility. The charge for horses so carried will be the same as for cattle in full truck loads.

PIGS—Same as cattle. Minimum, 15s.

(When a double decked waggon is occupied, 50 per cent. will be added.)

Under the foregoing Herd and Flock Rates for Cattle, Sheep, Horses, and Pigs, no less charge than for one full truck will be made for each and every truck used.

1st October, 1885.

SMALL CONSIGNMENTS.

½ truck, *i.e.*, 4 Cows or Oxen, or 10 Calves, or 1 Deck of Sheep, or 30 Pigs.	¼ Truck, *i.e.*, 2 Cows or Oxen, or 5 Calves, or 20 Sheep, or 15 Pigs.	Single Cow or Ox.	Sheep or Pigs, when less than ¼ Truck.	Calves, when less than ¼ Truck.
6d. per mile	4d. per mile	3d. per mile	½d. each per mile	1d. each per mile.
Minimum, 10s.	Minimum, 7s. 6d.	Min., 7s. 6d. each	Min., 1s. 6d. each	Minimum, 2s. each.

When the number of animals or the space occupied exceeds the limit for ¼ or ½ truck, each one in excess will be charged at the mileage rates enumerated above for single animals until the ½ or full truck rate, as the case may be, is reached.

In ascertaining what portion of a truck is to be charged for—*i.e.*, ¼, ½, or full truck—regard will be had to the space actually occupied more than to the number of animals; but in no case must the number of animals stated above be exceeded.

Mixed stock will be carried together in the same truck, provided the whole consignment belongs to one person, and the Commissioner is relieved of all responsibility. When mixed stock cannot be loaded together, each kind will be charged for separately with the following exception :—On Thursdays single animals conveyed to Sydney in the same trucks, although belonging to different owners, will be charged at a proportion of ¼, ½, or full truck rate, plus 25 per cent.; for example, should there be two cows, each owner will be charged half of the ¼ truck rate, plus 25 per cent., and should there be three animals, the owners will be charged the ½ truck rate equally between them, plus 25 per cent. It is absolutely necessary that each animal be legibly addressed.

When the charge per head for live stock exceeds that for a quarter truck, or when the charge for a part truck on market days exceeds than for a full one, only the lesser amount will be collected.

BULLS.

The charge for bulls is 7d. each per mile up to 100 miles and 4d. for every additional mile, plus the charge for 100 miles; if more that one in a truck, 4d. each per mile; for half a truck and upwards, cattle rates. Minimum, 12s. 6d.

VALUABLE RAMS AND EWES.

If less than half a truck load, will be charged 2d. each per mile; for half a truck and upwards, sheep rates. Minimum, 5s.

HORSES.

See full truck rates. No less charge than for a full truck load will be made for any number.

When live stock is returned from Sydney or Homebush to country stations in those neighbourhoods to which cattle trucks and sheep vans are being sent empty, half the above rates will be charged, provided the owners wait the requirements of the Department, but not otherwise.

When live stock in waggons is conveyed by passenger train the charge will be as for a full horse-box for every truck.

No. 53—*continued.*

Live Stock Rates and Conditions—1st October, 1885—*continued.*

Herds, Flocks, &c., when in consignments of not less than one full truck load.

GREAT SOUTHERN, WESTERN, AND RICHMOND LINES.

CATTLE

Will be conveyed from the undermentioned Stations to Homebush, at the following rates per Truck :—

Stations.	Rate.	Stations.	Rate.
	£ s. d.		£ s. d.
Hay	10 5 4	Bungendore	5 7 10
Carrathool	9 14 0	Tarago	4 17 10
Darlington	9 2 8	Goulburn	4 4 0
Whitton	8 19 4	Marulan	3 10 8
Jerilderie	9 11 4	Moss Vale	2 12 0
Colombo	8 16 4	Bowral	2 8 0
Narrandera	8 9 8	Mittagong	2 6 0
Coolaman	7 17 4	Picton	1 10 0
Old Junee	7 11 0	Bourke	11 4 4
Albury	9 2 8	Byerock	10 5 8
Culcairn	8 12 8	Nyngan	8 19 8
South Wagga	7 17 0	Nevertire	8 7 8
Bomen	7 15 4	Dubbo	7 6 8
Junee Junction	7 9 8	Wellington	6 16 8
Cootamundra	6 18 4	Orange	5 15 4
Wallendbeen	6 14 4	Blayney	5 5 4
Young	6 17 0	Bathurst	4 11 4
Harden	6 10 0	Mudgee	5 14 4
Binalong	6 3 4	Rylstone	4 18 4
Bowning	5 16 4	Capertee	3 19 4
Yass	5 12 10	Wallerawang	3 4 8
Gunning	5 1 10	Mount Victoria	2 6 0
Breadalbane	4 13 10		

Other distances to be charged—For the first 140 miles, 8d. per truck per mile; from 140 to 200 miles, 6d. per truck per mile; every additional mile, 4d. Minimum charge, 15s per truck.

SHEEP

Will be conveyed from the undermentioned Stations to Homebush, at the following rates per truck :—

Stations.	Rate	Stations.	Rate.
	£ s. d.		£ s. d.
Hay	8 10 6	Bungendore	4 8 5
Carrathool	8 0 7	Tarago	4 1 9
Darlington	7 10 8	Goulburn	3 13 1
Whitton	7 7 9	Marulan	3 5 7
Jerilderie	7 18 3	Moss Vale	2 12 0
Colombo	7 5 2	Bowral	2 8 0
Narrandera	6 19 3	Mittagong	2 6 0
Coolaman	6 8 6	Picton	1 10 0
Old Junee	6 3 0	Bourke	9 7 2
Albury	7 10 8	Byrock	8 10 10
Culcairn	7 1 11	Nyngan	7 8 1
South Wagga	6 8 3	Nevertire	6 17 7
Bomen	6 6 9	Dubbo	5 19 2
Junee Junction	6 1 10	Wellington	5 10 5
Cootamundra	5 11 11	Orange	4 13 5
Wallendbeen	5 8 5	Blayney	4 6 9
Young	5 10 9	Bathurst	3 17 3
Harden	5 4 7	Mudgee	4 12 9
Binalong	4 18 9	Rylstone	4 2 1
Bowning	4 14 1	Capertee	3 10 6
Yass	4 11 9	Wallerawang	3 1 10
Gunning	4 4 5	Mount Victoria	2 6 0
Breadalbane	3 18 9		

Other distances to be charged—For first 80 miles, 8d. per truck per mile; from 80 to 100, 6d.; from 100 to 150, 4½d.; and from 150 to 200, 4d per mile. Every additional mile, 3½d. Minimum charge, 15s. per truck.

When single-decked trucks are loaded with sheep two-thirds of the above rates will be charged in all cases, but it is optional for senders to wait for sheep vans. When, in order to complete a consignment, a half-waggon load is sent, the charge for such will be two-thirds of the above rates. For small consignments see page 179.

GREAT NORTHERN LINE.

CATTLE

Will be conveyed between the undermentioned Stations, at the following rates per truck :—

From	Newcastle.	East Maitland.	West Maitland.	Farley.	Lochinvar.
	£ s d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Glen Innes	8 4 8	7 18 8	7 18 0	7 17 4	7 16 0
Armidale	7 3 4	6 17 4	6 16 8	6 16 0	6 14 8
North-western: Narrabri	7 0 8	6 14 8	6 14 0	6 13 4	6 12 0
North-western: Poggabri	6 10 0	6 4 0	6 3 4	6 2 4	6 0 4
North-western: Gunnedah	6 1 4	5 12 4	5 11 4	5 10 4	5 8 4
North-western: Breeza	5 8 4	4 19 4	4 18 4	4 17 4	4 15 4
Tamworth	5 14 4	5 5 4	5 4 4	5 3 4	5 1 4
Werris Creek	5 0 10	4 11 4	4 10 0	4 8 8	4 6 0
Quirindi	4 15 4	4 4 0	4 2 8	4 1 4	3 18 8
Willow-tree	4 9 4	3 17 4	3 16 0	3 14 8	3 12 0
Scone	3 4 0	2 12 0	2 10 8	2 9 4	2 6 8
Muswellbrook	2 13 4	2 1 4	2 0 0	1 18 8	1 16 0

Other distances to be charged—For the first 140 miles, 8d. per truck per mile; from 140 to 200 miles, 6d. per truck per mile; every additional mile, 4d. Minimum charge, 15s. per truck.

No. 53—*continued.*

Live Stock Rates and Conditions—1st October, 1885—*continued.*

SHEEP

Will be conveyed between the undermentioned Stations, at the following rates per truck:—

Stations from	Newcastle.	East Maitland.	West Maitland.	Farley.	Lochinvar.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Glen Innes	6 14 11	6 9 8	6 9 1	6 8 6	6 7 4
Armidale	5 16 3	5 11 0	5 10 5	5 9 10	5 8 8
North-western. Narrabri	5 13 11	5 8 8	5 8 1	5 7 6	5 6 4
North-western. Boggabri	5 4 7	4 19 4	4 18 9	4 18 1	4 16 9
North-western. Gunnedah	4 17 5	4 11 5	4 10 9	4 10 1	4 8 9
North-western. Breeza	4 8 9	4 2 9	4 2 1	4 1 4	3 19 10
Tamworth	4 12 9	4 6 9	4 6 1	4 5 5	4 4 1
Werris Creek	4 3 9	3 17 3	3 16 6	3 15 9	3 14 3
Quirindi	3 19 10	3 13 1	3 12 4	3 11 7	3 10 1
Willow-tree	3 16 1	3 9 4	3 8 7	3 7 10	3 6 4
Scone	3 1 4	2 12 0	2 10 8	2 9 4	2 6 8
Musclebrook	2 13 4	2 1 4	2 0 0	1 18 8	1 16 0

Other distances to be charged—For the first 80 miles, 8d. per truck per mile; from 80 to 100 miles, 6d.; from 100 to 150 miles, 4½d.; from 150 to 200 miles, 4d. Every additional mile, 3½d. Minimum charge, 15s. per truck.

When single-decked trucks are loaded with sheep, two-thirds of the above rates will be charged in all cases, but it is optional for senders to wait for sheep-vans. When, in order to complete a consignment, a half-waggon load is sent, the charge for such will be two-thirds of the above rates. For small consignments, see page 179.

For single-decked trucks, same rates to be charged as on page 180.

GREAT SOUTHERN, WESTERN, AND RICHMOND, AND NORTHERN LINES.

HORSES.

The Commissioner will carry horses in cattle trucks if requested to do so, but only under special contract, relieving him of all responsibility. The charge for horses so carried will be the same as for cattle in full truck loads.

For the rates for horse-boxes see Coaching Rate Pamphlet.

PIGS—same as cattle.

(When a double-decked waggon is occupied, 50 per cent. will be added.)

Minimum, 15s.

GENERAL CONDITIONS AND REGULATIONS.

The Commissioner will not receive live stock for conveyance on Sunday, Good Friday, Christmas Day, or any proclaimed holiday.

Live stock will be conveyed only from and to such stations as have accommodation for loading and unloading (see following page), and herds and flocks only at convenient times to be previously arranged with the Traffic Manager.

The number of animals must be so limited that the gross weight in any one truck shall not exceed 6 tons.

The Commissioner does not guarantee arrival at any particular time or for any particular market.

All orders for conveyance of live stock per stock or goods trains are to be made to the Traffic Manager on the printed form provided for that purpose. Those sent by telegram, letter, or through a station-master or other railway officer, will be subject to the same conditions as if made on the printed form.

Each order must be accompanied with a deposit of 20s. per truck ordered.

An order once lodged with the Department can only be withdrawn or the number of trucks reduced at any time (not being less than four clear days before the date of conveyance) by forfeiting the deposit of 20s. for each truck so withdrawn.

An order cannot be withdrawn or reduced or altered within four days of the date of conveyance.

All trucks ordered and not used on the date and at the station specified in the order will be charged for as if used.

Trucks must be loaded and ready for despatch at a time fixed by the Traffic Manager, which will be ascertained on application at the Traffic Manager's Office, or the station-master at the loading station, two clear days before the stock is to be loaded. If not loaded by the time specified, the Department reserves the right to remove the waggons, and charge full rates.

Sundays are not included in the number of days to be reckoned.

All live stock must be loaded and unloaded by the senders and consignees respectively, by whom also the truck doors must be secured and opened, fastenings attended to, &c.

All live stock must be unloaded within three hours after arrival, otherwise it will be unloaded by the Commissioner, and a charge made of 2s. per truck.

All live stock must be removed from the railway premises immediately after unloaded; or if left, will remain at the owner's risk and expense, and may be sent to agistment or livery, the cost of which shall be paid by the owner, and such cost must be paid on demand as part of the authorized charges; and such stock, if not removed within seven days, may be sold by auction, by order of the Commissioner, within the railway premises, and the proceeds applied in payment of all expenses incurred, and the balance thereof handed over to the owner on demand.

When a truck is only partly occupied by a consignment, the Commissioner will have the right to fill it up to its full carrying capacity with other stock.

One *bonâ fide* drover will be allowed to accompany each consignment of not less than three full trucks, travelling distances over 60 miles, to give the stock whatever attention may be necessary during transit. He will be furnished with a return free pass, available for three days for distances over 60 and under 200 miles, for four days for distances over 200 and under 350 miles, and for six days for distances over 350 miles, and must ride either in the guard's van or a 2nd class carriage. In cases where the stock is conveyed by more than one train, a pass will be issued for each train. The drover must travel by the same train as the stock, otherwise a pass will not be issued.

The following are the rates at which live stock can be insured:—

NEAT CATTLE (including Bulls.)

1 to 50 miles, 2 per cent. on the declared value above £15.
51 to 100 „ 3 „ „ „
101 to 150 „ 4 „ „ „
151 and upwards, 5

No. 53—*continued.*

Live Stock Rates and Conditions—1st October, 1885—*continued.*

The same percentage charge to be made for Pigs and Sheep (including valuable Rams and Ewes) on the declared value above £2

Under no circumstances will the Commissioner be responsible for loss or injury to live stock, insured or uninsured, occurring during loading or unloading, whether such services be performed by either the servants of the Department or the owner. Nor will he under any circumstances be responsible for loss of or injury to any live stock during transit, arising from fear or restiveness, or through any of the animals being suffocated or trampled upon

Rates for Carriage of Wool—1st February, 1884.

GREAT SOUTHERN RAILWAY.

	To Sydney			To Sydney.
	Per bale not over 4 cwt			Per bale not over 4 cwt
	s d			s. d
From Hay... (South-western Line)	11 0		From Junee	9 0
Carrathool (South-western Line)	11 0		Bethungra	8 9
Darlington (South-western Line)	11 0		Cootamundra	8 6
Hulong (South-western Line)	10 9		Harden	8 3
Narrandera (South-western Line)	10 6		Binalong	8 0
Coolaman (South-western Line)	10 0		Bowning	7 9
Albury	10 6		Yass	7 9
Ettamogah	10 3		Gunning	7 6
Yambla	10 3		Goulburn	7 3
Gerogery	10 0		Marulan	7 0
Culcairn	9 9		Moss Vale	6 0
Yerong Creek	9 6		Mittagong	5 0
Sandy Creek and the Rock	9 3		Picton	4 0
Wagga Wagga	9 0		Menangle	3 0
	To Albury		Campbelltown	2 6
South Wagga	7 0		Upper Tarago	7 6
Sandy Creek	7 0			
Hanging Rock	7 0			
Yerong Creek	6 0			
Culcairn	4 0			
Gerogery	2 6			

GREAT WESTERN RAILWAY.

	To Sydney		To Sydney
	Per bale not over 4 cwt		Per bale not over 4 cwt
	s. d.		s d.
From Nyngan	11 0	From Raglan	7 6
Nevertire	11 0	Brewongle	7 3
Dubbo	10 6	Tarana	7 0
Wellington	10 3	Capertee	7 3
Orange	9 0	Wallerawang	6 6
Blayney	8 6	Bowenfels	6 3
Perth	8 0	Penrith	2 6
Bathurst	7 6	Richmond	2 6

GREAT NORTHERN LINE.

	To Newcastle	To Morpeth.		To Newcastle	To Morpeth
	s d.	s. d.		s d.	s. d.
From Narrabri	10 0	9 6	From Quirindi	7 6	7 0
Boggabri	9 3	8 9	Murrurundi	7 0	6 6
Gunnedah	9 0	8 6	Blandford	6 9	6 3
Breeza	8 6	8 0	Scone	6 3	5 9
Armidale	10 6	10 0	Aberdeen	6 0	5 6
Uralla	10 0	9 6	Musclebrook	5 0	4 6
Walcha Road	9 3	8 9	Ravensworth	4 6	4 0
Moonbi	9 0	8 6	Singleton	4 0	3 6
Tamworth	8 6	8 0	Branxton	3 6	2 6
Werris Creek	8 0	7 6	Maitland	2 6	1 6

The above rates are for bales not over 4 cwt Bales over 4 cwt to be charged 15 per cent on above charges for every cwt. or portion of cwt in excess of 4 cwt Wool in bags and pockets charged actual weight at first class rates Wool in bales, between stations not enumerated above, will be charged actual weight, first class rates

Dumped Wool.

An allowance of 15 per cent will be made on above rates for all wool properly dumped and hooped with iron, and for all bales not exceeding 250lb in weight.

The rates to washing establishments are —For distances not exceeding 15 miles, 10d. per bale; exceeding 15 but not exceeding 22 miles, 1s. 1d. per bale. From washing establishments the rates for similar distances will be 1s. and 1s. 3d. per bale respectively

No. 53—*continued.*

Rates for Carriage of Wool—*continued.*

1st October, 1885.

GREAT SOUTHERN RAILWAY.

	To Sydney. Per bale not over 4 cwt s. d.
From Jerilderie and all Stations and Sidings on the Jerilderie Branch ..	11 6
Hay ..... (South-western Line)	11 0
Carrathool ... (South-western Line)	11 0
Darlington (South-western Line)	11 0
Whitton ... (South-western Line)	10 9
Narrandera. (South-western Line)	10 6
Coolaman (South-western Line)	10 0
Albury	10 6
Ettamogah	10 3
Yambla . .	10 3
Gerogery	10 0
Culcairn . .	9 9
Yerong Creek	9 6
Sandy Creek and the Rock	9 3
Wagga Wagga	9 0
To Albury	
Wagga Wagga	7 0
Sandy Creek	7 0
Hanging Rock . .	7 0
Yerong Creek . .	6 0
Culcairn...	4 0
Gerogery . ..	2 6
Yambla	2 6

	To Sydney. Per bale not over 4 cwt s. d.
From Old Junee	9 2
Junee ...	9 0
Bethungra	8 9
Cootamundra	8 6
Harden	8 3
Young	9 0
Binalong	8 0
Bowning .. .	7 9
Yass	7 9
Gunning	7 6
Bungendore ..	8 0
Tarago	7 6
Goulburn .	7 3
Marulan	7 0
Moss Vale	6 0
Mittagong	5 0
Picton	4 0
Menangle	3 0
Campbelltown	2 6

GREAT WESTERN RAILWAY.

	To Sydney Per bale not over 4 cwt s d
From Bourke	15 0
Byrock	12 6
Girilambone .	11 6
Nyngan	11 0
Nevertire	11 0
Dubbo	10 6
Wellington	10 3
Orange ...	9 0
Blayney ...	8 6
Perth . .	8 0
Bathurst .	7 6
Raglan	7 6

	To Sydney. Per bale not over 4 cwt s. d.
From Brewongle	7 3
Tarana	7 0
Mudgee .	9 0
Rylstone	8 3
Lue .	8 3
Ilford	7 9
Capertee	7 3
Wallerawang . ..	6 6
Bowenfels .	6 3
Penrith	2 6
Richmond	2 6

GREAT NORTHERN AND NORTH-WESTERN RAILWAY.

	To Newcastle Per bale not over 4 cwt s d.	To Morpeth Per bale not over 4 cwt s. d
From Narrabri (N.-western Line.)	10 0	9 6
Boggabri (N.-western Line.)	9 3	8 9
Gunnedah (N.-western Line.)	9 0	8 6
Breeza ... (N.-western Line.)	8 6	8 0
Glen Innes	12 0	11 6
Glencoe	11 9	11 3
Ben Lomond .	11 6	11 0
Guyra	11 0	10 6
Booralong	10 9	10 3
Eversleigh	10 6	10 0
Armidale .	10 6	10 0
Uralla	10 0	9 6
Walcha Road	9 3	8 9

	To Newcastle Per bale not over 4 cwt s. d	To Morpeth. Per bale not over 4 cwt s. d
From Moonbi	9 0	8 6
Tamworth .	8 6	8 0
Werris Creek	8 0	7 6
Quirindi	7 6	7 0
Murrurundi	7 0	6 6
Blandford .. .	6 9	6 3
Scone .. .	6 3	5 9
Aberdeen .	6 - 0	5 6
Musclebrook .	5 0	4 6
Ravensworth ..	4 6	4 0
Singleton	4 0	3 6
Branxton .	3 6	2 6
Maitland ...	2 6	1 6

Single bales over 4 cwt to be charged 15 per cent on above charges for every cwt or portion of cwt in excess of 4 cwt. When wool is consigned in quantities, and the average weight per bale is over 4 cwt, the charge will be for as many bales as there are 4 cwts. or portion of 4 cwts in the total weight Wool in bags and pockets charged actual weight at first-class rates. Wool in bales from places not enumerated to Sydney, Newcastle, or Morpeth, will be charged *pro rata,* 3d. per bale being added for every 10 or portion of 10 miles to the rate from the nearest station shown *on the up side* thus —

TURRAWAN TO NEWCASTLE.

Rate from Boggabri.. .. .	9s 3d. per bale.
„ Turrawan to Boggabri (20 miles)	6d „
Through rate	9s 9d. „

But in no case will the charge be in excess of the rate from the station immediately beyond from which a rate is quoted

Wool in bales, carried to stations other than Newcastle, Morpeth, and Sydney, and places where there are wool-washing establishments, will be charged actual weight at first-class rates.

No. 53—*continued.*

Rates for Carriage of Wool—1st October, 1885—*continued.*

DUMPED WOOL.

An allowance of 15 per cent. will be made on above rates for bales properly dumped and hooped with iron, and for all bales not exceeding 250 lb. in weight.

RATES TO AND FROM WASHING ESTABLISHMENTS.

	To. Per bale. s. d.	From. Per bale s. d.
For distances not exceeding 15 miles	0 10	1 0
" exceeding 15 but not exceeding 22 miles	1 1	1 3
" " 22 " 26 "	1 4	1 6
" " 26 " 30 "	1 6	1 8
" " 30 " 35 "	1 8	1 10
" " 35 " 40 "	1 10	2 0

Rates for Carriage of Coal.

SOUTH AND WEST LINES.

3 February, 1881.

Owners' Trucks.

Under 50 miles, 1d. per ton per mile. Minimum charge, 2/-
Over 50 " ¾d. " " with a terminal charge of 3d. per ton. Minimum charge, 4/3.
Lots under 5 tons to be charged as 5 tons, or First-class rates.

Commissioner's Trucks.

First 50 miles, 1½d. per ton per mile.
50 to 150 " 1d. " "
150 " 250 " ¾d. " "
Over 250 " ½d. " "

4 October, 1882.

No alteration except the following :—

Commissioner's Trucks.

First 15 miles, 1s. 6d. per ton.
15 to 35 " 1¼d. " per mile.
35 " 150 " 1d. " "
150 " 250 " ¾d. " "
Over 250 " ½d. " "

NORTHERN LINE.

3 February, 1881.

Owner's Trucks.

Under 7 miles	-/10
Over 7 to 10 miles	1/-
10 " 15 "	1/3
15 " 25 "	1/10
25 " 35 "	2/4
35 " 50 "	1d. per ton per mile.

For distances of 50 miles, ¾d. per ton per mile, with a terminal charge of 3d. a ton. Minimum charge, 4/3.

After the first three days a charge of 3d. per waggon per day will be made for standing accommodation on the Coal Sidings at Newcastle.

The above rates include the use of cranes and staiths for shipment at Newcastle.

Commissioner's Trucks.

Same as South and West.

4 October, 1882.

No alteration except in Commissioner's Trucks, as on South and West.

10 October, 1885.

No alteration.

25th June, 1883. No alteration.

Hay, Straw, and Chaff per Truck.

4 OCTOBER, 1882—(Unaltered, 1 October, 1885.)

Not exceeding—	Hay. £ s. d.	Straw and Chaff. £ s. d.	Not exceeding—	Hay. £ s. d.	Straw and Chaff. £ s. d.	Not exceeding—	Hay. £ s. d.	Straw and Chaff. £ s. d.
16 miles	0 10 0	0 10 0	215 miles	2 17 2	2 10 7	365 miles	4 1 7	3 12 1
26 "	0 14 0	0 14 0	220 "	2 18 0	2 11 4	370 "	4 2 4	3 12 10
35 "	0 17 0	0 17 0	225 "	2 18 10	2 12 0	375 "	4 3 2	3 13 7
41 "	0 19 6	0 19 6	230 "	2 19 7	2 12 9	380 "	4 4 0	3 14 4
46 "	1 1 6	1 1 6	235 "	3 0 5	2 13 6	385 "	4 4 10	3 15 0
54 "	1 4 0	1 4 0	240 "	3 1 3	2 14 2	390 "	4 5 7	3 15 9
60 "	1 5 6	1 4 6	245 "	3 2 1	2 14 11	395 "	4 6 5	3 16 6
70 "	1 7 0	1 5 6	250 "	3 2 10	2 15 7	400 "	4 7 3	3 17 2
80 "	1 8 6	1 7 0	255 "	3 3 8	2 16 4	405 "	4 8 1	3 17 11
90 "	1 10 0	1 7 6	260 "	3 4 6	2 17 1	410 "	4 8 10	3 18 7
100 "	1 11 9	1 8 1	265 "	3 5 4	2 17 10	415 "	4 9 8	3 19 4
110 "	1 14 2	1 9 0	270 "	3 6 1	2 18 7	420 "	4 10 6	4 0 1
120 "	1 16 7	1 12 5	275 "	3 6 11	2 19 3	425 "	4 11 4	4 0 9
130 "	1 19 0	1 14 6	280 "	3 7 9	2 19 11	430 "	4 12 1	4 1 6
135 "	2 0 1	1 15 7	285 "	3 8 7	3 0 7	435 "	4 12 11	4 2 2
140 "	2 1 6	1 16 8	290 "	3 9 4	3 1 4	440 "	4 13 9	4 2 11
145 "	2 2 7	1 17 9	295 "	3 10 2	3 2 1	445 "	4 14 7	4 3 8
150 "	2 3 11	1 18 10	300 "	3 11 0	3 2 11	450 "	4 15 4	4 4 4
155 "	2 5 0	1 19 11	305 "	3 11 10	3 3 8	455 "	4 16 2	4 5 1
160 "	2 6 1	2 0 9	310 "	3 12 7	3 4 4	460 "	4 17 0	4 5 10
165 "	2 7 2	2 1 9	315 "	3 13 5	3 5 0	465 "	4 17 10	4 6 7
170 "	2 8 3	2 2 8	320 "	3 14 3	3 5 9	470 "	4 18 7	4 7 3
175 "	2 9 4	2 3 8	325 "	3 15 1	3 6 6	475 "	4 19 5	4 8 0
180 "	2 10 5	2 4 7	330 "	3 15 10	3 7 3	480 "	5 0 3	4 8 8
185 "	2 11 6	2 5 7	335 "	3 16 8	3 7 11	485 "	5 1 1	4 9 4
190 "	2 12 7	2 6 6	340 "	3 17 6	3 8 7	490 "	5 1 10	4 10 1
195 "	2 13 8	2 7 6	345 "	3 18 4	3 9 4	495 "	5 2 8	4 10 10
200 "	2 14 9	2 8 5	350 "	3 19 1	3 10 5	500 "	5 3 6	4 11 7
205 "	2 15 7	2 9 2	355 "	3 19 11	3 10 9	505 "	5 4 4	*4 12 3
210 "	2 16 4	2 9 10	360 "	4 0 9	3 11 0			

* 1 October, 1885.

Smaller quantities charged actual weight at First-class rates.

The charge per truck for distances not shown in this table will be one-fifth of the difference in rate between every 5 miles.

No. 53—*continued.*

Special Class A Traffic.

In Truck Loads (not exceeding 6 Tons).
4 October, 1882—(Unaltered, 1 October, 1885.)

	Rate per Truck. £ s. d.		Rate per Truck. £ s. d.		Rate per Truck. £ s. d.		Rate per Truck. £ s. d.
100 miles	2 18 6	205 miles	4 8 10	310 miles	5 15 0	415 miles	6 17 0
105 „	2 0 0	210 „	4 10 3	315 „	5 16 2	420 „	6 18 0
110 „	3 1 5	215 „	4 11 8	320 „	5 17 3	425 „	6 19 0
115 „	3 2 10	220 „	4 13 1	325 „	5 18 5	430 „	7 0 0
120 „	3 4 3	225 „	4 14 5	330 „	5 19 6	435 „	7 1 0
125 „	3 5 8	230 „	4 15 11	335 „	6 0 8	440 „	7 2 0
130 „	3 7 2	235 „	4 17 4	340 „	6 1 9	445 „	7 3 0
135 „	3 8 7	240 „	4 18 9	345 „	6 2 11	450 „	7 4 0
140 „	3 10 0	245 „	5 0 2	350 „	6 4 0	455 „	7 5 0
145 „	3 11 5	250 „	5 1 6	355 „	6 5 0	460 „	7 6 0
150 „	3 13 0	255 „	5 2 8	360 „	6 6 0	465 „	7 7 0
155 „	3 14 6	260 „	5 3 9	365 „	6 7 0	470 „	7 8 0
160 „	3 15 11	265 „	5 4 11	370 „	6 8 0	475 „	7 9 0
165 „	3 17 4	270 „	5 6 0	375 „	6 9 0	480 „	7 10 0
170 „	3 18 9	275 „	5 7 2	380 „	6 10 0	485 „	7 11 0
175 „	4 0 2	280 „	5 8 3	385 „	6 11 0	490 „	7 12 0
180 „	4 1 8	285 „	5 9 5	390 „	6 12 0	495 „	7 13 0
185 „	4 3 1	290 „	5 10 6	395 „	6 13 0	500 „	7 14 0
190 „	4 4 6	295 „	5 11 8	400 „	6 14 0	505 „	*7 15 0
195 „	4 5 11	300 „	5 12 9	405 „	6 15 0		
200 „	4 7 4	305 „	5 13 11	410 „	6 16 0		

* 1 October, 1885.

Any quantity over 6 tons in one truck will be charged *pro rata.*

The charge per truck for distances not shown in this table will be one-fifth of the distance in rate between every 5 miles.

25 per cent. will be added to above rates for sawn timber (including battens) and 50 per cent. for boards not exceeding 2 inches in thickness, *and not exceeding* 14 feet in length and two thirds, when over that length (added 1 October, 1885.)

Miscellaneous in Truck Loads.

(Not exceeding 6 Tons.)
4 October, 1882—(Unaltered, 1 October, 1885.)

	Rate per Truck. £ s. d.		Rate per Truck. £ s. d.		Rate per Truck. £ s. d.		Rate per Truck. £ s. d.
120 miles	2 17 10	220 miles	4 3 10	320 miles	5 5 7	420 miles	6 4 3
125 „	2 19 2	225 „	4 5 0	325 „	5 6 7	425 „	6 5 2
130 „	3 0 6	230 „	4 6 4	330 „	5 7 7	430 „	6 6 0
135 „	3 1 9	235 „	4 7 8	335 „	5 8 7	435 „	6 6 11
140 „	3 3 0	240 „	4 8 11	340 „	5 9 7	440 „	6 7 10
145 „	3 4 4	245 „	4 10 2	345 „	5 10 8	445 „	6 8 9
150 „	3 5 9	250 „	4 11 5	350 „	5 11 8	450 „	6 9 8
155 „	3 7 1	255 „	4 12 5	355 „	5 12 7	455 „	6 10 7
160 „	3 8 4	260 „	4 13 5	360 „	5 13 5	460 „	6 11 5
165 „	3 9 8	265 „	4 14 5	365 „	5 14 4	465 „	6 12 4
170 „	3 10 11	270 „	4 15 5	370 „	5 15 3	470 „	6 13 3
175 „	3 12 2	275 „	4 16 6	375 „	5 16 2	475 „	6 14 2
180 „	3 13 6	280 „	4 17 6	380 „	5 17 0	480 „	6 15 0
185 „	3 14 10	285 „	4 18 6	385 „	5 17 11	485 „	6 15 11
190 „	3 16 1	290 „	4 19 6	390 „	5 18 10	490 „	6 16 10
195 „	3 17 4	295 „	5 0 6	395 „	5 19 9	495 „	6 17 9
200 „	3 18 8	300 „	5 1 6	400 „	6 0 8	500 „	6 18 8
205 „	4 0 0	305 „	5 2 6	405 „	6 1 7	505 „	*6 19 8
210 „	4 1 3	310 „	5 3 6	410 „	6 2 5		
215 „	4 2 6	315 „	5 4 6	415 „	6 3 4		

* Added 1 October, 1885.

Any quantity over 6 tons in one truck will be charged *pro rata.*

The charge per truck for distances not shown in this table will be one-fifth of the difference in rate between every 5 miles.

Parcels Rates.

Miles.	3 lb. and under.	Over 3 lb. to 7 lb.	Over 7 lb. to 14 lb.	Over 14 lb. to 28 lb.	Over 28 lb. to 56 lb.	Over 56 lb. to 84 lb.	Over 84 lb. to 112 lb.	Every 28 lb. or part thereof.
Distances not over—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
15	0 3	0 4	0 6	0 8	0 10	1 0	1 2	0 3
30	0 3	0 5	0 7	0 9	0 11	1 2	1 4	0 3
45	0 3	0 6	0 9	1 0	1 3	1 6	1 9	0 4
60	0 4	0 8	0 11	1 3	1 7	1 11	2 2	0 6
75	0 5	0 9	1 2	1 6	1 11	2 3	2 8	0 7
90	0 6	0 11	1 4	1 9	2 2	2 8	3 5	0 8
105	0 6	1 0	1 6	2 0	2 6	3 0	4 0	0 10
120	0 7	1 2	1 8	2 3	2 10	3 5	4 6	1 0
135	0 8	1 3	1 11	2 6	3 2	3 9	5 0	1 3
150	0 9	1 5	2 1	2 9	3 5	4 2	5 6	1 5
165	0 9	1 6	2 3	3 0	3 9	4 6	6 0	1 6
180	0 10	1 8	2 5	3 3	4 1	4 11	6 5	1 7
195	0 11	1 9	2 8	3 6	4 5	5 3	6 10	1 8
210	1 0	1 11	2 10	3 9	4 8	5 8	7 3	1 9
225	1 0	2 0	3 0	4 0	5 0	6 0	7 6	1 10
240	1 1	2 2	3 2	4 3	5 4	6 5	8 0	2 0
255	1 2	2 4	3 4	4 6	5 8	6 10	8 5	2 1
270	1 3	2 6	3 6	4 9	6 0	7 3	8 10	2 2
285	1 4	2 8	3 8	5 0	6 4	7 8	9 3	2 3
300	1 5	2 10	3 10	5 3	6 8	8 1	9 8	2 4
315	1 6	3 0	4 0	5 6	7 0	8 6	10 1	2 5
And respectively for every additional, or part of additional, 50 miles	0 1	0 2	0 2	0 3	0 4	0 5	0 5	0 1

No. 53—*continued.*

Parcels Rates—*continued.*

See General Regulations relating to insured parcels.

Fresh meat, fish, poultry (dead), dairy produce, eggs, fruit, vegetables, and game, under 1 cwt., 25 per cent. reduction on parcel rates; minimum charge, 3d.

Bread, half parcels rates.

Musical instruments, packed in cases, 25 per cent. added to above rates.

Pictures in frames, packed or unpacked, double rates. Mirrors, double rates.

Furniture and sewing-machines, packed in cases, ordinary rates, but when unpacked double rates will be charged.

Bath chairs, perambulators, velocipedes, and bicyles, requiring a carriage truck for their conveyance, will be charged as for a two-wheeled carriage (see page). Bath chairs and perambulators (adults) carried in Break Vans will be charged double the rate for children's perambulators.

Corpses, 1s. per mile; minimum charge, 5s.

Newspaper parcels, one-quarter parcels rates; minimum charge, 3d.

Passengers' excess luggage, parcels rates.

Commercial travellers' excess luggage, parcels rates on down journey and free on up journey, on production of Railway receipts certifying that full trainage has been paid on down journey.

Gunpowder and other explosives will not be conveyed by Passenger Trains.

The maximum rates for the conveyance of parcels between Sydney and any Station on the Southern and South-western Lines are as follows:—

3 lb. and under.	Over 3 lb. to 7lb.	Over 7lb. to 14 lb.	Over 14 lb. to 28 lb.	Over 28 lb. to 56 lb.	Over 56 lb. to 84 lb.	Over 84 lb. to 112 lb.	Every additional 28lb. or part thereof.
s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1 6	3 0	4 0	5 6	7 0	8 6	10 1	2 5

Perambulators (children's) and velocipedes will be conveyed in Guard's Vans, at the following rates:—

When conveyed as passengers' luggage—

	s. d.		s. d.
Not exceeding 15 miles	0 9	Not exceeding 125 miles	3 0
30 „	1 0	150 „	3 6
50 „	1 6	200 „	4 0
75 „	2 0	250 „	4 6
100 „	2 6	300 „	5 0

When conveyed as parcels 50 per cent. additional will be charged.

Ice will be conveyed by Passenger Trains as under:—

Miles.	10 lb. and under.	For each additional 10 lb.	Miles.	10 lb. and under.	For each additional 10 lb.
Distance not over—	s. d.	s. d.	Distance not over—	s. d.	s. d.
100	0 2	0 1	300	0 6	0 3
150	0 3	0 1½	350	0 7	0 3½
200	0 4	0 2	400	0 8	0 4
250	0 5	0 2½			

Exchange of Parcels, &c., Traffic between New South Wales and Victorian Lines.

Parcels, excess luggage, and commercial travellers' samples are booked through between New South Wales and Victorian Stations at the undermentioned rates:—

For those parcels booked through between Sydney and Melbourne the rates are—

		s. d.
Not exceeding	3 lb	2 0
Over 3 but „ „	7 „	3 0
„ 7 „ „ „	14 „	4 6
„ 14 „ „ „	28 „	6 0
„ 28 „ „ „	56 „	10 0
„ 56 „ „ „	84 „	12 0
„ 84 „ „ „	112 „	14 6

and 2s. 6d. for every additional 28 lbs. or part thereof.

All other parcels, &c., from New South Wales Stations to Victorian Stations are booked to Wodonga, and those from Victorian to New South Wales Stations are booked to Albury at the rates named below.

Between Albury and Victorian Stations the ordinary Victorian rates are charged (189 miles from Melbourne), and, in addition, the following charges for the New South Wales Department are added:—

		s. d.
Not exceeding	3 lb	0 3
Over 3 „ „ „	7 „	0 4
„ 7 „ „ „	14 „	0 6
„ 14 „ „ „	28 „	0 8
„ 28 „ „ „	56 „	0 10
„ 56 „ „ „	84 „	1 0
„ 84 „ „ „	112 „	1 2

and 3d. for every additional 28lb. or part thereof, and for the purposes of charging parcels, &c., from New South Wales Stations to Wodonga, the latter station is regarded as 388 miles from Sydney, and the charges calculated accordingly, *plus the rates named above.*

Parcels between Albury and Wodonga are charged double the above rates.

Press parcels are charged one-fourth the above rates—minimum, New South Wales Line, 3d.

Packed parcels in hampers, crates, bags, cases, or other packages are charged quadruple the above rates, and the onus of proving that parcels are not packed rests with the consignors or consignees.

When two or more parcels are consigned to one person the above rates are charged on each parcel separately.

Bicycles, feathers, furniture, glass, hats, bonnet or hat boxes, cases of millinery, straw bonnets, mirrors (loose), musical instruments, perambulators, sulkies in pieces, pictures, sewing-machines, wicker-work, wire cages (loose), or other articles light or fragile, are considered admeasurement goods, and are charged 50 per cent. additional on the above rates. Parcels containing articles and property of a description not mentioned or specified in the following clause, such articles and property being over £10 in value, are, in addition to the amount chargeable by the foregoing scale of rates, charged a further sum equal to 1 per centum upon the declared value thereof.

Parcels

No. 53—*continued.*

Parcels Rates.—*continued.*

Parcels containing any of the following articles are charged the following increased rates, viz. :—Over £10 and under £50 in value, double, and over £50 in value, quadruple, parcel rates, viz. :—Gold or silver coin of this realm, or of any part of Her Majesty's dominions, or of any foreign state, or any gold or silver in a manufactured or unmanufactured state, or any precious stones, jewellery, watches, clocks, or time-pieces of any description, trinkets, bills, notes of any banks in Her Majesty's dominions, or of any foreign bank, order, notes, or securities for payment of money, whether foreign or otherwise, stamps, maps, writings, title-deeds, paintings, engravings, pictures, gold or silver plate, or plated articles, glass, China, silk in a manufactured or unmanufactured state, and whether wrought up or not wrought up with other materials, furs or lace or any of them contained in any parcel or package.

The trainage on all parcels conveyed under bond must be prepaid.

Horses, carriages, and dogs from New South Wales to Victorian stations are booked to Wodonga at Albury rates, and from Victorian Stations to Albury at Wodonga rates, plus the following charges :—

	s.	d.
One horse	2	0
Two horses	3	0
Three horses belonging to same owner	4	0
Carriages, gigs, dog-carts, and vehicles of a similar description	4	0
Dogs	0	6

Corpses are booked in a similar manner, with 4s. added for conveyance between Albury and Wodonga.

Rates for conveyance of Library Exchanges.

Books forwarded for exchange to and from subscribers to recognized Circulating Libraries only will be carried at one-fourth parcels rates, under the following conditions, viz. :—

1. The sender's name must be legibly inscribed on each parcel.
2. Each parcel must be open at both ends.
3. Each parcel must be declared on the consignment-note to contain books only.

Gold Dust and Bullion, and Gold and Silver Coin.

The Commissioner for Railways will not be responsible for the safe conveyance of Gold Dust and Bullion, Bank-notes and Bills, Orders, Notes, and Securities for the payment of Money, and Gold and Silver Coin, or any of the other articles mentioned above, as the following charges are made, and the Gold Dust and Bullion and Coin carried, on condition of its being in charge of owners and at their risk.

	Distance not over 55 miles.	Distance not over 100 miles.	Distance not over 150 miles.	Distance not over 200 miles.	Distance not over 250 miles.	Distance not over 350 miles.	Distance over 350 miles.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Gold Dust and Bullion, per 100 ozs	2 0	3 6	4 3	5 0	5 6	6 0	6 6
Gold Coin, per £100	0 6	0 10	1 3	1 8	2 0	2 3	2 6
Silver Coin, per £100	1 0	1 9	2 6	3 3	3 6	3 9	4 0

Fractions over 100 and under 50 will not be charged, but fractions of 50 and over will be charged as 100.

If conveyed at Commissioner's risk the following Insurance Rates will be charged in addition :—

1 to 100 miles	1s. 6d. per cent. on declared value.	
101 to 200 do.	1s. 9d.	do.
201 to 300 do.	2s. 0d.	do.
301 to 400 do.	2s. 3d.	do.
401 to 500 do.	2s. 6d.	do.

Rates for Milk.

In quantities of not less than 300 gallons.

15 miles and under	½d.	per gallon.
40 „ „	½d.	„
90 „ „	¾d.	„
Beyond 90 miles	1d.	„

Minimum charge, 3d.

Less than 300 gallons, double rates.

Returned Empties.

Returned empty milk cans will be conveyed free; all other returned empties double goods rates, except otherwise arranged. Only small empties will be accepted for conveyance by Passenger Train.

No. 54.

Comparative Statement of the Rates charged for Goods in New South Wales, Victoria, Queensland, and South Australia, 31st December, 1885.

Articles of Traffic.	New South Wales.			Victoria.			Queensland.			South Australia.		
	Class.	50 miles.	150 miles.	Class.	50 miles.	150 miles.	Class.	50 miles.	150 miles.	Class.	50 miles.	150 miles.
		s. d.	s. d.		s. d.	s. d.		s. d.	s. d.		s. d.	s. d.
Acids (in cases and carboys)	4	38 3	109 6	Double rate 4	58 0	175 0	Gunpowder rate Cases Carboys dbl. rate	45 10 91 8	125 0 250 0	4	39 6	112 8
Aerated Waters	2	21 7	61 2	Miscellaneous	13 6	38 6	1	29 2	75 0	Special	10 5	30 9
Agricultural Machines	3	29 5	84 10	2 3	21 0 25 0	62 6 75 0	1	29 2	75 0	½d. to 1s. 4d. per mile according to kind of machine.		
Ale and Porter (in bulk)	2	21 7	61 2	Miscellaneous In cases 3	13 6 25 0	38 6 75 0	1	29 2	75 0	1	14 6	38 11
Ammunition	4	38 3	109 6	4	29 0	87 6	Gunpowder Rate	45 10	125 0	Double 3	54 0	151 6
Bags (new, empty)	B	8 10	24 8	1	16 6	50 0	1	29 2	75 0	Bales A Bundles 1	14 6	38 11
Bark (in sheets, bundles, or bags)	A	5 4	13 6	in truck loads, A in less than truckloads, Miscellaneous.	7 6 13 6	17 8 38 6	Agricultural 1	10 10	27 6	Bales A Loose 2	8 4 20 9	17 9 57 4
Battens (not exceeding 14 feet in length)	A plus 25 %	6 8	16 11	Soft wood 1	16 6	50 0 60 c. ft. to ton.	Timber Rates	8 4	25 0	1	14 6	38 11
Do. do. do.	A „ 33⅓%	7 2	18 0									
Beet-root	A	5 4	13 6	Agricultural	5 6	15 0	Agricultural 2	10 10	27 6	2	20 9	57 4
Bicycles	4	38 3	109 6	Cases double rate Packed 4	58 0 29 0	175 0 87 6	2	41 8	112 6	4	39 6	112 8
Boards (not exceeding 14 feet in length)	A plus 50 %	8 0	20 3	1	16 6	50 0	Timber rates	8 4	25 0	1	14 6	38 11
Do. do. do.	A „ 66⅔%	8 11	22 6									
Boats (by measurement, 80 cubic feet to ton)	2	21 7	61 2	6d. per truck	per mile,	minimum 20s.	2	41 8	112 6	1 60 cub. ft.	14 6	38 11
Boilers	2	21 7	61 2	4	29 0	87 6		29 2	75 0	not ex. 2 tons 1 ex. 2 tons 2	14 6 20 9	38 11 57 4
Bones (in bags or loose, not less than 4 tons)	A	5 4	13 6	Agricultural	5 6	15 0	Excep.	8 4	23 4	In bags A Loose 1	8 4 14 6	17 9 38 11
Do (loose, not less than 4 tons)	B	8 10	24 8									
Bottles (empty, in cases and crates)	B	8 10	24 8	Miscellaneous	13 6	38 6	1	29 2	75 0	Special	10 5	30 9
Bran	A	5 4	13 6	Agricultural	5 6	15 0	Agricultural 2	10 10	27 6	A	8 4	17 9
Bricks	M	4 10	12 6	Excep.	3 11	5 5	Excep.	8 4	23 4	1s. 2d. per ton per mile, special	10 5	30 9
Cabbages	A	5 4	13 6	A	7 6	13 8	Agricultural 2	10 10	27 6	A	8 4	17 9
Candied Fruits	(To Sydney and Newcastle) B	8 10	24 8	3	25 0	75 0	2	41 8	112 6	2	20 9	57 4
Carpentry	3	29 5	84 10	4	29 0	87 6	2	41 8	112 6	2	20 9	57 4
Carrots	A	5 4	13 6	Agricultural	5 6	15 0	Agricultural 2	10 10	27 6	A	8 4	17 9
Cases (new, empty)	B	8 10	24 8	2	21 0	62 6	2	41 8	112 6	3	27 0	75 9
Casks do.	B	8 10	24 8	2	21 0	62 6	2	41 8	112 6	3	27 0	75 9
Cement	B	8 10	24 8	B	9 6	23 9	Special	20 10	50 0	1	14 6	38 11
Chaff (pressed)	See page	.....	.....	Special a	7 6	17 8	Agricultural 2	10 10	27 6	Special (4-ton lots)	10 5	30 9

Charcoal (in bags)	B	8 10	24 8	A	7 6	17 8		1	29 2	75 0	2	20 9	57	
Chicory Root	A	5 4	13 6	Agricultural	5 6	15 0		Agricultural 2	10 10	27 6	A	8 4	17 9	
Clay	Miscellaneous	4 10	12 6	Firewood	4 2	11 3		Excep.	8 4	23 4	Excep. (5-ton lots)	6 3	18 9	
Coal	Commisnr's Trucks Owner's Trucks	4 10 4 2	12 6 9 8	Excep.	4 2	12 6		Government Trucks Owner's Trucks	4 2 3 2	10 5 7 4	Special	10 5	30 9	
Coke	B	8 10	24 8	Misc. in bags	13 6	38 6		1	29 2	75 0	2	20 9	57 4	
Do. (in owner's trucks)	A	5 4	13 6	Quantities not less than 5 tons A	7 6	17 8		Excep.	8 4	23 4	Not mentioned			
Colonial Wine	B	8 10	24 8	Bulk A Cases up 2	7 6 21 0	17 8 62 6		2	41 8	112 6	Special	10 5	30 9	
Copper ore	Miscellaneous	4 10	12 6	A	7 6	17 8		Excep.	8 4	23 4	Excep.	9 0	18 4	
Do. (Smelted)	B	8 10	24 8	Upjourney misc. 2	13 6 21 0	38 6 62 6		.....	.....	.....	1	14 6	38 11	
Drain Pipes	A	5 4	13 6	A	7 6	17 8		Excep.	8 4	23 4	Special	10 5	30 9	
Dairy produce	1	17 8	49 4	Cheese in cases 1 Butter, &c. 2 ...	16 6 21 0	50 0 62 6		Agricultural 1	10 10	27 6	1	14 6	38 11	
Dynamite	Excep.	50 0	150 0	4	29 0	87 6		Gunpowder rate	45 10	125 0	Double 3	54 0	151 6	
Feathers	3	29 5	84 10	4	29 0	87 6		2	41 8	112 6	Double rate 4	79 0	225 4	
Felloes—undressed	A	5 4	13 6	Firewood	4 2	11 3		Timber rates	8 4	25 0	1	14 6	38 11	
Fireclay Blocks	A	5 4	13 6	1	16 6	50 0		Excep.	8 4	23 4	Special	10 5	30 9	
Firewood	Miscellaneous	4 10	12 6	Firewood	4 2	11 3		Timber rates	8 4	25 0	Special (Between 1 April and 31 Oct, per truck)	10 5 29 8	30 9 88 0	
Fireworks	4	38 3	109 6	4	29 0	87 6		Gunpowder dbl. rate	91 8	250 0				
Fish—fresh or shell	Excep.	12 6	37 6	Excep. 3 2	16 8 25 0 21 0	45 10 Fresh 75 0 Dried 62 6 In brine		Excep. 1 2	8 4 29 2 41 8	23 4 75 0 112 6	2 Preserved 1 Dried 2	20 9 14 6 20 9	57 4 38 11 57 4	
Flour	A	5 4	13 6	Agricultural	5 6	15 0		From Col. wheat. Agric. From Imported Special.	10 10 20 10	27 6 50 0	A	8 4	17 9	
Flower-pots	B	8 10	24 8	3	25 0	75 0		2	41 8	112 6	3	27 0	75 9	
Fruit	A	5 4	13 6	A	7 6	17 8		Agricultural 1	10 10	27 6	A	8 4	17 9	
Furniture (loose)	4	38 3	109 6	4	29 0	87 6		2	41 8	112 6	4	39 6	112 8	
Do. (in cases)	3	29 5	84 10	3	25 0	75 0		2	41 8	112 6	3	27 0	75 9	
Garden Produce	A	5 4	13 6	Agricultural	5 6	15 0		Agricultural 2	10 10	27 6	A	8 4	17 9	
Glue-pieces	B	8 10	24 8	2	21 0	62 6		2	41 8	112 6	3	27 0	75 9	
Do. (wet)	A	5 4	13 6	2	21 0	62 6					Not mentioned			
Grain	A	5 4	13 6	Agricultural	5 6	15 0		Agricultural 2	10 10	27 6	A	8 4	17 9	
Green Fodder	A	5 4	13 6	Not mentioned	.....	.....		Agricultural 2	10 10	27 6	Not mentioned			
Guano and Artificial Manures	A	5 4	13 6	Artificial Manures (Col.) Agricultural.	5 6	15 0		Excep.	8 4	23 4	Excep.	6 3	18 9	
Gunpowder (in casks)	Excep.	50 0	150 0	4	29 0	87 6		Gunpowder rate	45 10	125 0	Double 3	54 0	151 6	
Hardware	3	29 5	84 10	3	25 0	75 0		2	41 8	112 6	3	27 0	75 9	
Hats	4	38 3	109 6	4	29 0	87 6		2	41 8	112 6	Double rate 4	79 0	225 4	

No. 54—*continued.*

Articles of Traffic.	New South Wales.			Victoria.			Queensland.			South Australia.		
	Class.	50 miles.	150 miles.	Class.	50 miles.	150 miles.	Class.	50 miles.	150 miles.	Class.	50 miles.	150 miles.
		s. d.	s. d.		s. d.	s. d.		s. d.	s. d.		s. d.	s. d.
Hay	See page .			See page .			Agricultural 2	10 10	27 6	Special	10 5	30 9
Hides—(Green and Wet Salted)	A	5 4	13 6	B	9 6	23 9	Loose 1	29 2	75 0	Bales A	8 4	17 9
Do. Dry	B	8 10	24 8				Tied Special	20 10	50 0	Loose 1	14 6	38 11
Hoofs (in bags, or loose, not less than 4 tons)	A	5 4	13 6	Miscellaneous	13 6	38 6	Excep.	8 4	23 4	in bags A	8 4	17 9
Do. (loose, in quantities under 4 tons)	B	8 10	24 8							Loose 1	14 6	38 11
Horns (in bags, or loose, not less than 4 tons)	A	5 4	13 6	Miscellaneous	13 6	38 6	Excep.	8 4	23 4	in bags A	8 4	17 9
Do. (loose, in quantities under 4 tons)	B	8 10	24 8							Loose 1	14 6	38 11
Iron—Bar, Rod, Angle, and T	2			Miscellaneous	13 6	38 6	1	29 2	75 0	1	14 6	38 11
Do. Boiler-plate or Sheet		21 7	61 2	Sheet 2	21 0	62 6	1	29 2	75 0	1	14 6	38 11
Do. Castings (if over 3 tons, owner's risk only)	2			Plate Miscell.	13 6	38 6	Heavy, 3 cwt. & over			Polished and turned 2		
				3	16 6	50 0	1	43 9	112 6	in cases 1	14 6	38 11
Do. Corrugated (in cases)	1	17 8	49 4	2	21 0	62 6	Over 12 feet, rate and half.			Loose 2	20 9	57 4
							1	29 2	75 0	Loose 3	27 0	75 9
Do. Girders	2	21 7	61 2	3	25 0	75 0				in cases 1	14 6	38 11
Do. Tanks—Galvanized (160 feet to ton)				4	29 0	87 6	1	29 2	75 0	1	14 6	38 11
							2	41 8	112 6	1	14 6	38 11
Do. Tanks (Malt, Square, and Empty)	3	29 5	84 10	4	29 0	87 6	Galv. iron, double rate.			120 ft. to ton.		
							2	41 8	112 6	3	27 0	75 9
Do. Wire (in bundles)	1	17 8	49 4	1	16 6	50 0	Special	20 10	50 0	Special	10 5	30 9
Do. Wheels and Axles (Railway or Tramway)	2	21 7	61 2	Wheels 1	16 6	50 0	2	41 8	112 6	Wheels 2	20 9	57 4
Do. Nails				Axles 2	21 0	62 6	1	29 2	175 0	Axles 1	14 6	38 11
					16 6	50 0				1	14 6	38 11
Do. Pig and Scrap	M	4 10	12 6	A	7 6	17 8	Excep.	8 4	23 4	Pig 3 Special	10 5	30 9
Ironmongery	3	29 5	84 10	3	25 0	75 0	2	41 8	112 6	Scrap Excep.	6 3	18 9
										Cases 1	14 6	38 11
Ironstone	Miscellaneous	4 10	12 6	A	7 6	17 8	Excep.	8 4	23 4	Loose 3	27 0	75 9
										Excep. 5-ton lots	9 0	18 4
Jams	(To Sydney and Newcastle) B	8 10	24 8	B	9 6	23 9	2	41 8	112 6	Special	10 5	30 9
Joinery	3	29 5	84 10	3	25 0	75 0	2	41 8	112 6	2	20 9	57 4
Kerosene Oil	(To Sydney and Newcastle) 1	17 8	49 4	3	25 0	75 0	2	41 8	112 6	2	20 9	57 4
Lamps—(Street, Door, or Hall)	3	29 5	84 10	Loose dble. rate	58 0	175 0	2	41 8	112 6	4	39 6	112 8
				in cases 4	29 0	87 6						
Laths	A	5 4	13 6	2	21 0	62 6	Timber	8 4	25 0	1	14 6	38 11
Lead (Pig)	2	21 7	61 2	M	13 6	38 6	Special	20 10	50 0	Pig or sheet 1	14 6	38 11
Do. (Sheet)				3	25 0	75 0	1	29 2	75 0	Piping 3	27 0	75 9
Leather (in bales or secured bundles)	(To Sydney and Newcastle) 1	17 8	49 4	Fancy 4	29 0	87 6	2	41 8	112 6	In bales 1	14 6	38 11
				Miscellaneous	13 6	38 6						
Do. (except patent and morocco)	2	21 7	61 2	.....	.....	.....	2	41 8	112 6	Not mentioned.		

Lime (4 tons and over)	A	5 4	13 6	A For manure, ag.	7 6 5 6	17 8 15 0	Excep.	8 4	23 4	A	8 4	17 9
Limestone	Mis.	4 10	12 6	Not	named.		Excep.	8 4	23 4	Special	10 5	30 9
Lithofracteur	Except	50 0	150 0	4	29 0	87 6	Gunpowder	45 10	125 0	Double 3	54 0	151 6
Lucerne Seeds	1	17 8	49 4	2	21 0	62 6	Agric. 1	10 10	27 6	Not mentioned	14 6	38 11
Machinery (of all kinds)	3	29 5	84 10	heavy 2	21 0	62 6	3 cwt. and over 1	29 2	75 0	1 notagricultural 3 light or fragile	27 0	75 9
Malt (in bags and tanks)	1	17 8	49 4	B	9 6	22 9	1	29 2	75 0	Special	10 5	30 9
Mangold Wurzel	A	5 4	13 6	Agric.	5 6	15 0	Agric. 2	10 10	27 6	A	8 4	17 9
Manure (loose)	Mis.	4 10	12 6	Agric.	5 6	15 0	Excep.	8 4	23 4	Excep.	6 3	18 9
Do. (artificial)	A	5 4	13 6	Agric.	5 6	15 0	Excep.	8 4	23 4	Excep.	6 3	18 9
Marble (undressed)	Mis.	4 10	12 6	A	7 6	17 8	Special	20 10	50 0	Cases 2	20 9	57 4
Meal	A	5 4	13 6	Oat, A	7 6	17 8	Agric. 2	10 10	27 6	A	8 4	17 9
Measurement Goods, except otherwise mentioned, 140 cub. feet to ton	3	29 5	84 10	Not	named.		Not	named.		Not	named.	
Millinery	4	38 3	109 6	4	29 0	87 6	2	41 8	112 6	4	39 6	112 8
Muriate of Lime	1	17 8	49 4	Not	named.		2	41 8	112 6	1	14 6	38 11
Musical Instruments	4	38 3	109 6	4	29 0	87 6	2	41 8	112 6	4	39 6	112 8
Naphtha	4	38 3	109 6	4	29 0	87 6	Gunpowder dbl. rate	91 8	250 0	Not	named.	
Offal	Mis.	4 10	12 6	Not	named.		Excep.	8 4	23 4	Excep.	6 3	18 9
Oil-cake	B	8 10	24 8	M	13 6	38 6	2	41 8	112 6	1	14 6	38 11
Opium	4	38 3	109 6	Double rate 4	58 0	175 0	2	41 8	112 6	4	39 6	112 8
Ores (crude)	Mis.	4 10	12 6	A	7 6	17 8	Excep.	8 4	23 4	Excep.	9 0	18 4
Paintings and Engravings	4	38 3	109 6	loose Double rate in cases 4	58 0 29 0	175 0 87 6	2	41 8	112 6	4	39 6	112 8
Palings (undressed)	A	5 4	13 6	Firewood	4 2	11 3	Timber	8 4	25 0	1	14 6	38 11
Paper and paper bags (in large quantities) Do. (under 1 ton)	B	8 10	24 8	2	21 0	62 6	2	41 8	112 6	Bales 2 Bags 3	20 9 27 0	57 4 75 9
Papier Mâché Goods	3	29 5	84 10	4	29 0	87 6	2	41 8	112 6	4	39 6	112 8
Perambulators	4	38 3	109 6	4 double rate	29 0 58 0	87 6 bundles 175 0 loose	2	41 8	112 6	4	39 6	112 8
Perfumery	3	29 5	84 10	4	29 0	87 6	2	41 8	112 6	4	39 6	112 8
Picture-frames	4	38 3	109 6	double rate 4	58 0	175 0	2	41 8	112 6	Double rate 4	79 0	225 4
Pier Glasses and Mirrors	4	38 3	109 6	3 double rate 4	25 0 38 0	75 0 cases 75 0 loose	2	41 8	112 6	4	39 6	112 8
Pipes (Iron)	2	21 7	61 2	1	16 6	50 0	2	41 8	112 6	1	14 6	38 11
Pitch	1	17 8	49 4	1	16 6	50 0	2	41 8	112 6	1	14 6	38 11
Plants (in pots and cases)	3	29 5	84 10	3	25 0	75 0	1	29 2	75 0	4	39 6	112 8
Plate-glass (in cases)	4	38 3	109 6	4	29 0	87 6	2	41 8	112 6	Window 3 Plate 4	27 0 39 6	75 9 112 8
Plated Goods	3	29 5	84 10	4	29 0	87 6	2	41 8	112 6	4	39 6	112 8
Pollard	A	5 4	13 6	Agric.	5 6	15 0	Agric. 2	10 10	27 6	A	8 4	17 9
Portable Engines	3	29 5	84 10	Mis.	13 6	38 6	1	29 2	75 0	2	20 9	57 4
Posts and Rails (undressed)	A	5 4	13 6	Firewood	4 2	11 3	Timber	8 4	25 0	Special	10 5	30 9
Potatoes	A	5 4	13 6	Agric.	5 6	15 0	Agric. 2	10 10	27 6	A	8 4	17 9

No. 54—*continued.*

Articles of Traffic.	New South Wales.			Victoria.			Queensland.			South Australia.		
	Class.	50 miles.	150 miles.	Class.	50 miles.	150 miles.	Class.	50 miles.	150 miles.	Class.	50 miles.	150 miles.
		s. d.	s. d.		s. d.	s. d.		s. d.	s. d.		s. d.	s. d.
Poultry (living) in crates	1	17 8	49 4	4	29 0	87 6	1	29 2	75 0	4	39 6	112 8
Do (in flocks) per truck	Excep.	25 0	66 8					Not named.				
Preserved Meat	(To Sydney and Newcastle) A	5 4	13 6	Miscellaneous	13 6	38 6	2	41 8	112 6	1	14 6	38 11
Quicksilver	1	17 8	49 4	3	25 0	75 0	2	41 8	112 6	3	27 0	75 9
Rags and Materials for making Paper (not chemical)	A	5 4	13 6	Rags—Miscel. 13 6 Rope—A 7 6	38 6 17 8		Excep.	8 4	23 4	1	14 6	38 11
Railway Materials	1	17 8	49 4	Miscellaneous	13 6	38 6	Excep.	8 4	23 4	1	14 6	38 11
Regulus (with more than 33 per cent. of copper) Do. (with not more than 33 per cent. of copper)	A Miscellaneous	5 4 4 10	13 6 12 6		Not named.		Excep.	8 4	23 4	Excep.	9 0	18 4
Resin	1	17 8	49 4	1	16 6	50 0	2	41 8	112 6	1	14 6	38 11
Road Metal	Miscellaneous	4 10	12 6	Firewood	4 2	11 3	Excep.	8 4	23 4	Excep.	6 3	18 9
Salt—Rock and Calcutta—Lick Blocks	B	8 10	24 8	B	9 6	23 9	Special	20 10	50 0	A	8 4	17 9
Do. Dairy and Meat-curing	B	8 10	24 8	B	.....	.....	Special	20 10	50 0	A	8 4	17 9
Sand	Miscellaneous	4 10	12 6	A	4 2	11 3	Excep.	8 4	23 4	Excep.	6 3	18 9
Sawdust	A	5 4	13 6	Miscellaneous 13 6 In trucks 4 2	38 6 11 3		Excep.	8 4	23 4		Not mentioned	
Scientific Instruments	4	38 3	109 6	4	29 0	87 6	2	41 8	112 6	4	39 6	112 8
Seed—Grass	1	17 8	49 4	Miscellaneous	13 6	38 6	Agric. 1	10 10	27 6	2 Flower 4	20 9 39 6	57 4 112 8
Sewing-machines (unpacked at owner's risk) Do. (packed)	3 3	29 5	84 10	4 29 0 3 25 0	87 6 loose 75 0 boxed		1	29 2	75 0	Packed 3	27 0	75 9
Shale—Kerosene	Miscellaneous	4 10	12 6	A	4 2	11 3	Excep.	8 4	23 4		Not named.	
Sheepskins	B	8 10	24 8	Miscellaneous	13 6	38 6	(Tied) Special 20 10 (Loose) 1 29 2	50 0 75 0		A 1	8 4 14 6	17 9 38 11
Shingles	A	5 4	13 6	Firewood	4 2	11 3	Timber	8 4	25 0	(Loose) 1 (Bundles) A	14 6 8 4	38 11 17 9
Silk Goods	3	29 5	84 10	2	21 0	62 6	2	41 8	112 6	4	39 6	112 8
Slate Slabs	4	38 3	109 6	3	25 0	75 0	2	41 8	112 6	3	27 0	75 9
Slates	A	5 4	13 6	1	16 6	50 0	Excep.	8 4	23 4	Special	10 5	30 9
Sleepers (Railway)	A plus 25 %	6 8	16 11	Firewood	4 2	11 3	Timber	8 4	25 0	1	14 6	38 11
Soap (except scented and fancy)	1	17 8	49 4	1	16 6	50 0	1	29 2	75 0	1 Fancy 4	14 6 39 6	38 11 112 8
Soda (Crystals)	B	8 10	24 8	1	16 6	50 0	1	29 2	75 0	1	14 6	38 11
Do. (Caustic)	B	8 10	24 8	1	16 6	50 0	2	41 8	112 6	2	20 9	57 4

Spokes and Shafts (undressed)	A	5 4	13 6	Firewood	4 2	11 3	Timber	8 4	25 0	1	14 6	38 11
Stone (cut for building or grindstones)	Mis.	4 10	12 6	Building 2 Grindstones M	21 0 13 6	62 6 38 6	Excep. 2	8 4 41 8	23 4 112 6	Special Special.	10 5 10 5	30 9 30 9
Do. (carved, and gravestones) Do. (finished)	2	21 7	61 2	2 4	21 0 29 0	62 6 87 6	2	41 8	112 6			
Do. (undressed)	Mis.	4 10	12 6	A. P.	5 6	15 0	Excep.	8 4	23 4	Excep.	6 3	18 9
Stocks (undressed)	A	5 4	13 6	Firewood	4 2	11 3	Timber	8 4	25 0	1	14 6	38 11
Straw	See page			See page	.....	.....	Agricultural 2	10 10	27 6	Special	10 5	30 9
Sugar	*2	21 7	61 2	2	21 0	62 6 In mats & bags	Imported 1 Colonial excep.	29 2 8 4	75 0 23 4	1 Loaf, loose 4	14 6 39 6	38 11 112 8
Sulphuric Acid	1	17 8	49 4	4	29 0	87 6	2	41 8	112 6	4	39 6	112 8
Tallow	B	8 10	24 8	Miscellaneous	13 6	38 6	Special	20 10	50 0	1	14 6	38 11
Tar	1	17 8	49 4	1	16 6	50 0	1	29 2	75 0	1	14 6	38 11
Terra-cotta	A	5 4	13 6		Not	named	2	41 8	112 6	Not	mentioned.	
Threshing Machines	3	29 5	84 10	2	21 0	62 6	1	29 2	75 0	2	20 9	57 4
Tiles—Earthenware	A	5 4	13 6	Mis.	13 6	38 6	Excep.	8 4	23 4	Special	10 5	30 9
Do. Tesselated and Ornamental	B	8 10	24 8	2	21 0	62 6	Excep.	8 4	23 4	2	20 9	57 4
Timber: Board, not exceeding 2 inches in thickness and 14 feet in length.	A 50 %	8 0	20 3	1	16 6	50 0	.....	.....	.....	1	14 6	38 11
Timber: Board exceeding 2 inches in thickness and 14 feet in length.	A + 66½%	8 11	22 6									
Timber: Hardwood in logs, 30 c. ft. to ton Other than Hardwood, 40 do.	A	5 4	13 6	Timber (sawn)	6d. per	truck per mile.	Timber	8 4	25 0	1	14 6	38 11
Timber: Undressed	.....	.....	.....	.....	.....	.....	Timber	8 4	25 0	1	14 6	38 11
Timber: Sawn, over 2 inches in thickness and not exceeding 14 feet in length.	A + 25 %	6 8	16 11									
Timber: Sawn, over 2 inches in thickness but not exceeding 14 feet in length.	A + % 33⅓	7 2	18 0									
Tin (smelted)	B	8 10	24 8	2	21 0	62 6	Special	20 10	50 0	1	14 6	38 11
Tin Plates	2	21 7	61 2	2	21 0	62 6	Special	20 10	50 0	1	14 6	38 11
Tin Ore	B	8 10	24 8	.....	Not	named	Exceptional	8 4	25 0	Excep.	9 0	18 4
Tobacco—Colonial leaf	A	5 4	13 6	A	7 6	17 8	Agricultural 1	10 10	27 6	1	14 6	38 11
Toys, in cases	3	29 5	84 10	4	29 0	87 6	2	41 8	112 6	3	27 0	75 9
Tricycles	4	38 3	109 6	double rate 4	58 0	175 0	2	41 8	112 6	4	39 6	112 8
Turnips	A	5 4	13 6	Agr.	5 6	15 0	Agricultural 2	10 10	27 6	A	8 4	17 9
Velocipedes	4	38 3	109 6	double rate 4	58 0	175 0	2	41 8	112 6	4	39 6	112 8
Whiting	B	8 10	24 8	1	16 6	50 0	Special	20 10	50 0	1	14 6	38 11
Wire Netting	3	29 5	84 10	4	29 0	87 6	Special	20 10	50 0	4	39 6	112 8
Woolpacks	B	8 10	24 8	1	16 6	50 0	1	29 2	75 0	1	14 6	38 11
Wool	See page			See page			See page			See page		
Zinc	2 †3	21 7 29 5	61 2 84 10	Perforated 4	29 0	87 6	1	29 2	75 0	1	14 6	38 11

* When carried in truck loads not exceeding six tons, 2s. per truck per mile subject to the following discount:—10% on every mile from 100 to 150; 20% on every mile from 150 to 200; 40% on every mile exceeding 200. Minimum 42s. per truck.
†For all articles not enumerated above. A terminal charge of 1s. per ton is included in Special and Miscellaneous Rates.

No. 54—*continued.*

NEW SOUTH WALES.

Wool.

	Per Bale not over 4 cwt s	d
Southern Line :—		
From Campbelltown to Sydney, 34 miles	2	6
„ Albury „ 386 „	10	6
„ Hay „ 454 „	11	0
Western Line :—		
From Richmond to Sydney, 38 miles	2	6
„ Bourke to „ 503 „	15	0

NOTE —The above rates include cartage from the railway to the wool stores

Northern Line —		
From Maitland to Newcastle, 20 miles	2	6
„ Narrabri to Morpeth, 238 miles, 9/6 ,—to Newcastle, 252 miles	10	0

Bales over 4 cwt , 15% per cwt in excess of above charges.

An allowance of 15% on above rates for wool dumped and hooped with iron, and for bales not over 250 lbs.

To washing establishments—15 miles, 10d , over 15 miles to 22 miles, 1/1 per bale.
From „ 15 „ 1/ ; „ 15 „ 22 „ 1/3 „

Live Stock.

Herds, Flocks, &c , when in consignments of not less than one full Truck load.

CATTLE.

	Per Truck £	s	d	Other distances
100 miles	£3	6	8	1 to 140 miles, –/8 per truck per mile.
200 „	6	3	4	140 „ 200 „ –/6 „ „
300 „	7	16	8	Over 200 „ –/4 „ „
400 „	9	10	0	Minimum . . 15/– per truck.

HORSES.

The Commissioner will carry horses in cattle trucks if requested to do so, but only under special contract, relieving him of all responsibility. The charge for horses so carried will be the same as for cattle in full truck loads.

SHEEP.

	Per Truck £	s	d	Other distances
100 miles	£3	3	4	1 to 80 miles, –/8 per truck per mile.
200 „	4	18	9	80 „ 100 „ –/6 „ „
300 „	6	7	11	100 „ 150 „ –/4½ „ „
400 „	7	17	1	150 „ 200 „ –/4 „ „
				Every additional mile, –/3½.
				Minimum ..... 15/– per truck.

Single-decked trucks two-thirds above rates.

VICTORIA.

Wool.

50 miles Per bale, not over 4 cwt	150 miles Per bale, not over 4 cwt
2/4	6/8

Portland to Williamstown, 279 miles, 8/3 Per bale

Bales of wool over 4 cwt each will be charged 25% additional upon the rate for 4 cwt for every cwt. or part of a cwt in excess.

Dumped wool carried by railway will be allowed –/5, over 90 miles –/9, and over 150 miles 1/2 per bale. 15 % on ordinary rates.

Live Stock.

CATTLE.

Pigs or Cattle (in Goods Truck) :—

	Per Truck £	s	d
100 miles	£3	17	0
150 „	4	9	6
200 „	5	18	8
300 „	8	17	0

Single cattle the same as horses, and one or more bulls same rate as a truck-load of cattle, or as entire horses, if sent in horse-boxes, but no terminal for single animals

Over three goats or pigs and up to ten, not exceeding 100lb. each, half-truck ; and over ten, or over 100 lb , full truck rates ; goats and calves at cattle rates.

Single pigs, sheep, calves, or goats in crates or cases, by goods trains, fourth class goods' rates , minimum as for 2½ cwt. per package.

SHEEP.

	Per Truck £	s	d
100 miles	£3	17	0
150 „	4	9	6
200 „	5	18	8
300 „	8	17	0

QUEENSLAND.

Wool.

	Per ton
From Roma to Brisbane, 317 miles	92/4
From Miles to Brisbane, 230 miles	76/–
From Ipswich to Brisbane, 24 miles	9/7

Dumped wool will be allowed a rebate of 10 % on ordinary rates.

Live Stock.

CATTLE.

Six-wheeled Trucks.

	Per Truck
Roma, 317 miles	216/6
Stanthorpe, 206 miles	167/–
Toowoomba, 100 miles	89/–

HORSES.

Six-wheeled Trucks.

	Per head
Roma, 317 miles	31/11
Stanthorpe, 206 miles	21/5
Toowoomba, 100 miles	13/3

SHEEP.

Any number loaded :—

	Six wheeled sheep van
100 miles	84/–
200 „	132/–
300 „	170/6

SOUTH AUSTRALIA.

Wool.

	Per bale not over 4 cwt	
Any distance not exceeding 15 miles	1	0
*Over 15 miles, and not exceeding 65, every 10 miles, or part of 10 miles	0	6
*Over 65 miles, for every 10 miles, or part of 10 miles	0	4

Each bale over 4 cwt will be charged 25 per cent per bale additional upon the rate for a 4 cwt bale upon every cwt or portion of a cwt in excess

An allowance will be made upon wool dumped or otherwise reduced to 18 cubic feet of 6d per bale if carried more than 50 miles by rail, and 9d per bale if carried more than 100 miles

An allowance of 6d per bale will be made on bales weighing not more than 300lb if carried more than 50 miles by rail , but this allowance will in no case be made at the same time as that mentioned above

The following exceptional rates are in force, subject to the foregoing conditions —
Adelaide and Port—7d per mile.
Goolwa and Victor Harbor—9d per bale
Morgan to Adelaide or Port Adelaide—4s 6d per bale, and a drawback of 6d per bale to a consignor of 2,000 bales or over of riverborne wool in one season

All wool is carried at owners' risk as to condition and will be signed for accordingly

* In each case cumulative on the preceding rate

Live Stock.

	Per mile	Min
For a single horse	–/6	6/–
For two horses	–/10	8/–
For a single cow or bull	–/6	5/–
For horse-box	1/–	8/–

SHEEP.

	Per large van s	d
100 miles	91	8
200 „	161	10
300 „	220	2

Min. .. ..10s.

CATTLE.

100 miles	74	9
200 „	142	11
300 „	192	10

Min..... 6s.

Pigs.

Same rates per truck as cattle. Minimum, 15s.

Under the foregoing rates for cattle, sheep, horses, and pigs, no less charge than for one full truck will be made for each and every truck used.

Small Consignments.

½ Truck, *i.e.*, 4 Cows or Oxen, or 10 Calves, or 1 deck of Sheep, or 30 Pigs.	¼ Truck, *i.e.*, 2 Cows or Oxen, or 5 Calves, or 20 Sheep, or 15 Pigs.	Single Cow or Ox.	Sheep or Pigs, when less than ¼ Truck.	Calves when less than ¼ Truck.
6d. per mile	4d. per mile	3d. per mile.	½d. each per mile.	1d. each per mile.
Minimum, 10s.....	Minimum, 7s. 6d.....	Min., 7s. 6d. each.	Min., 1s. 6d. each.	Min., 2s. each.

Bulls.

The charge for bulls is 7d. per mile up to 100 miles, over 100 miles 4d. per mile Minimum, 12s. 6d.

Valuable Rams and Ewes.

If less than half a truck-load, will be charged 2d. each per mile; for half a truck and upwards, sheep rates. Minimum, 5s.

When live stock is returned from Sydney or Homebush to Country Stations in those neighbourhoods to which cattle trucks and sheep vans are being sent empty, half the foregoing rates will be charged, provided the owners wait the requirements of the Department, but not otherwise.

Goods Trucks.

100 miles	£2	11	0
150 „	3	3	6
200 „	4	4	4
300 „	6	6	0

In the event of the Department not being able to supply sheep trucks it does not undertake to provide goods trucks.

Every sheep or lamb, up to 3, carried any distance not exceeding 24 miles, by goods trains only 2/-

And for each mile beyond that distance..... -/1

Over 3 and up to 10 sheep or lambs, half sheep truck rate; over 10 animals, full truck rate.

Minimum Charge:—Sheep truck, 40/-; goods truck, or half-truck, 20/-; exclusive of a terminal charge of 2/- per truck for sheep trucks, and 1/- per truck for goods trucks.

Store sheep in lots of not less than two truck loads, to be carried from Newmarket to country stations at ⅔ published rates, and store cattle at ½ published rates, full terminal, provided the trucks are required to load on the up-journey, again from the Line to which such store cattle and sheep are consigned.

Rates for one Pig, or Calf, or Sheep.

50 miles and under...	1/6
51 „ to 100	2/-
101 „ to 150	3/-
151 „ to 200	3/6
201 „ to 250	4/-
251 „ to 276	4/6
277 „ to 300	5/-
301 „ to 350	5/6
351 „ to 400	6/-
401 „ to 450	6/6

Pigs and calves in 4-wheeled trucks -/6 per waggon per mile; minimum, 5/-

Pigs in 6-wheeled trucks -/10 per truck per mile; minimum, 5/-

Mixed consignments -/7 per truck per mile; minimum, 5/-

	Per mile
Calves per head	-/2.
Goats „	-/1.
Pigs „	-/1.

Rates for Fresh Meat in van loads.

To be loaded and unloaded by Owners.

In the case of beef, the van-load will be limited to 12 carcases, but this number may be increased provided that a van-load shall not be held to consist of a greater total weight than 4 tons. Where a consignment of beef does not amount to 4 tons, senders will be allowed to make up the van-load with carcases of mutton, pork, or veal. Any weight above 4 tons, whether the number of carcases be more or less than 12, will be charged for at the rate of ⅛d. per cwt. per mile.

Distance.	Beef, Pork, or Veal.		Mutton.		Distance.	Beef, Pork, or Veal.		Mutton.	
	s.	d.	s.	d.		s.	d.	s.	d.
15 miles and under...	10	0	10	0	85 miles and under...	56	8	42	6
25 „ „ ...	16	8	12	6	95 „ „ ...	63	4	47	6
30 „ „ ...	20	0	15	0	105 „ „ ...	66	2	49	7
35 „ „ ...	23	4	17	6	115 „ „ ...	69	0	51	9
45 „ „ ...	30	0	22	6	125 „ „ ...	75	0	56	3
55 „ „ ...	36	8	27	6	135 „ „ ...	81	0	60	9
65 „ „ ...	43	4	32	6	150 „ „ ...	90	0	67	6
75 „ „ ...	50	0	37	6	Every mile over 150...	0	6	0	5

Smaller quantities charged actual weight at 3rd class rates. Minimum charge for use of van, 10s.

Fresh Meat.

		50 miles	150 miles
Class 2	per ton ...	21/-	62/6.
Large quantities	per truck...	39/6	89/6.

Fresh Meat.

	50 miles.	150 miles.
Class 1.....	29/2	75/-.

Fresh Meat.

	50 miles per ton.	150 miles per ton.
Class 2	20/9	57/4.

No. 54—*continued.*

NEW SOUTH WALES.

Live Stock for Agricultural Shows.

To the Show, ordinary rates; and the same from the Show, if sold. Unsold exhibits will be returned to the Stations whence they came, free of charge, on production of a certificate from the Secretary of the Agricultural Society to the effect that they are unsold.

Live stock conveyed to and from Agricultural Shows will be subject in all respects to the General Conditions and Regulations of the Department, except that, when carried free, it will be entirely at the owner's risk.

Contractor's Plant.

Waggons on wheels, 4d. per mile each; minimum charge, 5s.

Locomotive engines in steam, owner's risk only, 2s. 6d. per mile each, in addition to wages of driver, fireman, and guard, and cost of fuel; minimum, £1 17s. 6d.

Locomotive engines on wheels, but not in steam, first-class rates, at owner's risk only.

Hay, Straw, and Chaff—per Truck.

	Hay. £ s. d.	Straw & Chaff. £ s. d.		Hay. £ s. d.	Straw & Chaff. £ s. d.
Not exceeding 16 miles.....	0 10 0	0 10 0	Not exceeding 200 miles	2 14 9	2 8 5
" " 35 "	0 17 0	0 17 0	" " 250 "	3 2 10	2 15 7
" " 54 "	1 4 0	1 4 0	" " 300 "	3 11 0	3 2 11
" " 100 "	1 11 9	1 8 1	" " 400 "	4 7 3	3 17 2
" " 150 "	2 3 11	1 18 10	" " 450 "	4 15 4	4 4 4

Smaller quantities charged actual weight at first-class rates.

Returned Empties.

Freight must be prepaid.

	Not exceeding— 50 Miles.	100 Miles.	200 Miles.	300 Miles.	400 Miles.	500 Miles.	600 Miles
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
* Bags, in bundles, or bales (minimum charge 1 cwt. per package)....per cwt.	0 3	0 6	0 9	0 11	1 0	1 2	1 4
Baskets and coops measuring not more than 8 cubic feet.....each	0 2	0 3	0 4	0 5	0 6	0 7	0 8
Do. do. and cases over 8 and under 15 cubic feet .....each	0 3	0 6	0 9	0 11	1 0	1 2	1 4
Do. do. over 15 and under 25 cubic feet "	0 6	1 0	1 6	1 10	2 0	2 4	2 8
Do. do. over 25 cubic feet ..... "	0 9	1 6	2 3	2 9	3 0	3 6	4 0
Hogsheads ..... "	0 6	1 0	1 9	2 3	2 6	3 0	3 6
Pipes ..... "	1 0	2 0	3 0	3 6	3 9	4 0	4 6
Quarter-casks and half-hogsheads .. "	0 3	0 6	0 9	0 11	1 0	1 2	1 4
Tierces ..... "	1 0	2 0	3 0	3 6	3 9	4 0	4 6

All other returned empties as may be agreed upon.

Empty cases measuring not more than 8 cubic feet will be carried free.

* Empty bags must be so made up in bundles or bales as to leave all ends exposed. When sent in quantities of 1 ton and upwards B rates will be charged.

VICTORIA.

Live Stock, &c. for Agricultural Shows.

Implements to the Show, ordinary rates; and the same from the Show, if sold. Unsold exhibits will be returned free, and half of amount of the freight paid for conveyance of same to the Show refunded on production of certificate from the Secretary of the Society to the effect that they are unsold.

Live stock and produce will be returned free and a refund made of one-half the freight paid to the Show if exhibits are not sold.

The above regulations are only to apply if the exhibits are conveyed in cattle waggons and by goods trains, and no reduction in the ordinary rates will be made if conveyed in horse-boxes or by passenger trains.

Poultry and dogs will be charged full rates both ways.

Contractor's Plant.

Waggons -/6 per truck per mile.

Train of 10 waggons, contractor's engines and men, or haulage of engine of wheels, but not in steam, 2/6 per mile; minimum, 50/-. When Department finds engine and men, for empty trucks 5/- per mile; minimum, 50/-; for full trucks, 7/6 per mile; other plant 10/- per truck per mile; minimum, 20/-

Hay and Straw—Loose—per Truck.

	miles	Hay. £ s. d.	Straw. £ s. d.
Not exceeding	20	0 17 6	0 15 0
" "	30	1 2 6	1 0 0
" "	50	1 12 6	1 10 0
" "	100	2 19 9	2 11 1
" "	150	3 16 3	3 13 9
" "	200	4 12 11	4 10 5
" "	250	5 19 7	5 7 1

Part of a truck to be charged as a full truck.

Returned Empties. *

	50 miles.	150 miles.
Crates / Pipes each.....	2/-	4/-
Tallow puncheons	1/-	2/-
Hogsheads	-/9	1/6
Butter and egg boxes ...	-/3	-/3
Quarter-casks & barrels...	-/6	1/-
Kegs, tub, and demijohns	-/6	-/9

Minimum, -/6d.

Cases, drums, cans, carboys, crates (in pieces, tied), butter boxes, and fowl coops, miscell. rate, 50 miles, 13/6 per ton; 150 miles, 38/6 per ton: min. -/6.

Fruit cases, special, 50 miles, 7/6 per ton; 150 miles, 17/-8 per ton; min., -/6.

Returned empty bags, agricultural produce rate; min. -/6.

* Second class rates when less than this rate.

QUEENSLAND.

Live Stock, &c., for Agricultural Shows.

Not named.

Contractor's Plant.

Not named,

Hay and Straw—Loose.

To Brisbane only—

Warwick—166 miles, 18/2 per ton.

Toowoomba 100 " 13/9 "

Hay, straw and chaff, pressed (generally.)

Agriculture 2—50 miles 10/10 per ton.

150 " 27/-6 "

Returned Empties.

	50 miles.	150 miles.
Pipes and tierces and large cases	1/-	2/-
Hogsheads, half hogsheads, barrels, quarter-casks, ale and porter cases (4 doz.), and ice cases	-/6	1/-
Kilderkins, ferkins, kegs, and small cases	-/3	-/6
Bundles of grain bags and coal sacks (not more than 2 cwt. each)	1/-	2/-

SOUTH AUSTRALIA.

Live Stock, &c., for Agricultural Shows.

Exhibits sent by rail to any Show will be returned free on production of certificate from the Secretary that they are unsold.

Contractor's Plant.

Materials used by Contractors in construction of new Railway lines, or of new buildings, will be conveyed at owner's risk at 10d. per truck per mile; maximum, 6 tons to 3 cwt. each truck.

Hay and Straw.

Special class—50 miles, 10/5 per ton.

150 " 31/3 "

Returned Empties.

(Charges must be prepaid.)

Articles.	Not exceeding 10 miles Each	Exceeding 10 but not exceeding 25 miles Each.	Exceeding 25 but not exceeding 50 miles Each	For every additional 20 miles or part thereof. Each.
Hogsheads	4d.	9d.	1s.	2d
Barrels.....	3d.	7d.	10d.	1½d.
Quarter-casks	3d.	5d.	8d.	1d.
Bags, per bundle of 25				
Empty baskets and five-gallon kegs, not exceeding two cubic feet measurement	1d.	2d.	3d.	½d
Bottle cases and casks, half-barrels and ten-gallon kegs, and cases containing empty tins used for sending butter and eggs to market, provided the tins are not packed, not exceeding five cubic feet measurement, and cases containing not more than six dozen aerated-water bottles, empty and measuring not more than 3½ cubic feet ...	2d.	4d.	6d.	1d.

Horses.

In Boxes:—Full horse-box (3 horses, one owner), 1s. per mile; minimum charge, 15s.; one horse, 6d. per mile; two horses, 9d. per mile; minimum charge, 7s. 6d. each; stud horses, 1s. per mile each; two horses, one owner, 10d. per mile; one horse, 8d. per mile; minimum charge, 15s. Mares, with foal at foot, rate and a half.

A reduction of 20 per cent. on the above charges will be made on every mile beyond 150 and up to 200, and over 200 miles, 33⅓ per cent. per mile will be allowed.

For Agricultural Shows.

To the Show, ordinary rates, and the same from the Show if sold. Unsold exhibits returned free.

For Race Meetings.

To the Races, ordinary rates, and the same from the Races if sold. If unsold they will be returned free of charge.

Hunting Horses and Dogs.

Horses going to the Chase, single fare for the double journey. Dogs, ½d. per mile each to 50 miles, and 4d. additional for every 30 miles or part of 30 miles thereafter; minimum charge, 6d.

Carriages.

Carriages, gigs, and dog-carts, 6d. per mile, each; two vehicles, one owner, if on one truck, 9d. per mile; 4-wheeled waggons and bullock drays (empty), 8d. per mile; minimum charge, 7s. 6d.

A reduction of 20 per cent. on the above charges will be made for every mile beyond 150 and up to 200; and over 200 miles, 33⅓ per cent. per mile will be allowed.

Dogs.

50 miles, 2/1; 150 miles, 3/5.

Gold Dust and Bullion, and Gold and Silver Coin.

The Commissioner for Railways will not be responsible for the safe conveyance of gold dust and bullion, or gold and silver coin, &c., as the following charges are made, and the gold dust and bullion and coin carried, on condition of its being in charge of owners and at their risk.

	Distance not over 55 miles.	Distance not over 100 miles.	Distance not over 150 miles.	Distance not over 200 miles.	Distance not over 250 miles.	Distance not over 350 miles.	Distance over 350 miles.
Gold dust and bullion, ℔ 100 ozs.	2/-	3/6	4/3	5/-	5/6	6/-	6/6
Gold coin, ℔ £100	-/6	-/10	1/3	1/8	2/-	2/3	2/6
Silver coin, ℔ £100	1/-	1/9	2/6	3/3	3/6	3/9	4/-

Fractions over 100 and under 50 will not be charged, but fractions of 50 and over will be charged as 100.

Milk.

In quantities of not less than 300 gallons, less than 300 gallons double rates.

15 miles and under	¼d. per gallon.
40 " "	½d. "
90 " "	¾d. "
Beyond 90 miles	1d. "

Empty cases returned free.

Horses.

Each mare, gelding, or filly, or entire under 2 years, 6d. per mile; min. 20/- each.

Each stud horse, 2 years or over, 1/- per mile; minimum ..... 20/- "

Horse-box (three horses), 1/3 per mile; minimum 40/-

In goods trucks and by goods trains on either up or down journey, cattle rates. By passenger trains, 1/6 per truck per mile.

Carriages.

Carriages, gigs, dog-carts, and vehicles, of a similar description will be charged for at the rate of -/6 per mile, subject however that the sum of 20/- shall be the minimum charge in any case. Two vehicles, one owner on same truck, if owner accepts all risks, -/9; three vehicles, 1/- per truck per mile, minimum 20/-; vehicles for repair, return tickets will be issued at 50 per cent. addition on above rates.

Dogs.

50 miles, 2/1; 150 miles, 6/3; minimum charge, -/6.

Milk.

	50 miles.	150 miles.
Miscl.	13/6	38/6

Horses—in Boxes.

	One horse	Two or more horses each.
100 miles	33/6	25/-
200 miles	58/6	42/-
300 miles	75/-	50/-

Minimum charges, 5s.

Entire Horses.

	One horse	Two or more each.
100 miles	50/-	42/-
200 miles	92/-	75/-
300 miles	125/-	100/-

Carriages.

100 miles	41/6 each.
200 miles	75/- "
300 miles	100/- "

Minimum charge, 10s. each.

Dogs.

Dogs, 50 miles, 2/-; 150 miles, 3/-; minimum, -/6 each.

Gold and Gold Dust, and Gold and Silver Coin.

	50 miles.	150 miles.
Gold & gold dust, ℔ 100 ozs.	8/-	11/-
Gold coin, ℔ £100	2/6	5/6
Silver coin, ℔ £100	4/6	8/-

Milk.

In Cans of not less than 6 gallons.

25 miles and under	-/1 per gallon.
Over 25 miles	-/1½ "

Cans returned free.

Horses.

Horse-box	1/- per mile, minimum, 8/-
One horse,	-/6 " " 6/-
Two horses,	8/- " " 8/-
Full box...	1/- " " 8/-

Carriages.

Gigs, dog-carts, and light drays (empty) weighing not more than 10 cwt., -/3, per mile; minimum charge, 3/-.

Carriages, and waggons, and drays weighing not more than 25 cwt. (empty), -/4 per mile; minimum charge, 4/-.

Ditto, ditto, over 25 cwt. (empty), -/6 per mile; mnimum charge, 6/-.

Dogs.

50 miles, 2/-; 150 miles, 3/-.

Milk.

Not mentioned.

No. 54—*continued.*

SOUTH AUSTRALIA.

Parcels under £10 value.

Any distance not exceeding miles—	Weight not exceeding 7lb	14lb	28lb	56lb	84lb	112lb	For each additional 14lb or part thereof
	s d	s d	s d	s d	s d	s d	s d
10	0 6	0 6	0 6	0 8	1 0	1 4	0 2
20	0 6	0 6	0 6	1 0	1 6	2 0	0 3
40	0 6	0 6	0 8	1 4	2 0	2 8	0 4
60	0 6	0 6	0 10	1 8	2 6	3 4	0 5
80	0 6	0 6	1 0	2 0	3 0	4 0	0 6
100	0 6	0 7	1 2	2 4	3 6	4 8	0 7
140	0 6	0 8	1 4	2 8	4 0	5 4	0 8
180	0 6	0 9	1 6	3 0	4 6	6 0	0 9
220	0 6	0 10	1 8	3 4	5 0	6 8	0 10
260	0 6	0 11	1 10	3 8	5 6	7 4	0 11
300	0 6	1 0	2 0	4 0	6 0	8 0	1 0
For each additional 14lb or part thereof	—	0 1	0 2	0 4	0 6	0 8	0 1

Double rates charged on furniture, musical instruments, and fragile articles and larger packages weighing less than 10 lb. to each cubic foot.

QUEENSLAND.

Stamped Parcels Rates.

Miles	3 lb and Under	7 lb and Under	14 lb and Under	28 lb and Under	56 lb and Under	Joints of Meat not exceeding 28 lb (Owners' risk)	Bags or Baskets of Bread not exceeding 56 lb
	s d	s d	s d	s d	s d	s d	s d
Under 10	0 3	0 6	0 6	0 9	1 3	0 6	0 6
10 to 25	0 6	0 9	1 0	1 3	1 6	1 0	1 0
26 to 50	1 0	1 3	1 6	1 6	2 0	1 6	1 0
51 to 100	1 6	1 9	2 0	2 3	2 9	2 6	1 6
101 to 150	1 6	2 0	2 3	2 6	3 6	2 9	2 0
151 to 200	2 0	2 6	2 6	2 9	4 3	3 3	2 0
201 to 250	2 6	2 9	3 0	3 0	4 6	3 6	2 6
251 to 300	2 9	3 3	3 6	3 6	5 3	3 9	2 6
301 to 350	3 3	3 6	3 9	3 9	6 0	4 0	2 6

Opium, double rates

Parcels over £10 value and under £50, double rate, and over £50, quadruple rate Although these rates are charged, and the value of parcels declared, the Commissioner will not hold himself responsible for contents.

Newspaper parcels and despatches, half rates, minimum charge, 6d.

Hats, millinery, and bonnet boxes charged double rate

Packed parcels, quadruple rates Corpses, 1s per mile; minimum, 10s.

VICTORIA.

Ordinary Parcels Rates.

Miles	At the risk of the Owner, Stamped — Not over 14 lb	28 lb	56 lb	84 lb	112 lb	For every 28 lbs or portion thereof, *addl*	At the risk of the Carrier, not Stamped, and under £10 in value — Not over 14 lb	28 lb	56 lb	84 lb	112 lb	For every 28 lb or portion thereof, *addl*
	s d	s d	s d	s d	s d	s d	s d	s d	s d	s d	s d	s d
Not over 25 miles	0 3	0 6	1 0	1 6	2 0	0 6	0 4	0 8	1 4	2 0	2 8	0 8
Not over 50 miles	0 5	0 9	1 6	2 3	3 0	0 9	0 6	1 0	2 0	3 0	4 0	1 0
Not over 75 miles	0 6	1 0	2 0	3 0	4 0	1 0	0 8	1 4	2 8	4 0	5 4	1 4
Not over 101 miles	0 8	1 3	2 6	3 9	5 0	1 3	0 10	1 8	3 4	5 0	6 8	1 8
For every additional 25 miles or part thereof	0 2	0 3	0 6	0 9	1 0	0 3	0 2	0 4	0 8	1 0	1 4	0 4

Packed parcels in hampers, cases, &c, to be charged quadruple the above rates

Perishables, including fish, fruit, butter, eggs, poultry, &c, to be charged the above rates or 4th class goods rates (except fish, carried 100 miles, 4d per ton per mile, 100 to 200, 3d, over 200 miles, 2d per ton per mile, and 1d per ton terminal added)

Bicyles, feathers, furniture, glass, hat boxes, millinery, mirrors (loose), musical instruments, or other articles light and fragile, will be charged 50 per cent additional on the above rates

Corpses, under 40 miles, 20s each, above 40 miles, 6d per mile

Books (Library) returned free

Commercial travellers' samples over 1½ cwt carried at 50 per cent reduction on rates

NEW SOUTH WALES.

Parcel Rates.

Miles[1]	3 lb and under	Over 3 lb to 7 lb	Over 7 lb to 14 lb	Over 14 lb to 28 lb	Over 28 lb to 56 lb	Over 56 lb to 84 lb	Over 84 lb to 112 lb	Every 28 lb or part thereof
	s d	s d	s d	s d	s d	s d	s d	s d
Distance not over— 15	0 3	0 4	0 6	0 8	0 10	1 0	1 2	0 3
30	0 3	0 5	0 7	0 9	0 11	1 2	1 4	0 3
105	0 6	1 0	1 6	2 0	2 6	3 0	4 0	0 10
150	0 9	1 5	2 1	2 9	3 5	4 2	5 6	1 6
210	1 0	1 11	2 10	3 9	4 8	5 8	7 3	1 9
255	1 2	2 4	3 4	4 6	5 8	6 10	8 5	2 1
315	1 6	3 0	4 0	5 6	7 0	8 6	10 1	2 5
And respectively for every additional or part of additional 15 miles	0 1	0 2	0 2	0 3	0 4	0 5	0 5	0 1

Fresh meat, fish, poultry (dead), dairy produce, eggs, fruit, vegetables, ice, and game, under 1 cwt, 25 per cent reduction on parcel rates, minimum rates 3d

Musical instruments, packed in cases, 25 per cent added to above rates

Sewing machines, packed in cases, ordinary rates but when unpacked double rates will be charged

Bath chairs, perambulators, velocipedes, and bicycles, requiring a carriage truck for the conveyance, will be charged as for a two wheeled carriage

Corpses 1s per mile minimum charge, 5s

Newspaper parcels, one quarter parcels rates, minimum charge, 3d

Passenger's excess luggage, parcel rates

Commercial travellers' excess luggage, parcels rates on down journey and free on up journey, on production of Railway receipts, certifying that full frainage has been paid on down journey

Perambulators (children's) and velocipedes will be conveyed in Guard's Vans at the following rates —

When conveyed as Passenger's luggage —

Not exceeding	s d	Not exceeding	s d
		125 miles	3 0
Not exceeding 15 miles	0 9	150 ,,	3 6
30 ,,	1 0	200 ,,	4 0
50 ,,	1 6	250 ,,	4 6
75 ,,	2 0	300 ,,	5 0
100 ,,	2 6		

When conveyed as Parcels 50 per cent additional will be charged

Ice conveyed by Passenger trains—

	10 lb and under d	Every 10 lb additional d
100 miles	2	1
200 ,,	4	2
300 ,,	6	3

Books from and to recognised Circulating Libraries, one fourth parcels rates

No. 55.

RETURN of the number and nature of the ACCIDENTS, and the INJURIES to LIFE and LIMB, which have occurred on the Great Southern, Western, Northern, and Branch Lines, from 1st January to 31st December, 1885.

Date.	Line	Passengers killed or injured.				Servants of the Department or Contractors.				Trespassers		Remarks.
		Causes beyond their own control		Their own misconduct or want of caution		Causes beyond their own control		Their own misconduct or want of caution		Their own want of caution		
		Killed.	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	
1885.												
6 Jan. ...	Richmond ..	..	...	...	.	...	..	1	..	...	...	Porter—run over at Mulgrave.
12 „	North ..	..	...	...	..	..	1	.	..	...	..	Struck on chest by barrier arm at Newcastle.
13 „	Morpeth .	.	...	.	...	.	...	1	.	...	.	Porter—crushed while loading goods at Morpeth.
15 „ ..	South West	.	.	.	..	..	.	1	...	...	...	Permanent Way employee—fell between carriage and break-van, near Whitton.
15 „ ...	South	.	..	.	..		.	1	...	...	..	Loco Storeman—run over at Harden.
16 „ .	Suburban	...	...	.	1	.	.	...	...	..	..	Fell from train near Ashfield.
16 „	South... .	...	...	..		.	.	.	1	.	.	Guard—foot crushed at Minto.
24 „	Illawarra	...	...	..	...	..	..	1	.		.	Guard—fell between carriages in transit.
27 „	South	4	21	...	..	3	4	...	..	..	...	Accident at Cootamundra—line washed away.
3 Feb.	Suburban	...	...	.	.	1	.	...	.		.	Killed while unloading rails at Darling Harbour.
12 „	West . .	...	...	.	.	...	.	.	..	1	...	Killed while driving cows on line at Bowenfels.
12 „ .	North	...	...	.			...	.	1	.	.	Porter—leg broken while loading hay, Waratah.
14 „ ...	Suburban .	...	..	.	1	...	.	...	.	..	.	Fell from train near Auburn.
21 „ ...	Western. .	..	..	.	1	...			..	...	...	Injured while crossing line at Mount Victoria.
26 „ ..	Suburban	..	..	1		..	.	.	...	.	...	Killed while crossing line at Stanmore.
26 „ .	„ ...	.	..	.	1	.	..	...	.	...	.	Passengers whose arms were projecting from carriage windows, and were struck by trains from opposite directions.
28 „ ...	„ ..	.	...	..	1	..	...		..	..	.	
1 Mar	South	.	...	..	.	.	.	...	1	...		Driver—run over at Picton.
5 „ .	„ ...	...	..	.	...	...	...	.	.		1	Foot caught in points at Marulan.
5 „ .	North		...		..		..		.	1	...	Run over by train at Moonbi.
9 „ ...	South	..	.	.	...		...	1	...		...	Shunter—killed at Goulburn
24 „ ...	„	..	..	.	.	...	..	.	..	1	.	Found dead on line at Mullaly's Crossing.
26 „	„	..	..	.	1		.	...	...	..	...	Jumped from train at Junee.
30 „ .	„	...	...		1		.	.	.	..	...	Alighted after train had started, Minto.
27 „ .	Suburban .	..	...	.		.		...	1	.	...	Signalman knocked down at Eveleigh.
4 April ..	„ .	...	..	...	...	..	...	1	...	..	.	Engine-cleaner—tried to enter train on wrong side at Burwood.
7 „	Suburban ..	.	..	...	1		...	..	..	..	...	Fell off the platform, Sydney station
11 „	Western ..	...	...	.	...	1	.		...	..	..	Porter—killed while loading timber at Dubbo.
7 May	North	..	.		.	...		1	.	.	.	Killed while shunting at West Maitland.
14 „ ...	South	.	1	..	...		...	...	...	...	...	Injured while alighting at Joppa; train stopped some distance from platform.
6 „ ...	North.....	...	...	.	.	..	.	...	1	..	...	Porter—hand crushed while shunting at Tamworth
15 „ ...	„	...	...	.	..	...	...	..	...	1	.	Run over at Hamilton.
16 „	Western... .	..	...	...	..	...	..	...	..	1	...	Run over at South Creek.
16 „ ...	S Western .	.	...	.	1	.	...	.	...	...	...	Fell out of van near Carrathool.
18 „ ..	„	...	...	...	1	.	...	...	...	..		Jumped off platform at Wagga.
28 „ ..	Illawarra ...	..	..	...	...	..	...	.	.	..	1	Run over near Hurstville.
28 „	West ..	...	3	.	...	..	...	...	...	...	...	Collision at Warne.
29 „ .	North... .	..	...	..	...	..		...	1	...	...	Foreman—leg broken while loading goods, Newcastle.
29 „ ...	„ .	.	...	..	...	..	...	...	1	...	..	Porter—crushed between trucks, West Maitland.
3 June	Suburban ...	...	...	...	1	...	...	...	...	...	.	Fell on platform at Sydney station.
4 „ ...	West	...	...	.	1	...	...	...	...	..	..	Crossed in front of engine at Nevertire.
4 „	„	...	.	...	...	.	.	1	.	...		Alighted from ballast train in motion at Lithgow.
6 „ ...	Suburban ..	..	...	1	...	...	..	.	..	..	...	Tried to enter train in motion, Burwood.
6 „ .	South .	.	..	...	...	...	..		1	..	...	Fell off bridge at Yass.
13 „ ...	West	...	..	...	...		.	1	...	.	.	Porter—crossing line at Dubbo.
17 „ ...	South	...	...	1	...		.	..	..	.	...	Fell over platform at Marulan.
26 „ ...	West	...	...	..	.	...	..	1	...	..	..	Fettler—in charge of trolly run over by unexpected train near Nyngan.
1 July	Suburban . .	...	...	..	1	..		.	..	..	...	Jumped from train in motion at Redmyre.
6 „ .	Richmond .	..	...	.	...	..	1		...	...	...	Fireman—struck by a spragg whilst shunting at Douglas Siding.
8 „ ...	Suburban	...	...	.	..	...		.	1	..		Guard—slipped at Eveleigh.
10 „ ..	Southern ..		.	.	...	...	1	.	..	..	...	Guard—end of thumb taken off by side-chain at Campbelltown
11 „	West	...	...	...	...	...	...	.		1	..	Suicide on line at Esk Bank.
21 „ ...	South			..	...	...	...	.	1	..	.	Fettler—truck ran over his foot at Goulburn.
24 „ ..	North .	...	...	...	..		...	...	1		...	Guard—leg crushed between trucks, Farquharson's Siding.
21 Aug.	West	...	...	...	1	...	...	...	.	..	..	Struck by truck at Mount Victoria.
15 „ .	North.... .	...	...	..	..	.	..	..	..		.	Vehicle (with passengers) collided with gates.
28 „ ...	Illawarrra...	...	...	...	1	.	...	.	..	...	1	Fell down at Tempe.
1 Sept.	Suburban ...	...	...	..	...	...	...	.	1	...	..	Alighted from train in motion, Stanmore.
1 „	West	...	1	...	...	...	..	..	...	.	.	Coupling broke on the Zigzag.
3 „	„	...	...	..	.	.	...	1	...	...	...	Night Officer—fell between train and platform at Trangie.
6 „ ...	North.... . .		...	...	...	...	..		...	1	...	Fell over cutting, Ben Lomond.
9 „	Richmond...	...	...	...	...	..	...	..	...	1	..	Run over near Riverstone.
21 „ ...	North.....	.	...	..	..	..	.	...	1		...	Guard—arm broken roping break-van at Hexham.
22 „	Suburban ..	.	...	...	...	...	...	1	..	...	..	Waggon-builder—while crossing the line at Sydney.
28 „ ...	„ ..	...	...	...	.	..	...	..	...	1	...	Run over at Petersham.
29 „ ...	„ ...	...	...	..	..	.	...	1	.		...	Telephone operator—knocked down at Darling Harbour.

No. 55—*continued.*

Date.	Line.	Passengers killed or injured				Servants of the Department or Contractors.				Trespassers		Remarks.
		Causes beyond their own control.		Their own misconduct or want of caution		Causes beyond their own control		Their own misconduct or want of caution		Their own want of caution		
		Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	
1885. 7 Oct.	Suburban	..	...	...	...	.	1	..	.	...		Fireman—engine was moved when he was beneath at Granville.
31 ,, .	West ..	. .	.		.	..	...	...		.	1	Child of gatekeeper—run over near Murrumbidgee
10 ,,	,,	. .	...	...	. .		...	...	1	.	.	Driver—at Mount Victoria.
11 ,,	South .. .	.	...	...	.	...			...	1	.	Found dead on line at The Rock.
27 ,,	West		..		.		.	.	...	1	.	Knocked down at Esk Bank.
25 Nov	,,	...		...			.	.	...	1	.	Run over by train at Penrith
28 ,, ...	,, ...		.		.			1	. .	...	.	Fireman—run over by train at South Creek.
29 ,,	North...		...		...	.		.	1	. .	.	Porter—fell while loading goods at Newcastle.
29 ,,	South .	.	.		.				...	1		Run over by train at Binalong
4 Dec. ...	,,			.	1	.		...	. .		.	Porter—knocked down at Liverpool.
5 ,, ...	West	.	. .	.						1	. .	Child on line at Bathurst
7 ,,	South ..		.		...	...	.	. .	1			Fettler—asleep on line near Albury
13 ,, ...	Suburban	.			1		. .	.	.		. .	Alighted from train in motion at Ashfield.
23 ,,	Illawarra	...	.		1	...			.	..	...	Tripped, and fell at St Peters.
23 ,,	North.	.	...				.		1		..	Porter—crushed while shunting at Armidale.
	Total	4	26	3	18	5	8	15	17	14	4	

No. 56.

RETURN of the number and nature of ACCIDENTS, and the INJURIES to LIFE and LIMB, which occurred on the TRAMWAYS, during the year 1885.

Date	Servants of the Department		Passengers		Other Persons		Remarks
	Killed.	Injured.	Killed	Injured.	Killed	Injured	
1885. 9 January	.. .	1	... .	. . .	... .	. .....	Fireman attempting to jump on motor in motion. Foot cut off
10 ,, .	. . . ...	. .....	. .. .	.... .	. . .	1	Boy knocked down and slightly injured; attempting to cross line in front of moving motor on the Newtown Road.
19 ,, .	. .	... . ..	..	.. .	...	1	Man threw himself in front of motor.
5 March..	.	. .	.	1	.	. .	Van backed into tram-car at College-street.
5 ,, .	. .	1	. .	. .	. .	. . .	Fireman attempting to jump on motor in motion. Foot cut off.
5 ,,	.	.. .. .	... ..	.	.	1	Man knocked down and slightly injured while attempting to cross in front of moving tram.
6 ,, ..	. . .	1	.	. . . .	. . .	. .	Car-lifter crushed between two trams in Bridge-street yard.
6 ,, .	. .	.....	.	.	1	..... .	Boy run over in Elizabeth-street; attempting to cross in front of moving tram
22 ,, .	. .	. .	. .	. .	.. .. ..	2	Cart colliding with motor on Newtown Road; two occupants of car slightly injured.
29 April	1	. . .. .	.	.. . . .	. . ..	.. .. ..	Conductor knocked off footboard by van backing into tram car.
3 May	. .	. . .	1	. . .. .	. ...	....	Woman fell out of car in motion at Waverley.
29 ,,	.	1	.. .	.	. .	... .. .	Conductor knocked off footboard by passing cab.
18 June	.	.	.	1	.. . .	....	Attempting to enter car in motion at Waverley.
19 ,,		.	1	. .... .	. . ...	. .....	Jumping off car in motion in Crown-street.
28 ,, .		1	.	.. . .	. . .	... .	Motor-driver knocked down by tram.
6 July	. .		.	1	. . .	.... .	Man jumped off tram in motion on Botany Road.
9 ,, .. .	. ..	. . .	.	. .	....	1	Collision between cab and motor; cabman injured.
27 ,, . . .	.	. . ...	.	... .	.....	1	Buggy ran into by motor; driver of buggy slightly injured.
10 August . .	. .	.	. .	1	. .....	....	Man fell from car at Dowling-street.
23 ,, ..		.	.	1	....	..... .	Man injured jumping off car in motion, Devonshire street.
1 September		. . . .	.	..... .	1	....	Man knocked down by motor in George-street West, whilst endeavouring to cross in front of moving tram.
22 ,,	.	.	.	. ...	. ... ..	1	Man seriously injured, horses colliding with motor.
10 October .	. .	. .. ...	. ...	1	.. ....	. ...	Man seriously injured; jumped off car in motion, Elizabeth-street, Paddington.
29 ,,	. ... .	. . ...		..... .	1	....	Boy run over at Belmore Park whilst attempting to cross in front of moving tram.
13 November	.	1	...	. .... .	. . ...	.....	Motor-driver injured through shoe coming off brake gear.
10 December		... . ..	. .. ..	..... .	. . ...	1	Man run over while attempting to cross street in front of moving motor.
26 ,,		.. .	... ..	1	. .....	.....	Man fell from tram-car in motion at Liverpool-street; seriously injured.
Total ...	1	6	2	7	3	9	

No. 57.

RETURN of the Number of Passengers, Tonnage of Goods, Earnings and Working Expenses Total and per Train Mile, percentage of Working Expenses to Gross Earnings, net Earnings, Capital Invested on Lines Open, and Interest on Capital each Year, from 1855 to 1885, inclusive.

Year.	Length of Line. 31 December.	Number of Passengers.	Tonnage of Goods.	Earnings from Coaching Traffic.	Earnings from Goods Traffic.	Total Earnings.	Working Expenses.	Earnings per Train Mile.	Working Expenses per Train Mile.	Percentage of Working Expenses to Gross Earnings.	Net Earnings.	Capital expended on Lines open.	Interest on Capital.
	Miles.	No.	Tons.	£	£	£	£	d.	d.	℔ cent.	£	£	℔ cent.
1855	14	98,846	140	9,093	156	9,249	5,959	157·34	101·37	64·43	3,290	515,347	·638
1856	23	350,724	2,469	29,526	2,757	32,283	21,788	113·32	76·48	67·49	10,495	683,217	1·536
1857	40	329,019	20,847	34,970	8,417	43,387	31,338	96·58	69·75	72·23	12,050	1,023,838	1·176
1858	55	376,492	33,385	45,858	16,451	62,309	43,928	105·69	74·51	70·50	18,381	1,231,867	1·492
1859	55	425,877	43,020	46,502	15,258	61,760	47,598	100·41	77·38	77·07	14,162	1,278,416	1·107
1860	70	551,044	55,394	45,428	16,841	62,269	50,427	83·37	67·52	80·98	11,841	1,422,672	·832
1861	73	595,591	101,130	49,637	25,367	75,004	61,187	83·77	68·34	81·58	13,817	1,536,032	·899
1862	97	642,431	205,139	62,096	41,775	103,871	68,725	90·79	60·07	66·16	35,146	1,907,807	1·842
1863	124	627,164	218,535	71,297	52,644	123,941	96,867	94·38	73·76	78·16	27,073	2,466,950	1·097
1864	143	693,174	379,661	81,487	66,167	147,653	103,715	85·30	59·92	70·24	43,938	2,631,790	1·669
1865	143	751,587	416,707	92,984	73,048	166,032	108,926	82·42	54·07	65·60	57,106	2,746,373	2·079
1866	143	668,330	500,937	85,636	82,899	168,535	106,230	82·49	51·99	63·64	62,305	2,786,094	2·236
1867	204	616,375	517,022	87,564	101,508	189,072	117,324	82·02	46·87	62·08	71,748	3,282,320	2·185
1868	247	714,563	596,514	99,408	124,951	224,359	144,201	70·06	45·03	64·29	80,158	4,060,950	1·973
1869	318	759,635	714,113	109,427	155,548	264,975	176,362	71·17	47·37	66·57	88,613	4,681,329	1·892
1870	339	776,707	766,523	117,854	189,288	307,142	206,003	81·81	54·86	67·08	101,139	5,566,092	1·817
1871	358	759,062	741,986	129,496	225,826	355,322	197,065	91·57	50·79	55·46	158,257	5,887,258	2·688
1872	398	753,910	825,360	164,862	260,127	424,989	207,918	98·43	48·15	48·92	217,071	6,388,727	3·397
1873	403	875,602	923,788	178,216	306,020	484,236	238,035	104·71	51·47	49·16	246,201	6,739,918	3·653
1874	403	1,085,501	1,070,938	188,595	347,980	536,575	257,703	103·09	49·51	48·03	278,872	6,844,546	4·074
1875	473	1,288,225	1,171,354	205,941	408,707	614,648	296,174	100·20	48·28	48·18	318,474	7,245,379	4·396
1876	509	1,727,730	1,244,131	233,870	459,355	693,225	339,406	98·50	48·22	48·96	353,819	7,990,601	4·428
1877	598	2,957,144	1,430,041	271,588	544,332	815,920	418,985	92·95	47·73	51·35	396,935	8,883,177	4·468
1878	688	3,705,733	1,625,886	306,308	596,681	902,989	536,988	81·62	48·54	59·47	366,001	9,784,645	3·741
1879	734	4,317,864	1,720,815	319,950	632,416	952,366	604,721	77·94	49·49	63·49	347,645	10,406,495	3·341
1880	849	5,440,138	1,712,971	390,149	770,868	1,161,017	647,719	86·02	47·99	55·79	513,298	11,778,819	4·358
1881	995	6,907,312	2,033,850	488,675	955,551	1,444,226	738,334	88·33	45·16	51·12	705,892	13,301,597	5·307
1882	1268	8,984,313	2,619,427	587,825	1,111,038	1,698,863	934,635	84·05	46·24	55·02	764,228	15,843,616	5·135
1883	1320	10,272,037	2,864,566	661,751	1,269,713	1,931,464	1,177,788	78·07	47·61	60·97	753,676	16,905,014	4·484
1884	1618	11,253,109	3,124,425	745,665	1,340,572	2,086,237	1,301,259	78·19	48·77	62·37	784,978	20,080,138	4·201
1885	1732	13,506,346	3,273,004	830,904	1,343,464	2,174,368	1,458,153	78·61	52·72	67·06	716,215	21,831,276	3·370

No. 58.

STATEMENT of the Number and Classification of Persons employed on the Railways and Tramways of New South Wales during 1885.

No.	Position	Rates of Pay—lowest and highest
	HEAD OFFICE.	
1	Commissioner	£1,250 per annum.
1	Secretary	£725 ,,
1	Chief Clerk	£525 ,,
2	Land Valuers	£575 and £725 per annum.
1	Accountant	£575 per annum.
1	Assistant Accountant	£420 ,,
1	Paymaster	£470 ,,
1	Cashier	£420 ,,
1	Examiner of Accounts	£395 ,,
1	Assistant Examiner of Accounts	£295 ,,
1	Book-keeper (Principal)	£370 ,,
1	,, (Assistant)	£320 ,,
3	Draftsmen	£220 to £320 per annum.
65	Clerks	£50 to £370 ,,
5	Conveyancing Clerks (Crown Solicitor's Office)	£100 to £400 ,,
7	Messengers	20s. per week to £135 per annum.
2	Housekeepers	£60 per annum.
95	Total	
	AUDIT OFFICE.	
1	Traffic Auditor	£470 per annum.
1	Assistant do.	£395 ,,
1	Chief Clerk	£370 ,,
5	Inspectors of Station Accounts	£260 to £305 per annum.
48	Clerks (25 Audit, 17 Statistical, and 6 Tramways)	£50 to £305 ,,
1	Office Cleaner	3s per diem.
57	Total	
	STORES	
1	Superintendent	£470 per annum
5	Storekeepers	£200 to £320 per annum.
35	Clerks	£39 to £275 ,,
2	Foremen	£205 per annum
1	Assistant Foreman	£170 ,,
4	Watchmen	6s 6d to 7s. 6d. per diem.
1	Messenger	5s. per diem.
64	Issuers, Assistants, Gangers, Talleymen, Storemen, Labourers, &c.	7s to 10s per diem.
1	Office Cleaner	20s per week
114	Total.	
	ENGINEER IN-CHIEF'S BRANCH.	
	OFFICE STAFF.	
1	Engineer in-Chief	£1,800 per annum.
1	Inspecting Engineer	£825 ,,
1	Assistant Engineer (Office Staff)	£725 ,,
1	Assistant Engineer for Trial Surveys	£725 ,,
48	Draftsmen and Assistant Draftsmen	£75 per annum to £445 per annum.
1	Chief Clerk	£525 per annum.
8	Clerks	£120 to £270 per annum
10	Cadets	£52 per annum to 7s per diem.
1	Probationer	£72 per annum
3	Messengers	10s per week to £120 per annum
75	Total	
	FIELD STAFF.	
14	District Engineers	£350 to £600 per annum.
12	Assistants to District Engineers	£150 to £300 ,,
33	Surveyors	£150 to £400 ,,
61	Inspectors, &c.	10s to 18s per diem
194	Chainmen, &c	6s. to 8s ,,
314	Total, Engineer-in-Chief's Branch.	
	LOCOMOTIVE ENGINEER'S BRANCH.	
1	Locomotive Engineer	£775 per annum.
1	Chief Clerk	£470 ,,
7	Draftsmen	£176 to £332 per annum
17	Clerks	£75 to £320 ,,
6	Cadets	20s. per week to 8s per diem.
1	Messenger	6s per diem.
33	Total.	
	ENGINEER FOR EXISTING LINES OF RAILWAYS AND TRAMWAYS.	
	OFFICE STAFF.	
1	Engineer for Existing Lines	£1,030 per annum.
1	Deputy Engineer	£725 ,,
1	Chief Clerk	£420 ,,
1	Architect	£400 ,,
1	Assistant Architect	£300 ,,
1	Acting Resident Engineer	£400 ,,
1	Resident Engineer	£375 ,,
2	Assistant Engineers	£240 and £300 per annum.
9	Draftsmen	£120 to £250 ,,
1	Surveyor	£230 per annum
10	Cadets	£50 to £110 per annum.
8	Clerks	£100 to £305 ,,
1	Custodian of Plans	£50 per annum.
1	Messenger	£100 ,,
2	Office Boys	£50 ,,
41	Total.	

No. 58—*continued.*

STATEMENT of the Number and Classification of Persons employed in the Engineer for Existing Railways Branch, year 1885.

	District Engineers	Resident Engineers	Assistant Engineers	Surveyors	Draftsmen	Cadets	Clerks	Office Boys	Timekeepers	Foremen	Inspectors	Sub Inspectors	Gangers	Labourers	Gangers—Flying Gangs	Labourers—Flying Gangs	Carpenters	Bricklayers	Masons	Plasterers	Painters	Plumbers	Blacksmiths	Strikers	Pattern makers	Fitters	Engine drivers	Machinists	Turners	Boiler makers	Riveters	Tinsmiths	Gatekeepers	Guards	Watchmen	Fencers	Furnacemen	Carters	Quarrymen	Moulders	Improvers	Messengers	Boys	Total
£525 per annum	2																																											2
£500 ,,	2																																											2
£370 ,,											4																																	4
£350 ,,		4																																										4
£330 ,,			1								1																																	2
£310 ,,			2								1																																	3
£290 ,,			1								9																																	10
£280 ,,				3																																								3
£275 ,,									1			2																																3
£254 ,,					1																																							1
£245 ,,										4		6																																10
£230 ,,					1					1																																		2
£215 ,,										4		26																																30
£208 ,,												1																																1
£200 ,,				1			1			3		5																																10
£190 ,,					1																																							1
£180 ,,							2		2																																			4
£175 ,,					1																																							1
£170 ,,					1																																							1
£150 ,,					1		6		1																																			8
£140 ,,							1																																					1
£125 ,,							8		1																																			9
£120 ,,							1																																					1
£110 ,,						2	2																																					4
£95 ,,							2																																					2
£80 ,,							2																																					2
£65 ,,							2		1																																			3
£50 ,,						6	5	2																																				13
£40 ,,								7																																				7
£30 ,,								1																																				1
£5 per week					1																																							1
£4 ,,												1																																1
20s per diem											1																																	1
17s ,,																																						1						1
15s ,,											4																																	4
14s ,,										1	10																																	11
13s ,,										1	1	1						12		2						1																		18
12s 8d ,,										1																																		1
12s 6d ,,										1												1								3														5
12s 4d ,,																	1						1																					2
12s ,,										1			1		1		8	31	1				1		1												98						73
11s 8d ,,																	4					1	3			2																		10
11s 6d ,,																	2	3					1																					6

No. 58—*continued.*

STATEMENT of the Number and Classification of Persons employed in the Engineer for Existing Railways Branch, year 1885—*continued.*

	District Engineers	Resident Engineers	Assistant Engineers	Surveyors	Draftsmen	Cadets	Clerks	Office Boys	Timekeepers	Foremen	Inspectors	Sub Inspectors	Gangers	Labourers	Gangers—Flying Gangs	Labourers—Flying Gangs	Carpenters	Bricklayers	Masons	Plasterers	Painters	Plumbers	Blacksmiths	Strikers	Pattern makers	Fitters	Engine drivers	Machinists	Turners	Boiler makers	Riveters	Tinsmiths	Gatekeepers	Guards	Watchmen	Fencers	Furnacemen	Carters	Quarrymen	Moulders	Improvers	Messengers	Boys	Total
11s 4d per diem																	4					1										1												6
11s 2d ,,																							4			1																		5
11s ,,											1		2		1		39	1	1			2	5			1			1			1												55
10s 8d ,,										1												12	7			12						5												37
10s 6d ,,											1		2		1		34		16			5	3		3	3						3		1										72
10s 4d ,,																	18				1																							19
10s 2d ,,																							1																					1
10s ,,												1	6		10		35	2			2	4	7			1	1	1		2						1			1	1				75
9s 8d ,,																					2		4					1																7
9s 6d ,,													3		1		8						3								7	1		3					1					27
9s 4d ,,																					3																							3
9s 2d ,,																					2		1																					3
9s ,,											1	1	466		3		14	1		1	15	1	2			2		3						1										511
8s 8d ,,																					6							4																10
8s 6d ,,													15				15	3			8		2			1	2	1				1		1		4					1			54
8s 2d ,,																											2	6																8
8s ,,											1		8	7			6	1		1	5	4		1		2		2							2	6	1		1					48
7s 8d ,,																					1						1																	2
7s 6d ,,														1800		423		2			6			47				4													4	3		2289
7s ,,														2			2				3			7				1					1											16
6s 9d ,,																																											2	2
6s 6d ,,																												1													1			2
6s 3d ,,																																											1	1
6s ,,														2				1						2				1													4	1	1	12
5s 6d ,,																																									1		1	2
5s 3d ,,																																											1	1
5s ,,														2			1					1		1																	4		2	11
4s 9d ,,																																											3	3
4s 6d ,,																																									1		3	4
4s 3d ,,																																											4	4
4s ,,																	1																								5		21	27
3s 0d ,,																																											2	2
3s 6d ,,																																									1		6	7
3s 4d ,,																																											2	2
3s 3d ,,																																											1	1
3s ,,																																									8		11	19
2s 6d ,,																																									8		3	11
2s ,,																																									3		8	11
1s 9d ,,																																									1			1
1s 8d ,,																																									1		2	3
8d ,,																																									1			1
	4	4	4	4	7	8	32	10	6	18	35	44	503	1813	17	423	192	57	18	4	54	32	45	58	4	26	6	25	1	5	7	12	1	6	2	11	1	29	2	2	44	4	74	3654

No. 58—*continued.*

STATEMENT of the Number and Classification of Persons employed in the Locomotive Branch on 31st December, 1885.

Rates.	Locomotive Overseer	Superintendent of Rolling Stock.	Locomotive Foreman	Inspectors.	Foremen.	Clerks	Timekeepers	Shed inspectors.	Engine drivers (Locomotive).	Engine drivers (Stationary)	Firemen.	Cleaners.	Fitters.	Turners & Machinists	Blacksmiths	Strikers.	Boilermakers.	Assistant Boiler-makers.	Carriage & Waggon Builders	Labourers.	Fuelmen.	Pumpers	Brass moulders, Finishers, and Coppersmiths	Gangers.	Carriage trimmers	Tinsmiths	Carriage lifters	Apprentices.	Improvers.	Carriage & Waggon Examiners	Watchmen	Furnacemen	Wire workers.	Pattern makers and Carpenters	Painters.	Assistant Painters	Oilers.	Gas fitters.	Gas makers.	Cylinder fillers.	Lamp-lighters.	Regulator makers.	Cylinder makers	Messengers and Office cleaners	Storemen.	Total
£500 per annum	1	.	...	..	..	...	..	...	.	..	..	...	.	...	...	.	...	..	...	...	..	...	...	...	...			.	...		..	.	..	...	...	.	.	...	...	..	..	...		..	1
£470 ,,			1	..	...		...	...	...	...	...	..	...	...		..		...	...	..	..	...	..	..	..	...		..	.				..	..	.		...	.						.	1
£410 ,, .	...	...	1	..	...		..	...	...	...	...	.	..	...	.	.		...	.	...	...	...		.	.	.	..	.	.			.		...	.	...	...	...		...	.	.		.	1
£390 ,, ..		.	...	1	...		.	...	...	..		..	..	...		.	...	...	...	.	..		.	.	..	.	.	.	...	...		.	...	.		..	...	.	..					.	1
£360 ,, ...	...	1	.	...	...	.			...	...	...	...		.		.	.	...	..	.	...	..		...	.		.		.	...	..	.	..		..		...		.						1
£350 ,, .	...			5	..	..	..		..	..	...			..	.	...	.	...	...	...	...	...	.	...		.	.	.	...		.	..		..		...	.	..								5
£335 ,,	.	.	..	1	1	.	..	.	..	..	..	...		...	..	...	..	...	..	...	...	.	...	...	..	...		..	..	..	.			.	..		..	.	.		.					2
£330 ,,	..	...	...	1	.	.	...	...	...	...				..		.	...		...	...	...	.				..	...	.		...	.			..				...	..	.						1
£320 ,, .		..		.	1	.	.	...	..	...			.	...				...	.	...	.	..	.		.	.		.	...		..	.		..				...	.	.		.	.		...	1
£310 ,,		..		2	...	.	...	..		.						.		...	..	..			.			..								..	...		.	..		.						2
£305 ,,		.	.	1	1	...	..				.			...	.	.		.	.	...	..	..	..	.		.	..	...	.					.	...	.	..	...	.		...					2
£300 ,, ...	.	.	.	2	1	...	...	..		.	...	..	..	...		..	.	...	...	...	...	...	.	...	...	.		...				..		..	..	..	..	..	...	.	..				..	3
£290 ,, .	..	.	...	2	..	..	1	.	...			.	.	.		.	..	.	...	.	..	...	.	.	.	..	..	..	..	...	.		...	.	..			...					..	..		3
£285 ,, ...				.	3	...	...	...	...	.			...	..	...	.	.	..	...	...		.	...			.	..	..	..		..		...		...	.		.	.	.				.		3
£280 ,, ...	.		...		..	..	...	3		.			.		.	...	.		.	...	...		.			.			.	...		.	.	..	...		...	.									3
£275 ,,		..	.	...	.	1	...	..	..			.	..	..		.	...	..		...	.	.	...			...		.				...				...		.			.					..	1
£270 ,, .	.	..	..	3	.	..	...	2	..	.				..		..	..			.	.	...	..		...		...			.				...	..			..	.							...	5
£260 ,, .		...	...	.	1	..			.	.	.		...				..		...	.		.	.	..					...	.	..	..	.		.			..	.							1
£255 ,,	.	..		.	5	...		8	...			..	...	.	.	...	..			.	...	.	...	.		...	..	...	.	.			...			.			.			..		.		13
£245 ,,		.	...	..	..	1	.	2	...		.			...			.		...			.	..	...							.			..		.	.	...							...	3
£240 ,, .				...	3	.	...	.	...	...	.		...	..				..	.	..	.	..	...	.				.	.	...	...			..	...			...	.		...	...		..		3
£235 ,, .		..	...	..	.	...	2	...	..	.		.		.			.	.	.		...		..	..	..	...	..	..			...						.									2
£230 ,, .		.	.			...	1		...	..	...		...	..	.		..	..	..		..	...	...	.		..	...		.	..	...	.						...	.		...	.		.		1
£225 ,,				..		...	...	2	...					..			...	..	..	...	..		.		..	.					.	.		...	.			..	.					...			2
£185 ,,	..			.	.	...	2	..		...	...	..		...	...	..	..	...	...	...	...	...	...			..			.	..				.		..	...	...			.					2
£180 ,,		...		.	.	..	3	.	...	.		.	.	..	..	..		...	...	...	...	...		.						...		.		.	..		...	..	..				...				3
£165 ,,		.		..	..	1	2	...	...	.		...	..	..		...		..		.		...	...		..	..	.	..	...				...	...			...	...	.								3
£155 ,,	.	...	..	..	.	1	1	.	.	.		...	.	.	...		..	..		...	...	...		..		.		..		..	...		...	...	...	..		...		..					..		2
£150 ,,	..	.		..	...	1	5	..	.	...					...		.	.		...	..	...	...	.				..	.										.								6
£135 ,,				..		1	1	..	.	...			.	..	.	...	.	..		..	..	...	..	...			...	..				.		.	.	.		..						.		...	2
£125 ,,		..	.	.	...	2	1		.		...	...	...					..				.	..	...	...	...								..	..		.			...						...	3
£120 ,, ...		.		.			4		..	.	.	.		...	...	.		...	.	...		..			.	..				...				..	.		.		.	.							4
£110 ,,		.			...	2	1	...	...		..			.				..	..		.	.	.	..	.							...								.				.	.		3
£105 ,,		...	...	..		1	1	.	...	..	.	.		.		.		.		..	.		.	...	.					.	.		.	.	.			.		..	...						2
£95 ,, ...				.			1	...	..	..		...		.	...	...	...			..	...	...				.					.						.				..		...			1
£80 ,,		...	..			...	2	.	...	..		..		.	...	..		.	.	...	.	...			.		...						.	...	...		..				.			.		2
£75 ,, ...	.	.			..	...	1	..		...	..			...	...						...	...	.	...												..	.						.			1
£65 ,,	.	..		...		1	2	..	...	...		.		.	..	.					...		..			.	...		...	.				..										...	.	3
£4 per week ..	.	.			2	..	...	...	.	.			...	...		..				...		..	..	..	..	...			...	..	.	.						..		...				.		2
£3 10s. ,,		.	..	.		..	...	.	.	.	.	.	..	...				...	.	...		.			..	...		..				.	..						1	.	...						1
£3 7s. ,, .			...	...	..	..		..	.		..			...	..			...	.			.				...	.	.	...	...		.		.	.			.	1					...			1
£2 5s. ,, ..		.	...		..			..		...	.		...	...	.			.	..	.		...				..				..	1		.	..	.	..				.				...			1
£1 5s. ,, .		...			.		..	.		.	.		..	...	..				..	.		...	...					.	.	.		.		..			...		...	..					1		1
£1 ,, .	...				..	1	..			..		...		...	.	.		...	.	.	..	...	..	..	.	..	..			..			.	..	.					.		...		..	..	1
10s. ,,			.		..	1	..	...		...		..		...	.		...	.	.	..		.	...				..			...			.	...			.	..	..	..			...		.	1
16s. per day ...	.	..	.	..		..	.	.	.			.	.	..	1		.		...		...	..	...	...		...		...	...		...				.	...		..	..	.						1
15s. ,, .	..			1	1	...	..	...	34	..		...	1	...	.		...				.	..	...	...		...						.	.	..	.		..	...	.	...			.			37
14s. 8d. ,, .	..	...		..	...	...	...	...	..	...	.	.	...	...	...		..	.	...	...	.		..			...	..		...	1	..		.	...	..		.	..	..						...	1

255

No. 58—*continued.*

STATEMENT of the Number and Classification of Persons employed in the Locomotive Branch on 31st December, 1885—*continued.*

Rates.	Locomotive Overseer	Superintendent of Rolling Stock.	Locomotive Foreman	Inspectors.	Foremen.	Clerks.	Timekeepers.	Shed-inspectors.	Engine-drivers (Locomotive).	Engine-drivers (Stationary).	Firemen.	Cleaners.	Fitters.	Turners & Machinists	Blacksmiths.	Strikers.	Boilermakers.	Assistant Boiler-makers.	Carriage & Waggon Builders.	Labourers.	Fuelmen.	Pumpers.	Brass-moulders, Finishers, and Coppersmiths.	Gangers.	Carriage-trimmers.	Tinsmiths.	Carriage-lifters.	Apprentices.	Improvers.	Carriage & Waggon Examiners.	Watchmen.	Furnacemen.	Wire-workers.	Pattern-makers and Carpenters.	Painters.	Assistant Painters.	Oilers.	Gas-fitters.	Gas-makers.	Cylinder-fillers.	Lamp-lighters.	Regulator-makers.	Cylinder-makers.	Messengers and Office-cleaners.	Storemen.	Total
14s. per day	...	...	...	...	1	...	...	...	207	...	...	1	2	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	214
13s. „	...	...	...	...	...	...	...	...	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	62
12s. 8d. „	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3	...	2	...	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	12
12s. 6d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
12s. 4d. „	...	...	...	...	...	...	...	...	...	...	...	...	21	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22
12s. 2d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	13
12s. „	...	...	...	...	...	...	...	...	51	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	56
11s. 8d. „	...	...	...	...	...	...	...	...	...	...	...	...	10	10	9	...	2	...	...	...	...	...	2	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	38
11s. 6d. „	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
11s. 4d. „	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
11s. 2d. „	...	...	...	...	...	...	...	...	...	...	...	...	2	10	1	...	5	...	...	...	...	...	3	...	1	...	...	...	...	3	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	26
11s. „	...	...	...	...	...	...	...	...	48	...	...	...	6	3	7	...	2	...	15	...	...	...	3	...	...	...	...	...	...	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	85
10s. 10d. „	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	6
10s. 8d. „	...	...	...	...	...	...	...	...	...	...	...	...	36	7	6	...	6	...	3	...	...	1	...	...	4	...	...	...	...	12	...	1	...	2	2	...	...	...	...	...	...	1	...	...	...	81
10s. 6d. „	...	...	...	...	...	...	...	...	...	...	...	...	6	1	1	...	6	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	3	1	...	...	...	...	...	...	...	...	...	...	21
10s. 4d. „	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14
10s. 2d. „	...	...	...	...	...	...	...	...	...	...	...	...	14	1	4	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	29
10s. „	...	...	...	...	...	...	...	...	...	2	145	2	56	14	7	...	6	...	67	...	...	...	7	1	7	...	...	...	...	4	...	...	...	3	17	...	...	1	1	...	...	...	...	...	...	340
9s. 8d. „	...	...	...	...	...	...	...	...	...	...	...	...	4	4	...	...	7	...	...	...	...	...	...	...	...	...	3	...	...	3	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	25
9s. 6d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	2	1	...	...	...	1	2	...	...	...	...	3	...	...	...	...	2	...	...	1	4	...	...	...	...	...	...	19
9s. 4d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	...	4	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15
9s. 2d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	8	...	...	...	1	...	...	...	...	...	...	...	...	9	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
9s. „	...	...	...	...	...	...	...	...	...	2	140	1	5	7	1	...	1	...	1	7	1	...	...	1	...	1	1	...	...	7	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	179
8s. 10d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2
8s. 8d. „	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	...	...	...	...	...	...	33	...	...	...	...	...	...	...	...	...	...	...	1	5	...	...	...	...	...	...	...	...	...	...	43
8s. 6d. „	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	3	2	3	2	...	...	...	...	...	...	1	...	...	...	...	1	...	...	1	1	...	2	...	...	...	...	18
8s. 4d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
8s. 2d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	1	...	...	1	...	...	3	...	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	11
8s. „	...	...	...	...	...	...	...	...	...	3	127	8	5	2	...	2	...	3	...	14	57	24	...	...	1	...	..	...	1	2	...	...	...	1	1	2	5	1	1	1	...	...	1	...	1	263
7s. 8d. „	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	...	...	5	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
7s. 6d. „	...	...	...	...	...	...	...	...	...	2	...	1	...	2	...	52	...	35	...	151	58	3	...	...	...	...	...	...	1	3	2	...	...	...	...	24	2	1	1	...	...	...	...	1	...	339
7s. „	...	...	...	...	...	...	1	...	...	...	...	149	...	...	...	16	...	18	...	99	12	...	...	...	...	...	...	...	2	3	1	...	...	...	...	10	21	...	1	1	2	...	...	...	...	336
6s. 6d. „	...	...	...	...	...	...	...	..	...	...	...	47	...	1	...	1	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	59
6s. „	...	...	...	...	...	...	...	..	...	...	...	50	1	...	...	...	...	1	...	7	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	60
5s. 6d. „	...	...	...	...	...	...	...	...	...	...	...	30	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31
5s. „	...	...	...	...	...	...	1	...	...	...	...	40	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	9	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	54
4s. 6d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
4s. 2d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
4s. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
3s. 6d. „	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	11
2s. 6d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	17
1s. 9d. „	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
1s. 6d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1s. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
8d. „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17
Total	1	1	2	19	20	17	32	17	401	14	412	329	180	77	51	73	67	59	106	298	131	72	22	3	15	1	17	66	7	58	4	1	1	15	40	38	28	8	11	2	4	1	3	6	1	2731

No. 58—*continued.*

STATEMENT of the Number and Classification of Persons employed in the Traffic Branch, Southern and Western Lines, for 1885.

Rate	Traffic Manager	Assistant Traffic Manager	Goods Superintendent	Coaching Superintendent	Traffic Inspectors	Station-masters	Clerks	Relieving Station masters	Foremen	Telegraph Operators	Night Officers	Officers in Charge	Telegraph Inspector	Signalmen, Shunters, and Points men	Guards	Gatekeepers	Printers	Porters	Tarpaulin Makers	Messengers	Ladies Attendants	Watchmen.	Electric light Engineers	Telegraph Line Repairers	Total
£675 per annum.	1	.	...	.			.		...		...	..	.	.	.			..	...	..	..		.	.	1
575 ,,	...	1	.			...	...				..			..					...	...	.	.		...	1
470 ,,		..	1	1		...	..	.				.					.				..	..		...	2
420 ,,	..		.	...	4	..		..							...	.	...		.	...		.	.		4
400 ,,	..	.	..		...	1			...		...	.		.	...		...				..		..	..	1
330 ,,	.		..	.		2	...		...	.	...	.		...	.							..			2
310 ,,	...	.	...	..	.	2		..	.	.		.		..							..	.		.	2
290 ,,	.	.	...	...	1	10	...	..		.			.			...	...	.		.	.	...		.	11
275 ,,	.		.		.		1			...	...			..	...				...	...		...		...	1
260 ,,		.	.	...		...	2				...			...		...		.							2
255 ,,					.	9	.			..	.			.			..			.	...		..		9
250 ,,	...		..	..	.	.	3		...	...						..	..	..						..	3
245 ,,	.	.		...			1			...		.	...	...		..		...	..	.		.			1
240 ,,	...				...	.	12	1	1			...	...				.	.		.					14
225 ,,	...		.	..	...	..	1			.						.					...				1
220 ,,	..	.			...	...	2		...					.	.			.	.		.	.	...		2
215 ,,			...			...				1									...					.	1
210 ,,				...		10				...						...		...		.		...		...	10
205 ,,	..	.	...	.	..	...	2		..		...	.	...					...	.		.				2
200 ,,			.	..			10	1	.	1			1		...		.	..	...	.	...	.	1		14
195 ,,	...	.				7	4	.		1	.	.					..		.	.			..	.	12
185 ,,				.			1		.					.			.	..					.	.	1
184 ,,					.		1		.			..	..	.							..	...	...		1
180 ,,				.	.	16	18	5		...		...									...	...		.	39
175 ,,	..		...	..			...	1	...		.		...				.	...							1
170 ,,					...	.	1	..	...	...			..			..	.			.				..	1
165 ,,			.		..	...	15	17	.	..	1			.	..	..			.					...	33
160 ,,		...	...	..		.		1	.		...		..	.	.		.	...	..	.		.	.		1
156 ,,	..	...		...	..	.		1		...		..	.	.	...		.	...							1
155 ,,			.	...		.	.	1	.				.	.	.	..	..			...		..	..		1
150 ,,				.		.	15	24	.		10	.	1		.	...			.		..	..			50
140 ,,					..	.		3		.	4	.	.	...	..	...	..	..	..	.	...	..	.	...	7
135 ,,		...		..	.	.	.	2		...			...		.	.	...	...	...	..	.	...	...	..	2
130 ,,	...				.		..					28	61	.	..	...		...	.			...			89
125 ,,	..		...				...	24		...	.	16			.		.	.	...	..		.	...		40
120 ,,		.			..	.	.	5	..	.	1			..	.	..	...	...	..	.	...	.	.	.	6
117 ,,			...					1	.	..	...	..	...	...	...		.	...	..	...	.	...	...	.	..	1
110 ,,		..		...			.	8	..	.	..	29	..	..	..	...	...	..	..	.		.		..	...	37
108 ,,	.	..	...		..	..	.	...	..	...	1	..	1	..	...	.	..	...	...	..	..	..		.	.	2
105 ,,			..	..		...	..	2	.		..	...		.	.	..	...	...	.	..	.	..	.		...	2
100 ,,		..	...	..	.	..		...	..	..	.	13		.	..	...	.	..	.	...	..	.	...	...	..	13
96 ,,				.	.	..		1	.	...	1	..	...	...	..	.	...	.	...	...	..	..	..	...		2
95 ,,		..	...	...	...	.	...	8		..	38		...	..			...	.	...				...	.	..	46
84 ,,	.	..	..		.	...	..	..			2	..	..	..	...	...	..	...	...	...	...	..	...	..	..	2
80 ,,	.	.	...	...	..	.	.	9	..	...	23	.	..	..		.	..	..		.		.	..	..	..	32
78 ,,	...			..	.	.	.	1		...	..		.	..	...		.	.	...		...	.	..	...	..	1
75 ,,	..			.			...	1		...			...	..	..	...			..		..	.		..	...	1
72 ,,		.	..	..			...	1			1			.		...		...	...	...	...	..	...	..	...	2
65 ,,	.	.	...	..		.	...	5	...	.	4		...	..	...	.		..	...	...	...		..	..	..	9
60 ,,		..	.		.			.	.	..	4	..	.	...	...	...	..	..	...		..			...	.	4
52 ,,			.	..	.	...	...	1	...			.	...		.	...		.	..		...				.	1
50 ,,				.	..	.	.	6	.		10				...	...	.	..	.	.	..	.	.		..	16
39 ,,	.	.	...	.		.	...	1	..	...		.	...	.	.	.	...	.	..	..	.			.	...	1
15 ,,		.	..	.	..	..	..	...	..	...	1		...	..	..	..	.	.		..	..	.	.	.		1
12/- per day ..		.	...	.	.		...	...	...	6	...	..			...	9	...	1	..	...	..	...		.	..	16
11/6 ,, ..			.	..	..	.	...	..	..	1	...	...	.	..		1	...	..	...	...	...		...	...	...	2
11/- ,, ...	..	...	.	.	.	.	.	.	.	1	...	...		...	4	8	...	1	2	...	...	...	..	.	...	16
10/6 ,, ..			..	..	.	...	...		.	1	..		...	..		26	...	...	1	..	.	..	...	...		28
10/- ,, ..	...		..	...		..	...		..	1	1	...	.	...	7	78	...	..	10	.	...	.	...	1		98
9/6 ,, ...	.		...	...	..	..	.	...	.	1	...	..	.	..	8	18	...	...	3	...	..		.	.	.	30
9/- ,, .	.		...	...	..	..	...	..	.	2		.	.	...	10	15	...	...	8	..	..	.	..	..	.	35
8/6 ,, ...	..		...	..	..		.	..	..	...	.	...	.	...	17	52	...	...	12	..	..	...	...	...	..	81
8/- ,, ..	..		...	..	.	.	...	...	...	1	..		..		26	20	...	.	67	..	..		...	..	..	114
7/6 ,, .	.		.	...	..	.	...	...	..	.	1	..	.	...	66	9	...		134	.		...	1	.	1	212
7/- ,,	..		...	..	..	..	...	2	.	.	1		..		33	2	4	...	512	13	...	...	2	..	1	570
6/6 ,, ...	.		...	...	..	..	..	..	.	.	...		...	.	..	.	1	...	1		.		1	...	..	3
6/- ,, ..	..		...	..	..	.	...	...	..	...	..		..		..	...	1	..	..	.	..	..	.	..	.	1
5/- ,, .	..		...	..	...	..	...	...	.	..		...	...	.	...	...	...	...		1	.	...	.			1
48/- per week ...			...	...	..	.	...	...	..			..	...		..	.	.	...	5	..	...	...	.	...		5
45/6 ,, ..	..		..	..	.	...	...	...	..	...	..	...	...	..	.	...	...	..	1	.	.		...		...	1
45/- ,, .	...		...	..	..	..	...	...		...		...	..	...	..	.	4	...	4	...	...	..	7	..		15
42/- ,, ..			...	..		...		.	..	..	...	..	..	...	1	.	1	...	...	..	...	...	2	...	...	4
40/- ,, .	..		...	...	.		.	...		..	.	..	...	...	...		...	...	...	...	1		...	.	..	1
35/- ,, ...	..		...	..	.	..	...		..	...	..	..		..	2		6	...	8		..		...	.	...	16
30/- ,,	...		...	...	..	.	.	..	..	.	..				1		29	...	24	...	2	1	...	.	..	57
25/- ,, ...	..			..	..	..	...	...	.			...	...	...	..	...	9	...	11	...	2	3	...	..	...	25
22/6 ,, ...	..				...	.	...	..	..	...	.	.			...	..	...	...	1		.			..		1
20/- ,, ...	...		.	...	...	.	...	1	.	.	...	.	.				.	...	13		...		..	...	..	14
15/- ,, .	..		..	.	.	..	...	..	...	...	1			.	..	...	9	.	8	.	...		.	...	.	18
12/6 ,, .	.		.	.	..	.	..	.		..	..	.		.	.	..	1	..	...		.	.	...		...	1
10/- ,, ...	.		..	..		..	...	.	...	.	2		.	...	...		33	.	9	...	1	.		...	.	45
7/6 ,, ..						..	...	[illegible]					..	.			12	...	...					...		12
7/0 ,, ..			.	...		.	..	...	..			..	...				21	...		...	.					21
5/0 ,,	...					.											30	..			...				..	30
2/6 ,,			.	.		.		..		...	25	.		..	..		1	...		...	.	..	.	.	.	26
Total	1		1	1	1	5	100	174	7	14	135	86	63	1	175	238	162	2	834	14	6	4	13	2	2	2041

No. 58—*continued.*

GREAT NORTHERN RAILWAY.

STATEMENT of the Number and Classification of Persons employed in Traffic Branch for Year ending 31st December, 1885.

Rate	Traffic Manager.	Berthing Masters	Traffic Inspectors.	Paymaster.	Relieving Station masters	Station-masters	Clerks.	Cashier.	Foremen.	Telegraph Inspectors	Overseer Coal Traffic	Telegraph Operators	Telegraph Probationers	Tunnelkeeper	Signalmen, Shunters, and Pointsmen	Guards	Gatekeepers.	Porters.	Tarpaulin Makers	Messengers	Ladies' Attendant.	Watchmen.	Tinsmith	Laundress.	Officers in charge.	Night Officers-in charge	Total.
£525 per anm	1		...	...	.		...		...		..	.		...		.	.	..	...	..	..	...	.	...	...	...	1
420 ,,		...	2	.	...			...	...		..		.	.	.	.			..	.	..	.		...	...	..	2
370 ,,			1		...	...		.		..			...	..		..	..	.	..		...	...	...	..	...	...	1
320 ,,		...	..	1		.	1	.						..		..	...	..	.	..	...	..	...	...	...	..	2
300 ,,	...		.		..		..	...			1		...		..			.	...		..		.	...		...	1
290 ,,		...	.			5	.		.						..	.	...	..		.	.	...		...	...	...	5
280 ,,		...			1		.			...	...				..		...	.	...	..	...	...	.	.	...	...	1
270 ,,		...		.	..	4		1	...			.	...	.	..		..	...	.	.	..		..	..	.	..	5
260 ,,		...	...	...		...	2		...			.					...			.	.	.		..	...	...	2
250 ,,	...		...	.	.	..	1	..	..	.			..		...	...		..	.	..		..		...	...	...	1
245 ,,		..	...	...			1		...				...		...			..	..	.	..			...	...	...	1
240 ,,	...				.	3	..						.				...			.	...		.	...	..	...	3
225 ,,	...			...	.	1	.	..								.	...		.	.	..	.	...	...	..	...	1
220 ,,	.	1	...		2		1			.	...					.	.	.	...	..	..		...	...	...	...	4
215 ,,	..	...		...	.	.	1	.	.				...		.		.	.	...	...	..		.	.	..	...	1
210 ,,	..	.			...	7										..	..	.	..	..	.	.	.	...	...	...	7
205 ,,							1			.		.	..		.			...	...	..	.	.	...	...	..	...	1
200 ,,			...		.	..	3		.								.			.	..	.	..	...		...	3
190 ,,	...		.		.	.	1	...	.								.	.	...		...	.		.	...	...	1
180 ,,					...	8	4		.							...	.	...		..	...	...	.	..	..	...	12
170 ,,				...	...		2	.	..				.		.	...	...		.	..	..	..		..	...	...	2
165 ,,				.	...	6	3	.	...		..			1			.		.	...	..		.	...	..	.	10
160 ,,		2	..	.	...	.		..		.	.						.		...	..	.	..	.	.	...	...	2
155 ,,					.	...	3		.				.			..		...	...		.	..		...	..	...	3
150 ,,				.	...	2				..							...		..	..	...		...	...	...	..	2
140 ,,	...		.		.	...	7	...				1	..		...		.		...	..	...	..	..	.	...	...	8
130 ,,	.	..		.	..	..	.				...	.	...	.	..	.	.	..	..	..	...	.	...	...	16	5	21
125 ,,	...	.	..	..	...	..	7		..			6	.	...		.	.		..	.	..		.		...	...	13
120 ,,	..		..	...	.	...	1		.		.		.				.		...	.	...		...	.	...	9	10
110 ,,	.			.		...	2				.	5	.		...		.		..	..	...	..	.	...	.	1	8
100 ,,			...		..	..	...		...	1			...			...	..	...	..	.	..	..	...	.	.	4	5
95 ,,	.		..			.	5	..	.	...	.	14	.		.	...	...	...	...	.	...	..	..	..	...	..	19
90 ,,			.	...	.	...	1							.	.	.	.		.	..	...	...	.				.	1
84 ,,		.	...	..		.		.	.	..		2	.		.		..	..	...	...	...	..	...	.			2
80 ,,	...		...			.	3		.			14			...	...			...	..	...		..	...		...	17
75 ,,						...	1				...		..		.	.			.	...	...	...	...	...	..	..	1
65 ,,	.		.		...	.	5		.				.	...	..	...	..	.	..	..	...		..	.	.	.	5
60 ,,			..	.	.	.	...					18		...	.		..	...	.	...	...		.	.	.	..	18
50 ,,						.	4				...	6			..	..	.	...	..	..	...		.	..	.	...	10
40 ,,			..	...	.		1		..			...			.	...	..	..	...	...	...		..	.	...	..	1
15 ,,			..		.	.	..		.		.	6	.	.	.	..	...	..	.	...	...		.		...	...	6
55/- weekly.		...	.		..	.		.	.				.		1	.	..	..	...	...	.		..		...	..	1
49/- ,,	...	.	.		.	..		.		...		..			1	.	..	..	..	..	...	...	...		...	...	1
48/- ,,		..			.	.			...		.	...	.		1	..	...	.	...	.	...	...	.	..	...	...	1
42/- ,,			.		..	...	1	.	..			...	..		.	.	.	.	.	.	...	2	...	.	..	...	3
35/- ,,	...	...	...		.		...			...			.		.	...	1	.	..	...	..		...	...	...	...	1
30/- ,,	...	...	...	...	.	...	..	.	..			...	...	.	.	..	2	.	..	.	...	..	...	..	.	...	2
25/- ,,			...	...	..	...	.	...		..	.		.		...	...	1	.	.	..	1	...		1	.	..	3
20/- ,,			.	...	.		...	.	.			...	...		..	...	2	1	...	3	1	...	...	..	...	...	7
17/6 ,,	.		..			.	...	.	..			...	...		...	..	2	..	...	...	...	...	...	...	...	..	2
15/- ,,		.	.		.	.	...	..	.		.		...		.		82	...	...	1	...	...	...	..	.	...	83
12/6 ,,			...		..	.	...	...	.		..	.	...	.	...		5			...	...	..	..	..	.	...	5
12/- ,,		.			.	.			...				.		.		1		.	...	...	...	..	..		...	1
10/- ,,			...		..		.	...	.				..		..	.	42	...	...	..	...	..			..	...	42
7/6 ,,		...	..			.		.					.	.	.		4	.	...	...	.	.			...	...	4
2/6 ,,		.		..	...	..		...				23			.		...	.	.	..	..	...		. .		...	23
13/- per day.	..		...			.	.		I	...	...				..	.			.	..	.	.		...	...	...	1
12/- ,,		...	.	...	.	.		...	2			...	...	...		...	...	..		..	...	...	..	...	...	...	2
11/- ,,		...	.		..	..	...		1			...	...	.	2	3	.	..	..	..	.	.	..			..	6
10/6 ,,	.				..	...	.								.	5	.			...	..	.		...		...	5
10/- ,,			..		.	. .		...	1	. .				...	4	13	.	8	1	..	.			...		.	27
9/6 ,,	.		..		...			...		.		...		...	4	2	...			...	...				...	. .	6
9/- ,,		...	.		...	.	...	.			..	...	..		3	16	..	10	.	.	..	...		..	.	..	29
8/6 ,,		.	..	.	.							.			6	10		5	..	..	...		1	.		...	22
8/- ,,						...				...					10	9		10	...	.	.	1	.	...	...	...	30
7/6 ,,			.		.							.			14			45	4	.	.	1	.		...	.	64
7/- ,,				...	.	..									7	.	16	146	2		.	4		..	...	...	175
6/6 ,,			...		.	..	...			.	...				...	...	1	1	..	..	.	. .	..		...	..	2
6/- ,,	.		.						...					.	..		4	1	...		...	.	.		.	...	5
5/6 ,,	...	...	..		.					...		...	...					1		..		..					1
5/- ,,			..		..				..	...	.		.	...	1		...	1			..	...	...		...	...	2
4/- ,,					..	..									1			2	.		..		...	...		.	3
	1	3	3	1	3	36	62	1	5	1	1	72	23	1	55	58	163	231	7	4	2	8	1	1	16	19	778

No. 58—*continued.*

STATEMENT of the Number and Classification of Persons employed in Traffic Branch, Tramways, for the year ending 31st December, 1885.

Rate.	Superintendent.	Clerks.	Housekeeper.	Inspector.	Ticket Clerks.	Messenger.	Waiting room Attendant.	Traffic Foremen.	Timekeeper.	Conductors.	Staffmen.	Pointsmen.	Shunters.	Point-cleaners.	Flagmen.	Car-cleaners.	Car-oilers.	Lamp trimmers.	Special Conductors.	Total.
£550 ℔ annm.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
£270 „ ...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
£205 „ ...	...	2	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3
£155 „ ...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
£150 „ ...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
£120 „ ...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
£105 „ ...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
£90 „ ...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
£78 „ ..	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
£50 „ ...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	1
£39 „ ...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
80/- per week..	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
15/- „ ...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
12/- per diem	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2
11/- „ ...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2
10/- „ ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
9/- „ ...	...	...	...	...	...	...	...	...	...	52	...	...	3	...	...	1	...	...	3	59
8/6 „ ...	...	...	...	...	...	...	...	...	...	32	...	...	...	1	...	...	...	...	...	33
8/- „ ...	...	...	...	...	...	...	...	...	...	17	12	7	1	1	...	...	...	...	...	38
7/6 „ ...	...	...	...	...	...	...	...	...	...	8	...	5	...	2	...	...	...	...	...	15
7/- „ ...	...	...	...	...	...	1	...	...	...	5	...	2	...	2	18	26	4	...	...	58
	1	8	1	1	5	2	1	4	1	114	12	14	4	6	18	27	4	...	4	227

No. 58—*continued.*

STATEMENT of the Number and Classification of Persons employed in the Locomotive Branch of the Government Tramways in the Year 1885.

Rates.	Superintendent.	General Foreman.	Draftsmen.	Clerks	Timekeepers.	Foremen	Inspector.	Engine-drivers (Loco.)	Engine drivers (Stationary.)	Firemen.	Cleaners	Fuelmen	Fitters—Engine	Fitters—Car.	Blacksmiths.	Strikers.	Turners.	Machinists.	Pattern-maker	Boiler-makers.	Plumbers	Tinsmiths	Brass-finishers	Brass-moulders	Car-builders.	Carpenters.	Car-examiner.	Car-lifters.	Painters.	Watchman.	Labourers.	Lads.	Apprentices	Messengers.	Office-cleaner.	Pumper.	Boiler-washers.	Car-oilers.	Storeman	Lamp-trimmers	Gate-keeper	Total
£525 per annum	1																																									1
£410 ,,		1																																								1
£320 ,,			1																																							1
£315 ,,						1																																				1
£290 ,,				1																																						1
£275 ,,						1																																				1
£228 ,,			1																																							1
£218 ,,						1																																				1
£215 ,,						4																																				4
£208 ,,			1																																							1
£205 ,,				3																																						3
£170 ,,				1	1																																					2
£155 ,,				1	1																																					2
£150 ,,				1																																						1
£110 ,,			1																																							1
£120 ,,				1																																						1
£90 ,,				1																																						1
£75 ,,				1																																						1
£70 ,,																																	1									1
£50 ,,																																	1									1
15/- per week																																			1							1
13/- per day							1	48																																		49
12/4 ,,													3		1									1			1															6
12/2 ,,															2																											2
12/- ,,						1		40							2																											43
11/10 ,,															1																											1
11/8 ,,																	1				1																					2
11/4 ,,													3		2						1																					6
11/2 ,,						1											1			1									1													4
11/- ,,								11					1		1				1						5																	19
10/10 ,,																										1																1
10/8 ,,															2		3			2	2	2																				11
10/6 ,,																								1	3																	4
10/4 ,,															1		2			2	1																					6
10/2 ,,													33	3			5	2		1			1			1																46
10/- ,,								1					15				1			1		2	1						1													22
9/10 ,,													1				1									1																3
9/8 ,,																				2					1	1			7													11
9/4 ,,																									1																	1
9/2 ,,																		1																								1
9/- ,,										1	23				1											1																26
8/10 ,,																										1																1
8/8 ,,										1								4																								5
8/6 ,,												1						1								1																3
8/4 ,,																		1										2														3
8/- ,,											54	1						1										4	2		4					1	3		1			71
7/6 ,,											22	22				16		1												1	4											66
7/- ,,												8	18															2			80							3		2	1	114
6/6 ,,												7																														7
6/- ,,												4																														4
5/6 ,,												9																														9
5/- ,,																																	3									3
3/6 ,,																																	1									1
2/6 ,,																																1										1
1/9 ,,																																	1									1
8d. ,,																																	2									2
	1	1	4	10	2	9	1	100	2	99	52	18	56	4	12	16	14	11	1	9	5	4	2	2	10	7	1	8	11	1	88	1	7	2	1	1	3	3	1	2	1	583

No. 58—*continued.*

STATEMENT of the Number and Classification of Persons employed in the Permanent Way Branch of the Tramway Department, at 31st December, 1885.

	Inspectors.	Sub-Inspectors.	Clerks.	Weigh Clerk.	Time-keeper.	Gangers.	Labourers.	Gangers—Flying Gangs.	Labourers—Flying Gangs.	Blacksmiths.	Horse-drivers.	Guards.	Boys.	Total.
£245 per annum ...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
£215 " ...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
£180 " ...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
£150 " ...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
15/- per day	...	1	...	...	...	...	...	...	...	...	...	...	...	1
14/- "	1	...	...	...	...	...	...	...	...	...	...	...	...	1
12/- "	...	1	...	...	...	...	...	...	...	...	28	...	...	29
10/- "	...	...	...	1	...	1	...	1	...	1	...	...	...	4
9/- "	...	...	...	...	...	15	...	1	...	...	...	...	...	16
8/6 "	...	...	...	...	...	...	...	...	...	...	...	2	...	2
7/6 "	...	...	...	...	...	...	38	...	79	...	...	...	...	117
5/- "	...	...	...	...	...	...	...	...	...	...	...	...	1	1
4/9 "	...	...	...	...	...	...	...	...	...	...	...	...	2	2
	1	4	2	1	1	16	38	2	79	1	28	2	3	178

SUMMARY.

	No.	No.
Head Office		266
Engineer-in-Chief's Branch—		
Office Staff	75	
Field Staff	314	
		389
Engineer for Existing Lines Branch—		
Office Staff	41	
Permanent-way	3,654	
		3,695
Locomotive Engineer's Branch—		
Office Staff	33	
Locomotive Staff	2,731	
		2,764
Traffic Branch		2,819
Total, Railways		9,933
Tramway Branch—		
Rolling Stock Staff		583
Permanent-way Staff		178
Traffic Staff		227
Total, Tramways		988

No. 59.

RETURN of the Total Amount paid for Wages on the different Branches of the Railway and Tramway, 1884–85.

Branch.	South and West.	North.	Total.
	£ s. d.	£ s. d.	£ s. d.
Locomotive—			
1884	270,921 11 2	62,720 3 5	333,641 14 7
1885	305,754 9 9	66,009 2 0	371,763 11 9
Permanent Way—			
1884	292,663 17 6	63,053 1 5	355,716 18 11
1885	351,768 7 11	69,629 17 4	421,398 5 3
Traffic—			
1884	171,380 13 11	52,846 2 8	224,226 16 7
1885	174,764 10 5	52,946 10 4	227,711 0 9
Total all Branches—			
1884	734,966 2 7	178,619 7 6	913,585 10 1
1885	832,287 8 1	188,585 9 8	1,020,872 17 9
Tramway—			
1884	140,688 7 8	.....	140,688 7 8
1885	145,846 11 1	.....	145,846 11 1

No. 60.

RETURN of Free Passes issued during 1885, specifying the different services.

Why granted.	No. issued.
Visitors of distinction	281
Press purposes	245
Indian and Colonial Exhibition	3
Judges on Circuit	21
Volunteers on duty	9,318
Intercolonial Cricket Match	1
Unemployed, and to obtain employment	2,862
Immigrants	1,178
Officers and Seamen, H.M. War Ships	401
Sydney Infirmary...	1
Charitable purposes	16
Fire Brigade, Sydney	1
„ Demonstrations	28
Brookside Convalescent Home	22
Benevolence	47
Water Conservation Commission	17
Inspector of Blind	1
Deaf, Dumb, and Blind	100
Railway Bridges Commission	8
Scientific purposes	7
Victoria Militia	12
Members and relations of Contingent	72
Miscellaneous	77
Total	14,807

Plate 2

NEW SOUTH WALES RAILWAYS.

COMPETITIVE DESIGNS FOR THE HAWKESBURY RIVER BRIDGE, NEW SOUTH WALES.

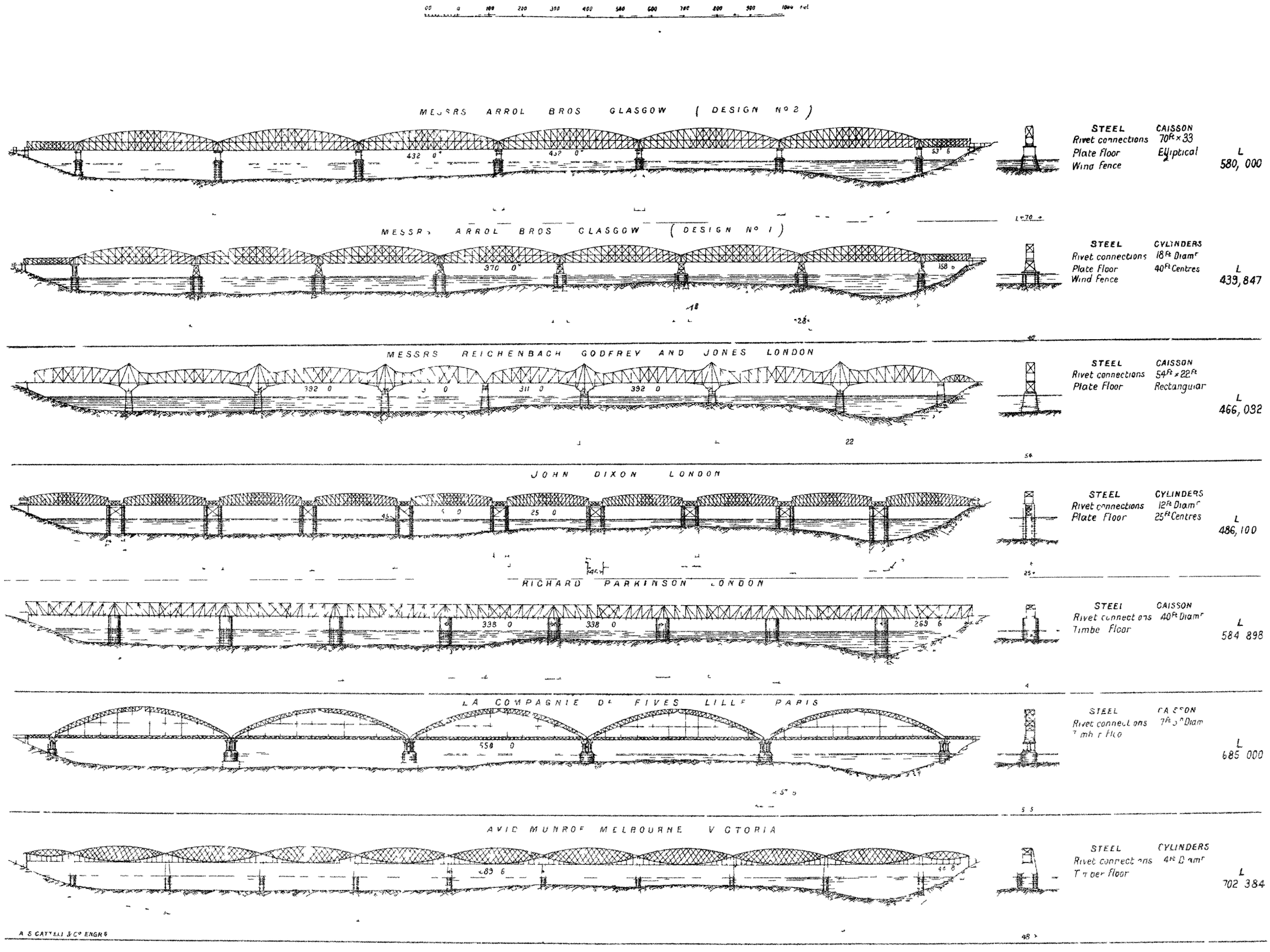
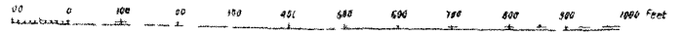


Plate I

NEW SOUTH WALES RAILWAYS.

COMPETITIVE DESIGNS FOR THE HAWKESBURY RIVER BRIDGE, NEW SOUTH WALES.



ELEVATIONS	SECTIONS	REMARKS: SUPERSTRUCTURE	REMARKS: PIER AT BASE	REMARKS: AMT OF TENDER
THE PHŒNIX BRIDGE Co PHILADELPHIA PA U S A		IRON Phœnix construction	PHŒNIX COLUMNS Cast Iron Screws	£ 280, 800
THE EDGEMOOR IRON Co WILMINGTON DEL U S A		STEEL Pin connections For Eye bars & Struts, Rivets elsewhere Timber cross Sleeper Floor	CYLINDERS 20ft Diamr 40ft Centres	£ 296,350
THE UNION BRIDGE Co NEW YORK U S A		STEEL Pin connections For Eye bars & Struts Rivets elsewhere Timber cross Sleeper Floor	CAISSON 24ft by 52ft Rounded ends	£ 327, 000
MESSRS FFORDE AND YOUNG LONDON		STEEL Rivet connections	CYLINDERS 10ft 6ins Diar 28ft centres	£ 377, 500
THE BUTTERLY IRON Co LONDON, AND MESSRS ROYCE SYDNEY N S W		STEEL Rivet connections Timber Floor	CYLINDERS 16ft Diamr 28ft Centres	£ 403, 367
MESSRS HANDYSIDE AND Co DERBY (DESIGN No 2)		STEEL Rivet connections Plate Floor Wind Fence	CYLINDERS 15ft Diamr 28ft Centres	£ 456, 000
MESSRS HANDYSIDE AND Co DERBY (DESIGN No 1)		STEEL Rivet connections Plate Floor Wind Fence	CYLINDERS 15ft Diamr 28ft Centres	£ 435, 000

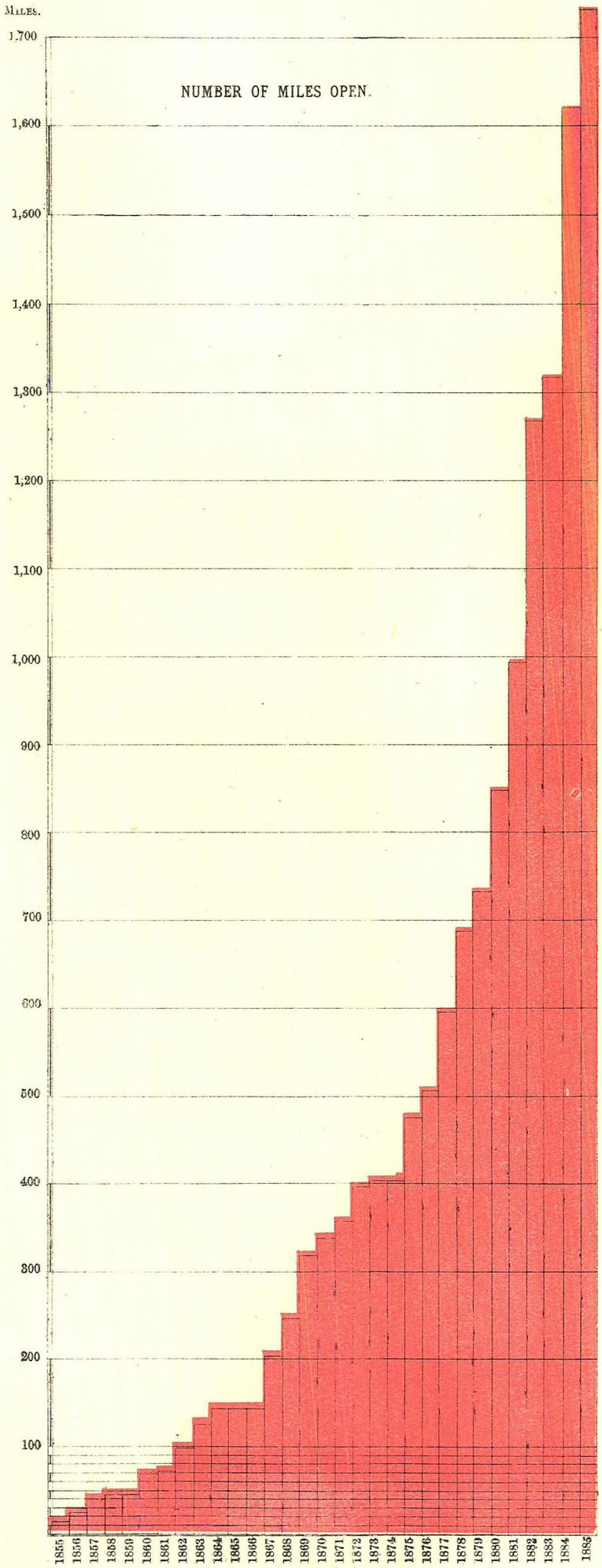


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

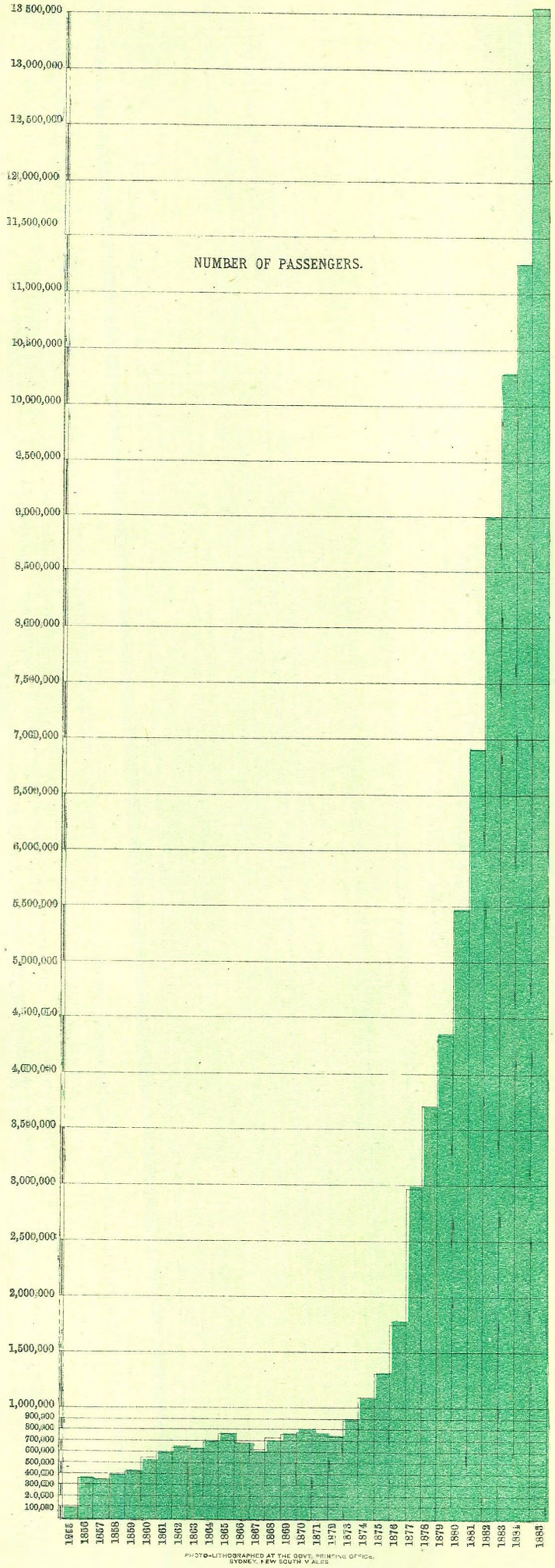


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES

TONNAGE OF GOODS.

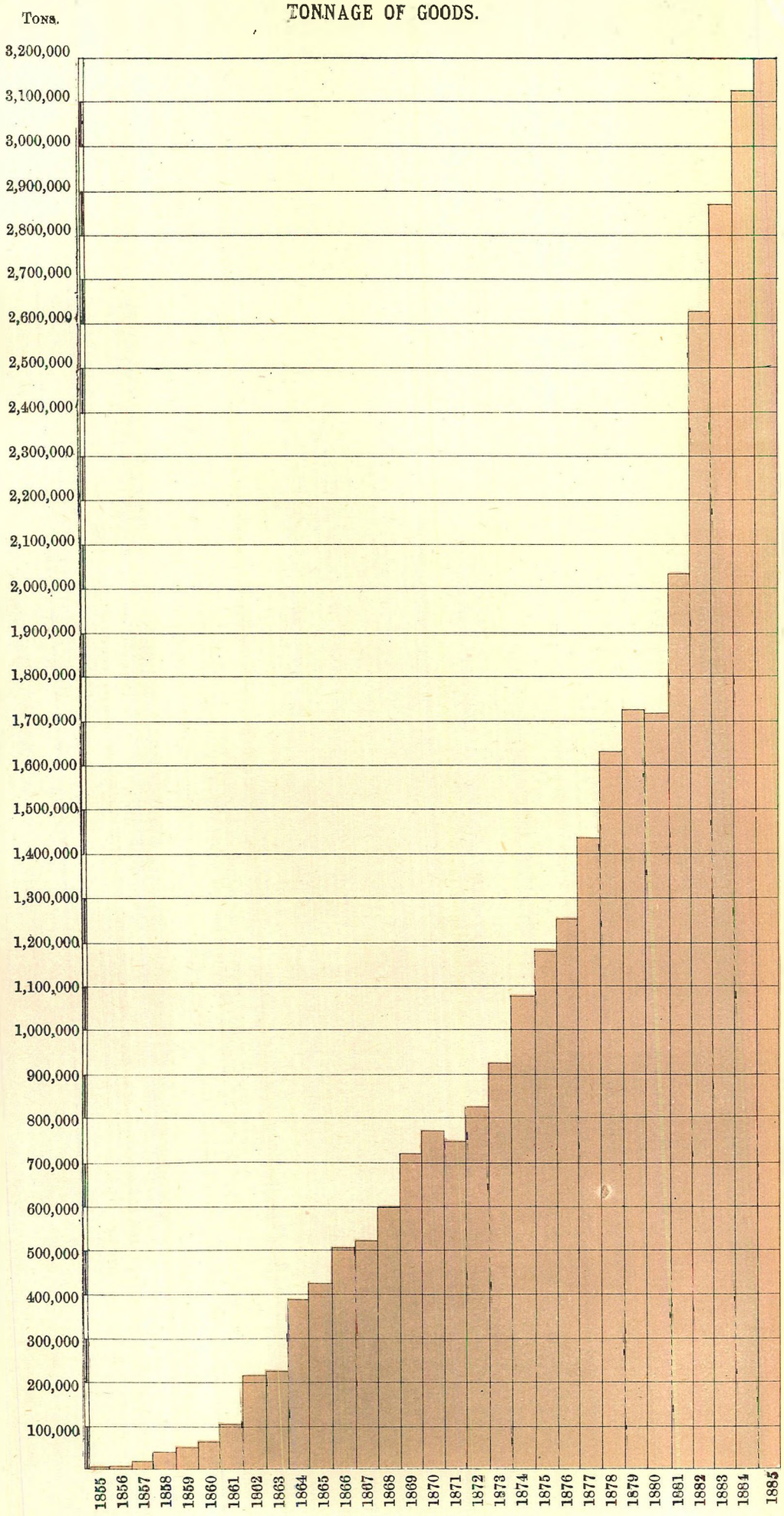
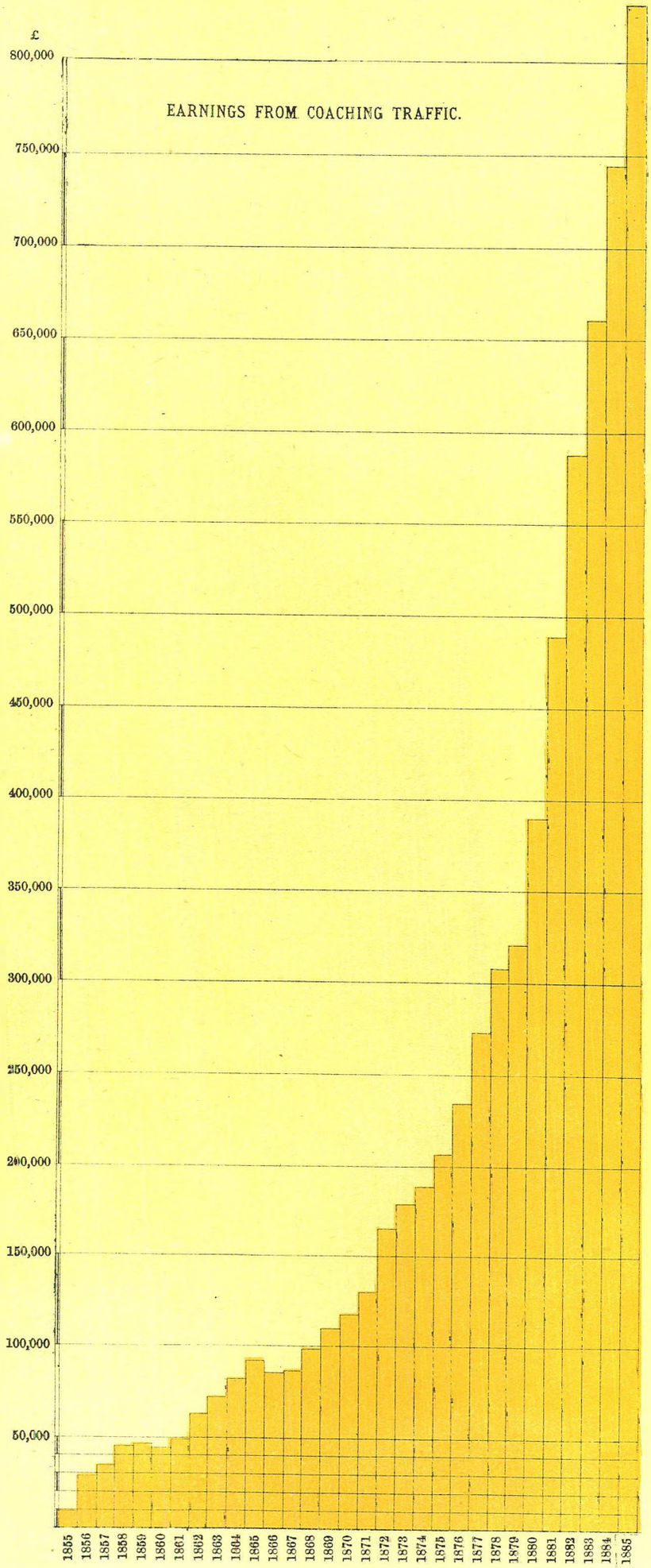


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.


EARNINGS FROM COACHING TRAFFIC.
£
800,000
750,000
700,000
650,000
600,000
550,000
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
1855
1856
1857
1858
1859
1860
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1884
1885

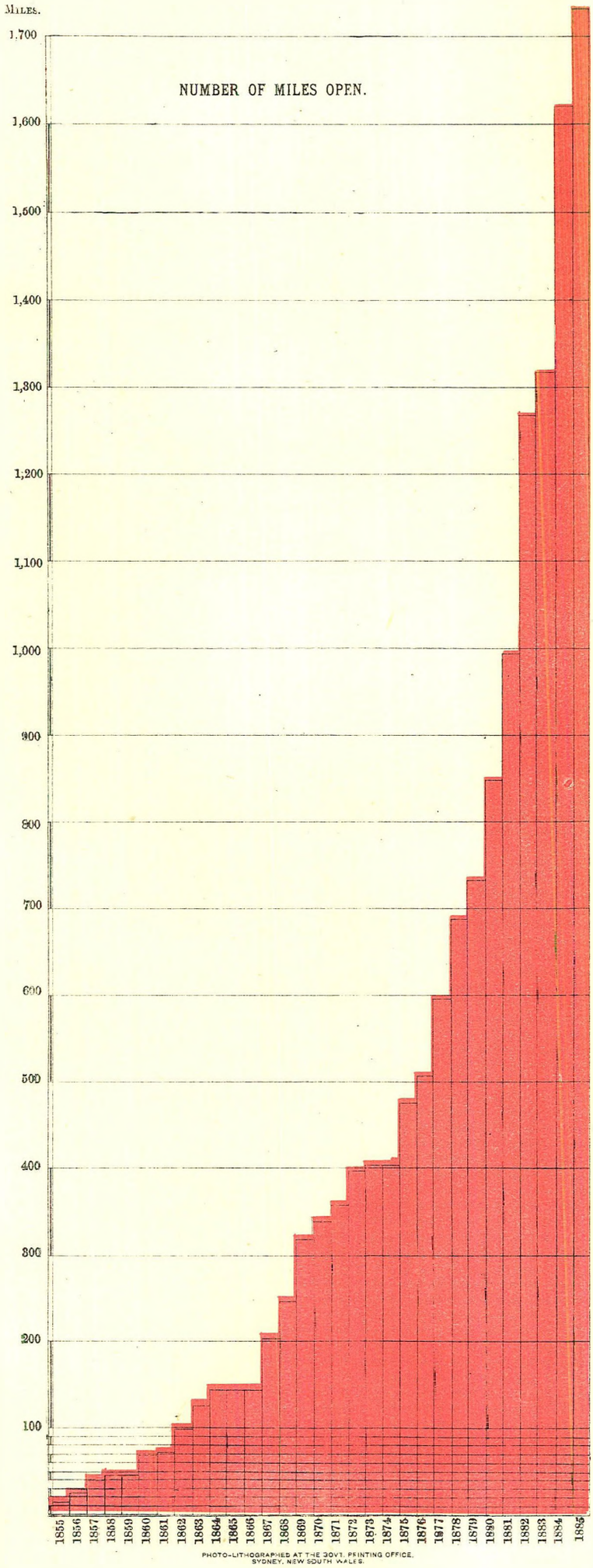


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

2

EARNINGS FROM GOODS TRAFFIC.

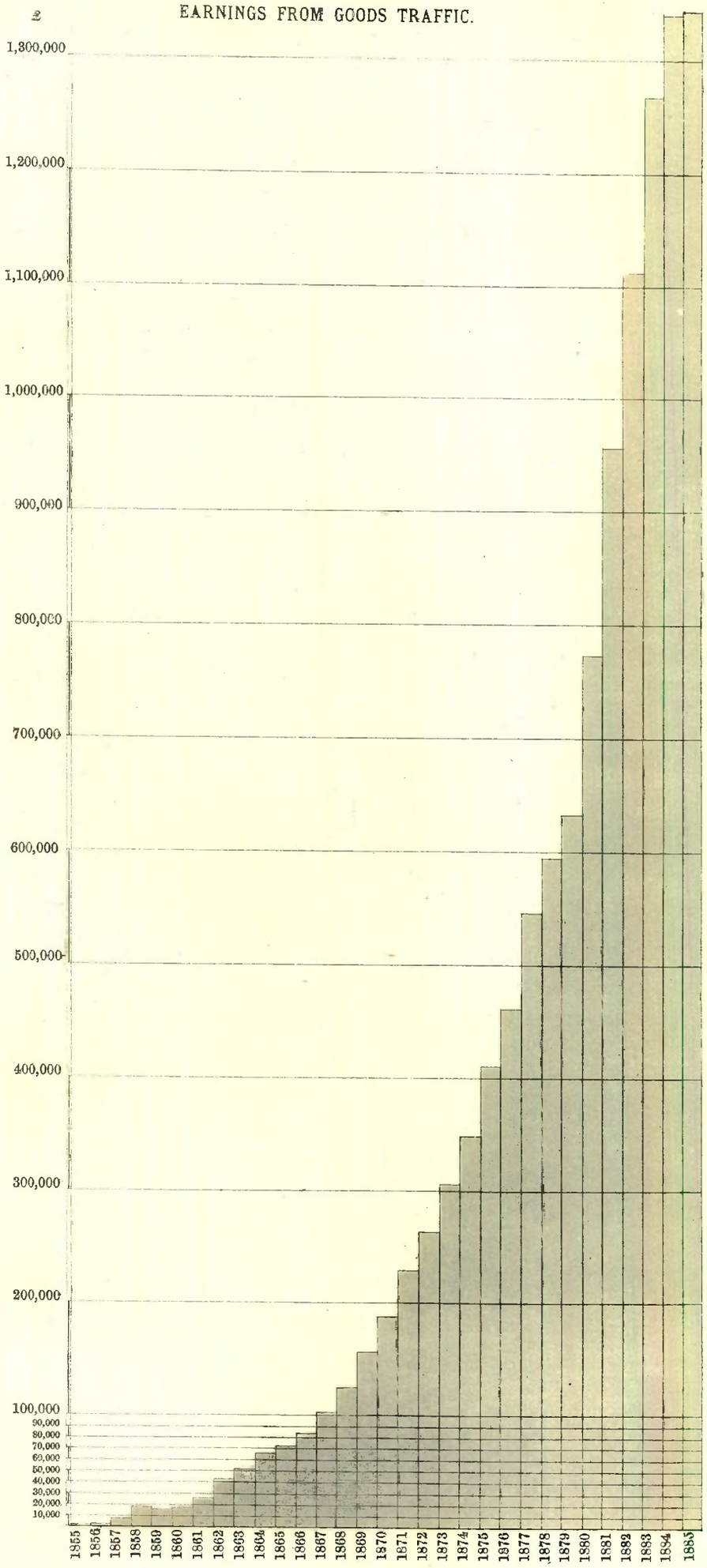


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE.
SYDNEY, NEW SOUTH WALES.

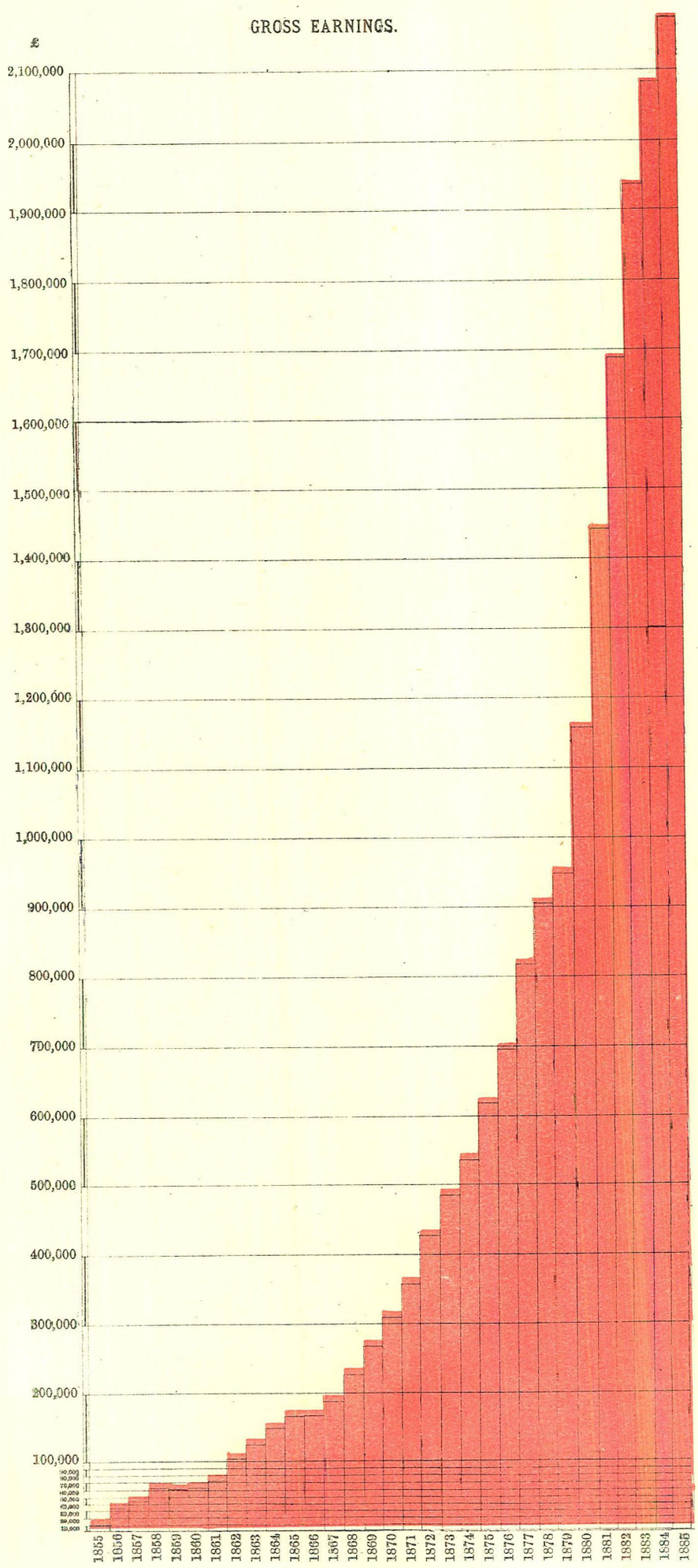
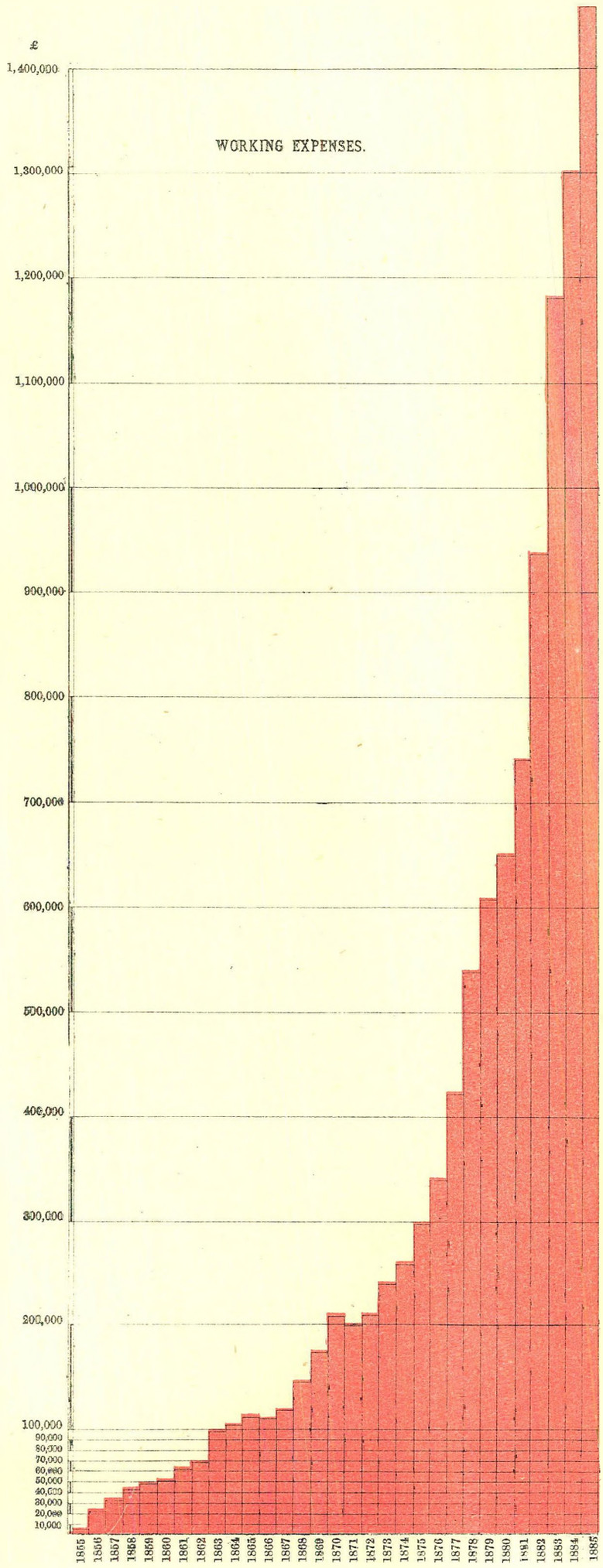


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE.
SYDNEY, NEW SOUTH WALES.


WORKING EXPENSES.
£
1,400,000
1,300,000
1,200,000
1,100,000
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
1855
1856
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1884
1885

EARNINGS PER TRAIN MILE.

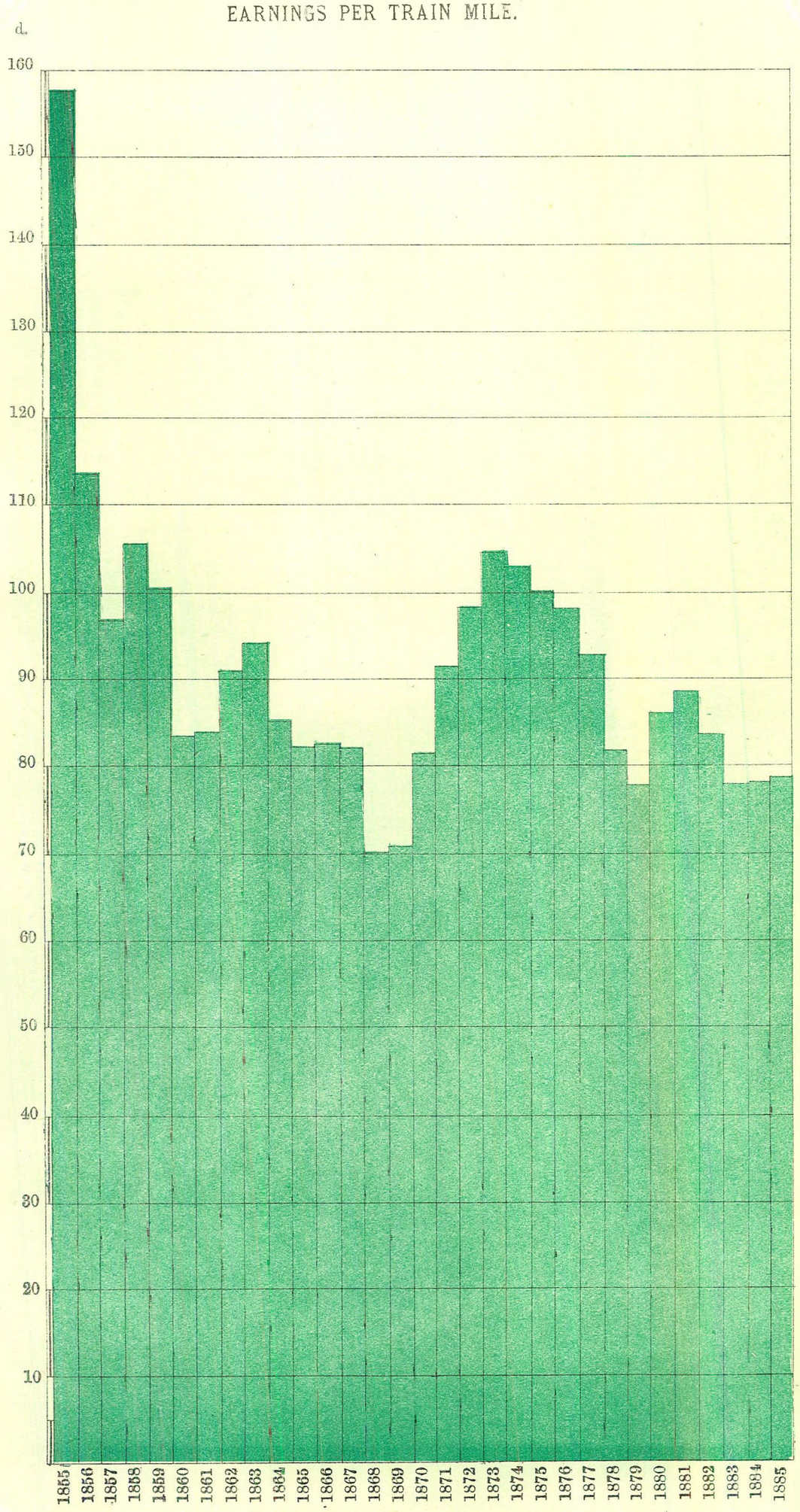
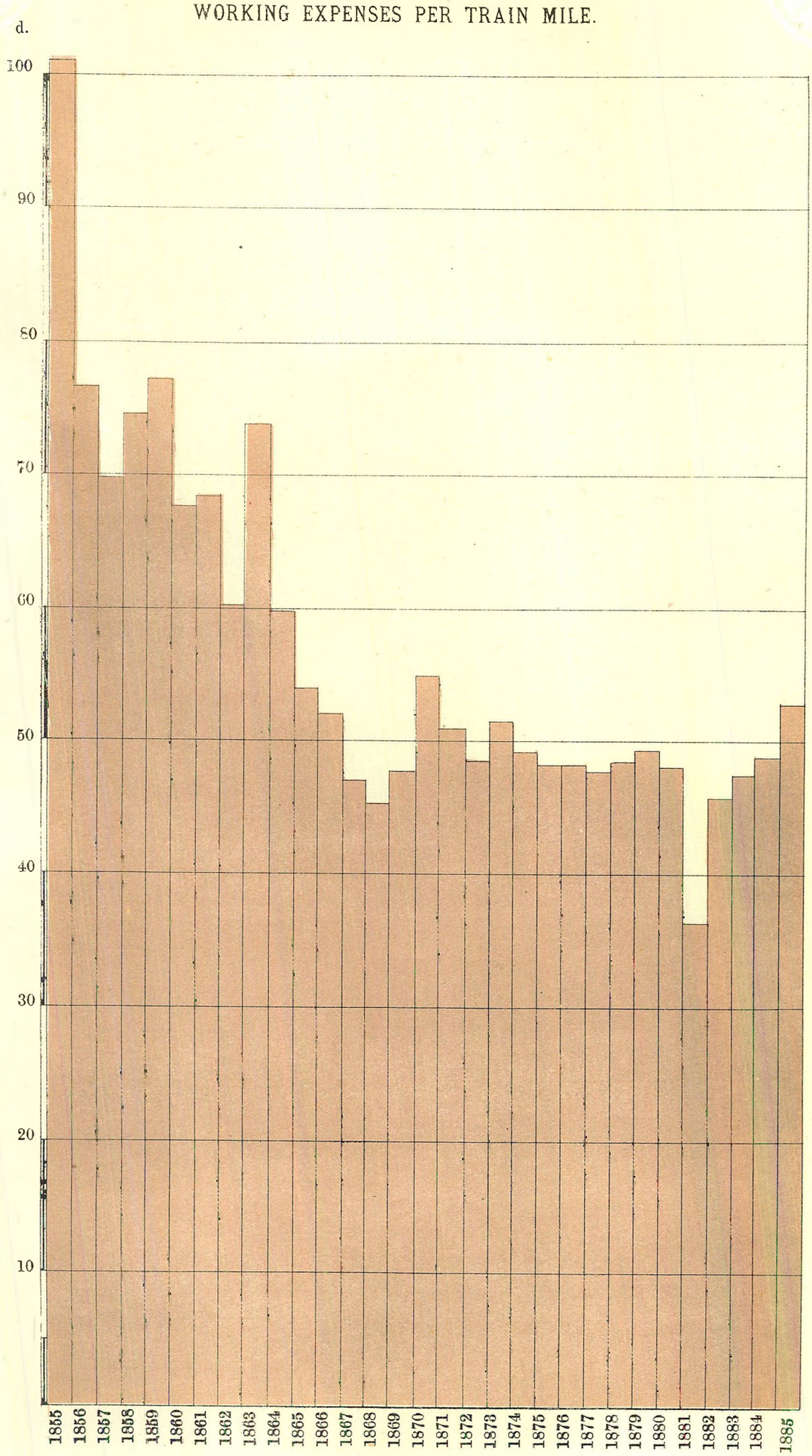


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

WORKING EXPENSES PER TRAIN MILE.



PERCENTAGE OF WORKING EXPENSES TO GROSS EARNINGS.

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

NET EARNINGS.

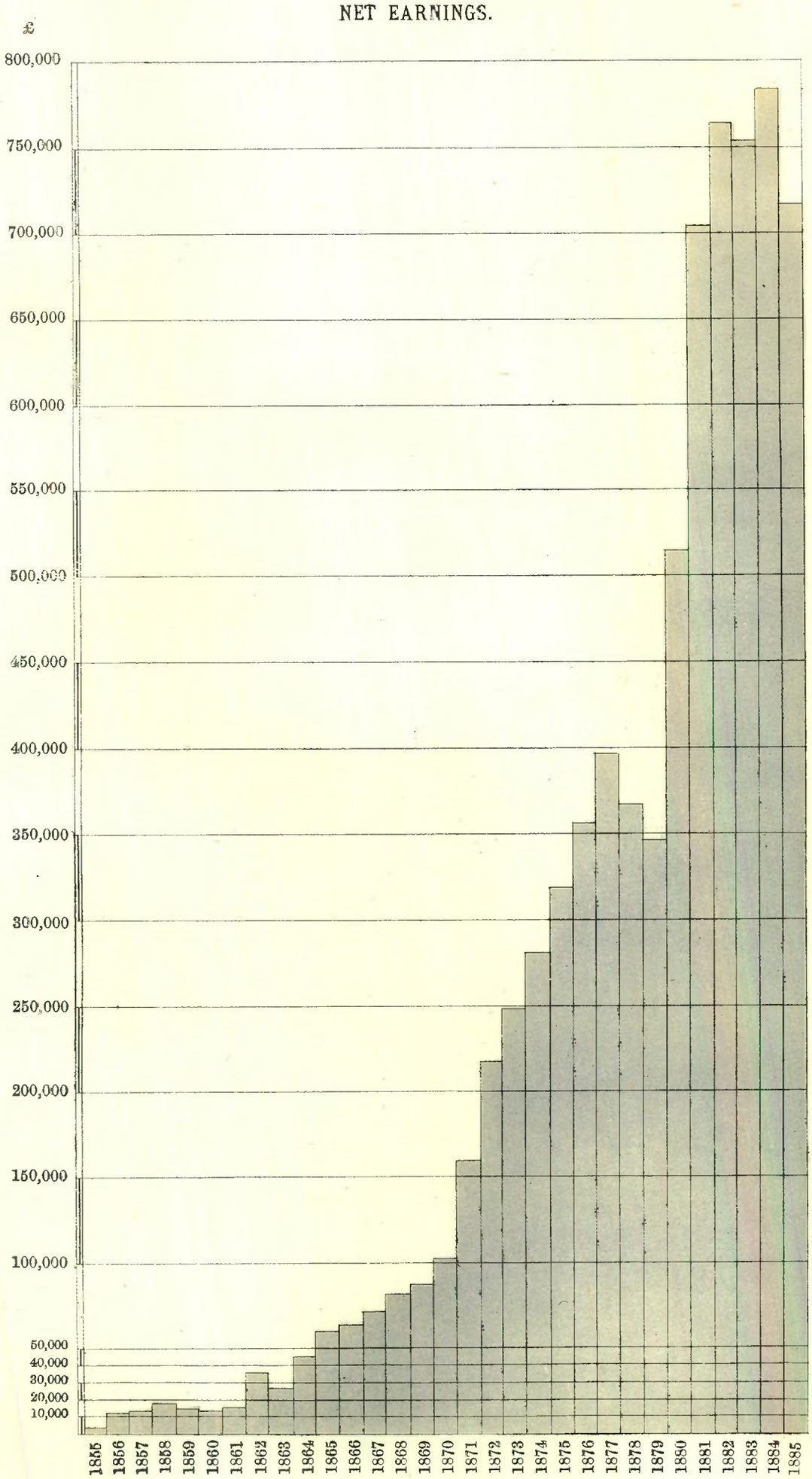


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE
SYDNEY, NEW SOUTH WALES.

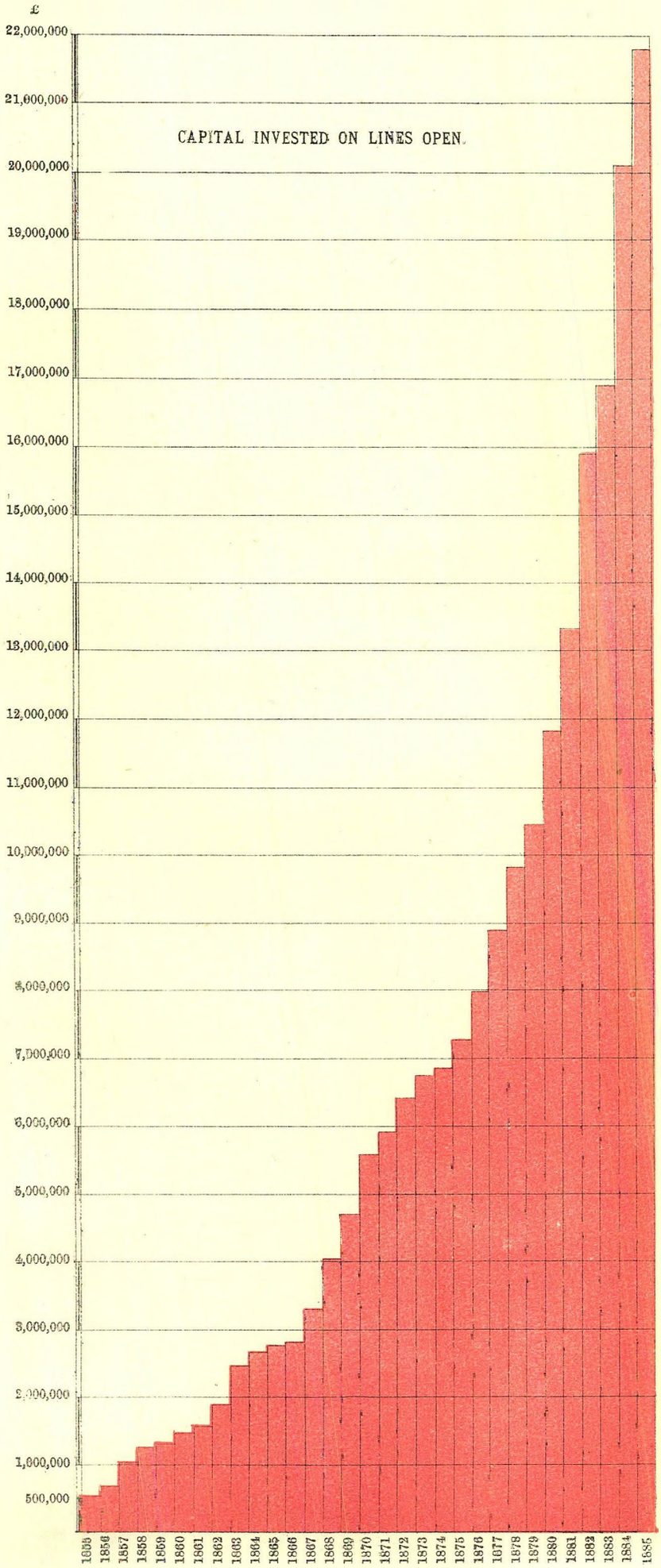


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE.
SYDNEY, NEW SOUTH WALES

INTEREST ON CAPITAL.

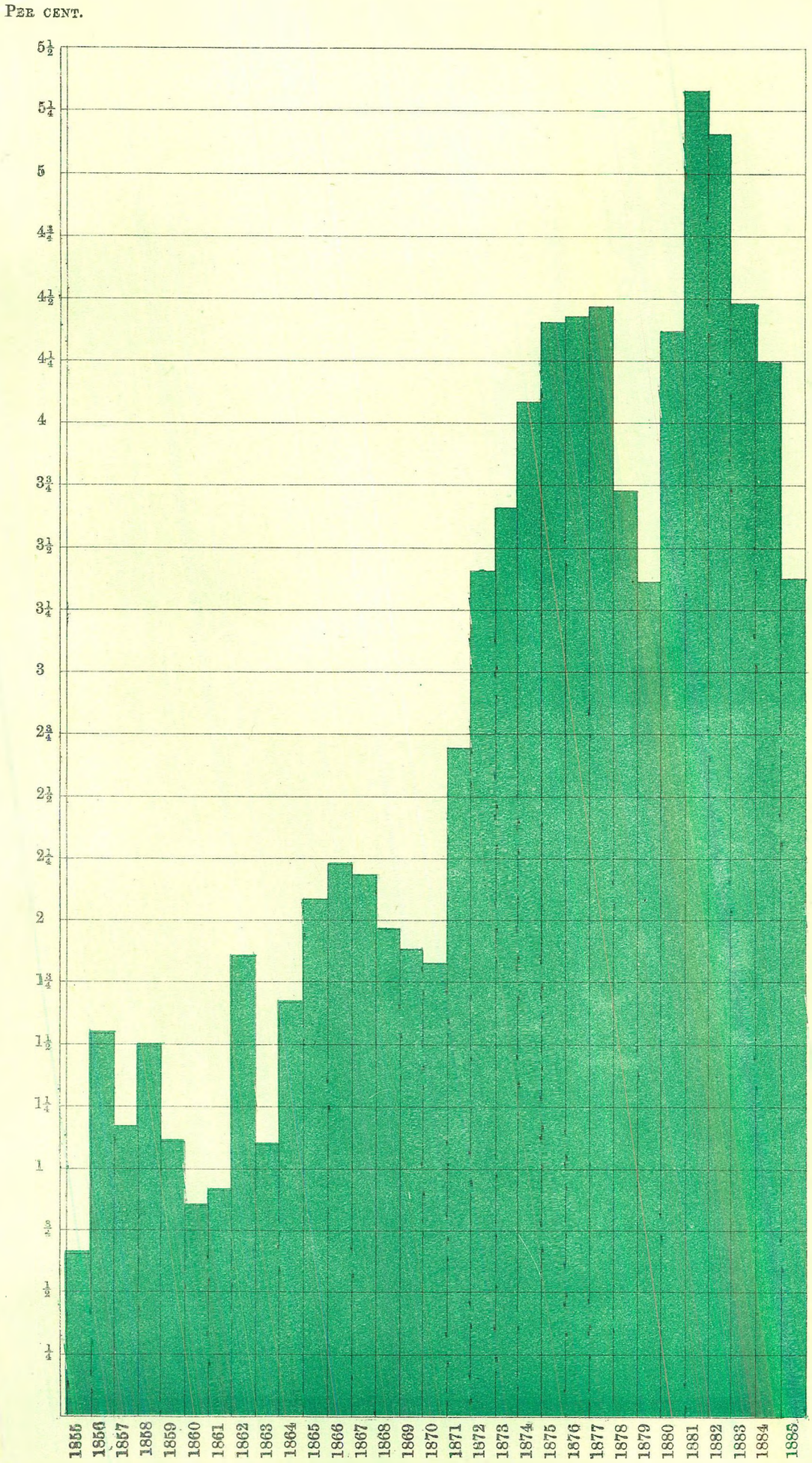


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

MAP
SHEWING THE
RAILWAY SYSTEMS
OF
AUSTRALIA

Comparative Statement showing Railway Mileage, Earnings, &c., for the year 1885.

	Area of Country.	Population.	Miles of Railway open.	Authorized.	Total mileage when completed.	Capital expended on lines open.	Total authorized.	Gross receipts.	Net receipts.	Interest on Capital.
	sq. miles.					£	£	£	£	£
New South Wales...	310,700	980,573	1,732	1,689	3,421	21,831,276	40,207,161	2,174,368	716,215	3·37
Victoria	87,884	991,869	1,676	1,210	2 886	22,914,449	21,822,056	2,181,932	904,507	3·95
South Australia ...	380,070	319,769	1,063	724	1,787	7,242,605	11,141,168	659,104	255,308	3·53
Queensland.. ...	668,224	326,916	1,434	391	1,825	9,266,183	16,625,487	733,336	280,196	3·12

With the exception of the figures relating to the population the Victorian and South Australian statistics refer to the year ended 30th June, 1885.

(Sig. 443.)

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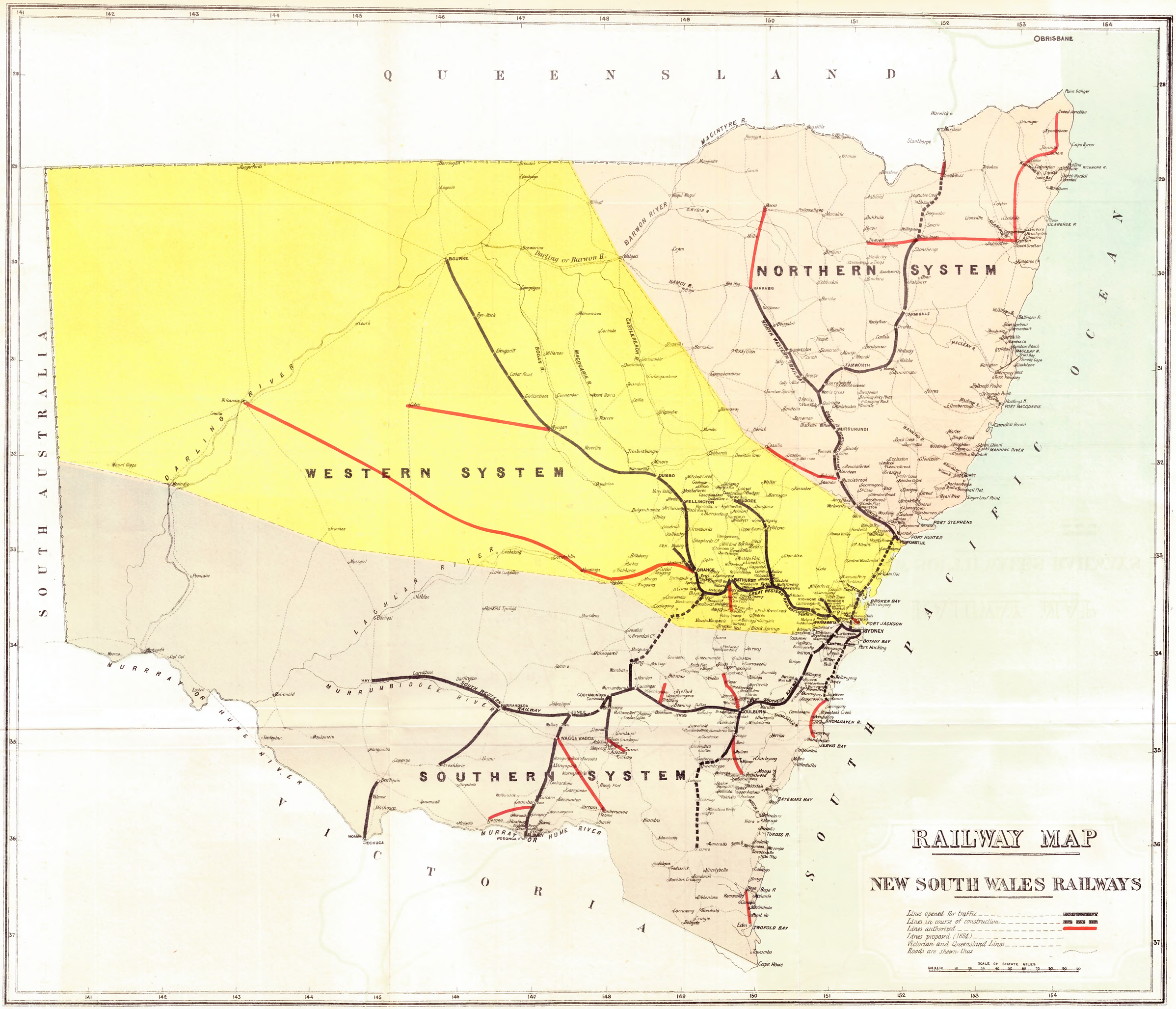
SYDNEY, NEW SOUTH WALES.



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Chas A Goodeley

Commissioner for Railways, July, 1886.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(REPORT OF SIR JOHN FOWLER ON SYSTEM OF LIGHT LINES.)

Ordered by the Legislative Assembly to be printed, 7 April, 1886.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works in answer to Question No.* 12 *on Votes and Proceedings, No.* 40, *of the 6th April,* 1886.]

Sir John Fowler to The Secretary for Public Works.

Sydney, 23 March, 1886.

Sir,

I beg to acknowledge the receipt of your request, conveyed to me through Mr. Rae, that I should furnish you with a report on the subject of light railways as feeders to the trunk lines, in the Colony of New South Wales.

It is fortunate, in some respects, for the Colony that the decision on this important question has not been required until after considerable experience has been obtained in solving a similar problem in other countries.

The question generally presents itself, as in the case of New South Wales, at a time when the more important trunk lines have been carried out.

The permanent way on trunk lines, in every country, will nearly always be found to be adequate for the employment of heavy and powerful goods or passenger engines.

The time however inevitably arrives when it becomes a question of the highest public importance to adopt a policy of light and cheap railway extension into thinly populated districts, to serve as branches and feeders to the trunk lines.

It may be that the traffic for such extension is so small as to be barely remunerative, and yet the circumstances are frequently such that the general interests of the country, and especially the indirect public advantages which are certain to follow, completely justify their adoption.

Probably in no country in the world is this problem of light and cheap railway extension so important as in the Colonies of Australia, in consequence of its vast and valuable interior.

I have ventured on this short common-place introduction even with the risk of being supposed to be writing platitudes familiar to every public man, and I have done so for the reason that, although the principles may be perfectly simple, and of universal recognition, it has been found that it is possible to err greatly in the practical work of giving effect to them.

It may be taken for granted that nearly all proposed railway extensions as feeders to trunk lines are divisible, and it will be convenient to divide them into the three following categories, viz. :—

1st. When the line *must* always be worked in connection with and by the rolling stock of the trunk line adjacent.

2nd. When by their length and position the new lines can be treated as distinct systems, so far as regards the engines to be employed in working the traffic.

3rd. When the position of the new lines is such that it would obviously be a great economy and convenience at some future time to use the ordinary rolling stock of existing lines in working them.

With regard to the *first* category the decision will generally be easily made, as their length and local position will almost of necessity settle the question in the only one possible way, and as such lines will usually be short no further observations need be made with reference to them.

The *second* and *third* categories are of equal importance, and very careful consideration must be given to the condition of each case.

On the one hand the object of minimum expenditure would not be obtained by adopting the exact permanent-way of the trunk lines on the ground that you are thereby certain to be safe, and on the other hand it is necessary to avoid the reckless feeling which sometimes finds expression in the words, "Oh! we *must* have a very light, cheap railway, whatever happens afterwards as regards its cost of working or reconstruction."

As

As both these mistakes have been made within my knowledge—and they are very serious mistakes—I have ventured to mention them. I will assume, however, in your case that due and careful consideration has been given to the subject by yourself and your experienced and responsible engineers and traffic officers, and you have decided that certain extensions may be safely treated as distinct systems as regards the weight of engines to be employed.

I mention engines because I think the permanent-way should always be of such strength and character that wagons and carriages can pass everywhere without change.

The preliminary question having been settled, the line has to be surveyed, and the works and permanent-way determined upon.

Let me here take the liberty of advising that with your light railways more than usual pains should be taken by the responsible engineers to obtain the best gradients and curves with the least possible work. I call attention to this point because it was far too common until recently to treat light railways in a very light and careless manner, and to make the formation level below the flood line of valleys, and apparently forgetting that even light railways have to be maintained and worked, have actually laid sleepers without proper ballast or regular gradients. I need hardly say that the result has always been a great waste of money, and the permanent distortion of the rails. No doubt such a proceeding has never taken place without exceptional ignorance, and it is not likely to be often repeated; but as such things have happened it is well to be guarded against them. The line having been carefully surveyed, and the gradients fixed (which in your future extensions will generally be of a favorable character), the important decision of the permanent-way has to be arrived at.

The saving which might be effected by adopting a rail below 50 lbs. per yard in weight has not been found to be true economy under any circumstances.

With a 50-lb. well designed flat-bottomed rail you have sufficient strength, with about 2,000 sleepers per mile, to carry without injury or rapid wear a 24-ton locomotive on six wheels, and such a rail will have at the same time a sufficient amount of wearing material to last for many years before renewal.

The permanent road and these engines would be capable of carrying all profitable goods and passenger traffic on the line included in the *second* category in a very efficient and economical manner, and waggons and carriages of every description now used might be worked over them.

Local sleepers of every description, except from trees of an inferior kind, would of course be used, and of dimensions slightly less in section (but not in length) than those now in use.

The cost per mile of such a railway cannot be easily estimated without detailed plans and sections, and local information as regards sleepers, ballast, fencing, bridges, and culverts; but, assuming the line to be over nearly a level plain, which I believe many of the extensions will be, and the facility for procuring sleepers, ballast, &c., fairly favorable, I think you will be able to complete a railway of the light but efficient character I have indicated, for about £2,500 per mile, without land or the railway charges on existing lines for the conveyance of materials.

For railways under the third category, or where it is probable that at some future time it may be found desirable to use all the existing rolling stock, except specially heavy engines, I would advise a slight modification in the permanent way I have suggested for the second category.

I would here propose 60-lb. flat-bottomed rails, with sleepers of the same size as for the trunk lines (which I may observe are rather small, especially in length) and of the same number per mile. The additional cost of such a permanent way would be about £200 per mile over the 50-lb. permanent way, and if made suitable at any time for the ordinary engines, a further cost of about £200 per mile would be required for extra sleepers, &c.

When I say that with the additional sleepers the ordinary engines may safely run over the line (excepting as before mentioned, a few of the very heavy ones) of course I mean for the limited number of trains which might be expected on such lines, and not that a 60-lb. permanent way would be a proper one for trunk lines having numerous as well as heavy trains.

The permanent way I have indicated in both cases must be understood as the minimum. I would recommend, and I would venture to suggest for your very serious consideration, whether it might not be prudent, if the present very low price of rails continues, to adopt a 60-lb. rail for all your light lines. The additional cost would be small, whilst the advantage and convenience would be considerable.

I have, &c.,
JOHN FOWLER.

[3*d*.]

Sydney: Thomas Richards, Government Printer.—1886.

1885-6.

NEW SOUTH WALES.

RAILWAY BRIDGES INQUIRY COMMISSION.

REPORT

OF THE

ROYAL COMMISSION,

APPOINTED ON THE 22ND APRIL, 1884,

TO INQUIRE INTO THE STABILITY OF CERTAIN IRON BRIDGES CONSTRUCTED ON THE EXISTING LINES OF RAILWAY; AND ALSO OF THE TIMBER APPROACHES TO THE BRIDGE OVER THE MURRUMBIDGEE RIVER, AT WAGGA WAGGA, IN THE COLONY OF NEW SOUTH WALES;

TOGETHER WITH THE

MINUTES OF EVIDENCE, DIAGRAMS,

AND

APPENDICES.

Presented to Parliament by Command.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1886.

[10s. Cd.] 795—a [866]

ANALYSIS OF THE REPORT

OF THE

RAILWAY BRIDGES INQUIRY COMMISSION.

1885-1886.

	PAGE.
1. COMMISSION	5-6
2. EXTRACTS FROM MINUTES OF PROCEEDINGS	7-39
3. STATEMENTS OF THE CIRCUMSTANCES WHICH LED TO THE APPOINTMENT OF THE COMMISSION	40-48
4. PROGRESS REPORT	49
5. FINAL REPORT	53
6. MINUTES OF EVIDENCE	1-73
7. SPECIAL REPORTS	77-101
8. APPENDICES	105-141
9. PLATES AND DIAGRAMS	144

Members of the Commission.

G. A. MORELL, C.E., President.

W. C. KERNOT, M.A., Professor of Engineering, Melbourne University.

W. McD. COURTNEY, Memb. Inst. C.E., M.I.M.E.

W. H. WARREN, A.M.I.C.E., Professor of Engineering, Sydney University.

OWEN BLACKET.

Commission.

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

To Our trusty and well-beloved—

GUSTAVUS ALPHONSE MORELL, Civil Engineer; W. C. KERNOT, Professor of Engineering, University of Melbourne; W. McD. COURTNEY, Civil Engineer, M.I.C.E., M.I.M.E.; W. H. WARREN, Civil Engineer; and OWEN BLACKET, Esquire.

Greeting:

KNOW ye that We, reposing great trust and confidence in your ability, zeal, industry, discretion, and integrity, do by these presents authorize and appoint you, or any three or more of you, as hereinafter mentioned, to make a dilligent and full inquiry into the stability of certain Iron Bridges constructed on the Existing Lines of Railway, and also of the Timber approaches to the Bridge over the Murrumbidgee River, at Wagga Wagga, in Our Colony of New South Wales: And We do by these presents give and grant to you, or any three or more of you, at any meeting or meetings to which all of you shall have been duly summoned, full power and authority under the Act 44 Victoria No. 1, to call before you all such persons as you may judge necessary, by whom you may be better informed of the truth in the premises, and to require the production of all such books, papers, writings, and all other documents as you may deem expedient; and to visit and inspect the same at the offices or places where the same or any of them may be deposited, and to inquire of the premises by all lawful ways and means; also, to visit and inspect the Bridges to ascertain the character of the materials and workmanship therein: And Our further will and pleasure is that you, or any three or more of you, after due examination of the premises, do and shall, within the space of four months after the date of this Our Commission, or sooner if the same can reasonably be, certify to Us, in the Office of Our Secretary for Public Works, under your or any three or more of your hands and seals, what you shall find touching the premises: And We hereby command all Government Officers and all other persons whomsoever within this the Colony of New South Wales, that they be assistant to you and each of you in the execution of these presents: And We appoint you, the said GUSTAVUS ALPHONSE MORELL, to be President of this Our Commission.

In testimony whereof, We have caused these Our Letters to be made Patent, and the Great Sea of Our Colony to be hereunto affixed.

Witness the Right Honorable SIR AUGUSTUS WILLIAM FREDERICK SPENCER LOFTUS (commonly called LORD AUGUSTUS LOFTUS), Knight Grand Cross of the Most Honorable Order of the Bath, a Member of Her Majesty's Most Honorable Privy Council, Our Governor and Commander-in-Chief of Our Colony of New South Wales and its Dependencies, at Government House, in New South Wales aforesaid, this twenty-third day of April, in the year of Our Lord one thousand eight hundred and eighty-four, and in the forty-seventh year of Our Reign.

By SIR ALFRED STEPHEN, Lieutenant-Governor, acting by virtue of a Deputation under the Great Seal, from His Excellency the Governor, now absent from the Colony.

By His Excellency's Command,—

ALEXR. STUART.

Entered on Record by me, in REGISTER OF PATENTS, No. 12, pages 67–8, this twenty-fourth day of April, one thousand eight hundred and eighty-four.

(For the Colonial Secretary and Registrar of Records),

CRITCHETT WALKER,

Principal Under Secretary.

WHEREAS

WHEREAS it is necessary to extend the time by which the Commissioners are to make their report in the above matter: Now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the said Commissioners are to make such report to and for the period of four months beyond the time in and by the said Commission appointed for such purpose.

Given under my hand at Government House, Sydney, this nineteenth day of August, one thousand eight hundred and eighty-four.

AUGUSTUS LOFTUS.

By His Excellency's Command,—
ALEXR. STUART.

Entered on Record by me, in REGISTER OF PATENTS, No. 12, pages 105–6, this twenty-ninth day of August, one thousand eight hundred and eighty-four.

(For the Colonial Secretary and Registrar of Records),
CRITCHETT WALKER,
Principal Under Secretary.

WHEREAS the time appointed for the return of the Commission in the abovem atter was by an Instrument dated the nineteenth day of August last extended for a period of four months: And whereas it is necessary to extend the same still further: Now, therefore, I do hereby, with the advice of the Executive Council extend the time within which the Commissioners are to make their return to and for a further period of four months beyond the time in and by the aforesaid Instrument appointed for such purpose.

Given under my hand, at Government House, Sydney, this twenty-second day of December, one thousand eight hundred and eighty-four.

AUGUSTUS LOFTUS.

By His Excellency's Command,—
WILLIAM BEDE DALLEY.

Entered on Record by me, in REGISTER OF PATENTS, No. 12, page 186, this tenth day of January, one thousand eight hundred and eighty-five.

(For the Colonial Secretary and Registrar of Records),
CRITCHETT WALKER,
Principal Under Secretary.

WHEREAS the time appointed for the return of the Commission in the above matter was, by an Instrument dated the twenty-second day of December last, extended for a period of four months: And whereas it is necessary to extend the same still further: Now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the Commissioners are to make their return to and for a further period of two months beyond the time in and by the aforesaid Instrument appointed for such purpose.

Given under my hand, at Government House, Sydney, this twenty-second day of April, one thousand eight hundred and eighty-five.

AUGUSTUS LOFTUS.

By His Excellency's Command,—
WILLIAM BEDE DALLEY.

Entered on Record by me, this twenty-second day of April, 1885.

(For the Colonial Secretary and Registrar of Records),
CRITCHETT WALKER,
Principal Under Secretary.

WHEREAS the time appointed for the return of the Commission in the above matter was, by an instrument dated twenty-second April last, extended for a period of two months: And whereas it is necessary to extend the same still further: Now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the Commissioners are to make their return to and for a further period of two months beyond the time in and by the aforesaid instrument appointed for such purpose.

Given under my hand, at Government House, Sydney, this twentieth day of June, one thousand eight hundred and eighty-five.

AUGUSTUS LOFTUS.

By His Excellency's Command,—
ALEXR. STUART.

Entered on record by me, in REGISTER OF PATENTS, No. 12, pages 199–200, this twenty-sixth day of June, one thousand eight hundred and eighty-five,—

(For the Colonial Secretary and Registrar of Records),
J. J. M. BEATTY,
For the Principal Under Secretary.

RAILWAY BRIDGES INQUIRY COMMISSION.

EXTRACTS FROM MINUTES OF PROCEEDINGS.

WEDNESDAY, 14 *MAY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

A letter was read from Professor Kernot, acknowledging the receipt of a copy of the Commission forwarded by the Secretary, and stating that he hoped to leave Melbourne on the 6th June, for the purpose of attending the meetings of the Commission.

The Commission authorizing the Inquiry was read by the President.

The Secretary was instructed to forward the usual form of notice to each member of the Commission before any meeting of the Commission was held.

The President explained the circumstances connected with the appointment of the Commission originally gazetted, and the reasons which had led to the cancellation of that Commission, and to the appointment of the present one.

Various documents explanatory of the subject submitted to the Commission for inquiry were laid upon the table by the President, and read.

Mr. Blacket moved,—"That the first matter to be inquired into by the Commission be the timber approaches to the Wagga Wagga Bridge."

The motion was seconded by Mr. Courtney, and agreed to.

Professor Warren moved,—"That the Commission be supplied with the plans and specifications of the timber approaches to the Wagga Wagga Bridge."

The motion was seconded by Mr. Blacket, and agreed to.

The Commission read and deliberated upon the papers before them relating to the approaches to the bridge at Wagga Wagga.

FRIDAY, 16 *MAY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering, Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The President informed the members of the Commission that Mr. Charles Lyne had been appointed Secretary and shorthand-writer to the Commission.

Plans and specifications of the timber approaches to the Wagga Wagga Bridge were laid on the table.

The Commission resumed the consideration of the papers before them relating to the approaches to the Wagga Wagga Bridge, and carefully examined and conferred upon the plans.

Mr. Blacket moved,—"That in future, unless otherwise ordered, the Commission meet on Monday, Wednesday, and Friday in each week, at a quarter past 2 o'clock p.m."

The motion was seconded by Mr. Courtney, and agreed to.

The Commission resolved to apply to the Colonial Treasurer, through the Minister for Works, for the sum of £500 to be placed to the credit of the Commission, for the purpose of meeting expenses connected with the inquiry.

MONDAY, 19 *MAY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering, Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission continued their consideration of the papers and plans relating to the approaches to the Wagga Wagga Bridge.

The Secretary was instructed to obtain a statement giving the length and weight of the heaviest trains passing over the Wagga Wagga viaduct, specifying the weight, length, and wheel-base of each locomotive, and load on each axle, and weight, length, and wheel-base of each carriage and truck when loaded.

WEDNESDAY,

WEDNESDAY, 21 *MAY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission further considered the subject of the approaches to the Wagga Wagga Bridge, and decided upon the formula to be used in calculating the strain upon the different parts of the span.

FRIDAY, 23 *MAY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The President, referring to the discussion at the last meeting of the Commission upon the design of the approaches to the Wagga Wagga Bridge, pointed out the necessity of the same data being taken by each member of the Commission for calculating the load which each span of the viaduct could carry with safety; and laid before the meeting a statement showing the data upon which the members of the Commission should work and compare their results.

The Secretary was instructed to have the document printed, for the use of members of the Commission.

A comparison of calculations with reference to the strain upon the approaches to the Wagga Wagga Bridge was made, and the Commission discussed the matter at length.

Sketches of plans for taking the deflection of the girders of the approaches to the bridge were submitted by Mr. Courtney and Mr. Blacket.

MONDAY, 26 *MAY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The President stated that in his recommendation for the calculation of strains on the Wagga Wagga Viaduct he had been guided by the experiments in Colonial timbers made at the Sydney Branch of the Royal Mint in 1861, and also by his own personal experience of many years in calculations for Colonial timber girders and bridges.

The members of the Commission submitted their calculations with reference to the timber approaches to the Wagga Wagga Bridge, compared the results, and, with the aid of the plans, carefully discussed the question of strains upon the approaches to the bridge.

It was decided that each member of the Commission should, by the next meeting, tabulate a statement showing the strains upon the top girder, the bottom girder taken in two ways, and the cross-girders.

WEDNESDAY, 28 *MAY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The members of the Commission present submitted statements of calculations with reference to strains upon the Wagga Wagga Viaduct, in accordance with the arrangement at the last meeting.

A discussion took place upon the data submitted by the President, and it was resolved that the calculation should be revised according to the new data proposed, and compared at the next meeting.

The subject of visiting Wagga Wagga and testing the strength of the approaches to the bridge was considered, and it was decided that one member of the Commission should proceed to Wagga Wagga in advance of the others to make all the necessary arrangements for the testing.

FRIDAY, 30 *MAY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission resolved that Professor Warren should proceed to Wagga Wagga to make the preliminary arrangements for the inspection and testing by the Commission of the approaches to the Wagga Wagga Bridge.

The

The question of employing a draftsman to prepare tracings of plans or other drawings required by the Commission was considered, and it was resolved that Mr. M. B. Halligan should be appointed draftsman to the Commission.

The analysis of strains and safe working load on the approaches to the Wagga Wagga Bridge was submitted by each member of the Commission present in accordance with the decision at the last meeting, and examined and compared; and it was resolved that the particulars should be tabulated, as a record of the calculations made.

MONDAY, 2 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The question of having the £500, applied for by the Commission to meet expenses, paid into a Bank, was brought before the meeting by the President, and it was resolved, on the motion of Mr. Blacket, seconded by Professor Warren,—"That the money be paid into the Bank to the credit of the President of the Commission, and that all cheques be signed by the President, and countersigned by the Secretary."

A further comparison of calculations with reference to the strains upon the approaches to the Wagga Wagga Bridge was made, and the Commission agreed upon a tabulated form to be used in recording the calculations of each member.

The Commission deliberated upon the best method of testing the approaches to the Wagga Wagga Bridge, and upon the order of proceeding with reference to the visit to Wagga Wagga, and the examination of witnesses directly interested in the question of the strength of the approaches to the bridge.

WEDNESDAY, 4 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The President laid upon the Table a copy of the form to be used in tabulating the calculation of the members of the Commission with reference to the Wagga Wagga Bridge.

The President brought before the Commission the subject of examining witnesses, and it was resolved, on the motion of Mr. Blacket,—"That John Whitton, Esq., Engineer-in-Chief for Railways, W. B. Wade, Esq., District Engineer, and J. W. Drewett, Esq., Assistant Engineer, should be summoned for examination on Friday, the 6th instant.

The Commission deliberated upon the plans of the approaches to the Wagga Wagga Bridge, in relation to the arrangements necessary for testing the strength of the structure.

FRIDAY, 6 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

The President laid upon the Table a statement from the Locomotive Engineer of the Railway Department with reference to the weight and length of the heaviest trains passing over the Wagga Wagga viaduct, the weight, length, and wheel base of each locomotive, and load on each axle, and weight, length, and wheel base of each carriage and truck when loaded.

It was resolved that the document be printed.

Mr. John Whitton, Engineer-in-Chief for Railways, Mr. W. B. Wade, District Engineer, and Mr. J. W. Drewett, Assistant Engineer, were examined.

The Commission resolved that Mr. George Cowdery, Engineer for Existing Lines, and Mr. R. D. Stephens, District Engineer, should be summoned for examination on Monday, 9th instant.

MONDAY, 9 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A form of receipt, received from the Treasury Department, to be signed by the President of the Commission before the amount of £500 to meet expenses connected with the Commission could be paid into the Bank, and undertaking to furnish the Audit Office within six months from date with accounts of expenditure properly vouched and receipted, was signed and directed to be returned to the Colonial Treasurer.

On the motion of Mr. Blacket, seconded by Mr. Warren, it was decided that a plan of the appliances for measuring the deflection of the approaches of the Wagga Wagga Bridge should be prepared by the draughtsman of the Commission previous to the Commission visiting Wagga Wagga.

Mr. George Cowdery, Engineer for Existing Lines, was examined, and at his request, and there being no objection on the part of the Commission, Mr. Pigott, solicitor, was permitted to be present during the examination.

The Commission were informed that Mr. R. D. Stephens, District Engineer, was prevented by illness from attending for examination, and it was resolved that his examination should be postponed until Wednesday, the 11th instant.

WEDNESDAY, 11 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The President reported that he had received a communication from Mr. Cowdery informing him that Mr. R. D. Stephens, District Engineer, was still unable through illness to attend for examination.

On the motion of Mr. Blacket, seconded by Professor Warren, it was resolved that the Secretary should telegraph to Mr. R. D. Stephens, requesting him to inform the Commission if he would be able to attend for examination on Friday, and in the event of his being prevented by illness from attending, to forward a medical certificate to that effect.

Printed copies of the statement supplied by the Locomotive Engineer respecting the weight and length of the heaviest trains passing over the Wagga Wagga Viaduct were laid upon the Table by the President and distributed among the members of the Commission.

A letter to the Commission from Mr. Cowdery, with reference to the reports of the latest date before the Commission, on the approaches to the Wagga Wagga Bridge, and submitting for the consideration of the Commission remarks in relation to those reports, together with documents showing the period during which the approaches to the Wagga Wagga Bridge had been under the charge of Mr. Cowdery as Engineer for Existing Lines, and giving the weight of locomotives running on the New South Wales Southern and Eastern Railways, were laid upon the Table.

It was resolved that the document giving the weight of locomotives should be printed.

FRIDAY, 13 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., President.

W. C. Kernot, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Printed copies of the statement giving the weight of locomotives and tenders in use on the Southern and Western Lines were laid upon the table and distributed amongst the members of the Commission.

A telegram and letter, accompanied by a medical certificate, representing the inability of Mr. R. D. Stephens to attend for examination at this meeting in consequence of illness, were laid before the Commission by the President.

The Commission resolved that Mr. R. D. Stephens, should be examined on some future day; that the visit of the Commission to Wagga Wagga be deferred until after his examination; and that until his evidence has been obtained the further consideration of the subject of the approaches to Wagga Wagga Bridge be postponed.

The Commission discussed the circumstances necessary to be considered in relation to the inquiry into the stability of the iron bridges, and on the motion of Professor Warren, seconded by Mr. Blacket, it was resolved,—"That the plans and specifications and all other information relating to the Menangle and Wollondilly Bridges be laid on the table for consideration."

A diagram with reference to the statement giving the weight of locomotives and tenders in use on the Southern and Western Lines was received from Mr. G. Cowdery, and it was decided to have it photo-lithographed for the use of the Commission.

MONDAY, 16 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission took into consideration the papers before them with reference to iron bridges.

A letter was received from the Engineer-in-Chief for Railways, forwarding, for the information of the Commission, six drawings, and the specification of the viaducts over Barber's Creek, Boxer's Creek, Wollondilly River, and Mulwaree Creek; also the specification of the Menangle Bridge—all on the Great Southern Railway, Picton to Goulburn section.

The drawings and specifications were examined and considered.

On the motion of Mr. Blacket, seconded by Professor Kernot, it was resolved, "That photographs be obtained of the railway bridges at Menangle, Wollondilly, Wagga Wagga (and approaches), Penrith, Solitary Creek, Bathurst, Wellington, Aberdeen, Peel River, Peel-street, and M'Donald River, and any other bridges, the photographs of which might be of use to the Commission."

On

On the motion of Mr. Blacket, seconded by Professor Warren, the Commission resolved that Mr. R. D. Stephens should be requested to inform the Secretary of his fitness to attend before the Commission for examination immediately his health was sufficiently improved to permit of his coming to Sydney.

WEDNESDAY, 18 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was received from the Engineer-in-Chief for Railways forwarding the following drawings for the information of the Commission:—Menangle Viaduct, Great Southern Railway: No. 1, General elevation of bridge; No. 3, plan and elevation of iron bridge; No. 4, sections and elevation of masonry piers; Nos. 5, 6, and 7 ditto; No. 8, timber openings on south side of the river; no numbers. Construction of timber piers, ditto, showing double line of timber viaduct and timber openings on north side of river. Wagga Wagga Bridge, Great Southern Railway: No. 1, block diagram showing erecting marks on main girders; No. 2, general elevation; No. 3, erecting marks on pilasters; No. 4, elevation at centre of bridge; No. 7, details of cylinders, bolts, &c.; three tracings showing erecting marks and shipping numbers, and one printed specification.

The drawings were examined and considered.

A discussion took place upon the information contained in the papers before the Commission with reference to the iron bridges.

It was resolved that a visit should be paid by the members of the Commission on Friday, the 22nd instant, to the Railway Locomotive Works, Redfern, in order to meet Mr. Scott, Locomotive Engineer, for the purpose of making further inquiry connected with the information given on the diagram supplied by the Engineer for Existing Lines with reference to the weight of locomotives and tenders in use on the Southern and Western Lines.

FRIDAY, 20 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was received from Mr. John Rae, Under Secretary for Public Works, informing the Commission that photographs of the various railway bridges, as required by the Commission, would be supplied as early as possible.

A letter was received from Mr. R. D. Stephens, informing the Commission that he would be able to attend for examination on Tuesday, 24th instant.

The Secretary was instructed to write to Mr. R. D. Stephens and request him to attend for examination on Wednesday, 25th instant, at a quarter past 2.

The Commission then proceeded to the Railway Locomotive Works at Redfern, where, in an interview with Mr. Scott, Locomotive Engineer, they obtained further information respecting locomotives and tenders running on the Southern and Western Lines; and afterwards examined the different kinds of engine used on those lines for goods and passenger traffic.

MONDAY, 23 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission discussed the question of visiting and inspecting the bridges at Menangle and the Wollondilly River, and also the bridge at Wagga Wagga and its approaches.

On the motion of Mr. Blacket, seconded by Professor Kernot, it was resolved,—"That the Commission leave Sydney by the 9·8 a.m. train on Friday, 27th instant, to examine the bridge at Menangle."

Mr. Blacket moved, and Professor Warren seconded,—"That Mr. Whitton and Mr. Cowdery be invited to accompany the Commission on their visit to the Menangle Bridge, and in the event of either not being able to attend, to send a representative officer, and to bring with them, or send with the officers representing them, any persons they might desire to have examined in reference to the bridge; and that Mr. Cowdery be requested to instruct Mr. Hilzinger to accompany the Commission."

The motion was agreed to, and it was decided that the Commissioner for Railways should be asked to send with the Commission a workman with the necessary tools for testing and cutting out rivets.

On the motion of Professor Warren, seconded by Mr. Blacket, the Commission resolved,—"That plans and specifications of the bridges at Penrith, Solitary Creek, Bathurst, and Wellington be obtained for the use of the Commission."

The Commission further resolved,—"That in order to ascertain the changes that have taken place in the iron bridges since their construction, Mr. Whitton be requested to supply the Commission with the

the following information respecting the bridges at Wagga Wagga, Menangle, and Wollondilly River in the South; Aberdeen, M'Donald River, Peel River, and Peel-street in the North; and Penrith, Solitary Creek (five bridges), Bathurst, and Wellington in the West:—

1. The date of completion.
2. The date of opening for traffic.
3. A description of main girders.
4. Number of spans and dimensions.
5. The camber given to the main girders (if any).
6. The name of the superintending officer in charge during erection.
7. The name of the contractors.
8. The test each bridge was subjected to, and how applied.
9. The deflection noted at the time of testing.

WEDNESDAY, 25 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Mr. R. D. Stephens, District Engineer, Railway Department, Goulburn, was examined.

FRIDAY, 27 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The Commission met at the Railway Station, Redfern, at 9·8 a.m., and, accompanied by Mr. W. B. Wade, District Engineer, representing Mr. Whitton, Engineer-in-Chief for Railways, Mr. G. Cowdery, Engineer for Existing Lines, and Mr. F. M. Avern, District Engineer, stationed at Bathurst, left by train for Menangle, where they inspected the Menangle Bridge.

Inspector Rose and Inspector Hilzinger, of the Department of the Engineer for Existing Lines (the former being the inspector who first reported on the condition of the bridges, his report having been sent in immediately after Mr. Cowdery took charge of the Existing Lines Branch of the Railway Department), were present during the inspection, and were examined respecting the finding and removal of loose rivets from the bridge.

A copy of the first report upon the condition of the bridge from Inspector Rose to the Engineer for Existing Lines was handed to the President by Mr. Cowdery, who was requested to supply the Commission with the original report.

It was resolved that each member of the Commission should write an independent report, giving his opinion upon the examination of the riveting of the bridge, the reports to be compared and discussed when submitted.

It was also resolved that the plans or copies of plans of the Menangle Bridge as erected should be obtained from the Engineer-in-Chief for Railways, and that Professor Warren should visit the bridge on Saturday, 5th July, to see that the plans agreed with the bridge as erected.

MONDAY, 30 *JUNE*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission discussed the circumstances connected with their visit to Menangle and their inspection of the Menangle Bridge.

A letter was read from Mr. William Scott, Locomotive Engineer, forwarding particulars of locomotive engine No. 207.

On the motion of Professor Warren, seconded by Mr. Blacket, it was resolved that the document be printed.

A letter was received from the Engineer-in-Chief for Railways, forwarding plans and specifications of the following bridges:—Penrith, Solitary Creek, Bathurst, and Wellington, as per detailed list attached.

It was resolved that the Engineer-in-Chief for Railways be requested to furnish the Commission with all the information recorded in his office relative to the design of the bridge at Menangle, and to the testing of the bridge at the time of opening it for traffic, mentioning the camber and deflection in the centre of the girders and at point of contra reflexure.

The Secretary was instructed to ascertain from the Government Printer if his photographer could be sent to the Railway Yard, Redfern, for the purpose of photographing four engines, of different types, to be pointed out by Mr. Scott, Locomotive Engineer.

The Commission proceeded to examine the plans of the Wollondilly Bridge, and to discuss the circumstances connected with that bridge.

THURSDAY,

THURSDAY, 3 *JULY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C E., President.

W. M'D. Courtney, Esq., C E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

Attention was drawn to the great inconvenience to which members of the Commission were subject, by reason of the Board-room in which the Commission holds its meetings being occupied, at various times, by other persons, including the members and officials of the Water Conservation Commission, and it was resolved that the Colonial Secretary should be communicated with, and requested to have arrangements made by which the room should be used exclusively by the Commission.

The Commission discussed the plan on which the uniform system of recording the calculated strains, the actual sections, and the deflection in reference to each bridge under consideration should be shown by diagram, and fixed upon the system to be adopted.

MONDAY, 7 *JULY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

On the motion of Professor Warren, seconded by Mr. Courtney, it was resolved,—"That the members of the Commission should be provided with free railway passes, to enable them to inspect any one or more of the railway bridges on any day that may be deemed desirable, and in any locality," and the Secretary was instructed to write to the Commissioner for Railways, requesting him to cause such passes to be issued.

The Commission decided to postpone the production of the reports to be submitted by the members of the Commission, on the subject of their visit of inspection to the Menangle Bridge, and the discussion upon them, until the next meeting.

The Commission proceeded to examine the plans of the Penrith Bridge, and discussed its design and construction.

Instructions were given to the draughtsman of the Commission with regard to the preparation of certain tracings necessary for each Commissioner in dealing with this bridge, and the Commission then adjourned.

FRIDAY, 11 *JULY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A statement was laid before the Commission that Mr. B. Barnes, who had built the Railway bridge at Dubbo, was anxious to be examined by the Commission with reference to that bridge and to bridge construction generally.

It was resolved that Mr. Barnes should be informed that the Commission would be glad to have his evidence, and that as he was about to leave Sydney he should be requested to inform the Commission of the date of his intended departure, so that a day for his examination before that time might be appointed.

On the motion of Professor Warren, seconded by Mr. Blacket, it was resolved,—"That the Engineer-in-Chief for Railways be requested to forward, for the information of the Commission, any reports or statements which he may have received at different times relative to the various iron railway bridges of the Colony, and which he may desire to have submitted for the consideration of the Commission."

A letter was received from Mr. W. H. Quodling, Chief Clerk in the Department of the Engineer-in-Chief for Railways, forwarding further papers relating to the design, testing, &c., of the railway bridge at Menangle.

Further discussion took place upon the design and construction of the Penrith, Wollondilly, and Menangle Bridges.

A report was received from Professor Kernot upon the visit made by the Commission on 27th June, to the Menangle Bridge. The report was read.

Reports were also handed in and read by Mr. Courtney and Mr. Blacket.

It was arranged that the reports from the President and Mr. Warren should be produced and read at the next meeting of the Commission, and that the discussion upon the whole of the reports should then take place.

WEDNESDAY, 16 *JULY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was received from Mr. W. H. Quodling forwarding some reports and statements received at the office of the Engineer-in-Chief for Railways relative to variou siron railway bridges of the Colony.

On the motion of Mr. Blacket the papers were received.

The reports of the President and Professor Warren upon the visit of inspection made by the Commission to the Menangle Bridge were handed in and read. The President explained the uniform system he proposed to be adopted by the Commission for recording the strains and sections of the lattice girder bridges under consideration according to design, and to show also on the diagrams the actual section and deflection at the same points.

MONDAY,

MONDAY, 21 *JULY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Mr. Benjamin Barnes, Railway Bridge Contractor, was examined.

The President brought under the notice of the Commission the statements made in the documents received at the last meeting from Mr. W. H. Quodling relative to various iron railway bridges of the Colony, and it was resolved that the following persons should be summoned to attend before the Commission for examination on Friday, 25th instant:—Joseph Dunn, Samuel Maddock, Charles Sherdon, Edwin Massey, and George Mills.

FRIDAY, 25 *JULY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, C.E., Esq., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from Mr. W. H. Quodling, forwarding, for the information of the Commission, a tabulated statement setting forth the particulars asked for in the minutes of the meeting of the Commission of the 23rd ultimo, respecting certain iron bridges on the Great Southern, Great Western, and Great Northern Railways.

It was resolved that the document should be printed.

Mr. Samuel Maddock, Inspector of Bridges, Mr. Edward Massey, boilermaker, and Mr. George Mills, boilermaker, were examined.

It was decided that the witnesses Edward Massey and George Mills should be paid the expense they had incurred by attending before the Commission for examination.

WEDNESDAY, 30 *JULY*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq , Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Mr. Thomas Smithyman, boilermaker, and Mr. Joseph Dunn, boilermakers' holder-up, were examined.

MONDAY, 18 *AUGUST*, 1884.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E. (in the Chair).
W. H. Warren, Esq., Professor of Engineering, | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from Professor Kernot stating that he would leave Melbourne for Sydney on the 22nd instant.

A letter was read from Mr. W. H. Quodling, enclosing reports from Mr. Robert T. Ewing with respect to rivets, also forwarded from the Menangle and Penrith Bridges.

It was resolved, on the motion of Professor Warren, seconded by Mr. Blacket,—"That this Commission, in view of the extensive nature of the inquiry it has been directed to undertake, and the impossibility of concluding its labours within the period for which the commission was originally issued, requests the Colonial Secretary to extend the time for a further period of four months."

It was resolved, on the motion of Mr. Blacket, seconded by Professor Warren—"That curves of areas be plotted for the southern and western bridges in a manner similar to that carried out by Professor Warren and under that gentleman's supervision."

The Commission examined the rivets sent by Mr. Quodling and agreed in the main with Mr. Ewing's report.

The Secretary was instructed to telegraph to Professor Kernot that the Commission were making arrangements to inspect the Wollondilly bridges, and to request Professor Kernot to meet them at Marulan on Saturday.

WEDNESDAY, 20 *AUGUST*, 1884.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., (in the Chair).
W. H. Warren, Esq., Professor of Engineering, | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission considered the question of visiting and inspecting the Wollondilly bridges, and the Secretary was instructed to inform the Minister for Works that the Commission would visit the bridges on Saturday, Monday, and Tuesday, the 23rd, 25th, and 26th instant, and request that one of the heaviest engines in use on the Great Southern Railway be placed at the disposal of the Commission for testing purposes, and that all passing trains on the dates mentioned be directed to proceed over the bridges slowly.

The

The Secretary was also instructed to inform Mr. Whitton, Engineer-in-Chief for Railways, and Mr. Cowdery, Engineer for Existing Lines, that the Commission would visit the Wollondilly bridges on Saturday, Monday, and Tuesday.

Mr. M. B. Halligan, draughtsman to the Commission, was instructed to procure the necessary apparatus for testing the bridges.

It was decided that Mr. Courtney, accompanied by the draughtsman, should leave for Marulan on Thursday night, in order to have everything ready for testing the bridges on Saturday.

SATURDAY, 23 *AUGUST*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The Commission met at Marulan for the purpose of inspecting the Wollondilly bridges, and spent Saturday, Monday, and Tuesday in testing and carefully examining the bridges at Barber's Creek, Carrick, Wollondilly, Boxer's Creek, and Mulwaree Creek.

During the inspection Mr. Cowdery and Mr. W. B. Wade were present with the Commission.

THURSDAY, 28 *AUGUST*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the two previous meetings were read and confirmed.

Mr. Courtney and Professor Warren reported the results obtained by the inspection of the Wollondilly bridges on the 23rd, 25th, and 26th instant, and a long discussion took place upon the subject.

The Commission considered the question of making another visit of inspection to the bridge at Menangle, but decided to postpone any decision in the matter until the next meeting, when all the members of the Commission could be present.

FRIDAY, 29 *AUGUST*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A telegram was read from Professor Kernot informing the Secretary that as he was at Menangle preparing for experiments he would not be able to attend this meeting of the Commission.

Documents, forwarded to the Commission on 10th July, by Mr. W. H. Quodling, relating to the design, testing, &c., of the railway bridge at Menangle, being copy of Inspector Morgan's report dated 23rd May, 1863, extract from Mr. Whitton's note-book, dated 29th June, 1863, and copy of article published in the *Engineer* of 18th December, 1863, were read by the Secretary.

The Commission further considered the subject of making another visit to Menangle for the purpose of examining and testing the Menangle Bridge.

The Secretary was instructed to write to Mr. Whitton, asking whether as the drawings from which the Menangle Bridge had been erected had not been forwarded to the Commission, he could procure for the Commission as soon as possible the section of the girders, top and bottom boom, and the web, at the points marked upon an appended diagram; and stating that the drawings of the Wollondilly bridges forwarded to the Commission had been found to be incorrect.

MONDAY, 1 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The subject of again visiting and testing the Menangle Bridge was further considered, more particularly with reference to the extent to which the bridge should be tested.

The Secretary was instructed to write to the Under Secretary for Public Works stating that it was the intention of the Commission to visit the bridge at Menangle on Friday, the 5th instant, and requesting that one Mogul engine and two express passenger engines be sent to Menangle for the use of the Commission on Friday morning.

WEDNESDAY, 3 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from Messrs. Ibbotson Brothers & Co. to the Chairman and Members of the Commission on the subject of rail-fastenings on bridges and ordinary nuts and bolts on bridges.

The Secretary was instructed to acknowledge the receipt of the letter.

A letter was read from the Principal Under Secretary enclosing a document extending the time during which the Commission shall report the result of their enquiry to four months beyond the date originally fixed.

A letter was read from Mr. W. H. Quodling, forwarding, for the information of the Commission, the particulars regarding the Menangle Bridge as required by the minutes of the meeting of the Commission on 29th August, and asking for the return of the drawings relative to the Wollondilly Bridges.

The Commission discussed the method of testing the Menangle Bridge, and also the subject of the Wollondilly Bridges, and the inspection and test that had been made of them.

The Commission decided to meet at the Redfern Railway Station at a quarter to 9 o'clock on Friday, the 5th inst., in order to proceed to Menangle.

FRIDAY, 5 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The Commission met at the Railway Station, Redfern, at a quarter to 9 a.m., and proceeded by the ordinary train to Menangle, where they further examined and tested the Menangle Bridge.

MONDAY, 8 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the two previous meetings were read and confirmed.

The visit of the Commission to Menangle on Friday, 5th instant, and the results obtained from the examination and the testing of the bridge were taken into consideration and discussed.

Mr. Blacket laid before the meeting a diagram showing the results of the deflection experiments made during the testing of the Menangle Bridge.

It was resolved that before anything further be done with regard to the Menangle Bridge the notes taken during the examination and testing of the Wollondilly Bridges on the 23rd, 25th, and 26th August be classified, and arrangements made for a report upon those bridges.

The Secretary was instructed to write to Mr. W. Scott, Locomotive Superintendent, and request him to forward to the Commission the weight of each of the engines used in testing the bridge at Menangle on Friday, 5th instant, as follows:—

Engine 265—Express passenger (Dubs & Co.), tender full, with full charge of coal.

Engine 212—Mogul engine (Beyer and Peacock), tender filled to within 2 feet from top with water, coal three-quarters full charge.

Engine 269—Express passenger (Dubs & Co.), tender filled to within 2 feet from top with water, with full charge of coal.

WEDNESDAY, 10 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, C.E. (in the Chair at the opening of the meeting).

W. H. Warren, Esq., Professor of Engineering, | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

It was resolved that Mr. Courtney and Professor Warren prepare a report upon the Wollondilly Bridges.

The Secretary was instructed to write to Professor Kernot requesting him to forward all the information in his possession with reference to the Wollondilly Bridges, and to calculate and plot according to the following scale:—Vertical scale of areas 20 square inches to 1 inch, horizontal scale one-eighth of an inch to a foot.

The Commission considered the subject of the scale to be adopted in the diagrams to illustrate the strains, sections, and deflection of the bridges.

FRIDAY, 12 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A discussion took place upon the design of the Wellington Bridge.

Diagrams were submitted of stresses and areas of the Wellington Bridge.

Mr. Blacket laid before the Commission a diagram showing the deflections of the Wollondilly Bridges, taken during the recent visit of inspection to those bridges.

MONDAY,

MONDAY, 15 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The subject of inspecting and testing the Wagga Wagga viaduct was taken into consideration, and it was decided that a preliminary visit of inspection should be made to the viaduct on Friday, 19th inst., the Commission to leave Sydney on Thursday, 18th instant.

The Commission agreed finally upon the method to be adopted in calculating the strength of the iron bridges.

WEDNESDAY, 17 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from Mr. W. H. Quodling, expressing regret that the original drawings of the Wollondilly bridges had been forwarded to the Commission in error, and that a slight alteration in design had been forgotten, and enclosing, for the information of the Commission, a copy of Mr. Fowler's letter of 26th June, 1866, describing the alteration in question, and a statement of the sectional areas of iron work of the bridges for 60 feet and 130 feet spans.

A telegram was read from Professor Kernot, Melbourne, informing the Secretary that he would comply as soon as possible with the request that he should forward all information in his possession relating to the Wollondilly bridges.

Mr. Courtney and Professor Warren submitted a report of the Wollondilly bridges, in accordance with the minutes of the meeting on the 10th instant, and the report was considered.

The Commission also took into consideration the question of calculating the deflection of the bridges generally.

THURSDAY, 18 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The Commission met at the Railway Station, Redfern, at 9 p.m., and proceeded by the ordinary train to Wagga Wagga, where, on Friday and Saturday, the 19th and 20th instant, they made a preliminary inspection of the Wagga Wagga viaduct.

MONDAY, 22 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the two previous meetings were read and conferred.

A letter was read from Professor Kernot, forwarding information with regard to the Wollondilly bridges.

A letter was read from Mr. W. Scott, Locomotive Engineer, forwarding, in accordance with the request of the Commission, a return, showing the weight of the engines used in testing the Menangle bridges on the 5th instant. It was decided that the document should be printed.

Mr. Courtney, Professor Warren, and Mr. Blacket, reported the circumstances connected with the preliminary visit of inspection made by them to the Wagga Wagga viaduct, and a long discussion took place upon the subject.

Professor Warren submitted proposals and sketches for testing timber in connection with the Wagga Wagga viaduct, and it was decided that certain experiments should be made, and that Professor Warren should visit Granville and ascertain if a site could be obtained there for carrying out the tests.

The Secretary was instructed to procure the copy of a book shown to the Commission at Wagga Wagga by the maintenance man at the Wagga Wagga bridge, and containing the number of each span, and a description of the timber used in each of the piles of the viaduct.

WEDNESDAY, 24 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren reported that he had visited Granville, and had found there everything necessary for carrying out experimental tests in connection with the Wagga Wagga viaduct.

The Commission discussed at considerable length the manner in which the tests should be made.

FRIDAY, 26 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The subject of the experimental tests in relation to the Wagga Wagga viaduct was further considered.

Professor Warren brought under the notice of the Commission the fact that the drawings of the bridges over Solitary Creek were the same as those shown for the Wollondilly bridges.

The plans of the bridges at Bathurst and Wellington were taken into consideration, the examination and discussion being directed principally to the cover-plates and joints of these bridges.

MONDAY, 29 *SEPTEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, C.E., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Mr. Courtney laid before the Commission a diagram showing the strains brought on a span of 130 feet by loading the bridge with three locomotive engines.

The detail of construction of the Bathurst and Wellington bridges was brought under examination, and a discussion took place on the joints and cover plates to see whether a sufficient number of rivets had been put in the joints, and which of the joints had been treated with a double shear applied to the rivets.

The Secretary was instructed to obtain from the Engineer-in-Chief for Railways the drawings and specifications, and all other information available relating to the bridges at Aberdeen, Tamworth, Peel River, Peel-street, and Macdonald River.

WEDNESDAY, 1 *OCTOBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from Mr. Cowdery, forwarding a copy of a book, in the possession of Charles Cook at Wagga Wagga, containing the number of each span and a description of each pile in the Wagga Wagga Wagga viaduct.

The detail of construction of bridges at Bathurst and Wellington was further considered.

FRIDAY, 3 *OCTOBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission considered the details of construction of the Penrith and other Bridges on the Western Railway, and discussed the subject at considerable length.

Plans and specifications relating to the bridges over the Peel and Macdonald Rivers, and to the Aberdeen and Peel-street bridges of the Great Northern Railway were received from the office of the Engineer-in-Chief for Railways and examined.

The Commission discussed the subject of a final visit to Wagga Wagga, for the purpose of inspecting and testing the Wagga Wagga viaduct, and it was decided that the visit should be made in the following week.

MONDAY, 6 *OCTOBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from Mr. W. H. Quodling, forwarding drawings of bridges on the Great Northern Railway, and a paper giving data for the calculation of strains on certain bridges on the Great Northern Railway.

Plans and specifications of bridges at Solitary Creek, Peel River, and Peel-street Crossings were examined and discussed in detail.

It was resolved, on the motion of Professor Warren, to apply to the Railway Department for sections to the Wagga Wagga iron bridge, similar to those already supplied of the bridges over the Peel and Macdonald Rivers.

WEDNESDAY,

WEDNESDAY, 8 *OCTOBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission discussed the calculations of the plate girders in the Wellington Bridge, and of the bridge at Peel-street, Tamworth, and also with reference to the webs of plate girders.

The Commission decided to visit Clyde on Friday, 10th instant, to make arrangements for experiments in connection with the Wagga Wagga viaduct.

FRIDAY, 10 *OCTOBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The Commission met at the Railway Station, Redfern, and proceeded by train to Clyde, where they made an examination of the ground and of the appliances and material that could be used in the testing of an experimental girder. Sketches were made of the plan to be adopted, and it was resolved that a letter should be forwarded to Mr. J. H. Royce, asking for the use of his traveller; to the Engineer for Existing Lines, asking that the Commission may be supplied with some of the timber in stock for use as an experimental girder; and to the Government Store Department, to ask for the loan of iron rails and other material necessary to make the test intended.

MONDAY, 13 *OCTOBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the two previous meetings were read and confirmed.

A letter was read from Mr. W. H. Quodling, forwarding, for the information of the Commission, a table of sectional areas of the railway iron bridge at Wagga Wagga.

A general discussion took place with reference to the Western and Southern bridges, and the details of the calculations relating to these bridges were compared.

WEDNESDAY, 15 *OCTOBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren submitted a diagram of stresses produced by varying the positions of the live load on the Wagga Bridge. The diagram was examined and considered, a discussion taking place upon the application of similar diagrams to other bridges of one span, as at Tamworth, and of three spans, as at Bathurst, Wellington, and Aberdeen, and with reference to the relative economy of three or more spans in continuous girders.

MONDAY, 20 *OCTOBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Mr. Blacket submitted to the Commission a sketch plan of the proposed testing of an experimental girder at Clyde, with reference to the Wagga Wagga viaduct.

Professor Warren's diagram of stresses produced by varying position of live load on the Wagga Wagga Bridge was further considered.

FRIDAY, 7 *NOVEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. M'D. Courtney, Esq., C.E.,

W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

The Secretary was instructed to write to the Principal Under Secretary, informing him of the bridges that the Commission intended to visit.

Various matter of detail in connection with the testing of the bridges were discussed.

TUESDAY,

TUESDAY, 11 *NOVEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. C. Kernot, Esq., Professor of Engineering, | W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

The matter of the visit of the Commission to Wagga Wagga to test the timber viaducts, and then to proceed to Albury to inspect the bridges, was discussed. The Secretary was instructed to secure the services of two plate-layers with a trolly, to be placed at the disposal of the Commission on Thursday, Friday, and Saturday, also to get two of the heaviest locomotive engines used on the Great Southern Line placed at their disposal for Saturday morning, and to obtain authority for the requisite testing gear to be taken by the ordinary mail train on Wednesday night.

Mr. Courtney moved, and Professor Kernot seconded,—"That the Engineer-in-Chief for Railways and the Engineer for Existing Lines be informed of the intention of the Commission to visit and test the Wagga Wagga viaduct, but that they wished to be perfectly independent in their action and did not desire the presence of any officers from either department."

The Secretary was instructed to summon certain witnesses to attend and be examined at Wagga on Saturday, November 18, at 2 o'clock p.m.

SATURDAY, 15 *NOVEMBER*, 1884.

Meeting held at the "Commercial Hotel," Wagga Wagga.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

Mr. George F. Chapman and Mr. Charles Cook were each called in, sworn, and examined.

Memo.:—Professor Kernot and Mr. Courtney went to Wagga by the mail-train on the night of November 12 to make final arrangements for testing the Wagga viaduct. On the 13th Mr. Morell, President, and Professor Warren, left for Wagga also, and were joined there on the 14th by Mr. Blacket and the Secretary. The preliminary arrangements having been made, the Commission proceeded on the 14th to make a thorough examination of the viaduct and iron bridge and fixed upon the spans for testing on the following day. Two heavy engines, Nos. 257 and 259, arrived from Sydney on the 15th, and the Commission proceeded immediately to test the viaduct. Twenty-four experiments were recorded with instruments, and in the evening the Commission examined two witnesses as above. On November 16 the Commission proceeded to Albury, and on the 17th made an inspection of the Albury iron bridge and bridge approaches, after which they returned to Sydney.

FRIDAY, 21 *NOVEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the two previous meetings were read and confirmed.

The Secretary was instructed to write to Mr. Scott, Locomotive Superintendent, requesting him to furnish the Commission with the weights of the engines, Nos. 257 and 259, used in testing the Wagga viaduct and bridge, each with a full load of coal and water.

The diagrams showing the results of the testing of the timber viaducts at Wagga were discussed in detail.

WEDNESDAY, 26 *NOVEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

The diagrams showing the deflections of the various viaducts at Wagga were examined and discussed. It was resolved, on the motion of Professor Warren, seconded by Mr. Courtney, that each member of the Commission should write a report of his opinion with regard to the testing of the Wagga bridges.

The Secretary was instructed to write to the Engineer-in-Chief for Railways requesting him to supply the Commission with sections of the river at Penrith, Bathurst, and Wellington, showing the bridges.

MONDAY, 8 *DECEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from Mr. W. H. Quodling, forwarding sections of the river Macquarie at Bathurst and Wellington.

The Commission discussed the subject of testing wooden girders similar to those used in the Wagga Wagga viaduct.

Professor

Professor Warren moved, and Mr. Blacket seconded, and it was resolved,—"That a Committee be appointed to make arrangements for the testing of wooden girders similar to those used in the timber approaches to the Wagga Wagga viaduct, and that the Committee consist of Mr. Courtney, Mr. Blacket, and the mover."

It was further resolved that the first meeting of the Committee should be held on Wednesday, 10th December.

WEDNESDAY, 10 *DECEMBER*, 1884.

Meeting of Committee appointed on 8th December to make arrangements for the testing of wooden girders.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

Mr. Blacket submitted sketches illustrating the manner of testing wooden girders, such as those used in the Wagga Wagga viaduct, and after consideration it was resolved to prepare drawings and specifications, and to call for tenders for the erection of the necessary testing apparatus.

FRIDAY, 12 *DECEMBER*, 1884.

Meeting of the Committee.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Mr. Courtney submitted drawings from the draftsman of the Commission, and specifications of the apparatus for testing wooden girders similar to those used in the Wagga Wagga viaduct; and, after consideration, he was authorized to obtain from contractors an estimate for the iron-work required.

The Secretary was instructed to write to Mr. Cowdery, and ask him to have selected from the timber he has in stock that which was required by the Commission for the testing experiments.

MONDAY, 15 *DECEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the meeting on 8th December were read and confirmed.

It was resolved,—"That, as the further extension of time granted to the Commission for the purposes of their inquiry will expire on the 24th instant, the Colonial Secretary be requested to grant another extension of four months."

Mr. C. E. Nicholas, District Engineer, Railway Department, and Mr. R. D. Stephens, District Engineer, Railway Department, were examined.

TUESDAY, 16 *DECEMBER*, 1884.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission discussed the subject of visiting the bridges on the Great Western Railway, and whether, as the Wollondilly bridges had been found different from the drawings supplied to the Commission, it would not save time and expense if Mr. Whitton were requested to certify that the bridges in the west and also in the north had been erected according to the plans supplied to the Commission, or forward to the Commission other plans, showing the difference between the bridges as designed and as erected.

On the motion of Mr. Blacket, seconded by Professor Warren, it was resolved,—"That the Commission, having found that the bridges over the Wollondilly River—five in number—have not been carried out as shown in the drawings supplied to the Commission, the Engineer-in-Chief for Railways be requested to certify that the following bridges in the west and north have been carried out in accordance with the drawings of those bridges sent to the Commission; or if there is any difference between the design of those bridges and the bridges as erected, to supply the Commission with drawings showing that difference, and with a statement of the reasons for it:—Penrith, Solitary Creek (five bridges), Bathurst, Wellington, Aberdeen, M'Donald River, Peel River, and Peel-street, Tamworth.

The Secretary was instructed to forward a copy of the resolution to the Engineer-in-Chief, and at the same time to return the plans of the bridges referred to.

Mr. Alfred Cecil Brayne (Railway Inspector), Mr. John Thomas Rowlands (Sub-Inspector of Railway Timber Bridges), and Mr. John Giddy (Sub-Inspector of Railway Timber Bridges), were sworn and examined.

TUESDAY, 23 *DECEMBER*, 1884.

MEMBERS PRESENT :—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

The minutes of the meeting on 12th instant of the Committee appointed to make arrangements for the testing of wooden girders were also read and confirmed.

The Commission considered the tenders sent in with reference to the testing of wooden girders, and it was decided to accept the tender of Messrs. Waugh and Josephson, the work to be delivered on 5th January.

The Commission considered the subject of making a visit of inspection to the bridges on the Great Western Railway.

On the motion of Professor Warren, seconded by Mr. Courtney, it was resolved,—"That the Engineer-in-Chief for Railways be requested to supply the Commission by next Tuesday, 30th instant, with the information asked for in the Secretary's letter of the 16th instant, as far as it relates to the Bathurst and Wellington bridges, and the information with reference to the other bridges mentioned in the Secretary's letter, as early as possible."

A letter was read from Mr. C. A. Goodchap, Commissioner for Railways, giving the weights, with full loads of coal and water, of engines Nos. 257 and 259, used by the Commission in testing the Wagga Wagga bridge and viaduct.

Professor Warren read to the Commission from the minutes of the proceedings of the Institution of Civil Engineers, Vol. LXXII, an article "On the preservation of iron bridges, by E. Paschen." (Glaser's Annálen, Vol. XII, 1883, p. 47).

TUESDAY, 30 *DECEMBER*, 1884.

MEMBERS PRESENT :—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

A letter was read from Mr. John Whitton, certifying that to the best of his knowledge and belief the iron bridges on the River Macquarie at Bathurst and Wellington were carried out strictly in accordance with the drawings previously furnished to the Commission, and now returned.

The Commission further considered the subject of inspecting the bridges on the Great Western Railway, and it was resolved that Mr. Courtney and Professor Warren should proceed on the 31st instant to Bathurst and Wellington for the purpose of making the necessary arrangements for an inspection and testing of the Bathurst and Wellington Bridges by the Commission.

The Secretary was instructed to see Mr. Cowdery and have arrangements made for all necessary assistance to the Commission from the District Engineer at Bathurst and Wellington, and for the use of any materials in the possession of the Railway Department required for testing purposes.

FRIDAY, 16 *JANUARY*, 1885.

MEMBERS PRESENT :—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The President read a letter from the Colonial Secretary stating that the time of the Commission had been extended for a further period of four months.

On the motion of Professor Warren, seconded by Mr. Courtney, it was resolved,—"That Professor Kernot having been absent from the visit paid by the Commission to the western bridges, he be requested at his earliest convenience to examine those bridges, and assist the Commission in the discussion in reference to the testing of the strains of the same, and the diagrams obtained from them."

It was resolved, on the motion of Professor Warren, seconded by Mr. Courtney,—"That Mr. Blacket be requested to make a sample of the new testing apparatus, and that if the sample be approved the whole set be completed."

Various matters of detail in connection with the testing apparatus were discussed at length.

The Secretary was instructed to obtain from the Engineer-in-Chief for Railways particulars of the cost of all the bridges on the Southern, Western, and Northern lines. Also from the Engineer for Existing Lines the cost of the repairs for the same bridges since they have been in charge of his department.

Memo.:—On December 31st Mr. Courtney and Professor Warren left Sydney for Bathurst and Wellington to make arrangements for the examination and testing of the Bathurst and Wellington Bridges by the Commission.

On January 7th they were joined at Bathurst by Mr. Morell (President), and the bridge at Bathurst was carefully inspected and tested. On January 8th the Commission was joined by Mr. Blacket, and the bridges at Wellington and Dubbo were inspected, and on January 9th the Wellington Bridge was carefully tested. Inspector Hilzinger was examined at Bathurst.

WEDNESDAY,

WEDNESDAY, 28 *JANUARY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Mr. Blacket submitted for the approval of the Commission a deflection apparatus, which was examined.

A letter was read from Mr. John Whitton, stating that the bridges at Penrith, Solitary Creek, Aberdeen, Macdonald River, Peel River, and Peel-street, Tamworth, had been carried out, to the best of his belief, in strict accordance with the drawings now furnished, and expressing regret that the correct drawings of the bridge over the Wollondilly River were not in the first instance forwarded to the Commission.

On the motion of Professor Warren, the name of Professor Kernot was added to those of the Committee appointed on December 8th.

The Commission discussed their recent visit of inspection to the bridges on the Western Railway, and it was resolved that each member of the Commission should write a report upon the subject for the consideration of the Commission at a future meeting.

On the motion of Professor Warren, it was decided that Mr. Blacket should be requested to have the testing apparatus for the contemplated experiments at Clyde put in order.

A letter was read from Mr. G. Cowdery, stating that certain timber had been forwarded to Finegan's Siding, near Granville, and stacked with other material for the use of the Commission.

On the motion of Professor Kernot, seconded by Mr. Blacket, the Secretary was instructed to write to the Under Secretary for Public Works, reminding him that the photographs of the bridges on the different railways, asked for in a previous letter, had not yet been supplied to the Commission, and requesting him to have them supplied at his earliest convenience; and also to write to Mr. Scott, Locomotive Superintendent, requesting him to supply the Commission with photographs of the following engines, with the total weight of each engine and tender when in full steam, and having a full load of coal, mentioned on the photographs,—No. 265 or 269, No. 212, No. 257, or 259, and No. 134, 137, or 140.

The Commission discussed the subject of a visit of inspection to the bridges on the Great Northern Railway, and then adjourned the discussion until the next meeting.

FRIDAY, 30 *JANUARY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren reported to the Commission what had been done with regard to the preparations for carrying out the intended experiments at Clyde, and it was arranged that immediately the preparations were complete the Commission should be summoned to Clyde and the experiments made.

The proposed visit of inspection to the bridges on the Great Northern Railway was further considered, and it was resolved that Professor Kernot and Professor Warren should proceed to the North and make the necessary preparations for the inspection of the bridge by the Commission.

WEDNESDAY, 4 *FEBRUARY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E. | Owen Blacket, Esq.

The Committee appointed on 8th December, having completed arrangements for the testing experiments at Clyde, the Commission met at Clyde and the experiments commenced.

THURSDAY, 5 *FEBRUARY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The Commission met at Clyde and continued their testing experiments.

FRIDAY, 6 *FEBRUARY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President:—

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The Commission met at Clyde, and continued their testing experiments.

SATURDAY,

SATURDAY, 7 *FEBRUARY*, 1885.

MEMBERS PRESENT:—

W. C. Kernot, Esq., Professor of Engineering, | W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering.

The Commission met at Clyde and continued their testing experiments.

MONDAY, 9 *FEBRUARY*, 1885.

MEMBERS PRESENT:—

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering
W. M'D. Courtney, Esq., C.E. | Owen Blacket, Esq.

The Commission met at Clyde and continued their testing experiments.

TUESDAY, 10 *FEBRUARY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The Commission met at Clyde, and continued their testing experiments.

WEDNESDAY, 11 *FEBRUARY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq. C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The Commission met at Clyde and concluded their testing experiments.

THURSDAY, 12 *FEBRUARY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meetings, from 30th January, were read and confirmed.

A letter was read from the Principal Under Secretary, forwarding photographs of Railway bridges.

A letter was read from Mr. W. H. Quodling, forwarding, for the information of the Commission, a return with reference to the cost of iron bridges.

The Secretary was instructed to write to Mr. Cowdery, reminding him that no answer had been received from him to a letter of 29th January with reference to the cost of repairs to bridges.

Professor Warren explained to the Commission the exact nature of the experiments that had been carried out at Clyde, and Mr. Courtney submitted a report of the meetings held by the Committee which had been appointed to make the arrangements for the experiments.

It was decided that the report should be included among the papers of the Commission.

The Commission deliberated upon the subject of visiting and inspecting the bridges on the Great Northern Railway, and it was resolved that Professor Kernot and Professor Warren should leave that night for Newcastle, and make the necessary arrangements for the inspection of the bridges by the Commission, forwarding a report to the members of the Commission remaining in Sydney by Monday.

MONDAY, 16 *FEBRUARY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A report was read from Professors Kernot and Warren at Aberdeen concerning the arrangements they had made for the inspection and testing by the Commission of the bridges on the Great Northern Railway.

It was resolved that the report should be filed.

The Commission deliberated upon the best time to leave in order to join Professors Kernot and Warren, and it was resolved that they should leave Sydney for Aberdeen on Wednesday night.

The Secretary was instructed to inform Professors Kernot and Warren of the intention of the Commission to leave Sydney on Wednesday night and to make the necessary arrangements with the Locomotive Engineer at Newcastle and the Traffic Manager at the same place for engines for testing the bridges.

FRIDAY, 27 *FEBRUARY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren reported to the Commission that he and Professor Kernot left Sydney on Tuesday, 12th instant, and arrived on the following morning at Aberdeen, where they inspected the tailway bridge and made the necessary arrangements for the testing of it by the Commission, including rhe marking of positions for deflecting apparatus. On the same night a report was forwarded to the Commission

Commission in Sydney. The following day they thoroughly inspected the Aberdeen Bridge, examining the rivets and the work in the bridge, and left at night for Tamworth. On Monday morning they inspected the bridge at Tamworth, and marked positions for deflecting apparatus, after which they returned again to Aberdeen to await the arrival of the Commission from Sydney.

The President reported that the Commission left for Aberdeen on Wednesday, 18th instant, and on the 19th the Aberdeen Bridge was tested by the whole of the members of the Commission. At 9 o'clock on the following morning a meeting of the Commission was held at Tamworth, and the Commission then tested the bridge on the Peel River and that over Peel-street. On the 21st instant the Commission proceeded to the M'Donald River and tested the bridge there. On the 23rd the bridge over the M'Donald River was again visited, and Mr. Bewick, Superintendent of Permanent Way, Mr. Robt. Ewing, Inspector of Bridges, and Mr. Hilzinger, Inspector of Bridges, were examined. The Commission then returned to Tamworth, and on the bridges examined Mr. Ewing and Mr. Hilzinger. On the 24th the Commission returned to Aberdeen and examined on the bridge Mr. Ewing, Mr. Hilzinger, and Inspector Morrison. The same day the Commission left Aberdeen for Newcastle, and returned to Sydney on the morning of the 25th.

The Commission discussed the results from their visit to the Northern bridges, and the Secretary was instructed to write to Mr. T. Boag, Locomotive Foreman at Newcastle, for the total weight of each type of engine and tender in the numbers 222 and 237 (Beyer & Peacock), and 261 (Dubbs & Co.) when in full steam and having a full load of coal and water, and the weight on each wheel, and the exact distances between the wheels. The Secretary was also instructed to write to Mr. Whitton, Engineer-in-Chief for Railways, requesting him to supply the Commission with the detail of main girders at Peel River, Tamworth, and M'Donald River, showing development of boom plates and joints, and sizes of lattice bars.

The Secretary was instructed to summon Mr. W. B. Wade, Mr. J. W. Drewett, Inspector Parkinson, and if possible Mr. W. Russell, for examination at a meeting of the Commission on Wednesday, 4th March.

MONDAY, 2 *MARCH*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren submitted for the consideration of the Commission the plotted deflections from the experiments made at Clyde, and the subject was discussed.

The Commission took into consideration a letter received from the Under Secretary for Public Works with reference to the time when the Report of the Commission would be submitted to the Government, and a general discussion took place as to when a Progress Report should be made.

The subject of the recent visit of the Commission to the Northern bridges was brought before the meeting, and a discussion took place with regard to the proper form in which the results of the inspection and testing of the bridges should be recorded.

WEDNESDAY, 4 *MARCH*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren handed in the following report relating to the experiments in the testing of wooden girders at Clyde:—

Feb. 5.—Commenced experiments on timber at Finnegan's siding, and levelled the experimental beam. In order to represent the conditions existing in bridge eight rails were slung from the cantilevers 8 feet 7 inches from centre of tressles and ten rails placed in cage and deflection noted. The deflection of compound beam with 12-inch transoms was also noted when loaded with forty-two rails. Six experiments were made.

Feb. 6.—Experiments 6 to 34 to compare 9-in. transoms with 12-in. and with 6-in.

Feb. 7.—Experiments 35 to 57 relating to the effect of corbels.

Feb. 9.—Completing corbel experiments, and commenced to break 29 feet 6-in. beam on tressles with sixteen rails, increasing four rails at a time.

Feb. 10.—Breaking 29 feet 6-in. beam.

Feb. 11.—Experiments 78 to 102, which related to 26 feet compound beam with 6-in. transom spaces loaded in every respect as in bridge, including the effect of various loads on deflection, and the increased deflection produced by slackening bolts.

Mr. W. B. Wade, District Engineer, Department of Engineer-in-Chief for Railways, was examined.

FRIDAY, 6 *MARCH*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The President laid before the Commission a document supplied by Mr. W. B. Wade, showing section of top and bottom booms at centre of girders of bridges over the Peel and M'Donald Rivers.

Mr. J. W. Drewett, Assistant Engineer, Department of Engineer-in-Chief for Railways, and Mr. Thos. Parkinson, Inspector of Railway Bridges, were examined.

The Secretary was instructed to summon Mr. J. G. Griffin, contractor, for examination at a meeting of the Commission on Wednesday, 11th instant.

WEDNESDAY, 11 *MARCH*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren reported to the Commission that he had, at the request of the President, visited the Menangle Bridge, and that he had found that some of the timber bed-plates under the river piers were very much decayed.

Samples of the decayed timber were laid before the Commission, and after discussion it was resolved, on the motion of Mr. Blacket, seconded by Mr. Courtney,—"That in consequence of the statements made by Professor Warren, and the samples of decayed timber shown by him, the Commission proceed to Menangle and inspect the timber of the bed-plates under the main girders."

It was arranged that the Commission should proceed to Menangle by the 9·6 a.m. train on Saturday, 14th instant, and the Secretary was instructed to write to Mr. Cowdery and request him to have a platform erected on the top of the two river piers of the bridges, so that the Commission might be enabled to examine the wooden bearers, and to have a carpenter present with an auger for drilling holes through the timber.

A letter was read from Mr. Goodchap, forwarding photographs of engines used by the Commission testing bridges, and also diagrams giving the dimensions, weights, &c., of the engines.

Mr. John George Griffin, contractor, and formerly District Engineer in charge of a section of the Great Northern Railway, was examined.

SATURDAY, 14 *MARCH*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The Commission met at the Redfern Railway Station, and proceeded by the 9·6 a.m. train to Menangle, where they carefully examined the timber of the bed-plates under the main girders of the Menangle Bridge.

At the conclusion of the inspection a discussion took place; and the Commission being informed that similar decayed timber was to be found in the Penrith Bridge, it was resolved that Mr. Courtney and Professor Warren should proceed to Penrith that night to examine the timber bearings of main girders in the Penrith Bridge and to report upon them, and also to make preliminary arrangements for the testing of the bridge by the Commission.

WEDNESDAY, 18 *MARCH*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren reported to the Commission the circumstances of the visit made by him and Mr. Courtney to the Penrith Bridge, and it was resolved that a written report of the visit should be prepared.

A letter was read from Mr. Thomas Boag, Locomotive Foreman, Great Northern Railway, giving the weight, &c., of the engines used by the Commission when testing the bridges on the Great Northern Railway.

The Commission took into consideration the subject of forwarding a Progress Report to His Excellency the Governor for presentation to Parliament, and a Draft Report was submitted by the President, and, after discussion, approved of.

WEDNESDAY, 25 *MARCH*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Progress Report of the Commission was submitted by the President in a completed form and signed, the President first explaining that the Report had been sent to Melbourne for the perusal of Professor Kernot, who had approved of it and signed it.

A letter was read from Mr. W. H. Quodling, returning a tracing of erecting marks on girders of the bridges over the Peel River (Tamworth) and the M'Donald River, with information required by the Commission noted upon it.

Professor Warren laid before the Commission the diagrams of deflections taken during the testing of the bridges, as far as they had been completed, and they were examined and considered.

The Commission decided that for the future the ordinary meetings of the Commission should be held on Monday and Thursday afternoons at a quarter past 2 o'clock, and that committee meetings be held from 8 to 10·30 on Wednesday and Friday nights.

FRIDAY,

FRIDAY, 27 *MARCH*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., in the Chair.

W. H. Warren, Esq., Professor of Engineering, | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Chairman reported that the Progress Report signed at the last meeting of the Commission had been forwarded to the Hon. the Minister for Works.

The Commission discussed the subject of the riveting of several of the railway bridges with a view of deciding in what instances the riveting showed careless or defective work, and in what instances it was an improvement to the strength of the bridges.

The Chairman informed the Commission that there were in use at the present time as a standard two kinds of hydraulic testing machines, one for testing rivets put in for boiler and steam tight purposes, and the other for girder work.

The results of the testing of the Wellington Bridge were read over and considered.

The Commission discussed the subject of further evidence that it was necessary to have, and it was decided to summon Mr. W. B. Wade, for examination on Monday, 30th instant.

WEDNESDAY, 1 *APRIL*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering, Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission discussed the general scheme of calculating the stresses in the bridges and agreed upon a classification of the bridges.

Professor Warren was appointed to complete calculations he had already begun, and to submit them when completed to the Commission for examination.

The Secretary was instructed to telegraph to Professor Kernot, asking him to forward as quickly as possible his calculations of the Menangle Bridge, and to return the Wagga Wagga deflection diagrams.

THURSDAY, 2 *APRIL*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., (in the Chair.)

W. H. Warren, Esq., Professor of Engineering, | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Mr. W. B. Wade was further examined.

The Commission discussed the order of their future business, and it was decided that at the next meeting, to be held at 7·30 p.m. on Wednesday, 8th instant, the Commission should as far as possible prepare that portion of their Final Report which would relate to the bridges over the Wollondilly River.

WEDNESDAY, 8 *APRIL*, 1885.

MEMBERS PRESENT:—

G. A, Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering, Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The reports and other records of the inspection and testing by the Commission of the Wollondilly Bridges were read and considered, and the substance of that portion of the Commission's Final Report which would relate to the Wollondilly Bridges was agreed upon.

It was resolved that at the next meeting of the Commission, to be held on Friday evening, 10th instant, the draft of the Final Report upon the Wollondilly Bridges should be further considered, and that the Commission should at the same meeting take into consideration the subject of preparing the Final Report upon the Bathurst and Wellington Bridges.

FRIDAY, 10 *APRIL*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering, Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The preparation of the Final Report of the Commission as far as it would relate to the bridges over the Wollondilly River was further considered and discussed.

The Commission then proceeded to discuss their Final Report upon the Bathurst and Wellington Bridges, principally with regard to the preparation of diagrams of stresses in web, with sectional areas required, and diagrams of stresses in booms with curves of areas required; and also with reference to commenting on the stresses and the material in the actual bridge.

A telegram was read from Professor Kernot, in Melbourne, intimating that he would comply with a request of the Commission, and that he would forward, as soon as possible, his Report upon the Menangle Bridge.

MONDAY.

MONDAY, 13 *APRIL*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren laid before the Commission a diagram showing effective and actual areas in booms, also curve of areas, calculated from maximum stresses, relative to the Bathurst and Wellington Bridges; and the diagram was examined and considered.

On the motion of Mr. Blacket, seconded by Mr. Courtney, it was resolved,—That tracings of the diagram submitted by Professor Warren be made, one to be forwarded to Professor Kernot, and the other to be for the use of the Commission."

The subject of the Peel River (Tamworth) and the M'Donald River Bridges was brought before the Commission by Professor Warren, and the Secretary was instructed to write to Mr. Whitton and request him to furnish the Commission with the sizes of the channel irons in the bridges referred to.

Mr. Courtney handed in, as part of the draft of the Commission's Final Report upon the bridges over the Wollondilly River, a description of the bridges.

The President drew the attention of the Commission to the fact that as the date on which the last extension of time granted to this Commission to conclude their inquiry and make their report would expire on the 24th inst., it was necessary to make application for a further extension.

On the motion of Mr. Courtney, seconded by Mr. Blacket, it was resolved,—"That application be made for a further extension of four months."

FRIDAY, 17 *APRIL*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Mr. Blacket laid before the Commission for use in their Final Report, a description of the testing machinery used in the testing of the bridges.

The President submitted plans of deflection tests drawn by the draughtsman to the Commission, and after a lengthy discussion it was decided that certain particulars should be added to what was represented on the plans.

A general schedule of particulars for the Final Report on the Bathurst and Wellington Bridges was drawn up, and after consideration adopted.

FRIDAY, 24 *APRIL*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from the Commissioner for Railways, stating that he had been placed in possession of the Commission's Progress Report, and asking for an explanation of the concluding paragraph in the Report.

The letter was considered.

A letter was read from Mr. W. H. Quodling, returning a tracing of erecting marks of bridges over the Peel River at Tamworth, and M'Donald River, with what purported to be the sizes of the channel irons given.

Professor Warren laid before the Commission detailed calculations of the various lattice bridges.

The calculations were examined and discussed.

The President submitted, for the consideration of the Commission, plans showing the full speed test of the Bathurst and Wellington Bridges.

It was arranged that the plans should be completed and submitted again at the next meeting of the Commission.

WEDNESDAY, 29 *APRIL*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

The Commission considered the diagrams of strains and of deflections, and the calculations referring to the sections, of the bridges over the Macquarie River at Bathurst and Wellington, and of the bridge at Aberdeen.

The calculation of the web of the Tamworth and M'Donald River Bridges was also considered.

A discussion then took place on the details of construction of, and on the defects pointed out in, the bridge at Penrith, and the Solitary Creek Bridges on the Great Western line, and it was resolved that Mr. Courtney should, on Tuesday, 5th May, proceed to those bridges and make the necessary arrangements for the inspection and testing of the bridges by the Commission on the following Thursday, Friday, and Saturday.

MONDAY,

MONDAY, 4 *MAY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from the Principal Under Secretary, enclosing a document extending the time during which the Commission shall make their Final Report to the Government for a period of two months.

Professor Warren reported that he had been informed in the office of the Engineer-in-Chief for Railways that more information with regard to the sizes of the channel-irons in the bridges of the Peel River at Tamworth, and the M'Donald River, than that given in the returned tracings of those bridges, could not be furnished to the Commission, and that therefore it would be necessary for the Commission to have the necessary measurements of those bridges made by some one appointed by the Commission.

It was resolved that the necessary measurements of the bracing and channel bars should be made by some one appointed by the Commission.

The Commission discussed the subject of their intended visit to inspect and test the bridge at Penrith, and the bridges at Solitary Creek; and the Secretary was instructed to write to the Commissioner for Railways, requesting that three of the heaviest consolidation engines be on the Penrith Bridge at 9 o'clock on Friday morning, and that, after the testing of the Penrith Bridge, one of the engines, with a carriage, proceed with the Commission to the bridges over Solitary Creek, for the purpose of their inspecting and testing those bridges, and then bringing the Commission back to Sydney.

Professor Warren read to the Commission a letter he had received from Professor Kernot, containing a check made by Professor Kernot on Professor Warren's calculations with regard to Aberdeen, Bathurst, and Wellington bridges.

The Commission resolved to have diagrams prepared of the locomotives used in the testing of each bridge.

The diagrams of deflections relating to the Bathurst, Wellington, and Aberdeen bridges were considered, and also the drawing of one of the spans and one of the piers of the Wagga Wagga viaduct, as prepared for the Commission's Final Report.

The Commission also considered the diagram of moments produced by the position of the live-load on the continuous bridges at Bathurst, Wellington, and Aberdeen.

THURSDAY, 7 *MAY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

Mr. Courtney having left Sydney on Tuesday night to make the necessary arrangements for the inspection and testing of the Penrith and Solitary Creek bridges, the Commission met at the Redfern Railway Station on Thursday morning and proceeded by the 9 o'clock train to Penrith, where they inspected the Penrith Bridge, and on Friday tested it. On Friday afternoon they left Penrith for Wallerawang, and on Saturday they carefully inspected and tested the six bridges over Solitary Creek.

On Saturday evening the Commission took into consideration two letters received from the Commissioner for Railways, asking for an explanation of the concluding portion of the Commission's Progress Report.

It was resolved that a reply be sent to the Commissioner, stating that while the Commission recommended that for the present "the maintenance of the bridges be carefully carried out," they did not exclude from maintenance anything urgent, such as may be rendered necessary by changes which may come under observation. But they recommended the discontinuance of replating, reriveting, and other alterations in the bridges they had inspected and tested, until the result of their calculations, compared with the diagrams of strains and deflections, enabled them to determine if such work was absolutely necessary.

The Commission also resolved that, as a high wind, which was blowing at Penrith on Friday, prevented the testing of the bridge there from being as complete as desirable, a further test should be made on Saturday, 16th instant, and the Secretary was instructed to have the necessary arrangements made for the engines required for the purpose.

MONDAY, 11 *MAY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the two previous meetings were read and confirmed.

Professor Warren submitted plans of the experiments carried out by the Commission at Clyde.

A letter was read from Professor Kernot, enclosing the report of a visit made by him to the Western bridges, and the report was considered.

A discussion took place upon the inspection which had been made by the Commission of the Penrith Bridge, and the testing of that bridge, and it was decided that a further examination should be made of the booms.

Mr. Courtney reported that he had examined a portion of the cells of the bottom booms, and had found that they had not been cleaned since the time when the bridge was erected, and that there was a great accumulation of rust and some loose rivets in them.

It was resolved that a letter be written to the Commissioner for Railways, requesting him to have the cells cleaned out by the Engineer for Existing Lines as soon as possible, so that access to them might be had by the Commission and a closer examination of them made than Mr. Courtney had been able to do; and also that some timber connected with the approaches to the bridge which blocked up the entrance to the cells, and which did not affect the strength of the bridge, be removed.

The Commission then proceeded to examine the drawings of the Penrith Bridge.

Diagrams of strains relating to other bridges were also considered, and it was decided that after they had been checked by the President they should be lithographed.

Professor

Professor Warren submitted a sketch of the Wagga Wagga Bridge approaches, which, with the diagram of the experiments at Clyde, it was resolved should be photo-lithographed.

Diagrams of the engines used in testing the Bathurst, Wellington, and Aberdeen Bridges were also submitted and considered, and it was decided that they be sent to the photo-lithographer.

It was resolved that the Commission should meet at the Redfern Railway Station at 8 o'clock on Friday night, 15th instant, to proceed by train to Penrith, for the purpose of further testing the Penrith Bridge on the following day.

SATURDAY, 16 *MAY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The Commission having met at the Redfern Railway Station on the previous night and proceeded by train to Penrith, assembled at the Penrith Bridge on Saturday morning and made further tests of the bridge.

The Commission took into consideration the letter to the Commissioner for Railways for the removal of the obstruction at the entrance to the cells of the bottom booms of the Penrith Bridge and the cleaning out of the cells, and the Secretary was instructed to write another letter to the Commissioner, requesting him to inform the Commission immediately the work was carried out, so that the Commission might proceed without delay to examine the cells.

Mr. W. J. Hilzinger, Inspector of Bridges, was then further examined.

WEDNESDAY, 20 *MAY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous two meetings were read and confirmed.

Diagrams of deflections of the Penrith Bridge were submitted by the President and considered.

Mr. Courtney read to the Commission his notes of the inspection made by him of the Penrith Bridge, of his examination of the timber packing and girders, the plating, riveting, &c., and of the special inspection he made of the boom cells; and a discussion followed.

The necessity of obtaining further evidence with reference to some of the bridges was then considered, and it was resolved that the reports and other documents forwarded to the Commission should be read again at the next meeting and the names of additional witnesses noted.

FRIDAY, 22 *MAY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren submitted diagrams of the continuous bridges, and the diagrams were examined and discussed.

The various reports and other documents forwarded to the Commission relative to the Railway bridges were reperused and read, and additional notes were made by the members of the Commission as a guide for the questioning of witnesses yet to be examined by the Commission.

WEDNESDAY, 27 *MAY*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E. (in the chair.)

W. H. Warren, Professor of Engineering, | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission further considered the reports and other documents relating to the bridges, and discussed the notes that had been made with reference to the examination of other witnesses.

The Chairman drew the attention of the Commission to an elaborate report on riveting, just issued from the Institute of Naval Architects.

FRIDAY, 29 *MAY*, 1885,

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E. (in the Chair.)

W. H. Warren, Esq., Professor of Engineering, | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The subjects upon which it was considered advisable that further evidence should be taken were again considered, and a number of questions were prepared.

It was decided to summon Mr. T. R. Firth, District Engineer, for examination on Tuesday, at 2·30 p.m., and Mr. T. Smithyman, for examination on the following Friday.

The Secretary was instructed to write to Mr. Avern, and ask if his health was good enough to permit of his attending and giving evidence, and to Mr. Macnamara Russell, Melbourne, asking if he was kely to be in Sydney shortly, and if not whether he could arrange to visit Sydney to give evidence before the Commission, and at what cost to the Commission.

TUESDAY,

TUESDAY, 2 *JUNE*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from the Commissioner for Railways, informing the Commission that the work of removing the obstruction at the entrance of the cells of the bottom booms of the girders in the Penrith Bridge, and the cleaning out of the cells, had been completed.

Mr. T. R. Firth, District Engineer, Department of the Engineer-in-Chief for Railways, was sworn and examined.

The Commission decided to meet at 8 o'clock on Wednesday night to prepare, as far as practicable, the information in their possession with regard to the Wagga Wagga viaduct for their Final Report.

Photo-lithographs of diagrams of the deflections of the Penrith Bridge were submitted and examined.

It was decided that on Friday, the 5th instant, the Commission should meet for the purpose of taking further evidence, and that the following witnesses should be examined:—Mr. Alfred Williams, Harbours and Rivers Department; Mr. Richard Waring, Inspector of Railway Bridges, Department of Existing Lines; Mr. Thomas Smithyman, boilermaker; and Mr. G. C. Clark, District Engineer, Department of the Engineer-in-Chief.

It was further decided that on Friday the President (Mr. Morell) and Professor Warren should visit the Wollondilly Bridges, and that Mr. Courtney and Mr. Blacket should proceed to the Penrith Bridge for the purpose of examining the cells of the bottom booms of the girders.

The Secretary was instructed to write to the Commissioner for Railways, and ask that a second trolly be provided to enable members of the Commission to go through the cells of the bottom booms of the girders of the Penrith Bridge.

WEDNESDAY, 3 *JUNE*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

After discussion, it was resolved that the calculations for the timbers of 29 feet 6 inches should be made from the data obtained by the Commission on the experiments made at Clyde. Also, that a copy of the documents and tests should be supplied to each Commissioner as soon as possible, in order that he might make his remarks on the coefficient to be adopted.

A discussion followed on the advantages, or otherwise, to be derived from using wrought-iron girders instead of timber for superstructures. Also, as to cast-iron screw piles instead of timber for piers.

It was resolved that all the returns that could be printed should be put in hand without delay.

A further discussion took place in reference to the Wagga Wagga bridge approaches. It was resolved that Mr. Bennett, Engineer-in-Chief for Roads and Bridges, be written to, requesting him to give his opinion to the Commission as to his views regarding the life of timber bridges in the Colony.

The question of the examination of the following witnesses was then considered:—Mr. A. Williams, Mr. R. Waring, and Mr. Thos. Smithyman.

The President reported that he had been informed that Mr. Clark, District Engineer, had left the Department of Railways, and could not at present be found.

FRIDAY, *JUNE* 5, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from Professor Kernot, containing his report upon the approaches to the Wagga Wagga Bridge.

The following witnesses were examined:—Mr. Alfred Williams, Mr. Richard Waring, and Mr. Thomas Smithyman.

MONDAY, *JUNE* 8, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from Mr. Avern, expressing his regret that he was unable, in consequence of ill-health, to attend and give evidence before the Commission.

Mr. Blacket reported to the Commission that he went on Saturday last to Penrith Bridge, and found that the T irons had been removed and some rivets cut out of the bottom of the booms, but the cells were in such a state of dirt that he could not go through them until they were swept and cleaned.

It was resolved that a letter be written to the Engineer for Existing Lines, requesting him to have the bottom booms of the Penrith Bridge cleaned out, but not painted, so that the Commission might inspect them.

The

The President stated that, on Saturday, he, in company with Professor Warren, had visited the Wollondilly bridges, had inspected all of them, and verified the facts of a report previously drawn up by Professor Warren and Mr. Courtney. The principal defects they found were in the general design, such as want of access to the ends of the girders over the piers, caused by the stone parapet, which made it almost impossible to clean the bearings and bed plates; also the narrow space between the top of the piers and ends of cross girders, where dirt falls in and accumulates, and if not frequently cleaned out must produce decay of the ironwork. This had caused the shifting of some of the girders, some of which were an inch, or an inch-and-a-half, out of the proper position.

A discussion took place with regard to the Wollondilly bridges, and in the absence of Professor Kernot, who had gone carefully into the subject, it was decided to adjourn the discussion until the next meeting.

The Secretary was instructed to telegraph to Professor Kernot, and request him to inform the Commission when he would be able to attend.

WEDNESDAY, 10 *JUNE*, 1885.

MEMBERS PRESENT :—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The diagrams of the testing experiments at Clyde were submitted, and after discussion it was resolved to send them to be photo-lithographed for the Final Report.

The diagrams of the Wagga Wagga approaches were carefully examined and revised, and the whole of the diagrams of deflections of the following bridges were submitted, viz.:—Penrith, Bathurst, Wellington, Aberdeen, Tamworth, and M'Donald River. It was resolved to have these diagrams photo-lithographed as soon as they had been finally checked by the President.

The printed draft of evidence was submitted with the corrections made by the Secretary. It was resolved to have the evidence corrected, and that a copy of his evidence should be sent to each witness who had not yet had an opportunity of correcting it.

It was resolved that the Secretary should be instructed to write to the Government Photographer, asking for photos of the experimental beams at the railway siding, Clyde; also for photos of the engine types used in the testing of bridges taken in a manner similar to the sample sent by the President; also that photos of the following bridges be at once prepared by the Woodbury process for publication with the Final Report, viz.:—Wagga Wagga Bridge, Wagga Wagga Bridge approaches, Mulwaree Creek Bridge, Goulburn, Wollondilly Bridge, Boxer's Creek Bridge, Menangle Bridge, Penrith Bridge, Tarana Bridge, Bathurst Bridge, Wellington Bridge, Dubbo Bridge, Aberdeen Bridge (to be obtained from the Under Secretary), Tamworth Bridge, Tamworth with approaches, M'Donald River Bridge.

It was resolved, in consequence of reasons stated as under, that the Government be requested to grant the Commission a further extension of time for two months from the expiration of the present term of extension:—

1. Because when the Commission in April last applied for an extension of four months, only two months were granted.
2. In consequence of the delay in obtaining the returns required by the Commission.
3. On account of having to obtain the evidence of additional witnesses.
4. On account of the necessity for the reinspection of the Penrith and Menangle bridges in consequence of certain serious matters having been brought under the notice of the Commission.
5. In consequence of the difficulty of obtaining from the Engineer-in-Chief for Railways the plans of certain of the bridges, which necessitated the sending of an officer to visit and make diagrams of certain bridges in the north and south.
6. On account of the Commission having had to await the arrival from Melbourne of Professor Kernot, who could not leave his duties at the Melbourne University until the second week in June to join the Commission in preparing their Final Report.
7. On account of the large amount of drawings now in the hands of the printer and in course of preparation for photo-lithography, and which will not be completed until after the expiration of the present term of extension.

FRIDAY, 12 *JUNE*, 1885.

MEMBERS PRESENT :—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The draft of a letter to the Colonial Secretary, requesting a further extension of time to the Commission for two months, was read and adopted.

A discussion took place on the subject of wind braces in lattice bridges.

The Secretary was instructed to write to the Department of Railways in Victoria, requesting that the Commission may be furnished with the results of timber testing by that Department.

Professor Kernot submitted designs of timber bridges as used in Victoria, and they were compared with the Wagga Wagga viaducts.

MONDAY,

MONDAY, 15 *JUNE*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from Mrs. M. Russell, of Melbourne, stating that Mr. Macnamara Russell was in Adelaide, but would shortly return, when he would reply to the Secretary's letter of 7th June.

A discussion took place with regard to the wind bracing of the M'Donald River and other bridges.

It was resolved that the Secretary be instructed to write to Mr. R. D. Stephens, District Engineer, Goulburn, asking him for his calculations of the shorter spans which he proposes should be used instead of the larger spans for the Wagga Wagga timber viaduct.

A discussion took place in regard to the designs of the bridges on the Southern, Western, and Northern lines of railway, and on the evidence of witnesses in regard thereto.

It was resolved that Mr. Thomas Smithyman be summoned to attend on Thursday morning next, at 11 o'clock, to be further examined, and the Secretary was instructed to summon Mr. Smithyman accordingly.

WEDNESDAY, 17 *JUNE*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

Committee Meeting.

A discussion took place upon the strongest, safest, and cheapest viaducts, not exceeding 30 feet span. A comparison of 15 feet, 20 feet, and 30 feet spans used on the Victorian Railways (5 feet 3-inch gauge), and the 26 feet span used on the Queensland Railways (3 feet 6-inch gauge), with the 26 feet and 29 feet 6-inch spans, used on the New South Wales Railways (4 feet 8½ inch-gauge), was brought forward by Professor Kernot, and during the discussion the quantity of timber used in the different designs was shown to be much greater in the New South Wales timber viaducts than in those of the adjoining Colonies. The weight of travelling and driving wheels, and wheel base of the heaviest locomotive engines used on the timber viaducts under consideration showed that the heaviest Government engines on the New South Wales Railways do not strain our bridges to a greater extent than the lighter engines used on the Victorian Railways.

The mode of construction of the different timber spans and of piers of different heights was also considered, and it was shown that stability may be obtained with much less timber than is put in the timber viaducts of the Colony, similar to those of Wagga Wagga.

The particulars and strength of Wollondilly, 130 feet span, were discussed, in reference to the web plates, at 42 feet from the centre of span.

FRIDAY, 18 *JUNE*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. H. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Mr. Thomas Smithyman was recalled and further examined.

The Secretary was instructed to summon Mr. J. F. Mann to attend and give evidence on Monday next.

MONDAY, 22 *JUNE*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

A letter was read from the Engineer for Existing Lines in reference to the cleaning of the bottom booms of the Penrith Bridge.

With reference to the Wagga viaduct, Professor Kernot laid before the Commission a letter he had received from Mr. Steele, Inspector-General of Public Works in Victoria, on the subject of screw piles, with a diagram.

The question of the best construction of timber viaducts was discussed fully. It was considered that less timber would have been required for the construction of such viaducts as those at Wagga had a design been selected similar to those used in the Victorian timber viaducts, or by substituting larger spans at the greatest depths, and making larger embankments in the more shallow water; also, that the larger spans might have been constructed of iron in the deeper portions where strong currents have been found in flood time. By such means great part of the expense of maintenance of these expensive timber structures might have been avoided. A saving of timber by using similar spans to those of the Victorian viaducts would have been made. The cost of using 60 feet iron spans with screw piles compared with the cost

cost of the timber approaches would have been greater, but a saving in the cost of maintenance in the iron over the wooden structures would also have been made. With regard to construction it was considered that there were very few defects in the superstructure, which is ironbark, and the few girders which may have shown defects have been replaced. The transoms should have been of ironbark, and it would be advisable to replace them with that timber as they decay. With reference to the piles many of them are defective, having been put in with the sap in them. As ironbark piles could not have been obtained when the Wagga viaducts were constructed it would be advisable, the Commission considered, for the Government to keep a stock of piles, to be obtained by contract, and used for the construction of timber approaches and bridges.

WEDNESDAY, 24 *JUNE*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Professor Warren handed in his calculations of all the bridges examined by the Commission, with the exception of Penrith, Menangle, and the Wagga iron bridge. The Secretary was instructed to have these calculations printed as an Appendix to the Report.

It was resolved that the diagrams of the testing of the various bridges should be printed to accompany the Report.

The Secretary was instructed to summon Mr. J. G. F. Mann and Mr. Hilzinger to attend before the Commission and give evidence on Saturday morning at half-past 10 o'clock.

It was resolved that a clerk should be engaged by the President to compile portions of the papers to be printed, and to perform other clerical work required by the Commission.

It was also resolved that the Messrs. Amos should be summoned at some future date to give evidence before the Commission.

THURSDAY, 25 *JUNE*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Secretary was instructed to write to Mr. John Rae, Under Secretary for Works, asking for photos of the bridges inspected by the Commission.

A letter was read from Mr. Robert Watson, Engineer-in-Chief, Railway Department, Victoria, enclosing results of experiments on different Colonial and other timbers in the year 1880; also copy of the report of the Carriage Timber Board, dated May, 1884. The Secretary was instructed to acknowledge with thanks the receipt of the above communications, and to request Mr. Watson to further oblige the Commission by supplying them with the results of experiments on large scantlings of red gum timber, made at Sandhurst in the year 1865.

The Secretary was also instructed, on the motion of Professor Warren, seconded by Professor Kernot, to write to the Engineers-in-Chief for Railways of the Colonies of Queensland, South Australia, Tasmania, and New Zealand, requesting to be furnished with the result of any experiments they may have made to ascertain the strength and elasticity of Colonial timbers.

A telegram was read from Mr. R. D. Stephens, dated from Albury, stating that he would forward the information requested by the Commission, immediately on his return to Goulburn.

The evidence in regard to the Wagga Wagga viaducts and the iron bridge, and the Wollondilly, Menangle, and Penrith bridges was discussed in detail, and questions were prepared for the further examination of witnesses thereon.

It was resolved to re-examine Mr. John Whitton, Engineer-in-Chief for Railways, at an early date.

SATURDAY, 27 *JUNE*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. M'D. Courtney, Esq., C.E.,
W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

Mr. Gother F. Mann was examined.

Mr. William Hilzinger was recalled and further examined.

TUESDAY, 30 *JUNE*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

The question of the evidence to be given by Mr. Macnamara Russell was considered, and it was decided, on the motion of Professor Warren, seconded by Mr. Courtney, that Mr. Russell be summoned to attend and give evidence on Thursday next, at 11 o'clock.

A letter was read from the Colonial Secretary, stating that the time of the Commission had been extended for two months from the 24th instant, but that no further extension of time would be granted.

Diagrams of the stresses of the different bridges, and of the experiments at Clyde, were submitted, examined, and revised.

A discussion took place upon the details of construction of the Penrith and Menangle bridges, compared with the calculations of the strains submitted by Professors Warren and Kernot, showing that on the Penrith Bridge the rivets fastening the web to the angle irons of top and bottom booms were strained to the extent of 8 tons per square inch, under the load of two locomotives and eleven ballast trucks covering the middle span and half the adjoining span. With regard to the cross girders it was shown that with a moving load they were strained to the extent of 7·5 tons compression and 9 tons tension. It was agreed that this matter should be made the subject of special mention in the Report.

The subject of the web and plate girders on the Wollondilly bridges was considered, and the strain of those plates when a full load passes over them.

THURSDAY, 2 *JULY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

Mr. Macnamara Russell was examined.

It was resolved that the consideration of the various matters before the Commission should be for some further time discussed in Committee.

FRIDAY, 3 *JULY*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

Committee Meeting.

The Committee was engaged during the whole of the evening in the examination and revision of the proofs from the Government Printer, of the calculations made in regard to the various bridges.

MONDAY, 6 *JULY*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering, Owen Blacket, Esq.

Committee Meeting.

Professor Warren stated that he had received a letter from Professor Kernot, in which the writer spoke strongly about the weakness of the Penrith Bridge and the Solitary Creek Bridges, especially when considered in reference to the heavy engines which travel on the Western line.

A letter was read from Mr. R. Watson, Engineer-in-Chief in Melbourne, enclosing tables and diagram respecting testing of red-gum timber at Sandhurst. It was resolved that the diagram should be printed as an Appendix to the Report, and that the Secretary should acknowledge the receipt of the letter with thanks.

A discussion took place as to the general report on riveting; also as to the final report on the Penrith Bridge.

Professor Warren submitted the complete calculations of the Penrith Bridge ready for the printer.

THURSDAY, 9 *JULY*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering, Owen Blacket, Esq.

Committee Meeting.

Mr. Courtney brought forward some valuable information he had just received from England in reference to riveting.

It was decided that Professor Warren should have reproductions made of some Victorian timber bridge designs supplied by Professor Kernot.

Professor Warren reported in what stage he had the calculations in regard to the Wagga Bridge and viaducts, and the various calculations were discussed.

It was decided that the Commission should visit Penrith on the following Saturday, and take further particulars in reference to the bridge there.

SATURDAY, 11 *JULY*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering, Owen Blacket, Esq.

The Commission proceeded to Penrith to test and examine the bottom booms of the Penrith Bridge, and to take further detailed particulars in regard to that structure.

WEDNESDAY,

WEDNESDAY, 15 *JULY*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

Committee Meeting.

Mr. Blacket read his report on the Wagga viaduct, which was discussed.

Professor Warren read his report on the Clyde experiments, which was discussed. Also his report on the Penrith Bridge, and a discussion ensued as to the suggestions contained therein.

Some correspondence was read from Professor Kernot in reference to deflections.

It was decided to send a telegram to Professor Kernot asking him to send complete calculations of the strength of strutted Victorian timber viaducts; also, that Mr. Whitton be requested to supply particulars of central cross-section of clear spans of main approach girder at Penrith.

FRIDAY, 17 *JULY*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

Committee Meeting.

A letter was read from Mr. R. D. Stephens, giving his estimate of differences if the 26 feet span had been adopted for the Wagga Wagga viaduct instead of the 29 feet 6 inches as now erected.

A proof copy of the experiments on the strength of red-gum timber was received from the Government Printer; also information that he had the photos. of bridges in hand.

Arrangements were made as to which members of the Commission should write reports on the various bridges, the work being distributed so that each member should bring in a report of the bridges allotted to him.

MONDAY, 20 *JULY*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

Committee Meeting.

Revised proofs of the experiments on the strength of timber at Sandhurst were received from the Government Printer.

A report by Professor Warren was read on the design and construction of the Aberdeen Bridge, and after discussion adopted.

A long discussion took place on the subject of riveting, and also as to how the General Report should be worded, and under what headings the various styles of rivets should be termed, and which should be replaced.

FRIDAY, 24 *JULY*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.
Owen Blacket, Esq.

Committee Meeting.

A letter was read from Professor Kernot on the Penrith Bridge. A long discussion ensued in regard to the best means to be adopted for strengthening that bridge.

TUESDAY, 28 *JULY*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of previous meetings were read and confirmed.

Reports in connection with the Wagga Wagga viaducts were submitted and discussed; also various matters connected with the iron bridges.

WEDNESDAY, 29 *JULY*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.
Owen Blacket, Esq.

Committee Meeting.

The report on the Penrith Bridge was carefully gone over, and some necessary alterations were made in the same.

FRIDAY,

FRIDAY, 31 *JULY*, 1885.

MEMBERS PRESENT:—
G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.
Owen Blacket, Esq.

The minutes of the previous Committee and Commission meetings were read and confirmed.

A letter was read from Mr. W. H. Quodling, giving particulars of girder at the Penrith Bridge.

The President submitted a diagram of the deflections of the Wagga Wagga viaducts, and the diagram was considered.

The Commission discussed the deflections of the Menangle Bridge.

The printed matter connected with that portion of the Commission's Final Report which would relate to the Wollondilly bridges was examined and considered, and the Secretary was instructed to obtain for the use of the Commission additional proofs of everything that had been sent to the Government Printer.

A discussion took place with reference to that portion of the Commission's Report which would deal with the bridge at Wagga Wagga, and the Secretary was instructed to inquire of Professor Kernot by telegraph whether he had in his possession a book handed to the Commission by Mr. Nicholas, the engineer in charge of the construction of the Wagga Wagga viaduct, and relating to that viaduct.

Arrangements were made for the preparation of portions of the Commission's Final Report not already written, and the meeting then adjourned.

FRIDAY, 31 *JULY*, 1885.

MEMBERS PRESENT:—
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

Committee Meeting.

The Committee considered what recommendations should be made for the Aberdeen Bridge and also for the Penrith Bridge.

MONDAY, 3 *AUGUST*, 1885.

MEMBERS PRESENT:—
G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.
Owen Blacket, Esq.

The minutes of the previous meetings were read and confirmed.

The subject of the Commission's Final Report was further considered, and the printed matter relating to it was further examined and corrected.

The Secretary was instructed to write to the Engineer-in-Chief for Railways requesting him to furnish the Commission at his earliest convenience with a return showing the localities where timber bridges and approaches to iron bridges have been erected on the different lines of railway in the Colony, the length of each bridge or approach, the number of spans, the date on which each bridge or approach was erected, and, if possible, the cost; to the Engineer for Existing Lines, requesting him to furnish the Commission with a return showing the cost of maintenance of each of the timber bridges and approaches to bridges on the different lines of railway in the Colony; and to the Commissioner for Roads, requesting him to furnish the Commission with a statement of his opinion regarding the life of timber bridges in this Colony and the cost of maintenance, and to state what repairs have been necessary, if any, to the iron bridges erected in his department.

The Secretary was also instructed to telegraph to Mr. C. E. Nicholas, and ask him to supply the Commission, if possible, with a copy of the book classifying the different kinds of timber used in the Wagga Wagga viaduct.

MONDAY, 3 *AUGUST*, 1885.

MEMBERS PRESENT:—
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

Committee Meeting.

The Committee further considered the recommendations with reference to Penrith Bridge and the subject of renewal of rivets in that bridge, and a proposal by Professor Kernot to put a longitudinal girder in the bridge.

WEDNESDAY, 5 *AUGUST*, 1885.

MEMBERS PRESENT:—
G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meetings were read and confirmed.

The Commission's Final Report was further considered, and the printed matter relating to it further examined and corrected.

The Secretary was instructed to have the evidence taken before the Commission classified, and the Commission then adjourned.

FRIDAY, 7 *AUGUST*, 1885.

MEMBERS PRESENT:—
G. A. Morell, Esq., C.E., President.
W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission further considered their Final Report, and discussed the various matters to be referred to in the Report.

TUESDAY,

TUESDAY, 11 *AUGUST*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

Proofs of diagrams to accompany the Commission's Final Report were examined and considered.

A letter was read from the Engineer-in-Chief for Railways, stating that he could not undertake to furnish the Commission with certain details required respecting timber bridges.

A letter was read from the Commissioner and Engineer for Roads, forwarding a statement with reference to the life of timber bridges and to repairs to iron bridges erected under the superintendence of officers in the Roads Department.

A paper on the waterway of bridges and culverts, forwarded from Melbourne by Professor Kernot, was read and considered.

The Commission then further considered the subject matter of their Final Report.

WEDNESDAY, 12 *AUGUST*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

Committee Meeting.

The Committee discussed the details of the Penrith Bridge inspection.

TUESDAY, 13 *AUGUST*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,
Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

A letter was read from the Chief Assistant Engineer of Existing Lines in Victoria, forwarding certain drawings for the information of the Commission.

A letter was read from Mr. Cowdery with reference to the request from the Commission for a return showing the cost of maintenance of each of the timber bridges and approaches to bridges on the different lines of railway.

A telegram was read from Mr. C. E. Nicholas, stating that he had no copy of the book classifying the different kinds of timber used in the Wagga Wagga viaduct.

A letter was read from Mr. W. H. Quodling, forwarding to the Commission vouchers sent in to the office of the Engineer-in-Chief for Railways for expenses incurred by witnesses when coming to Sydney to give evidence before the Commission.

The Secretary was instructed to telegraph to Professor Kernot, requesting him to be in Sydney on Saturday, 22nd instant, for the purpose of signing the Commission's Final Report.

The Commission further considered the subject matter of their Final Report.

A discussion then took place as to the advisableness of forwarding a copy of the evidence taken before the Commission to Mr. Whitton and Mr. Cowdery for their perusal previous to further examining them upon points brought out by the evidence; and it was resolved that, with the consent of the Hon. the Minister for Works, a copy of the evidence should be so forwarded, and an intimation sent to each officer that the Commission intended to summon them for further examination on an early day next week.

FRIDAY, 14 *AUGUST*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering,

Committee Meeting.

The Committee discussed the details of the inspection made by the Commission of the Wagga Wagga viaduct.

MONDAY, 17 *AUGUST*, 1855.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meetings were read and confirmed.

The Secretary reported that a telegram had been sent to Professor Kernot requesting him to be in Sydney on Saturday for the purpose of signing the Commission's Final Report, and that a copy of the evidence taken before the Commission had been forwarded to Mr. Whitton and Mr. Cowdery.

The Commission further considered the subject matter of their Report, and then adjourned until the following morning, to examine Mr. Whitton and Mr. Cowdery.

TUESDAY,

TUESDAY, 18 *AUGUST*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

The minutes of the previous meeting were read and confirmed.

Mr. John Whitton, Engineer-in-Chief for Railways, and Mr. George Cowdery, Engineer for Existing Lines, were further examined.

WEDNESDAY, 19 *AUGUST*, 1885.

MEMBERS PRESENT:—

W. M'D. Courtney, Esq., C.E., | W. H. Warren, Esq., Professor of Engineering.

Committee Meeting.

The Committee discussed the general question of loose rivets, and the various kinds of imperfect riveting, and their effect upon the strength of bridges.

FRIDAY, 21 *AUGUST*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President. | W. H. Warren, Esq., Professor of Engineering.

Committee Meeting.

The Committee discussed the calculations relating to all the bridges, and the recommendations with reference to strengthening Penrith Bridge.

SATURDAY, 22 *AUGUST*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meetings were read and confirmed.

A letter was read from Mr. Cowdery with reference to the piers of Wellington Bridge.

The President submitted a complete draft of the Commission's Final Report, and it was read and considered.

MONDAY, 24 *AUGUST*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission further considered their Final Report, and adjourned until the evening.

MONDAY, 24 *AUGUST*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission further considered their Final Report.

TUESDAY, 25 *AUGUST*, 1885.

MEMBERS PRESENT:—

G. A. Morell, Esq., C.E., President.

W. C. Kernot, Esq., Professor of Engineering, | W. H. Warren, Esq., Professor of Engineering,
W. M'D. Courtney, Esq., C.E., | Owen Blacket, Esq.

The minutes of the previous meeting were read and confirmed.

The Commission further considered and signed their Final Report.

RAILWAY BRIDGES INQUIRY COMMISSION.

STATEMENT OF THE CIRCUMSTANCES WHICH LED TO THE APPOINTMENT OF THE COMMISSION.

MINUTE PAPER.

Construction of Iron Railway Bridges.

Department of Public Works, Sydney, 11 October, 1883.

FOR some time past the Engineer for Existing Lines, acting in what he considered to be the performance of his duties, has had a number of workmen employed in cutting out and renewing rivets and doing other works which he considered necessary on the iron railway bridges of the Colony.

Shortly after my acceptance of the office of Minister for Public Works reports were submitted to me by Mr. Cowdery which practically condemned the construction of most of the bridges in question; in fact in one or two instances Mr. Cowdery stated that he as Engineer for Existing Lines would not be answerable for the safety of these bridges unless he was allowed to repair them as he wished, as he had great doubts as to their stability.

The first of Mr. Cowdery's reports reached me on the 20th June last. On the following day I forwarded the papers for report to the Engineer-in-Chief, and at the same time expressed my intention of asking my colleagues to concur in the appointment of a Royal Commission to investigate the very serious charges and counter charges that have been made by two officers holding such high and responsible positions in the Public Service.

Mr. Whitton who, as Engineer-in-Chief, has the entire charge of the Railway Construction Branch, speaks in strong terms of Mr. Cowdery's want of professional ability to form any estimate as to the character of the iron bridges, and states in unmistakable terms that the action taken by Mr. Cowdery has tended very much to destroy the usefulness of the bridges and to impair their strength.

On the other hand Mr. Cowdery is equally pronounced in his condemnation of Mr. Whitton's abilities as an engineer, and in his opinions respecting the defective construction of the iron bridges.

This question is of so much importance to the entire community, and one so eminently of a professional nature, that it is quite impossible for any Minister to decide it. I therefore ask my colleagues to concur in the appointment of a Royal Commission to further and fully investigate the matter. I am strongly of opinion that nothing but the appointment of a Royal Commission (which would have the power to subpœna witnesses and examine them on oath) will meet the case.

I would suggest the following gentlemen to form the Commission :—

MR. G. A. MORELL, C.E.
MR. NORMAN SELFE, C.E.
MR. J. P. FRANKI (Manager, Mort's Dock).
MR. W. DAVIDSON (Manager, A.S.N. Company's Works).
MR. EDGINGTON (Atlas Company's Works).
MR. COURTNEY, C.E.

F. A. W., 11/10/83.

Cabinet approved.—A.S., 16/10/83.

The

The Commissioners named in the above Minute Paper were duly appointed, and their appointment was confirmed by the Executive Council, but circumstances arising in relation to the position of one or two of the Commissioners as persons connected with firms in the habit of contracting with the Government for the supply of ironwork for railway purposes, it became necessary to cancel the appointment, and to submit for the approval of the Executive Council a revised list of names. The cancellation of the appointment of the first Commission was effected by means of the following minute :—

MINUTE FOR THE EXECUTIVE COUNCIL.

Cancellation of Minute appointing Royal Commission to inquire into Railway Bridges.

Department of Public Works, Sydney, 13th March, 1884.

WITH reference to the Minute of the Executive Council, dated the 29th October last, appointing Messrs. Morell, Selfe, Courtney, Franki, and Edgington, members of a Royal Commission to inquire into and report upon the stability of certain iron bridges erected on the Existing Lines of Railway, I have the honor to request sanction to the cancellation of the said Minute, to enable me to submit for the approval of His Excellency the Governor and the Executive Council a revised list of names of members of the Commission in question.

F. A. WRIGHT.

The Executive Council advise that the proceedings on the 30th October last, appointing a Royal Commission for the purpose herein specified, be cancelled.—ALEX. C. BUDGE, Clerk of the Council.

Min. 84/10.—26/3/84. Confirmed, 1/4/84. Approved.—A.L., 25/3/84.

The revised list of names referred to in the foregoing Minute was only submitted and approved, and the Commission, the names of the members of which appear elsewhere, was appointed on the 23rd April, 1884.

Shortly after the appointment of the first Commission the following Minute Paper was written by the Honorable the Minister for Works, and a copy of it subsequently forwarded to the second Commission :—

MINUTE PAPER.

The Commission to inquire into Iron Railway Bridges.

Department of Public Works, Sydney, 5 November, 1883.

I SHALL be glad if the Under Secretary will prepare a *précis* of the whole case and forward it with the papers to the Chairman of the Royal Commission, Mr. G. A. Morell, C.E., pointing out the nature and the serious character of the dispute that has arisen between the Engineer-in-Chief for Railways and the Engineer for Existing Lines, with reference to the stability of certain iron bridges on the different railway lines; stating at the same time my desire to have the matter thoroughly investigated for the satisfaction of the Government and to restore confidence in the minds of the travelling public.

As it will be necessary in conducting this investigation for the members of the Commission to personally inspect the bridges and subject them to such a strain as they may consider necessary to test the stability of the bridges, the Commissioners may be informed that all necessary appliances will be placed at their disposal by the Traffic Department, and every facility will be afforded them by the officers of the Engineering and Traffic Departments, who will be instructed to furnish plans and papers and to give all information that may be required. To enable them to report fully upon the design and workmanship of the bridges witnesses may be examined on oath.

It will be seen that among the papers there are some dealing with the subject of the approaches (timber) to the Wagga Wagga bridge. Though these do not strictly refer to the main question in dispute, I have carefully considered the matter in connection with the question at issue and wish the papers submitted to the Commission and dealt with by them.

Without wishing to interfere in any way with the deliberations of the Commission, or to precipitate their decision, they may be informed that I am desirous that no unnecessary delay should occur in conducting and concluding their investigations, so that the Government may take immediate action in the matter, and allay any feeling of alarm that may have arisen in the mind of the public as to the stability of the bridges over which so many thousands of persons are constantly travelling.

The Commission may be informed that I have appointed Mr. Charles Lyne to be shorthand-writer and secretary; and that a room in this Department is at their disposal for the purpose of holding their meetings therein.—F.A.W., 5/11/83.

Have copy of this minute sent to Mr. Whitton and Commissioner for Railways, and also to chairman of Royal Commission.—F.A.W.

PRECIS OF THE CASE FOR INQUIRY.

THE *précis* of the case submitted to the Commission for their consideration and inquiry was as follows :—

FOR some considerable time there has been a serious dispute between the Engineer-in-Chief for Railways and the Engineer for Existing Lines about the stability of some of the iron bridges on our railways. Reports from the Engineer for Existing Lines and his officers have from time to time been laid before the Minister by the Commissioner for Railways, and referred to the Engineer-in-Chief for his report. Being unable, from severe illness, to visit the bridges himself, he instructed some of his chief assistants to do so, and their united reports are directly at variance with those of the Engineer for Existing Lines and his assistants; but the allegations of the latter as to the unsafe condition of the bridges are so startling, and the opinions of the officers at the head of two branches of the same department so contradictory, that the Minister for Works (Mr. Wright) felt assured that no decision of his would lead to a satisfactory settlement of the dispute, and that the only means of solving the difficulty and satisfying the Government and the travelling public was the appointment of a Royal Commission of Experts. Mr. Wright's suggestion to this effect was at once adopted by his colleagues.

A Commission, consisting of Mr. Morell, C.E., Mr. Selfe, M.I.C.E., Mr. Courtney, M.I.C.E., Mr. Franki, Manager, Mort's Dock Company, and Mr. Edgington, Atlas Works, was appointed by the Governor and Executive Council. Mr. Morell was elected President, and Mr. Selfe, Vice-President.

The papers submitted to the Commission, with an index to facilitate reference, explained the serious character of the dispute that had arisen between Mr. Whitton and Mr. Cowdery as to the stability of the bridges.

On 7th December, 1883, Mr. Whitton in his report to the Minister drew attention to the cutting out of rivets in some of the iron girder bridges constructed under his superintendence, without any reference to him, and enclosed reports from Mr. Cowdery, received by him from Mr. Hilzinger, on the loose rivets of the Wellington bridge, and from Mr. Wade in reply.

A report from Mr. Cowdery on the 9th February combated Mr. Wade's remarks on the rivets in Wellington bridge, and referred to his inspection of Penrith, Solitary Creek, Wollondilly, and Menangle bridges, corroborating the opinion of his officers, Messrs. Avern and Hyndman, whose reports were appended with a memo. of Mr. Hilzinger's experience on bridge work, &c.

On 16th March, 1884, Mr. Whitton requested the Minister's attention to a paragraph in the *Evening News*, reflecting on his supervision of the construction of the bridges and asked for a copy of the reports on the subject before they were submitted to Parliament.

Mr. Hilzinger on 7th, 16th, and 23rd April, reported to Mr. Cowdery on his inspection of the Aberdeen bridge, and the bridges over the Peel River, Peel-street, Tamworth, and the McDonald River, on the Northern line, showing the nature of the defects and the number of loose rivets in each.

By the Commissioner's directions Mr. Cowdery, on 25th May, examined the whole of these bridges and generally corroborated the statements of his officer, and considered that though there is no immediate danger it would be advisable to have the riveting attended to without delay.

On 21st June Mr. Secretary Wright, on receiving this report, thought it of so much importance that he requested the Engineer-in-Chief to report on the subject as soon as possible. Mr. Whitton at this time was only recovering from a severe illness which had confined him to his house for several weeks, but on 25th June he informed the Minister that he had instructed some officers of his Department to inspect the bridges on the Northern Line.

On 29th June the Minister again referred to the seriousness of the statements in the reports of Mr. Cowdery and his officers as to the construction and stability of the bridges, and stated that he could not take action till he had received Mr. Whitton's explanation, after which he would suggest the appointment of a Royal Commission of experts to examine and report on the whole question.

Mr.

Mr. Whitton, on 6th July, reported to the Minister that, being unable from illness to examine the Northern bridges himself, he had instructed Mr. Wade, Mr. Drewett, and Mr. Russell, three of his assistants, accompanied by Mr. Ewing, an experienced mechanic, also in his Department, to inspect the bridges referred to. He forwarded copies of their reports, from which he stated that the Minister would see that there was not the slighest foundation for the allegation that the bridges were in any way defective. He had no hesitation in affirming that no better iron bridges with regard to material and workmanship were ever built, and he expressed the hope that the Minister would give instructions that no further attempt at either loosening or replacing rivets in these bridges be made without his approval.

On 30th July the Minister requested the Commissioner to send this report to Mr. Cowdery, for his perusal only, and to instruct him to at once stop all work in connection with the riveting of all the bridges pending the report of the Royal Commission. This was carried out on the following day.

On 3rd September Mr. Whitton reported to the Minister that as it had been decided to appoint a Commission he would merely refer in general terms to the reports of Mr. Cowdery and Mr. Avern on the bad condition of the Western bridges. He attributed the cause of the loose rivets mainly to Mr. Hilzinger who in his inspection was reported to have used a flogging hammer weighing about 6lb.

And on 10th September Mr. Cowdery expressed his regret that he was precluded from giving a specific reply to Mr. Whitton's continued attacks, but while passing them by he was fully sensible, he said, of the insults Mr. Whitton dealt out to his (Mr. Cowdery's) officers and to himself.

Along with the papers forwarded to the Commission were a number of reports connected with the timber approaches to the Wagga Wagga bridge, to which Mr. Wright requested the attention of the Commissioners.

List of Papers.

The following Papers on the subject of the instability of the Railway Bridges were forwarded for the information of the Commission :—

Report of the Engineer-in-Chief for Railways on the cutting out of rivets in the iron girder bridges, enclosing some papers on the subject from the Engineer for Existing Lines, forwarding Mr. Hilzinger's report on the loose rivets in the Wellington Bridge and Mr. Wade's report on the same. Mr. Whitton complains of the re-riveting having taken place without any reference to him, and states that his responsibility for the safety of these bridges must cease from the date of his report. 1882. 7 December.

Report from Mr. Cowdery in answer,—commencing with a reply to Mr. Wade's remarks about the loose rivets, as to the supervision of the Inspector's work on the Wellington bridge. He next refers to his inspection of the Penrith Bridge, and states that many parts of the girders in the main portion of the bridge have been disgracefully put together; that the small plate girders of Solitary Creek Bridge have sagged from bad workmanship; and with reference to the Southern Bridges over the Wollondilly that he could turn round hundreds of the rivets without the use of a hammer. He then explains the nature of the repairs he had effected in the Menangle Bridge, and forwards reports from District Engineers Avern and Hyndman, and a memo. of Mr. Hilzinger's experience on bridge work, &c. 1883. 9 February. Wellington. Penrith. Solitary Creek. Southern Bridges. Wollondilly. Menangle.

Minute from Mr. Whitton, calling the Minister's attention to a paragraph in the *Evening News* of the 15th, reflecting on the engineering supervision of the construction of certain railway bridges, and stating that as he is responsible for their design and construction he should have been the first to be informed of any alleged defects in them. He asks for a copy of the reports before they are submitted to Parliament. 6 March.

Extract from the *Evening News*, under the head of "Railway Bridges and Blunders." 21 March.

Report of Mr. Hilzinger to the Engineer for Existing Lines, on his inspection of the iron railway-bridge at Aberdeen, on the Northern line, showing the number of loose rivets, &c. 7 April.

Memorandum from Mr. Avern to Mr. Cowdery,—that he was informed that Mr. Wade and Mr. Warren were examining the Wellington Bridge, and asking for instructions. Mr. Cowdery orders him to allow no examination of the bridge without his approval. 8 April.

Report from Mr. Hilzinger on the defective rivets, &c., in the bridges over the Peel River and Peel-street, Tamworth. 16 April.

Report of Mr. Hilzinger to Mr. Cowdery on the defective rivets in the iron bridge over the McDonald River, on the Northern line, with minute by the Commissioner instructing Mr. Cowdery to inspect the bridge, and if he finds the Inspector's report correct, Mr. Goodchap states that he will draw the attention of the Engineer-in-Chief to the matter. 23 April.

Minute

22 May. Minute of Mr. Stuart while acting as Secretary for Works, drawing attention to the wide breach between the Commissioner and the Engineer-in-Chief for Railways, and giving his views of the unwise procedure adopted where one engineer proceeds to alter the structural character of works done by the other.

25 May. Minute of Mr. Cowdery to the Commissioner for Railways reporting that he had personally examined the iron bridges on the Northern Railway, and confirming the Inspector's report on them. He considers that though there is no immediate danger of a collapse it would be advisable to have the riveting put right without delay to prevent sagging.

Mr. Secretary Wright thus minutes this paper :—

"The report submitted by Mr. Cowdery is of so much importance, and demands such immediate attention, that I should like the remarks of the Engineer-in-Chief for Railways to be made thereon as soon as possible.—21/6/83."

25 June. Minute of Mr. Whitton regretting that his serious illness for the past few weeks still prevented him from waiting on the Minister to express his views on the grave matters referred to in Mr. Cowdery's report; stating that he had instructed officers in his Department to inspect the bridges on the Northern line; and requesting the Minister to obtain a report from Mr. Bewick, the Superintendent of the Permanent Way in the North.

27 June. Memorandum from Mr. Cowdery to Mr. Bewick for a report in detail, and to afford every facility to the officer of the Engineer-in-Chief to conduct an inspection.

Minute of Mr. Secretary Wright :—

29 June. "The question involved in these papers is so important to the Department, to the travelling public, and, in fact, to the entire community, that I forward them to the Engineer-in-Chief for Railways, and must ask him to lose no time in replying to the statements contained in the enclosed reports from the Engineer for Existing Lines and from officers engaged under him (Messrs. Avern, Hyndman, and Hilzinger), in which the construction and stability of the principal iron railway bridges in the Colony are questioned.

"As these bridges have been constructed under the immediate supervision of the Engineer-in-Chief for Railways, I cannot take action until I have his explanation. As soon, however, as I am in possession of his report I shall bring the matter before my colleagues, and suggest the appointment of a Royal Commission of Experts to examine and report upon the whole question, which is of such importance that I feel any delay that can be avoided on my part would be highly culpable."

2 July. Memorandum from Mr. Bewick to Mr. Cowdery reporting on the bridges.

On Mr. Whitton's minute of 25th June, the Minister writes :—"The Commissioner will have the goodness to give effect to this through the usual channel.—26/6/83."

And the Commissioner telegraphs in Mr. Cowdery's name to Mr. Bewick to carry out the Minister's instructions.—26/6/83.

6 July. Minute from Mr. Whitton to the Minister stating that not having sufficiently recovered from his late illness to go to the north to inspect the bridges so unfavorably reported on by Mr. Cowdery, he had requested Mr. Wade, Mr. Drewett, and Mr. Russell, three of his assistants, all fully competent, accompanied by Mr. Ewing, an experienced mechanic, also in his department, to inspect and fully examine the bridges referred to. He forwards copies of their reports from which he affirms the Minister will see that there is not the slightest foundation for the allegation that the bridges are in any way defective. He has no hesitation in stating that no better iron bridges, with regard to material or workmanship, were ever built, and requests that the Minister will give instructions that no further attempt at either loosening or replacing rivets in these bridges be made without his approval.

Minute of Mr. Secretary Wright :—

30 July. "Will the Commissioner for Railways send the attached report from Mr. Whitton to the Engineer for Existing Lines, for his perusal only. At the same time to instruct Mr. Cowdery to stop all work in connection with the riveting of the whole of the railway bridges north, south, and west, pending the report of a Royal Commission that it is my intention to move my colleagues to appoint for the purpose of investigating the serious and important charges made in Mr. Cowdery's reports about the workmanship and stability of these bridges."

31 July. And the Commissioner forwards this minute to Mr. Cowdery to give it effect, which was done.

Minute

Minute of Mr. Whitton to the Minister, stating that as he had decided to appoint a Commission to investigate the matters in dispute, he would merely refer in general terms to the reports of Mr. Cowdery and Mr. Avern on the western bridges. He attributes the cause of the loose rivets mainly to Mr. Hilzinger in his inspection using a flogging hammer weighing about 6 lb. 3 September.

Minute of Mr. Cowdery, regretting that from the Minister's remark he is not at liberty to make any specific reply to Mr. Whitton's continued attacks; but while passing them by he is fully sensible of the insults Mr. Whitton deals out to his officers and himself. 10 September.

Sundry extracts from the Colonial Press.

Minute of Mr. Wright, recommending to the Cabinet the appointment of a Royal Commission, which was approved by the Cabinet on the 16th. 11 October.

In addition to the above the following papers were received by the Commission on the subject of the Wagga Wagga Viaduct:—

1882	
18 May	Commissioner for Railways, *re* reports from Engineer for Existing Lines, *re* defective material used in the construction of the viaduct at Wagga Wagga.
3 October	Engineer-in-Chief for Railways, forwarding copies of reports received from officers of his Department and Messrs. A. and R. Amos, *re* defective Pile, South Wagga viaduct.
1883	
18 July	Commissioner for Railways, forwarding report of District-Engineer Stephens on the subject of Wagga Wagga Bridge approaches.
11 August	Engineer for Existing Lines, forwarding report of District-Engineer Stephens on the subject of defective works, South Wagga viaduct.
1 August	Engineer for Existing Lines, forwarding statement of expenses in keeping the approaches to Wagga Wagga Bridge in order.
8 August	Commissioner for Railways, enclosing report on defects in the Wagga Wagga viaduct.
10 September...	Engineer for Existing Lines, *re* examination of South Wagga Iron Bridge.
14 September...	Engineer-in-Chief for Railways, forwarding reports on timber viaducts over the Murrumbidgee Valley, at Wagga.
4 October	Engineer for Existing Lines, forwarding papers in connection with timber viaducts over Murrumbidgee Valley, at Wagga.

Documents referred to in the foregoing Statement.

Minute Paper.

Wellington Bridge.

Department of Public Works, Sydney, 22 May, 1883.

The accompanying paper is one of several which have come before me during my short administration of this Department, which causes me extreme pain and regret.

This is caused by the evidence of a wide breach between two high officers of the Government—the Commissioner for Railways and the Chief Engineer for Railways.

It is my intention to state my views with some degree of fulness upon these differences as soon as I have time, not from any desire to favour one more than the other, or to depreciate either officer, but because I feel that such differences are in the highest degree detrimental to the Public Service, of which both are highly trusted and distinguished officers.

In this particular case it seems to me that if the Engineer of Existing Lines has any doubt as to the stability of the Bridge—nay more, if, in his opinion, there is any faulty construction in the Bridge, he should report or cause a report to be made thereon, with such recommendations as he may deem fit for rectifying the defects.

The Minister should then call upon the Chief Engineer for Railways for his remarks thereon, and then the Minister would have the opportunity and the responsibility of deciding between the two, to enable him to do which he would probably take the evidence of experts to cause a survey and report to be made to him.

I think that the procedure is not a wise one, where the one Engineer proceeds to alter the structural character of work done by the other, as it then leads to a state of things which cannot be examined or surveyed, but merely resolves itself into one asserting one thing and one another, to the embarrassment of the Minister and the detriment of the Public Service, as well as to the widening of the breach of these officers, on whose co-operation so much of the permanent good of the country—the common employer of both—depends.

A.S.,
22/5/83.

Minute from Engineer for Existing Railways to Commissioner.

Subject—Iron Bridges, Great Northern Railway.

Department of Public Works, Railway Branch, Existing Lines Engineer's Office,
Sydney, 25 May, 1883.

I beg to report, for your information, that I have personally examined the Iron Bridges on the Northern Railway, and am sorry to say I can only confirm my inspector's report of them.

The Aberdeen Bridge, which is similar to the Bathurst and Wellington Bridges, has been very badly constructed. There are more bad booms than good ones, particularly in the centre top booms, where they should have been of the best. The number of loose rivets are quite as many as reported, viz., 2,359, and when they are replaced many of the others will become loosened. Nearly all the strain in the top booms of this bridge comes on the rivets that are tight, and as there are so many that are not tight it must consequently

consequently shorten the life of the bridge to a great extent. I do not anticipate any immediate danger, but the sooner the loose rivets are replaced by sound ones the better for the bridge.

The work is in bad line, and the plates in many places not close.

The bridge over the Peel River has been well constructed as regards the plates being well butted and close, but the riveting is very bad; in fact I do not think there are many sound rivets in it. Of course there are more loose ones found in the top booms in consequence of the butts being good, but there are 2,458 found in the bottom booms, and I have no doubt many others were loose before the strain came on them, that is, before the stage was taken from under; but whether that be so or not, with the number found loose the bridge cannot be nearly so strong as it should be, and although there may be no immediate danger of a collapse, I deem it advisable to have the riveting put right without delay to prevent the bridge sagging. The cause of so many of these rivets being loose is that they were never large enough for the holes, there being nearly $\frac{1}{8}$ inch difference.

The bridge over Peel-street, Tamworth, is fairly constructed, there not being so many loose rivets, but still too many.

The bridge over the M'Donald River is the same span, and similar to the one over the Peel River, and is in similar condition, except that there are only 3,813 defective rivets found against 4,585 in the Peel River bridge.

GEORGE COWDERY.

The report submitted by Mr. Cowdery is of so much importance and demands such immediate attention, that I should like the remarks of the Engineer-in-Chief for Railways to be made on it as soon as possible.—F.A.W., 21/6/83.

MEMORANDUM to G. Cowdery, Esq., Engineer for Existing Lines.

S. Wagga Viaduct—Defective work.

Railway Department, Office of Engineer for Existing Lines, Goulburn, 28 July, 1883.

YOUR M.P. 82-3,100, 83-7,844, &c., &c.

These viaducts are represented by the following openings:—

Viaduct No. 1	113	bays of 29 ft. 6 in. each.		
" 2	66	"	"	
" 3	4	"	"	
" 4	73	"	"	
Then the iron bridge over the Murrumbidgee.				
Then viaduct No. 5	57	"	"	
Total	313	"	"	= S. 9,233 ft. 6 in.

The iron bridge does not enter into the present question; this iron bridge is substantially built and bears very fair comparison with bridges of this class.

The superstructure of the timber viaducts consists of double 12 in. x 12 in. ironbark road girders, outside girders, and transoms with 10 ft. corbels resting on two bearing and two batter piles; the latter, *i.e.* the piles, being in some, in fact in many instances, of very doubtful quality, both as regards size and description of timber. In fact I simply state that they are bad, in fact very bad. The whole of the piles, with the exception of some 120 adjoining the river, rest on sills, and the working sideway is most apparent.

I attach detailed list of imperfections as ascertained up to the present time; this on careful examination will, I believe, more than anything else, clearly prove that my remarks contained in my reports, dated January 16, 1882, and May 12, 1882, are more than fully borne out.

Mr. Drewett's report is straightforward and to the purpose; his examination was honest, and though he and I happen to slightly differ as to amount of deflection, that is a matter of comparatively small moment.

I may, however, state that at the time he examined these bridges I myself was not fully aware of some most important defects that we subsequently discovered.

Curtly my objection to these viaducts are as under:—

1st. I consider that a very serious and fruitlessly expensive mistake has been made in extending the spans from 26 ft. centres to 29 ft. 6in. centres.

I cannot but think that the Engineer-in-Chief never intended it himself; that it was some clerical error; in fact this is evinced by their very careful avoidance of 29 ft. 6 in. spans on the Jerilderie and Albury Extension Lines.

We have 30 ft. spans, but the girders are 14 in. x 14 in. which as against 12 in. x 12 in. makes a very considerable difference. Independently of this the racking of the timber is still further increased by the injuriously long corbels—10 ft. The cost of these useless or rather detrimental lengths of corbels, squared timber, with their accompanying bolts, &c., would have gone a very long way to putting in the requisite spans—26 ft. centres, as against the 29 ft. 6 in. spans, which border on the point of danger.

R. D. STEPHENS.

Let this paper be sent at once to the Engineer-in-Chief for Railways for a report, and I wish a report sent me at once stating what, if any, action has been taken in the matter, and what, if any, portion of the viaduct has been renewed, the parts taken out, &c. Reply to this so that they may be at any time examined. I also wish no work to be done in renewing any portion of this work until the Engineer-in-Chief has sent an officer of his own to examine and report.—F.A.W., 7/8/83.

I have personally examined these viaducts, and am sorry to say they are quite as bad as reported by Mr. Stephens, and at the present rate of decay, if it is decay since erection, it is my opinion that all the uprights and many of the girders will have to be renewed within ten years.—G.C., 1/8/83.

MINUTE

MINUTE from Engineer for Existing Railways to Commissioner.

Subject: Timber Viaducts over the Murrumbidgee Valley at Wagga.

Department of Public Works, Railway Branch, Existing Lines, Sydney, 4 October, 1883.

IN returning these papers to the Commissioner after perusal, waiving the continued and persistent insults of Mr. Whitton to my officers and myself, which I suppose must be endured for the present, as a specific reply would, I take it, be inconsistent with the Minister's intimation that these papers are sent for "perusal only," I must urge the Commissioner, however, in the strongest possible terms not to allow the props to be removed that were placed under the above viaduct, by my instructions, after a personal and careful examination of them; they were put there for the safety of the public and not "to alarm the public," as insinuated by Mr. Whitton.

As an illustration of the worth of Mr. Whitton's officers' reports, I would ask the Commissioner to notice Mr. Drewett's representation that "50 in all" comprise the hollow uprights or piles, and that the pipes in these are from "1 in. to 2 in. or 3 in." With the papers supplied is a detailed list, the correctness of which I personally tested, and this shows a total of 104 bad and questionable, with pipes from 1 in. to 9 in. There are actually 63 from 4 in. to 9 in. For the present I content myself with drawing attention to this misstatement of simple facts, and leave it to others to decide whether it springs from "ignorance or malice."

I may state that most of these faulty girders would have been taken out and replaced with sound ones by this but for the Minister's minute, 7/8/83, on Mr. Stephens' report, requesting that no work should be done until examined by the Engineer-in-chief.

Will Commissioner please say if these viaducts are now to be repaired, as a flood may come at any time and carry out the props.

GEORGE COWDERY.

As the props are to be left for the present it does not seem necessary to precipitate the question in dispute or prejudge it by repairing the structure in the way suggested. The Royal Commission is to be appointed, I understand, without delay, and they will probably give this matter, as it is the most urgent, their first attention. If the props are carried away by the flood they can be replaced by others. And in the meantime (should such an exigency arise) a light engine will be used to run the trains over the viaduct, and so reduce to a minimum all risk of accident.—CH. A.G., 5/10/83.

Wagga Wagga Viaduct.

Engineer for Existing Lines to The Chairman of Railway Bridges Inquiry Commission.

Sir, Railway Department, Office of Engineer for Existing Lines, Sydney, 11 June, 1884.

In connection with the investigation into the condition of the approaches to the Wagga Viaduct upon which the Commission has now entered, I have the honor to call your attention to the fact that the papers before the Commission conclude with reports by Messrs. Whitton, Wade, and Drewett.

The reason for my not replying to these reports lies in the order implied by the Minister, in his minute, forwarding these reports for my perusal only.

I now beg to submit to the Commission these remarks which I should otherwise have made at the time.

The result of Messrs. Wade and Drewett's inspection is reported by them to be,—First. That they found the dry rot had attacked the viaducts more or less throughout their length, and that they found some 50 piles having in them pipes from 1 in. to 3 in. in diameter. Under these circumstances they consider it a fortunate circumstance that a large margin of strength was allowed in the piers. To this I have to reply that Messrs. Wade and Drewett's report must have been a very superficial one, and I maintain that there are awaiting the inspection of the Commission not 50 but 130 piles, having in them pipes varying from 2 in. to 9 in. in diameter, the positions of which are shown in the diagram now before the Commission.

Further I have to state that I differ entirely from Mr. Wade in seeing any cause for congratulation in the manner of construction of the piers. I can only find great cause for regret that such extensive viaducts should have been constructed with inferior timber, leading as it surely will to the early necessity for the complete renewal of the piles at a very heavy cost to maintenance.

In regard to the superstructure, Messrs. Wade & Drewett speak of there being a few unsound girders. I prefer to be definite, and maintain that there are no less than thirty-six beams cracked or otherwise defective; of these four were so bad that they have been renewed, the others are more or less defective, and as a matter of precaution all of them should, I consider, be replaced by sound beams.

On the occasion of my second inspection of this viaduct I found that my District Engineer had placed props under certain of these cracked girders; I approved this action, and ordered certain other girders to be similarly treated. Mr. Wade has formed the opinion, which he was entitled to express, that this propping of the girders was unnecessary. I maintain, however, that he had no justification for describing my action as "an ostentatious display, intended to impair the confidence of the public in this structure"; and I also submit that Mr. Whitton's request that the Minister would order the removal of the props was a most unjustifiable attempt to override me in the execution of my duties.

Mr. Wade permits himself to characterize the District Engineer's opinion that the span of these viaducts, 29 ft. 6 in., is too great for the design as "silly criticism."

Even had Mr. Wade expressed his dissent in more courteous terms I could not agree with him. The extreme and unusual length of the corbels in this viaduct, namely 10 feet, would seem to evidence that the span had been stretched beyond the usual limits. The extra length of corbels is however a mistake, as beyond a limit of 6 feet they cease to be rigid, and spring with the girders, causing the unloaded end to kick up and raise the girders of the adjacent span, thereby setting up a jumping action in trains running over the bridge.

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This jumping action I actually observed, and after experiment with an engine running at different rates of speed I considered it advisable to limit the speed of trains crossing the viaducts to 16 miles an hour.

This precaution having been dictated by actual observation of a dangerous rocking of trains, no calculations of breaking weight by Mr. Wade would induce me to relax it. Indeed the question is one of deflection, and I do not think it could be decided merely by a calculation of the breaking weight. Further, I believe the Commission will find that Mr. Wade's statement of the breaking weight being 1,000 tons for each span is erroneous, and far in excess of what actually exists, even viewing the action of the different members of the design under the most favourable circumstances.

With the above remarks I leave the case of these viaducts in the hands of the Commission, merely asking them to keep in mind that in my position as Engineer in charge of maintenance all my actions must necessarily and primarily be on the side of public safety.

I have, &c.,
GEORGE COWDERY.

1885-6.

RAILWAY BRIDGES INQUIRY COMMISSION.

PROGRESS REPORT.

To His Excellency The Right Honorable Lord Augustus William Frederick Spencer Loftus, Knight Grand Cross of the Most Honorable Order of the Bath, a Member of Her Majesty's Most Honorable Privy Council, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

May it please your Excellency,—

We, the undersigned Members of the Royal Commission, appointed on the 23rd day of April, 1884, to make a diligent and full inquiry into the stability of certain iron Bridges constructed on the Existing Lines of Railway, and also of the timber approaches to the Bridge over the Murrumbidgee River, at Wagga Wagga, in the Colony of New South Wales, beg to submit the following Progress Report:—

The important nature of the inquiry entrusted to us has led us to consider with carefulness every step we have taken so that our investigation might be conducted in the fairest and best manner possible, and the conclusions to be drawn from it definite and beyond dispute.

The circumstances which led to the appointment of the Commission, and which have been an important feature in the various matters that in the course of our inquiry have come before us, viz., the differences of opinion, or the want of harmony, existing between the two great branches of the Railway Department with regard to the construction and maintenance of the railway bridges, we shall do no more in this Progress Report than allude to. In our Final Report it will be necessary to introduce a statement of the correspondence which has passed between the two officers of the department more immediately concerned in this inquiry, in order that the course of our investigations may be the more clearly apparent, but for the present it is sufficient for us to say that there was supplied to us at the time of our appointment, and it has received our earnest attention at every stage of our labours, all the correspondence which had passed between the Engineer-in-Chief for Railways and certain of his officers, and between the Engineer for Existing Lines and certain of his officers, together with minutes of the Honorable the Minister for Works, and other documents, relating to the stability or otherwise of certain of the bridges on the railways of the Colony.

In commencing our inquiry we first made ourselves thoroughly conversant with the correspondence and documents submitted to us, and then we decided upon a plan of operations, dividing our inquiry into two parts:—

(1.) The taking of evidence with respect to the matters referred to in the papers before us, and to other matters which in the course of our investigation might come under our notice; and

(2.) A personal inspection and testing of the various bridges.

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The first matter inquired into was the wooden viaduct at Wagga Wagga, or the timber approaches to the Wagga Wagga bridge. This we regarded as the most urgent of the subjects requiring investigation, as it had been the most prominent before the public in the statements which had been published with reference to the condition of some of the bridges on the lines of railway. Plans and specifications of the viaduct, and the weight and length of the heaviest trains passing over it, specifying the weight, length and wheel base of each locomotive, and load on each axle, and weight, length, and wheel base of each carriage and truck when loaded, were obtained, and together with the papers already before the Commission were carefully considered. Later on the viaduct was twice visited by the Commission and minutely inspected and tested. The details of the formulæ adopted by the Commission for making an analysis of strains and safe working load on the viaduct, and the appliances used for ascertaining the deflection with a moving and with a dead load, will be best described in our Final Report; but it may be stated here that the viaduct was tested with two of the heaviest engines, and that twenty-four experiments were recorded.

Plans and specifications relating to the iron bridge at Menangle and to the bridges over the Wollondilly River (five in number) were then taken into consideration, and on the 27th June we inspected the Menangle bridge, particularly with regard to the riveting and the statements which had been made and laid before us of the finding of loose rivets in the bridge. On the 5th September we again visited this bridge, and further examined it and tested it. Information was also obtained from the Engineer-in-Chief for Railways relative to the design of the bridge, and to the testing of the bridge at the time of opening it for traffic, including the camber and deflection in the centre of girders and at points of contrary flexure, and from the Locomotive Engineer relative to the weight of the engines used in the testing of the bridge.

On the 23rd, 25th, and 26th August we visited and carefully inspected and tested the Wollondilly bridges—at Barber's Creek, Carrick, Wollondilly River, Boxer's Creek, and Mulwarree Creek.

We next gave our attention to the bridges on the Great Western Railway, dealing first with those at Bathurst and Wellington; and the detail of construction having been carefully considered from the plans in our possession, these two bridges were, on January 7th, 8th, and 9th, after a preliminary visit by Mr. Courtney and Professor Warren to make the necessary arrangements, minutely inspected and tested, and the bridge over the Macquarie River at Dubbo was examined.

On the 12th February Professor Kernot and Professor Warren left Sydney for Newcastle to make the necessary arrangements for the inspection and testing by the whole of the Commission of the bridges on the Great Northern Railway; and on the 19th, 20th, 21st, 23rd, and 24th February, a thorough inspection and testing of the bridges at Aberdeen, Peel River, and Peel-street (Tamworth), and Macdonald River, were made by the Commission.

More recently still, viz., on the 14th instant, the Commission again visited the bridge at Menangle, for the purpose of examining the condition of the wood bearers or plates laid on the top of the stone piers to support the iron girders; and two members of the Commission proceeded the same day to Penrith to make preliminary arrangements for the inspection and testing by the Commission of the bridge over the Nepean River at Penrith, on the Great Western Railway.

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The inspection and testing of the Penrith bridge will be carried out by the Commission at an early date, and there will then remain to be inspected and tested the bridges over Solitary Creek, which are also on the Great Western Railway. It may, however, be necessary for another short visit to be made by one or more members of the Commission to Wagga Wagga, in order that some portions of the wooden viaduct there may be further examined. When the inspection and testing of the Penrith and Solitary Creek bridges, and the possible further examination of the Wagga Wagga viaduct, have been carried out, the visits of the Commission to the railway bridges will have ended, and we shall then be in a position to prepare our Final Report.

During the course of our inquiry we have deemed it essential to the due performance of the work entrusted to us to obtain from the proper officers of the Government various returns and diagrams affording information not included in the documents originally submitted to us for our consideration. In order to ascertain the changes that have taken place in the iron railway bridges since their construction, information was obtained from the Engineer-in-Chief for Railways respecting the whole of the bridges on the railways on the following points:—(1) The date of completion; (2) the date of opening for traffic; (3) a description of main girders; (4) the number of spans and dimensions; (5) the camber, if any, given to the main girders; (6) the name of the superintending officer in charge during erection; (7) the names of the contractors; (8) the test each bridge was subjected to, and how the test was applied; and (9) the deflection noted at the time of testing. Also (*a*) any reports or statements the Engineer-in-Chief might have received at different times relative to the various iron railway bridges, and which though not included among the papers before the Commission were documents he might desire to have submitted for their perusal; (*b*) a return showing the cost of the erection of each of the bridges; and (*c*) a return from the Engineer for Existing Lines, showing the cost of the repairs and maintenance generally of the bridges.

The subject of making certain experiments in the way of testing the strength of wooden girders similar to those used in the Wagga Wagga viaduct, came under the consideration of the Commission during their deliberations upon the condition of that structure, and we decided to make a series of experiments at the Government Yard, Clyde, near Granville, where everything necessary for them was at hand. Arrangements for these experiments were made by a committee appointed for the purpose from the members of the Commission, and on the 4th February, these arrangements having been completed, the Commission met at Clyde, and the experiments were commenced. They were continued for a week, and numbered 102, and they were carried out so as to establish a fair comparison between the experimental compound beam and the Wagga Wagga viaduct, and a large number of similar timber bridges on our railways.

The experiments related to the deflection under the same load as in the case of the Wagga Wagga viaduct which consists of compound beams, 29 feet 6 inches long, and to similar compound beams with 26 feet span as are used in the approaches to many other iron bridges on our railways; to a comparison between 9 inches and 12 inches and 6 inches transoms, and beams bolted together without transoms between them; to the increased deflection produced by slackening bolts; to the effect of corbels; to the increased deflection caused by various loads until reaching the limit of elasticity; and to the breaking of a 29 feet 6-inch beam, 12 inches wide

by

by 12 inches deep, to determine accurately the coefficient of safety of the best Colonial timber.

Twenty-two witnesses have been examined, and several of them re-examined, by the Commission, and a large amount of evidence has been taken.

The time allowed the Commission for making their inquiry and submitting their Report has been twice extended, and it may be necessary to ask for another short extension. If a further extension of time should be asked it will be in consequence of the elaborate and intricate calculations which have to be completed and the diagrams that remain to be prepared. The work of the Commission was very much hampered in its early stages by great delay which occurred in connection with the reply to a representation from the Commission to the Hon. the Minister for Works with regard to special travelling allowances—this delay, however, being unavoidable in consequence of the Minister's illness; and to some extent the speedy progress of the inquiry was interfered with by the serious illness, for some months, of the President of the Commission. It should also be mentioned that one of the members of the Commission (Professor Kernot), being a resident of Melbourne, has been able to visit Sydney and attend the meetings of the Commission, or accompany the Commission to inspect and test bridges, only at certain times, and as his duties in connection with the Melbourne University would permit. Each of these circumstances, but more especially the first, has caused the inquiry to be extended over a period much longer than under ordinary circumstances would be requisite.

We have, throughout, endeavoured to conduct the inquiry expeditiously, but at the same time we have not lost sight of the fact that, in an important investigation of this kind, expedition is not the only point to be observed, and that thoroughness and accuracy must not be sacrificed to a desire to close the inquiry quickly. A consideration of the design of each bridge and a calculation of strains have been necessary to bring out the diagrams for comparison with the actual sections from which the bridges have been constructed; the inspection of the bridges, to ascertain to what extent the original design has been carried out or deviated from; and the testing of the bridges, to verify our previous calculations. The amount of labour involved in the calculations and other work connected with our inspection and testing of the bridges has been very great. Our object, however, has been to so carry out the duty entrusted to us that the result shall be not only an accurate test of the present condition of the bridges on the railways of the Colony, but also a useful guide to bridge construction in the Colony in the future.

Our observations upon the condition of the bridges will be given in our Final Report. We recommend, however, that for the present the maintenance of the bridges be carefully carried out, but that no further alterations in the bridges be made until our Final Report has been submitted.

Certified under our hands and seals, this twenty-fifth day of March, 1885.

G. A. MORELL, C.E., PRESIDENT. (L.S.)
W. C. KERNOT, M.A., Professor of Engineering, Melbourne University. (L.S.)
W. M'D. COURTNEY, Memb. Inst. C.E., M.I.M.E. (L.S.)
W. H. WARREN, A.M.I.C.E., Professor of Engineering, Sydney University. (L.S.)
OWEN BLACKET. (L.S.)

1885–6.

RAILWAY BRIDGES INQUIRY COMMISSION.

FINAL REPORT.

To His Excellency The Right Honorable Lord Augustus William Frederick Spencer Loftus, Knight Grand Cross of the Most Honorable Order of the Bath, a Member of Her Majesty's Most Honorable Privy Council, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

May it please your Excellency,—

We, the undersigned Members of the Royal Commission, appointed on the 23rd day of April, 1884, to make a diligent and full inquiry into the stability of certain iron bridges constructed on the Existing Lines of Railway, and also of the timber approaches to the Bridge over the Murrumbidgee River, at Wagga Wagga, in the Colony of New South Wales, beg to submit our Final Report, as follows:—

As was stated in our Progress Report, which was forwarded to your Excellency on 25th March, 1885, the circumstances which led to the appointment of the Commission, and which have been an important feature in the various matters that in the course of our inquiry have come before us, namely, the differences of opinion or the want of harmony existing between the two great branches of the Railway Department with regard to the construction and maintenance of the Railway bridges, render it necessary, for the information of those more particularly interested in the work and the conclusions of the Commission, as well as for the information of the general public, that some statement of the correspondence which has passed between the officers of the Department more immediately concerned in this inquiry, should be given. That statement will be found in a separate paper accompanying this Report. In brief it is as follows:—Mr. Cowdery, in the performance of his duty as Engineer for Existing Lines, thought it necessary to renew what he considered to be loose rivets and defective work in certain iron bridges. Being, by the nature of his appointment, responsible for the safety of the bridges, he appears to have thought it unnecessary to refer to the Engineer-in-Chief for Railways, Mr. Whitton, for his advice in the matter, and to have considered himself competent to deal

deal with the subject without such reference. He, however, applied to the Engineer-in-Chief for Railways for the drawings or plans of these bridges, but these drawings or plans the Engineer-in-Chief declined to supply. Mr. Whitton, finding that some extensive reriveting had been done in some of the bridges, and his attention having been drawn to some comments in the Press upon the insecurity of these structures, wrote a minute to the Minister for Works, recommending that this reriveting, which he considered to be injurious to the stability of the bridges, should be discontinued. Mr. Cowdery, supported by the reports of his officers, assured the Commissioner for Railways that the bridges were very defective, and he was thereupon instructed by the Commissioner to report upon their condition. This report was forwarded to the Engineer-in-Chief for Railways who, also supported by his officers, reported to the Minister that the bridges were in good condition, and that "no better bridges, with regard to material and workmanship, were ever built."

This difference of opinion led to a personal attack on the one side, and to recrimination on the other; Mr. Cowdery regarding the statements of Mr. Whitton as an insult to him and to his officers. At this point, in order to arrive at a sound decision in the dispute, the Minister being unable to deal with the technical matters involved, and being desirous of having the question thoroughly investigated for the satisfaction of the Government, and to allay any feeling of alarm that might have arisen in the minds of the public as to the stability of the bridges over which so many thousands of persons are constantly travelling, determined to refer the subject for inquiry to a Commission of Experts, and this decision being approved by the Cabinet, and afterwards confirmed by the Executive Council, a Commission was appointed in the first place in October, 1883, of certain gentlemen whose appointments were subsequently cancelled, and afterwards, on 23rd April, 1884, of those whose names are appended to this Report.

The two parts into which we divided our inquiry, as mentioned in our Progress Report, necessitated the taking of evidence in respect to the matters referred to, and also an inspection of the bridges, as it was necessary to see that the bridges had been well designed and were well constructed.

In the taking of the evidence we were careful to examine as far as could possibly be done every person who had been connected with the design, construction, erection, or maintenance of the bridges, so that each side in the dispute might be fairly represented, and in order that we should have every information before us to enable us to form a correct opinion upon the matters referred to us for inquiry.

A personal inspection and testing of every bridge were made with the greatest possible care and accuracy, and this, with the evidence taken, led us to undertake an investigation of the design of each bridge, so as to ascertain by calculation whether the stresses in the different parts of the girders corresponded with the sectional area of the metal provided to resist them.

Diagrams referring to the stresses and sections have been prepared, and will be found in detail as Appendices, as also diagrams representing the method of testing the bridges and showing the loads to which they were subjected, and the deflections thereby produced.

We have taken in our calculation of the stresses applied to the bridges the unit stress generally recognized by engineers, and set down in the British Board of Trade Regulations for Railway bridges, namely, 4 tons per square inch of sectional area in compression, and 5 tons in tension.

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The live load has been taken as follows:—

In	60 feet span,	single line,	1·5	ton per foot run on bridge.		
,,	130 & 150	,,	,,	1·4	,,	,,
,,	162	,,	double line,	2·8	,,	,,
,,	198	,,	,,	2·5	,,	,,

The dead load per foot run on bridge, and the effective span and depth of the girders, have also been taken in each case.

The calculations computed from all these data give the sectional areas required, and by comparison with the actual sections adopted in the design and carried out in construction the excess or deficiency of metal in the girders, and the load each bridge will carry with safety, are shown.

After careful consideration of the details of construction, the defects—regarding the importance of which the evidence is very conflicting—were minutely inspected by us and the loose rivets tested, in order to ascertain if the extensive reriveting which has taken place in some of the bridges under the direction of the Engineer for Existing Lines has been useless expenditure and injurious to the bridges as stated by the Engineer-in-Chief. This careful inspection was made both before and after the testing of each bridge.

Before testing the bridges, returns were obtained from the Locomotive Engineer of the weight, length, and wheel base of locomotives and tenders of each class in use on the different lines of railways, to determine the load with which the deflections should be ascertained.

The live load taken in the calculations was not exceeded, as only a proportion of this load can be applied to the bridges by the heaviest traffic likely to pass over them.

The deflections were recorded in each case under the following circumstances:—

1. The locomotives standing on the bridge in various positions.
2. Running full speed across the bridge.
3. Running full speed, and applying the brakes when coming on th bridge.

The recording instruments (which were very sensitive, and increased the deflection eight times) were placed principally in the centre of the girders, and at points of contrary flexure. The pencils were fixed at the datum line before the testing began, and it was ascertained that no permanent set occurred in any of the bridges with the loads applied.

The result of this interesting portion of the work of the Commission forms the subject of some of the recommendations made in this Report.

We submit in this Report, in a condensed form, a description of each bridge; but our remarks upon the inspection, construction, and testing are more elaborately given in detail in the accompanying Special Reports.

The order in which the bridges examined are dealt with is as follows:—

SOUTHERN LINE.

Menangle Bridge, over the Nepean River; completed in 1863.

Wollondilly Bridges—Barber's Creek, Carrick, Wollondilly River, Boxer's Creek, and Mulwarree Creek; completed in 1869.

Wagga Wagga Bridge, over the Murrumbidgee River; completed in 1880.

WESTERN

WESTERN LINE.

Penrith Bridge, over the Nepean River; completed in 1867.
Solitary Creek Bridges—Tarana, 4th crossing, 3rd crossing, 2nd crossing, and 1st crossing; completed in 1872.
Bathurst Bridge, over the Macquarie River, completed in 1876.
Wellington Bridge, over the Macquarie River; completed in 1881.

NORTHERN LINE.

Aberdeen Bridge, over the Hunter River; completed in 1871.
Tamworth Bridge, over the Peel River; completed in 1882.
Peel-street Bridge (Tamworth), over Peel-street; completed in 1882.
Macdonald River Bridge; completed in 1882.
Wagga Wagga Timber Viaduct, completed in 1880.

The Menangle and Penrith bridges are designed to carry a double line, and all the other bridges a single line, of rails.

The permanent-way in every bridge is supported upon a timber platform fixed to iron cross-girders, spaced 3 feet from centre to centre.

SOUTHERN BRIDGES.

Menangle Bridge.

This bridge consists of three spans, each 150 feet in the clear, and is constructed with two main girders 486 feet long over all, and 25 feet 6 inches apart. The girders are 12 feet 6 inches in height, and are constructed with top and bottom boxes and central cells formed of two webs. The piers are of stone 162 feet between centres, and the main girders are continuous over two piers. The cross girders are 25 feet 6 inches long, and formed of flange-plates and double angle-irons at top and bottom, riveted to a web-plate.

The main girders are supported upon beds of timber laid on top of the stone piers. Expansion rollers between cast-iron plates are provided over three piers.

At present a single line of rails only is laid on this bridge.

The defects of design or construction are as follows, viz.:—

(1) Decay of portion of timber supporting main girders over piers.
(2) Want of access and drainage to bottom cells of girders.
(3) Imperfect contact in riveted plates and angle or tee irons, and looseness of rivets.

Some loose rivets have already been replaced, but no weakness appears in the portion of the work to which nothing has yet been done. The greatest deflection in 1863, with 5 locomotives weighing 290 tons, was ·60 inches, and in 1885, with 3 locomotives (equal to a live load of ·92 per foot run on the loaded girder), as taken by us, ·50 inches. The passing of an ordinary goods train across the bridge showed a maximum defection of ·44.

The safe load the bridge will carry is 1·15 tons per foot run on each line of rails, equal to 2·3 tons per foot run on the whole bridge, with an intensity of stress of 4 tons per square inch in compression, and 5 tons in tension.

Wollondilly Bridges.

These bridges are five in number and comprise two spans of 130 feet and thirty-two spans of 60feet. The 130 feet spans are formed of plate girders 140 feet long over all, 10 feet 3 inches in height, with double web and plate booms, and are spaced

spaced 14 feet apart. The 60 feet spans are formed of plate girders 65 feet 6 inches long overall, 4 feet 9 inches in height, with single web and plate booms, and are spaced 12 feet 10 inches apart. The 130 feet spans are at the first and second crossings of the Wollondilly River, all the other bridges being of 60 feet spans. All the cross-girders are 14 feet long, formed of double angle-iron flanges top and bottom, riveted to a plate web. All the piers are of brick in cement, with stone caps. The main girders rest and slide upon metal plates bedded upon the piers. The girders of the 60 feet spans, many of which are built on the skew, are bedded on sheet lead at each end.

In our inspection of these bridges we noticed the following defects, viz.:—

130 *feet spans.*—The calculations show that the top boom will only carry 1·1 tons per foot run of bridge with a unit stress of 4 tons per square inch of section. The other parts of the girders are, however, strong enough to carry the calculated live load of 1·4 tons per foot run on span. The flange joints in main girders and angle-iron wrappers are barely sufficient in plate and rivet area. The expansion arrangement is not sufficiently protected to prevent cinder ballast from accumulating round the bearings of the girders.

There is no record of the first testing of these spans, but the greatest deflection we obtained in testing was ·59 in the centre of the girders, with a load equal to ·9 tons per foot run.

60 *feet spans.*—The flange plates joints are weaker than the rest of the girders, and a greater strain is brought upon the rivets.

The expansion arrangement is defective; the lead on which the girders rest becomes gradually destroyed, and the cinder ballast falling between the ends of the girders and the parapets of piers is injurious and prevents the examination and cleaning of the bearings.

The camber is irregular, varying from 0 to 1⅛ inches in some of the girders. A sag occurs in each of the five spans of the Barber's Creek viaduct, but we could not obtain positive information to show with what camber they had been built.

The original deflection is recorded as ·25 inch, and the greatest deflection we obtained was ·625 in the centre of girder, with a live load equal to 1·50 tons per foot run on the bridge. The ordinary traffic (goods train) causes a deflection of ·562 inch in centre of girder.

The safe load these bridges will carry is 1·1 tons per foot run on bridge, with an intensity of stress of 4 tons per square inch in compression and 5 tons in tension.

Wagga Wagga Bridge.

This bridge consists of four openings, each 150 feet in the clear, and is constructed of two main lattice girders 639 feet long over all, and 14 feet apart in the clear. The girders are 12 feet 3 inches in height, and are constructed with trough-shaped plate booms and double lattice web. The cross girders are 14 feet 8 inches long, formed of double angle-iron flanges at top and bottom, riveted to a plate web. The piers are 159 feet from centre to centre and are of cast iron cylinders, filled with concrete, and connected with wrought iron diagonal bracing. The main girders are continuous over three piers, and are supported upon cast iron bed-plates, fixed on the top of the piers. Expansion rollers are placed over four piers.

With the exception of some loose rivets we did not remark any defects in this bridge. The

The record of the testing of this bridge in 1880, with three locomotive engines, weighing 185 tons, was ·63 inches on the centre span, and ·74 on the end spans.

The safe load this bridge will carry is 1·52 tons per foot run, with an intensity of stress of 4 tons per square inch in compression and 5 tons in tension.

Western Bridges.

Penrith Bridge.

This bridge consists of three openings of 186 feet and one approach span of 127 feet in the clear.

The main girders of the 186 feet openings are 594 feet long and 28 feet 6 inches apart. The girders are 13 feet in height, and are constructed with top and bottom boxes, and central cells formed of two webs. The piers are of stone, 198 feet between centres, and the main girders are continuous over two piers. The cross girders are 26 feet 3 inches long, and formed of flange plates, and double angle-irons at top and bottom, riveted to a web plate. The main girders are supported upon a bed of timber, and the expansion rollers are similarly arranged to those in Menangle Bridge.

The approach span is formed of two separate plate girders, double web, and cellular top and plate bottom booms, the cross girders being similar to those of the larger spans.

There is at present only a single line of rails laid on the bridge, the remaining portion of the width being used for road traffic.

The bridge is of the same type as that at Menangle, and has similar defects. The small size of the top and bottom cells renders inspection and repairs very difficult.

The timber platforms supporting the main girders show signs of decay.

We find by calculation that in the booms the unit stress produced by the live load of 1·25 tons per foot run on each line of way, or 2·50 tons on whole span, is equal to 4·64 tons per square inch in compression, and 5·82 tons in tension, but the shearing stress in the web over piers is equal to 9·3 tons. This shearing stress is equal to 7·9 tons on one line of way, including ordinary road traffic on the other part of the bridge. This is in excess of the intensity of stress allowed by the Board of Trade. Mr. Whitton, however, in his evidence, states that the rivet iron in the Penrith bridge is particularly good, and that he would not consider a stress of $7\frac{1}{2}$ tons per square inch upon such rivets dangerous.

The rivet area in covering plates of booms over $\frac{1}{2}$-inch thick, and in angle-iron wrappers, is barely sufficient.

The stresses in the cross girders would exceed a safe limit with a double line of way.

The testing of the bridge with a load of 1 ton per foot run on the main girder next to rails gave a deflection of ·93 inch.

There is no record of the original testing. The deflection with an ordinary goods train was ·75 inch.

Some recommendations will be made regarding the alterations necessary to increase the rivet area over piers where the shearing stress occurs, and for duplicating the line on this bridge in the future.

Approach

Approach Span—Main Girders.—The only defect in these girders is that the top cell is inaccessible for inspection and repairs.

The greatest deflection with the same load as on the larger spans was ·70 inch.

Solitary Creek Bridges.

These bridges are five in number, comprising six spans of 60 feet each in the clear, and are constructed with separate plate girders, 4 feet 9 inches in height, having single web and plate booms 65 feet 6 inches long and 13 feet apart in the clear.

The cross girders are 14 feet 3 inches long, and are similar in construction to those of the Wollondilly Bridges.

The ends of the main girders are bedded upon sheet lead, resting on the stone caps of the piers, which are built of brickwork in cement.

We observed in the inspection of these bridges that the expansion arrangement is defective, and presents the same obstructions to examination and cleaning as the 60-feet spans of the Wollondilly Bridges.

The bed stones had become unset and broken by the expansion of the girders, but they have now been made good with brickwork in cement.

The girders were built with a camber of $\frac{3}{4}$ of an inch, but this has decreased in some of them.

The testing of these bridges, with a consolidation goods engine weighing with tender 75 tons, showed a deflection of ·54 inch as against ·35 inch after the first testing with a 42-tons engine.

The safe load these bridges will carry is 1·06 tons per foot run, with an intensity of stress of 4 tons per square inch in compression and 5 tons in tension; but with a live load, equal to 1·5 tons per foot run on bridge, the unit stresses will be increased to 4·3 tons in compression and 6·1 tons in tension.

Bathurst Bridge.

This bridge is of the same type as the Wagga Wagga Bridge, but consists only of three openings of 150 feet each, in the clear, constructed with two main lattice girders, each 480 feet long over all, and 14 feet apart in the clear. The cross girders are 14 feet 8 inches long, and are similar to those of the Wagga Wagga Bridge. The piers are spaced 159 feet, centre to centre, and are formed of cast-iron cylinders filled with concrete, connected with wrought-iron diagonal bracing. The main girders are continuous over two piers, and supported upon cast-iron bed-plates fixed on the top of the cylinders. Expansion rollers are placed over three piers.

The only defects in this bridge are in a portion of the span which has not been reriveted. The angle-irons are not in close contact with the horizontal and vertical plates of booms; some of the angle-iron wrappers are not in close contact; and some of the rivets are loose.

The testing of this bridge, with a load of 1·4 tons per foot run, gave a deflection of ·84 inch, and with an ordinary goods train ·46 inch.

The record of the first testing in 1876, with three engines weighing 178 tons, gives a maximum deflection of ·78 inch on the centre span and ·77 on end span.

The safe load the bridge will carry is 1·6 tons per foot run, with an intensity of stress of 4 tons per square inch in compression and 5 tons in tension.

Wellington Bridge.

This bridge consists of five openings. The three openings over the main stream are each 150 feet in the clear, and the main girders, cross-girders, and piers are similar to those of the Bathurst Bridge. The end spans are each 61 feet in the clear, constructed with two separate plate girders 12 feet 3 inches in height, single web and plate booms, 65 feet 8 inches over all and 14 feet 8 inches apart in the clear; the cross-girders are similar to those of the 150-feet spans, and the piers are also formed of cast iron cylinders, &c. The expansion arrangement consists of sliding plates.

During our inspection of this bridge our attention was directed to a difference of level of more than 3 inches in one of the land piers. This is attributed by the Engineer for Existing Lines to a settlement of the pier, which he believes will increase after heavy floods. The Engineer-in-Chief asserts that the difference of level is due to an error in the erection of the pier, and that the foundation is good.

The piers have been tested with a load of 150 tons without showing any sign of settlement. The evidence is contradictory; but we do not think that any sudden sinking will take place, although the difference of level should be watched and recorded, particularly before and after every flood.

The other defects in the construction of this bridge are the unsymmetrical positions of the main girders upon the cast iron bed plates, to the extent of from 4 to 9 inches, the want of close contact between the plates and angle irons and channel irons with web, and some loose rivets.

The testing of the bridge with a load of 1·4 tons per foot run showed a deflection of ·84 inch, and with an ordinary goods train ·461 inch. The record of the first testing in 1881, with three engines weighing 174 tons, gives a deflection of ·64 inch on the centre span and ·72 inch on the end spans.

The safe load the bridge will carry is the same as that of the Bathurst Bridge, viz., 1·6 tons per foot run.

The testing of the approach span with a load of 1·05 tons per foot run showed a deflection of ·36 inch in centre of span.

The record of the first testing in 1881 with a 63-ton engine is ·33 inch.

Northern Bridges.

Aberdeen Bridge.

This bridge is similar to the Bathurst Bridge, consisting of three openings of 150 feet each in the clear, and constructed with two main lattice girders 480 feet long over all, and 14 feet apart.

The main girders, expansion arrangement, cross girders, and the piers are similar to those at Bathurst and Wellington Bridges.

In our inspection of this bridge we found the defects to be want of closeness in the joints of plates and bars, imperfect butting of plates in compression, space between plates of booms and cross-girders, loose rivets, and want of proper access to the expansion arrangement.

The

The testing of the bridge with a load of 1·37 tons per foot run showed a deflection of ·83 inch. The record of the first testing in 1871, with three engines weighing 170 tons, shows a deflection of ·68 inch on the centre span and ·79 on the end spans.

The safe load the bridge will carry is the same as that of the Bathurst and Wellington Bridges, viz., 1·6 tons per foot run.

Peel-street (Tamworth) Bridge.

This bridge consists of one span 61 feet in the clear, and is constructed with two separate plate girders 6 feet 3 inches in height, having single web and plate booms 65 feet 8 inches long over all, and 14 feet 8 inches apart. The span is similar to the approach spans of the Wellington Bridge. The cross girders are 14 feet 3 inches long and similar to those of the Aberdeen Bridge.

The piers are of brick in cement, with stone caps.

The expansion arrangement consists of sliding plates.

There are no defects in this bridge except a few loose rivets.

The original deflection is recorded as ·30 inch, and the greatest deflection we obtained with a 66 tons locomotive was ·29 inch.

The safe load this bridge will carry is 1·78 tons per foot run, with an intensity of stress of 4 tons per square inch in compression and 5 tons in tension.

Tamworth Bridge.

This bridge consists of one span 150 feet in the clear, and is constructed with two main lattice girders, double web and plate booms 161 feet 9 inches long over all, 12 feet 3 inches in height, and 14 feet apart. The cross girders are 14 feet 8 inches, and similar in construction to those of Aberdeen Bridge. The piers are formed of cast iron cylinders filled with concrete, and connected by wrought iron diagonal bracing.

The main girders are supported upon cast iron bed plates, fixed on top of cylinders, and expansion rollers are placed at one end of the girder.

The principal defects we found in this bridge were some loose rivets, and difficulty of access to the expansion arrangement.

The testing of the bridge with a load of 1·4 tons per foot run showed a maximum deflection of ·90 inch. The record of the first testing in 1882, with three engines weighing 174 tons, shows ·78 inch in the centre of the girders. The deflection caused by the ordinary mail train, with only one locomotive, was ·566 inch.

The safe load the bridge will carry is 1·6 tons per foot run, with an intensity of stress equal to 4 tons per square inch in compression and 5 tons in tension.

MacDonald River Bridge.

This bridge is similar in design to the Tamworth Bridge, except that the piers are of brick in cement.

It has similar defects.

The

The testing, with a load of 1·4 tons per foot run, gave a maximum deflection of 1·03 inches. The record of the first testing of the bridge in 1882, with three engines weighing 174 tons, shows a deflection of ·72 inch in the centre. The deflection caused by the ordinary mail train, with only one locomotive, was ·578 inch.

The safe load the bridge will carry is 1·6 tons per foot run, with an intensity of stress of 4 tons per square inch in compression and 5 tons in tension.

Summary of Results.

The result of our consideration of the designs and our calculations upon the working live load that each bridge will carry with safety, together with the test load applied to each bridge, and the deflection produced by it, is summarized in the following table :—

Name of Bridge.	Effective span.	Live load in tons per foot run taken in calculation.	Unit stresses produced by total load in tons per square inch.		Live load which the bridge will safely carry according to rules of the British Board of Trade. Unit stresses, 4 tons per sq. inch in compression, and 5 tons in tension.	Test load reduced to tons per foot run of span tested.	Greatest deflection recorded by the Commission in testing the bridges in 1885.	
			Compression.	Tension.			With test load.	With ordinary traffic.
Wollondilly Bridges—	ft.							
Small spans	60	1·5	4·5	4·9	1·1	1·5	·625	·56 (goods train).
Large spans	130	1·4	4·6	5·4	1·2	·90	·59	.....
Solitary Creek Bridges	60	1·5	4·3	6·75	·91	1·56	·542	·50 (goods train).
Bathurst Bridge	159	1·4	3·68	4·33	1·6	1·4	·703	·461 ,,
Wellington Bridge						1·4	·84	.....
Aberdeen Bridge						1·37	·83	.....
Tamworth Bridge	156	1·4	3·72	4·37	1·6	1·4	·90	·566 (mail train).
MacDonald River Bridge						1·4	1·03	·578 ,,
Peel-street Bridge, Tamworth	61	1·5	3·5	4·42	1·78	1·5	·29	.....
Wellington Approach Span						1·5	·36	.....
Wagga Wagga Bridge	159	1·4	3·82	4·7	1·52	.....	.....	.....
Menangle Bridge	162	1·4 on each line of way.	4·32	5·3	1·155 on each line of way.	1·37 on the line loaded or 1 ton on the loaded girder.	·50	·44 (goods train).
Penrith Bridge	198	1·25 on each line of way.	4·64 in booms only; 9·3 in web over piers.	5·82 in booms only; 9·3 in web over piers.	·9 on each line of way for booms only.	1·5 on the line loaded or 1·00 on main girder tested.	·93	·75 ,,

Our inspection of the bridges and investigation of the defects and loose rivets, ointed out by the officers of the Department of Existing Lines, did not disclose such weakness in the bridges as the information supplied would have led us to believe. On the one side, Mr. Whitton's officers admitted that some defects and a few loose rivets existed, but gave a decided opinion that the strength of the structures was not affected by the imperfect work; and on the other side, Mr. Cowdery and his officers insisted upon the necessity of making good the visible and apparent defects to prevent the deterioration of the material, and that no time should be lost in doing what they regarded as a very important and urgent work indispensable to the stability of the bridges.

RECOMMENDATIONS WITH REFERENCE TO THE IRON BRIDGES.

In making recommendations, we are aware of the great responsibility resting upon the Engineer in charge of maintenance, and his officers, whose duty it is to renew any defective materials. Every detail of the design and construction should be known to the Engineer for Existing Lines, who should have for reference copies of the plans from which the bridges have been built.

In order to decide whether a certain group of rivets are to be cut out and replaced the stresses which the rivets in question have to transmit should be ascertained, and also the amount of effective rivet area which is necessary to transmit these stresses with safety after making due allowance for looseness and other defects, or the percentage of rivets in excess of the effective rivet area required. It is not necessary to cut out and replace rivets simply because they seem slightly loose, unless the looseness is such as to make them vibrate with passing loads.

After hearing all the evidence and carefully examining the bridges, we are unable to find any grounds for the allegation that rivets have been loosened by violent and improper testing.

By comparing the girders of the bridges in which thousands of rivets have been renewed with the girders in which no reriveting has been done the difference in stiffness or deflection cannot be perceived, and although tight riveting is desirable a few loose rivets in the whole structure will not affect its safety.

At the time our Progress Report was forwarded to your Excellency, our consideration of the design of the bridges and our inspection of some of them had shown us that no apprehension need be felt by the Government for the safety of the travelling public, and we recommended that "no further alterations be made in the bridges until our final report has been submitted."

The recommendations we now make may be classified as follows:—

1. Regarding defects of workmanship.
2. Regarding defects preventing proper maintenance.
3. Making alterations in some of the bridges to comply with the rules of the British Board of Trade, and to provide for heavier traffic in the future.

Other recommendations for proper maintenance will be found in the Special Reports on each bridge.

Menangle Bridge.

1. Replacing decayed timber platform supporting main girders over piers. Re-riveting tee irons and web plates and angle iron wrappers in which loose rivets occur.
2. Facilitating the inspection of the cells of booms by proper ventilation and drainage holes in such places not affecting the stresses on the parts where they are made.

Wollondilly Bridges.

130 *feet spans.*

We have no recommendation to make with reference to these spans.

60 *feet spans.*

1. Removing the lead on which the girders rest, and placing a simple cast iron bed-plate under the ends of the girders; two adjoining girders being fixed on a bed-plate and sliding at the opposite ends on other plates with longitudinal strips to prevent lateral displacement.
2. Cutting away a portion of pilaster over piers to give access to expansion arrangement referred to above.

Wagga

Wagga Wagga Iron Bridge.

We do not recommend anything to be done to this bridge except the usual cleaning, repainting, &c., when necessary, and replacing a few rivets where showing signs of looseness.

Penrith Bridge.

1. We recommend the renewal of rivets in diaphragm plates of centre cells of girders, in covering plates of web, and in vertical tee iron attachment of cross girders where the rivets are loose and the parts in bad contact; also that where the rivets are loose in some of the angle iron wrappers, or where blank holes occur, the joint be entirely re-riveted.

2. Cutting convex surface on top of stone piers to permit the renewal of any portion of the decayed timber in the platform supporting the main girders.

   (The obstructions to the entrance of the cells of bottom booms have been removed at our request, and the booms cleaned, but additional ventilation and drainage are necessary.)

3. The $\frac{3}{4}$-inch rivets uniting the webs to booms in the main girder next to rails to be replaced by rivets 1 inch in diameter for a distance of 40 feet on either side of the two middle piers and for 10 feet from end piers; not more than six rivets to be taken out and replaced at one time.

Before the line is duplicated on this bridge we recommend that the $\frac{3}{4}$-inch rivets uniting the webs to booms be replaced by 1 inch rivets on the other main girder for a distance of 40 feet on either side of the two middle piers and for 10 feet from end piers; also that a longitudinal girder be riveted to the cross girders the whole length of the bridge to distribute more effectually over several cross girders the weight brought upon them by the driving wheels of the engines when passing over.

Solitary Creek Bridges.

The recommendations made for the 60 feet spans of the Wollondilly Bridges also apply to these bridges.

Bathurst and Wellington Bridges.

We do not recommend anything to be done to these bridges beyond replacing a few rivets where positively loose.

Nothing should be done to the land pier at Wellington Bridge, reported to have sunk, until future observations prove that an actual sinking takes place.

Aberdeen Bridge.

We recommend the renewal of the angle wrappers where double holes or loose rivets occur, and the cutting out and removal of loose rivets where necessary.

Peel-street Bridge, Tamworth.

We have no recommendations to make with reference to this bridge.

Tamworth and MacDonald River Bridges.

We recommend a judicious removal of loose rivets in attachments of lattice bars in angle iron wrappers and in some of the joints of the booms.

Having

Having now dealt with the iron bridges, we proceed to refer to the Wagga Wagga timber viaduct.

WAGGA WAGGA TIMBER VIADUCT.

(*From Bomen to Wagga.*)

According to the documents submitted to us with reference to this viaduct, Mr. R. D. Stephens, District Engineer in the Existing Lines Department, having tested the viaduct on the 6th December, 1881, drew the attention of the Engineer for Existing Lines, in a report dated 16th January, 1882, to the great deflection of the timber girders, and commenting on what he considered to be an excessive length of span and corbels adopted in the design of the viaduct, advised that on account of the wavy motion of the engines when passing over the structure the speed should be limited to 18 miles an hour.

After subsequent reports from Mr. Stephens regarding defective girders and decayed piles, the matter in the meantime having been brought before the Commissioner for Railways, Mr. Goodchap, considering that it was a question affecting the stability of the viaduct, requested the Engineer for Existing Lines to personally examine the structure and report upon it.

Upon the receipt of this report, he directed that the speed of the trains should be reduced to 18 miles an hour.

Mr. Cowdery's report upon the examination of the viaduct was sent to the Commissioner on 13th June, 1882, and forwarded by him to the Engineer-in-Chief.

On 3rd October, Mr. Whitton forwarded for the information of the Minister, copies of reports received from officers in his Department upon a defective pile, and Mr. Cowdery having minuted upon these reports that it was desirable for engines not to run over the viaduct at a greater speed than 16 miles an hour, Mr. Goodchap before finally deciding to limit the speed to that extent, and before bringing the matter under the attention of the Minister, requested Messrs. Cowdery and Stephens to adopt such measures as were necessary to establish their statements.

Mr. Cowdery having again personally examined the viaduct, forwarded to the Commissioner a detailed list of imperfections in the structure, stating at the same time that the viaduct was quite as bad as reported by Mr. Stephens, and that he was of opinion that all the uprights and many of the girders would have to be removed within a few years.

This paper having been laid before the Minister by the Commissioner, the Minister directed that it be sent to the Engineer-in-Chief for Railways in order that he might have the work reported upon by his officers.

Mr. Whitton thereupon had the viaduct inspected by Messrs. Wade and Drewett, Officers in his Department, and sent the report of those gentlemen to the Minister for Works. This report stated that "the timber was to all appearances sound when put in, and that every care was taken to have the work properly carried out," but "that the dry rot which had made its appearance some time after the completion of the work was accelerated to a great extent by the timber having been cut when the sap was up instead of during the winter months," and that "the timber supports having a large margin of strength, no danger need be apprehended if the progress of the dry rot be carefully watched."

In the meantime Mr. Whitton asked the Minister to order that the props which Mr. Cowdery had directed to be put under the girders of the superstructure be removed as he considered they produced an impression that the viaduct was unsafe.

This paper having been forwarded by the Minister for Mr. Cowdery's perusal only, Mr. Cowdery in returning it to the Commissioner for Railways urged upon him in the strongest possible terms not to allow the props which had been put there by his instructions for the safety of the public, after a personal and careful examination, to be removed.

Description and Inspection of Viaduct.

The viaduct forms the approach to the Wagga Wagga iron bridge, over the portion of the Murrumbidgee River exposed to heavy floods. It consists of a series of timber spans, 29 feet 6 inches long, supported upon timber piers or trestles abutting upon embankments, except the span adjoining the iron bridge.

The piers are constructed of timber piles, headstocks, walings, and bracing, and consist of 1,288 piles in 322 rows, of which 58 rows are driven into the ground to a depth varying from 14 to 57 feet, and 264 rows are tenoned into sills bedded in concrete at depths of from 6 to 8 feet below the surface. The height of the piers varies from 5 feet to 16 feet.

The spans forming the viaduct are arranged as follows, viz.:—

No. 1	113 spans.
„ 2	66 „
„ 3	4 „
„ 4	72 „
„ 5	56 „
„ 6	5 „
Total	316 spans,

Equal in length to more than $1\frac{3}{4}$ miles.

The number of beams forming this large structure is 2,528, each 29 feet 6 inches long, 12 inches wide, and 12 inches deep, equal in length to more than 14 miles of hewn timber. They are all of ironbark.

Each span consists of four compound beams, two of which are under the rails and the other two on the outside, at a distance of 2 feet from the former. Eight transoms unite the four compound beams, and keep the upper and lower girders of each 6 inches apart. Corbels 10 feet long, 12 inches deep, and 12 inches wide, projecting 5 feet on each side of pier, support the ends of each compound beam. The whole is bolted together with 1-inch screw-bolts through six of the transoms, and with $1\frac{1}{4}$-inch screw-bolts through beams, corbels, and the two end transoms. The platform for the permanent way is formed of 3-inch planking, with ballast boards on each side.

The difference of opinion between the Engineer-in-Chief for Railways and the Engineer for Existing Lines and their respective officers, regarding defective timber and the stability of the viaduct, and also the removal of props placed under some of the girders to support them, and the question of the rigidity of the structure and reducing the speed of trains passing over it to 16 miles per hour, could not be decided by us with an inspection and testing of the viaduct only, and without a serious consideration of the design and calculations upon the strength of Colonial timber. The opinion of officers belonging to the two great branches of the Railway Department was so much at variance upon the co-efficient of safety to be taken in calculating the strength of Colonial timber, that we resolved to make experiments on a large scale to test the strength and elasticity of compound timber beams, similar to those used

used in the Wagga Wagga and other viaducts on the Government Railways, and to determine a reliable co-efficient of safety. The particulars of these experiments wil be referred to hereafter.

In our inspection of the viaduct, the detailed particulars of which are the subject of a Special Report, we found that properly seasoned timber for piles could not be obtained in the short period of time allowed for the erection of the viaduct and the opening of the line, and that the great distance from which the timbers had to be procured was taken into consideration in reference to the cost of the structure.

For this reason, in addition to ironbark the following timber was allowed to be used for piles, viz.:—Stringy-bark, ash, messmate, appletree, &c. The piles having been cut when the sap was up, instead of during the winter months, began to show signs of decay soon after the erection of the work, and in addition to the dry-rot, pipes and other defects were detected.

The number of piles in various stages of unsoundness were found to be eighty, equal to 1 in every 16 of the whole, and the number of unsound girders to be twenty, or 1 in 126; twenty-three piles are strutted and fifteen girders propped up.

The girders are of ironbark, and, except some occasional dry knot or bad heart, few defects were detected.

The question of the length of corbels (10ft.) being excessive is more particularly referred to in our experiments on the compound beam.

Great attention has been paid on the maintenance of the viaduct. Holes have been drilled to reach the pipes of the piles, and a composition injected to preserve the timber from insects and decay; bolts are kept well screwed up, and additional ones have been put in when necessary to stop the extending of the cracks in the hewn timber caused by atmospheric influences.

From returns furnished by the Engineer for Existing Lines, the cost of maintenance of the Wagga Viaduct from the time it was opened for traffic in September, 1880, to the 26th July, 1883, was £1,546 10s. 9d.

Taking the average life of a bridge constructed with good timber and properly maintained to be 25 years, the yearly renewal of the material will be about 4 per cent. of the whole. From the analysis of our timber inspection we find, however, that owing to the defects stated to exist in the piles of the Wagga Viaduct nearly the whole of the piers may have to be renewed within 20 years, whereas the superstructure being of ironbark may last over 25 years.

It is important to notice this as it may guide the Government Engineer in the future design of large timber structures, to calculate if the difference of cost of construction and maintenance of timber viaducts, compared with structures of iron and other materials, is the most economical system to be adopted.

In comparing the design of the Wagga Viaduct with the timber viaducts erected in Victoria, we find that some timber can be saved by a change of design which under similar circumstances presents the same objections regarding the duration of the material.

The testing of the Wagga Viaduct with two engines weighing each 63 tons 16 cwt. 3 qrs., running at more than 20 miles per hour, showed a deflection of less than half an inch except in three spans where it reached as much as ·59 inch

Comparing

Comparing these deflections with those obtained in the experiments referred to, we found that the Wagga Viaduct gave satisfactory results, the maximum load produced by the engines under testing on one span of the viaduct being equivalent to a distributed load of 42 tons, or to 12·4 tons on each rail-bearing compound girder, and that the viaduct is more than sufficiently strong for the heaviest traffic which passes over it.

Having given careful attention to the oscillating and plunging motion of the engines as mentioned by the officers of the Existing Lines Department, we found nothing more abnormal in this motion than is usually accumulated in a large number of small uniform spans, when the elasticity of the timber has to be taken into account. We tested accurately the motion of the beams and trestles in every direction and found very little movement at any speed. Observations were also taken from an ordinary passenger carriage and from the overhanging platform of a bogie car. As a final test we rode on the engines when running at a speed exceeding 30 miles an hour, and found but little difference when running over the viaduct or on the embankments. The viaduct is therefore sufficiently stiff for the heaviest traffic that passes over it. We do not, therefore, see any reason why the ordinary speed of trains passing over the viaduct should be reduced, and we are of opinion that with proper maintenance no danger need be apprehended on account of the speed.

Experiments for testing the strength of Timber Girders.

These experiments were made at the Government Railway siding at Clyde, near Granville, and are more fully detailed in our Special Report upon the subject.

A compound beam, similar to those in the Wagga Viaduct, was erected upon two trestles representing piers, and gradually loaded in the centre until a weight of about 10 tons had been reached, the deflection being noted at each test. The deflections were also recorded with varying loads under the following circumstances, with all the bolts screwed tightly, viz:—

1. Compound beam, 29 feet 6 inches long, with 10-feet corbels, and 12-inch, 9-inch, and 6-inch transoms between the beams.
2. Compound beam with 6-inch transoms, and 10-feet, 8-feet, and 6-feet corbels respectively.

A compound beam 26 feet long, similar to those used on nearly all timber viaducts constructed before the Wagga Viaduct, was then erected upon the trestles and loaded in the centre until the weight reached 10½ tons, and the deflection was recorded at each test under the following circumstances:—

1. With the length of corbels 8 feet and with 6-inch transoms between the girders and all bolts screwed tightly.
2. The same with slack bolts.
3. The same with the transoms removed and the beams tightly bolted together.

From the experiments with corbels we found that by shortening the corbels from 10 feet to 8 feet or 6 feet, the central deflection of the girder was increased while the deflection of the corbels was diminished; and from the experiments with slack bolts we found that the strength of the compound beam may be reduced according to the slacking of the bolts from 35 per cent. to 68 per cent.; also that girders bolted together without any blocks or transoms between them are much stiffer than with them.

Co-efficients of Rupture and of Elasticity.

The co-efficients or modulus of rupture and the modulus of elasticity of Colonial timber not having been definitely established for large-sized timbers, we resolved to complete our investigations upon the strength and elasticity of compound beams by testing to the breaking point an ironbark girder $12\frac{1}{4}$ inches deep by $12\frac{1}{4}$ inches wide, and 29 feet 6 inches long.

The beam was gradually loaded in the centre, and the deflection noted at each addition to the load until it began to crack with a load of 16·55 tons, showing a deflection of 7·62 inches.

The loading was continued until the beam broke with a load of 19·55 tons, showing a deflection of 12 inches.

Comparing our experiments with those made as far back as 1861 by Major-General Ward, R.E. (then Captain Ward), and Mr. Trickett at the Royal Mint, Sydney, on small scantling, and with those made more recently by the Victorian Railway Department, in October, 1880, on larger timbers, the particulars of which were sent to us by Mr. R. Watson, the Engineer-in-Chief for Victorian Railways, and with the experiments made by Mr. Whitton on scantlings used in our timber viaducts, we obtained the following results:—

	Major-General Ward, R.E., and Mr. Trickett, at Royal Mint, Sydney. Scantling 2″ × 2″ × 4′ long. (1)	Mr. John Whitton, Engineer-in-Chief for Railways, N.S.W. Scantling 12″ × 12″ × 26′ long. (2)	Victorian Railway Department. Scantling 11″ × 7½″ × 14′ 8″ long. (3)	Railway Bridges Inquiry Commission. Experiments made at Clyde. Scantling 12″ × 12″ × 29′ 6″ long. (4)	Mean of experiments on large-sized timbers.
Modulus of Rupture "*f*" in lbs. avoirdupois per square inch	13,734 Ironbark from Albury.	13,953 Ironbark	8,430 Red gum	12,222 Ironbark	(2) and (4) 13,088
Modulus of elasticity "E" in lbs. avoirdupois per square inch	2,069,280	.....	1,948,128	2,715,813	(1) (3) and (4) 2,244,407

It will be observed that our co-efficient "*f*" with large-sized timbers is smaller than that obtained in the Mint experiment with small scantling, but the modulus of elasticity "E" is larger.

The Earlier and the Later Railway Bridges.

The two largest bridges in the Colony (those at Menangle and Penrith) were erected at a time when the designing and construction of such works had not arrived at the point of perfection apparent at the present day. The Engineer-in-Chief has followed the improvements made in the science of bridge designing, and every type of bridge erected since the date of the erection of the Menangle and Penrith Bridges has been an improvement upon previous designs. This we have ascertained by our inspection of the iron bridges at Dubbo and Albury, and more recently, of the George's River Bridge, in which the improvements are evident.

The same remarks apply to the construction of the bridges, the workmanship in the more recently erected bridges being more accurate and altogether a great improvement upon what is to be seen in the first iron bridges built in the Colony.

While in the first bridges erected on the railways of the Colony the makers and erectors did not arrive at the accuracy of construction which is now attained, each new bridge has been an improvement on that which has preceded it, and as is the case with the Albury Bridge, the Dubbo Bridge, and the bridge over the George's River, the bridges now erected on our railways are of a superior description both in design and construction. Thus

Thus the greater facilities at hand in connection with the later structures make it unfair to expect that the earliest bridges should have reached the standard of the bridges more recently erected, and we cannot, therefore, in justice, compare the first of the bridges with those of later and more perfect design. We can only express our opinion that the earlier bridges were good specimens of bridge building at the time they were designed, and that notwithstanding the number of years which have passed since their erection they have not deteriorated to such an extent as to affect their safety.

The Maintenance of the Bridges.

The maintenance of the bridges having long since passed away from the Department of the Engineer-in-Chief, he can scarcely be held responsible for any want of attention to those parts of the structures to which the present Engineer for Existing Lines has considered it his duty to attend since he assumed the responsibilities of his office. Mr. Cowdery, in our opinion, has in all he has done acted conscientiously, and at the time this inquiry was instituted was endeavouring to remedy defects which he believed would lead to some disaster if the work of alteration, which he authorized, were not done. Much of that work, principally reriveting, has, it is true, been unnecessary, and many rivets which his officers have condemned as being so loose as to require replacing did not require to be replaced and should not have been renewed without greater consideration of the stresses and evidence of weakness. On the other hand, however, no harm has been done, and in the case of some of the smaller bridges the structures have been improved by the reriveting.

But we differ entirely from Mr. Cowdery's opinion that all plates and angle iron not butting properly or in perfect contact should be now removed and made good. We are of opinion that these defects are not of such importance in the parts of the bridges where they occur as to justify any feeling of alarm, and that they should not be interfered with until a positive looseness of rivets or an increased deflection renders such repairs necessary.

All work of this description must be watched carefully, and in no way interfered with by any one not possessed of a thorough knowledge of bridge work. Perfect contact is certainly desirable, but is not as necessary in bridge as in boiler work, where the joints are to be made steam tight. The cost of such perfection in the former would preclude ironwork from being used in the construction of bridges except in a very few cases.

It is to be observed that mathematical accuracy is not attainable, and should not be expected, in ordinary bridge work. Imperfect butting of plates constantly occurs, and to provide for it compression joints are usually designed on lines similar to those adopted for tension joints, that is to say, cover plates including several rows of rivets are used, so that sufficient shearing area is provided to carry the stress even though the butts should not be in contact. This practice has been followed at most of the bridges, and consequently the complaints of bad butting are of no force whatever, the strength of the parts being independent of the butting. At the Tamworth and Macdonald River bridges, however, this precaution has not been fully carried out, and hence the strength of the top booms is dependent upon the butting. Most fortunately all parties agree, and the members of the Commission are satisfied from personal inspection, that in these latter cases the butting is remarkably perfect.

In

In many places the contact between the channel iron struts and the side plates of the booms is not very perfect. This defect is due frequently to the circumstance that the back of the strut has become slightly rounded in the process of rolling. Such a strut may be in most perfect contact at the middle of its width where the rivets pass and yet may gape $\frac{1}{16}$ or even $\frac{1}{8}$ of an inch at the sides. Another cause of gaping is to be found in the "burr" or ridge left round the hole after punching, and which occasionally appears even in drilled holes. This "burr," if not removed, will keep the parts slightly apart and give an appearance of bad work.

Unless accompanied by an unmistakeable looseness of the rivets, this apparently imperfect contact does not affect the strength of the bridge.

The British Board of Trade rules for proportioning iron girders make large allowances for imperfections in construction. Could absolutely uniform material and perfect workmanship be obtained, the amount of metal used might be reduced to the extent of 30 or 40 per cent. Hence a few defects, provided they are not of excessive magnitude, need not cause alarm. Their probable existence was forseen and provided for when the rules generally recognized by engineers were first established.

Periodical Testing of Bridges.

We recommend that every bridge be tested periodically, under the direction of the Engineer-in-Chief for Railways; that the test loads should not largely exceed the heaviest traffic passing over the bridges; and that a tabulated statement recording the loads with which the tests have been made, reduced to tons per foot run of spans tested, and the deflections produced by these loads, be published from time to time and filed for comparison with future testings; and also that the camber of each bridge be accurately ascertained as soon as possible, and that it be examined at each time of testing, in order to detect any alteration that may have taken place.

Respective duties and responsibilities of the Engineer-in-Chief for Railways and the Engineer for Existing Lines.

The great extent of the Government Railways has no doubt necessitated a subdivision of the labour and great responsibility involved in their construction and maintenance, but we are not called upon by the nature of our inquiry to make any recommendation upon this arrangement.

The duties of Mr. Whitton as Engineer-in-Chief are understood to be to design the lines of railway, including all bridges and other works, and to superintend their construction. As soon as new lines or extensions are opened for traffic his connection with them appears to cease, and it then becomes the duty of Mr. Cowdery, as Engineer for Existing Lines, to keep in good order and to maintain the works handed over to him. In addition to this, Mr. Cowdery has to take charge of the permanent way and to design alterations to existing lines of railways, as well as to design and superintend the erection of the extensive and costly buildings necessary for the protection of the rolling stock and the accommodation of the travelling public.

The engineers at the head of these two great branches of the Railway Department are assisted by a large staff of competent engineers and other officers.

Any official misunderstanding between the officers of the two branches must be injurious to the public interests.

The

The responsibility of the Engineer-in-Chief should not cease as soon as the railway lines are open for traffic, nor should the Engineer for Existing Lines be solely responsible from that time for works over the design and construction of which he has had no control. This applies particularly to railway bridges; and we are of opinion that in future no structural repairs should be made in any railway bridge without the knowledge and approval of the Engineer-in-Chief.

We are strengthened in this opinion by Mr. Cowdery's own evidence, that when authorizing the renewal of rivets he had not ascertained the stresses which the rivets in question had to transmit, nor the amount of rivet area which is necessary to transmit those stresses without exceeding the safe unit stresses on the rivets.

We recommend that the duties and responsibilities of these two high officers should be more clearly defined in accordance with the opinion we have expressed, and we suggest that the advice of the Engineer-in-Chief should be obtained in all such matters where his well-recognized ability in railway engineering and long Colonial experience render his opinion of especial value to the success of the Railway system of the country.

Recapitulation.

To recapitulate, our recommendations are briefly as follows:—

Menangle Bridge.—Decayed timber, supporting the main girder, to be renewed; tee iron and angle iron wrappers, in which loose rivets occur, to be re-riveted; holes to be made in cells of booms to provide for proper ventilation and drainage.

Wollondilly Bridges.

130 *feet spans.*

No recommendation.

60 *feet spans.*

The lead under girders to be removed, and replaced by bed plates to support the ends of the girders, and to provide proper expansion; portions of pilasters of the piers to be removed to give access to expansion arrangement.

Wagga Wagga Iron Bridge.—The usual maintenance to be carried out, and loose rivets to be replaced where they appear.

Penrith Bridge.—The loose rivets at present in diaphragm plates of centre cells of girders, covering plates of web, vertical tee iron attachment of cross girders, angle iron wrappers, and joints with blank holes, to be renewed; the top of stone piers to be cut down to permit a renewal of decayed timber under main girders; the $\frac{3}{4}$-inch rivets uniting the webs to the booms in main girders to be replaced by 1-inch rivets for a distance of 40 feet on each side of the two middle piers, and for 10 feet from end piers. This last recommendation is intended to apply to only the main girder next to rails with a single line of way, but it will apply to the two main girders when the line is duplicated on this bridge, when also a longitudinal girder should be riveted to the cross girders the whole length of the bridge.

Solitary Creek Bridges.—To be dealt with as recommended in the case of the 60 feet spans of the Wollondilly bridges.

Bathurst Bridge.—The usual maintenance to be carried out, and loose rivets to be replaced where they appear.

Wellington

Wellington Bridge.—To be dealt with as recommended for the Bathurst Bridge, and careful observation to be made of land pier to ascertain if any sinking takes place.

Aberdeen Bridge.—Angle iron wrappers to be renewed where double holes occur and loose rivets to be replaced where they appear.

Peel-street (Tamworth) Bridge.—No recommendation.

Tamworth and MacDonald River Bridges.—Loose rivets in attachments of lattice bars, in angle iron wrappers, and in some of the joints of the booms, to be renewed judiciously.

Wagga Wagga Timber Viaduct.—To be kept in a perfect state of repair, in which case the speed of engines need not be reduced.

The Maintenance of the Bridges.—The maintenance of the bridges, which should not include structural repairs, to be strictly carried out.

Periodical Testing of Bridges.—Every bridge to be tested periodically under the direction of the Engineer-in-Chief for Railways, with a load not largely exceeding the heaviest traffic passing over the bridges; the results of the testings to be recorded and published for comparison with future testings, and the camber to be accurately ascertained and periodically examined.

Respective duties and responsibilities of Engineer-in-Chief for Railways and Engineer for Existing Lines.—The responsibility of the Engineer-in-Chief not to cease as soon as a railway line is opened for traffic, and the Engineer for Existing Lines not to be solely responsible from that time for works over the design and construction of which he has had no control; no structural repairs to bridges to be carried out without the knowledge and approval of the Engineer-in-Chief; the duties and responsibilities of the Engineer-in-Chief and the Engineer for Existing Lines to be clearly defined; and the advice of the Engineer-in-Chief to be obtained in all matters in which his opinion would be of special value.

Certified under our hands and seals, this twenty-second day of August, 1885.

G. A. MORELL, C.E., (L.S.)
PRESIDENT.

W. C. KERNOT, M.A., (L.S.)
Professor of Engineering, Melbourne University.

W. M'D. COURTNEY, (L.S.)
Memb. Inst. C.E., M.I.M.E.

W. H. WARREN, A.M.I.C.E., (L.S.)
Professor of Engineering, Sydney University.

OWEN BLACKET. (L.S.)

MINUTES OF EVIDENCE.

LIST OF WITNESSES.

	PAGES
John Whitton, Engineer in-Chief for Railways	1 2, 65–69
W B. Wade, Inspecting Engineer	2 3, 10, 40–44, 48 50
J W Drewett, Assistant Engineer	4, 44–46
George Cowdery, Engineer for Existing Lines	5–6, 10, 69–73
R D. Stephens, District Engineer	7–10, 24–26
John Rose, Inspector of Iron Bridges	10
William Hilzinger, Inspector of Railway Bridges	11, 32, 34–36, 37–39, 40, 61–63
Benjamin Barnes, Railway Bridge Contractor	11–13
Samuel Maddock, Railway Inspector	14–15
Edward Massey, boilermaker	15–16
George Mills, ,,	16
Thomas Smithyman, boilermaker	16–17, 55–59
Joseph Dunn, boilermakers' holder up	17–18
George F. Chapman, Inspector of Bridges	18–20
Charles Cook, ganger	20–22
C E Nicholas, C E, District Engineer	22–24
Alfred Cecil Brayne, Inspector of Bridges	26–29
John Thomas Rowlands, Sub-Inspector of Timber for Railway Timber Bridges	29–30
John Giddy, Sub Inspector of Wooden Bridges	30–31
George Bewick, Superintendent of Way and Works	32–33
Robert Ewing, Inspector of Ironwork	33–34, 36, 37–38
Peter Morrison, General Foreman	38–39
Thomas Parkinson, Railway Bridge Inspector	46
John George Griffin, Ass M.I C E, formerly District Engineer	74 –48
T R. Firth, District Engineer ...	50–53
Alfred Williams	53–54
Richard Waring	54–55
Gother F. Mann	60–61
Macnamara Russell	63–65

RAILWAY BRIDGES INQUIRY COMMISSION.

MINUTES OF EVIDENCE.

FRIDAY, 6 *JUNE*, 1884.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E.,
OWEN BLACKET, Esq.

W. H. WARREN, Esq., Professor of Engineering,

John Whitton, Esq., Engineer-in-Chief for Railways, sworn and examined:—

J. Whitton, Esq.
6 June, 1884.

1. *President.*] Dealing first with the subject of the approaches to the Wagga Wagga bridge, we want to ask you some questions with reference to certain particulars that have come before us, and any information that you may feel disposed to give afterwards in the form of a statement, instead of answering a question now, we shall be very glad to have. We will take the information in the way in which you wish to give it? Thank you.
2. These are the plans which have been forwarded to us, of the approaches to the Wagga Wagga bridge. *(Plans produced.)* Was the design of the South Wagga Wagga timber viaduct prepared under your direction? Yes.
3. Did you determine the length of the spans? Yes.
4. And the width of the platform? Yes.
5. And the arrangement of the girders? Yes; in fact the whole. I take the whole responsibility upon myself.
6. Was the length of the corbels calculated to reduce the spans of the girders? Well, it was to some extent no doubt; but it is not considered in any way whatever in the calculation. In making the calculations for this bridge I have taken no notice whatever of the corbels. I have taken the entire span as 28 feet 6 inches, irrespective of any assistance that might be obtained by the use of the corbels of the bridge.
7. Were the transoms calculated to assist the strain on the rail-bearing girders? No doubt they are, and they do very materially assist. They throw a very considerable pressure upon the outside girders. As a matter of fact I may say that the difference in the deflection of the rail-bearing girders and the outside girders is only one-tenth of an inch, showing that they do assist most materially.
8. Were any calculations made of the dead load of each span and also of the safe working load? Yes.
9. Did you make those calculations personally or did some of your officers make them and you checked them? I made them personally.
10. Do you remember what strain came upon each span? Yes.
11. I may rather call it the maximum working load? The maximum working load is about 70 tons, calculating the weight of the bridge, which it is hardly fair to take into consideration with a small span like this; but I have taken the rolling load at $1\frac{1}{2}$ ton per foot, and the weight of the bridge—the dead load—at a ton to the foot, and with that you get about 70 tons weight altogether.
12. That is distributed? Yes, the distributed weight. The breaking strain on the girders in the centre is about 400 tons, which will give a distributed load of 800 tons, and as the total load cannot be more than 70 tons it is clear that the bridge would carry at least ten times more than you would ever put upon it. It would, in fact, carry more than ten times, but I had better say ten.
13. Did you get the concentrated weight on the driving-wheels of a locomotive coming on the centre of this span? You cannot get more than 15 tons on the centre. There is no engine, I believe, in the Colony more than 15 tons.
14. What is the weight of the heaviest goods-engine passing over the viaduct? I think about 42 tons.
15. *Mr. Courtney.*] That does not include the tender? The tender cannot go on at the same time.
16. *President.*] At what speed would such an engine pass over the viaduct? I have tested scores of bridges, and I never could make the eighth of an inch difference in the deflection of the girders between running over the bridge at full speed and being stationary on it, more particularly in the case of long spans. It might be the case with smaller spans, but I have never yet been able to detect it.
17. At what speed would you consider it safe for the heaviest train likely to pass over this viaduct to travel? At any speed they can run.
18. What speed generally would that be? I believe 30 miles an hour, but I would not object to go 60 miles an hour.
19. You tested the viaduct before it was opened for traffic? Yes.
20. Personally, or by one of your officers? Personally. Of course the deflection in these bridges will very materially depend upon whether the bolts are screwed up tightly or not. If they are tight the greatest deflection I have found has been half an inch. If they are loose of course it is different.
21. How was the test made and the deflection noted? The deflection was noted by having two rods, one placed under the girder and the other placed from the ground, a pencil being put under the upper rod, and as the engine went over it depressed the rod. Of course you can test with levels.
22. Was this done with one of the girders, or with all the girders? All the girders as a rule.

J. Whitton, Esq. 6 June, 1884.

23. At the same time? Yes. These bridges are so strong that I should hardly have tested them at all except in the case of the first bridge that was put up. I never found more than three-eighths of an inch deflection in the 26 feet openings. These larger ones are 28 feet 6 inches. There is one of these bridges at Werris Creek, another at Breeza, and another at Tamworth with the same spans precisely.
24. Do you remember what the deflection was when the test was made on the Wagga Wagga viaduct? Half an inch, and a little less on the outside girders—a very little less.
25. Do you think that this would cause the wavy or jumping motion which is attributed to the deflection on this bridge? It does cause a wavy motion on all timber bridges, and you cannot avoid it.
26. But it is not dangerous? Not the slightest. I would run over that bridge at any speed an engine can travel. Of course no danger could be apprehended, except from the jumping of the engine; but as far as this bridge is concerned you could put upon it ten times the weight you do in practice.
27. Then you consider this viaduct to be perfectly safe for trains to be run at the usual speed? Perfectly safe.
28. Was the work of the contractor carried out to your satisfaction? Yes. Of course it must be assumed in a large bridge of this kind that there may be after the use of four or five years cracks in the timber. That naturally will take place in all timber. You can get no seasoned timber in this country, and therefore it is certain to shrink.
29. Who was the superintending officer in charge of this work? Mr. Nicholas.
30. Mr. Wade is one of your district engineers, is he not? He is Inspecting Engineer.
31. He reported on this bridge last August, I believe, and stated in one of his reports that he calculated the breaking strain at 1,000 tons? A thousand tons distributed load.
32. I will refer to the report to be certain of what he stated? I think the distributed load would be 1,000 tons.
33. "Respecting the silly criticisms on the design of this viaduct, it will be sufficient to point out that the design gives a calculated breaking weight of over 1,000 tons in each span"? Well he takes the formula for ironbark; I have taken the average of ironbark and the other timbers of the Colony.
34. What co-efficient of safety do you consider applicable to ironbark? 5; and I would not hesitate to put up a bridge to-morrow with two main girders alone, and 3-inch planking between them, and run the trains over that; if I were perfectly satisfied with the quality of the timber I would not object to use two beams instead of four. In fact I have used them—not the same spans as in this case, but 23 or 25 feet. I am not quite sure which, but at any rate over 20 feet, I know.
35. If you take 5 as the co-efficient of safety it would give a working strain of 200 tons? I say the breaking strain is 400 tons, and the distributed strain 800 tons.
36. I have not yet asked you about Mr. Wade's calculation; but if the breaking weight were 1,000 tons, and the co-efficient of safety 5, it would give you a working strain of 200 tons? Yes, but I say that I believe that bridge will carry ten times the weight it does carry before breaking down.
37. After the viaduct was opened for traffic it became the duty of the Engineer for Existing Lines to take charge of it and to see to its proper maintenance, screwing up, &c.? That is his duty undoubtedly.
38. And then your duty in connection with the bridge ceased? Yes, it was a most unfortunate arrangement, and the most singular fact is that the same bridges have been put up in the north as in the south and the west, and there never has been a complaint in reference to the north; all the complaints are from the south and the west; the reason is obvious, of course.
39. Do you remember when the Engineer for Existing Lines took charge of this viaduct? It was some time in 1880; I think September, 1880.
40. What time should elapse after the completion of such an extensive timber structure before it would require any screwing up? Well, the screwing up is a matter that should be going on for 6 or 8 months, and then if the timber shrinks it could be easily seen.
41. It should go on from the time the viaduct is finished? From the time it is finished it is a constant screwing up; these girders have shrunk so much that cast-iron washers have been put in and screwed up tightly.
42. The Commission propose to proceed to Wagga Wagga next week to examine the viaduct, and note accurately the deflection;—do you wish to meet us there, or will you send a competent and responsible officer to represent you? If you have anyone there to represent the Existing Lines Branch I should like to be represented; my view of the matter was that you would take an independent course; but if you have anyone there from the Existing Lines Branch I should like some one to be there from my department.
43. If you do not desire to meet us on the same day as the representative of the other branch, you could arrange to meet us on a different day? If you can let me know I shall be glad to make arrangements for sending some one; Mr. Wade cannot go, as he is going away with me to the north to-night.
44. We intend to test the bridge, and I dare say we shall have to hear what Mr. Cowdery's officers have to say in pointing out any defects, and then we may have to examine your officers. Probably we shall have an examination on the ground, and then test the bridge on our own account, and form our own judgment? If you will kindly let me know I will instruct an officer to attend.

W. B. Wade, Esq., Inspecting Engineer, sworn and examined:—

W. B. Wade, Esq. 6 June, 1884.

45. *President.*] We wish to ask you a few questions with reference to the Wagga Wagga viaduct. You know this viaduct? Yes.
46. You have inspected it, and reported to the Engineer-in-Chief upon it? Yes; I inspected it, and tested every span shortly after the opening; I tested a good many of the spans, and examined it all last year; it was completed in September, 1880.
47. You stated in your last report that some wood transoms necessitated the use of cast-iron washers? Yes.
48. Can you explain why they were put in? On account of the shrinking; those transoms were not iron-bark; the girders only were iron-bark; the transoms were ordinary hardwood of various sorts—stringy-bark, black butt, and that class of timbers; they shrink considerably, and it was necessary to put in an extra thickness of washers to screw the bridge up tightly.
49. Where were those washers put? Underneath the nut. The first time this bridge was tested, very shortly after it was opened for traffic, it was very loose; it was in rather a peculiar condition compared with what we usually have in connection with these bridges. There had been no running over it at all. The work had been going on at the other end, and the last work the contractors had to do was closing the

Wagga

W. B. Wade, Esq. 6 June, 1884.

Wagga Wagga viaduct and the engine had not run over it. Usually we have everything running over a viaduct, but in this case the contract was for the bridge and the viaduct, and there had been no running over it. The consequence was that when it was opened for traffic nothing would come to its bearings, and it took weeks and months before the timbers would come to their bearings, and were tightly screwed up.

50. Which were the four spans you tested? I cannot tell you; I took them haphazard. We did not have a special engine that day; and we took passing trains. I think we took one span very near the iron bridge.

51. They were not four consecutive spans? No, they were not; I took them haphazard.

52. What arrangement did you make for the testing? On that occasion I think it was only a measurement on a batten—a batten nailed up against the bridge and another on the ground; the first time I tested it I did so with a set of dials which I had; that measured on an exaggerated scale of ten to one; in the other case I used sliding battens.

53. On what girders? The centre girder.

54. But it was on the rail-bearing girders you made the test? Yes, I mean the rail girder.

55. They gave respectively a deflection of 0·30, 0·28, 0·33, and 0·27 of an inch, and these were on the two centre girders? On one only.

56. You did not test the deflection on the side girders? Not on that occasion; I have often tested them and compared them with the others.

57. What difference did you make? A little over a tenth of an inch—the difference between 0·30 and 0·40.

58. You stated in this report of yours that this result was a marked improvement upon the test you made at the time of the completion of the viaduct? Yes.

59. Do you remember what difference there was? The deflection on the first occasion was as high as 0·40, and in some cases as high as 0·60.

60. Was the bridge screwed up then? No; quite loose.

61. *Professor Warren.*] That was immediately after the commencement of traffic? Immediately after opening—after about a fortnight had gone without any screwing up.

62. *Mr. Blacket.*] Then it had been standing some month or so? Some of it had been standing a year or more. It took a long time to complete.

63. *President.*] When was the work completed and opened for traffic? In September, 1880.

64. Did you at or about the time it was opened for traffic notice any wavy motion or any jumping of the train? No; the permanent way people said there was such a thing; but I looked very closely and could not detect the smallest sign.

65. What was the speed of the train that went over for the trial? We ran a good many over as fast as we could get speed on. I suppose 30 miles an hour. Then we found that we could not get any more deflection at that speed, and we adopted a more moderate pace.

66. Did you ever notice any difference in the deflection according to the speed? No.

67. If you have a higher rate of speed have you a greater deflection? No; I have tried it repeatedly and find it does not affect it.

68. Do you consider that the corbels being 10 feet long assist the strain coming on the spans? I should never take it into a calculation for strength. I only look upon the corbel as making a joint good—as making good the butt joints. I do not consider we are entitled to calculate its resisting strength. We take the strength independently of the corbel.

69. Do you think that these corbels bring any continuity on the girders? No, I do not think so; in fact they are not for any practical strength because they are divided in the centre by a pier. I only consider the corbel as a means of making a joint.

70. You made some calculations in connection with this bridge or viaduct? Yes.

71. And you stated that the design gave a calculated breaking weight of a thousand tons on each span? Yes, I made the breaking weight in the centre, I think, 1,000 tons—perhaps at the outside. It is barely as much as that. The exact breaking weight in the centre is for a single compound beam 130 tons. Then it is a question whether you are justified in taking 4 or only a portion of 4—say 3½ or somewhere about 3½. Of course the centre girder must have gone down something measurable before the side ones began to take their work—about one-tenth of an inch.

72. *Mr. Blacket.*] It is one girder that you call the single? A single compound bridge, that is one girder above another. Of course in an accurate calculation of a thing of that sort you are met with a very wide and doubtful quantity of the constant for timber.

73. *President.*] I was just going to ask you, from your experience of Colonial timber, particularly of ironbark, what co-efficient of safety would you use in a calculation of this kind? I would take 3,000 for ironbark.

74. What co-efficient of safety? I think 10 would be a fair thing. In this we have quite 20.

75. *Mr. Courtney.*] Does that refer to the dead load or to the live load? The live load; I do not consider the dead load in small bridges.

76. *President.*] What would be the dead load on that bridge then? Something under a ton to the foot—not taking the girders themselves.

77. No; the load only? Taking the transoms, sleepers, planking, ballast-boards, ballast, and rails, it would come to about ·80 or ·90 tons to the foot.

78. When you were speaking just now of 3,000, what did you allude to? The constant for ironbark timber in a calculation for cross-strains on timber.

79. What would you take for the modulus of rupture? I have not taken it out in that way. I have taken it the more simple way—the Barlow formula. All Colonel Ward's experiments, which are no doubt the most reliable we have, are taken out that way, from the actual cross-strain.

80. *Professor Warren.*] You refer to the experiments made at the Mint? Yes. We had some of them tried in this Department on a larger scale—thick beams, 12 x 12 and 26 feet long, and they have come out remarkably similar to Colonel Ward's.

81. *President.*] Do you consider that the transoms transmit the strain from the rail-bearing girders to the side girders? That is shown by testing the side girders under a load; and that I found, as I said before, about one-tenth of an inch less deflection than rail girders.

82. How long after the completion of such an extensive timber structure as the Wagga Wagga bridge do you consider that any repairs, screwing up, or maintenance, would be necessary? It would always want screwing up.

83. From the beginning? From the beginning; from the first hot day.

J. W. Drewett, Esq., Assistant Engineer, sworn and examined:—

J. W. Drewett, Esq. 6 June, 1884.

84. *President.*] You reported to the Engineer-in-Chief regarding the defects in the Wagga Wagga viaduct? Yes.
85. This is the plan of the viaduct. (*Plan produced*)? Yes, that is the plan showing portions of it.
86. You tested the viaduct, did you not? Yes.
87. In what manner did you ascertain the deflection on the rail-bearing girders? By placing sliding rods underneath while a train was passing over the viaduct. I got down early one morning, and there was a train going over the viaduct with two engines attached. I had no means of knowing what those engines weighed, but I took advantage of the circumstance and took the deflection there and then. I do not recollect now what it was, but I think it is stated in my papers. It was some time ago.
88. You do not know the weight of the engine nor the speed? No; I should say the speed was about 25 miles an hour, because the train had had a good run to the station by the time it got to the viaduct.
89. Which were the spans of the viaduct which you tested? I cannot point out which ones; they are alike in construction.
90. It was not one with the gangways? It was one near the bank, but I could not tell you exactly. The engine was going at a good speed.
91. You did not make the test at one with the gangways? Those are merely places built out for taking a lorry. There is no difference in the construction.
92. *Mr. Courtney.*] They are what is called a "refuge?" Yes, "sanctuaries" we call them.
93. *President.*] Have you made any calculation to ascertain the safe moving load one of the spans will carry? Yes, I have. I have a memorandum which, if you have no objection, I will read to you.
94. We shall be glad to have it read, and also to have it produced in your evidence, if you like? I can give you a copy of it. It is as follows:—

Sydney, 6th June, 1884.

According to my calculations the severest strain to which the 29 feet timber spans is likely to be subjected by a dead load, is when a tank engine and tender, or so much thereof as can be brought upon the span, is on same; the maximum weight then brought upon it is = 30 tons (for two pairs of driving wheels) on a wheel base of 7 feet 4 inches, or $4\frac{1}{10}$ tons per foot; or an average of 40 tons on a wheel base of 18 feet 8 inches, or $2\frac{1}{10}$ tons per foot; this is, in fact, a distributed weight of 40 tons as a maximum strain from a dead load, such as that of the heaviest locomotives. The same load, if travelling at 50 miles an hour, would probably intensify this strain to an extent perhaps of 50 per cent., which would mean that each span of 29 feet, consisting of eight trussed timbers of 12in. × 12in., and ignoring the assistance afforded by the corbels, has to bear a working strain of not exceeding 60 tons.

Now, the strength of any one of these single girders is equal to a breaking weight in the centre of not less than 23 tons (*vide* experiment on box girders), and as given by following equation, wherein co-efficient of K equals 7 (similar to Teak)

$$W = \frac{b\,d^2}{s} \times K$$

Taking them as simple girders, then the four rail-bearing girders are equal to a breaking weight (applied in the centre) of 92 tons; but as shown by Weisbach's formulæ—

$$P = 14 \quad \frac{b\,h^2}{l} \times \frac{K}{6}$$

they being really built girders are strengthened in the proportion of 4 to 14.

Thus the four ironbark girders only are equal to a breaking weight in the centre to 322 tons, whilst they are assisted (as regards the distribution of the load) by the side girders by half this extent to 483 tons, which is equivalent to a factor of safety of 7, and as a matter of fact these spans are really considerably stronger than indicated by the above analysis.

For instance, the girders are fixed at the ends (in lieu of being merely supported) and this increases their strength to double that above stated; again, no account has herein been taken of the lateral stiffening and distributing afforded by the 3 inch decking, or of the ballast boards, &c.

Against these advantages there may be placed as a practical set-off, the dead weight of the superstructure, loose road and permanent way materials, but which only amount to about 30 tons.

J. W. DREWETT.

95. You do not consider that the corbels are reducing the span? No, not at all. I never take the corbels into consideration in the span. But they really, in my opinion, make a continuous girder of it, because they are very firmly and strongly bolted together. I may say that I have designed a great many of these bridges, not only in this Colony but also in England. I have now been at this work for nearly 50 years. I was 20 years with Brunel, and I have been 28 years this month here at this work, and I have never had a failure in any design that I have ever put up.
96. You stated that you have not the slightest doubt whatever as to the stability of the viaduct? I have not the slightest doubt.
97. Can you account for the wavy motion that took place? I can account for the wavy motion on the occasion when I saw it. The bridge was not properly screwed up. The bolts were loose to the extent of an inch in some places. I could knock the washers round with my stick where I could reach them. That was the cause of the working at that time, and I think I reported so. But the last time I examined this viaduct with Mr. Wade we did not notice any movement.
98. You said you examined the viaduct in July, 1882, and again in August, 1883; I find this from your report; and you alluded on each occasion of your reports to the Engineer-in-Chief to insufficient maintenance as the cause of the working of the timbers and the deflection of the girders? I do not think the deflection then amounted to more than between $\frac{3}{8}$ and $\frac{1}{2}$ inch; but whatever it was I believe it is in my report. I have no notes of it with me now. The last time we tried it the deflection varied, I think, from ·27 to ·33 of an inch.
99. *Professor Warren.*] That was when the bolts were not screwed up? That was when the bolts were screwed up.
100. *President.*] Was the deflection upon the side-girders the same as upon the rail-bearing girders? The difference was very little. The deflection, if I recollect aright, was close upon $\frac{1}{4}$ of an inch, shewing that the side-girders were doing their work as well as the rail-bearing girders.
101. How long do you consider should elapse after the completion of a timber structure of such an extent as the Wagga Wagga viaduct before any proper maintenance is necessary? Well I think it wants constant looking after for some time after its completion, because this timber shrinks so tremendously that it requires a great deal of looking after. I should say that at the least it should be screwed up once in every six weeks.

MONDAY,

MONDAY, 9 *JUNE*, 1884.

Present:—

G. A. MORELL, Esq., C.E., President.

W. C. KERNOT, Esq., Professor of Engineering,
W. M'D. COURTNEY, Esq., C.E.,
W. H. WARREN, Esq., Professor of Engineering,
OWEN BLACKET, Esq.

George Cowdery, Esq., Engineer for Existing Lines, sworn and examined:—

G. Cowdery, Esq. 9 June, 1884.

102. *President.*] Do you know the Wagga Wagga bridge and viaduct? Yes, but I have never seen the drawings before.
103. You have seen the bridge? Yes, I have seen the bridge.
104. These are the plans (*showing plans to witness*)? Yes, they appear to me to be correct.
105. What position does Mr. Stephens hold in your department? He is a district engineer.
106. Mr. Stephens is in charge of this portion of the district? He is.
107. He has written to you respecting this viaduct? He has.
108. And in that report he alludes to structural defects, and also to defects arising from workmanship and material? I am not sure whether he mentions anything about workmanship.
109. But he mentions material? The material certainly.
110. You have examined this viaduct personally? I have.
111. And did you remark any defects? I did.
112. You agreed with Mr. Stephens' report in that respect? Perfectly.
113. Do you consider the design of the viaduct defective? I do not say it is not strong enough as regards the girders, but they are not sufficiently strong to prevent the engine jumping when going at a high speed. They are not sufficiently rigid.
114. In what way? The spring from one to the other is complained of by the drivers—many of them.
115. Is this jumping caused by the continuity over the piers? I suppose it is from their being at equal distances apart. They get a regular spring from one to the other from the deflection of the girders.
116. Have you any details of the design of this viaduct? I have not.
117. Mr. Stephens has gone through these details? He has gone into them. I do not think he has said anything but what I could agree to.
118. Did you find any defects in the superstructure? Not further, I think, than that the spans are too great for that description of framing. The corbels are long to assist the span, but I do not think it has the desired effect, because they roll on the headstock as the train passes over.
119. What length of corbel should have been used? I do not think more than 6 feet is any use there.
120. What use is it at all? Only for making the joints.
121. Then in your opinion the corbel would not reduce the span? Only to a very small extent. Not anything like the extent of the corbel.
122. It would produce a kind of continuity between one span and the other? Yes, it does.
123. Do you know of any other defects in the superstructure except those you have mentioned? Some of the girders are defective; they are not sound. If they were all sound it is well put together, as far as I know.
124. Is that due to want of proper supervision at the time of erection? I should imagine so. It is not a very old bridge now. Some, I think, may have split since they have been in the bridge. That is quite possible.
125. Did you take possession of the viaduct as soon as it was constructed? As soon as the line was open, but a good deal of this timber framing was built a long time before; probably 12 or 18 months before the opening.
126. But when the Engineer-in-Chief for Railways completed this structure you took charge of it? No I did not. At that time Mr. Mason was in charge.
127. Do you remember at what time this bridge was completed? I do not exactly.
128. At what time was it put in your charge? I do not remember the date, but I will furnish it to you.
129. You do not remember what time it was between its being opened for traffic and your taking charge of it? Not many months, but I cannot tell you exactly from memory; I can ascertain for you.
130. How long do you consider a bridge of this description would require after it is completed, before it should be screwed up? It generally happens that as soon as it is completed it requires more screwing up than at any other time, for the simple reason that the timbers shrink.
131. During the time that you have had charge of this viaduct has the screwing up been attended to regularly? Yes, there has been a gang of men engaged in screwing up ever since.
132. Why did you recommend that the speed on this viaduct should be reduced to 16 miles an hour? Simply because of the jumping of the engines; I have been on the engines myself, and found that there was considerable motion, and uncomfortable to travel at a high speed, and I considered it necessary to reduce the speed; the engine-drivers complained of it.
133. At that time was the bridge screwed up? Certainly.
134. In one of your reports you say that, when this viaduct begins to decay, it will give an immense amount of trouble;—how is that? Because nearly all the supports are of a bad class of timber.
135. That does not apply to the superstructure? No; of course, when it begins to decay there will be a considerable amount of trouble to keep it in order; then there is such an immense length of it; but the uprights are the defective part of it, and they are all on sills; they are not on piles, except a few near the river; I have never been supplied with any of these drawings, and I cannot tell what it is composed of; I have asked for them repeatedly, and never could get them.
136. You tested the bridge? Only the viaduct.
137. What means did you use for testing it? I have not tested the deflection.
138 You only went by Mr. Stephens' report? Yes, Mr. Stephens' and Mr. Whitton's reports. Mr. Whitton reported $\frac{5}{8}$ deflection, or $\frac{3}{4}$, I think. I am not sure, but one of them deflected $\frac{7}{8}$.
139. Then you did not go into any calculation at all of the safe load the viaduct could carry? No, I have not, but I am quite satisfied about the strength of it, and that it is able to carry any train that we have. I am satisfied of that as long as the timber is good; the danger is in having bad girders. We have taken out a few girders already, and there are some more that I wish to take out.

140.

G. Cowdery, Esq.
9 June, 1884.

140. What is about the weight of the heaviest locomotive on that line? About 76 tons I should think.
141. What is the length between the leading and the trailing wheels? I am not certain whether any of the consolidation engines have been running on that line.
142. Were they intended to run on that line? They were intended to run anywhere.
143. What is the weight of the engines that go with the mail trains? I cannot tell you exactly from memory.
144. Do you know the weight upon the driving wheels of any of those engines? I have got a list of them in my office from the Locomotive department. I have never weighed them myself.
145. Before you recommended the speed to be reduced to 16 miles, what was the speed at which they passed over the viaduct? The usual speed. Any speed they liked to have.
146. What was the usual speed? With some trains it would be about 30 or 35 miles an hour, but they vary very considerably.
147. Do you know of your own knowledge whether that speed will affect the deflection? I think it will make a very considerable difference whether you run fast or slow. It affects the engine more than the bridge, by making it jump.
148. It is the deflection not the speed that affects the engine? A high speed does not give much more deflection than a low speed in the girders, only it makes the engine jump when she is running fast. When she is going slowly she goes over it without jumping.
149. You have had some experience in the quality of timber? I have; about 27 years.
150. What co-efficient of safety would you think necessary in a bridge of that description to use with good sound ironbark? I should think about one-fourth, or barely so much. It is so difficult to know when a stick of ironbark is really sound. It may appear sound outside, and you find it is not so inside.
151. What was the cause of your having props put in the centre of the spans? Simply because I found defective girders.
152. Are they merely piles? Yes; put in the middle of the girder as a temporary support, until the girder can be taken out.
153. To how many spans was this done? I do not remember exactly. I think it is all stated in the report.
154. Was it near the bridge? No; near the Sydney end.
155. About what portion of it? In various places; there are not many. There are some supports where the piles are defective.
156. What was the object of those props? To prevent the chance of accident; one girder would not be safe.
157. Were the props under one or two of the rail-bearing girders? Under whichever girder was defective. It was in the case of the lower girder being defective; propping the bottom one was propping the other also.
158. Did you prop both? Only the one.
159. Would there be more deflection in the one than in the other? No; it was only to prevent accident in the case of a defective girder.
160. Have those props been removed? No, they are there now; there are very few of the girders propped—perhaps four or five—I do not know exactly how many from memory; we always adopt that system wherever there are defective girders; the first thing is to prop it; we have men continually watching them.
161. It has been said that some of the piles were rotten, and that you were of opinion that they were rotten when put in? That was one particular pile, and such remarks were made with regard to it, but since then I find there are a great many rotten, and one must have been known to be rotten, because it was filled up with concrete or cement; Mr. Drewett went up to ascertain the facts of the case, and he agreed with me that it was so; there are any number of them rotten now.
162. You would hardly expect in such a large structure but that some of the timbers would be defective? No.
163. What proportion of this work is defective? I consider that very little of that timber will last many years.
164. Why? Because it is a bad description of timber.
165. What kind is it? A great deal of it is ribbon gum, or as some people call it, mountain ash; there is some apple-tree amongst it, and some stringy-bark; it is a mixed lot.
166. What speed would you recommend to be used for this viaduct? I would not approve of the speed being increased.
167. Only 16 miles an hour? That is quite fast enough; you will find if you travel over it on an engine at a high speed that it is very uncomfortable.
168. To what is the motion of the train due? It is the deflection from one to the other; I do not know perhaps but that a higher speed might reduce it again; the engines jump from one to the other, and the drivers were afraid that the engines would jump off the rails.
169. The motion is not sideways? No; there is very little side motion.
170. We intend to proceed to Wagga Wagga shortly; do you wish to be with us, or to be represented? Yes, I would rather be with you myself.
171. *Professor Kernot.*] Did you ever notice the span in front of the engine rise up before the engine came to it? Yes.
172. Visibly? Yes, visibly rising.
173. So that the train seemed to plough up a wave? Yes.
174. There is a certain speed at which this is troublesome? Yes.
175. At a lower speed it is not so troublesome? No.
176. At a higher speed? That has not been tested.

WEDNESDAY

WEDNESDAY, 25 *JUNE*, 1884.

Present:—

G. A. MORELL, Esq., C.E., President.

W. C. KERNOT, Esq., Professor of Engineering,
W. M'D. COURTNEY, Esq., C.E.,
W. H. WARREN, Esq., Professor of Engineering,
OWEN BLACKET, Esq.

R. D. Stephens, Esq., District Engineer, Goulburn, sworn and examined:—

R. D. Stephens, Esq. 25 June, 1884.

177. *President.*] You are the District Engineer in charge of the Southern Railway? The Southern Railway, yes—and South-western as well.
178. You are in charge of the Wagga Wagga bridge and timber viaduct? Yes.
179. Do you know this drawing (*plan of viaduct produced*);—have you seen it before? No, I have not seen it before.
180. But you identify it as the design of the viaduct at Wagga Wagga? Yes, it is.
181. It is part of your duty to look to the maintenance of this viaduct? Yes.
182. That is to say, the screwing up, repairing any defective timbers, and so on? Yes.
183. Did you take charge of this viaduct as soon as it was finished? No.
184. Who was in charge? Well, I suppose Mr. Mason was; I do not know, but Mr. Mason, I suppose, was. I really do not know.
185. But who was the District Engineer who took charge of it as soon as it was finished? No one; I was the first engineer there.
186. That is you were the first engineer appointed in the Department of Existing Lines to take charge of that district? Yes.
187. How long was it after the completion of the bridge until your duties began? November 1, 1881; that was the date when I was appointed.
188. Then who had charge of this viaduct previous to that—from its completion to the time when you took charge? Well, I suppose, Mr. Mason, and then Mr. Cowdery; there was no one else.
189. There was no officer but Mr. Mason to look after it? No; except, of course, the inspectors.
190. The usual inspector, but no engineer? No.
191. I find that the viaduct was completed in September, 1880. Between that time and the time of your appointment Mr. Mason was in charge? Mr. Mason and Mr. Cowdery.
192. Do you know if anything was done to the viaduct during that time in the shape of maintenance? Oh yes. It had been screwed up. There was an inspector, you know, just the same.
193. Just the same? Yes.
194. You examined the bridge very carefully, and reported to Mr. Cowdery upon its defects? Yes.
195. You stated in that report that you did not like the structure—that you did not like the viaduct? No; I do not.
196. That it is decidedly weak in design? Yes.
197. Have you made any calculations? Yes; I have.
198. What working load would the viaduct carry? 30 tons is what a single girder will carry, and of course 120 to each double one. For a dead load, of course, it is perfectly safe; it would carry any amount of weight for a dead load. There is no doubt about that. But the usual span is about 26 feet.
199. You had better confine yourself to answering the questions, or otherwise it will be confusing to the Secretary to note down what you say. If you have made any calculation in connection with this bridge how did you calculate the strains, and on what length of span? 20 feet; that is allowing a full distance for the corbels.
200. Do you think the corbels add any strength to the span? That length of corbel weakens it.
201. What length of corbel is generally used with a 26-feet span? About 6 feet.
202. And for a 30-feet span, what length should be used? I consider that anything beyond 6 feet does more harm than good.
203. Why? I look at it in this way: Supposing this corbel instead of being 10 feet is 20 feet, or the whole distance apart 15 feet on this side and 15 feet on that; when the weight comes on to them, unless it bends it is bound to tilt this up. A corbel beyond a certain length does more harm than good. Suppose you make it still longer than 10 feet; make it 20 feet; this is bound to go down when the weight of the train goes on it; and if it is at all lengthy it will tilt this one up.
204. You state that the lengthening of the corbel to 10 feet would produce other than the effect intended; but what was the effect intended? It was of course to shorten the span; they wanted to shorten the spans as much as possible there.
205. But in your calculations you state you have taken the corbel? That is to give it every chance. If I were doing it for my own calculation I would not take more than 6 feet—in fact, not 6 feet. We find that the more you build one on top of the other with corbels like this—that in fact for moving loads it is a mistake to put too great top-heavy timbers.
206. Does this refer to strains or to deflection? Well of course the intention in putting corbels is to shorten the working span—that is the intention of course; in fact to shorten the distance where the real weight comes in on the centre of the span.
207. Then if you follow out that argument the bridge would be stronger without corbels than with them? Up to a certain point, yes.
208. Then how would you make the joints of the girders? Well, of course you would have a certain amount of corbels—about 5 or 6 feet of corbels is ample.
209. Would you make the corbels longer for the longer span than for the short one? No, I would not.
210. Then you consider that the viaduct would have been stronger if the corbels had been less that 10 feet? Certainly, and strictly speaking it would mean less expense, because there are 20 cubic feet of square timber wasted in each span.
211. You stated in one of your reports, which I have here before me, that the deflection on the timber girders varied from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch, but was mostly $\frac{5}{8}$ with a 63-ton engine passing over the viaduct;—was the bridge properly screwed up at that time? No, it was not.
212. Would the deflection have been greater or less if the corbels had been shorter—do you consider that with this test, when you noted the deflection, the corbels would have made any difference? I do not think they would have made much difference either one way or the other.

R. D. Stephens, Esq.
25 June, 1884.

213. How did you find the deflection? Well, with a rod, with a sliding rod; one rod above, and sliding down.
214. On which girders—on the rail-bearing girders? On the rail-bearing girders.
215. On both, or only one? We had three or four of them in each span.
216. Could you point out what spans you tested? No, I could not.
217. Was it in the centre of the viaduct or towards the end? We tried several; but I could not state which they were. They are all so much alike that it is really difficult to distinguish them. I tested them several times. The deflection now is not so great as it was.
218. What in your opinion is the cause of the wavy motion of the engine when passing over the viaduct? Sideways or vertically?
219. Vertically? Well, if each span were 26 feet it would not wave, to a certain extent.
220. But what is the reason of the wave being formed over a larger span than 26 feet? Well, it gives to a certain extent; the girder gives to a certain extent.
221. You mean to say that the girders are rocking over the piers? Oh, no. Well, the piers go a little laterally—they do not go longitudinally.
222. They do not go longitudinally? No, but they go sideways.
223. *Mr. Courtney.*] At right-angles to the road? Yes, slightly.
224. *President.*] Do you consider that these corbels form continuous girders of each span? I look upon the corbel more as a joint for the two girders, and also as a support for the main girders, the same as the wall-plate.
225. But not to establish continuity between the girders of different spans over the piers? You cannot look upon it as a continuous girder.
226. That is what I wanted to know. You stated in one of your reports that you found some difficulty in keeping the rails in line? Yes.
227. How can you explain that? It has simply what we term a loose hold on the top, and of course the ballast is simply on the planking.
228. I quite understand what you mean. You did not mean to say that the rails were getting further apart in the gauge, but that the whole line itself was sliding? It is liable to slacken on a slippery bottom. I do not ascribe any fault to the viaduct as far as that is concerned.
229. You just now alluded to the piers rocking sideways. To what extent do they rock sideways? Oh, very slightly; half an inch, or not even that. I have never actually measured it. But you will see that the ground around the piles there is all open; it is broken where the piles enter the ground.
230. But most of these piers are on sills? They are not strutted underneath. (*Plan produced.*)
231. This (*referring to plan*) is where these piers are strutted? Yes; I do not see it in all cases, but in some you will find that where any pile strikes the ground it is crumbled around the pile. I do not say it is anything serious at all.
232. *Mr. Courtney.*] It may be caused by a difference in the expansion of the timber in the ground.
233. *President.*] Is it the vibration; you have not remarked any longitudinal motion of the piers? No.
234. Only sideways? Only slightly; it is of no great importance. It is appreciable, but nothing of any moment.
235. When you tested the viaduct what load was passing over it, and at what speed? I think 60 odd tons.
236. A 63-ton engine you mentioned? Yes, that is about the weight.
237. A 63-ton engine you mentioned, but you did not state the speed? Well, about 15 miles an hour. As far as the deflection is concerned we found that it made no difference whether the engine went at full or half speed. The deflection in both cases was the same.
238. Could you give us a copy of your calculations in reference to the way in which you computed the strains? No; I simply did it roughly. I took the four girders—eight girders, rather—and computed the strength of those. It comes to about 120 tons for each double girder; that is for a 20-feet span.
239. *Professor Warren.*] Is that for a distributed load? No.
240. For a central load? Yes.
241. I thought you stated that a single girder would carry 30 tons? Yes; but that is for a double girder.
242. A double girder then carries four times as much as a single girder? Yes; supposing all the timber to be of the very best quality.
243. *Mr. Blacket.*] Is that the breaking weight or the safe load? The breaking weight.
244. *President.*] You stated that there is a general impression that the speed on this bridge should be limited to 25 miles an hour: To whom did you refer as having that impression? To the engine-drivers.
245. That is on account of the wavy motion and vibration on the bridge? Yes. Would you allow me to state one thing: We have had a rail break away at the joint on the viaduct.
246. At about what part of the span? That I could not tell you; I did not notice that.
247. Was it on the piers or in the centre of the span? I did not notice, but we have had one rail break away.
248. *Mr. Blacket.*] At the fish-plate? Yes.
249. That would be due to bad bolts? No, I do not think so. I do not attach so much importance to that; but what I do attach importance to is this: That with this wavy motion an engine would be far more likely to jump the rail if it came across a broken joint.
250. *President.*] If you could remember whether it was on the pier or on a part of the span where the joint broke we could form some idea of the cause? I could tell you the mileage.
251. *Mr. Blacket.*] Could you point it out if we were there on the bridge? Yes, I think I could. I can state one thing.
252. *President.*] Yes? In making the calculation for this breaking weight the weight is put on very, very gently. It is not an engine going over; it is simply a dead weight put on very gradually.
253. It is not a moving load? No; simply a very gentle weight, put on pound after pound.
254. But that would not be the calculations made for a railway bridge? No, but that is what it was.
255. *Professor Warren.*] Your breaking weight? Yes; in fact the same as testing for timber.
256. *President.*] You state there is very little advantage gained in the matter of cost by making the spans 26 instead of 29 feet? Yes.

R. D. Stephens, Esq.

25 June, 1884.

257. Have you taken the quantities of the viaduct as erected, and calculated the difference between that and a 26 feet span? Yes, I have; it would make a difference of 42 piers. There are 313 spans now. If 26-feet spans were introduced there would be 42 additional piers.
258. I think as you have gone into the matter it would be better for you to give us that statement in writing? Well, that is all it really comes to.
259. Because if you have a smaller span you require a great number of piers, and the quantities ought to be gone into accurately to know what quantity of timber is required for the piers in addition to the superstructure. The superstructure will be the same except that you will have more corbels and more piers? You will have 42 more; against that you have 20 times 42 cubic feet of squared timber saved.
260. This statement is not satisfactory; you cannot check a statement like this unless it is given in writing. It is only because you stated this in your report that I ask you the question. It would be better for you to give us a written statement in order that it may be checked properly? Yes. I would have to go into it very minutely then.
261. In a question of cost—when you mention anything in reference to cost—it should be gone into minutely, because 42 piers would involve a considerable amount of timber. You also stated that the 26-feet spans are constructed with 14 x 14 girders, instead of with 12 x 12. Is it your opinion that if these had been 14 x 14 that the viaduct would have been stronger—or sufficiently strong? Yes; but I do not know that there would have been much difference.
262. Why? Because I believe in shorter spans. It is far more easy to get short sticks than it is to get long sticks, and there is greater safety in short sticks. There is far more likely to be a flaw in long sticks than in short ones.
263. You have not made any calculation in reference to the working load that would give us a shorter span than this? No, I have not.
264. You have removed some girders and some piles from this viaduct—defective timber that has to be replaced? Yes.
265. Have you preserved it for examination? Yes.
266. So that we can see it when we go to Wagga Wagga? Yes.
267. Can you explain to us what you meant when you said that the piles of the bridge were very bad, and that the working sideways was most apparent? Well, I sent in a return of the pipes in each pile. You have that, I believe.
268. But how could you find them? We bored for them. We bored into the pile, and the moment we got into the pipe the auger went right into it. And some of the piles are only 11 inches at the top—that is, including sap-wood; so that actually the good timber would not be more than 9 inches or something like that.
269. Was it at your instance that the props were put under some of the spans? Yes.
270. What was the object of having these props under the spans? To reduce the strain.
271. And you recommended that all these spans should have a prop put under them? Well, we have done so. Mr. Mason did so at Fish River. But I would hardly recommend that now.
272. You recommended it at one time? Yes, I did.
273. What danger would you apprehend now if the props were removed? The possibility of the girder breaking. I do not say they would; but in cases of this kind you have to guard against any possibility of accident.
274. But you stated a little while ago that the girder was strong enough? Yes; but this happened to be a bad girder.
275. Then you would not remove the props if the girders were bad? No.
276. Since you have been in charge of this bridge you have constantly employed gangs of men in screwing up and painting? Not painting.
277. But screwing up? Yes, screwing up.
278. Do you consider that this screwing-up is more than would be considered necessary with any other timber structure of that extent? Yes, certainly more than double. We find that the whole of the bolts get loose—especially at the corbels. We now have washers on, a good 4 inches in depth.
279. Is that due to the shrinking of the timber only? And to the general working of the bridge.
280. Do you mean the workmanship? No, the working movement of the bridge. The bridge moves more than ordinary bridges would do.
281. Is that to be attributed to bad workmanship? No; I attribute it to the extra span—to the 4 feet 6 inches extra length of span.
282. Do you think that this viaduct is unsafe in any way at present? I consider that there is no fear of a train or engine falling through the bridge except where the girders are defective. There is no fear of that. It is strong enough in that respect. But the danger that I apprehend is that the engine or train is far more likely to leave the rails in jumping. You see when the engine goes on to the viaduct, if there is any obstacle on the line the engine is more apt to jump off the rail, and that is my reason for pointing out the way in which the joint in the rail was broken.
283. That is also the reason why you recommended the speed to be reduced? Yes; but I may mention that the deflection at the time I did so was considerably more than it is now.
284. How do you account for that? Well, in the first instance, the timber was greener. I find that green timber is more elastic than dry timber. That has a great deal to do with it. A rotten stick will not bend before it breaks altogether. Then, at the same time, the bridge was not so well screwed up as it is now.
285. *Mr. Blacket.*] Do the cross sleepers rest secured to the bridge? They rest simply on the ballast; they are not secured to the bridge at all; between the ballast boards it is filled in with ballast and then treated as an ordinary road.
286. And does the water go through the boards? That is one objection; they have put the boards too close to each other and the water is retained; it trickles through to the main girders and it is apt to rot the girders. There are two things I would like to state—especially with regard to the corbels: Suppose you put one corbel on the top of another—about 5 or 6 feet of corbel—so that you would have no span to signify in the middle, all this top-heavy timber is a real detriment instead of being an advantage. You see the higher it is the more it goes wabbling sideways.
287. *President.*] It would form an arch of timber? For a dead load it might be an advantage, but for a moving load it is the very reverse. With regard to those calculations which I made they were for the very best timber, and it was done on the supposition that there was not a single flaw in the timber.

R. D. Stephens, Esq. 25 June, 1884.

288. *Professor Warren.*] What is the constant you use? Seven. I consider what I have allowed to be almost excessive; but it is on the supposition that the timber is very good and has not a single flaw in it; the objection to long sticks is that there is far greater liability to a flaw in a long stick, and if there is one flaw in a long stick it is just the same as a flaw in a chain; one bad link in a chain destroys the lot; and it is far easier to get good short sticks than it is to get good long ones.

289. *President.*] The timber in the piers is not ironbark? No; the only ironbark in this bridge is in the girders, corbels, and head-stocks; all the other—transoms as well—is local timber.

FRIDAY, 27 *JUNE*, 1884.

Present:—

G. A. MORELL, Esq., C.E., President.

W. C. KERNOT, Esq., Professor of Engineering.,
W. M'D. COURTNEY, Esq., C.E.,
W. H. WARREN, Esq., Professor of Engineering.,
OWEN BLACKET, Esq.

The Commission met on the Railway Bridge at Menangle.

George Cowdery, Esq., Engineer for Existing Lines, examined:—

G. Cowdery, Esq. 27 June, 1884.

290. *President.*] When was your attention first drawn to anything loose on this bridge? When fixing the cross girders; we had occasion to renew the decking in a large degree; it was thoroughly overhauled; and finding that the cross girders were nearly all loose they were re-riveted; it threw us into a great deal more riveting than probably we should otherwise have had; it was in consequence of the open work, the work not being well closed; as we tightened up we did not know where to stop.

291. How are the cross girders fastened? They are hanging on the rivets.

292. Who first reported on the condition of the rivets in the bridge? Inspector Rose, who is present here; he reported on the bridge before Inspector Hilzinger was employed. I have a copy of Inspector Rose's report which I can give you. (*Copy of the report handed to President.*)

293. When was this report supplied? Immediately after I took charge of the Department, when I went through everything with him.

294. Inspector Rose was the first to find loose rivets? Yes, and he commenced to repair the bridge.

295. Where did he first find them? In the girder on the west side and at the extreme north end of the bridge.

296. Have you the original report sent in by Inspector Rose? Yes, I have no doubt I have; I will get it and send it to you.

W. B. Wade, Esq., Inspecting Engineer, examined:—

W. B. Wade, Esq. 27 June, 1884.

297. *President.*] What is the distance between the piers of this bridge? The distance between the piers is 150 feet, and 156 feet between bearings; it is 162 over all, and 150 in the clear—three continuous girders.

Mr. John Rose, Inspector of Iron Bridges, stationed at Goulburn, examined:—

Mr. J. Rose. 27 June, 1884.

298. *President.*] Where did you principally find the loose rivets? Along the angle iron connecting the top boom with the web; and there were loose rivets in the cross girders. In many cases they were not up to $\frac{1}{8}$ of an inch. We found them loose in the angle iron and stiffeners principally; they were not close there by $\frac{1}{8}$ of an inch.

299. You reported this to Mr. Cowdery? Yes.

300. Then you were instructed to remove the loose rivets and replace them? Yes.

301. On which part of the bridge did you begin to remove them? I commenced from this end (the north end, and the west side of the bridge) on the web.

302. You brought the T iron in contact with the web plates? Yes, we closed everything.

303. Have all those rivets that now appear painted been replaced? Yes, those have been replaced.

304. Other rivets became loose as you re-riveted the work, did they not; you had to clamp or bolt the T iron to the web plate to bring the plates together, and put in new rivets, and then in doing so you naturally loosened other rivets? The other rivets were loose.

305. How many rivets did you take out of one T iron at a time? Not more than about half-a-dozen at a time.

306. You did not take all the rivets that are painted out at one time? No.

307. You only took out a certain number of rivets to bring the plates together and rivet again before you took more? That was all. If we took out any quantity of rivets we filled up every other hole with a bolt before we took out another.

308. How did you test the looseness of the rivets? With a small hammer.

309. Have you a hammer to show us how you did it? Yes; I tried it on the inside or head of rivet, not on the side on which it snapped.

310. What kind of blow did you make in testing? Just a small sharp blow on either side of the head of the rivet, putting a finger on one side while I made a blow on the other.

311. When you felt any vibration under the stroke of the hammer with the finger did you mark the rivet to be cut out? Oh, no; there was a distinct movement of the rivet in each case.

312. You did not when there was only a small vibration consider it necessary to cut the rivet? I passed those by.

313. You first went through this girder on the west side and at the north end of the bridge, and then I suppose you extended your investigation a little farther to the other girders, and found other rivets? The principal part I went through was the box between the top and bottom booms. With regard to the other side of the bridge I knew that one part I looked at was very similar to the other and I did not go through that; I only reported on the one side.

314. The rivets have been renewed on the other side? Yes, but that side was reported on by another inspector—Mr. Hilzinger.

Mr.

Mr. William Hilzinger, Inspector of Iron Bridges, stationed at Sydney, examined :—

Mr. W. Hilzinger. 27 June, 1884.

315. *President.*] When you inspected this bridge you tested the rivets on the other side—the east side? No, the men continued until they finished the span on the west side, and then they came back on the other side. We kept on just the same.

316. Where did you principally find the loose rivets on the east side? On the rims and on the cross girders. Most of those were loose. We cut all those out, and as we cut them out we had to follow up the straps until we got to solid ones. Those cross girders are hanging on the rivets, and they were loose, and where they were loose we cut them out and replaced them. We had to cut them out until we came to where they were solid.

317. Did you find any space between the T iron of the web and the web plate? Yes.

318. In many of them? Yes, a great number of them. I could get a piece of hoopiron between the rivets, and shove it through; and all along the top boom, along the angle iron, and the cover straps you could get a piece of hoopiron between the rivets in the same way.

319. Did you find all the rivets to be loose when the plates or angle iron did not fit closely? No, not all loose; perhaps you would find one or two loose, and then when you replaced those and drew the angle iron close together it would make them all loose. I looked more for the work to be close together than for the rivets to be loose on this job.

320. Did you find any of the plates in the top or bottom boom not close together? No; they are pretty close together.

321. Not "pretty close";—were they close? Yes, they were close together.

322. With regard to the angle irons fastened to the booms, were the new rivets put in the angle irons or only in the wrappers? Occasionally there were places where a few were loose.

323. It appears more in the web than in the booms? Yes. Where the rivets have been only a little loose I have only tightened them up a bit, as you see on the bridge on both sides. But they are mostly on the angle iron and the wrappers, and when you find that you have to run them along until you get them solid again.

324. I notice that on almost every rivet there is a mark;—is that from a blow of the hammer? They have been sounding them as they went along. As they had a stage up they tried the rivets as they went along.

325. It seems to me that if you made a mark like this (showing a mark on a rivet) you must have given them a good blow with the hammer? It is only the paint knocked off.

326. What kind of a hammer did you use? A light hammer—4 or 5 ounces, perhaps.

MONDAY, 21 *JULY*, 1884.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E. | W. H. WARREN, Esq., Professor of Engineering.

OWEN BLACKET, Esq.

Benjamin Barnes, Esq., Railway Bridge Contractor, sworn and examined :—

B. Barnes, Esq. 21 July, 1884.

327. *President.*] What position with regard to the Department of the Engineer-in-Chief for Railways did you hold at Dubbo;—were you the contractor for the railway bridge? I was the contractor—myself and another. My partner did not come on to the works at all. I carried out the work.

328. Were you at Dubbo from the time when the erection of the bridge commenced until it was completed? Yes.

329. Can you give us a few brief particulars of the Dubbo bridge? Yes. It consists of three 150 feet openings in the clear, that is 159 feet from centre to centre of columns, the columns being 9 feet in diameter, and there are two additional spans, one at each end, of 60 feet opening. There are in addition to that, long wood approaches at each end, the dimensions and particulars of which I cannot mention at this moment.

330. Are those approaches of iron or timber? Timber viaducts.

331. What description of girder—an open lattice girder? An open lattice girder.

332. Similar to the Wellington bridge? Similar, but by no means like the Wellington.

333. Were any deviations made from the drawings and specifications in the erection of the bridge? I do not remember any.

334. Do you consider that the work has been done satisfactorily according to the drawings and specification? In the Dubbo bridge?

335. Yes? I do.

336. Could any contractor take advantage of any omission in the drawings and specification in the erection of this bridge? Well, I do not see how he could, because, as you may know, the bridge is erected under the supervision of a district engineer with a resident inspector always on the works. The district engineer visits the works nearly every day. At some stages of the work he visits it every day, but when the work is such that it is not absolutely necessary for him to personally inspect it he does not come every day: he has other business to attend to. But the inspector was there every day, and all day; and they had the drawings and specification, and we had to work under their direction and to the drawings and specification.

337. So you could not take advantage of any particular wording of the specification to put inferior material in the bridge, or give inferior workmanship? I do not see how in any way we could.

338. Who was the Government superintendent or Government engineer in charge? Mr. Alfred Randall.

339. Were all the joints of plates of angle-irons brought into close contact by the rivets? They were.

340. Do you think a few loose rivets may have escaped the notice of the inspector? Yes, I think it is possible.

341. Do you think that in a year or two some of the rivets may become loose by the expansion and contraction of the ironwork, or by the vibration caused by the traffic over the bridge? I think it is just possible some of them may become loose on the top member. Not exactly loose. No doubt there are some few of what you would call perfectly tight rivets that would possibly be loose on the top member—not on the bottom member. That would be where the iron is strained in tension.* 342.

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* Note *(on revision)* :—There is no doubt that the strains referred to would have a tendency to loosen rivets, but it would not have that effect on the bottom member where the iron is strained in tension.

B. Barnes, Esq.
21 July, 1884.

342. What number of rivets would be likely to become loose in a couple of years? I could not tell.
343. What percentage, roughly speaking? I cannot say.
344. In work of that description properly carried out, just roughly speaking? I could not give an opinion on that. I think where the work is in compression and the rivets do not fill the holes thoroughly, and when the bridge has been working for some time, that it is possible, in consequence of the vibration and the expansion and contraction of the iron, that the rivets may become not to say loose but not perfectly tight. There is almost a distinction between a loose rivet and a something not perfectly tight, if you understand.*
345. Would a smart blow with a 4-lb. hammer, struck on each side of such a rivet as you allude to, cause it to become loose? Well, I do not think it is fair to treat rivets like that; and when I say that I speak as one who has had some practice in the thing.
346. You would not allow your rivets to be tested with a 4-lb. hammer? I would not. When I say that, you could not prevent the Department from doing what they like.
347. But it would not be fair? I was myself a Government officer for four years, and had a large number of bridges erected under my supervision, and I never thought of testing rivets by using a 4-lb. hammer.
348. You would rather use a 4-oz. hammer? I would not use a heavy hammer in any case.
349. Such a blow as that from a heavy hammer would be likely to loosen the rivets if they did not fill the holes accurately? Yes, and in hand riveting it is almost impossible to get all the rivets to fill the holes. You may know that the practice in riveting is to heat the rivets at the forge, and the point of the rivet is almost always made much hotter than the head. The rivet is then put into the hole of say two or three thicknesses of half-inch plate, and we will suppose the rivet to thoroughly fill the hole. The riveters then come on it with their hammers and knock down the hot end of the rivet. In the meantime the cooler part of the rivet, under the head and near the other side of the plate, is not affected by the hammers, and as it cools it becomes smaller—only a fraction, but still it becomes smaller; and when the rivet is quite cold if you put your finger on one side of the head where it touches the plate and hit the opposite side of the head of the rivet with a hammer the chances are the slightest possible movement will be detected.
350. One part of the rivet will be loose? We distinguish between heads and bats. The bat is the end produced by the riveter. It is the head of the rivet I speak of; the other portion you will find tight. I may say that in machine riveting a totally different state of affairs exists. The rivets when they are put in by a machine are usually heated in a furnace all over alike, and when they are put into the holes they are rammed in by the machine, and so completely fill the holes.
351. But in the erection of a bridge you cannot have that—you must have hand riveting? Yes.
352. Would you allow rivets to be put in when they are nearly cold; do you consider that such rivets put in would make good work? No. The rivet requires to be heated, and well heated, or the men cannot well rivet it.
353. *Professor Warren.*] What do you mean by well heated? White—white hot.
354. *President.*] In your opinion, what time would elapse after the completion of an iron bridge before any rivets became so loose as to require renewing. I mean, of course, a few of the rivets, not the whole? Well, I really could not answer that question. I have had a lot of work done under my supervision, and I never yet saw any rivets I would renew in a bridge after the bridge has been completed.
355. Not unless the moisture has got to them, or something of that kind? That does not affect the bridge itself. I may say that in plate-work where the holes are punched the tendency to the head of a rivet being loose is much greater than in plate-work where the holes are drilled, because in one instance the hole is parallel and in the other slightly conical, and the conical part of the hole is or should be always next the head.
356. The Dubbo bridge is entirely completed, is it not? Yes.
357. Has it been tested? It was tested severely by the Engineer-in-Chief and the Inspecting Engineer.
358. Do you remember what the test consisted of? Yes, for I made a test myself. I took a diagram independently of the Government test, and I know that the greatest deflection did not reach two-thirds of an inch for the 150 feet span; it was a little under two-thirds of an inch.
359. *Professor Warren.*] How was the bridge loaded? With heavy goods engines. I am sorry I have not the diagram here. I may tell you that when the bridge was about to be tested I saw a lot of indicators that had been sent from Sydney, and I spoke to Mr. Randall, and said I knew a much simpler method of testing the bridge. He said if I would make an instrument he would have an independent test made.
360. *President.*] That was before the staging was removed? Yes, but I did not use the staging for my test; I took it from the earth in one of the land spans.
361. What height was it? About 15 feet.
362. What apparatus did you use? A simple lever with a pencil. I first prepared a board, which I fixed on a piece of iron driven into the earth. I then made a lever 12 inches long, working upon a pivot, and at the movable end of the lever I fixed a pencil at a point 3 inches distant from the pivot upon which the lever worked. I attached a copper wire and connected it with the underside of the girder, and weighted it so that when the girder deflected the lever would move up or down. I put a sheet of paper under the pencil and fixed it to a point, and when the weight came on the girder deflected and the pencil went down and described part of a circle; and when the weight was removed to the next span the pencil went up beyond the mark, because the portion between the two spans acted as a beam. One-fourth of what the pencil indicated was the actual deflection. It was intensified to get a more correct reading. The severest test was when three heavy goods engines were going over the bridge at about 40 miles per hour, and it was the same both ways.
363. Do you remember what type of engines they were? I do not remember; but they were heavy engines.
364. *Professor Warren.*] Did they cover the bridge? They covered rather more than one span.
365. Did you place the engines on the outside girders and leave the centre one light, and then place them on the centre one and leave the outside light? Yes; four engines were placed at rest on the first span, and then removed to the next span, and so on.
366. That was the first test? No; the first test was one engine on the bridge. That produced very little effect. Then four engines were put on at rest. They more than covered the span, and they remained

* NOTE (*on revision*):—There should be a distinction between a loose rivet and a rivet the movement of which could only be detected by a blow on the side of the head of it with a hammer.

B. Barnes, Esq.

21 July, 1884.

remained there some little time. After that test the four engines were run off the bridge, and three engines were coupled and taken back to the Dubbo station yard, and the drivers told to come at full speed to the bridge, and that produced the severest test. They went at a speed of about 40 miles an hour.

367. And was the deflection greater? It was a little greater than with the fixed load, but not more than $\frac{1}{100}$th of an inch. The first test was one engine; the second was the four engines, and that produced what we call a permanent set, which I presume you know. When the one engine came on to the bridge it was taken off and we saw no difference. When the four came on they produced the effect I have just mentioned, and when taken off the bridge did not go back to what it was before. That test brought the bridge to its bearings—to the permanent set—and it remained at that.

368. *President.*] You considered that test was very satisfactory? Yes; the permanent set did not extend $\frac{3}{100}$th of an inch; it was less than in any bridge I have ever before seen tested.

369. In alluding to the permanent set, you do not mean the permanent set beyond the elasticity, but the permanent set by which the bridge took its bearings? Yes; at all bridges I have tested the first great load brings down the bridge to something at which it remains; it brings everything down to its solid bearing, and it is what is carefully registered.

370. You do not know the weight of the locomotives put on? I did hear at the time, but I do not remember now. You will get that accurately from the Locomotive Department.

371. Have you examined any of the railway bridges in the Colony? No, none of the bridges except that at Dubbo.

372. Did you ever pass over them and look at them—I mean over the iron bridges? No, I have not. I was down at Wellington, but I scarcely had time to look at the bridge, and never went to look at anything about it.

373. Do you consider that the Dubbo bridge is a fine specimen of an iron work of that description? I do—I do indeed. I was one of the contractors for the bridge, and the engineer as far as the contractors were concerned, and I think it is a good job, whoever goes to look at it.

374. *Mr. Blacket.*] Who was your inspector? A Mr. Hodson.

375. *President.*] Was the Engineer-in-Chief satisfied with the way in which the work was carried out? The Engineer-in-Chief appointed a day for testing the bridge, and he came up and remained there two days. He and the Inspecting Engineer spent the whole of one day looking into the bridge and closely examining it. Some week or four days before the bridge was tested another inspector came up from Sydney with a letter which I received from the District Engineer, telling me that this new inspector from Sydney was sent by the Engineer-in-Chief to go over all the rivets in the bridge. I was to render him every assistance I could, and I did so; and he spent three days knocking about the rivets and examining them as closely as he could. The Engineer-in-Chief came up after that, and spent all one day examining the bridge, and then it was tested, and both he and the inspecting engineer expressed themselves well satisfied, and told me that when I had finished painting they would take the bridge off our hands.

376. We are very much obliged to you Mr. Barnes for what you have told us? Having gone so far, I should like to say something more.

377. Yes? I was very much surprised, after the bridge had been opened for traffic and everything was working satisfactorily, to find two more men come up there and hammer the rivets on the bridge for four days continuously. Continuously they hammered the heads of the rivets on that bridge. I thought that was an undue amount of interference—I thought it was going too far; in fact I felt so annoyed about it that I sat down at once and wrote a protest to Mr. Randall. I wrote the same morning they commenced.

378. From what Department did they come? I understood from the Maintenance Department, the Existing Lines.

379. They were not sent by Mr. Whitton's officers? No, they were not. The people of Dubbo came to me to know what was the matter. The editor of the *Dubbo Dispatch* came to me to know if anything had gone wrong with the bridge; and we have some feeling in a matter of that kind, although we are contractors.

380. Do you know the names of the men who did this? I do not know the name of one of them, but I heard the name of the other; I think it was Hilzinger. For three weeks they were there, hanging lines and examining everything most accurately; and it occurred to me that either the men who were there before were competent to inspect the work and pass it or they were not. Of course we had our reputation to look after, and if it gets abroad that we have been doing bad work we do not stand as well for other work. After the bridge was finished we had to take up the temporary line, and do other work which the Engineer-in-Chief requested us to do, and it was during the time I was taking up this temporary line and doing other work that these proceedings went on.

381. *Mr. Blacket.*] What sort of testing was it—testing with a chipping hammer? I do not think it was; but I did not go on the bridge while they were doing it. I could hear them from my office hammering all day, testing the rivets.

382. A small hammer you would not have been able to see; could you see the hammer that was used? Oh yes; I could see the men putting their fingers on one side of the head of a rivet and striking the other side with the hammer violently; and then treating the other side of the head the same way.

383. It could not have been a flogging hammer? Oh no, it was a hand hammer.

384. *Mr. Courtney.*] You say that an inspector came up before the bridge was taken off your hands, and that he spent three days going over the rivets with a hand-hammer;—what was the result of that? It would be better for the information to come from him, but he told me he found about $1\frac{1}{2}$ or 2 per cent. in which he could detect a movement. I do not give you that officially, but he told me that.

385. *Mr. Blacket.*] Two rivets out of every hundred loose? Yes; some he condemned, and some he cut out, and some we cut out and replaced. I had heard a great deal about the riveting in other bridges in the Colony, and I took every pains to do a good job at Dubbo. I gave big wages and would allow no piece-work, and I never hurried the men in the riveting. I tried my best to please, but I could not stand by and see every rivet put in, and I did not. There is one other thing I would like to mention. Going back to the testing, I told you that we got permission from the Chief to apply my own test. After it was over the Engineer-in-Chief and the Inspecting Engineer came up to the office and we compared the diagrams they had taken with the one I had taken, and they were exactly alike in every particular.

FRIDAY,

FRIDAY, 25 *JULY*, 1884.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E., | W. H. WARREN, Esq., Professor of Engineering.

OWEN BLACKET, Esq.

Mr. Samuel Maddock, Railway Inspector, sworn and examined:—

Mr. S. Maddock. 25 July, 1884.

386. *President.*] Your name is Samuel Maddock? Yes.
387. Are you at present connected with the Railway Department? Yes.
388. In what capacity? As inspector.
389. You wrote a letter to the Engineer-in-Chief on the 27th March, 1883, in reference to the rivets in the Wellington bridge? Yes. (*Letter read.*)
390. That is the letter, is it not? Yes.
391. You have been connected with the works on the Wellington bridge? Yes, I was inspector. When I wrote the letter just read I was not in the Railway Department; I was manager of the Eskbank Iron Works.
392. When you visited the Wellington bridge on the occasion stated in this letter you did not find any loose rivets? I did not.
393. What kind of examination did you make? I tested them with a hand hammer.
394. And you could not find one loose rivet? I did not find any loose rivets that were chalked or marked to be cut out.
395. There is another letter I have here from you to the Engineer-in-Chief, dated 9th May, 1884. You were in the Department before you went to Eskbank, were you not? Oh, yes.
396. And you are now in the Department again? Yes.
397. You left the Department for a time to go to Eskbank? Yes.
398. This letter, which is dated in May, 1884, was written when you were again in the Department? This was when I was in the Department again, and it is just as the men stated to me.
399. These are only statements made to you? Made to me and Mr. Smithyman; we were both standing together at the time.
400. But you do not know of your own knowledge whether the statements were correct or not? No.
401. You just reported what was stated? Yes.
402. Where is Sheardon who is mentioned in this letter? I have been trying to find him but cannot. He was working on the Cook's River Bridge when he made that statement to me.
403. Who is David Christie? He is a boiler-maker; I do not know the man myself. (*Letter dated May 9th*, 1884, *read.*)
404. That is the letter referred to, and it is signed by your name? Yes, that is the one.
405. In July and August, 1883, you witnessed some statements made by a man named Joseph Dunn and by another man named George Mills? Yes.
406. What are those men? One is a holder-up for a boiler-maker, and the other is a boiler-maker. Dunn is a holder-up.
407. Dunn refers to the riveting of the Penrith bridge? Yes.
408. Have you any knowledge of the work in that bridge? Not at all.
409. Mills refers to certain matters connected with some bridges in another department? Yes, in another department.
410. You know nothing of that of your own knowledge? No, not of my own knowledge.
411. At whose request did they come to make this statement? Mills came to my house at his own instance. Dunn went to Smithyman's house, and I happened to be there at the time.
412. As an inspector of iron bridges you have had some experience in riveting? Yes.
413. Do you think that rivets could be replaced in the boxes of such bridges as that at Penrith? I do not think so.
414. So as to be able to make a good job? I do not think a man would live to get up the box. How is he going to get up the box—it is only 18 inches.
415. 16 inches, I think? Yes, and he could not possibly hold a rivet up.
416. The rivets would probably get cold before they were used, I suppose? Before they got there at all.
417. And that, in your opinion, would not make good work? It would make bad work.
418. If there were a loose rivet in those boxes it would be better to leave it than to replace it by another? I think so.
419. Do you consider that in riveting plates or angle irons to plates they should be brought into perfect contact? Yes, close together; quite close; screwed up quite tight.
420. To make good work it is necessary to do that? It must be done.
421. From your own experience do you know if rivets will get loose after a bridge has been finished and the traffic is passing over it? The only rivets that can get loose in a bridge, from all my experience, are those in the cross girders which are attached to the bottom booms.
422. You mean to say the rivets of the cross girders, or those fastening the cross girders to the boom? Yes, fastening the cross girders to the bottom boom.
423. You do not think that rivets can get loose in consequence of a heavy load passing over a bridge? Only on the cross girders.
424. Not on the main girders? No, not if the layers of plates were close at first.
425. You would make no allowance for the expansion or contraction of the iron: Do you think that the expansion or contraction of the iron by change of temperature would loosen any rivet? I do not think so. There might be a great tension or strain on some portion of the bridge, and more compression on the other.
426. Would the loosening of the rivets be owing to the vibration of a load passing over the bridge? I do not think so.
427. Have you employed men under you to rivet a portion of a bridge? Yes.
428. If you employed any boilermaker or riveter to take out rivets from a bridge and replace them, how many rivets do you think would be a fair day's work? To cut them out?

Mr. S. Maddock. 25 July, 1884.

429. And replace them—supposing there were any loose—to cut them out and replace them in the ordinary way? From 70 to 100 a day.
430. That would be a fair number? For eight hours per day, 70 to 100. I am presuming that there would be a rivet here and another there, that the man would be shifting about. If it was straightforward work they would do from 150 to 200 rivets per day. I mean one set of riveters, viz., 2 boilermakers, 1 holder-up, and 1 boy.
431. When you wrote this first letter in March, 1883, whilst you were at Eskbank, you did it voluntarily—you were not requested by anyone to write it? Not at all; I saw the statement about the rivets in the bridge in the paper, and I went there. Having been inspector there I took an interest in it.

Mr. Edward Massey, boilermaker, sworn and examined:—

Mr. E. Massey 25 July, 1884.

432. *President.*] Your name is Edward Massey? Yes.
433. You are a boilermaker? Yes.
434. You have been employed on some of the railway bridges? Yes.
435. As boilermaker? Yes, on the Penrith bridge only.
436. You made a statement in reference to the riveting on the Penrith bridge, on the 28th March, 1883? Yes.
437. To whom was that statement made? I made the statement to Mr. Whitton.
438. At whose request was it made? Well, not exactly at his request. I was asked some questions concerning the work on the Penrith bridge—did I find this, that, and the other; and the statement I made to the individual asking me was brought by him before Mr. Whitton. It had reference to what actually went through my hands.
439. Who was it who brought you to Mr. Whitton to make that statement? Smithyman. (*Witness's statement read.*)
440. That statement which has just been read was the statement you made? Yes.
441. And this is your signature attached to it? That is my signature.
442. How many rivets did you cut out and replace—approximately? We commenced with about fifteen in a group; there were about fifteen to start with moderately loose. You could not exactly tell the sound of a rivet, the plates not being exactly close; but in a space of 80 feet you could find one or two that you could turn round with your finger. When they started jarring and cutting out I have known as many as thirty blows on a rivet. When the holders-up have come out of the box I have asked them if they have been able to get the rivets up, and they have said "we cannot get them up." As the rivets came out they were blood red. The boy had to drag himself in to get the rivets out; it was utterly impossible for a man to get into a 12-inch space to do his duty. As we were cutting out the rivets a great number were loosened by the jar of the hammer, and when the men, the holders-up, came out from the box I asked them how they were getting on inside, and they told me there was not room to work, and that they could not make a first-class job of it. Then taking one rivet out they loosened twenty, and by taking twenty out they loosened 100, right away along. It is difficult to sound a rivet with that jar, unless you get a very small hammer, and then you have to listen very acutely. I know the rivets swaged down because I swaged them myself.
443. How many rivets did you generally cut out in one day? Something like twenty.
444. That was in the box? Yes, we used to take out about twenty and put twenty others in.
445. Could you not do more than that in a day? They used to take them out and put them in.
446. How long did it occupy you to take one out? I have known it to take a quarter of an hour.
447. Why did it take so long? Well, through the iron being good, and the rivet perhaps not being properly solid, and the plate opening out, it is a drag; it drags the plate along with it.
448. Were the holes properly drilled? Yes, they were all straight holes—very good holes.
449. How many rivets did you cut out at one time before you replaced them; and did you put in any service bolt as you cut the rivets? We put fresh rivets in as we cut the others.
450. How many at a time? Twenty.
451. You cut out twenty at a time? Yes.
452. Were they consecutive rivets? Yes, they would cut out twenty in one space, and then put the others in—twenty a day.
453. You did not put in any bolts to hold a portion of the plates whilst you were cutting others? No.
454. After a few rivets had been cut out as you have described, did you see any movement in the plates—any bulging or difference that would show that the hole of the different plates had changed its position or was not so true as at first? Not at all. The plates—some of them—were not exactly close, but the hole was fair down, the rivet was fairly in. The holes were very good. Of course the hole being 5 inches pitch the plates were not exactly close.
455. What I mean is—there was no strain on the plates, so that the holes would change between the time when you cut a rivet and when you replaced it? Not at all; as the rivets were cut out the plates remained just as they were when the rivets were taken out; there was no strain, no move, or anything of that kind. She neither went up nor down; she remained in her place.
456. When you cut the head of a rivet, which you did first to remove the rivet, had you to punch the remainder of the rivet out to drive it out? We had to drive it out; and some came without driving out.
457. How many? I could not say. Some took a good bit of punching out, and some actually came out themselves.
458. How many of them? I cannot say.
459. Not many I suppose? Well, for the time I was there I have seen two or three which one blow would fetch out after being cut, and I have seen four or five blows on one. Of course that was reasonable.
460. Did you remark to Mr. Hilzinger that the work you were doing was useless? I made this remark: I said to him, "Well, where are you going to start first?" He said, "Start at the end." When I cut one or two rivets out I called his attention to the fact that as soon as we cut those out every one would be loose. He told me to "cut them all out, no matter." I had made a carriage to pull a man into the box, but I said "no man has the power to do the work properly," and I said "The more we cut the more will be loose."
461. You must have had a small man to put into the box? Yes.

Mr. E. Massey. 25 July, 1884.

462. And the rivets must have been nearly cold by the time they reached the men? Most decidedly, and that stands to reason, for the fire is outside the bridge and the rivets have to be handed in through a little hole to a boy, while the man has to lie on his back, and the space he is in is such that no man doing the work can do it properly. Went we first went up there—the day before we started—we looked around. He asked me what I thought about the bridge. He said, "She's dropping." I said, "It is impossible to drop; see those web plates." We went where the ornamental angle irons are, and I said, "If she has dropped these angle irons will show it." I said it was "a matter of impossibility; see those web plates"—11 feet web plates. The bridge would carry a million times more than it does.

463. You were there about two months? I was twelve months with Hilzinger altogether. I was working at the Ashfield bridge as well as at the Penrith bridge.

464. But with regard to the Penrith bridge? About two months.

465. During that time who was looking after the work besides Hilzinger;—did anyone else come to the work? Not that I saw.

466. It was left entirely to Hilzinger? I believe I saw Mr. Cowdery one day.

467. You do not think that taking the rivets out of the boxes at the Penrith bridge caused as good a job to be made of the bridge as was the case before with the old rivets? I cannot see it; I cannot see it at all. I have been doing many a bit of work, and it is a matter of impossibility, because the men cannot do their duty on a ⅞-rivet in a 12-inch hole. It is a matter of impossibility. I thought at the time that if the rivets were taken out it would be far better to fill up the holes with a bolt than with a bad rivet. That was my idea, though I did not say anything. As the men came out, I used to say, "Well, Jack, how did you get on?" "Oh," he said, "it was a deuce of a job." I said, "Mind you cut them all." He said, "You cannot cut them all."

468. Are you employed in the Railway Department now? Oh, no; I left the Penrith bridge to go down to Newcastle.

469. *Mr. Blacket.*] How did you come to give Mr. Smithyman the first information about this—who asked you for it? Well, I met Smithyman in the town one day, and he says to me, "You were working up at Penrith, wasn't you, Massey"? I said, "Yes." He said, "Did you find any loose rivets"? I said, "Yes, a few loose rivets." He said, "How did they get them in after they cut them out"? I said, "Well, they got them in, but I don't suppose they made a first-class job." He then says to me, "Well, will you come and make a statement to Mr. Whitton"? I said, "I'll make a statement before anybody"; and, doing nothing at the time, I came down and told Mr. Whitton just what I have told you.

470. *President.*] Did you see Hilzinger use one of those flogging hammers, trying the rivets? Yes, at times I have seen him give two blows, one on each side the rivet, on the head.

471. What size of hammer did you see him use? I saw him use a hammer of 4 lbs. or 5 lbs—a flogging hammer.

472. *Mr. Blacket.*] Was that to test the rivets? Yes, that was his style of testing.

473. But if you wanted to loosen a rivet you would not hit it on the head? No, I should hit it on the top. But it is a matter of impossibility to loosen a good rivet. You may hit it fifty blows. I have seen a boiler rivet, and three blows would fetch the head off, but you may hit a good rivet in a boiler fifty times and not loosen it. The head may fly off, but the rivet will be in the hole. In this case it was not cutting but sheer dragging them out.

474. *Professor Warren.*] So many plates? There were so many thicknesses.

Mr. George Mills, boilermaker, sworn and examined:—

Mr. G. Mills. 25 July, 1884.

475. *President.*] Your name is George Mills? Yes.

476. You are a boilermaker? Yes.

477. You have been engaged on some of the railway bridges, have you not? Yes, I was working on the Parramatta overbridge.

478. That is in the Department of Existing Lines? Yes.

479. You made a statement on the 4th August in reference to the class of work that was being done on that bridge at Parramatta? Yes. (*Statement read.*)

480. That is the statement you made? Yes.

481. And that is your signature attached to it? Yes.

482. Were you requested by anyone to make that statement, or did you make it voluntarily? Partly voluntarily. I had a hearing with Mr. Cowdery, and he promised to meet me at Parramatta to look at this defective work, but he did not come. I ran about for a week, and he did not come near, and of course I left the Government employ altogether.

483. Then why did you make this statement—what induced you to make it? I thought—at least I was told—if I said what I knew concerning the Parramatta bridge that I should have a fair hearing, and be brought face to face with Mr. Hilzinger.

484. To whom was this statement addressed—to whom did you send it? Well, it was a gentleman of the name of Maddock. Of course he heard at the time that I had a hearing with Mr. Cowdery. He came and saw me about the bridge, and told me about Hilzinger; and he asked me if I knew anything about the Parramatta bridge. I said I did, and I told him all I knew about the defective work in the bridge; and likewise Mr. Cowdery.

WEDNESDAY, 30 *JULY*, 1884.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E., | W. H. WARREN, Esq., Professor of Engineering.

OWEN BLACKET, Esq.

Mr. Thomas Smithyman, boilermaker, sworn and examined:—

Mr. T. Smithyman. 30 July, 1884.

485. *President.*] You made a statement on the 20th March, 1883, in reference to the iron railway bridges? Yes, I did.

486. To whom was that statement addressed? To Mr. Quodling, I think.

487. Were you requested by anyone to make that statement? No.

488.

Mr. T. Smithyman. 30 July, 1884.

488. You made it of your own free will? I used my own judgment. (*Statement read. Vide Appendix.*)
489. That is the statement you wrote? Yes.
490. And that is your signature attached to it? It is.
491. Then you have been connected with the erection of the Menangle bridge? Yes.
492. And of the Penrith bridge? Yes.
493. And of the bridges over the Wollondilly? Yes.
494. The whole of them? Right away from Towrang to Goulburn.
495. And you were engaged in the erection of the Aberdeen bridge? Yes.
496. Of the Bathurst bridge? Yes.
497. And the Wellington bridge? Yes.
498. Did you in every case give satisfaction to the Engineer-in-chief? Satisfaction in all cases; never had any complaints at all—not one to my knowledge.
499. I think that will do for to-day. We shall want to examine you again some other day.

Mr. Joseph Dunn, boiler-maker's holder-up, sworn and examined:—

Mr. J. Dunn. 30 July, 1884.

500. *President.*] You made a statement on July 21st, 1883, respecting the Penrith bridge? Yes. (*Statement read.*)
501. The signature to that statement is yours? Yes. Before you got the trolly into the boom you had to crawl in on your hands and knees; you had to get in on your face and hands, and then you had to lie on your back. Before the rivet came it was passed to the boy and before it was used it was nearly black-hot. It ought to have gone in nice and hot. When they were not hot underneath the head it was impossible to hold them up. I have worked at riveting from a lad, and been a holder-up all my lifetime, and in the work I have done I have always done good work.
502. How far had the boy to crawl on his hands and knees to hand his rivets to you? He had to go as far as from here to the corner of that wall.
503. 20 feet? Yes; that was before he could put it up for me to get hold of it with the long-shafted hammer called a dolly.
504. Who were the boiler-makers who used to knock the rivets on each side? James Foley and Thomas Crealey.
505. Can you say if any rivets that were cut out were not loose? I can certainly say that rivets came out that were not loose at all.
506. How could you find that out? By being inside and having an opportunity of seeing.
507. Did you feel them with your finger? If a rivet is loose you can shake it with your finger.
508. Did you feel that shaking with the blow of the hammer? Yes.
509. You say that when the paint was blistered around a rivet you had to cut that rivet out? Yes, as long as the edge of the rivet was seen.
510. Was this blister caused by the hammer used in testing the rivet? No, the blister was the paint at the edge of the rivet, the same as if you had the cup too long.
511. *Mr. Blacket.*] It was a crack in the paint? Where the paint came off you could get many a snap to go on the rivet, and you do not put the edge in; still the rivet is sound.
512. *President.*] The rivets that you put in and that were nearly cold could never be up under the head? No; some of them were up under the head, but others were not. If you cannot get a rivet up until it is cold you cannot get it up at all. If the head is cold you cannot get it up; it is a matter of impossibility.
513. You got into the bottom box too? You mean by the bottom box the boom?
514. Yes? No, I never went in there.
515. Where then did you put the two rivets you allude to? That was underneath the bridge.
516. When twenty rivets were taken out were they all cut at once? Yes, you had to cut twenty a day and put in twenty a day.
517. But did you cut the twenty? No, you put in twenty and cut out twenty.
518. What I mean is, did you first cut out twenty and then fill the twenty holes? No.
519. How many did you cut at one time? You would cut some in one place and fill up, and then go about 3 feet further.
520. How many rivets did you cut out, and then fill up the holes, at one time? Ten or fourteen.
521. Were those rivets cut from the bridge generally or only within a small distance? In a small distance. You would cut them out in one place and then go along.
522. Were those rivets cut out of the top plates or the side plates? On the top.
523. Was it in the centre, or in the angle-irons, or the corner of the box? In the centre; and some were cut out of the angle-iron.
524. Were you employed for three months in doing nothing else but holding-up inside the box? I would not say altogether three months; about that.
525. Nearly three months, you say? Yes, I was holding-up all the time I was there.
526. How many rivets did you cut out during the time you were in the box? I could not say; I never took account; I know we have taken out as many as fifteen at a time. The orders were to take out twenty and put in twenty, and sometimes they would average over that. The other two men were working on the other side, and sometimes they would run the others.
527. Who marked the rivets to be cut out—who was to say what rivets were to be cut out? The riveters themselves. Hilzinger told them that twenty were to go out and twenty to go in. The riveters took out what were marked; the riveters would sound the rivets and take them out.
528. How often was Mr. Hilzinger there at that time? He used to come perhaps once in a week. He generally used to be there on a Wednesday. I saw him once on the pay. Then he never stopped above a couple of hours when he did come; he would go away to Sydney again. There was a man named David Christie who used to sleep in his tent.
529. How long did you stay in the box at one time? Well, I went in at a quarter to 9, and I have come out at 11. Of course I am an exception as I am a small man.
530. You must have found it pretty hot? I did; I have come out ringing wet. In fact I have not had a shirt to my back, many a time. When a train has been going by we have had to knock off work because the vibration was so great.

Mr. J. Dunn. 30 July, 1884.

531. Do you think that some of the rivets which were cut out ought not to have been cut out? I am positive of it.
532. Were the rivets that were put in as good as those that were taken out? Plenty of them were not.
533. *Professor Warren.*] Those rivets that you referred to as having been put up cold were afterwards caulked, were they not? Yes; they tried to pass them in with a long wire, but that would not suit.
534. *Mr. Courtney.*] Are there rivets in the box that are tightened up with a round nose to make them appear sound? Yes. That is the cup of the rivet; you take a round nose, and just touch it round; it is on the cup outside that you put the round nose.
535. *Mr. Blacket.*] They did not caulk the rivets inside the box? No; and nobody can see where the round nose has been put, where it is nicked in. Then you can sound the rivet and you will find it tight.

SATURDAY, 15 *NOVEMBER*, 1884.

Meeting held at Commercial Hotel, Wagga Wagga.

Present:—

G. A. MORELL, Esq., C.E., President.

W. C. KERNOT, Esq., Professor of Engineering.
W. M'D. COURTNEY, Esq., C.E.,
W. H. WARREN, Esq., Professor of Engineering.
OWEN BLACKET, Esq.

Mr. George F. Chapman, Inspector of Bridges, sworn and examined:—

Mr. G. F. Chapman. 15 Nov., 1884.

536. *President.*] What is your position in the Railway Department? Inspector of Bridges.
537. In what district? From Picton to Albury, from Picton to Hay, from Picton to Jerilderie, and from Picton to Tarago.
538. Have you been inspector of iron bridges as well as timber bridges? No; merely timber bridges.
539. Have you had some experience of timber in this country? Yes.
540. What experience have you had? I have had experience both as a worker and as a getter.
541. Can you tell one kind of timber from another kind? Yes, as a general rule.
542. You would know the difference between stringy-bark and gum? Yes; but the timber of the piles in these bridges was not determined by me.
543. You did not send in any of the reports which are before me as to what the timber was particularly, or if you did you assumed that it was correct as stated by some other person? You mean the superstructure. I know what it is. The timber of the piles was determined by an expert sent by Mr. Cowdery, called Rowlands, assisted by sub-inspector Giddy.
544. You examined the whole of the timber viaducts on the Wagga line? Yes.
545. These reports that you submitted to Mr. Stephens are yours (*showing documents to witness*)? Yes.
546. When did you begin to examine these viaducts? Shortly after they were handed over to our Department for traffic on. It is my usual course, as soon as the traffic commences, to go there and examine the bridges. It is part of my duty.
547. Had you anything to do with these bridges before the Existing Lines took charge of them? Nothing at all. I saw them while they were under construction, but I never interfered.
548. What state was the viaduct in when you first took charge? It wanted screwing up very badly.
549. That was before the traffic began to pass over it? No, after.
550. How long? Hardly a month, I should say, speaking from recollection.
551. The first thing you did was to screw up the bridge? Yes; the bolts in many instances came through a great way—from three quarters of an inch to an inch and a half.
552. Was that from shrinkage? I do not know that. All the bolts are let down into the top girder the depth of the head, flush with the top of the girder—various depths, from half an inch. We had to get cast-iron washers for them; they would not screw up sufficiently without.
553. You have had some of the girders strutted;—by whose orders was that? Mr. Cowdery's, through Mr. Stephens.
554. Did you first report that those girders were defective? Yes.
555. Can you remember how many of those girders were strutted? I cannot give it from memory to be correct. I should say about ten or twelve.
556. In which viaduct was that? In various viaducts—numbers 1, 3, 4, and 5. The pieces cut out were sent down to the office of the Engineer-in-Chief.
557. At what part of the girder was this cut out; at what distance from the pier? I cannot be exact upon that. I could not tell you within a foot. It was not on the centre; it was more on one side.
558. About a quarter of the span? I cannot say exactly.
559. Did you notice what was the effect of a train passing over those defective girders before they were propped up? Some of them came down more than others. Having a doubt I climbed up on the head stock, and I fancied that these girders came down, and I took steps to prevent anything from happening.
560. You have inspected these viaducts very carefully? I made it my particular duty to do so.
561. Are there any other girders beyond those propped up which are defective? Not that I know of, and I have been through them very carefully.
562. When these girders were propped up did you understand that it was with the object of having the defective girders replaced by sound ones? It was originally the object to replace all the defective girders.
563. In your experience of timber have you found that sometimes a piece of timber, say 12 by 12, will seem to be perfectly sound when put upon the ground, and yet, after a year or so, it will crack in several long cracks? Sound girders will do so, although the heart is in a sound state.
564. With regard to the piles in the piers, you found a great many of them had pipes in them? Yes.
565. And how many piles did you remove? I think there were two piers or rows of piles in No. 4 viaduct that were renewed by me.
566. Was that near the bridge? Yes.
567. *Mr. Courtney.*] You do not refer to those tressels which have an extraordinarily short pile? No, I do not.

Mr. G. F. Chapman.

15 Nov., 1884.

not. There are only four piles in it. The reason they were done was this: I pointed out to Mr. Stephens that there were some defective piles that should be removed at once, and he gave me orders to do it.
568. *President.*] Have you seen timber which would have a pipe at some 10 feet from the butt end, and which would not show at the butt end? Pipes are very eccentric. Such a thing might happen.
569. Would that be frequent? No, not frequent.
570. If a pile has a pipe in it, it would generally begin at the butt end? Yes, generally.
571. And how far would a pipe of say 3 inches extend in a 16-inch pile? Sometimes it would run up to 8 or 10 inches, and sometimes it would run up quite hollow.
572. In your experience as a practical man in timber, have you noticed that the pipes in a pile increase in the course of time? That all depends upon the nature of the timber.
573. A great many pipes are caused by the shrinking of the timber leaving a pipe. That would be effected by the atmosphere? Yes, that would cause it.
574. If a pile was thoroughly closed up at the end, do you think the decay would still take place? Yes, I believe it would go on.
575. That would be the case with different classes of timber? Yes. I have bored holes into the timber until I have met a pipe at the bottom, while there has been none at the top.
576. Would not the white ant be likely to cause it? No, they do not occur very often. If a report came in that No. 4 or 5 viaduct was affected with white ant it would not surprise me.
577. Then you have to look very carefully for white ant in those bridges? Yes.
578. Have you found many? No, I have not; though I have looked very closely I did not find many.
579. If white ants came and settled on any of the piles, do you think it likely that some of them could get to the pipe? No, because we have put a composition in a great number.
580. In your experience of timber, how long should a 16-inch pile, that has sap an inch and a half round it, and a pipe 3 inches inside, be likely to last—such kinds of timber as have been used in the viaduct? If the pile was ironbark I would not be afraid of it, but with the majority of timbers I would not say how long they would last. There are internal effects at work.
581. In your opinion, were these piles sound at the time the bridge was erected? I could not say at all.
582. Would they be likely to have a pipe 10 feet from the butt-end? Probably there might be. Of course I would not attempt to say that any of these piles were all right when put in.
583. Is it customary in such timber as this to find pipes in the middle of the tree? It is not customary.
584. Have you found arsenic and kerosene a good composition to destroy the white ant? Yes, I have used it.
585. What time do you think the different kinds of timber used in these piles would be seasoning, say stringy-bark or messmate? They would be seasoned properly and fit for use in about twelve months.
586. And how long for ironbark? That would take longer, say eighteen months. It depends very much upon when the timber was cut, whether the sap was up or down.
587. In one of your reports you speak of a pile which had been stopped with putty;—was it in a 9-foot pile? Yes.
588. What was the cause of the putty being used? That pile was thoroughly rotten. You could poke an auger from one side to the other.
589. Has that pile been removed? No, it is still there.
590. Does coating the pile over with tar protect it from dry rot? I do not think it would protect it from dry rot; it merely keeps insects off. I do not think a coating of tar would protect the inside of the pile.
591. Did you open the ground to the concrete to examine the state of the piles below the surface? No.
592. That has been done by somebody? Yes, one row.
593. Did you do it yourself? Yes, with Mr. Stephens, and by his orders.
594. Did you expose the concrete? The concrete is below the surface. The timber there is not very good. Some of them are cemented up to the surface. When the sap rots the water gets down and runs along them from end to end.
595. What did you do in those piers where you took piles out? We took out the whole thing, and put in another.
596. What kind of timber did you take out? Either mountain ash or messmate.
597. *Mr. Courtney.*] Were you present at the driving of these piles? No, I was not present. It was Mr. Brayne.
598. *President.*] What was the depth of the concrete originally? As near as I could say, about 4 feet.
599. When you charred the piles below the surface did you take off any portion of the sap? Yes, except those filled up with cement; those we did not touch.
600. How many of those were there? I think Mr. Cook can give you a better idea of them than I can.
601. *Professor Warren.*] The timber in the piles of these viaducts is of various kinds, and you say in some the pipes increased in size. In what kinds did you observe that? In the softer kinds. They are more liable to decay at the heart.
602. You have not observed that in the ironbark? No, they do not increase in the ironbark.
603. *Mr. Blacket.*] Have you noticed that the bridge is decaying since you first took it in hand yourself? I have noticed that the piles seem to shake more sideways than before.
604. When you first went there did you notice any cement in the timber? Yes, in No. 4. I took the cement out, and it was sent to Mr. Cowdery. I went and made a preliminary inspection.
605. Did you consider the timber was defective when put in? It was not so good as it ought to have been.
606. *President.*] What is the pile that has been made so much of, that was replaced—the butt pile? I cannot make out where the butt pile would be.
607. *Mr. Blacket.*] There is another thing—there is the broken rail;—was there any reason for that rail breaking—was it bad? No. One of my men was working, and he discovered this broken piece of iron. I told him to deal with it at once, as the mail train was coming.
608. Was it the defect of the rail or the defect of the bridge? I could not say. I do not think the rail broke.
609. *President.*] There was a defective pile in No. 4 viaduct. Do you remember in what span it was? In 18 span. The pile was perfectly rotten, and must have been so, I think, when put into the work.
610. Did you remove that pile? No; we put in another at its side.
611. Was the head-stock of that pile quite sound and good? Yes.
612. *Mr. Courtney.*] Have you made any careful measurements to see if the pipes are increasing in size in the Wagga viaducts? No, I have not tried them since we bored into them.

Mr. G. F. Chapman. 15 Nov., 1884.

613. *President.*] You spoke of other works under your charge;—are they of similar extent? No, the Wagga is the longest I have got.
614. Do they differ in any way? No, they are much the same. 26-feet centre is the largest we have got. I have been over all the viaducts on the line to Narrandera, and they are all ironbark, and of a quality that will always stand. There are different kinds of timber, and they all shrink differently.
615. You think the other viaducts are superior to the Wagga viaduct through having ironbark transoms? Yes.
616. Have you noticed how those other viaducts compare with Wagga in reference to springing? I have not examined that, but I feel sure they will compare favourably.
617. Is the plan of having sills instead of concrete generally used, or is it peculiar to the Wagga bridge? I believe it is peculiar to this bridge. They found through boring that they would have a job to get the piles into the rock, and they thought of the sills.
618. *Mr. Courtney.*] Have you found any of the heads of the bolts pulled down so that they were deeper in the timber than provided for in the first instance? If there is a washer put on they do not come down into the timber.
619. *President.*] Do you consider that the superstructure is now as it was put up at the time? If all the butts and all the girders were hollowed out like that I would not call it good work.*
620. The spaces at the joints are only due to shrinkage? Yes, that is all.
621. If a cabinetmaker had done it he could not help shrinkage? No.
622. How long had the bridge been erected when you first took charge? More than a month. I had particular orders from Mr. Mason to have a special care.

Mr. Charles Cook, ganger, sworn and examined:—

Mr. C. Cook. 15 Nov., 1884.

623. *President.*] What position do you hold in the Existing Lines Department? I am a ganger.
624. To whom do you report upon any work with which you are connected? To Mr. Inspector Chapman.
625. What are your duties? To keep the bridge screwed up, and if I see anything wrong to report it, and if possible to fix it up, such as in the way of strutting.
626. You refer to the Wagga bridge approaches? Yes.
627. How long have you been employed upon those bridges? Four years next January; but I have not been ganger all the time; I took that position on the 25th March, 1882.
628. You have made notes of the different kinds of timber used in the bridge? Yes, they are all in this book (*produces book*). Sub-inspectors Giddy and Rowlands classified the timber.
629. How often were they at the bridge to inspect the timber? The inspector generally comes up twice a month; sometimes three times.
630. Were you with them when they first came to classify the timber? Yes.
631. Was the timber tarred at the time? Yes.
632. They went through it pier by pier and you noted all the kinds of timber used in each bay? Yes.
633. Does this book record the classification? Yes.
634. Have they an inspector's book of this kind? Yes, I believe they have.
635. Did they allow you to get the whole of this information for yourself? It was not exactly for myself; I suppose they thought that if any one came up that I should have this to show; that is the only idea I can form upon it. There is no one else sees that book but myself and the inspectors.
636. And you have this book to refer to about any particular pier or girder or pile? Yes.
637. And you have them written down by numbers or letters so as to simplify classification? Yes.
638. Who do you say has the original of this book? Inspector Chapman.
639. And Sub-inspector Giddy and Sub-inspector Rowlands have a copy? Yes.
640. In classifying this timber they stated what each pile and piece of timber was, and in doing so they noted it down in this book? Not in this book, they had a small book with them, and this was taken down from that book afterwards. Sub-inspector Rowlands classified the timber and Sub-inspector Giddy took it down, and this was copied from the original book.
641. Who ordered you to drill holes in the piles? I got my orders from Inspector Chapman.
642. How did you find that certain piles were hollow? I tried them with the hammer outside, and if they sounded hollow I bored.
643. Did you find you had made a mistake in sounding the piles? No, I did not make many mistakes, except that I sometimes found a bigger pipe than I thought.
644. Have you had any experience of timber? No, I am a seaman, I have had no experience in timber except in American pine.
645. You have never been engaged in bridge work as carpenter or otherwise? No not before I came under the Government. I have been ganger for eighteen months or two years screwing up bridges, and then I got the gangership here.
646. Have you seen timber that showed no appearance of a pipe when you sounded it, but had a pipe higher up? No.
647. Then when there is a pipe in the pile you would be sure to detect it at the big end of the pile? Yes.
648. What size are the pipes in some of these piles in this viaduct? Some as much as 8 inches. I used to put my auger in until it broke into the pipe, and then I marked 9 inches with a rule, and then measured back in many, and found that there have been two pipes. I have found a pipe on the other side. I believe there is one pipe that I drilled quite through.
649. What kind of pipe was that? Only a very small pipe, about 2 inches.
650. Do you remember what height from the ground the pipe extended in some of the worst piles? In some I bored there were 18 inches or 2 feet. I bored further on and found no difference in the pipe.
651. What was the highest bore? About 4 feet from the ground.
652. And you found a pipe then? Yes.
653. Do you think that if a hole is drilled through a pipe it is detected at once? Yes, I have found it in every pile.
654. Can you drill a ¾-inch hole in these piles without finding out that there is a pipe there? I should think you could not.

655.

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* NOTE (*on revision*):—Does this question imply that our Department made any alterations since viaducts were constructed—if so, no. I remember replying as per my answer to a question of good workmanship *re* hollowing butts, that I would not call that good workmanship.

Mr. C. Cook. 15 Nov., 1884.

655. You know at once that you have nothing to drill into? Yes, and I have brokn augers in the holes.
656. How was that? Because while boring I fell short apparently. In another instance while boring the auger slid round and I got into a kind of crack.
657. Was any auger hole put in without the pipe being detected? No; the bottoms of the holes I bored were immediately over the waling bolts.
658. You are satisfied that all these holes are the size mentioned in this book? Yes.
659. In screwing up the bridge have you found that the timber had shrunk much in the superstructure? I could not make out whether it was shrinking or whether I was drawing the bolts through. In some instances I have got 2½ inches on some of the bolts; I have broken bolts in the girders, and I have never found a plate washer on any bolt that I have taken out; the heads of the bolts in every instance let into the girder.
660. When you find any cracks in any pile do you fill them up? No.
661. Do you draw the attention of the inspector to them? Yes. The only thing I have done I have stopped cracks in piles with tallow and arsenic, for the white ant.
662. Do you also fill the holes you drill with tallow and arsenic? Yes.
663. Have you found white ants? Yes, and I have dressed them with kerosene and arsenic, and stopped the cracks also. The hole bored I plugged up.
664. But there is very little white ant in the bridge? Very little.
665. What is the state of the sap that you found in these piles, and in what kind of timber? The sap was rotten; they were all pretty well the same; I have got 2 inches of sap on some.
666. You scraped that depth, and then charred the piles? Yes.
667. Were any of them strutted below the ground? No.
668. What state did you find the piles in before you charred them;—what state of decay or preservation compared with the timber above the ground? I charred them before we thought of boring for the pipes. The only one bad I found before charring them was in No. 4 viaduct, No. 18 row. That was over three years ago. It was cemented and tarred over. I knocked the cement out, and found a great many white ants behind it. After the charring was finished I got orders to sound the piles. I found some of them hollow, and sent in my report, and the inspector came out, and we went into the matter.
669. Did you find that some of the piles had been concreted up to the surface? Yes, in the low bays in No. 4 viaduct, where there are no braces or walings up to No. 18 row of piles.
670. In what state was the timber? The sap was rotten on the surface.
671. So that the moisture could get in? Yes, it could get in.
672. *Mr. Blacket.*] Were you there when they built that viaduct? There was a great part of it built when I came. I was here five years ago. We had nothing to do with the viaducts then. We only had the temporary bridge to look after.
673. *President.*] Do you think there are many white ants in the bridge now? Not to my knowledge.
674. *Mr. Blacket.*] You go through the bridge to see? I go through the bridge three times a week.
675. *President.*] Have you noticed in any of these places where you state the piles are hollow that any of the head stocks were bad? No.
676. All generally sound? Yes.
677. Of what timber are they constructed? Ironbark all through.
678. But the transoms are not of ironbark? No.
679. *Mr. Courtney.*] From your observation, what timbers are the transoms mostly made of? There are some gum and a few ironbark, and I think a few ash.
680. There are very few rotten? Very few; only those with butt pieces that are in any way gone.
681. The butt pieces are not ironbark? No.
682. Did you find any caulking in the girders besides cement? Only putty; I found putty.
683. *President.*] When you have been screwing up the braces and walings have you found any of the bolts to be as tight as they would be in sound timber? Yes, very tight, so that when I have had to take a bolt out I have had hard work to drive it out.
684. Have you replaced any of these bolts? Yes, every bolt that has been taken out has been replaced.
685. Have there been many of them taken out? Not many of them.
686. How many of these bolts have you taken out of the walings and piers? I have taken I believe three or four out of the walings and one out of the bracing, and in every instance had a job to get them out.
687. When you put the new bolts in do you try if there is a pipe in the pile? No.
688. Was it before you bored the holes to find out the pipes? Yes.
689. If it was pretty tight you would soon find when you came to a pipe? Yes, and if so, I made the hole bigger.*
690. *Professor Kernot.*] Were those bolts that were removed in sound piles? I cannot say. It was before I started to bore for pipes.
691. You did not know whether there were pipes or not in these particular piles? I cannot say that for certain.
692. You have the means of measuring the diameter of the pipes in the piles? Yes.
693. Have you been led to the conclusion that the pipes are increasing in size? No, I have not noticed any increase.
694. How long have you had them under inspection? The first time was just after I bored the holes. I used wires within the last twelve months.
695. So you have not had a very long experience with these pipes? No.
696. *President.*] You did not remark that some of the timber was decayed when you excavated in order to remove the sap and char some of the piles? Yes, I spoke to our inspector, and I think that was what led to this being done; I told him I had removed the sap, and under the sap the timber was found to be rotten, but I had never bored holes to find pipes at that time.
697. *Mr. Blacket.*] Have you noticed that any particular kind of timber seems to be fretting away more quickly than any other kind? No, I have not noticed that.
698. Which seems to be worse? What they call messmate. Ironbark is the best; I have never found any pipe in that.

699.

* NOTE (*on revision*):—I do not remember being asked this question, unless it is in reference to putty holes in girders or dry knot holes in piles.

Mr. C. Cook. 15 Nov., 1884.

700. *Mr. Courtney.*] Can you give any opinion about the tressels with these piles? No, I did not see that going on.
701. The outside pile is not plumb? No.
702. Do you know how many are on tressels? From No. 6 row to No. 35 row, I think.
703. There is one pile at the south end driven 75 feet? Not to my knowledge.
704. What length is the longest you know of? 45 feet. There is a trial pile near No. 1, cut off close to the surface; that was driven down 75 feet.

MONDAY, 15 *DECEMBER*, 1884.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E., | W. H. WARREN, Esq., Professor of Engineering.

OWEN BLACKET, Esq.,

C. E. Nicholas, Esq., C.E., District Engineer, sworn and examined:—

C. E. Nicholas, Esq. C.E. 15 Dec., 1884.

705. *President.*] You were the district engineer in charge of the erection of the Wagga Wagga approaches? Yes.
706. Did you reside near the works? Yes, at Wagga.
707. How often did you visit the works? It all depended upon what there was to do. If you had a copy of my journals that would tell you. I would be away sometimes as much as a week. I had charge down to Albury, which was 80 miles, but I resided at the Wagga Wagga end. It would take me a week to measure up to Albury and back; that would be the time I would be away. That was up to the time when, in consequence of the iron bridge being commenced, I was relieved of a considerable portion of the work, and I only went out some 20 miles from Wagga.
708. Then you had some overseer? Yes, Mr. Brayne—Inspector Brayne.
709. This is a plan of the Wagga Wagga viaduct (*showing plan*)? That is it.
710. You are well acquainted with the design? Oh, yes.
711. Did you make any calculation of the strength of one span, or of the girders? No, I did not.
712. You have had some experience of timber bridges? I had not then had much experience of timber bridges. Most of the bridges I have put up have been in masonry or brickwork.
713. It was at first specified that these piles should be driven, and it was found advisable to put the piers on sills, on account of the great depth of driving? The first idea was that they should be planted, and then it was thought better to put them on sills.
714. Did you keep a record of the depths at which in every case the sills were sunk? Yes. I have not them now, but the inspector has them. He has them outside now, and I can get them in a moment.
715. If you will not mind getting them for us? (*Witness obtained the record.*) This book will give you the measurements of every bit of the viaduct, including the measurement of every pile in the viaduct. For instance, here (*indicating in the book*) is the concrete in the piers. The five to one came up to the sills. Here is the eight to one which came above the sills, and at every fifth pier you will see there is an extra quantity of concrete. Five to one is the composition of the concrete, and eight to one above the sills, and every fifth pier, to start with, and afterwards every fourth pier, the concrete came up to the ground, which accounts for the increase in quantity. Here are the abutments; then the length of all the piles, and the number of the piers. Luckily Mr. Brayne has kept this book. (*Book handed to President.*)
716. We can keep this book for the present for our own information? Yes; it gives the total number of spans and total amount of everything in them; you can find everything in there; all the piers are numbered. This tracing is for the spans adjoining the iron bridge. (*Tracing produced.*) Five piers on each side adjoining the iron bridge. Those are all ironbark.
717. There is another small tracing showing the sills? I have one with me. (*Tracing produced.*) That is what you require.
718. Yes. How was the timber protected below the ground? You see it was buried in the concrete.
719. Was it tarred as well? Let me see. Yes, it was; it was tarred before it was concreted.
720. Was the other portion of the pile also tarred, or protected against the white ant, or decay? Yes, all tarred.
721. What kind of timber was it? If you will let me look at that book for a moment it will show the measurement of the tarring. But I know it was tarred. No, you will not find it in this book, because they averaged the length of the piles for the measurement of tarring.
722. What kind of timber was used in the sills? Various timbers. It was not ironbark. Most of the timber came from Sutton Forest. We were at first using a timber called messmate, but we stopped using it.
723. Was the timber that was put in the sills well seasoned? I cannot say it was well seasoned; I suppose it was all got after the contract commenced. But a lot of the piles lay up there for a long time before they were used. At the commencement of the work the timber was necessarily greener than it was afterwards.
724. I see from this tracing that the tenons of the piles let into the sills are 14 x 9. Was the work carried out according to this? That 14 x 9 refers to the size of the sill.
725. What was the size of the tenon? 6 x 4 x 4 or 6 x 3 x 3. I think 6 x 3 x 3 was about the average size.
726. Of what timber generally were the piles? They were of box, stringy-bark, and messmate; very few red-gum were driven. You could not get the gum small enough, and on either side of the bridge for five spans the piles were ironbark.
727. They were, I suppose, more or less seasoned according to what you could get? Yes; more or less seasoned.
728. Did you find any pipes in any of the piles? We did not allow any pipes to get in. There were a few piles in which we found pipes, and they were thrown out. I do not believe there were any visible pipes in the piles when they were put in the work.
729. You rejected all the piles you thought were defective? Certainly. I rejected several in consequence of some openings or cracks which the inspector thought it unnecessary to condemn. They were principally stringy-bark which opened very much to the sun.

730.

C. E. Nicholas, Esq., C.E.

15 Dec., 1881.

730. What end of the pile did you put in? The butt end down; for driving the butt end up.
731. And if there were pipes in the piles you would in cutting the piles discover what otherwise would remain hidden? In the timber bridge we were putting up 40-feet girders, and among them was an ironbark girder that looked a most perfect piece of timber. We had to cut it 6 inches at the end, and it disclosed in this ironbark girder a "dosy" place which we should never have suspected if we had not cut into it. Otherwise the girder looked as sound as a bell.
732. In what per-centage of piles would that be likely to occur;—what would be the age of a pile in which such a thing could occur? I should say a very small per-centage; but it is hard to say, because if you have not seen it in the butt end you do not know whether it is there or not. There would be very few piles where you would be lucky enough to cut into it.
733. If a pipe existed in a pile you would when drilling the holes for waling and bracing pass through it? You would probably find it out.
734. That is to say if a pipe really existed through a pile you would find it out by a drilling a hole? Yes. It does not follow though that a carpenter drilling a hole would call the inspector's attention to the pipe. If the inspector found it out he would have the pile taken out.
735. In any case in which the inspector's attention is drawn to the matter? Yes.
736. But he should look for a pipe in a pile? Certainly.
737. It is his duty to do so? Certainly.
738. If any piles had pipes in them, and they could be detected through the bolt-holes, and the attention of the inspector was not drawn to them, the contractor must evidently have given you timber which he knew would not have been passed if the pipes had been pointed out? Quite so.
739. That is to say, if the inspector's attention had been drawn to a pipe of 3 inches or more existing in any pile, he would have had that pile drawn out? Of course—less than that. I do not think I ever saw many piles come in with pipes; but if there were a pipe in a pile they would cut it off until the pipe was out. Then, if the pile were sound and long enough it would go in.
740. What difference in effect is there between a pile with a pipe in it and a sound pile? I do not think a small pipe hurts at all, except that it allows white ants to get along. I do not think a small pipe hurts in a pile unless there is "dosy" timber all round. If the timber is clean and sound all round it does not matter.
741. Is a pipe likely to increase in size—is the decay shown in the pile likely to increase, and therefore decrease the soundness of the pile? I cannot say from experience. I do not, you know, refer to large pipes. Of course if the pipe is a large one it would materially decrease the strength of the pile; but a small pipe is different. As a matter of habit we cut them out, but I do not think it matters much except that the pipe helps white ants.
742. If one of the piles of the Wagga Wagga approaches—not under the rail-bearing girders—were removed altogether do you think that the headstock would be strong enough to carry the girder without too much deflection? It depends upon what you call too much deflection. It would, no doubt, cause deflection; but I have no doubt that with three piles instead of four, with one in the centre, it would be strong enough.
743. The reduction of the section of a pile by a pipe would not affect the safety of the pier? No.
744. How long do you think would be the difference between the life of timber with a pipe and that of timber without a pipe? I cannot say. One would have to live a long time in the bush and have a long experience to be able to say.
745. A pile with a small pipe might last as long as the other? Yes, unless the white ant got in, and the pipe helped it along. In the case of the piles at Wagga Wagga the white ant could not get into them; the ends are covered. They might get in through one of the bolt holes when the timber shrinks. But anyhow it is against all rule in the Department to allow pipes. Pipes are condemned whenever they are found out.
746. Was the timber comprising the piles for the Wagga Wagga viaduct generally of the quality specified? The specification merely said "in approved hardwood," and they were all approved hardwood because they were all submitted to the examination of the inspector and myself. Not that I claim to have been a judge of the timber then. I was fresh out from home, and had no experience of Colonial timber. I was a far better judge when the timber was cut. So I left it to the inspector as much as possible. Still I was able to throw out a good many suggestions. I do not like those sun-cracks, and they would open in the sun sometimes. This messmate that I was talking about just now is, I believe, exactly the same timber as the black-butt on the coast. Messmate grows inland, and they tell me it is not so good as it is on the coast. I am just now driving black-butt piles, and they stand a lot of hammering and seem very good timber.
747. You have put up some other bridges of the same description as that at Wagga, but not in the same district? Oh yes.
748. Did you put up the Albury bridge? No; I put up some of the timber bridges between Albury and Wagga. I think they are all 26 feet openings.
749. Do you think a 26-feet opening is much stronger than 29 feet 6 inches? No doubt.
750. Do the corbels add any strength to the girders? No doubt they help.
751. They bring also more continuity from one span to another? Yes. I think the corbels in the Wagga Wagga approaches are longer than those we put in the 26 feet span. But anyhow the 29 feet 6-inch span is not so strong as the 26 feet.
752. You think there is likely to be more vibration and deflection upon the 29 feet 6-inch span than upon a 26 feet span? Oh yes.
753. Particularly on very long timber approaches? The part of the Wagga Wagga approaches which is not quite the thing is, I think, as we find from experience, the continuity of it. It is so long that it is like driving a buggy over a field that is ridge and furrow; every pier you feel regularly, and get into a regular spring, and you fancy there is far more deflection in the girders than there really is.* There is a lot of it in the springs. The piers occur so regularly, and are so rigid, that you get into a regular dip between them.
754. The girders are ironbark? Yes, all ironbark.
755. And I suppose some defects may occasionally escape notice? The ironbark girders—I am not speaking for myself, but all people who are well acquainted with the timbers of the Colony who saw them said

* NOTE (*on revision*):—I do not think you can feel the piers in a carriage; it was when on the engine I have felt them.

C. E. Nicholas, Esq. C.E. 15 Dec., 1884.

said they never in their lives saw such a fine collection of ironbark—certainly I never saw anything like it. They were magnificent girders. You could see more about the ironbark—it was square timber. The piles were another matter.

756. Defects such as cracks might be seen sometimes after the timber has been put in its place, through shrinking? Quite so, but if there were any serious defects seen after the timber was put in the piles would have to come out. There were very few defects to be seen before the timber was put in.

757. It has been reported that some of the girders crack through the load upon them. Is that a fact? I should doubt that. There have been some brought up, but they have not split longitudinally but from the heart being too much on one side.

758. *Professor Warren.*] Have you tested the vibration? You could feel every pier as you went over it on an engine, and there was so much deflection. When I say that there was a certain amount of deflection on each of those spans I should say that the deflection on each of the spans was I think ·60. With such a short length as that when you come on the solid pier you are bound to notice it. When you come to something alternately rigid and elastic you get into a regular up and down spring.

759. *Mr. Courtney.*] That is more in the rolling stock than in the bridge itself? Yes.

760. You mentioned that besides the concrete put in the sills, to cure an oscillation in the trestles, every fifth one was filled to the surface? Every fifth one was concreted up to the surface. The original object of that was to stiffen the viaduct, on account of the timber coming down the stream.

761. I thought it might be on account of the oscillation. For instance, with the line running a certain way, were there any experiments ever taken to ascertain its oscillation sideways? I do not think so.

762. The whole viaduct did not become sinuous? Oh, no.

763. The sills were an after consideration? Yes.

764. But if the sills were put down on account of the foundation being bad, did such large sills as those run up, because those sills carried up from the ground must be very heavy? Yes; there is 2 feet 6 inches base of concrete, and when carried to the surface it is only carrying them up 6 or 7 feet.

765. But the foundation cannot be very bad? Oh, no; the foundation is not bad where we put the concrete. I think it was sent to us to put in simply because it was a better job than the planting. Directly you drive a pile with a flat head to it it bursts up the ground, and the more you drive the more it will burst up the ground about it.

766. That does not speak well for the foundation of the viaduct? But any ground will do that.

767. *Professor Warren.*] What weight had you for driving? A ton monkey and an 8 feet fall. The foundations, as a rule, were very good—very good hard bottom. They would have all been good culvert foundations.

768. *President.*] Did you try the strength of your concrete? I had one or two samples in the office, and one day a man told me that he did not believe they were putting any cement in, so I took some home to my office to try it, and in three months it was as hard as any stone. It looked very hungry, but it set tremendously hard. We had a very fine matrix for the concrete in the river-bed gravel with a very nice proportion of sand.

769. *Professor Warren.*] The deviation from driving the piles to putting them on sills was not due to bad foundations? Oh dear, no.

770. *Mr. Blacket.*] You did drive one pile 40 or 50 feet on the Albury side? We drove two or three test piles, but they went down so far that the Chief concluded they would take too much timber altogether, and that was the reason we put them on sills. The piles that went deepest were the ironbark piles on either side of the iron bridge, and we bored holes to start them. We planted them 28 feet down before driving them. We would have put them down further by boring, but we came to running sand there. It was a very good thing and the piles drove beautifully afterwards. They went very easily and steadily and had not half the tendency to burst. They had a good grip all the way down. Here it is (*referring to record*): Ram 27 cwt., fall 8 feet, a mountain ash pile; the hole was bored to 28 feet. It took 13 blows to get it down to 29 feet, 16 to 30, 22 to 31, 27 to 32, 29 to 33, 30 to 34, 33 to 35, 33 to 36, 40 to 37, 48 to 38, 48 to 39, 50 to 40, 50 to 41, 52 to 42, 62 to 43, 81 to 44, 80 to 45, 80 to 46, 80 to 47, 80 to 48, and 160 to 49—160 blows to get it down to the 49th foot.

771. *President.*] You refer, in a report of your own upon a defective pile filled in with concrete, to Brayne and Murray;—what position was Murray holding? Murray was a chainman. I took him off from being my chainman and left him with Brayne to look after the concrete and piles. Brayne could not attend to everything. Murray had to see that the concrete was properly mixed, and do other jobs of that sort.

772. Then if bad timber has been put into these piers you think it is not the fault of the inspectors but more the fault of the contractors? I do not know that it was the fault of the contractors. I do not think the contractors wilfully put in bad timber. I think they gave us the best timber they could get in Sutton Forest—the same timber that has been used in other bridges.

773. Is it a fact that the Wagga Wagga bridge is worse than the other bridges? The timber came from Sutton Forest, and my inspector who has put up other bridges says it is the same timber as in other bridges; and if it has gone in this bridge other bridges have probably gone too.

774. I am alluding particularly to the piles? Yes, I think Wagga Wagga is a very bad place for timber; it is so very hot. I know that in the case of good looking timber sent up there for scantling we condemned, I think, over 50 per cent. going into the works, after it had been lying there for some months. The thermometer is frequently over 100° in the shade there, and that is rather rough on timber.

R. D. Stephens, Esq., District Engineer, re-examined:—

R. D. Stephens, Esq. 15 Dec., 1884.

775. *President.*] We inspected the approaches to the Wagga Wagga bridge, and we want to ask you a few more questions, particularly in reference to the timber of the piers. Mr. Chapman is the inspector under you in the district? Yes.

776. And Charles Cook is what? He is the foreman.

777. The ganger? The ganger in charge of the screwing-up gang, who has been there ever since I have had charge. There has been more than the one gang at one time, but there is always one gang there. As soon as they have finished one end they have to go to the other end.

778. These piles or ends of piles (*referring to some decayed ends of piles produced by the witness*) are, I suppose, pieces cut from the piles originally put in? No; these do not refer to the South Wagga viaduct at all. I simply brought them to show you that we have not been meddling with the bridges unnecessarily.

R. D. Stephens, Esq. 15 Dec., 1884.

unnecessarily. These piles came out of a bridge about 12 miles outside of Goulburn, and I simply want to bring them before you to show that the Wagga piles will go precisely the same way as these, as they are precisely the same kind of timber. These were in the ground only eight years, and the Wagga ones will go just the same way.

779. Tell us where these came from? 145 miles 47 chains from Sydney, and these are no worse than what we have to deal with. I have renewed eighteen bridges since I have had charge—that is two and-a-half years ago, and these piles are no worse than what we have had to deal with. Two bridges I would like you to see are one at Yass and one at Gunning, which are worse than this.

780. Was this timber sound when it was put in? That I could not tell you.

781. How long has it been in? Eight years. I can send you another sample, if you like, of a pile that has been in only five years, I think, and the pipe inside of it is so big that I could put the whole of my leg down it. I could send you that down.

782. Do you think that some of the piles of the Wagga Wagga approaches are likely to become as bad as these? I do, decidedly.

783. But these have not been tarred and protected outside? I do not think that makes much difference. Tarring is very good when the timber is seasoned, but I do not place much faith in tar.

784. It does not prevent dry rot? Until the timber is seasoned I do not place much faith in tar.

785. In what part of the piers were these piles? I have here a full account of them, in a report to me from Inspector Chapman. The report is as follows:—

Inspector Chapman. Goulburn, 7 July, 1884.

Sir,

Bad piles in bridge 145 *miles* 47 *chains south.*

No. 0.—Row of piles from Sydney end—
Being found bad, were cut down, and new trestles built on top [*sample of C and D bad piles herewith.*]

No. 2.—Row of piles from Sydney end—A. Sound swamp gum.
B. Do do
C. Do do
D. Bad pile renewed.

No. 4.—Row of piles from Sydney end—A. Sound swamp gum.
B. Do do
C. Do do
D. Bad pile renewed.

No. 8.—Row of piles from Sydney end—A. Sound swamp gum.
B. Do do
C. Bad pile renewed.
D. Sound swamp gum.

Yours, &c.,
JOHN GIDDY.

R. D. Stephens, Esq., District Engineer.

Sir,

These are the piles, samples of which you examined this morning, which I have had renewed at 145 miles 47 chains bridge south. I beg to state that they are in the store next my office, at any time you should require them.

Yours, &c.,
July 7, 1884. GEO. CHAPMAN.

I HAVE carefully examined the samples, some 18 inches cut off from top of piles referred to. They are really fearfully bad, but they are most instructive, and will go far to explain the defects in the South Wagga piles. I shall retain them here till you and the Commissioner come up.

R.D.S.,
To Mr. Cowdery. July 8, 1884.

Boring is not always an invariable guide, for you may in boring miss the pipe.

786. Were these piles exposed at all to the water? No.

787. Were they above ground? Yes; this *(referring to one)* was one immediately above one of the head-stocks.

788. They are the same piles as those used for the Wagga piers? Yes; and during the last three years I have renewed eighteen bridges of a similar character, some as bad, and some worse. These are not a bad sample by far. I will send you down the other one.

789. I do not think we want any more. If the other pile is of the same character these are quite sufficient.

790. *Professor Warren.*] These have been in use about eight years? About eight years.

791. *President.*] Could the decay in these piles have been prevented by any process or means? No; if it is bad timber and put in too green. There is one thing I wish to specially remark, and it is that in regard to all the timber for the South Wagga Viaduct it was felled one day and put into the bridge the next day, or two or three days afterwards.*

792. It was not seasoned? No, none of it was seasoned. Since I saw you I have obtained a drawing, which I would like to show you.

793. We shall be glad to see it? It is a sketch of the Wagga viaduct spans, as originally built by the Department. *(Sketch produced.)* What I wish specially to draw attention to is that there are no straps at the bottom of the pile. I wish to qualify this by stating that in the two cases where we opened out and actually had occasion to take away the trestles and renew them, there were no straps. In other cases there possibly may have been straps. As the sap-wood of the underground portion of the piles decays, and as the tenons decay there is nothing at all to hold the pile in position; it will be like so many stilts on the sills, because there is nothing to hold it.

794. You think they ought to have had straps to the sill? That is the way we are doing it now. The two we have renewed in this Wagga Wagga viaduct we have done it with a strap going right round underneath—round the pile, underneath the bottom sill. All this timber is ironbark and seasoned timber. *(Plans showing the original form of the bridge and the alterations made were handed to the President.)* What I wish to draw your attention to specially is that sap-wood is detrimental; it does more harm than good.

795. It gets decayed near the ground line, and then there is a place for the water to come in? Exactly. In Queensland, where I was for several years, all timber was measured exclusively of sap-wood; sap-wood counted as nothing. In the case of the Wagga viaduct the piles are barely 12 inches at the top, and out of that 12 or 11-inch pile there are 3 inches of sap-wood; and when you place those iron straps on

* NOTE *(on revision)*:—This, perhaps, is rather too sweeping an assertion, but still it is remarkably like the truth.

R. D. Stephens, Esq. 15 Dec., 1884.

on the sap-wood, and this sapwood decays, there is no hold for the straps at all. All bearings ought to be on real wood. I really think it is a matter of importance to point out to you that these tenons will decay very shortly.

796. The strap will not prevent them from decaying? No, but there are two bolts which hold the sill to the pile. It won't prevent the tenon from decaying, but at the same time it is held by bolts.

797. Do you think where a pipe has been found, as at Wagga, 4 or 6 feet above the ground line that it was visible at the bottom of the pile—at the butt end? That does not follow. In Queensland, for instance, there was a beautiful bit of ironbark which was condemned by the inspector, and the contractor complained to me. But though the wood was perfectly sound at each end, the inspector brought his hammer and showed that it was hollow in the middle, and there was a pipe I could put my arm in.

798. There were a great many piles pointed out at Wagga Wagga with pipes, and those pipes generally were above the ground line;—do you think the pipes extend to the butt end—to the tenon of the sill? I really could not tell you; I think it is very likely they extend a considerable distance, but I could not say exactly.

799. A tenon could not be cut where there was a pipe? Oh, no.

800. *Professor Warren.*] You attribute the state of the bridges you have mentioned to bad unseasoned timber? I attribute what I said with reference to all the bridges I mentioned, to bad timber—not seasoned—cut down one day and put in the next.

801. *President.*] Tarring such piles would not prevent the decay? No; I think it would rather accelerate it? I am a great believer in charring 2 feet above and 2 feet below.

802. In the case of those piers you opened in order to replace them with others, as shown in these diagrams, what was the state of the sill that you removed? I did not see it myself. There is a man here who could tell you.

803. Who is that? Giddy.

804. Did you see some of the timber in the piers at Wagga which had pipes in it and which we saw;—do you think the pipes were in the timber when it was put in the piers; the pipes could not have been formed afterwards? Some must have been put in with the pipes. For instance, there is that one with the cement in it.

805. That is to say, whoever put that pile in must have known it was a bad pile? Must have known. I do not see how you can get out of that.

806. *Professor Warren.*] That is only a solitary case, what about the others? I really could not say; it would be wrong for me to say. The same inspector is looking after the bridges on the Jerilderie line at the present time as looked after the Wagga bridge, and he is making a very good job of the Jerilderie bridges. There is no reason at all to complain. They are really very good and well put together. There is one thing which perhaps the Commission ought to know, and that is that Mr. Brayne, who was the inspector at the time, had other work to do as well. He had to go down to the Rock and several places. And you will find that as you approach the iron girder bridge the work improves in quality; he could exercise more supervision there; he could attend more to it.

807. You mentioned two other bridges just now—one at Yass, and one at—I did not catch the other name? Gunning.

808. Are those among the bridges you renewed? No; they require renewing. You can take an auger and not merely screw it in but shove it in.

809. *President.*] Have you remarked the effect of the traffic passing over piers with such damaged piles as those? My experience is that it will stand without any apparent sign of going until it goes altogether, just like a rotten stick—it won't bend, it will suddenly snap. That is one reason why I do not pay much attention to deflection. You can put a heavy weight on a rotten stick and it won't bend at all—it will break. Whereas you can take a sapling and it won't break until it is actually nearly bent in two. The rotten stick will keep its own form until it snaps and goes altogether.

TUESDAY, 16 *DECEMBER*, 1884.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E.,
OWEN BLACKET, Esq.,

W. H. WARREN, Esq.,
Professor of Engineering.

Mr. Alfred Cecil Brayne, Inspector of Bridges, sworn and examined:—

Mr. A. C. Brayne. 16 Dec., 1884.

810. *President.*] You were the inspector of the Wagga Bridge approaches under Mr. Nicholas, District Engineer? Yes.

811. Do you know these plans (*plans of the Wagga Wagga Viaduct*)? Yes, but slightly altered in some of the bays. In No. 1 part there are 113 bays.

812. And in the next? Well, we did away with the bank shown in this No. 2. No. 2 has 66 bays; No. 3, 4 bays; No. 4 has 72, adjoining 4 spans of 159 feet iron; No. 5, 56 spans on the Wagga side of the bridge; No. 6, 5 spans. The original arrangements were 9 viaducts, which were altered to 6, thereby doing away with some of the embankments.

813. There is a book here which Mr. Nicholas left with us; he said it was a book which you kept during the erection of the viaducts? I have kept a lot of memo. books; I do not know whether they will be of use to you or not. That one is a record of the measurements.

814. That shows the depths of the piers? Yes. There are two kinds of concrete—5 to 1 underneath and 8 to 1 on the top of the sills.

815. Have you seen some of the concrete since then? I saw them pick some out about eighteen months ago.

816. What was it like;—good, hard, and well set? Yes. 8 to 1 is of course poor; 5 to 1 would be of course rich.

817. You saw them take some from around the piers when they were moving some of the piles? Yes; the 5 to 1 was rich, the 8 to 1 was poor.

818. This book shows in these tables the width and depth of the concrete? Yes.

Mr. A. C. Brayne. 16 Dec., 1884.

819. And the length of every pile? Yes, and the different braces too. I think it is summarised at the end, and shows the whole quantity.
820. Will you show me that, please? (*Witness indicated the part of the book containing the information.*) Of course, all this was done in the open air. One column represents bolts put in by contractors, which they had the option as to whether they would take the big transoms out or bolt them.
821. In which pier were the longest piles? Very close here (*indicating position by book*); piles driven in your No. 4.
822. Those were the longest piles? Yes. 35 to 57 and 58 feet—to 61 feet in fact; the longest is 61.
823. They averaged from over 30 feet to 61 feet? Yes.
824. And the piles on sills;—have you the lengths of those? Oh, yes; the whole of them are here in this book; you will find the information on page 79.
825. These dimensions are all actual measurements, and include the tenon? Yes.
826. Did you find that in some of these piles pipes existed? No; we rejected the pipey ones.
827. If a pile had a pipe in it at the butt you could not cut a tenon? No.
828. The tenon would be all broken to pieces? Yes; the tenon is the worst part of the pile at any time.
829. And it should be the most sound part of the pile? Yes.
830. Have you had any experience of timber work? I have had thirty years' experience in this Colony of timber work.
831. Are you acquainted with all kinds of timber work? All kinds; I have been right through.
832. What timbers generally have more pipes than others? Box is the most liable to pipes, and then the mountain ash. It is nearly all pipey, more or less. Gums are generally very solid.
833. What timbers have been used in these viaducts? Box, red-gum, stringy-bark, yellow-gum, or ribbon-gum, mountain ash, and messmate. There is one timber we do not use at all now—white gum.
834. *Mr. Blacket.*] Is there any white gum in the Wagga Wagga bridge? No.
835. *President.*] The mountain ash and the box;—are those timbers in which the pipes generally occur? Yes.
836. What proportion of this mountain ash and box was used amongst these piles? I could not say.
837. You did not enter in this book the timber that each pile consisted of? No, I did not notice what the timber was, except to see that it was sound. The timber was all imported there from Sydney way. I used to see it as it came off the trucks, and either condemn it then or after it was cut.
838. Do you sometimes find that a pipe will be in a pile or piece of timber apparently sound at the butt;—do you think you are likely to frequently find pipes in timbers which are sound at the butt? They are not exactly pipes that we find, but sometimes we find bits of rot inside. There was one instance of a pile which was sound at both ends and which, when being driven, burst in the ground; there was a bed of rot in it, and only an inch and a half of sound timber. That would have gone into the bridge had we not seen it.
839. Could you not have sounded the pile with a hammer, and found the defect? No, it was sufficiently sound for the hammer.
840. That was an exception? We often find it, but it generally gives us notice, because the wood is swelled. We then generally bore it with an auger. If the timber is perfectly straight the sound is not ascertainable. We pulled out three or four ironbark girders that opened out after they were in about a week or two.
841. Did you find any of those piles in the Wagga Wagga viaduct piers? No; we found the one I mentioned, and I think two or three more, but they were short trestle piles.
842. At what distance from the butt is the defect likely to occur? At various parts; but it may sometimes be from a limb having broken off and died away in the inside, and then another part growing over it.
843. Sounding the pipe outside with a hammer would not enable you to detect it? If there is sufficient wood around it you cannot. We sound them all, and if we have any doubt we bore them.
844. If there were a hole of that kind in a pile and you had to drill for a bolt through the centre ——? We should find it immediately, and if I were there I should have the pile out, but if I were not there the men would put the bolts through and let the pile be taken up.
845. Would that occur at Wagga? Not likely.
846. If it did occur it would not be your fault, but because of your not being there it escaped your notice? Yes.
847. Was there anybody there looking at the state of every pile? I had a man there looking after the concrete. His name was Murray. Looking after the concrete was what he more particularly did.
848. Do you think the contractor would take advantage of you if you found a piece of timber apparently sound and yet having such a defect as you have mentioned? It is not exactly the contractor, it is the men who are careless. The contractor sends up the timber and employs men. But he has an inspector in Sydney.
849. How was the timber protected under ground to the concrete—the sill was laid on the concrete. (*Drawing of pier shown to witness*)? When I excavated the hole I drove in three wood pegs 18 inches from the ground, and the concrete was filled in to the pegs; the sill was placed on the concrete and the pile was then put in. I think we started at every fifth bay to fill the hole right up, but the other holes were only covered over the sill.
850. But you finished one before you commenced another? Oh, yes.
851. Was the timber protected by tarring under ground? Yes, it was all tarred, the sills were tarred before going down to the bottom.
852. What kind of tar? Coal tar—a mixture of coal tar and kerosene. The tar is greatly inferior to what it used to be through the Gas Company's using kerosene to make the gas. In fact tar to be the same as it originally was requires 2 lbs. or 3 lbs. of pitch to every gallon of tar.
853. Do you find much sap in these piles? They were full of sap, both outside and in the wood too—all of them.
854. How long had this timber been seasoned before being put in? I could not say; not very long.
855. How long had it been cut before it was used—judging it from these piles? Not more than two or three months; some of it might be six months.
856. Timber in such quantities put under ground would be likely to decay very much at the junction? The

Mr. A. C. Brayne. 16 Dec., 1884.

The horizontal pieces would decay quicker than the vertical pieces. There is no outlet for the sap, and of course it is the sap that takes the dry rot.

857. Would it have been possible to get such a large quantity of timber thoroughly seasoned as was required for this viaduct in the time? Oh, no; if you wanted to season your timber you would want to let it lie over two or three years before it went in.

858. Would 6 to 12 months have been sufficient time? I do not think so; I do not think you would get it seasoned in six months; the sap would lie in the timber. We season the piles in rivers by putting them in rivers to wash the sap out of them, but we have no appliances in this country for doing that. If we could get rid of the sap we could get rid of the dry rot, which and the white ants are our two greatest enemies.

859. Did you see any white ants in any of this timber? Yes, lots of them. And there is another little insect which bores a hole as small as that which would be made by a needle; they come on the wing; they swarm and perforate the wood in millions. They perforate the sap and when you afterwards knock a part of the timber where they have been it becomes like snuff.

860. What do you call these insects? I do not know.

861. *Mr. Courtney.*] A kind of flying ant? They have very small bodies.

862. *President.*] These insects cause a good deal of damage? Yes.

863. They do not go into the sound part of the timber? No, they do not go further than the sap.

864. Does it occur more in some timber than in others? I do not think they make much distinction, except where the sap is thicker on the wood. There is the box which we call the yellow jacket; it has a sap of an inch and a half; the other box has only a sap of half an inch.

865. The dry rot does not come from these insects? Oh, no.

866. What was the kind of timber used in the sills of the trestles? We started with the messmate, but I got them condemned and they were thrown out; then we got the turpentine.

867. Was it seasoned? No, it might have been cut a few months.

868. Would turpentine resist the white ant? It did not resist the white ant, but we find it stands better on the ground than other timber, except the Murray gum.

869. Will white ants attack timber that is seasoned sooner than timber that is not seasoned? No, they attack green timber the most.

870. So that it is necessary to put well seasoned timber in anything likely to be exposed to the white ant? Yes.

871. The piles were tenoned to the sills? Yes.

872. Were the holes filled with any tar previous to the piles being put in? They were painted; the mortices were painted, and the tenons likewise, and the ends of the piles.

873. What size were the tenons made? 3 inches wide, and according to the size of the pile to the heart. We were supposed to cut them 9 x 3 x 3, but some of them would be 11 inches.

874. Were the piles fastened in any way to the sill? No, I do not think they were at Wagga. There was one place, but I do not remember whether it was at Dubbo or Wagga. You can see by the ironwork in this book. (*Memorandum book referred to.*) Yes, they were all strapped.

875. *Mr. Blacket.*] Was not that for the top pile? Ah, perhaps it might be. (*Memorandum book referred to again.*) No, there is nothing at all of it in this book. (*Witness referred to another memorandum book.*) No, there were no sills strapped.

876. Are there any sills strapped in any other bridges that you have been connected with? Yes, I have put straps on those I am at now at Narandera.

877. Are the piers constructed under the same conditions as these? The same, except that I have got the red gum instead of the mountain timber at Sutton Forest. I believe the red gum will last fifty years. It is our mountain timber that goes the quickest.

878. *Mr. Courtney.*] Mountain timber is not so good? Oh, no; I think you should get the local timber. By getting timber at 1,000 feet high and taking it to Wagga, which is about 500 feet above the level of the sea, it must make a wonderful difference in the timber. The timber becomes dry and perishes. Local timber seems to stand well.

879. *President.*] If you had detected a pipe in any pile you would not have allowed that pile to go in? Decidedly not.

880. And all the tenons made at the butt ends of the piles that rest on the sills were sound? All sound.

881. Could bad piles or bad tenons have been put in without your knowledge? Not many; I have been all over the work. Not many—very few, if at all.

882. In that case you would have been greatly deceived? I should. You see there is a long stretch; 1,700 or 1,800 piles were put in there.

883. How many piles were put in, on an average, per day? We would get a lot framed—perhaps twenty piers framed—before putting them in.

884. Did you frame the whole of the pier together and put it in its place sills and all? We framed it on the ground first, and took it to pieces again. There were 317 piers altogether.

885. If a pile had a pipe in it—say 4 or 5 inches—and another pile was perfectly sound, what would be the difference in the time that each would last? None at all, I think. If you could cover both ends so that no insect could get at it the timber is better when it is hollow; the harder it is round the more likely it is to be seasoned; but still we are not allowed to use such timber, and I have never allowed it to go in.

886. What about the cracks? It is not so liable to crack with a pipe as it is when it is solid. It is the soundness of the heart that causes the burst on the outside.

887. Then there would be no difference in time between the life of a pile that is hollow and one that is sound? No.

888. Then why do you not allow the pipes to go in? I have to go by instructions.

889. Would the decay go on in the hollow pile? There would be no decay if it were a clean pipe. When we get a pipe in timber it is always clean.

890. Not always? You will find it all clean.

891. But there must be a certain amount of decayed matter falling to the bottom of it? I should consider it a rotten pile if there were anything in it.

892. Then you speak of a clean pipe only? Yes. In mountain ash you will find it like a hard surface inside. The sapling has evidently perished and fallen down to the bottom of the tree, and the tree has grown.

893.

Mr. A. C. Brayne. 16 Dec., 1884.

893. *Mr. Blacket.*] What do you call it then when a pile is rotten in the middle? That is a rotten heart.
894. That would keep increasing? Yes.
895. *President.*] You would not call that a pipe? No; that is a rotten heart. There must be no dirt in a pipe; it must be clean.
896. *Mr. Blacket.*] You never put in a pile with a pipe? No we are never allowed to do that unless it is for temporary work.
897. Then all these things that are in now must be bad hearts and not pipes according to what you say? They must be bad hearts, not pipes.
898. You would not call those pipes (*referring to samples of piles*)? No they are all bad hearts.
899. *Mr. Courtney.*] They might have been sound four or five years ago? Oh yes—two years ago. All that Sutton Forest timber is exactly the same timber as I have seen from Mount Macedon, in Victoria.
900. *Mr. Blacket.*] Do you consider that the Wagga Wagga viaduct will go like that (*referring to samples of piles*) in a couple of years? Some of them, no doubt, may go, and some may not.
901. Had you any idea when you were working on the bridge that that class of timber would decay in two years? No; I did not expect it then.
902. It is from information you have gained since? Yes we have seen a lot of it since. I was quite surprised to see a lot of it again; but I saw them taking it out where the white ants had got right into the middle. It was all perfectly sound when it went in—every bit of it.
903. How do you account for the piles in No. 5 viaduct, near the bridge, which are ironbark driven piles, being split from the top right down from the tenon? You see they are cut small for the shape of the headstock, and then it is sure to burst there because the rings will tear it apart. Where strapped bolts go up it will go right through the rings; you cut off the rings and it must burst. If you square a log on two sides instead of four it will burst.
904. *President.*] A pipe generally begins at the butt end? Yes.
905. And continues to a certain distance up the pile? Yes.
906. If it is only a rotten pile very likely the butt end will be very sound, and in driving a hole through the pile at a certain height—say 8 or 10 feet from the butt—you might find the rotten part, if you found that the auger jumped—that would not be a pipe? No, it would be some rot in the tree. If a branch had died in the tree it would decay.
907. Do you remember one of the piles that were stopped with putty? No.
908. There has been something said about such a pile—that it was stopped with putty? Not that I knew of.
909. That must have been done behind your back? I don't think it could have been stopped with putty, because they were all tarred there.
910. There was something also said about a pile being stopped with cement? That would have been done behind my back.
911. You would not have done it any more than allow a defective pile to be put in? No.

Mr. John Thomas Rowlands, Sub-Inspector of Timber for Railway Timber Bridges, sworn and examined:—

Mr. J. T. Rowlands. 16 Dec., 1884.

912. *President.*] You are a sub-inspector of timber for timber bridges? Yes.
913. Do you know the Wagga viaduct? Yes.
914. You went over the whole of the timber of that viaduct? Yes, every pile.
915. And the superstructure? Well, no; I looked at some of the girders and corbels that were shown to me by Inspector Chapman, but all I had to investigate were the piles.
916. And you classified these piles, and determined the kind of timber? Yes.
917. You had a book or record of the specification? Yes. (*Book produced.*) I sent a copy of this in to Mr. Cowdery.
918. Yes; we have it. (*Book referred to.*) You have had great experience of the different kinds of timber in the Colony? Yes, I have been at it all my lifetime; I am a native of the Colony.
919. And you can distinguish a good piece of timber from a bad piece? Oh, yes. There are 113 bays in that book.
920. I see the different kinds of timber here—apple-tree, mountain-ash, stringybark, messmate ——? Ironbark and spotted gum.
921. *Mr. Courtney.*] Is apple-tree in it? Yes. It is a very soft timber. They generally used it in olden time because it used to make good naves. It is tough. It will wear when it is kept out of any heavy weights. Spotted gum came from this district, I think.
922. *President.*] Did you find any pipes in some of these timbers? Oh, yes. I marked every pipe in them. I did not go to extremes, bear in mind. Some of these pipes are much larger than I have it here. There is a 2-inch pipe there, for instance (*referring to book*), and it is all dozy—only the outside sap over it; 2 inches to 5 inches I found. Very likely the 2-inch pipes, if you opened them out, would go to 3 or 4 inches; but I did not do that, or go to extremes.
923. What are these pipes? Dry rot—dirty dry rot.
924. Do you think this pipe, or dry rot, extends from the place where it is found by the auger to the butt end? As a rule. The greatest class of timbers there—messmate and mountain-ash—is very old before it is cut; it is almost decayed before it is put into the work.
925. *Mr. Blacket.*] It is decaying inside while it is growing on the outside? Yes; but it is no good at all, the mountain-ash.
926. *President.*] Which are the most pipey of these timbers? The mountain-ash. Stringybark has generally a little dry pipe; it does not rot nearly so quickly as the mountain-ash.
927. And the box? Box is very good timber, and generally sound.
928. *Mr. Blacket.*] Apple-tree has a good pipe? Yes; sometimes a very large pipe. Box, as a rule, is very good timber.
929. *Mr. Courtney.*] How about the ash? Mountain-ash and messmate.
930. There is another called plain ash? That is just the way; some bushmen will vary in the names given to timber. The white gum some will call cabbage gum, and some cheesy gum. They go in at it with a sharp axe, and they say, "This goes like a bit of cabbage," or "like a bit of cheese," and then it is called a cabbage or cheesy gum. The ribbon gum derives its name from the fact that it splits down like a ribbon.

Mr. J. T. Rowlands. 16 Dec., 1884.

931. But in this book there is mountain-ash and ash;—you do not think there is any distinction between them? No, they are all one tribe. The real mountain-ash grows very free. It is very nice working timber, and looks well; it planes up beautifully.
932. *President.*] If there were a pipe in a pile you would generally detect it at the butt end? Yes, as a rule; but in some cases it commences at the top. A limb may decay at the top, and then the water gets in and causes decay from the top instead of the bottom. You will find some trees quite decayed at the top and sound at the butt.
933. Could you find some of these pipes in a pile with both ends sound? Yes, you could find them by tapping them.
934. But does that occur: that the two ends of a pile may be sound, and a portion of it may be pipey? Yes, that occurs.
935. Often? Yes. I have noticed where the white ant has started where a bit of bark has been knocked off and the timber has cracked. The white ant travelling about has gone in, and then the water has got in and decay commences. There was a splendid ironbark girder on the Parramatta Bridge which I condemned. When I condemned it the contractor asked why it was condemned, and I told him it was pipey. To look at the girder no one would have thought of condemning it, but on looking over it I saw this little track of the white ant. He said he would write about it, because I had not done him justice. It appears he cut the pile, which he had given 6s. a foot for, and he then found a 3-inch pipe going up 9 or 10 feet.
936. Was it a clean pipe? Well, yes, it was a clean pipe; clean in places, and "dozy" at the ends—at the extreme ends.
937. *Mr. Courtney.*] That was a 14-inch girder? Yes.
938. And you found in it a 3-inch pipe? Yes. There was another instance at Darling Harbour where we had a "dozy" knot, and we cut eleven pieces off it before we found it sound, and it was sound at each end. When you split a tree open you know what the cause of the decay is. Sometimes a grub will work its way in and cause decay.
939. *President.*] In what state do you consider this timber appears (*referring to samples of piles*) for the time the piles have been put in? A very bad state.
940. What do you call a very bad state? I say the timber ought not to have gone in at first.
941. Do you think that some of that timber was put in by the people when they knew it was pipey? I do not say they knew it. The inspectors sometimes get deceived when they do not keep their eyes about. The timber is sometimes plugged, and I have seen plugs put in which are very hard to see unless a man knows it.
942. If you have a pile close at both ends, as in the Wagga viaduct piers, there would be no decay in that pile? Sound at both ends?
943. Yes? Oh, there may be decay for all that.
944. Then the decay may go on, too, in spite of there being no influence upon it? Yes, it would.
945. That timber (*alluding to the samples of piles*) has not been very long decaying? Not from the dry rot. Of course it was bad when it was put in, but you could see it was decaying.
946. Would the tarring of the piles prevent decaying? Not that kind of timber.
947. But in the case of timber like the Wagga piers: would tarring prevent the rapid decay? Not now; it is too late now.
948. What is the cause of it? Well, it was very inferior timber when it was put in.
949. How do you mean? Very old and short heart.
950. You mean it was not seasoned? No; it was too much seasoned.
951. *Mr. Blacket.*] You mean cut too long? No; it is the same with an old tree as with an old man. If you put a young man out in the weather he will stand it much better than an old one, and it is just the same with a piece of timber. And some timber grows on land that is no good at all; it grows too quickly, and grows soft, and bad in the heart. I went to look at the place where the timber for the Wagga approaches came from, and no good timber would grow there; it is too swampy and wet.
952. Where is that—Sutton Forest? It is the other side of Goulburn, between Moss Vale and Marulan.
953. To what do you attribute the dry rot? It is the nature of the timber. It would take a piece of ironbark fully thirty years to go as far as the pieces of timber you have here.
954. What is there to prevent dry rot? Well, there is nothing to prevent dry rot.
955. *Mr. Courtney.*] What would you class that timber as (*referring to samples of piles*)? It is called ribbon gum; the proper name is white gum.
956. Is that the famous spotted gum? No. The only fault with spotted gum is the sap. There is a little insect that eats just through the sap, but will not go any further. With regard to the mountain ash posts, when we have been fencing we have found that the rails have stood better than the posts. You could break the posts right off where the dry rot has occurred just above the ground.
957. *Mr. Blacket.*] Wind and water? Yes.
958. *President.*] You did not ascertain the length of the pipes in all the cases referred to in your book? No. For instance a pipe may go right up to the top or to the first limb.
959. You are certain that these pipes existed as you have stated in this book? Yes; and I have not gone to extremes.
960. You tried them with a piece of wire? No, I tried them with augers, and I chopped a piece out, and put my arm up some of them.
961. Was the pipe generally clean? No, dry rot; you could pull the stuff down and crumble it up.
962. What length would these pipes be? Running up to the top of the bridge.
963. No insects would be likely to get in now that you have stopped the holes? They could get in. Of course the little holes we made would not make much difference. Mr. Chapman was stopping them up and tarring them.
964. The tarring would not prevent the dry rot or decrease the decay in the holes? No.
965. Who assisted you in this examination? Mr. Chapman and his sub-inspector, Mr. Giddy.

Mr. John Giddy, Sub-Inspector of Wooden Bridges, sworn and examined:—

Mr. J. Giddy. 16 Dec., 1884.

966. *President.*] You are a sub-inspector of wooden bridges? Yes.
967. And you have had, in connection with Mr. Rowlands, to report upon the kind of timber put in the piers of the Wagga Bridge approaches? Yes.

968.

Mr. J. Giddy. 16 Dec., 1884.

968. You have had experience of the different kinds of timber? Yes; I have had great experience during the last twenty years.
969. Did you agree with Mr. Rowlands with regard to the kind of timber that he has mentioned in his book? We do agree with regard to it.
970. What is your opinion of that timber? Very bad timber. Once it is cut that timber lasts a very short time. No matter to what use it is put it decays—a kind of dry rot.
971. Where is that dry rot? It is in the heart; just the same as this [*alluding to samples of piles.*]
972. Is it a pipe? Some of it is a pipe, and some of it crumbles and moulders away.
973. Does it extend a long way through the timber—this dry rot? In different kinds of timber.
974. What is the length of a pipe? In course of time it goes right through the pile or log.
975. Would you have it at the butt end? That is where it mostly starts first.
976. But could the butt end be sound and the upper portion bad? Sometimes. But it may be from the ground upwards; it generally starts from the top of the pile.
977. Do you think that at Wagga they could have got a tenon at the butt end of a pile without finding a pipe if there were one? It is hardly possible to do that.
978. You were there with Mr. Rowlands when the holes were made to find out the pipes? Yes.
979. Did you see that some of the pipes extend right up the piles? Yes.
980. Are these pipes rotten holes or clean pipes? In some cases they are clean, but in others dry rot 5 or 6 inches.
981. Which are the worst? The dry rot, because they gradually go more and more. When once you get a clean pipe in it does not decay any more.
982. Then you make a distinction between a clean pipe and the dry rot? Yes.
983. And what are principally pointed to as pipes in the piers of this viaduct are more dry rot holes, you may say, than really clean pipes? In the report it is mostly "hollow and dry rot." Some of the piles had 2 or 3 inches of a pipe in them and 4 or 5 inches of dry rot—not a clean hollow. Inside of this it is a clean pipe, and you come on 3 or 4 inches of sap; and then you come into another which is pipey all through. That is in the Wagga bridge approaches.
984. *Mr. Blacket.*] Do you consider that if when the piles were put in you were able to make a tenon on one, and it looked all sound, there has since been time for it to decay? Oh, yes, plenty of time, from the kind of timber that is put in. Messmate, mountain ash, and such timber is cut green, and as soon as it starts to dry it begins to decay.
985. *President.*] How long do you think that such piles are likely to last—these bad piles that have been found with dry rot in them? Well, some of them may last two or three years longer; others won't last that long to be safe. In three or four years more there will be some hundreds of piles in that bridge that I do not consider to be safe.
986. What timber do you consider the worst put in these Wagga approaches? Messmate and apple-tree; that is the worst kind of timber. Most of the stringybark timber that is in is sound. There are very few of the stringybark piles that are not as sound as when they were put in.
987. But the messmate is not? Messmate is a wood that will not last many years if it is cut.
988. Are pipes in the messmate? In the messmate and in the apple-tree.
989. Do you think they could have drilled the holes necessary in the piles for the bracings and the walings without finding the pipes if they were there? No, they could not, because the bolts of bracings and walings go through the centre of piles, and if there was a pipe in a pile it must have been known.
990. In your opinion if there were a pipe in a pile when the holes were drilled for the bolts it must have been known? Yes.
991. Could the inspector have known in any case that he was being imposed upon? It is very hard for the inspector to know. There are a great many men working in different parts at the one time, and it would be impossible for the inspector to know everything that takes place.
992. *Mr. Blacket.*] Did you notice that different piles at the Wagga end of the viaduct were split at the top? Yes.
993. Those are ironbark piles? Yes.
994. Why are they split? I cannot say, unless because they are exposed to the weather; the jar of the driving since the weather got to them might open them, and the vibration of the train on the top might open them.
995. Do you consider that tarring those piles keeps the moisture in so as to make the centre rot more quickly? I think the tar is a protection.
996. It keeps the wet out? It keeps the wet from getting into the piles.
997. *President.*] How long would timber of the description required take to season properly? Without being cut?
998. After being cut? Well, some timber takes longer than others. Six to twelve months before being properly seasoned; but timber after it has been cut ten or twelve years will shrink, though not so much as when green.
999. *Mr. Blacket.*] Every time you cut a fresh surface the stuff shrinks? Yes.
1000. *President.*] You did not find any white ants in this bridge at Wagga? There are some odd ones; the men screwing up use kerosene, arsenic, and tallow and other stuff to get them out; they use scalding hot water too. Most of it is between the waling and the piles. There are two or three of the piles that have the white ant right through them.
1001. You think that some of this timber that has been found defective or pipey, and so on, should have been found out before it was put in? Well, I believe some of it has been put in that has not been good,—that it has had a kind of dry brittle substance in it when being put in.
1002. Could you by striking it on the outside with a hammer detect whether it was hollow or not? Oh, yes; you could tell very easily by the sound. When you strike a hollow part there is a difference between the sound of it and the sound of any other part; you could tell the difference at once.

WEDNESDAY,

WEDNESDAY, 7 *JANUARY*, 1885.

The Commission met on the Railway Bridge at Bathurst.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E. | W. H. WARREN, Esq., Professor of Engineering.

Mr. William Hilzinger, Inspector of Railway Bridges, examined:—

Mr. W. Hilzinger. 7 Jan., 1885.

1003. *President.*] We wish to know what has been done in the way of alterations to the Bathurst bridge. Whatever you say now in the form of a statement will be regarded as a continuation of your evidence before the Commission, and you have already been sworn? All girders have been repaired, except No. 1 down-stream girder, which has only been repaired a distance of 15 feet from the west end. The work is not all close. (*Witness showed how the space between the angle-iron and the top boom had been filled with rust cement; and also pointed out loose rivets.*) The bottom boom is not so bad as the top. A number of rivets show loose in the top boom of No. 1 up-stream girder, which have not been altered. Rivets that have been replaced show new painting. In No. 2 span both girders have been repaired, except the bottom boom which is not quite finished. A few rivets are loose in the cross girders.

MONDAY, 23 *FEBRUARY*, 1885.

The Commission met at the M'Donald River Bridge.

Present:—

G. A. MORELL, Esq., C.E., President.

W. C. KERNOT, Esq., Professor of Engineering, W. M'D. COURTNEY, Esq., C.E. | W. H. WARREN, Esq., Professor of Engineering, OWEN BLACKET, Esq.

George Bewick, Esq., Superintendent of Way and Works, sworn and examined:—

G. Bewick, Esq. 23 Feb., 1885.

1004. *President.*] What position do you occupy in the department? I am Superintendent of Way and Works.

1005. You were requested some time in July, 1883, to examine this bridge and to report with reference to a number of rivets alleged to be loose? Yes.

1006. And you made your report to the Engineer for Existing Lines? Yes, the report was addressed to him.

1007. Would you like to have your report read again in order to refresh your memory? No, I can remember distinctly the purport of everything I said.

1008. Have you had a large experience of riveted iron-work? No; I think I say in my report that I have not; I have had very little experience.

1009. But you know whether a rivet is well or badly put in? I do not know that I do. I do not profess to know. All I profess is that if anything is seriously wrong with a bridge I know it; but as for any question about riveting I would rather not express an opinion on what is a professional subject. I say in my report that I have had less experience of iron bridges than of any other kind of work, although I have had forty-eight years experience in connection with railway works generally. Wooden bridges I profess to be a little of an authority on, but as to iron bridges I do not.

1010. Do you know when a rivet is loose? Yes, by feeling with the fingers or tapping with a hammer.

1011. But you cannot tell us when a rivet is well put in? No, I won't say that altogether. I can tell whether it is loose or fast.

1012. You can form an opinion as to whether work is well or badly done? No, I should not like to offer an opinion with regard to an iron bridge, unless, of course, the work is very bad, so that anybody can see it. I would prefer not to offer an opinion on a matter with which I am not thoroughly conversant. I think I stated in my report that my opinion must be taken for what it is worth.

1013. You state in your report that after carefully examining and tapping some of the rivets you found that a large proportion were perfectly tight, but that in the case of a few—about 10 per cent. of those marked—you discovered symptoms of looseness? Yes; such was the impression on my mind after examining them. I have no objection to answer any question, but I will not profess to be what I am not.

1014. Were you present at any testings of these bridges? I have tested them myself with a single engine on several occasions, but I do not know that I was ever present at any other test. I test them myself once a year.

1015. What load do you use? An ordinary engine of 62 tons.

1016. At any speed? I run the engine over both slowly and fast and then I test the deflection. Half-an-inch is the greatest deflection ever I got. I am speaking from memory, but I am pretty certain I am right. I run over all the important bridges every year and test the deflection.

1017. Have you noticed much vibration in those tests? No, very little indeed.

1018. In this bridge particularly did you notice any vibration? None whatever, nothing more than you might expect.

1019. *Professor Warren.*] How did you make the test? In rather a rough and ready way; simply by having three boards, one at each end and one in the middle, and then marking the deflection.

1020. It was really a case of boning? Yes.

1021. *President.*] Did you test the bridges at all with a running load? Not this one—I daresay I did; I ran the engine over.

1022. And did you observe the vibration caused by the passage of the engine at speed? No.

G. Bewick, Esq.
23 Feb., 1885.

1023. Did you look for it? Yes, of course I did.
1024. *Mr. Courtney.*] On other occasions have you tested otherwise than with boards? When we have dry land below I test with solid rods.
1025. Were you here when the bridge was being erected? No; I don't think I saw it until it was completed.
1026. Here is a piece of information we were going to apply to Mr. Whitton's office for, but perhaps you may be able to give it to us: Do you know how these booms came out, as to whether they were in sections with the angle irons riveted to them? I think so; in fact I am pretty certain.
1027. *President.*] Mr. Wade in one of his reports states that "at M'Donald River bridge I find there is a place where the head of a rivet had been cut off, and the rivet being too tight to get out by either hammering or driving remains there still";—were you here on that occasion? I was present when the head of the rivet was cut off, and the rivet is there still I believe. I saw the attempt.
1028. Do you think that every rivet in the bridge is in the same condition? No, I do not say that. There are a few loose rivets in all of them.
1029. If the original head of a rivet is loose does it follow that the other head or the snap-head would also be loose? I think not. They must both go together to some extent. A rivet cannot be loose at one end and not at the other, that is absolutely loose. There might be an apparent looseness in the hole or at one head while the other is perfectly tight.
1030. Do you think the quantity of metal in the snap-head of a rivet should be as large or nearly as large as the quantity of metal in the original head? That is a question I would prefer not to answer. I do not profess to be an authority on such matters. I do not understand the technical matters in connection with the work and I do not wish to place myself in a false position by answering a question I am not able to answer. (*Witness, at the request of the President, tested a number of rivets in the lattice and upper boom at the north end of down-stream girder.*)
1031. *Mr. Courtney.*] You were asked whether the angle irons came out attached to the plates of the boom? I think they did but I cannot speak positively.
1032. You were asked the question with reference to this bridge;—did you see any of the materials of the others? I have, and my impression is that they all came out in that way—in sections.
1033. *Professor Kernot.*] Can you help us to identify the portion of the riveting done here and that done in England? No; I was not here when it was fixed.
1034. *President.*] What is your opinion with regard to the stability of the bridges? I think they are perfectly safe in every respect. I have had charge of them since their erection and I am responsible for their safety, and they are exactly the same now as when they were erected. There is no permanent deflection whatever, and no variation in the deflection caused by loads passing over; if there were, I should feel it my duty to examine them more closely. If, for instance, I found a deflection of ½ an inch on one occasion and of ¾ of an inch on another occasion, I should think there was something wrong; but as long as there is no permanent deflection and no difference of deflection when loads are passing over, I assume that everything is perfectly safe.
1035. Does your remark apply to all the bridges as well as to the bridge at M'Donald River? Yes; of the three bridges I consider that at Aberdeen the best, it having the least vibration.

Mr. Robert Ewing, Inspector of ironwork, sworn and examined:—

Mr. R. Ewing.
23 Feb., 1885.

1036. *President.*] What position do you occupy in the department? I believe I am called Inspector of Ironwork.
1037. In what department? The Engineer-in-Chief's department.
1038. Have you been connected with the putting up of any bridges? I have not.
1039. You were requested by Mr. Whitton to come and inspect these bridges? Yes, I suppose I may say so; I came up with Mr. Wade. Perhaps it would be well for me to tell my story in my own way, and then you could ask me questions afterwards. In the month of June, 1883, I came up along with Mr. Wade, Mr. Drewett, Mr. Russell, and Mr. Bewick to examine the bridges. Mr. Wade, Mr. Drewett, and Mr. Russell were engaged some considerable time in taking levels and testing the bridges with locomotives; I was assisting them, and I was directed to go into the lattice-work and test some of the rivets. I did so, and to the best of my recollection the proportion I made—I did not test many, but the proportion that I think I made was one in eight or ten of what one would call loose rivets.
1040. *Professor Warren.*] In this bridge? The remark applies to all.
1041. *Professor Kernot.*] Was that one in eight of the whole number or of the marked rivets? I am under the impression that it was of the marked rivets—those that were marked as loose.
1042. *President.*] How long have you had experience of bridge-work? I have had very little experience of bridge-work, but I have had experience of ironwork as a mechanical engineer for the last thirty years.
1043. Have you had experience of boiler work and riveted work? Yes, although not a boiler-maker.
1044. You would know when a rivet is well put in and when badly put in? I should think so.
1045. Do you think that a rivet well put in should be loose at the head and tight at the other end? It would altogether depend on the size of the rivet. If the rivet were small, it would be possible to jump up the point, and yet it might be slack at the head.
1046. I mean a rivet that would be calculated to fill the hole? Well, if the rivet were the proper size it ought to be a reasonably tight fit. I do not know that it would absolutely fill the hole on account of the contraction of the hot rivet. The rivet must necessarily be smaller than the hole.
1047. If you put in a rivet through several plates or thicknesses of iron, would you have the rivet hot right through, or only at the point? Well, the rivet ought to be heated through to get the hole to fill. As I said before the rivet must be smaller than the hole before it can go in, and of course as it gets hotter it gets larger.
1048. If the head of the rivet was cold, and only the point hot, the head end of the rivet could not be made to fill the hole exactly? Certainly not.
1049. Then you would consider that a bad rivet? I do not know that I would.
1050. Not if you found a rivet loose at one end and tight at the other? There are rivets, even in the best made boilers, that do not fill the hole, and yet they are steam tight.

Mr. R. Ewing. 23 Feb., 1885.

1051. But they would not be loose at the head for all that? No, but they might be made loose at the head; a very sharp blow on the head would make them sufficiently loose to be leaky rivets.
1052. Would not a blow with one of these small hammers (*showing a hammer of* 3 *or* 4 *ozs. weight*) produce that? No, I do not think it would.
1053. It would require a heavier hammer? I should think it would.
1054. What difference of metal do you think there should be in the snap-head of a rivet as compared with the head? I think the heads are usually made pretty nearly equal. A diameter and a quarter to a diameter and a half is what is allowed generally for making a snap-head. I think that is about the proportion.
1055. If you cut out a rivet which is apparently loose to the touch with a hammer, can you put a tighter one in if the plates are close to each other without loosening the adjoining rivets? I doubt whether you could; not if you had very much cutting to get it out.
1056. Suppose that one of the rivets marked in this bridge is loose where the plates are well in contact; in cutting that rivet out and putting a new one in, would you loosen any of the adjoining rivets? I think it very probable that you would.
1057. Then if you had a number of loose rivets adjoining each other, you think it would be better to leave them loose than to take them out and replace them? Well, no, that is a different question, where there is a number of them loose, you might replace that number with advantage perhaps; that is, providing they were very seriously loose; but where they are so very slight as some of these are—infinitestimally almost—I do not think it is wise to take them out; it is a mistake. (*At the request of the President the witness tested a number of rivets in the upper boom of the bridge, one triangulation from abutment north end of up-stream girder, and out of* 45 *marked he indicated* 11 *as loose, the looseness being just perceptible.*)
1058. But suppose that the angle-irons are not very close to the plate, is it better to leave a loose rivet in than to cut it out and put a tight one in; that is to say, if you put a tight one in would there be a danger of loosening the adjoining ones? Yes, bound to.
1059. Then it would be better to leave it than by taking it out to loosen more? Yes, the looseness is so slight.
1060. If you tap them nearer the plate, and they do not fill the hole, you can shift them slightly without affecting the top of the head? Yes, but the extent to which you shift them is the extent to which they are slack in the hole, and they would not go in unless they were smaller than the hole. (*The Commissioners here went inside the girders and tested a large number of rivets, and also directed the witness to indicate those which he considered loose.*)
1061. *Professor Warren.*] With reference to the rivets you have just marked how many would you cut out? I would not cut out one.
1062. Does that remark apply generally to the whole bridge? Well, I have not been over the whole bridge.
1063. *President.*] Does your remark apply to the three bays you have just gone over? It would apply to all I have done with you; I would not cut one out.
1064. Why? Because I do not think it would add to the strength of the bridge to put in new ones.
1065. *Professor Warren.*] You mean that you could not put in rivets that would add to the strength of the bridge? I doubt very much whether you could do it now. The looseness is very slight. The rivets must be slack at the head. You might keep on hammering at them with a small hammer until you got a feelable looseness.
1066. *Professor Kernot.*] I should like to know whether you consider the following statement to be a correct representation of the state of things on the bridge, namely, that there is one rivet visibly loose, and six others just perceptible to the touch? In the number I tried I believe such was the case, but this continual hammering will loosen the rivets.
1067. But I should like to have a direct answer to my question, because the statement is made in a certain document without any qualifying words that I am able to discover, and it conveyed a certain impression to my mind when I read it. I should be glad to know whether you really consider that that statement was calculated to lead a person reading the report, and who had not seen the bridge, to a correct conclusion? The number of rivets I tried was a very limited number, not anything like the number I have tried now, and I believe that it is substantially correct. It is my belief that in the number of rivets I tried there was one in eight or thereabouts loose—perceptibly loose, visibly loose.
1068. I am not referring to the statement that one in eight was loose; but I am asking whether the statement that one is perceptibly loose, and six others just perceptibly loose to the touch, was intended to describe the state of things on the bridge generally? I could not describe the state of things on the bridge generally when I had not gone over it. I only tried a limited number, and consequently I could not be expected to say that that represented the whole. You might find places where there are half-a-dozen loose all in a row. That was the proportion I made in the number I tried.
1069. Can you tell us what number you tried? I could not.
1070. Could you give any estimate of the number? I only tried in this corner (*in the box, north end of up-stream girder*) and along a portion of the way here.
1071. *Professor Warren.*] Did you try more than sixty rivets? I think I tried more than sixty or seventy rivets in each bridge.

Mr. W. J. Hilzinger, Inspector of Railway Bridges, sworn and examined:—

Mr. W. J. Hilzinger. 23 Feb., 1885

1072. *President.*] You are an Inspector of Bridges in the Department of Existing Lines? Yes.
1073. Did you visit the M'Donald River bridge in April, 1883? Yes.
1074. And you reported as to a certain number of loose rivets? Yes.
1075. You said that there were 3,813 loose rivets? Yes, something like that; I do not remember the number exactly.
1076. Your report was sent to the Engineer for Existing Lines? Yes.
1077. What hammer did you use in testing the rivets? One like this (*exhibiting a hammer weighing* 3 *or* 4 *ozs.*)
1078. Did you never use a heavier hammer than that? I never carried a heavier one about with me.
1079. Did you mark all the loose rivets with a cross in chalk? No, I did not mark them myself; I had two riveters marking them.

1080.

Mr. W. J. Hilzinger. 23 Feb., 1885.

1080. But since then you have gone over the rivets yourself? I have gone over them myself since then.
1081. And did you find that everyone of the marked rivets was loose? Yes, everyone.
1082. What do you mean by a rivet being loose? When I can hear it rattle in the hole, or when I can knock it about from one side to the other in the hole.
1083. With a slight tap? With one of these hammers (*a 3 or 4 oz. hammer*). I consider it loose if I can move it with one of these.
1084. How many of the rivets that have been marked as loose seemed to be loose on the head and tighter on the snap;—what proportion, do you think? Most of them are tight on the snap; it is the heads that are loose, not on the top of the hole. They are tight on the snap because the iron is caulked in with the rivet. At the point it fills up at the edge of the plate where it is knocked down and is not plugged up in the hole behind it.
1085. You have had great experience of riveted joints? Yes.
1086. What length of rod should be allowed in the rivet for making the snap-head? That all depends on the thickness of the plate it is to go through. For instance: there are four or five thicknesses there (*indicating the place on the bridge*), and a rivet $\frac{3}{4}$ of an inch or an inch longer would be required than in a place where there are only two thicknesses, in consequence of more of it having to stave up in the hole. If there are only a couple of thicknesses, $1\frac{1}{4}$ inch or $1\frac{3}{8}$ inch is plenty; whereas if there are four or five thicknesses you want a couple of inches. But those rivets that are loose on the head have simply been heated at the point, and they are just brought up through the first plate or half-plate, and that keeps the snap from shaking about. The more thicknesses the longer rivet you want to knock down.
1087. *Mr. Courtney.*] It is your opinion that very few rivets are so bad as not to be tight in the snap? They are very bad when they are not tight in the snap.
1088. But you mean that very bad rivets are tight at the snap? Yes, unless the work is not close, in which case they will go backwards and forwards.
1089. It would be well if you would state to the Commission your opinion as regards cold-headed and hot-headed rivets;—is there any advantage in a cold-headed rivet? A rivet should be hotter at the head than at the point to stave it up in the hole.
1090. Which end would you have in the fire last? The head; and the boy, just before bringing the rivet out, should catch hold of the point of it with his tongs so that the part of the rivet towards the head may be hotter than the point which gives something cooler to hammer on, so that it will stave back in the hole towards the head. If the rivet is hot on the point it splashes over the plate on the top while being rivetted and does not fill the hole but knocks down like a piece of lead over the top plate.
1091. Do you approve of a cup-headed or a flat-headed dolly? I do not believe in cup-heads at all. You cannot hold them solid with the cup.
1092. The best method of heating rivets is, in your opinion, to heat them horizontally on a smith's hearth and not to put them vertically or to use a plate? I do not believe in plates at all.
1093. You consider that a long rivet especially should be heated on the horizontal? Yes, across the fire.
1094. But not standing through it? Not to heat it; it is too long for the fire to heat it vertically; you must heat it horizontally.
1095. The usual practice is to heat with a plate? Nowhere, except in England. In Scotland and America they do not use plates.
1096. You think that as regards time there is no temptation to a contractor working properly to put rivets in with a riveting plate? He can put them in cheaper and better without a plate. Nobody that I know of will use a plate. I am talking about bridge rivets, not counter-sunk heated rivets or small rivets, but bridge work.
1097. Is it your opinion that the rivets should not be laid over with light hammers but struck in the middle with three or four blows, after which they should be struck about six with the snap? Yes.
1098. Then again, you think that a snap that is too hollow is a dangerous thing inasmuch as it cuts the plate when the rivet comes short in length? Yes, a shallow snap is the best.
1099. And that the fin is no objection? No; as soon as the rivet forms a lip on the plate of course you can drive no more into the hole. It wants to be left like a ball to put the snap on so that when it gets a smart blow with the flogging hammer it will upset the iron into the hole.
1100. Do you consider a snap injurious which is too deep for the amount of over-length of the rivet? Yes, if it is too deep.
1101. Is it your opinion that on this bridge the rivets have been snapped with deep snaps? Yes; or the snap has been worked round the rivet too much.
1102. Do you consider the snap heads of the rivets in the flanges abnormally small? Yes; in fact all over they are small for seven-eighths rivets, but especially on the top boom.
1103. *Professor Kernot.*] I should like to know the history of this hole (*pointing to a hole from which a rivet had been removed in the top boom of down-stream girder, near centre arch*)? I came up here with Mr. Cowdery and Mr. Avern about a month after I had had the bridge inspected and they wanted me to knock out a rivet. I had no tools with me for knocking out rivets but I got an old hand-hammer with nothing but a splinter of the handle remaining, and I just chipped the bat off on the top, and tried to knock it out with a piece of half-inch or five-eighths round iron. In consequence of its being a rivet that had not been heated at the head, but only heated at the point, and therefore only staved up just at the bat half-way through the first plate, it was bigger at the top of the hole than at the bottom, and the hole was not fair. I could not knock the rivet out with the piece of iron because the piece of iron bent; but next time I came up I had a punch and a hand-hammer with me, and the rivet was knocked out. It came out very easily. (*Rivet produced and its appearance explained by the witness who also used it to illustrate what he meant by defective riveting.*)
1104. *Mr. Courtney.*] In what condition did you find the rivet? Burnt halfway along it.
1105. *Professor Kernot.*] On what bridges were you engaged in Victoria and in what capacity? I was working as a riveter for Cornish and Bruce at the Castlemaine Foundry; and also at the Tarradale bridge, at Sunbury bridge, and at Bucki bridge.
1106. Were there any others? Yes, but I do not remember them. Tarradale was the largest.
1107. Was there not a bridge near Hawthorn? Yes, the Hawthorn Road and Railway bridge, and also the Cremorne Railway bridge. I worked piece-work as a riveter on those bridges.
1108. As a riveter not as an inspector? Yes.

Mr. W. J. Hilzinger. 23 Feb., 1885.

1109. *President.*] When I was inside the girder with you just now, and you pointed out so many loose rivets, did I understand you to say that they should all be replaced with new ones? I do not know about that; I do not say all.
1110. Which would you replace? I would replace those in the joints. I do not know about the ones between unless they are very bad. Wherever the work is not close I would replace the rivets. It is not so much a question as to whether the rivets are tight as to whether the work is close.
1111. There are some places in the booms where a large number of consecutive rivets are marked as being loose? Where I find a lot like that I would take them out.
1112. And where you find only two or three? I would not touch them unless the work was not close.
1113. Would there be any danger in taking out rivets like these in this boom (*indicating the place*), of loosening the rivets around them? If the work is close they will not be loosened.
1114. Do you consider the joints of the angle-irons and plates in this bridge close? Fairly close. In a few places they are little wide, but generally they are fairly close.
1115. *Professor Warren.*] Generally, if you were to take out a rivet where they occur singly or two together do you think you would loosen others near them? I would not bother with odd ones like that. If these two (*pointing to two rivets*) were very loose I would take them out, and not loosen the other ones. We cut them out very carefully. We do not cut them off with a side-set, but with a chisel. We just cut them across with the chisel, and the least thing cuts them off.
1116. And generally on this bridge you consider that you could cut out rivets where necessary without loosening other rivets? You might run along a few where the work is not close without going further.
1117. But this is a bridge where the work is close? Yes, it is fairly close.
1118. *Mr. Courtney.*] Did you see any of these bridges when they came out? No, never before I came to inspect them.
1119. Do you know whether they came out with the angle-irons riveted on the plates? Yes, I can point out the home work. (*The witness pointed out several parts as English work in which long rows of rivets were marked as loose.*)
1120. With regard to those rivets in the English work, did you find that they have been put in with a cold head and burnt in the point? I never took any out.
1121. But in any of the bridges taking the whole three? Yes.
1122. You find that they have been put in with a cold neck and burnt at the point? Yes they are. That is the result of heating them on a plate; that is why I condemn rivet plates.
1123. And from your experience you would say that in the three bridges on this line the rivets have been put in cold in the neck? Yes, which they ought not to be.
1124. *President.*] I suppose you have had to do with putting new rivets in bridges? Yes.
1125. Can you say whether you have had more rivets to put in in the English work than in the work done by the contractors in the erection? In some of the bridges it has been about the same in both, but in others it has been all in the Colonial work.
1126. But I mean in bridges similar to those at Wellington and Bathurst for instance? About the same with both.
1127. The Colonial riveting and the English riveting are about the same? Yes, I do not know any difference.

[*The Commission then proceeded to the bridge over the Peel River, at Tamworth.*]

Mr. Robert Ewing was here further examined:—

(*At the request of the President, the witness tested a number of marked rivets in the bridge.*)

Mr. R. Ewing. 23 Feb., 1885.

1128. *President.*] In the bay you have just examined, you find that out of thirty-six rivets marked as loose, seven are tight; that is to say the remainder are slightly loose? Very slightly indeed.
1129. I think you told us that the testing of the rivets was likely to loosen them? I think too much of it will.
1130. To what extent? Simply to the slight extent that there will be a play of the rivet in the hole.
1131. *Mr. Blacket.*] Do you mean that by testing with these small hammers the rivets will be loosened? I think too much testing will do it as the dropping of water will wear away stone.
1132. Do you say that that will be done by such a test as we have been making; that is by slightly tapping the rivets on one side with a small hammer? I think it will in the course of time.
1133. *Professor Warren.*] How many blows would it require? I have no idea.
1134. *President.*] But it is your opinion that it will loosen the rivets? I think too much hammering will.
1135. That is to say that if a tight rivet is hammered by testing as we have been doing, in the course of time the rivet will become loose? I believe so. (*The witness here, by the direction of the Commission, tested a rivet in the top boom of the up-stream girder, and stated that it was slightly loose.*)
1136. *President.*] Now we have all tested that one rivet which has not been marked as loose, and we find after striking it at least 150 times, and with harder blows than usual, that it is not loose, and you consider that it is a loose rivet? No, you are not putting my words fairly. I say that I would not call it a loose rivet, but it is to my feeling as loose as some that have been marked as loose. I would call it a tight rivet, and so I call those others that have to my feel as much play as this one has.
1137. But it has no play? I feel it to have a little play.

Mr. W. J. Hilzinger further examined:—

Mr. W. J. Hilzinger. Feb., 1885.

1138. *President.*] Did you mark the rivets in this bridge yourself? No, my men marked them.
1139. What instructions did you give them? To sound all the rivets and to mark those which were loose, and to be particular not to mark them unless they were positively loose—unless they could hear them rattle in the holes or see them move about.
1140. *Mr. Blacket.*] Were the men accustomed to the work? One of them I have had working for me twelve or fourteen years in different shops. I have had them between two and three years sounding rivets.
1141. One of them had been employed in Africa, had he not? Yes, he has been over the rivets recently

to

Mr. W. J. Hilzinger. 23 Feb., 1885.

to see if all those that were marked were loose, and if not to rub out the marks, and he found a lot with no marks which he marked. I suppose the marks had been washed out.

1142. *President.*] Do you know how many blows were given to the rivets to see whether they were loose or tight? Just one tap, and when the men found one that appeared to be loose they tapped it on both sides.

1143. Half-a-dozen taps I suppose would be sufficient? No, not half-a-dozen; it would take six months to sound all the rivets on the bridge at that rate.

1144. And have all the rivets in the bridge been tested? Every one, except the ends.

1145. But in the booms top and bottom? Yes.

1146. And those rivets that are marked are those that are considered to be loose? Yes.

1147. And you have been over them yourself since? Yes, pretty well all of them. I was here the first time they were marked. If the men found one they were doubtful about I examined it myself.

1148. Do you consider that those which are marked now should be replaced? Not all; in the case of some of them it would not be necessary.

1149. Which do you think require to be replaced? I think all those in the joints, and where there are three or four loose ones together, but where there is only an odd one or two I would not.

1150. *Professor Warren.*] Where there are half-a-dozen rivets like these (*pointing to the top boom*), would you replace them if they were loose? Yes, where there is a batch together like that. It all depends on how loose they are. Some are more loose than others; some have only a slight jar; when they have only a slight jar I would not replace them.

1151. In a case where one in every six is loose, you would not consider it necessary to replace them? No.

1152. *President.*] In a case where you have a number together (say eight or ten) loose, would you replace them one at a time, or would you take the whole lot out and put in service-bolts? At a place like that (*the joint of an angle-iron*) we would take the whole lot out and take the angle-cover off, and heat it so as to close it in its place hot.

1153. Have you found that the first few rivets you had put in in such a case became loose when you put in others afterwards: Say that you took the whole of them out; have you found that you loosened the first few that you put in by putting in others afterwards? No, not when we put the covering plates on hot and closed it. We put the bolts in and closed it well before we put in any rivets at all.

1154. If rivets are put in in the way you described at M'Donald River, do you think that some of the rivets first put in could be loosened by others being put in afterwards? If the work is close and the rivets were tight before, they will not become loose, but if the work is not close, then, of course, the rivets will shake loose.

1155. *Professor Warren.*] The work being such as is in this bridge—ordinary riveting—in which no particular trouble has been taken to make the head as hot as the rest of the rivet, do you think there is any danger of loosening a rivet by putting in an adjacent rivet? Not if the work is close and the rivets were tight previously.

1156. *Mr. Blacket.*] In the event of the Government Inspector condemning a rivet as loose, while the bridge was in course of erection, could the contractor tighten that rivet without taking it out? No; all the time he is trying to cobble it up he is loosening it. It would be just the same as hammering it.

1157. If the work was not properly done at the beginning it could not be rectified; the rivet would have to come out? Yes, in the case of these big rivets; with little ones of course it is different.

1158. *President.*] This bar is marked as not being in contact with the plate, and yet four of the rivets are not loose? That is because they are little short rivets, and the heads as well as the points have been made hot. They could not make the point hot without making the head hot also.

1159. If one of those rivets in the booms is tight, how many blows—ordinary blows—would be required to make it loose? I do not think you could make it loose. You might hammer it for a week, if it was solid, with a 4-oz. hammer, like that you have in your hand, without shaking it.

1160. You have told us before that the rivets have not been tested with heavier hammers than this? Yes; I have never carried about a heavier hammer.

1161. In testing the rivets you have never intentionally loosened any of them? I always had strict orders and always gave strict orders to my men never to use heavier hammers than that to test the rivets. When one of these hammers has not been at hand I have taken an ordinary hand-hammer to test them with.

1162. *Professor Kernot.*] Then you say that the rumours which have reached us as to rivets having been intentionally loosened by heavy hammers and by violent treatment are absolutely without foundation? Yes. We of course hit them a little smarter than you do, but never harder than this (*showing by a blow*).

TUESDAY, 24 *FEBRUARY*, 1885.

The Commission met at the Aberdeen Bridge.

Present:—

G. A. MORELL, Esq., C.E., President.

W. C. KERNOT, Esq., Professor of Engineering,
W. M'D. COURTNEY, Esq., C.E.,
W. H. WARREN, Esq., Professor of Engineering,
OWEN BLACKET, Esq.

Mr. Robert Ewing further examined:—

(*At the request of the President, the witness examined a number of marked rivets in No.* 1 *up-stream girder, near south end of bridge.*)

Mr. R. Ewing. 24 Feb., 1885.

1163. *President.*] You have just tested a number of rivets in two bays of this girder, what do you consider to be the result of your test? It harmonizes with the marking, though there is only one rivet that is really loose to the sound; the others are so slightly loose that they require feeling. All those that are marked are certainly feelable, but there is one that is hearable.

1164.

Mr. R. Ewing. 24 Feb., 1885.

1164. Out of 298 rivets in these bays you find that there are nineteen more or less loose? Yes, if you can call them loose.
1165. If you do not consider them loose you are not obliged to say they are? Perhaps imperfect would be a better word. One is decidedly loose.
1166. *Professor Warren.*] You say slightly loose? Well, there are loose rivets and rivets that are loose, just as there are drunkards and men who drink.
1167. *Professor Kernot.*] You would say loose to the touch? Feelable, I would say, and one that is hearable; one loose to the ear and the others to the touch.
1168. In your evidence yesterday you stated that a tight rivet might become loose in testing by constant hammering? I think so; as a matter of fact I have done it, but with heavier hammers than these.
1169. But did you find out that it was a perfectly tight rivet and in a place where the plates were in perfect contact? Yes.
1170. How many blows did you give? I cannot tell you the number of blows.
1171. Do you think that heavier hammers than we have been using have been used on these bridges? I believe that heavier hammers than these have been used but I am not prepared to say what was the weight of them.
1172. Do you know of your own knowledge that such hammers have been used? I do not.
1173. It is only your impression? It is only my impression.
1174. And that impression is obtained by having seen one or two rivets which seem to have had stronger blows than the others? Yes; from the appearance of the rivets.
1175. But if only one rivet out of 150 seems to have had a stronger blow than usual and it shows the blow on the sides, how is it that the others do not show signs of similar blows? Well it may have been that what looked like a defective rivet did not show it at the first blow and it was given an extra blow. Some of them do appear to have had an extra blow.
1176. *Professor Warren.*] And you consider such an extra blow sufficient to loosen a rivet? To mark it, decidedly. It would of course make a greater impression on the head and it would also tend, I think, to make the looseness more marked.
1177. You see that many of the plates are not in perfect contact with the angle-irons and also that some of the butts are wide apart. Do you think that the work would be improved if the joints were closer and the angle-irons were in better contact with the plates? I do not know that that is a question I am competent to answer; it is more a theoretical question I think. I would say this: These parts of the bridge are in compression, and if there had been any movement, any sagging, or undue deflection, I think——
1178. That is not the question. The question is, would it make better work to have the plates in contact? Most decidedly it would be better work. That is certainly defective work.
1179. With regard to those rivets that are slightly loose, do you think they are likely to become looser in consequence of the vibration caused by the traffic passing over the bridge? I think not.
1180. *Professor Kernot.*] Suppose that the plates of the bridge were in perfect contact and that one rivet was loose, do you think the renewing of that rivet would have any effect in loosening the adjoining rivets? I think so.
1181. That is if the plates were in perfect contact? Yes.
1182. Would there be any difference if the plates were not in perfect contact? The looseness would perhaps be more perceptible in the adjacent rivets.
1183. *President.*] But if you had to replace a number of rivets side by side and the plates were in perfect contact, every rivet you put in would loosen the one previously put in according to that? No, I think not, not when putting in a row. I think Mr. Blacket will know that, as a rule, when boiler-makers are doing boiler work and there is a difficulty in getting the plate down in some parts, as at the landings for instance, the men go back on the work one or two rivets.
1184. *Mr. Blacket.*] Is it not a common thing in practice to find, even when a job is finished, that a rivet is loose and a new rivet has to be put in its place, and that this is done without loosening the rivets on either side? Yes, sometimes, but it is not often the case. Sometimes you have to take out more than one.

Mr. Peter Morrison, general foreman, sworn, and examined:—

Mr. P. Morrison. 24 Feb., 1885.

1185. *President.*] What position do you at present hold in the service? I am general foreman in the Permanent Way Department.
1186. You were present at this bridge while it was being erected were you not? Yes.
1187. What was your position at that time? I was inspector of buildings and bridges.
1188. Under Mr. Wade? Yes.
1189. Do you remember the bridge coming here in sections as it arrived from England? Yes.
1190. Was the whole of the trough of the booms riveted in one piece? Yes.
1191. *Professor Warren.*] Just the length from angle-iron to angle-iron? From plate to plate.
1192. *President.*] Who was the contractor for the erection of the bridge? Mr. Smithyman.
1193. What were your duties in connection with the erection of the bridge? To look after the sinking of the cylinders and to get everything ready for the superstructure; also, to see as well as possible how the work came together. I believe that the holes for the rivets were all very fair holes.
1194. Had you to test the rivets for the Government? No.
1195. Not to see that they were tight? Well, yes, I was supposed to do that.
1196. And you did it? I believe so.
1197. Do you remember if there were any loose rivets in the parts that came from England? I could not say; I had nothing to do with that at all.
1198. Had you a copy of the specification? Yes, I had a copy.
1199. Did you remark that in one of the clauses it is stated that the plates are to be in perfect contact? It is too long ago for me to remember.
1200. To make good work the plates and angle-irons should be in perfect contact? Yes.
1201. You see a number of joints in the bridge with spaces between them;—can you remember whether that portion of the work was done in England or here? That work was done here—that scarf.
1202. Do you remember these false-punched holes in this joint (*in centre span of up-stream girder*)? No, I do not.
1203. Then you cannot tell us how they occurred? No, I cannot now.

Mr. P. Morrison. 24 Feb., 1885.

1204. Do you remember anything being said about these open joints—this bad butting of the plates? No, nothing was ever said about that.
1205. Not by Mr. Wade at the time? No, he was satisfied with the work.
1206. If you had seen these bad joints and these false-punched holes at the time, would you have drawn Mr. Wade's attention to them? Yes, certainly, to those holes in particular.
1207. Do you think the work would have been better if the butts had been close and the holes truly punched? Well, the holes are the worst. I must say that the work would have been better if the holes had been fair holes, but I do not think so much of the plates as the one is scarfed over the other. The plates pass one another and form a scarf.
1208. You have had, I suppose, a large experience of riveting? Not very much experience of riveting.
1209. But you can say whether rivets are well put in or badly put in? I think I can.
1210. Can you remember the way in which the rivets were put in by the men employed by Mr. Smithyman;—were they heated rivets? They were.
1211. Can you describe to us the plan they adopted in riveting? The rivets were made quite hot, then put in and snapped over with a snap-punch.
1212. Were they heated through? Yes.
1213. Including the head? Not so much the head, but about three parts of the rivet and sometimes the head too.
1214. Did they use a riveting plate, or did they only put the rivets into the fire? Only just put them into the fire.
1215. They had no plate into which they put the rivets vertically? No, they did not put them in that way.
1216. You see here an opening or bad joint between the angle-iron and the diaphragm of the cross-girders? Yes.
1217. Was that done in England? Yes, except the one that comes opposite to the scarf; the remainder were all fixed to the boom.
1218. *Professor Kernot.*] Do not the rivets that hold on the cross-girders also hold on the diaphragms? Yes.
1219. Well, were the cross-girders riveted on in England? The cross plates in the box-girders were riveted in England; also the bottom girder at one end, and the top girder at both ends, excepting the scarfs.
1220. *President.*] The contractor for the erection of the bridge had everything sent out for him from England? Yes.
1221. And he put it up just as it came—he did not make the pieces? No.
1222. He fitted the work just as it came out? Yes.
1223. *Professor Kernot.*] Can you give any account of these holes (*pointing to a number of holes near the northern end of the up-stream girder*). You will find them in similar positions on each span of the bridge? I cannot; I am sure they were there once.
1224. What, that rivets were there? I cannot give any explanation at all of those holes. I was under the impression when I said the rivets were there once that there had been someone here who had cut the rivets out; but it appears that they are blind holes.
1225. There is another peculiarity that occurs here—what is the meaning of this (*pointing to a number of dummy rivets in one of the boxes*)? They are only just filling up holes in angle-irons. They are neither one thing nor the other. They have simply to be filled up. They do neither good nor harm to the work.
1226. Are you aware whether in other bridges of similar design there is any work attached to that part? I do not think there is.
1227. Will you look along the top boom of the girder, and see if you notice any peculiarity? It is slightly out of line near the north end—about an inch I should think.
1228. *Professor Warren.*] You would not pass that? I do not think I would.
1229. You consider it a defect? It is a slight defect.
1230. Do you think it sufficient to justify the condemning of the work? No, I do not think so.
1231. Would you pass that work—(*pointing to a joint of channel iron strut with stringer plate near pier, where five rivets out of seven were loose*)? I find that they are slightly loose, but what has been on them. There has been a little sledge-hammer work about that. I would pass that.
1232. Would you pass such work as this (*pointing to a compression diagonal near centre of middle span up-stream girder where there was a "dummy" rivet*)? No, but I am not sure that it was always so. I should think that was the only putty rivet in the bridge.
1233. *Mr. Blacket.*] Will you go into these two bays (*those in which the rivets had been tested by the last witness*) and test the rivets, telling us how many you consider loose? There are about two slightly loose.
1234. Did you hit the rivets on both sides? Yes.
1235. And you consider that there are only two loose? That is all.
1236. *President.*] I will ask you to go over the bays again with Professor Warren and myself. (*Witness made a second examination as requested.*) What is the result of your further examination;—do you not find that there are five loose, four slightly loose, and four not loose? Yes.
1237. You stated that there had been some sledge-hammer work about the rivets in a portion of the bridge you examined;—what did you mean by that? Well, it is only hearsay; I do not say that it has happened.
1238. You do not know it of your own knowledge? No, certainly not.

Mr. W. J. Hilzinger further examined:—

Mr. W. J. Hilzinger. 24 Feb., 1885.

1239. *President.*] You have had something to do with the testing of the rivets in this bridge? Yes.
1240. Did you test them personally? I was here all the time. I had two men tapping them and I was following them about and looking after the butts and the wide places.
1241. Did you see how the men were tapping the rivets? Yes.
1242. What kind of a hammer did they use? A hammer similar to those we always use—one like this (*showing a hammer weighing 3 or 4 ozs.*).
1243. Did you ever see them use a heavier hammer? They had no heavier hammers.
1244. They did not use a heavier hammer by accident? No, only these little testing hammers.
1245. They never used a sledge hammer? No, we never had one with us.

Mr. W. J. Hilzinger. 24 Feb., 1885.

1246. *Professor Warren.*] But there are marks on some of the rivets that have not been made by these hammers? Just show me one and I will explain how that was done.
1247. Here is one? That was struck when it was hot. Where there are any marks on the rivets, they were made when the rivets were hot, and the testing hammers have happened to strike the same place.
1248. *President.*] You have reported upon a good many defects in this bridge, particularly as to bad rivets, and the cutting of the plates? Yes.
1249. I see many places marked on the booms and angle-iron covers: Are those the places to which you refer? Yes, pieces of straw are sticking in most of them, so that you can see them easily.
1250. Which do you consider the worst places? Here is an angle-iron cover which is nearly a quarter of an inch from the angle-iron.
1251. That is not what I mean; I want you to point out the worst of the bad buttings? I think this is (*pointing to a bad butt about* 12 *feet from the centre pier in up-stream girder*). It is open about five-sixteenths of an inch. (*The witness then walked along the top of one of the girders, directing the attention of the Commission to the joints in the top booms of both sides of the bridge, and pointing out those that were open to a greater or less extent.*)
1252. You consider as the result of your examination that most of the joints made in England are close? Yes, all through.
1253. And that those made in erecting the bridge are mostly loose? Yes, mostly loose.
1254. Have you examined the bottom boom? Yes, from the inside.
1255. And what do you find with regard to the butting of the joints? In the bottom booms they are fairly good, excepting the ends of the cross-girder plates. Some of them are open a good deal—about three dozen I think. There are some very wide on the up-stream side.
1256. Will you point out a few? Yes. (*Witness pointed out a few as requested.*)
1257. The diaphragms of the plates you have just looked at are not in contact with the web plate of the boom? No.
1258. Could they have been put in contact without straining the plates? If they could not have been brought into contact a liner should have been put in between.
1259. Have you observed that where they are not in contact is principally at the covering plate of the vertical plate of the boom? At the butts of the bottom boom web plate and the end of the cross girders.
1260. *Mr. Courtney.*] Have you ever tried how much these bridges are out of line? No.
1261. *President.*] What other defects do you point out in this bridge? A lot of double holes and the plate torn away through the holes having been punched from the top side where they should have been cut up from the bottom, so saving the tearing away of the plate. (*Witness pointed out several such holes in the top boom of centre span down-stream, near No.* 3 *pier.*)
1262. That was done in the erection of the bridge, not in the work as it came from England? Yes, in the erection.
1263. Can you point out any other place where the same thing occurs? (*Witness pointed out a number of double holes in various parts of the bridge.*)
1264. All those double holes seem to be in the joints that were made during the erection of the bridge? Yes.
1265. Do you know of any in the joints of the work as imported? No, all the double holes are in the work done here.
1266. The work did not fit properly and additional holes were made to make it fit? If the butts had been brought up close and fitted fairly the holes would have been fair. It is in consequence of the butts not having been drawn up.
1267. With regard to the contact of the angle-irons and plates we find that several are not close. Does your idea of riveting apply to this bridge as well as to the others you have examined in cases where the plates are not in close contact? Yes, the plates and angle-irons should have been bolted up and closed properly before the rivets were put into the holes.
1268. *Mr. Courtney.*] Have you ever thought that this shear in the holes in the flange plates was owing to bad scaffolding? I do not know anything about the scaffolding.
1269. But the reason is this: The work that has been jointed at home is close, and what has been put together here ought to be close also unless it were on account of bad scaffolding. Has it never struck you that that was so? Of course it was all on account of not having proper staging and not properly drawing the work together that the butts are bad.

WEDNESDAY, 4 *MARCH*, 1885.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E., | W. H. WARREN, Esq., Professor of Engineering.

OWEN BLACKET, Esq.

W. B. Wade, Esq., Inspecting Engineer, further examined:—

W. B. Wade, Esq. 4 Mar., 1885.

1270. *President.*] You were requested by the Engineer-in-Chief in June, 1883, to inspect the iron bridges at Aberdeen, Peel River, and Peel-street, Tamworth, and M'Donald River, on the Great Northern Railway? Yes.
1271. To ascertain the correctness of certain statements made as to defective construction; and you reported to the Engineer-in-Chief on the subject? Yes.
1272. The Aberdeen bridge was erected under your special supervision? Yes.
1273. Who was the inspector under you? A man named Morrison.
1274. Could you trust him as a competent man to see that the work was well put together? Yes.
1275. Had he any other duties to perform in addition to looking after the works? He was over the bridges, but I think at the time the Aberdeen bridge was built there was nothing to take him any distance away—only the neighbouring viaduct; I fancy so; I would not be certain about that.

W. B. Wade, Esq.
4 Mar., 1885.

1276. Did you yourself frequently visit the bridge? Constantly.
1277. Do you consider that the Aberdeen bridge has been erected in a satisfactory manner? Yes, I consider it a very good bridge indeed. It was the first drilled bridge we had, I think, in the Colony. A number of people visited it in the course of erection, and they all used to remark about the extraordinary accuracy of the work and the excellent way in which it fitted.
1278. Are all the plates and angle-irons in close contact? There are some small faults to be found in the butt joints; otherwise I am sure they were all in close contact. I may say that was observable at the time in 1871, and it is in precisely the same position now.
1279. Do you think the bridge would have been benefited by having close butting joints? I do not think it would have been benefited in the least. I do not think it would have been a bit the better for it, except in appearance.
1280. You saw a space between some of the cross girders and stay-plates? Yes, I think there were some of them that did not fit—that were not in very close contact.
1281. Do you think that if they had been in close contact the vibration would have been less? I do not see how it could be so at all; I do not see how it could affect it. Of course they are strictly bound down by the width of the longest cross girders. If you have certain cross girders longer than the others all the others are bound to be somewhat loose.
1282. Would it not have been better to have put liners to make the joints close? There was not space enough for liners; it would have been too small for a practicable size; I doubt if they were measurable.
1283. The girders—the iron-work generally—was imported from England in sections? Yes.
1284. The boom plates and the lattice-bars separately? Yes; the lattice-bars were not riveted one to the other.
1285. But the sections of the booms were riveted in England? Yes.
1286. Did you remark in those sections that came from England riveted together, where the joints were secured, that the butting joints were not close? Yes.
1287. Was that the fact in the portion that came from England? Yes. I am not at all sure whether in those days they planed the butt joints.
1288. Are you sure that some of those badly butting joints were riveted in England? I think so. You see the smallest irregularity in the butt joint would make it appear open from the edge. It does not follow that some part of that butt is not in contact.
1289. But some of the worst of the butting joints were made in the Colony during the erection? Well, I could scarcely say. Of course there is no choice in the matter; your holes are drilled through, and you must fit the holes, and if the joint does not butt you must take it at that, because you are bound down by the position of the hole. Perhaps I may remark that I do not consider the butt joints as of the least consequence except for appearance, for they are either methodically true or they are just as bad as if they were put apart.
1290. Was the bridge put together in England before it was sent out here? We always presume so.
1291. Do you not know for certain? I may say for certain, for nearly every bridge we have had was.
1292. Well if it were put together in England with service bolts, the butting joints must have been close? I do not see how the joints could ever have been different from what they are now. It is the same camber.
1293. If it were put in the yard would it have been passed by the engineer there unless the joints were fairly butting? We must only presume that it was passed.
1294. Did you remark that in several of those joints which were put together in the Colony during the erection—in three or four to my knowledge—there were double holes for the purpose of making the holes in the plates coincide? Yes, I remember that; I remember a few of them.
1295. That was not done in England? I presume so. We certainly did not drill any holes here.
1296. But these double holes which form a kind of oval hole were not made in England, surely, unless they had some special rivets to fit them? I presume that the original riveting when they came to put it together in England would not fit with the other holes—the holes would not come opposite one another; so they had to lengthen one of the holes to bring it in. We never drilled any holes here.
1297. Do you think the inspector should have passed the work without some better provision for the joints? The only thing he could have done would be to have had the plate cut out, and that is rather a serious matter when a lot of rivets have been made. If there had been a hundred rivets in one of the plates made he would have had to loosen all those for the sake of one or two others.
1298. These double holes occur in the angle iron, as well as in the plates themselves? The angle iron wrappers are very small—that could easily have been replaced; but in regard to a plate it is a very serious matter to condemn a long plate with a lot of rivets in it for the sake of one hole.
1299. *Professor Warren.*] You say for the sake of one hole? Yes.
1300. There are a lot of holes? There were a lot in one bridge!
1301. *Mr. Blacket.*] Six or seven in one place? Whereabouts in the bridge?
1302. *Professor Warren.*] In about six places? A main plate with the boom or a web plate!
1303. Main boom plates principally.
1304. *President.*] You can put a wire by the head of the rivet into the hole where the rivet is put in, showing that it is an elongated or double hole? Where is that?
1305. In the boom plates, towards the end? In the compression part of the boom!
1306. *Professor Warren.*] In the tension part and in the compression also; it occurs in six places altogether? You can put a wire in and through the hole! How many plates does that go through—one or more?
1307. You can only see it in one plate.
1308. *President.*] Did you find any loose rivets in the Aberdeen bridge? On my last visit?
1309. At the time of your visit to report upon it? Scarcely loose rivets—rivets that would vibrate, but not loose in a boilermaker's sense. But I noticed that all rivets or nearly all that had been marked with a pencil had had a tremendous hammering; they were all of them quite flat in the head.
1310. You state in your report that the course adopted in the maintenance department seemed to be to despatch the man Hilzinger armed with a heavy hammer to knock the rivets about until he could report a number of them loose, and then cut out and replace as many as he thought proper? Yes, I believe that is their custom.

W. B. Wade, Esq. 4 Mar., 1885.

1311. Is it only your impression, or did you get a report from anybody that this was the case? A man came to the office—I forget whether I was present or not, but I know Mr. Whitton has his evidence—and stated that was the case, and that he left the work because of the way in which the rivets were treated. And I know that wherever Hilzinger has been the rivets have been knocked about.
1312. Do you think that man could swear that Hilzinger used a heavy hammer, as reported? He did swear.
1313. Who was the man? I could not say, but Mr. Quodling has the evidence reported. I dare say you remember the day we were at Menangle, when Hilzinger came up with a heavy hammer prepared to show you how to loosen rivets, and Mr. Cowdery said, "No, I don't want you to show that."
1314. But you never saw him use a heavy hammer in the way you mention? No, I never saw the man in my life, except on that occasion at Menangle.
1315. At the time of your inspection you tested the iron bridges on the Northern Railway, and you stated, with regard to the Aberdeen bridge, that the deflection of span No. 1 was $\frac{6}{10}$ of an inch, of span No. 2 $\frac{6}{10}$, and of span No. 3 $\frac{5}{10}$; this was with an engine weighing about 70 tons? Yes.
1316. How did you register your deflection—at what points of the span? The centre.
1317. But how did you register the deflection? With a level on that occasion.
1318. You stated that before the bridge would fall an enormous deflection would take place? Yes.
1319. Your extension you put here—extension of the iron—would be enormous? Yes.
1320. Can you explain the meaning of this? Yes; I dare say you remember some twenty years ago or upwards there was a great cry out about an enormous weight of iron being swept out of Britannia bridge in rust; people got alarmed about it, and there was a great deal of writing in the newspapers about it. But the newspapers came to the conclusion that before there was any danger the deflection would become so enormous that everybody would notice it; and in taking a span of this sort I consider that before any danger could take place, all the plates would extend (say) 5 per cent., and if you extend them to 5 per cent.—say 5 per cent.—and then take the proportion of the new line or curve showing the extension to the original horizontal line, and compare that with the vertical line, you will find you have gone down 20 feet.
1321. *Professor Warren.*] That is assuming the elongation to be 5 per cent.? Yes; the elongation of one or both the beams before it reached its rupture point would have caused a descent of some 20 feet. That is to say, if you take the half bridge the length of the new line and the length of the old line, then the perpendicular between the two will represent some 20 feet. (*Sketch submitted by witness.*) That shows what the result of straining to a large per centage would be in practice.
1322. Do you consider that a riveted structure such as a bridge would elongate—that is to say, that the tension-boom would lengthen as much as 5 per cent.? I do; and I am not quite sure but I fancy I could bring you results to prove it by some of the riveted beams broken by Baker. I forget to what they extended, but it was a very large amount. One of the conclusions he came to with regard to the breaking of those beams was that the rivets acted as clamps only and not as pins.
1323. Referring to the question which the President asked with regard to deflection;—did you consider the result obtained with the 70 tons engine satisfactory, seeing that with 170 tons you got very little more deflection? One was practically a central load and the other was a distributed load.
1324. But you would have expected the deflection to be in proportion to the load? No, not strictly proportionate to the load. It would be rather a complicated result to work out with the different points of loading.
1325. But taking the weight of 170 tons distributed over the whole bridge;—suppose you had half that weight distributed in a similar manner, would the deflection be one-half or more than one-half? More than one-half.
1326. The result of your test would be more than that of 70 tons distributed? It would be equivalent to more than 100—decidedly.
1327. There is another question, on the violent treatment that the bridges are said to have received, and which is said to have caused loose rivets: You stated, I think, that you noticed the rivets had been hammered? Yes.
1328. In how many cases? A great number.
1329. At all in proportion to the number of rivets loose—there are a lot of rivets marked in Aberdeen bridge, and on a few rivets there are marks of a larger hammer than an ordinary testing hammer; but those are a very small proportion to the total number of loose rivets? I never saw any loose rivets—not worthy of the name. There may have been a few odd ones, but nothing to compare or to be named in the same day with the number marked.
1330. *Mr. Blacket.*] If the rivet had a flat head and the paint had not been removed would you say that had been done with a heavy hammer? It would be difficult to say; the bridge may have been painted recently.
1331. The bridge has not been painted recently. Did you ever notice a holder-up with his dolly on one side of the rivet, and the rivet-head hot, and he put a flat appearance on the rivet? Oh, yes.
1332. Could that not have been done? Possibly, but I believe the marks were from the hammer; they were too small to be from the effect of a dolly.
1333. *Professor Warren.*] And too large to be the effect of a small riveting-hammer? Well, they are too large for a small riveting-hammer. The rivets were all tested during the construction; I suppose I tested many thousands of them myself during construction. And there is another thing. Mr. Bewick has had charge of the Aberdeen bridge for twelve years, and has had it looked to every year, and never found fault with it until this man Hilzinger worked at it as he liked. I believe it was Mr. Bewick's custom to have men every year or every two years to test and examine the bridges.
1334. Did you notice that the third span nearest Tamworth was out of line? Very, very slightly. It is not an absolute straight line.
1335. It occurs at the last angle iron cover? It is very, very slight.
1336. You do not consider that of any consequence? Not the slightest.
1337. And you do not consider that there are really loose rivets in the angle iron covers? Not a quantity; there may be an odd one or two.
1338. Nor in some of the more important lattice-bars? I think I was pointed out some of the lattice-bars, but I do not consider them as of the smallest importance.
1339. I do not mean the sections, but the rivets uniting the lattice-bars with the struts? With the web: no, I was not shown any.

W. B. Wade, Esq.
4 Mar., 1885.

1340. But you would not pass loose rivets in that position? I would not pass loose rivets anywhere; but where there is a rivet loose it is very rare indeed that it is advisable to put a new one. That has been my experience.
1341. How was it that the struts were not brought in contact with the stringer plate? The web plate?
1342. Yes? I was not aware they were open. There are some cases where a washer has to go in.
1343. I do not mean that? They are in contact in some portion I suppose. They ought to be in contact to make neat work, but I do not see how that can affect the strength unless the channel iron has been damaged, but it is not at all likely.
1344. With reference to the tension bars, towards the end of the first span and towards the third span several cases occur in which the rivets have not been put in; we have a blind hole instead of a rivet? I suppose it was not considered advisable to make a new hole without having proper appliances, but I am not aware of it.
1345. With reference to the rivets at the intersections, you do not consider that it matters at all whether they are loose or not? No.
1346. *Mr. Courtney.*] Did you notice in the specification it was specified that no machine riveting was to be done in that bridge? No.
1347. It is so specified? Is it?
1348. Yes. I was going to ask you whether, at the time it was brought forward, any remark was made upon it? I do not remember it. (*Specification shown to witness.*) I never noticed that before. But it is negatived. It says it must be executed by hand, but it does not say it must not be executed by machinery; and the question is what at that time—about '67—was the position of machine-riveting at home.
1349. *Mr. Blacket.*] We had steam riveters out here? They were in use, but were they considered a good thing?
1350. *Mr. Courtney.*] Yes? I never noticed this in the report, but I dare say Mr. Baker will be able to explain.
1351. *President.*] You also tested the Peel River bridge at Tamworth and the bridge over the M'Donald River? Yes.
1352. And the result is stated in your report? Yes.
1353. Do you consider the work in those bridges satisfactory? Yes, very good indeed.
1354. Do you consider rivets likely to be loosened by the traffic, or expansion, or contraction of the iron? There is no question whatever that the expansion and contraction of the iron affect the rivets. Every writer on rivets says so.
1355. In the course of time there would be a slight looseness in several of the rivets? No doubt of it.
1356. And that would account for some of the rivets being slightly loose? No doubt of it; and moreover in every work it is universally admitted that there are a number of rivets which the least tap or pitch will make loose.
1357. The heavier the traffic the greater would be the looseness of the rivets? I do not think so much of the traffic, for it is limited to a few hundred tons; but the expansive forces amount to many thousands of tons.
1358. But heavy traffic would bring more deflection on the girders and more strain on the rivets? Yes, it would have that tendency; but the expansion and contraction of rivets between plates must lengthen rivets.
1359. Not sensibly? I think so.
1360. Do you think this apparent looseness of rivets is caused by the way in which the rivet has been put in? No, I do not think so.
1361. By the coldness of the head of the rivet when put in, so that it would not expand? The head of the rivet should always be kept hot. I will tell you one thing I have noticed lately on these new bridges of ours that came out in a different form: Our more modern bridges came out in plates and also without any web, consequently all the boom comes out as pure plate to which you can apply the hydraulic riveter with very great ease, and constantly we are using the hydraulic riveter.
1362. But the plates could not have been put in perfect contact? That is the fact, however, and by the best makers.
1363. Did that occur in the Dubbo bridge? Yes, I believe it did—I know it did; I saw some.
1364. Did you cause some of the rivets or hydraulic rivets to be cut? No, I did not.
1365. To see how they behaved in the riveting? No, it would be such a deuce of a job that I did not try to cut them.
1366. But if you passed them through four or five plates you could have seen whether it was good all through the hole? I did not do so.
1367. Here is a rivet that came from the Peel-street (Tamworth) bridge (*rivet produced*). The portion near the head has not been much upset in the riveting, whereas a portion of the bat has filled the hole completely. In the riveting you might have seen whether such an effect took place? The rivets should be tight, but it is a very difficult matter to get them so.
1368. Do you consider this rivet has a good head? No; not a good one; only so-so.
1369. It would make better work if it had more metal in it? Yes.
1370. Here is another, for instance (*rivet cut in two produced*);—is that an old or a new head? An old head; it is about the right proportion. But this has been so much on one side that the whole lot has been cut under the snap, I expect.
1371. *Mr. Blacket.*] They are all the same. This one with the head was cut off; you could almost take it out with your finger? There is one in the Aberdeen bridge that could be cut off, and was condemned as a loose rivet.
1372. We have that: that came from the M'Donald River.
1373. *President.*] You refer to a rivet at the M'Donald River that could not be knocked out;—do you know the circumstances connected with that rivet. "At M'Donald River bridge I find there is a place where the head of a rivet had been cut off, and the rivet being too tight to get out either by hammering or driving, remains there still." (*Rivet produced.*) Do you remember which way it was cut off—whether the head or the bat was cut off to drive it out? Indeed I cannot tell you, but probably the head was cut off. I could not tell you. It had been cut out before I got there.

W. B. Wade, Esq. 4 Mar., 1885.

1374. Who was the contractor for the erection of the Aberdeen bridge? A man named Smithyman, who has erected a good many bridges for us.
1375. He had the specification as his guide? Yes.
1376. Did he work closely to that specification? Yes.
1377. Do you consider him a good contractor for that kind of work? Very good, indeed—one of the best in the Colony. He certainly has had more experience than any other man in the Colony on the question.
1378. Do you think that if those defects that have been mentioned in the Aberdeen bridge had not existed the bridge would have been better? No, not a bit; not for any practical purpose. I consider there could not be a better bridge for its purpose of carrying a railway train than the Aberdeen bridge. There might possibly be a neater one, but I do not think there could be a better one—I am sure there could not.
1379. If the maintenance of these bridges were in your hands would you have the rivets in the bridges tested periodically? Certainly—oh, yes.
1380. If you found a number of loose rivets would you replace them? What I considered were loose—If there were any, that is to say. I should consider it my duty to replace a really loose rivet.
1381. Then in those iron bridges on the Northern Railway you would not think it necessary to replace any of the rivets? No.
1382. You do not think those bridges would be benefited by doing so? No, I do not.
1383. *Mr. Blacket.*] Was there no size given with regard to the rivets—that the rivet head should have a certain amount of metal in it? Oh, yes; it is in the specification. But then I would not condemn a lot of English rivets if they were a little too small—if they would not quite make the head specified for. We had a case where a lot of English rivets were a little too short to make the head specified for, and the question was whether we should condemn a lot of rivets and get inferior ones in the Colony. I say no, make the best of it. I think our size is a little too large. I notice that the English rivets latterly are not so large as we have specified for, in the heads.
1384. But what is the use of a specification if it is not worked to? Well, if you cannot work to it you must come to an explanation and see the reason, and if it is a fair reason why the rivets are not keeping this head then we must keep to the letter of the specification.
1385. *Professor Warren.*] You quoted Baker as to rivets acting as clamps, and no doubt they do act as clamps. What would be the action of rivets that are really loose, that you can knock from side to side? I say that rivet only fills a hole.
1386. But a rivet that you can fairly shake cannot act as a clamp? No.
1387. *Mr. Blacket.*] Did you have any rivets cut out? Oh, yes; scarcely a day passed during the erection but some were cut out.
1388. Do you know whether many of them showed signs of burning or heating? Many of them. That was a very common cause for cutting them out, because the head was burnt.
1389. The middle I mean (*rivet handed to witness*)? I am sure that the principal thing loose rivets teach you is that there is no shear going on.
1390. *President.*] That is to say there is an excess of rivets over those required? A very large excess.
1391. And a few that would be loose would not affect the strength of the bridge? The least possible shear would make those rivets tight. I say there is no shear going on where you find loose rivets.
1392. The effect of a section of the rivets always exceeding is to affect a section of the plates? Yes. But that is the principal lesson you learn from loose rivets—that there is no shear going on.
1393. *Mr. Courtney.*] At the time of the erection of the bridge did they heat the rivets with a rivet plate? No.
1394. *Professor Warren.*] They did not use a rivet plate? No.
1395. *Mr. Courtney.*] They were put in on the flat in the fire? On the flat in the fire. Riveting in the Colony is rather a loose way of going on. They have only one, two, or three rivets at the time, so that they can manage them with the tongs. I never yet found men who would do the work systematically.

FRIDAY, 6 *MARCH*, 1885.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E., | W. H. WARREN, Esq., Professor of Engineering,

OWEN BLACKET, Esq.

J. W. Drewett, Esq., Assistant Engineer, further examined:—

J. W. Drewett, Esq. 6 Mar., 1885.

1396. *President.*] You inspected the iron bridges on the Great Northern Railway with Mr. Wade and Mr. Russell? Yes.
1397. In June, 1883? I think that was the date.
1398. And reported to the Engineer-in-Chief in July? Yes.
1399. You tested some of the rivets? Yes, a good many of them.
1400. And you found about one in twelve of those that were marked slightly loose; that is what you state in your report? Yes; but I must tell you that I consider these rivets, or most of them, had been loosened by the hammering they had received before they were marked as loose, because there were the marks of blows on the heads of most of those that were marked as being loose.
1401. You know that the paint is easily knocked off, and that this looks like a heavy blow? Oh, yes, the paint is easily knocked off, no doubt, but unless it were a heavy blow it would not make the indentation I saw on the rivets.
1402. On what proportion of rivets did you see those blows? There was a large number; I did not count them; there were said to be some 2,000 or 3,000 rivets.
1403. Not loose? Loose.
1404. You did not see anyone give those heavy blows to the rivets? No.
1405. It is only your impression? Only my impression from what I saw.

J.W.Drewet Esq. 6 Mar., 1885

1406. You saw the badly butting joints in some of the plates in the top booms? Yes, I saw a few of them; there are a few that did not butt closely.
1407. To what do you attribute that? Well, I know it is a very difficult thing in punched plates to get them well one over the other, and the slightest discrepancy in the rivet holes would prevent them butting. The system of shearing or cutting those plates, which is done by a chalk line, generally speaking, is not exactly what you might term joiners' work.
1408. You do not consider that the strength of the bridge is affected at all by the butts being bad? No, certainly not. Of course it is better that the butts should close as nearly as possible, and they are always made to do so, but there may be a failure in a joint by the riveting together of a number of plates. Where five or six plates go together it is a very difficult thing to get the rivet holes exactly in the same position; I should think it was almost an impossibility.
1409. Do you remember seeing some double holes in some of the plates—two holes drilled side by side? No, I did not see anything of the kind.
1410. The rivet-head hid the second hole partly? You mean the rivet-hole is wrongly punched, or drilled in the wrong place?
1411. Yes? That happens sometimes, now and then.
1412. These were near those bad butts? Yes.
1413. Did you remark some of the joints of the cross-girders with the cross-plates in the bottom boom? Where they joined on to the main girder—yes.
1414. Some of them were loose or open? They were not loose; they were open here and there.
1415. Do you think that would affect the bridge in any way? I do not think it does. It is almost impossible to get those plates so as to have the side-plate almost perfectly straight. It is not like timber that you can work up to anything. You cannot get those plates in a dead line, and if one cross-girder happens to be a trifle longer than the rest there will be a slight gap. If one plate is cut too long and another too short, of course where the short one comes in, there will be a slight gap.
1416. But you think if all these joints had been close, and the butts closer than they are, that it would have been a better piece of work? Of course it would have been a better piece of work, no doubt; but that sort of thing is to be seen in every kind of bridge work. It is perfectly impossible to cut those long plates the exact lengths required, and it might not even depend on the length of those plates, but upon the side-plates being a little out of line.
1417. Your remarks with regard to the loose rivets equally apply to the bridges at Tamworth and the M'Donald River? Yes, I think so.
1418. About the same quantity of loose rivets as you mention? Yes, I think so. I think I noted that—about one in twelve.
1419. You seem to assert in your report that Mr. Cowdery gave directions for the rivets to be tested with a heavy hammer? Yes.*
1420. But have you any knowledge of that? I have nothing more than we have heard that it has been so reported, and I fancy you have the papers in which the manner of testing these rivets has been reported.
1421. But you do not know of your own knowledge how the testing of the rivets was carried out? No.
1422. You do not know the name of the person who has seen it? I only know from having heard.
1423. Have you had anything to do with the design of the bridges in the north? No, I have not had anything to do with the designing of those bridges. There have been a great many of those bridges made, and orders have been sent for similar bridges. They are all 150-feet span. I have merely made a small drawing of the required number of openings to be sent away; I have had nothing to do with them otherwise.
1424. *Professor Warren.*] How long were you on the bridge at Aberdeen? A couple of hours or more.
1425. And you examined both sides? Yes, there were three of us examining; I took the rivets, principally, while Messrs. Russell and Wade were taking levels. More than two hours—four hours I should say.
1426. You confined your attention principally to marked rivets? Yes, we only did that one bridge in the day; it must have taken us half a day.
1427. Did you notice on the marked rivets you found any signs of violence? I did on most of them.
1428. There appeared to be the marks of a heavy hammer? Yes, and some of them sideway blows.
1429. Not marks made with the dolly? Certainly not.
1430. And do you consider that only about one in twelve were loose? I do not consider there were any loose rivets; I consider they are a very good specimen of riveting in ironwork.
1431. But in the rivets that you say were not loose could you detect any vibration? There were a great many that were marked as loose that were not loose.
1432. Are those included in your one in twelve? Yes; we were very careful in testing them. If I had any doubt about a rivet being loose, I got one of my companions to test it. We tested four times over, each of us, and when Mr. Wade tested a rivet in another part of the bridge that appeared loose, he generally called us also. Of course there were some rivets, but very few, that were loose.
1433. Did you notice any blind holes in the lattice-bars—just over the lattice-bars in No. 1 and No. 3 spans—No. 1 span near Aberdeen? Yes, I think we noticed one or two blind holes.
1434. Did you say you did not notice any double holes? No; I did not examine the top booms.
1435. What do you think would be the effect of double holes in tension? I do not think in a large bridge like that with two or three double holes it would have any effect whatever.
1436. But suppose you have half a dozen or a dozen holes in one joint, what effect would it have in tension? It would weaken the tension.
1437. Do you consider that the Aberdeen bridge is a well fitted bridge—that the contact is good? I consider it a very fair specimen indeed.
1438. But you do not consider it as good as M'Donald River and Tamworth bridges, do you, as far as fitting is concerned? I rather think I give my preference to the Peel River bridge, from what I recollect of it.
1439. *Mr. Blacket.*] Just look at that rivet. (*Rivet handed to witness.*) Do you consider the head large or small for that sized rivet—I mean the amount of metal in the head? I think it is a tolerably fair size if the head were in the centre of the rivet.

1440.

* NOTE (*on revision*):—With regard to my reply to question No. 1419 I can only account for the answer given by my not having properly heard the question, and in consequence of my being somewhat deaf. I have carefully gone over my report, and I find no such assertion made by me therein; and I feel satisfied I must have misapprehended the question put by the President. My answer to this question should have been: "I do not assert that Mr. Cowdery gave such instructions, but I understood they were tested in the manner described."

J.W. Drewett, Esq. 6 Mar., 1885.

1440. Compare it with the other end—with the amount of metal in that? That is a little better. You are speaking of the iron here. (*Another rivet handed to witness.*) I do not call that a very good rivet.
1441. Do you consider those rivet heads are small? I consider that rivet (*a section of a rivet produced*) small.
1442. That is a sample of the rest of the riveting? It is small in comparison with the other.
1443. *President.*] Did you remark whether any of those badly-butting joints occurred in the portion that was sent riveted from England? I could scarcely tell that; the bridge had all been painted over, and I could not tell whether the joints were riveted together here in the colony. I did not look over it either, and I do not know how any person could very well.
1444. *Professor Warren.*] What about the angle iron covers? I mean where the two pieces are riveted together.
1445. *President.*] You can see by the different rivets? I did not remark it.
1446. The riveting is different at the joints made in the Colony? Yes.
1447. You were present at the testing of the bridge with Mr. Wade? Yes.
1448. Do you consider that the deflection you obtained there was satisfactory? Yes, highly satisfactory. I do not recollect what it was now, but I think it was about six-tenths of an inch thereabout.
1449. *Professor Warren.*] Suppose that in the joints—say an angle-iron cover, and of course where you have an angle-iron cover you have also boom-covers in these bridges—suppose that in an angle-iron cover you had several loose rivets—rivets that you could just feel move—would it make the joint much weaker? I do not think it would. I do not think it would affect the joint at all. I think it most unusual to rivet up bridge-work as you would a steam boiler.
1450. But would you not be more careful at the joints? If I were inspecting a work of that kind I would not admit loose rivets anywhere.
1451. You did not design the bridge? No.
1452. *President.*] Do you think it would be better to put the joints of a number of plates further apart than to have them as close as they are in the Aberdeen bridge? You mean lengthen the spaces between the joints?
1453. Yes? Well, I think they are pretty long now. I do not know what they are, but I think they must be from 12 to 13 or 14 feet in length.
1454. Do you think it would be better, for instance, to extend eight joints in plates of angle iron in the boom over 4 feet or 5 feet, if possible, than over 2 feet 6 inches? I cannot see what advantage there would be. Of course there is such a thing as having them too close together, but as long as you can get a couple of rivets in between, clear of the joints, it would appear to me to be space enough. I think the space now made is generally about a foot. I do not know what it is in the Aberdeen bridge.
No, it cannot be a foot, because three plates would make 3 feet.
1455. *Professor Warren.*] What relationship should exist between the rivet area and the area of the plate (*sketch shown to witness*)? I cannot say.
1456. Should it be equal to it, do you think? Yes, I think so.

Mr. Thomas Parkinson, Railway Bridge Inspector, sworn and examined:—

Mr. T. Parkinson. 6 Mar., 1885.

1457. *President.*] We want to ask you a few questions about the bridges at Tamworth and M'Donald River. Your name is Thomas Parkinson? Yes.
1458. You were Inspector of Bridges at Peel River and M'Donald River? Yes.
1459. Mr. Griffin was the engineer in charge? Yes.
1460. What was the nature of your duties? I had to see that the ironwork was properly fitted and that all the rivets filled the holes, and see the construction carried out according to the building. All the iron was fitted in England. Both those bridges were well fitted together; there were no alterations required in anything.
1461. What portion came out riveted from England? In the ironwork?
1462. What portion of the ironwork—the booms? Yes.
1463. In sections? Yes.
1464. In about what lengths? 20 feet to 26 feet.
1465. Did you remark any loose rivet in the portion that came out from England? No; there were none cut out, not in the construction in England; not that I remember; and I was there all the while.
1466. Who was the contractor for the erection of these bridges? Amos Brothers—A. and R. Amos; but the manager they had over the constructing of the ironwork was named Bennett, and he is dead.
1467. Do you remember the way in which the rivets were heated and put in; can you describe to us the method adopted in putting them in? They had a portable forge, and one man to hold the rivets, and one man carried them to them when they were hot enough, and put in the rivet on one side and held it up with the dolly.
1468. What do you mean by "when they were hot enough?" They were blown up with a coal fire.
1469. To what degree of heat;—was the rivet heated right through or only at the point? It was heated right through, and especially at the point.
1470. Were the rivets laid horizontally on the fire? Yes.
1471. Not put on a plate? On, dear no; fairly in the fire.
1472. Do you consider that on the whole the riveting was well done? I do. I do not consider there were half a dozen rivets but what I tried in both the bridges. I could not see every rivet put in, and for this reason: there were four or five sets of riveters at work. But I was always on the work.
1473. You tested them afterwards? I did.
1474. You have of course had some experience of riveting? I have seen a great deal of it. The first time I saw anything was in the south, upon Mr. Favil's contract at the Wollondilly, and I was afterwards foreman for Blunt and Williams at Sodwalls. My instructions verbally from Mr. Wade, when he was generally around the work, were that I was to see that the rivets were all full.
1475. Do you think if a loose rivet existed and you had to cut it to replace it, that you would loosen the adjoining rivets? That has been tried in several places, and I never found any loose but the one that has been cut out.
1476. You have not seen those bridges over the Peel River and M'Donald River since you were there as Inspector? No; I have been in Mudgee these three years. The last I saw of the bridges was when they were tested.

WEDNESDAY,

WEDNESDAY, 11 *MARCH*, 1885.

Present:—

G. A. MORELL, Esq., C.E., President.

W. D. M'COURTNEY, Esq., C.E., | W. H. WARREN, Esq., Professor of Engineering,

OWEN BLACKET, Esq.

John George Griffin, Esq., Ass. M.I.C.E., formerly District Engineer on the Great Northern Railway, sworn and examined:—

J. G. Griffin, Esq.

11 Mar., 1885.

1477. *President.*] I see by some returns sent to us by the Engineer-in-chief for Railways that you were in charge of the bridges over the Peel River and Peel-street (Tamworth), and the bridge over the M'Donald River? Yes.

1478. That was in ——? It commenced in '79, and went on to '82, I think.

1479. The manufacturers of those bridges were Brettell and Co., and the contractors for the erection, A. & R. Amos? Yes.

1480. And J. S. Bennett was a kind of partner? No, he was not a partner; he worked under Messrs. Amos. He had not a sub-contract, but was merely their foreman. He is dead since.

1481. Who was your Inspector? Parkinson. He had the brickwork and the bridges at the same time—most of the bridges he inspected were built of timber. He is a timber man.

1482. Had you any other duties to perform in the Department of Railways, at that time, besides the superintendence of these bridges? I had the whole line to supervise—*i.e.*, the whole construction of the line—about 64 miles in length. I saw the bridges every week.

1483. Do you consider that Mr. Parkinson was a competent man to look after the riveting and other matters connected with the erection of these bridges? I have a little hesitation in answering that question. If I were to say he was an incompetent man I should do him an injustice because he was always a careful man, and I rarely ever found him away from the work, but whether he knew anything about riveting or about putting any large iron bridges together before he saw these particular bridges I do not know, and if he did not he was hardly the man to have charge of them. But at the same time I was instructed to employ him as such, and I had no power, nor did I see anything to induce me to act to the contrary.

1484. How often were you on the works in connection with your duties at these bridges? I think I saw the bridges every week. I was rarely away longer. I may sometimes have been a fortnight, but I am almost sure I saw them every week, and when anything important was being done I saw them more frequently.

1485. Were you satisfied with the quality of the work done by the contractors? So far as the contractors (A. & R. Amos) did their work for the erection of the bridges, I think they did their work well. Of course we had disputes now and then.

1486. Then you consider that these three bridges over Peel-street (Tamworth), Peel River, and M'Donald River have been erected in a satisfactory manner? Yes, three bridges. They were tested afterwards, and the result of the tests gave but a very slight deflection.

1487. But the workmanship or erection? Yes, I think so. I may tell you there were several little things we had to alter in the bridges when they came out. There were some small alterations necessary, and repairs needed; not only repairs but changes, especially in the wind bracing. I think A. & R. Amos did these repairs as well as the erection of the bridges.

1488. In a satisfactory manner? Yes. The concrete was all put in the cylinders where cylinders were used, and everything required by the specification carried out.

1489. The portion sent from England, which was manufactured in England, consisted of sections of booms—that is to say, the vertical plates attached to angle irons and other plates were in certain lengths, and the bracing separately? Yes, all iron girders were separate; I think the booms were separate. I cannot remember whether they were all the same lengths, but they were in parts capable of being shipped. A plan was sent with the bridges showing the position of each part as it had been fitted in the English contractor's workshop.

1490. Did you remark in the portion sent from home whether there were any loose rivets? Yes, there certainly were; we cut out a good many rivets.

1491. When you cut out any of those rivets did you remark if any of the joints were in close contact where you cut the rivets out? I think taking them as a whole they were fairly close. Had they not been we should have had to alter the plates. I think it might be said that the plates were fairly close. The joints were slightly joggled in one place.

1492. When you took out any rivet from any of the riveted portions that came from England did you remark whether it loosened other rivets adjoining? I think in the M'Donald River bridge, which was the worst of them all, it did. But as this occurred some time ago, I would not like to be too positive.

1493. What I want to get at is this: whether, when replacing any rivet, you loosened adjoining rivets? I do not think we did. In the M'Donald River bridge we found one or two passably loose, and when we cut them out we found one or two others which required to be cut out; but I do not know that this was owing to anything we did.

1494. Do you think the expansion and contraction caused by the traffic passing over the bridge is likely, in the course of time, to loosen the rivets? I do not think it ought; the bridge ought to be sufficiently strong to stand that. I may remark for your information that in the M'Donald River bridge in the wind bracing, which consists of diagonal ties under the bridge, the threads of the screws were very bad in some places, and would not bear turning. We had to take them out and replace them. There were some other defects besides. That bridge was undoubtedly the worst of the three, but I do not remember what those other defects were. I think, however, I wrote a report on the whole subject, and if I did that report must be in the office. I think there was something else defective besides the wind bracing and the riveting in that bridge.

1495. You had a specification to work from? No, we had not; we had only the general specification for the construction of the works. (*Specification handed to witness*)? I never saw this.

1496. You had only the drawings or tracings sent from home for the erection? Exactly; marked.

1497.

J. G. Griffin, Esq. 11 Mar., 1885.

1497. Then there must have been no conditions? The general specifications that the contractors were to put the bridge together in accordance with the drawings. The drawings showed exactly the position of every part, and they had not to do more than follow them. They would not be responsible if the bridge were defective through any cause before they reached them. The bridges were properly tested. We had very heavy testing—at first engines at speed, and then at slow time.
1498. You mean to say that the contractor was not responsible for defective workmanship in the work supplied to him from England? No, he was not.
1499. With regard to the test, it is stated in a return the Commission has had supplied to them that the total load on one span was equal to 174 tons brought on by three engines, the deflection being ·78 ·72 hundredths of a foot? Is that the permanent deflection?
1500. No, it is the test under this 174 tons? I forget. I know it was about three quarters of an inch, and it came back, I think, again to about a quarter of an inch.
1501. Did you consider that was satisfactory? Yes.
1502. Was there much vibration in the M'Donald River bridge at that time? I do not think so. I was not on the bridge. I did not stand on the M'Donald River bridge. On the Peel River bridge I did; and the engines were going over it at speed. I stayed on it as they passed over the bridge, and while they remained standing upon it. At the M'Donald River bridge I think I was at the testing apparatus below—a small clockwork arrangement, a hand and needle.
1503. What kind of apparatus is that? A wire is attached to the girder and above to a post driven into the bed of the river; on the post is fixed a small index, or dial with an index on it; and the movement of the girder as the weight goes over moves the wire which in turn moves the index on the dial, and gives the amount of deflection.
1504. How many testing apparatuses had you on each girder? I think we had only two on Peel River, and one at the M'Donald River bridge.
1505. In the centre? In the centre. On Peel River bridge we had two.
1506. *Professor Warren.*] One on each girder? One on each girder. I am not quite sure about M'Donald River.
1507. You had every rivet tested before the bridge was handed over? Every rivet was struck or ought to have been struck. I cannot say that I saw every one.
1508. What kind of hammer was used? The ordinary hammer used by fitters.
1509. And the rivets were found to be pretty generally tight? Yes, we had cut out those that were loose. Had we noticed anything different more would have been cut out.
1510. You have left the Department? Yes.
1511. *Mr. Courtney.*] In your visits there, can you call to mind how they heated the rivets—did they heat them with a rivet-plate or put them in altogether; it makes this difference—that in one case every rivet is white in the head, and if put on a rivet-plate so as not to burn them they are hot in the point but black in the neck? I think the rivets were heated throughout, but there was no particular plate used; it was done with the tongs and forge; the rivets were put in the forge, and heated on the bridge, as close as possible to the plates where they were required. Those were my instructions, and the rivets were heated throughout, so that the cooling should be uniform.
1512. *President.*] You have only been connected with these three bridges on the railways? I was connected with the line further on, but those were the only iron bridges I was concerned in.

THURSDAY, 2 APRIL, 1885.

Present:—

W. M'D. COURTNEY, Esq., C.E., in the Chair.

W. H. WARREN, Esq., Professor of Engineering, | OWEN BLACKET, Esq.

W. B. Wade, Esq., Inspecting Engineer, further examined:—

W. B. Wade, Esq. 2 April, 1885.

1513. *Mr. Courtney.*] We want to ask you some questions relative to the bridges on the Great Western Railway. You were on that line at the time the Wellington bridge was put up? Only when it was started; I handed over the works to Mr. Clark.
1514. Can you tell us if you were there when the foundations were put down? Yes.
1515. How did they turn out? Oh, just as they were expected.
1516. You had no difficulty in getting them to start sinking? No; they went pretty easy at first; when they got to the bottom they were all right.
1517. They bottomed on—what? Two bottomed on clay, and the remainder on shale.
1518. They got a little out of range in going down? A little.
1519. That was not owing to any accident? No.
1520. I mean there were no broken slings? No.
1521. You are aware that they were doctored as regards plumb afterwards—that they came up crooked a bit—and were afterwards altered to bring them in as near as they could? I do not remember.
1522. *Professor Warren.*] The spans are different in the Wellington bridge; they are not all exactly alike? Well, I suppose that a Whitworth measuring apparatus would probably show that they were.
1523. Would you consider 2 feet a difference? I am sure they are not that; I think they are some number of inches—4 or 5.
1524. Did you know when the girders were cut that they were delivered on the site in order to go into the piers? No.
1525. They were not cut at all? They were not cut for that purpose. One of the girders was cut but not for that purpose. The bottom boom was not affected in the smallest degree, and if they were cut on account of the discrepancy of the length of the piers the bottom boom would be cut, and it was not.
1526. Then why were the girders cut? Because the top boom would not come in. I believe that they deny it strongly at home. I have a very strong impression that the bridge was made in the shop with only

W. B. Wade, Esq. 2 April, 1885.

only one span. I have a very strong impression (*showing diagram*) that one span was put up, and a little bit of the next span, and then, I believe, the cast-iron screen and moulding were put up on the outside of those. That would only hide the inside pillar, and when they began to fit all the struts they pushed them apart, a little out of plumb, and though that is the case with these screens they hoped no one would observe they were out of plumb, and they were delivered in that way, and I had to cut an inch and a half off. That was the accumulation of the three spans.

1527. *Mr. Courtney.*] But there is a very much larger difference than that existing? ——

1528. *Professor Warren.*] A difference of 2 feet? I have a strong impression that the difference is about 7 or 5 inches.

1529. *Mr. Courtney.*] That is not a matter of much importance? The reason of the cutting was this: It is quite evident that these inside pillars had been spread too far, a little out of the plumb. When we started building all the holes came as true as a gun-barrel, but we went on working and we came to a part where it would not fit any more, the diagonals did not fit the holes, and the only thing was to cut it. It is quite obvious then that the first span had pushed the first pillar out of the perpendicular. Had we known it at first we might have made a good job of it. The only thing was to cut a piece off the top boom, with the middle, and that put everything in place.

1530. So you cut some off both ends of the middle boom? In two places.

1531. *Professor Warren.*] About the bearing plates which the girders rest upon—they are not quite in the centre of the girders, not quite in the centre of the piers? That was through the timber that was found on the bottom pushing the second pair of cylinders out of position.

1532. The timber found in the ——? In the bottom, the foundations.

1533. That accounts for the wall plates not being exact? That accounts for the variation of span.

1534. Have you any record of the levels taken at the time when the bridge was erected? No, I am sorry to say I have not. I do not think anyone has. Mr. Warren, contractor's agent, I think had about the earliest record.

1535. Have you any record of the state of the bridge now? Well, I have a few months after its erection, and again about two years after that. I have not tried it since.

1536. A few months after its erection you took levels across the bridge, and two years afterwards you took levels and there was no variation? Yes, and that is about twelve months ago now.

1537. You have not those levels, have you? Yes, I have. (*Record of levels produced.*) On the first pier, right, 49·82, up stream; down stream, 49·95. Next pier, up stream, 49·95; down stream, 50·04. Next pier, up stream, 50·22; down stream, 50·22. Up stream, 50·22; down stream, 50·23. So that you see the only variation worth mentioning is on that pier—the 3 and the 4; and there is no doubt that from the first time anyone took any notice of that it was low; whether it went down or was always down we have no data to show. I do not believe it has altered from the first time we tried it. What first called attention to it was that after some number of months Mr. Cowdery called the attention of some one in our office to the circumstance that the Wellington bridge had gone down. When I went up there I tried to get some levels taken exactly at the time. Mr. Clark had some levels, I understood, but I could not get them from him. He said that he had noticed some repairing gang taking up the rails. I took the levels then. July, '81, I think was the first. As far as I could get any information from Mr. Clark and Mr. Warren they had not any reliable record at the time.

1538. Do you consider the piers have sunk since the time the bridge was erected? No; as far as I could gather information they certainly have not sunk. I believe Mr. Clark made some bungle about the levels, and kept some information about it.

1539. *Mr. Blacket.*] In the erection? Yes.

1540. *Professor Warren.*] What kind of staging had you for erecting the bridge? Very light round bush timber.

1541. Did it allow you to rivet the top boom as well as the bottom boom? We always kept props from one to the other.

1542. The men were able to get at the top boom quite as well as at the bottom boom? Yes; we always put round pieces of timber from boom to boom at short distances, so as to keep them a fixed distance apart. Of course you cannot say a man can get to the top boom as well as to the bottom boom, because on the bottom boom they stand on staging without any risk of getting giddy or anything like that. If a man were standing on the top boom—a 2-feet 9-inch boom—he has not so good a chance as when standing on a stage.

1543. How did the sections of the booms come out from England;—what lengths did they come out in? They are about 12 feet, I think.

1544. In fact where the joints are shown in the drawings? Yes.

1545. And were the boom-plates riveted to the stringer-plates and angle-irons? Yes.

1546. They came out in that form, and not with the stringer-plates separate? No.

1547. So that with the exception of the joints nearly all the riveting of the bridge was done in England? Yes, and the bracing.

1548. *Mr. Courtney.*] Did you see any of the riveting done? Yes, occasionally; not very often.

1549. Do you know the system of riveting;—did they rivet with a plate with holes in it on a smith's forge? No.

1550. The reason I ask that question is that there is very great appearance of that in the work? No; I never saw that. We had a very careful inspection of the Wellington bridge. A man of the name of Maddock, a trained mechanic, equal, I consider, to any mechanic in the Colony—I believe he saw every rivet put in. He ought to have done so.

1551. *Professor Warren.*] In the Bathurst bridge, as at present, two of the spans have had repairs done to them in the way of re-riveting; but in the first span, I believe, the work was interrupted, so that the first span one can examine. Now, was the work, as far as you know, in the other two spans better or worse than in the first span from Sydney? There was no difference; the same work and the same inspector.

1552. What inspector? Fearnleigh. He is in the Redfern shops. He was a boilermaker and a man thoroughly up in his work, and he was on the bridge from morning till night every day from the beginning to the end of the job.

1553. Had they to use anything to caulk the joints with, such as rust cement, to fill up the spaces between the angle irons and stringer plates? They would only do it on the sly if they did; the inspector was always on the look-out.

W. B. Wade, Esq. 2 April, 1885.

1554. Do you consider the first span well riveted? A very good bridge indeed. I was there once when Hilzinger and another were replacing rivets, and I felt a number of places where they had rivets marked and I could not observe the smallest appearance of looseness in them.
1555. *Mr. Blacket.*] Would those rivets go under the head of vibrating rivets with the hammer? I believe so. I felt a number of them, in their presence, and could not feel them loose.
1556. *Professor Warren.*] You remember the riveting done in the Colony: I take it that the booms were sent out just the same as in the case of the Wellington bridge? Just the same.
1557. And the amount of riveting done on the site of the Bathurst bridge was just about the same as in the Wellington bridge? Yes.
1558. Do you consider that the angle iron wrapper joints, with the riveting in those joints, are good? Yes.
1559. In all cases? In all cases, I believe. I do not believe when that bridge was left that there was a loose rivet in it. They may have loosened them since.
1560. You mean really loose rivets? Yes.
1561. Did you notice, when you examined the bridge at Bathurst, that the edge of the plates was corroded just about the angle irons and wrapper joints? No; I do not know anything about it.
1562. With reference to the testing do you remember, in the testing of these bridges, both Wellington and Bathurst, the deflections they gave? About ·70. I have them somewhere. They were just the same, tested with three engines, and gave a deflection of about ·70.
1563. With the level? Yes. I had not got a gauge in those days, and I took it with a level. At Bathurst bridge I had a gauge to work with. I think the extreme we have had in those bridges has been ·80. They have gone from ·70 to ·80. With regard to the deflections I have got them in the form of end spans and centre spans.
1564. Will you give us Wellington first? End spans, centre spans, and weights: End, first, ·72, ·64, 174 tons. Wellington, short spans, ·33, and 63 tons. Bathurst, ·77, centre ·77, 178 tons. I have also Aberdeen, original test, when the bridge was building, ·69 and ·79. Wagga is in the same proportion, ·74, ·63 centre, and 185 tons. In Dubbo bridge, which is perhaps as good a test as we have, the centre is the heaviest, ·56 was the end, and ·64 the centre.

TUESDAY, 2 *JUNE*, 1885.

Present:—

G. A. MORELL, Esq., C.E., President.

W. H. WARREN, Esq., Professor of Engineering, | OWEN BLACKET, Esq.

T. R. Firth, Esq., District Engineer, sworn and examined:—

T. R. Firth, Esq. 2 June, 1885.

1565. [*President.* What position did you occupy in the Railway Department at the time of the erection of the Penrith bridge? I was District Engineer.
1566. Had you charge or the superintendence of the erection of the bridge? Yes.
1567. What other duties had you to perform at the time? I had the superintendence or the carrying out of the whole work from Penrith to Blackheath at the time. I was in charge of the whole of the construction.
1568. Who was assisting you in the superintendence of the Penrith bridge? In the ironwork I had an Inspector named Higinbotham.
1569. What were his duties? To see that the work was properly put together. He was a mechanic himself.
1570. Where is he now? I don't know; I have not heard for years. It is at least ten or twelve years since I heard of him.
1571. Was Mr. Maddock also employed on the bridge at the time? No; Higginbotham was the only one.
1572. Do you know these drawings sent by the Engineer-in-Chief to us as drawings from which the bridge was erected (*plans shown to witness*)? I have not seen them since the bridge was put up.
1573. I suppose you could identify them? Yes, from the drawings of the bridge.
1574. These (*indicating on plans*) are the development of the plates? Yes.
1575. And sections? Yes.
1576. There is another cross section here (*indicating on plans*)? Yes; I remember that.
1577. It was carried out according to this section? Yes; to the best of my knowledge it was.
1578. Do you remember the plates shown here (*indicating on the plans*) to be joggled on the top boom? I am not aware of any alteration having been made from the drawings.
1579. Was there much difficulty in riveting the top and bottom booms in some part of the cells? There was no particular difficulty, because they got in as they followed them up. There was no particular difficulty in riveting them. They are small booms. I think these (*the top and bottom booms*) came out in 10 or 12 feet lengths. I think they came out in lengths.
1580. Do you remember if those angle irons of this diaphragm (*indicating on plans*) were in close contact with the plates? I do not remember, but I do not think they would have been left unless they were close. I know the riveting was well examined when the bridge was being constructed, and if they had not been close they would have been noticed.
1581. Who were the contractors for the bridge? Peto, Brassey, and Betts. They had a Mr. Williams in charge. He is in the Harbours and Rivers Department.
1582. *Professor Warren.*] He was for the contractors? He was for the contractors.
1583. *Mr. Courtney.*] Was your attention called at any time to the expansion of the plates of the bridge—at the way the bridge was erected on the piers—to begin at the pier superstructure? No. One pier was fixed, I think, and the others had two abutments and one clear.
1584. They were set upon a timber bed-plate? Yes.
1585. Do you remember any investigation at the time of the erection as to whether the bridge moved upon it? No; I do not think there was any. I have not the slightest recollection of anything having occurred, nor do I think anything of the kind took place.

1586.

T. R. Firth, Esq.
2 June, 1885.

1586. *Professor Warren.*] You looked for the expansion, but you could not find it? No, I could not observe it. But do I understand you to say I did not find the bridge expand at all?
1587. Yes? I did notice that the bridge did expand after completion, but not during construction.
1588. *Mr. Courtney.*] Could you give us any idea of it from memory? I think it was about $\frac{3}{8}$ of an inch that it expanded. That is speaking from memory, and I think I am right. I noticed it because I have heard that it would make a noise and go off with a start. After construction I know that the bridge did expand.
1589. Have you any recollection of any correspondence or of any fault being found with any of those lengths. It is pretty evident that the top cells did come out in lengths, and that they were found not to come in right? I am not aware of it.
1590. Because there is one portion of the bridge which shows that either the right pieces were not put together, or that there was some difficulty in getting them in. There are a number of joints, and when you go two or three lengths you come upon a place where it has been necessary to punch new holes, leaving that joint so that there is every sign of a misfit; and when you go some further distance you find the same thing again. You do not remember any difficulty of that sort? No; to the best of my recollection the instructions were to be very careful to follow the painted numbers, so that each should go into its place owing to the camber of the bridge, which was 3 inches.
1591. In the middle span? Yes.
1592. Higher than the piers? Yes. There was a camber, and particular care was supposed to be taken that each plate should go into its proper place to preserve that camber; because I am assuming that some of those plates must be tapered to get the camber; parallel plates would never make a camber.
1593. You are speaking, of course, of the web plates? Yes. I assume that the plates had been fitted together before with this camber, and that therefore we should put the plates together in their proper position; and that being so, I cannot see how the top cell could be misplaced. I dare not take upon myself the removal of plate "*A*," and put it somewhere else. Therefore I must take it for granted that the plates were put in a proper position. I do not know how to account for the holes which you say have been re-drilled.
1594. And also flange rivets there. It occurs in one part of the bridge, as if in finishing; the four or five last lengths are not together? Is that in the old part of the bridge?
1595. *President.*] It is in the old bridge.
1596. *Mr. Courtney.*] You notice it on the up-line girder at the far end of it from Sydney? That was the last portion of it put together.
1597. But we were speaking of the flange girder. Were the curved plates of the top boom sent out loose, or were they in lengths and jointed, or, in other words, were the plates connecting the rivets with the upper pile of flange plates riveted at home or here? I am under an impression that they were riveted at home in lengths.
1598. Of course they had to be left unriveted at the scarf-joints? Yes. I am under the impression that the riveting was done at home.
1599. If it were done at home there is likely to have been some report. If the arch plate is too high for the centre web to meet it there would be a space for the plate, and the angle iron would not be in perfect contact? There was no correspondence about that, I am quite sure.
1600. *Professor Warren.*] You would have pointed that out if you had seen it? Most decidedly.
1601. Can you give us any information as to how the bottom cell was constructed? I think that came out in lengths in the same way as the top cell; I think both the bottom and top cells came out in lengths, and they had simply to be riveted together at the scarf-joints.
1602. It is no simple job in the bottom cell, the place is so circumscribed? I think they came out in lengths, because there was some idea of putting them up on blocks in the lengths in which they came. I feel almost certain about it. Of course, if anyone were to contradict me and say that they did not, I should give in; but to the best of my recollection they came out in lengths, both the top and bottom cells. Of course this is twenty years ago, and we cannot remember all these things.
1603. *The President.*] What kind of staging was made for the erection? We drove piles down into the gravel, double tiers of piles, and these had beams across, and blocking pieces put on the top of those beams.
1604. *Mr. Courtney.*] I would like to ask you if you remember seeing those joggles? I do remember seeing them.
1605. Do you remember anything further about them? No.
1606. Do you remember if the plates came out so? Yes, they did come out so. There were no means of doing them on the bridge. There was nothing on the bridge except the ordinary machinery for hoisting and hand riveting.
1607. You did not notice any plates being put in without the joggle leaving a triangular space? I do not remember.
1608. There is another matter: Was it intended in the design of this bridge to carry the cross-girders by the rivets in their ends, or were they intended to be packed? I think they were intended to be packed on the bottom cell, to rest on the bottom cell, and rivet up the angle irons as well, or at the stiffening plate? I think that was the intention. To the best of my knowledge they all rest on the bottom cell; I do not think there are any packings put under them; I think they rest on the cell.
1609. Did you ever hear any complaint of the rivets having deficient or insufficient heads on the inside of the ends of these cross-girders? No.
1610. They have attempted to make nobble-headed rivets of insufficient size. Do you remember any complaint of that kind? There may have been.
1611. You have not observed them yourself? No; it is quite possible that a question of that kind might arise in the construction, and I might give instructions about it, and it may not be any more thought of. I certainly do not remember anything about it; I was always under the impression that those cross-girders rested on the bottom boom, as well as being riveted.
1612. There is only one other thing. Up to the time of your leaving the bridge was there any tendency in the diaphragm rivets to work loose? Not to my knowledge. Of course, when I left, there had been very little traffic over it; they only went over it at a walking pace, owing to the far end not having been completed. The timber portion had been washed away, and they had to put up a timber bridge for the trains.
1613. Have you any recollection of the fact that in the vertical T irons of the web, where they come under the rivet, the rivet is put in without any head? No; not even countersunk.

T. R. Firth, Esq.
2 June, 1885.

1614. There is no head to these rivets, and that occurs at every T iron; in many cases they do not reach the T, and are simply short rivets put into to fill the holes, and they remain there in their own friction. You never saw a lead rivet put into that bridge, I suppose? I never saw a lead rivet put in a bridge anywhere yet. I do not know how these things could occur very well, for I was always under the impression that the inspection on that bridge was about as good as it could be; the Inspector was continually there, and he was supposed to see everything. I was there two or three times a week and examined the rivets, and I always flattered myself that the bridge was perfect.

1615. *Professor Warren.*] What bridges had you before the Penrith bridge? That was the first iron bridge I had in this country. I had put up some iron bridges in France, on the Paris and Cherbourg Railway.

1616. *Mr. Courtney.*] Was any remark made at the time of there being no means of cleansing the bottom cells from rust? No; one might be able to cleanse the bottom booms as well as the others. There are openings in the side, I think, for cleaning the main plates. In the bottom booms a man would have to start and go right through, but that never came before me.

1617. There are two inner cells which are obstructed by a large timber beam among the timber of the bridge, so that no one has been through them since they have been built? So that there is no possibility of getting into them. It was so tight that we never thought anything could get into them to oxidise them.

1618. *President.*] Do you remember if the timber forming the packing or bedding of the girders, or some of the girders, was prepared at all with composition to prevent decay? I forget whether they were tarred or painted; there was no creosote in it, or anything of that kind. I think they were painted with red lead or oil.

1619. Were you present at the testing of the bridge? The bridge never was tested; and this was the reason: when the bridge was completed and ready for testing, we had a flood in June, 1867, which washed away the far end, and we then had to put up the temporary bridge to carry the traffic. Of course we could not then run over any train at full speed. We could have tested the bridge with dead weight, but we did not think that was necessary, until it could be properly tested with passing trains. And I think it was twelve months after that that the bridge was completed. I left that part and went up to Rydal, and it must have been twelve months after that the bridge was completed, and the trains ran over it at full speed. Whether it was tested then or not I do not know, but it was not tested when the bridge was completed.

1620. *Mr. Blacket.*] Did you have the building of the Solitary Creek bridges? Yes.

1621. *President.*] Do you remember the size or dimensions of the spans on the bridges at Solitary Creek? They are 60 feet, I think.

1622. But they came out in several sections? Yes, they did.

1623. How many sections? That I do not remember.

1624. I mean whether the girder and web were in several sections? In pieces; I could not say how many sections; they would be in about 12 feet lengths, I think, but I am not sure. Three or four pieces I think it was.

1625. Do you remember if these girders had any camber? The girders had three-quarters of an inch camber, I believe.

1626. *Professor Warren.*] Three-quarters of an inch? Yes; to the best of my belief they had three-quarters of an inch camber.

1627. *President.*] And the camber was given to them in the erection? Yes.

1628. Can you account for their having no camber now? Well, no, I cannot account for it, not knowing what they have been doing with them, but I should not be surprised to find they had been doing nothing with them, and they had no camber now after fifteen or thirteen years. I should not be surprised if they had not three-quarters of an inch camber now.

1629. *Professor Warren.*] Do you consider that you left those bridges with three-quarters of an inch camber? The girders. Yes.

1630. The main girders? Yes.

1631. *President.*] Do you remember how the girders were bedded on the piers? On sheet lead.

1632. *Mr. Courtney.*] You have never known them move on the sheet lead? I have not had an opportunity of noticing, but I think they would.

1633. *President.*] They would have a slight expansion? I think so. Mr. Warren was my Inspector there. He is now in the Government Railway Department, in Mr. Cowdery's department.

1634. *Mr. Courtney.*] One of these bridges is patched on the under flange. Was that the result of an accident or fall? In hoisting the girder up it fell down and struck a little on the bottom plate, and I had a piece put on for 3 or 4 feet.

1635. *President.*] You are positive that these girdars were not built up with a sag, but built up with the camber? I believe they were put up with the camber.

1636. How do you account for the sag? The way I account for it is that rumours are not always to be believed, and rumour is not evidence; but I do not think there would be any fault to find with the bridge if they had not now three-quarters of an inch camber after thirteen years continuous running over them. Continually hammering trains over them will be sure to bring them down. I should never expect to find the camber in a bridge after ten years the same as had been put in it originally, especially with those heavy trains running over it on a hot day. I have got the tests of those bridges, if you would care to have them.

1637. *President.*] We should? These are my tests.

RESULT of test of bridges on contract No. 7—Extension Penrith to Bathurst.—2 February, 1872.

Goods Engine No. 17, weighing 42 tons, and break van 10 tons :—

No. of Bridge.	Mileage.			Deflection with standing load.	Deflection passing at full speed.	
	m.	c.	l.	feet.	feet.	
No. 7	99	73	67	·020	·025	
8	100	8	28	·030	·030	
10	100	62	86	·030	·030	
13	102	11	60	·025	·025	On 16-chain curve.
15	102	57	75	·030	·035	
17	106	68	87	·030	·025	Eastern opening.
				·030	·035	Western ,,

In every instance the girders resumed their position *immediately* the load was off.

T. R. Firth, Esq. 2 June, 1885.

1638. *Professor Warren.*] You did not take the deflection with rods? With a level. As an instance, I tried the level on the George's River Bridge directly we took the wedges out. There were three spans, and they went down three-eighths of an inch. I tried them again next day, and they had gone down another eighth.
1639. *President.*] By their own weight? Yes; that is, from one day to the other, so that I am not surprised at a bridge going down in thirteen years with the trains going over it.
1640. At what time of the day did you do this? At the same time of the day.
1641. Where were the bed-stones obtained for the Solitary Creek bridges? At Mount Lambie some of them, and some of them were obtained from Lithgow Valley, and I think one or two of them came from Pyrmont. I think all the bed-stones were got from the top of Mount Lambie.
1642. *Mr. Courtney.*] Granite? No; sandstone.
1643. *President.*] There is a bed-stone to every girder? Yes.
1644. The string of the top of the pier seems to have been cut off, either broken off intentionally or otherwise? It was not originally so.
1645. *Mr. Courtney.* It has been built up with bricks.
1646. *President.*] But my question is, why was this cut off? They were all perfect when I left them. They were all perfect according to plans.
1647. There is no bed-plate at all under the girders; the girders rest upon the lead, and the lead was placed over the stone? Is there not an inch plate under the girders.
1648. *Mr. Courtney.*] No, nothing; nothing but the sheet lead? I think all the ends of the plates were planed.
1649. *President.*] Have you had to do with any other iron bridges since that time? No; except Cook's River and George's River.

FRIDAY, 5 *JUNE*, 1885.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E., | W. H. WARREN, Esq., C.E., Professor of Engineering.

OWEN BLACKET, Esq.,

Alfred Williams, Esq., sworn and examined:—

A. Williams, Esq., 5 June, 1885.

1650. *President.*] You had full charge of the erection of the ironwork of the bridge at Penrith? Yes.
1651. For Messrs. Peto, Brassey, and Betts? Yes.
1652. Can you tell us how the ironwork came out? Incomplete; detached in every way; plates and bars. None of it was riveted. It came out in pieces; in three shipments, I believe.
1653. Were the cells of the top and bottom booms riveted in sections or in lengths? It was all riveted on the work, plate by plate, as far as I can recollect. (*Produces plan.*) That is the section I made on the works, to give the thickness of the plates, to get up to the required level. All these bottom booms were built on the stage.
1654. No portion of it was riveted in England? I do not think so. I do not remember it. (*Produces another plan.*) That is the plan I made of the stage, showing the class of staging we used. I was the engineer for the contractors.
1655. These cells of the top and bottom booms did not come out riveted in sections or lengths? I do not recollect. I think it was all done upon the ground. That is my impression. It is nearly twenty years ago since it was done. I took possession of the ironwork on the ground at Penrith; I found it thrown about in the paddocks. The first thing I did was to sort all the plates, bars, &c.; to get it ready when the stage was finished.
1656. The cross-girders came in one piece? I think so.
1657. You wrote a letter to Mr. Whitton in reference to your connection with this bridge. Is that your letter (*showing letter to witness*)? Yes.
1658. Did you get very bad weather during the erection of the bridge: were there floods? There was one extraordinary flood, coming when there was no rain in the district, from rain in the country, very unexpectedly. Still I provided for the contingency of floods, and had boats and rafts. Fortunately we managed to pass the timber through the staging in this flood, without any injury to it.
1659. Was Mr. Smithyman, the inspector for the works, acting for you or for the Government? He was acting for the firm, under my instructions. He was paid weekly wages, and he had no interest in the work beyond his wages.
1660. Did not some of the ironwork get mixed, and the marks obliterated? Yes. Of course the marks on plates were to correspond with the plan I was furnished with. When I came to examine the ironwork I found that it had been so thoroughly mixed on the way out that the marks were of very little use to me, so that we had to sort, clean, and repaint the work, and get it on the stage while the staging was proceeded with, but it made it a very difficult work. If I had had all my numbers on the plates every plate would have come in its place just as it was at the yards in Birkenhead.
1661. Were you obliged to make new holes in consequence of the parts not coming together, so that there are now false holes in the work? Yes; in some cases it was necessary to repunch the plates.
1662. Was this in the bottom boom? I think it was in one section of the vertical plates.
1663. *Professor Warren.*] You say it was necessary to repunch the holes in the vertical plates. Do you remember anything of the kind in the top booms? I do not remember. It may have been necessary. It is possible some might have been done there.
1664. Probably owing to the fact of the marks being obliterated? We had to work it to make it fit.

1665.

A. Williams, Esq. 5 June, 1885.

1665. Then you would not be surprised to know there are several elongated holes in the booms as well as in the vertical plates? If it was so I was not aware of it. The holes I saw punched were free of the old holes.
1666. You must have known if they came out separately; if they did you could not tell if they came out right? In looking through my old papers I cannot find anything about how they came out.
1667. In reference to the inner cells, there are several rivets left out. Do you remember it? I do not remember it at all.
1668. There are several rivets knocked in and not snapped? I never allowed anything of that kind to be done. It is quite possible something of the kind might have escaped my observation.
1669. *Mr. Courtney.*] This is a question of some hundreds of them? It might not have been possible to snap some of them.
1670. *Professor Warren.*] Do you remember any lead rivets? No. I should have had to pay for them out of my own pocket.
1671. Do you remember using lead to fill up the spaces between the plates and the top boom, where the places did not perfectly meet? There was no lead put in to fill up the interstices. I do not remember having ordered any lead whatever.
1672. *President.*] But if lead was put in? It was put in by Mr. Smithyman, I suppose, or by his knowledge, but he never informed me about it. I have not the slightest knowledge of it.
1673. Do you know how the angle iron was riveted to the centre web-plates in the top boxes? I do not remember.
1674. Do you remember that the curvature was too much, and could not be brought down? I do not remember anything of the kind.
1675. Are you aware that the arch plate did not fit down to the middle web? I am not aware that it was so.
1676. *Mr. Courtney.*] Are you aware that at the side, where the splayed angle irons are used, there is a certain length where square angle iron has been used? I do not remember it.
1677. *Professor Warren.*] In reference to the cross girders do you know whether they were allowed to rest on the angle irons, or did you depend on the rivets? No. They rested on the bottom boxes.
1678. Would you not prefer a rivet with a proper head? Certainly.
1679. Do you remember that on the bridge there is scarcely a case of a good rivet, but that they have only a portion of a head? It could not have been so; some that I could not see might have been scamped by the men.
1680. In some cases the rivets were almost flush? In some of the plates they were countersunk to admit of the rivet having a fair hold on the iron.
1681. Was there any complaint made that the rivets were too short? None.
1682. No one objected to their putting in flattened rivets? I had no communication of the kind. I used to make a practice of tapping the rivets, and I believed every man was working properly. There were two inspectors constantly looking after that part of the work. I was sometimes away in Sydney on other business in connection with the firm, and while I was absent certain advantages might have been taken.
1683. Referring to the joggles, are you aware that in some cases you have really left a space between one plate and another? It could not have been; if so they could not have abutted close up.
1684. *President.*] You do not remember that these joggles in the bottom boom were not carried out according to this plan? No, I do not remember. The bridge was erected in ten months after taking possession of the works, and we had a flood which retarded the progress of the work. I had to run the stage right through.
1685. Do you remember after the bridge was finished what expansion, if any, was there in the whole length of the girders? I think it was about 4 inches. It was very considerable, and it astonished me.
1686. On which of the piers was the rolling gear erected? On all the piers.
1687. *Mr. Blacket.*] Were both the middle ones fixed? I do not recollect. I think they had rolling plates on all of them.
1688. *President.*] Do you remember whether the timber on which the girders are resting were prepared so as to prevent decay? I do not remember, unless it was well tarred, just the same as the other timber was done.
1689. Do you think that in the course of time these timbers would decay, and require to be renewed? Yes.
1690. Were you present at the time of the testing of the bridge? No. My work terminated when the ironwork was done and the staging removed. The timber deck was laid by another contractor.
1691. Then you do not know much about the deflections? No. I know we had 4 inches of camber on each girder.
1692. Have you seen the bridge lately? Not for eighteen months.
1693. Did you see any signs of decay or damage? No. I was surprised to see it looking so good and true in every respect. There were no signs of decay or buckling.
1694. Did you think that in course of time such would occur? It might. If there was any strain on the transverse girders it might buckle, but I did not see anything of the kind.
1695. It seems to be kept in fair order? Yes; that seems to be the main thing to attend to with bridge work.
1696. *Mr. Courtney.*] Speaking about the painting: can you give us any information about the placing of a large timber caulk, which renders one cell of each girder inacessible: Was anything said about that at the time of the erection? That would have been after my time.
1697. Was there any difficulty in getting men to work in the bottom cell to make those joints? I had no complaints. We paid first-class prices, and got first-class men. We paid 26s. per hundred for the inch rivets, and 23s. for the three-quarter inch. We got men very readily for those prices.

Mr. Richard Waring sworn and examined:—

Mr. R. Waring. 5 June, 1885.

1698. *President.*] You were connected with the erection of the Solitary Creek bridges? Yes.
1699. With the ironwork? Yes; the ironwork.
1700. What position did you hold? Inspector of permanent ways.
1701. What was your mode of proceeding with regard to these bridges? I tested the rivets in the girders; they were already riveted when they were landed there.

Mr. R. Waring. 5 June, 1885.

1702. In how many pieces? I think it was in two pieces; it might have been three.
1703. Were those pieces riveted together and the girders riveted on the spot? They were taken bodily across if I remember right; I almost forget it, it is so long since.
1704. Were they riveted on the bank or on the line or in any other place? I think it was on the bank.
1705. Do you remember if they gave any camber to the girders in riveting? I cannot remember.
1706. Have they had any camber? I cannot say.
1707. Did you get the specifications and drawings? No I did not.
1708. The girders were sent there and you put them together? No, Mr. T. R. Firth was the engineer; I had simply to see to the riveting.
1709. *Mr. Courtney.*] Do you know what provision was made for expansion in those bridges? There is a bed-plate on the girders and they rest on the bed-plate; the bed-plate is let into the stone-work under the end of the girders; if I remember right there was a piece of lead put in, but I would not be too sure.
1710. Do you distinctly remember the cast-iron bed-plates below the lead? Yes.
1711. They must have been recessed into the stone? Yes.
1712. The stone comes up flush with the lead? Yes.
1713. Was that cast-iron bed-plate not of plane surface? A plane surface as near as I can remember.
1714. Was there a wrought-iron plate riveted to the end side of the girder? I think there was, but I am not certain; I had nothing to do with the bed-plates, only with the riveting.
1715. *Mr. Blacket.*] Did you have one of the girders fall? I had nothing to do with them, except to see that the cross girders were perfectly riveted to the side girders.
1716. *Professor Warren.*] And you do not know whether you had any camber? I had nothing to do with the main girders.
1717. *Mr. Courtney.*] All you had to do was to see that the girders were quite fast? Only with the side girders.
1718. The bridge was virtually erected before you came there? Yes.
1719. *President.*] All the riveting was well done and to your satisfaction at the time? It was thoroughly well done; I tried everyone of the rivets myself.
1720. *Professor Warren.*] You did not interfere with the rivets in the main girder? I tried them and they were thoroughly sound.
1721. *Mr. Courtney.*] Did you find any loose rivets in the portion of the work that came out from England? I do not remember that I did.
1722. Can you remember if there was any sagg in the bridge? No, I cannot remember; I had nothing to do with that.
1723. Had you anything to do with the erection of the other iron bridges? No.

Mr. Thomas Smithyman recalled and re-examined:—

Mr. T. Smithyman. 5 June, 1885.

1724. *President.*] You have already been called and sworn before this Commission? Yes.
1725. Referring to your connection with the Menangle bridge;—what position did you occupy? I brought it out from home; I was in charge of it here. I had to erect it for Messrs. Peto, Brassey, and Betts.
1726. *Mr. Courtney.*] Have you any recollection of the angle irons on the web being altogether flat and not riveted close up? Not to my knowledge; they ought to be close up, all of them.
1727. *Professor Warren.*] Could you not get a piece of hoop-iron in between? Not to my knowledge.
1728. *Mr. Courtney.*] Were the angle-irons joined and the covering plates fitted at home so as to produce good riveting? Yes.
1729. The angle-irons connecting the plates with the top cell? Yes, they fitted, all of them.
1730. Can you remember were the rivets at the end of the cross girders;—where they are attached to the main boom; was that a satisfactory job? Yes, I had no complaints about it from the inspector at all.
1731. What about the cross girders;—were they bearing upon the flange? They were riveted to the main girders.
1732. Did they not depend on the rivets? I don't think so but it is a long time back.
1733. Then you don't remember that? No, I do not.
1734. Were you there at the completion of the job? Yes.
1735. Did you make any observation as to the contraction of and expansion of the bridge? No I did not.
1736. You are aware how it is bedded on the bed plates on timber? There is timber underneath.
1737. Have you ever seen it move on that timber? No, it is only on the rollers where it moves.
1738. *President.*] With reference to the Penrith bridge, what was your position? I brought it out from home and had to erect it here under Messrs. Peto, Brassey, and Betts.
1739. You were acting under Mr. Williams' instructions? Yes.
1740. Do you remember if the cells of the top and bottom booms came in sections, in different lengths, or if all the plates came out separately? It was according to the drawings which I have here.
1741. *Mr. Blacket.*] Did you see the bridge erected in the Britannia yards at home? Yes, I had a portion of the work to do; I marked it all there.
1742. *Professor Warren.*] Did you put in the joggles as they are shown on the plan? Yes.
1743. *President.*] These are the plans from which the bridge was erected in the yard. Do you remember if these angle irons were rolled to fit the curve? Yes, they were rolled to fit the curve.
1744. Did they fit closely when the bridge was put up? They ought to do so.
1745. But did they do so? To the best of my knowledge they did.
1746. *Mr. Blacket.*] Did you ever go through the boxes yourself? No, I could not get into them at all.
1747. *Mr. Courtney.*] What did you do with the spaces;—did you attempt to fill them up with lead? No, to my knowledge we had no lead about the place at all.
1748. What was done with the spaces? I cannot exactly tell.
1749. There was a change of tenons in the plates? But there was nothing put in, I believe.
1750. You do not know that the space was filled up with iron putty, or stopping, or lead? No, there was nothing at all put in to my knowledge.
1751. Were the rivets for attaching the cross girders to the main girders all put in under your supervision? Yes.
1752. They were nobbled rivets? Some of them.
1753. There are none of them snapped? I don't remember.
1754. Do you remember that any of those rivets were too short? No, I do not.

Mr. T. Smithyman. 5 June, 1885.

1755. These nobbled heads in many places are extremely small;—was there any reason for that being so? There might have been; if they are knocked well into the hole the head does not matter much.
1756. *Professor Warren.*] Did the plates come out separately or in lengths? All in separate lengths.
1757. Were the booms separate or fast? They were fast.
1758. And you formed the booms? Three or four plates in thickness as they came out from home.
1759. You saw the bridge erected at home and marked it? Yes, it was about half done when I took charge.
1760. Do you know how the plates came together;—were any of them mixed, so that they had to drill other holes? No, I do not know anything of that; these plates were all put in as marked.
1761. Are you not aware that there are double holes in the Penrith bridge? I am not aware of it.
1762. *President.*] Were not the marks on some of the plates rubbed out? No, they were all right.
1763. Were there any covering plates on the top boom with double holes? No, I do not know of any; it might happen now and again.
1764. *Mr. Courtney.*] You are not aware of there being twenty-four in one joint? No.
1765. *President.*] Did you remark that some of the rivets in the main girders got loose through the traffic passing over the bridge? No.
1766. You cannot put in a rivet without loosening others all round it? You cannot.
1767. Do you mean to say that if you clamp plates together and then rivet them, you cannot put in a rivet without loosening others around it? Yes, where there are several plates it is impossible to make rivets really tight.
1768. *Mr. Blacket.*] Do you believe that tapping with a test hammer would loosen those rivets? No, that cannot be done with a small hammer; if you had about a 6-lb. hammer you might do it.
1769. And the marks that are on the flat rivet-heads may be done from the dolly holding it up? No, they could not be done in that way.
1770. *Mr. Courtney.*] Do you remember any rivets being heated there on the smith's hearth? No, you cannot get the boys to do it.
1771. Are you aware that the curve of those arched plates on the top boom is such that the angle iron on the centre web does not come in contact with it only at long intervals? It might do so.
1772. And the upside girder in the further span from Sydney in the top cells and also in the other spans they have run out of splayed angle iron and have used square iron, and it does not fit by three-quarters of an inch? That is a mystery to me—as regards the square iron.
1773. Have you any memory of this fact: That in that same girder, the upside girder in the further span from Sydney, there are irregularities in the joints as if a piece had come from England in so many lengths—and if you have gone through a system of three or four you can open a joint as if it was misfitted—you can open a number of blank holes; do you know anything of the existence of that? No, I do not.
1774. *Mr. Blacket.*] How did you get men to work in those cells when there is no ventilation right through? We put one length on, riveted it, and then put another length on.
1775. You never went right through it yourself? No.
1776. *President.*] These cross girders bear upon the angle-iron in the bottom boom? It is intended that they should do so, but some of them might be a little off.

THURSDAY, 18 *JUNE*, 1885.

Present:—

G. A. MORELL, Esq., C.E., President.

W. C. KERNOT, Esq., C.E., Professor of Engineering,
W. M'D. COURTNEY, Esq., C.E.,
W. H. WARREN, Esq., C.E., Professor of Engineering.
OWEN BLACKET, Esq.

Mr. Thomas Smithyman recalled and re-examined:—

Mr. T. Smithyman. 18 June, 1885.

1777. *President.*] You were the sub-contractor for the erection of the Wellington Bridge? Yes.
1778. The contractor was Mr. Watkins, and you took the sub-contract from him? Yes.
1779. Who was your inspector? Mr. Maddocks.
1780. *Professor Warren.*] In sinking the piers of that bridge did you get a good foundation? Yes.
1781. The piers went down perfectly straight and in the position they were intended to occupy? Yes; we dropped on logs of timber 3 feet through—from 2 feet 6 inches to 3 feet.
1782. *President.*] In what pier was that? In number two from the Sydney side and also on the other side.
1783. *Professor Warren.*] Owing to that the cylinders might not have occupied the exact position they were intended to occupy? They might not.
1784. When you came to put the superstructure upon the piers then you could see that? Yes.
1785. And the superstructure did not come in quite right? No, not in width.
1786. Did you cut the girders? We cut them, but not for that purpose; there was a mistake; the top boom was 5 inches longer than the bottom boom, and we had to cut them in different places to make the holes in them.
1787. How much did you cut off? I think about 6 inches; it was somewhere about that; I am not exactly certain.
1788. How was it that the bed plates which the girders rest upon are not quite in the centre? I had to put them to suit the girders.
1789. Did you measure the spans after you erected the girders to see that you had the right span? No; the way that I did it was: I commenced on number two pier from the other side and worked towards Dubbo; I found I was out of plumb about an inch and a half; coming to the other end I could not get the holes to come in; the top boom was longer than the bottom boom and I had to cut it in two or three places, I think.
1790. Did you get the plates all on one level? I had Mr. Clarke there and he did all that.
1791. *President.*] Do you remember whether the top of all the piers was perfectly level before you put on the superstructure? Well, I do not think they were exactly level; but the bed plates were level.

1792.

Mr. T. Smithyman. 18 June, 1885.

1792. The bed plates throughout were made perfectly level? They were.
1793. Do you know if there has been any sinking in any one of the piers since the bridge was finished? There was one pier on this end, I think; I believe it was about 1½ or 2 inches too low.
1794. It was built that way and it did not sink afterwards? No, it never went down afterwards.
1795. *Professor Kernot.*] Was a test load placed upon the piers, and if so, how much? There were 150 tons placed on the piers.
1796. Could you say whether any of the piers yielded under that load at all;—did they come down? They went but very little indeed.
1797. What measures were taken to test the riveting? As a rule all we did was just to sound every rivet as it was put in.
1798. Can you say whether any rivets were condemned and cut out at the time the bridge was built? In almost every bridge we had to do that.
1799. Can you give any idea of how many? It might be one or two in a hundred, but not more than that.
1800. *Mr. Courtney.*] Did engines go over the bridge before you left it? I believe there were two engines there.
1801. Did you take any observations of the oscillations of the top of the girders? No, I did not..
1802. When the bridge was built did you observe the extent of the expansion and contraction? It was not very much; about three-eighths of an inch; that, I think, was the highest.
1803. *Professor Warren.*] Did you measure that expansion when the bridge was complete, or was it during its erection? During its erection, I think.
1804. Is not that rather small? When it was finished it might have been more.
1805. Were the cross girders in then? We had the girders in at that time.
1806. *Mr. Courtney.*] The angle irons on which the top boom rests are not close to the plates;—can you give any reason for that? They ought to be; it might have been overlooked; but they ought to be close.
1807. Do you remember, in the position of these piers, how much they went out of plumb, or rather out of range? I believe there were 4 or 5 inches in some of them.
1808. That was owing to meeting with timber in the sinking? Yes.
1809. Can you give us any information as to the bottom that was finally reached? I think it was marl clay.
1810. Were all the cylinders sunk to a hard bottom? Yes; the engineer saw to that before we commenced.
1811. You know that of your own personal knowledge? Yes.
1812. *President.*] What depth did you go to in sinking the piers? I think it was somewhere about 50 feet.
1813. How deep did you go before you put in the river piers? They were all alike; they were down to the clay; we went through one bed of clay and came to gravel again, and went through gravel until we got on clay the second time.
1814. *Mr. Courtney.*] You are speaking of the pier on the other side? The river piers were all alike.
1815. *President.*] You do not remember to what depth the land piers were sunk? I believe it was about 55 feet below the bed of the river—that is, the river piers.
1816. And what about the land piers? They were not so deep as that.
1817. Did they go as far as the bed of the river? Yes; but I could not tell you what the exact depth was.
1818. At what depth did you find these beds of gravel between the clay? The first was gravel on the top; we then got on to the clay; we came on to gravel again and then got clay after that.
1819. At what depth was that last clay found? I think about 50 feet below the bed.
1820. Did you sink to the second bed of clay in the land piers? We sunk down to the clay in the land piers, but I cannot exactly tell the depth of that now.
1821. But did you reach the clay in the land piers also? I do not think we had much gravel in the land piers at all; nothing but loam and clay.
1822. Was the clay at the bottom of the same nature as that in the river piers? Something of the same nature; I think we went down 40 feet on the bank.
1823. Did you go below the level of the bed of the creek? Yes.
1824. Do you remember what height the bridge is over the bed of the river? From the boom to the bed of the river I think was about 40 feet; it might be 45 feet; there is about 16 feet of water.
1825. What was the depth of sinking in the land piers? I think it was about 40 or 45 feet.
1826. *Mr. Courtney.*] Have you any recollection of the angle irons on the bottom flange being ill fitted? They were not to my knowledge.
1827. The joints were fitted on the bridge? Yes.
1828. Are you aware that any leaden rivets were put into that bridge? No, I am not aware of it at all; I could put half-a-dozen iron ones in while I was making one leaden one; it would have been no benefit.
1829. *President.*] Do you know whether any false holes were filled up with lead run into them? I have never used any lead there I am certain.
1830. In reference to the Bathurst bridge;—you were sub-contractor for the erection of the superstructure? Yes.
1831. And Mr. William Mason was the contractor? Yes.
1832. And Mr. Fearnleigh was the inspector? Yes.
1833. *Professor Warren.*] Do you know why the angle irons are not in contact with the booms? They came out in sections; the top and bottom booms just as in the Wellington bridge.
1834. Was the bad contact due to the work at home? I did not notice the work particularly, but I considered it a good job.
1835. Were the lattices in when the work came out? No.
1836. Then all the rivets in the lattice-bars were put in in the Colony? Yes.
1837. And all the joints? Except the top and bottom booms.
1838. Did you use cement to fill up the joints? No; the inspector was very strict over the job all through.
1839. In the angle iron wrappers do you consider that you put those rivets in tight—I mean did they fill the holes? Yes, I examined them all.
1840. Do you consider that the angle iron wrapper fitted the angle iron which it is intended to cover? Yes.

Mr. T. Smithyman. 18 June, 1885.

1841. Was there any space in which you could put hoop-iron? No.
1842. Do you consider that the rivets in the lattice-bars were put in properly? Yes.
1843. You had no loose rivets in fact? Well, I am not supposed to have any, but it is possible to have one or two.
1844. How many loose rivets do you think you have in those iron wrappers? If we found any loose ones we always cut them out.
1845. And you were very particular about the joints? Yes; the inspector always tried them, and if he found any he marked them and we afterwards took them out.
1846. And you never used any caulking at all, nor any leaden rivets? No.
1847. Did you observe anything of the expansion of these bridges? No.
1848. Did you have a good foundation? Yes, there was, but the contractor put the cylinders down.
1849. Do you consider the work was uniform throughout? Yes.
1850. It was so when you left it? Yes.
1851. You are quite sure that the first span from Sydney was as good as the third span? Yes, as far as my knowledge goes.
1852. Did you have to do with the Wollondilly bridges? Yes, I think I commenced at Towrang, up to Goulburn.
1853. Had you to do with Mulwarree? Yes.
1854. *Mr. Courtney.*] That was Mr. de Bergue's? Yes.
1855. *President.*] You erected the two bridges over the Wollondilly River, 130 feet span? Only one—the Towrang one.
1856. *Professor Warren.*] Do you know who erected the Carrick bridge? Mr. Hudson; he came out from home.
1857. *President.*] You erected also the five bridges, with 60 feet spans, over the Wollondilly? One 130 feet span, and the others 60 feet.
1858. Do you remember, in connection with these Wollondilly bridges, whether the girders were erected in a good line; that is, whether each girder in the erection was placed in a straight line? Yes; I believe they were.
1859. Are not some of them on the skew and others on the square? I think Towrang is all alike.
1860. But on the skew bridges, do you remember if the girders were in a good line? I believe they were.
1861. Was there a bed-plate sunk in the stone? I think there was no iron bed-plate, but I believe that the lead under the girder is put on the stone. I believe there is one in the 130 feet opening; I cannot exactly remember about the others.
1862. *Mr. Courtney.*] Have you been to these bridges since they were ballasted and opened—I speak particularly of the Mulwarree bridge? No, I have never been up there since.
1863. You did not notice any tendency in these girders to work off the centre line? I noticed one. We were decking the bridges, and I found that one girder had moved half-an-inch on the left, and I could not make it out.
1864. It moved sideways? No, it moved endways, about half-an-inch. I put that down to the expansion, the wooden deck being all one way.
1865. You have never seen any side motion on them? No. I have never been there since it was finished; they were in a line when I left them.
1866. Do you remember what camber they had? About 1½ or 2 inches, I believe.
1867. *Professor Warren.*] On Goulburn bridge there are several big covering plates on the top and bottom flange;—why were they put on? I forget these things; I do not know the reason why they were put on; they must have come from home with the work like that; there was no extra work done here.
1868. *President.*] You told us that the 60-feet spans were in a good line when you put them up; were they also plumb? Yes.
1869. Did you try them with the level? Yes, and the inspector tried them all.
1870. And if they have got out of plumb and out of line that must have occurred afterwards? They were both in line and plumb when we left them.
1871. Did you erect the piers? No.
1872. *Mr. Courtney.*] Were they in line after the cross girders were lifted in? Yes; we were very particular over that. If they were not in line it would have looked bad.
1873. Were they also plumb? Yes, they were.
1874. *President.*] Are you sure that in every instance the ends of the girders were bedded fairly all over? Yes, because the inspector looked after that.
1875. Were the stones made perfectly level to receive the ends of the girders? Yes.
1876. *Professor Kernot.*] Will you tell us what part of the riveting of these bridges at Towrang was done in England, and how much was done in the Colony? I cannot remember whether the side plates came out in one or two thicknesses; I know that the bridge was finished; Mr. Mason had some angle iron put in at the top, but I do not know what that was for; that was inside the boxes; they were short pieces; we had no room to put in rivets there.
1877. Were all the rivets in these bridges tested by the inspector? Yes.
1878. And all the loose ones replaced? Yes.
1879. Do you think that when the bridge was finished any of the rivets could be turned round by the fingers? No, not unless you got a hammer and hammered them on the head.
1880. *President.*] Do you know that that has been done? I have never seen it done, but a person said it was done by Mr. Hilzinger who riveted the Menangle bridge for me.
1881. *Professor Kernot.*] Were any rivets dubbed over the end instead of being perfectly riveted? No, not to my knowledge; it would be no benefit to do so.
1882. *President.*] Mr. G. F. Mann was the inspector of these bridges? He was the engineer in charge; there was a man of the name of Hamphire as inspector.
1883. He is dead? Yes.
1884. You were the contractor for the erection of the Aberdeen bridge? For the superstructure.
1885. Mr. Morrison was the inspector? Yes, in that case.

1886.

Mr. T. Smithyman. 18 June, 1885.

1886. How did the work of that come out from England? Just the same as the Bathurst and Wellington bridges; it came out in lengths—the top and bottom booms—and I riveted the joints then.
1887. What were the lengths of the pieces? Some of them up to 30 feet.
1888. Was the work that came out from England well put together and well riveted? Yes; I had no fault to find with it.
1889. Did you find many loose rivets? Well, I did not overhaul them to my knowledge.
1890. *Professor Warren.*] You riveted the booms sent out from England, and you also put in the lattice-bars? Yes.
1891. *President.*] Did you remark that the plates and angle-irons of the booms were in good contact? The templates were rather short; in the top booms the holes were exactly fair; they might be about the eighth of an inch apart in 30 feet; I mentioned it to Mr. Whitton myself.
1892. Did you require any false holes to be drilled? No.
1893. Were there any false holes drilled? Not to my knowledge.
1894. *Professor Warren.*] Then you do not remember anything about false holes or the elongated holes? No; they were all drilled at home, and the work came in very well.
1895. *Professor Kernot.*] Do you remember if the girders were in good line at Aberdeen? They were when I left.
1896. Do you remember on the furthest span on the up stream side on the top boom;—was there any irregularity there? I do not remember.
1897. *Professor Warren.*] Do you remember that the girder was bent? No, I do not remember it.
1898. Did you notice whether the top boom was straight? Yes, it was straight.
1899. You did not notice any bend in the top? No, I did not; it could not get out of line if the joints were met.
1900. *Professor Kernot.*] Do you remember whether any rivets were left out in the lattice-work and the holes filled up with putty instead? No, there was nothing of the kind.
1901. You are certain? I am quite certain.
1902. *Professor Warren.*] Talking about rivets being left out, do you remember the lattice in the end spans;—did you leave out any rivets there? No, I did not.
1903. Do you remember whether some defect exists at the far spans in a similar position? No, if they had been left out I would have filled them in.
1904. Do you remember whether the channel iron struts were left in close contact with the stringer plates? Yes, they were.
1905. When you left the bridge they were in contact all the way up? Yes, and the inspector tested them with Mr. Wade.
1906. Did you test them with hoop-iron? I did not.
1907. You could not say then within the extent of a quarter of an inch? No, I am not certain of that; I believe it was not so; if I had seen that I should have altered it.
1908. Do you consider that the iron covers are in good contact? Yes.
1909. And the rivets tight? And the rivets tight.
1910. Of course you put them in? Yes.
1911. You consider it was tight when you left it. You do not remember any spaces? I do not.
1912. *President.*] When I was asking you about false holes I meant double holes in the top boom in the work that was done in the Colony. You do not remember any double holes? All the work came out in first-class order.
1913. Do you remember if the ends of the cross girders were riveted quite close to the vertical plates of the booms? Yes, they were riveted close.
1914. Was there any space between the angle iron and the plate? No, I am very particular about having the plates close before they are riveted.
1915. *Professor Warren.*] Could anybody put any double holes in after the bridge was erected? It could be done, but I don't think it is likely.
1916. How long is it since you were on that job? It is about nine years ago.
1917. Do you think you can trust your memory so far back as that? Well, it takes all my time to think of these things; but I know the work came in very well from home; the Wellington bridge was just the very reverse way. I remember cutting the top booms at Wellington.
1918. You do not mean to say it came in better than Wellington in the joints? No, the joints were very well on the top boom; the work came in very well when I cut it.
1919. At the Aberdeen bridge do you remember seeing the angle-irons put on? Yes; but I have no recollection of double holes.
1920. *President.*] There was a camber given to the girders? Yes; I think it was about 3 inches.
1921. Were you there when the wedges were knocked off? Yes.
1922. How much did it come down? I cannot remember; I was there at the testing of the bridge too.
1923. *Professor Kernot.*] Do you remember the wind-bracing bars in the bridge? Yes.
1924. They were riveted there? Yes.
1925. These rivets are not riveted; they are simply put through. Do you remember anything about that? It is a mystery to me altogether; I cannot make it out at all.
1926. Do you remember whether any of the cylinders in the piers were cracked at the time the bridge was built? No, I cannot tell; there was a lot of them repaired; I cannot say whether they were put in without being repaired.
1927. *Professor Warren.*] How did you repair them? A plate was put inside.
1928. *Professor Kernot.*] How was the plate attached? By rivets, flush outside; but I had nothing to do with that.

SATURDAY,

SATURDAY, 27 *JUNE*, 1885.

Present:—

G. A. MORELL, Esq., C.E., President.

W. C. KERNOT, Esq., C.E., Professor of Engineering, | W. M'D. COURTNEY, Esq., C.E.,

W. H. WARREN, Esq., C.E., Professor of Engineering.

Gother F. Mann, Esq., sworn and examined:—

G. F. Mann, Esq.

27 June, 1885.

1929. *President.*] You were engineer in charge of the construction of the Wollondilly bridges? Yes.
1930. The girders of the Wollondilly bridges are 66 feet spans right up to Goulburn, except two of 130 feet spans? There are two over the Wollondilly; the others are 66 feet and 140 feet.
1931. What were your duties in connection with those bridges? I was responsible for the proper erection of the work; the ironwork was sent out; I set out the work and built the bridges; I had to certify that the work was properly put together.
1932. Mr. Smithyman was the contractor? Yes, I think he was.
1933. Some of these bridges are on the skew and some of them on the square? The second crossing at Wollondilly is on the skew, and the Mulwarree Ponds is on the skew; those are the only two; I had to do with all the Wollondilly bridges; my immediate superior officer was the Engineer-in-Chief.
1934. When the work came out from England was it well put together? Yes, it appeared very fair work indeed; there was nothing in it that would warrant me in reporting to the Engineer-in-Chief.
1935. It came out in sections? The 66 feet spans; the web girders were in halves; the box girders of the 140 feet spans came in sections as far as I remember.
1936. Do you remember, in the case of the spans at Mulwarree Creek, whether the line of the girders was good? It was a very good line indeed; in the Mulwarree and all the small bridges they lined up very well.
1937. *Professor Warren.*] Have you been on the bridges since they were built? I have not seen them excepting going over them in the train. With regard to Barber's Creek the girders shifted a little out of position after they were placed. They were bedded on two thicknesses of lead. They shifted after the trains ran on the line. It was not to any great extent, and they did not shift any more.
1938. *President.*] Was there any bed-plate? Not in the 66-feet openings—only in the 140 feet spans. They have got bed-plates; in the others the lead was on the stone, but there was no plate under it.
1939. *Professor Warren.*] Did you cut a piece out of the stone? No; we just put the lead down on the flat. We may have dressed the stone to get the level.
1940. *President.*] What was the length of the bearings on the pier? About 3 feet, and 4 inches allowed for expansion.
1941. Do you think the girders could expand upon the lead? Yes.
1942. Would they expand without tearing the lead? I would not say that; they might do it, and they might shift the lead.
1943. Was there any bed-plate under the girders? No.
1944. The rivets were merely countersunk into the bottom plates? Yes, as far as I recollect; but it is so long ago.
1945. Did you observe any expansion? No; I do not remember that I did.
1946. You would not like to say that they expanded at all? No, I would not.
1947. What was the object of putting parapets between the end of each girder? It was as much for ornament as anything else. They are just simply the width of the piers, and were not put with the intention of keeping the girders up—only for ornament.
1948. But they would prevent the girders from being painted on that side? Yes, but they were well painted when they were put up.
1949. *Professor Warren.*] You could not examine the bed-plates to see how they are working with those parapets? Not very well.
1950. How were the bridges erected? The 66 feet girders were riveted down below the boxes; girders were riveted on the staging.
1951. Were you satisfied with the riveting? Yes.
1952. You did not order any of the rivets sent out from home to be cut out? I tried all the rivets; I think I did have some cut out on Barber's Creek bridge; they had been riveted up so that the snaps were not down close; but there were very few of them.
1953. You are quite sure that none of the rivets could be turned round by the finger when left? Certainly not; for if so I would have been very culpable not to have reported it.
1954. *President.*] These bridges were constructed with a proper camber I suppose? Yes, about three-quarters of an inch to an inch.
1955. Was that reduced when the bridge was opened for traffic? I could not tell because the line was not open for traffic until after I left.
1956. *Professor Warren.*] How is it that the 60 feet girders have not the same camber throughout? They were all the same camber when they were put up; in fitting these together from the different makers you get a certain camber in fitting them up and so there may be a difference of camber in the different bridges; the average was about three-quarters of an inch or an inch.
1957. *Mr. Courtney.*] After the erection did you ever plumb the main girders in the large spans to find out whether the two top flanges were nearer than the bottom? Yes; I think we did and found them correct or very near it; still I would not be positive that we did, it is so long ago.
1958. You could not give us any opinion with regard to the smaller ones? No, it is so long ago I almost forget the thing.
1959. *President.*] Were any of the small girders out of winding? No.
1960. You had not to dress any of the stone? No, only ordinary dressing; we had to do nothing to humour it.
1961. *Professor Warren.*] Did you notice in the tension joints of the 60 feet girders that the lateral plates were only 6 inches, and that you had not the proper amount of metal behind the rivet? No, that did not strike me.

1962.

G. F. Mann, Esq. 27 June, 1885.

1962. *Professor Kernot.*] Can you tell us the reason of certain small pieces of iron riveted upon the top of the Mulwarree bridge that do not exist in any of the others? As far as I remember, the whole of those girders were erected just as they came from England; it must have been part of the design.
1963. *Mr. Courtney.*] Do you remember whether the cross girders were suspended on the rivets? I cannot remember how they were fixed; I fancy that they rested upon the bottom plates of the girder.
1964. *President.*] Have you been connected with the erection of any other iron bridges? No, not in this colony; I am connected at present with the erection of other iron bridges, but they are not yet finished.

Mr. William Hilzinger re-called and re-examined:—

Mr. W. Hilzinger. 27 June, 1885.

1965. *President.*] Do you know the Wagga and Wollondilly iron bridges? No, I do not know them.
1966. You remember the Menangle bridge having some timber under the end of the girders? Yes, under the sole plate.
1967. In what state is that timber? Some of it is very rotten and others not so bad.
1968. Were the cells of the booms clean? No, and they are not clean now.
1969. In what state are the plates and rivets inside? Rusty and dirty—the same as Penrith.
1970. Does the water get in? Yes, all over.
1971. Is there any ventilation in the lower cells? No, nor in the top ones; I have driven a few holes in most; there were none when we came there.
1972. *Mr. Courtney.*] Does the same evil exist in the middle web not being close to the crown plate as at Penrith? No, it is flat.
1973. Is the middle web well up against the plates? I have not been there myself, but I believe it is fairly close all through; I have had the riveters there. There are some places in the Menangle bridge where the butt-plates are against the angle-iron; you can see that from the end; there is very bad work; when you get inside the ends of the rivets hang down half-an-inch; the rivets are put in so that they hang down; the men have complained many times that they have knocked their heads against them going through.
1974. Have any riveting repairs been done on the bottom cells of the Menangle bridge? No, only the ends of the cross girders; nothing has been done in the inside at all.
1975. *President.*] It would be very difficult to put in any rivets inside? It would be very difficult to work in those cells at all top or bottom.
1976. They are now kept clean and painted? They are partly painted but not finished.
1977. Has there been any very serious loss of section in those bottom cells? Well they are very rusty, but I have not been through them myself.
1978. Are they smaller than those at Penrith? About the same size; you can see in the Menangle, inside, all the butt plates being fitted in; they catch on the top plate.
1979. What are those? The covering plates on the bottom booms on the inside. I wrote a report about them and asked if I should take them off, but they told me not to mind.
1980. Now about the Penrith bridge;—do you find any difficulty in cleaning the cells? Yes, they are very difficult to clean.
1981. In what condition were those cells when they were inspected lately? They are full of rust all over the angle-irons and the rivets; there was a lot of loose dust which we swept out, and flakes which we shall have to chip out.
1982. In what state are the rivets? They are very rusty, and the heads are eaten off.
1983. Is there any provision for the water to run off? Not at all.
1984. How does it get out? Where the work is not close.
1985. How much water was there in the lower cells? It was over the flanges of the angle-irons—it was 6 inches in some places; you can see water lying inside at present.
1986. Has it been lying there for any length of time? Yes; there is some now; when the men went into the cells they came out sopping wet.
1987. It must run off partly from the camber of the bridge? The camber is upside down, especially on the piers, and any way it cannot get over the covering plates; it lies in between; I have been getting holes cut in the bottom to let the water run off.
1988. The ends of these cells were inaccessible, stopped by some timber of the approaches? Yes, by the baulking of the permanent way by irons put in loosely, and we have knocked them out; they were over the piers; there were six of them on each pier; they did as much good on the bank as they did in the bridge because they were not fastened to it at all; they were just standing up by themselves; in all those T irons inside the bottom cells of the piers there were only two rivets, and I think there were not more than six holes.
1989. *Mr. Courtney.*] When you were cutting out those rivets did you measure the thickness through the holes? No, I did not.
1990. Were there any packings in the cross girders where they were attached to the main girders? No, very few I think were resting on the angle iron.
1991. What proportion do you think? About a dozen or so.
1992. About what percentage did rest on the angle irons? I should say about one-third.
1993. Then two-thirds were hanging? Fully that. Sometimes there is not one for a long distance without a liner.
1994. Did anyone put in liners until you came? No, they were all hanging on the rivets.
1995. In what state did you find the rivets attaching the cross girders to the main boom? Some of them had no heads on them at all.
1996. In what condition are the rivets in the bottom diaphragm which transfers the strain from the cross girders to the far web? A lot of them are very loose and knocked down all on one side of the hole.
1997. In which side are the loose rivets most prevalent? I never took any notice. They are about the same all over, I think.
1998. With regard to the dummies or headless rivets that are put in over the vertical T irons, what proportion are they to the good rivets about those approaches? I think about one-third of them are dummies. They generally average two good ones and one dummy.
1999. Have you found any of those dummies driven down on the top of the T irons? Some of them have been knocked down hot, a very few. They are mostly stuck down cold.
2000. Are there any special signs showing an error in building? Yes, a great many.
2001. In any particular part of this bridge? About the butts I found them, where the plates have been cut off they have got double holes in them, and in other places where the plates overlap instead of butting.

2002.

Mr. W. Hilzinger. 27 June, 1885.

2002. Have you found any places where there is an appearance of the lengths having been put wrongly together? Yes, plenty of places; in some places they do not come up within half-an-inch; there are very few places where they have been put together properly.
2003. *Professor Warren.*] Have you found any places in the bridge in which the holes have not come in properly? Yes, there are a good many places where there are double holes, and they are filled up with lead, and other places where they are filled up with burrs, which you can see from the outside.
2004. *President.*] Did you see those double holes inside in every plate or only in the top plate? We could not get in to see, but I should think they would be through the whole of the plates; if the holes are thrown out in one plate it must be in the whole of the pile, because they come out in piles.
2005. *Professor Kernot.*] Do you remember a row of rivets connecting the web to the angle-iron of the boom? Yes.
2006. What size are they? Three-quarter inch rivets.
2007. From end to end all through the bridge? Yes.
2008. What condition are those rivets in as a rule? They are fairly tight, except in the bottom where the bed-plates occur; generally they are pretty tight, except where the bed-plates are; those which marked the covering plates are too wide.
2009. Can you call the rivets to mind, particularly in the vicinity of piers two and three—that is, the two ends of the middle span? I cannot remember them particularly; they are bad always where the joints occur in any part of the bridge; they are bad where the coverings come, and you can get hoop-iron in.
2010. Are there double holes there? Yes.
2011. Are there many of them? I think we counted ten or twelve all of a row; there were a good many leaden rivets along that row; the row of rivets connecting the web plates with the angle-irons to the boom one side is as bad as the other, only they occur in different places—that is, in the ¾-inch riveting.
2012. *Mr. Courtney.*] In what condition did you find the rivets in the upper side of the diaphragm? I think the upper side is worse than the bottom; the middle ones are very loose; you can shake the plates about.
2013. What about the three angle irons which are attached to the arched top of the boom;—in what state are they? The angle iron has not been bevelled to suit the curve; it is square in most places and it does not touch at the root all the way along, and very seldom at the edge of the flange.
2014. A special angle iron has not been used? Not throughout; in some parts it is fairly close; where there are thin plates they set down better to the angle irons; we have put liners in all the wide places.
2015. In what condition have you found the rivets in the cross girders? They are all machine rivets; we have never tested them.
2016. Your experience is that they are pretty sound? Yes.
2017. Were you at the erection of the Solitary Creek bridges? No.
2018. When did they come under your charge? On the 11th of October, 1881.
2019. Since then have you observed any change in the camber of those bridges? No; I reported that they were down in the middle in 1881.
2020. According to your observation they have not changed since? No; we have stiffened them since we have taken out the loose rivets and replaced them.
2021. Did you take any measures to prop them? No, we only took out one or two of the rivets at a time.
2022. What were the chief faults in the bridges before you started to overhaul them? The stiffeners were not close on the top booms and the rivets were loose.
2023. Have you made any observations about the expansion and contraction of these bridges? I found that they were not resting upon sole plates, and they have been tearing away the piers; they were resting on sheet lead, and the lead has all dissolved into putty. I took some of the putty to Mr. Watt, the analytical chemist, and he said it was caused by the action of the salts that washed out of the earth acting on the lead.
2024. *Professor Warren.*] You inserted some wedges in certain places? Yes, where the butts were not close.
2025. Where did that occur? In the top booms.
2026. Not in the bottom booms? Yes, where required.
2027. How many rivets did you find loose, say in one bridge over the Solitary Creek? I could not tell you exactly; in one bridge I found twenty-seven on the top, in another one sixty-four, and in another one eighteen.
2028. *Mr. Courtney.*] There is one girder that has been repaired with a patch at the end;—what damage was done to it? I do not know.
2029. Do you know how many rivets were taken out of the bottom flanges? No, they have been riveted, and are now in a sound condition.
2030. *Professor Warren.*] In the Bathurst bridge you re-riveted the second and third spans, but only partially the first span, I believe? Yes.
2031. What were the chief defects you found in these bridges? The work was not close; the rivets were loose, and the spaces between the angle-irons and the plates in the top boom were stuffed up with cast-iron borings and salammoniac, which we scraped out; that was done after it was riveted.
2032. Did you find this between the angle-iron and the angle-iron covers? I do not remember; it might have been so.
2033. The work in the second and third spans before you riveted it, was that as good as the work in the first span? Something about the same.
2034. Were there any special defects in the second and third spans? No, not more than in the first span; I think if anything the middle span was the shakiest of the lot; there were more loose rivets in it.
2035. The chief defects in the second and third spans were loose rivets? The work was not close and was filled up with iron-borings and sal ammoniac, and there were a good many rivets loose at the end of the cross girders.
2036. Were they packed under the ends? They lay fairly close; some of them were a little off.
2037. How did you find it in the bottom booms? I found a few loose rivets, mostly in the ends of the cross girders.
2038. How did you find the rivets in the channel-irons and lattice-bars? There were a good many of them loose, especially at the end sections; there were a good many broken; we have chipped and scraped and painted two spans of that bridge.

Mr. W. Hilzinger. 27 June, 1885.

2039. Have you done anything to repair the Wellington bridge? Only to the wind bracing stays underneath; we have screwed them up; they were all loose; it was the same at Bathurst; I had them done before I commenced repairing the bridge at all.
2040. How were the rivets in the plates which formed the joint? Some of them were loose.
2041. You had to renew them? Yes, the nuts came off with the vibration of the bridge; they ought to have been locked; we have locked them since.
2042. You have found in the Wellington bridge about the same number of defective rivets in the top as you have in the bottom booms? Not so many in the bottom as in the top.
2043. Did you find any loose rivets in the cross-girders of the Wellington bridge? Not in the cross-girders.
2044. What about the rivets in the ends of the cross girders? There were some of them loose.
2045. Did you find any rust cement in the Wellington bridge? No; we did not find it at Bathurst until we began to repair.
2046. You found loose rivets at Wellington? Yes, in the top boom.
2047. Were they in any number? Yes, about two dozen of them; four and five of a row across the boom.
2048. You do not consider the work in the Wellington bridge at all comparable with that in the Bathurst bridge? It is much better and closer, not only in the riveting and plating part of the business but it is better in all other respects.
2049. How many rivets would you propose to renew in the Wellington bridge that you have marked? Where the work is not in contact I should cut them out; if they are a little loose and the work is fairly close I would not cut them out unless there were a great number of them all in a row; we marked all that were loose, but not necessarily that all should be cut out.
2050. How many do you think it would be necessary to renew? I think about five or six times that of the number as reported, because, when you start you have to go on until you come to where it is solid; I do not think we could stop at the number we have reported.
2051. What condition are the channel irons in;—are they well fitted to the stringer plates? Some of them are and some have a space between them, a space you can put hoop-iron in.
2052. *Professor Kernot.*] Do you consider the Aberdeen bridge in as good a condition with reference to tight rivets and contact as the Wellington bridge? No, it is far worse than Wellington.
2053. Is it worse than Bathurst was before you touched it? In some respects it is; there are not so many of those double holes in the Bathurst bridge as in the Aberdeen bridge; the work is closer in the Aberdeen bridge, but in the Aberdeen bridge there are more double holes.
2054. *Professor Warren.*] In what condition are the rivets in the wind bracing? I have not been over that.
2055. And that of the McDonald River and Peel River? We could not get in them unless we had staging erected.
2056. *Mr. Courtney.*] Have you on any of those bridges observed a failure of the lead in the wall-plates? I have not seen lead in them.
2057. *Professor Kernot.*] In cutting out the rivets what precautions did you take not to injure the plates? We split the heads off first, and then the other part comes off easily.
2058. Did you not strike it off along the grain of the plates? We never struck against the landing of the plates.
2059. That would be along the length of the boom? Yes. You cannot always go by the grain of the plate in cutting the rivet out.
2060. Do you think the plate is injured by cutting the rivet out? Not in the least. If it is a thin plate it will burr up the edge; but in such plates as we have in these bridges it does not have any effect.
2061. You never noticed any injury done to the iron? None whatever. The machine rivets should be drilled out.
2062. Have you had to cut out any of the machine rivets? No; we have not cut the rivets out of any of the cross girders; they are always tight.

THURSDAY, 2 *JULY*, 1885.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E., | W. H. WARREN, Esq., C.E., Professor of Engineering.

Macnamara Russell, Esq., sworn and examined:—

M. Russell, Esq. 2 July, 1885.

2063. *President.*] You held a position in the Railway department some time ago? Yes, I was chief draftsman.
2064. How long is it since you left? I left last December.
2065. You were requested by the Engineer-in-Chief for Railways to visit certain iron bridges on the northern line and report upon them—the Aberdeen, Peel-street (Tamworth), the Peel River, and the McDonald River bridges? I was.
2066. And this is a copy of your report (*showing document*)? It is.
2067. This report you wrote to the Engineer-in-Chief for Railways? Yes.
2068. You expressed an opinion in reference to loose rivets: that a very large hammer had been used to test them;—who informed you of that? The person who accompanied Mr. Wade, Mr. Drewett, and myself, in the inspection. His name was Mr. Bewick; I suppose he spoke from having seen the hammer used.
2069. You did not see the hammer? No, I saw the heads of the rivets.
2070. What proportion of the rivets? A large proportion of them.
2071. With reference to the butts and joints not being close in the top boom, you are of opinion that it did not affect the stability of the bridge to have those joints open? Yes, I have expressed that opinion. I have also given my reasons for forming that opinion, and I produce a passage from "Stoney on Strains" in support of that opinion.

M. Russell, Esq.
2 July, 1885.

2072. The Aberdeen bridge consists of three spans? Yes.
2073. What would you call those spans? Continuous girder, over two spans.
2074. You said that the joints in the top boom are all compression joints? No; being continuous, they are in compression and tension alternately, the change occurring at points of contrary flexure.
2075. *Professor Warren.*] You stated that you noticed marks of violent hammering. Do you think you could loosen rivets with the ordinary test hammer? No; I think not; and I understand, from practical smiths, that if you use a very heavy hammer you can lengthen the shank of the rivet, after it is cold, until by hammering you start both heads away from the work.
2076. Can you give some estimate as to how many of the marked rivets are loose? About one in ten.
2077. The rivets that bear signs of violent hammering;—how many are there? Those are the rivets I refer to—the marked rivets; and on the numbers named by me I have been guided by the report of Mr. Cowdery's officers.
2078. That gives the impression that only those rivets marked with the hammer are loose? No; some were marked with chalk marks, others with chisel cuts, and, as far as my memory serves me, the greater part of those that were marked bore signs of excessive hammering.
2079. You say that the rivets are true in line? Yes; if the bridge had sagged, that would have distorted the horizontal line of the rivets; if there had been lateral distortion it would have altered their vertical line; if the bridge had gone down at all, owing to loose rivets, or to excessive weight or constant traffic, it would present the appearance of being buckled.
2080. Are the tension and compression joints in this bridge designed in precisely the same good manner? So far as I could ascertain there were one or two exceptions, but I take it that the fact that the camber is still so nearly perfect, shows that there could have been no serious defect in the workmanship of the bridge.
2081. You did not notice any difference in the parts of the compression member over the piers and the joints and tension? No, I did not notice—I have a note-book in Melbourne which would refresh my memory on some of these details; I think one or two of the covering plates were not sufficiently large to cover the tension joints; but bridge engineering twenty-five years ago was in a very different stage to what it is now, and I think we might do worse even now than repeat the Aberdeen bridge work and design.
2082. You consider it well designed? Yes, and very faithfully built.
2083. *President.*] What difference of sectional area, if any, would be required between the area of rivets and the area of plate in making the joints? The amount of plate taken away by the rivet-holes should be compensated for by the plate over the lap-joints of (say) one-third to one-fifth; I cannot give the proportion exactly, this being a matter of detail which would depend upon the designer of the bridge. I think in some of these plates there was not sufficient area allowed for loss by riveting.
2084. You stated that one of the plates in the top boom had double or slotted holes? I think that plate should not have been put in at all; it has the appearance of being a defect—a defect or flaw in the workmanship.
2085. You stated also that it would be injurious to cut out a number of rivets and replace them;—what proportion of rivets do you think it would be injurious to cut out? If they were merely in single shear and easily got at, then the injury would be reduced, but if the rivets are mostly tight, I think it would be better to leave them in rather than resort to violence, because you cannot then withdraw them without injuring the adjacent rivets. In fact the more you take out the more you loosen. If the rivets were as loose as Mr. Cowdery's officers reported no injury could accrue; but I say they were not so loose that they could be cut out without injury.
2086. Do you know an instance in which loose rivets have been left and considered not unsafe in the bridge? I have no absolute knowledge of any instance, but I suppose it would depend upon the proportion that the loose rivets bore to the structure; if only 1 or 2 per cent., I should say leave them alone; if it was 75 per cent., then replace them; or, preferably, rebuild the bridge.
2087. On the whole you consider that the Aberdeen bridge is well put together? I think so, bearing in mind that there are one or two conspicuous but trifling defects in the workmanship which had better not have been allowed to go into the bridge. I would, for instance, take care not to leave a gap of half an inch in the jump joints, nor use plates with slotted holes, because it looks like slummed workmanship, but the camber being as perfect as it is the bridge has proved itself to be a very well-fitted bridge.
2088. *Professor Warren.*] Do you consider that the traffic would have any effect upon the camber? Yes, if the bridge had not been properly constructed. In this bridge, according to the present standard, the cross-girders are weak. I am of opinion that with the present rolling-stock some of the cross-girders are decidedly deficient in strength and approximate too closely to the factor of safety, especially perhaps in the case of the Nepean bridge, but at the time that bridge was designed the practice was to put in a great number of girders close together, a plan that is now abandoned under the new conditions of heavy rolling-stock which prevail.
2089. With reference to the flaw you spoke about, how long did you spend examining that bridge? We took the best part of a day to each of the bridges we examined; we spent a great part of that time examining the Aberdeen bridge.
2090. You did not observe in the other bridges defects of a similar character to the slotted or elongated holes? No. I did not observe any in either of the other bridges I examined.
2091. You state that if a few hundred rivets were replaced it would endanger the structure? No, only if they were replaced by means of excessive violence, which I believe would be necessary before you could get the rivets out at all; you would thereby start so much more of the other rivet work.
2092. *Mr. Courtney.*] How did you get the weight of the engines used in testing the deflection? Those were checked by Mr. Drewett and Mr. Wade, and all our calculations came very close to each other.
2093. You also inspected the bridge over the Peel River at Tamworth? Yes.
2094. You state that the remarks about the rivets on the Aberdeen bridge also apply to this bridge? I think so. I did not observe any case of slotted holes or anything of that kind.
2095. Did you test this bridge with the same load as the Aberdeen bridge? Yes.
2096. You found a deflection, as stated in the report? Yes.
2097. You made the same remarks upon every one of these bridges about the treatment of the rivets; it was assuming that the rivets had been loosened almost on purpose? I could not imagine any professional man having authorized any bridge to be used in this manner.

2098.

M. Russell, Esq. 2 July, 1885.

2098. How many blows would loosen a rivet? That depends upon the weight of the hammer and how the blows were given. I was told that the hammer was heavy. On all of these bridges the heads of the marked rivets were dented in; and more than that, the paint was knocked off corresponding to the blow. It was certainly not done with a tapping hammer. I saw some of the heads dented more than could possibly have been done by a tapping hammer.
2099. What per centage of those rivets were there? A large per centage of those I examined—probably some hundreds of them.
2100. *Professor Warren.*] Do you think there are 100 rivets in any one of the bridges that bear marks of violent hammering? Certainly; on one of the bridges nearly the whole of the marked rivets are "marked" with two deep chisel cuts.
2101. What depth are the chisel cuts? Probably the sixteenth part of an inch.
2102. Do you think you could scratch it as deep as that with a pen-knife? No; I was told those rivets were to be cut out and if those marks are not now visible perhaps they were cut out since I was there. If the rivets have not been taken out I am sure that they were dented as I have said.
2103. *Mr. Courtney.*] The marks that you saw upon the rivets were not such as to deteriorate their strength? No; I do not think that; the marks were only to show that they were to be removed.
2104. *President.*] Those marks of violence apply also to the M'Donald River bridge? Yes; I think I say so in the report. It was on the M'Donald River bridge that I found a rivet which they had attempted to withdraw and had been unable to.
2105. Do you know how this rivet was cut out;—was the head knocked off? After cutting the head off they had tried to punch the rivet out, but it had stuck there.
2106. Did that happen in your presence? No.
2107. You do not know the circumstances connected with the cutting out of that rivet? No.
2108. You found also that the deflection was five-tenths of an inch with the same load? Yes, and the camber was very nearly perfect.
2109. During the testing of that bridge did you find that the side-way oscillation was more than it should have been? No; I think it was a well built and very firm bridge; I observed no side oscillation; of course we were not running at a very great speed as was done in some other testing of which I have heard.
2110. You made the test with the level only? Yes, with the level only.
2111. *Professor Warren.*] Did you notice the wind bracing on the Aberdeen, McDonald, and Peel River bridges? Yes, it is diagonal bracing with coupled joints.
2112. Did you think the design of the connections was a good arrangement for connecting this wind bracing? No, I did not think it was a very good arrangement; there is too little metal left where the strain is greatest.
2113. Would it be better if the plates riveted to the girders were turned the other way about? Yes, it would be better I consider, as it would distribute the strain on the rivets better.
2114. Did you notice whether the rivets in one of the Aberdeen bridge wind bracing plates were tight or loose? No, I did not; however, the bridge is still as much of a bridge to-day as it was when it was first put up—though as a matter of engineering skill I should prefer placing those coupling-plates as you suggest; it looks to me as if there had been an oversight in fitting those plates.
2115. *President.*] What experience have you had of bridge work? I have been in the profession since I was seventeen years of age. I commenced my career in my father's office, who was a civil engineer in London; subsequently I was in charge of telegraph construction in Egypt, and was there for three years in the Viceroy's service. Afterwards I was three years at the Bermudas where my father was engineer, but we did not build any big bridges there. After that I practised my profession as a surveyor and civil engineer both in Victoria and in New Zealand, where I was assistant engineer at Auckland, and designed some and superintended other important engineering works, including an iron swing bridge, the work for which came from the yards of Messrs. P. N. Russell and Company. Seventeen years ago I came to this Colony, and was at once appointed to the Department of Roads and Bridges under Mr. Bennett, and I had charge of many of his largest works. I was five years in that department, and afterwards I joined Mr. Whitton's department, in which I remained for ten or twelve years, and until the end of last year, when I retired from the Public Service on account of ill health.

TUESDAY, 18 *AUGUST*, 1885.

Present:—

G. A. MORELL, Esq., C.E., President.

W. M'D. COURTNEY, Esq., C.E., | W. H. WARREN, Esq., Professor of Engineering.

John Whitton, Esq., Engineer-in-Chief for Railways, re-called and further examined:—

J. Whitton, Esq. 18 Aug., 1885

2116. *President.*] Before concluding our inquiry we wish to ask you a few questions with reference to some of the bridges on which we have to report. Beginning with the Menangle Bridge, I would ask you first, whether, in designing that bridge, you considered the difficulty of access to the boxes of the booms? I did not. I remember that at that time there had been only about five of these bridges built. The only two that I remember before that were two bridges over the Trent; one near Gainsborough, the other higher up. There is a difficulty, no doubt, in getting access to the boxes, but a boy or a small man might get through them. I have had none built like that since.
2117. Do you think that the timbers on which the girders are resting could be renewed? No; I have never thought how they could be renewed. Originally the girders were all bedded on timber. Since those two bridges were erected we have bedded the girders on plates—roller plates and flat plates.
2118. *Professor Warren.*] Were the cross-girders calculated for a double line of way? Yes.

J. Whitton, Esq.
18 Aug., 1885.

2119. In the calculations for the cross-girders on the Menangle bridge did you allow anything for the longitudinal timbers that go over them? Yes; they distribute the load very much. They have been calculated to distribute the load. If renewing them I should use stronger timber—thicker timber.
2120. *President.*] The design of the Wollondilly bridges was prepared in your Department? Yes; all the drawings have been made in my Department.
2121. They seem to have been signed by Mr. Mason? During my absence in England they were signed by Mr. Mason.
2122. We have found that the 130 feet spans at the first and second crossings have not been carried out according to the drawings? They were not carried out exactly according to the drawings.
2123. Was the alteration made with your concurrence? I do not think it was. I think Mr. Fowler ordered them at home. Indeed, I think I sent the Commission a letter from Mr. Fowler to me, in which he stated that he had made some slight alteration in the girders.
2124. There is no expansion arrangement provided for the 60-feet girders: did you think it was unnecessary? I did not think it necessary. They are very short girders. Some of them are on plates; the others are bedded on stone.
2125. There is no fastening to one end of the girders? No; no fastening to them at all.
2126. Did you think it was unnecessary? I did not think it was necessary to fasten them.
2127. Yet there is some expansion on those bridges? In the 60-feet one there is a little, but not very much. There is plenty of space left for any expansion. The only way in which they could have been fastened would have been by leaving slot-holes in the girders and bolting them down. But there is no chance of their lifting up.
2128. A quantity of dirt, such as ballast and cinders, falls between the ends of the girders, and although the expansion is very small it seems to be sufficient between the two girders to make a strong kind of cement of the material? I have not noticed that; I have not seen the bridges for years, but the dirt could easily be removed by the permanent-way men.
2129. *Professor Warren.*] There is a matter in connection with one of the joints in the 60-feet span I should like to ask you a question about, as the bridge differs in that respect from all the other bridges. Were you satisfied with the joints in tension in the bottom flanges of the Wollondilly bridges? I was not aware that it was as you point out; still I am satisfied with it, seeing that it has been in use for so many years. I admit, however, that it would have been better with a longer lap.
2130. *President.*] The Wollondilly bridges were built with a slight camber? I think with an inch camber; the others with a three-quarter inch camber; but so far as I know they have shown no sign of further deflection. They all remain as they were originally constructed.
2131. In the case of the Penrith bridge, what was the live load the bridge was designed to carry? I think it was a ton and a half per foot for each road; that would be 3 tons.
2132. *Professor Warren.*] In Maw and Dredge's book on bridges Penrith bridge is illustrated, and it is stated that the dead load of the structure is about $2\frac{1}{2}$ tons per foot run, and that the live load has been calculated as $1\frac{1}{4}$ ton per foot run on each line of way; that makes a total load of 5 tons? I thought it was 3 tons. I am pretty sure I calculated it with 3 tons, but it is so long ago I cannot remember.
2133. The question is whether the information given in the book is correct? I dare say it is; it must have been obtained from Mr. Fowler in London.
2134. That bridge bears your name and Mr. Fowler's jointly? Yes.
2135. *President.*] And what is the dead load? About $2\frac{1}{2}$ tons.
2136. *Professor Warren.*] With reference to the horizontal line of rivets uniting the webs to the booms, and which are three-quarters of an inch in diameter and of 4 inches pitch, do you consider that they are sufficiently strong for a double line of way? Yes; I think they are. The fewer rivets there are on a bridge the better, so long as they resist the shearing strain of the plates. It was intentionally done, I suppose, but I do not know why. The rivets should be the same size throughout, no doubt. I did not know that they were smaller. Still you have seen nothing in the shape of damage done.
2137. Following up the last question, I would ask you this: Are the rivets in the webs through the quarter-inch plates sufficient in bearing area? I should think they were. The great test is that the bridge has been in use for so many years, and as no symptoms of failure have shown in any of the riveting, I think the rivets must be considered as large enough for the purpose.
2138. Of course the questions are put in view of a double line of way, not of the present single line? Yes; all the bridges were designed for a double line.
2139. *President.*] I suppose you have taken the unit stress generally recognized by the Board of Trade with regard to tension and compression? Yes; 4 tons compression, 5 tons tension, to the square inch.
2140. Did you compare in your calculations the unit stress brought on by the total load with the intensity of stress required by the regulations? Yes; they are all calculated according to the Board of Trade regulations.
2141. And there was no difference? No.
2142. Do you think that in course of time the unit stress might be increased by the annual wear and tear and deterioration of the iron-work? In time no doubt the plates will get thinner, but they ought to be cleaned and painted to prevent anything of the kind happening.
2143. Do you think it would be safe to go beyond the limit of 4 tons compression and 5 tons tension? You might go beyond it, but I think there are very few of our bridges that show as much as 5 tons tension; I think it is generally about $4\frac{1}{2}$.
2144. *Professor Warren.*] Is that with reference to the traffic or calculated loads? I am speaking of the calculated loads.
2145. What was the quality of iron used for the rivets? The best quality of iron.
2146. Was any test specified with regard to it? I think it was to be the same as the best boiler plate. The iron used for the rivets as a rule is equal to the best boiler plate. They are exceedingly good, in the Penrith bridge particularly.
2147. Would you consider $7\frac{1}{2}$ tons dangerous in the case of such a bridge as that at Penrith? I should not consider it dangerous.
2148. *President.*] Of course, the cross-girders were taken out for a double line of way;—do you consider the strength of the cross-girders in the Penrith bridge sufficient for a double line of way? Yes; they are the weakest part of the bridge yet, I think, but they are sufficient for a double line of way. If I were preparing

J. Whitton, Esq.
18 Aug., 1885.

preparing the bridge for a double line of way I would strengthen them by placing over them longitudinal timbers 12 inches in depth. They might also be stiffened by putting in rail-bearers, the same as has been done in the lattice girder bridges.

2149. There is a letter from Mr. Fowler in which he recommends that the chairs should be fixed between the cross-girders—in that way, at least, two cross-girders would be compelled to come into action at once; that has not been carried out here? No.

2150. You did not consider it necessary? No; I did not consider it necessary.

2151. But in view of the heavier traffic which now passes over the bridges, and the increased weight on the driving wheels, would you consider it necessary now? I should do so if I were to renew them. The engines with the tenders are now weighing 20 tons more than they did some years ago.

2152. *Mr. Courtney.*] Can you call to mind whether the Penrith bridge came out riveted in parts or in bars; were the booms riveted at home or here? Here, most of them, I think, but I am not quite positive about it. Nearly all the other bridges have come out in parts.

2153. *President.*] With reference to a letter, in which you state that the booms are always in compression, and that it would matter little if one-third of the rivets were slack, did you refer to the whole of the booms? I only referred to that portion of the booms which were in compression. Over the piers they are in tension.

2154. *Mr. Courtney.*] With reference to the Solitary Creek bridges and the girders on stone, have you ever had experience of the lead being destroyed by acid from the mineral underneath the bed of the girders? I have not heard of it.

2155. I ask the question because the statement has been made in evidence? I have had no experience of it myself; but I think all girders would be much better if bedded on plates. Very often the contraction and expansion destroys the masonry.

2156. Have you observed the piers of the Solitary Creek bridges with regard to the expansion plates? They are cracked. The stone copings are cracked. The contraction and expansion of the girders are the cause of it, no doubt.

2157. They have been replaced by brickwork? Yes.

2158. What was the live load calculated on the Solitary Creek bridges? I think a ton and a half to the foot of rolling load.

2159. *Professor Warren.*] Do you not think they might have been calculated for a less load? No; I think it was calculated for a ton and a half to the foot.

2160. *President.*] The girders of the Solitary Creek bridges were built with a camber? I think they were built with an inch camber, but I cannot be positive.

2161. *Professor Warren.*] Do you consider that the camber could possibly have been destroyed by the traffic which has passed over the bridges? I think it is possible; they are a little sagged now.

2162. Do you attribute the sagging to the traffic or to the erection? It may have been the erection, but I never noticed it, nor did I notice that they had much camber; but I think they were built with an inch camber, though now they are very slightly sagged. They are very strong bridges. They would no doubt have been better with a camber of about 2 inches. But even if they were perfectly straight they would look sagged.

2163. *President.*] In the Wellington bridge there is a slight difference of level between some of the piers? Yes; in the end piers there is.

2164. What is your opinion about that? My opinion is that the District Engineer fixed them too low. I do not believe that they have settled. I think you will find among the papers you have a memorandum from him to say that he fixed them low.

2165. *Professor Warren.*] Do you consider that a difference of level, say of 2 inches, would affect in any way the strength of the bridge? Not in the slightest.

2166. Are the rods shown on the plan produced calculated for wind pressure? Yes.

2167. They are the same size throughout? Yes.

2168. On all the bridges that we have had to inspect the end attachment is made different from that on the George's River; in fact it appears to have been put on the reverse way? I did not notice that.

2169. *President.*] Coming to the northern bridges: in the Aberdeen bridge several defects have been pointed out, such as improper butting of plates in compression; slotted holes; want of proper contact in the angle-iron wrappers and the angle-irons, or the angle-irons and plates; want of proper contact in the ends of the cross-girders and the vertical plates to which they are fastened; and other defects of that kind? I know that some of the plates do not quite butt on the top boom, but to have attempted to alter them would have ruined the bridge. No doubt it would have been better if the joints had all butted up, but it does not follow that the bridge is weak because they are not in contact, so long as the rivets are tight. I do not think they have ever moved. I have not inspected the bridges since they were put up, but I do not suppose that they have moved.

2170. Is it your opinion that if no sign of looseness should appear where those defects occur, the maintenance would be considered satisfactory if nothing were done? Yes, certainly. If the rivets are distinctly loose, it is clear that they are doing no good; they are throwing the strain on something else. When a mere vibratory motion is found in a rivet I would not touch it; it is doing no harm.

2171. *Mr. Courtney.*] If in making an examination of a bridge you found some rivets apparently sound and good, exposed to a pressure considerably in excess of 5 tons, say 10 or 12 tons, would you cut them out to make a larger hole and put in a larger rivet, or would you leave them in until they showed a failure? I would leave them in undoubtedly. The fewer rivets there are the better; I should not cut them out unless I found them shearing.

2172. *President.*] Do you think that the vibration caused by the traffic will ultimately loosen some rivets? Yes, undoubtedly it will. In all rivet bridges it must be so; you cannot avoid it. Constant running over the bridges will no doubt in time shake some rivets loose, and if I found them thoroughly loose, so that they could be turned round with the fingers, I would put in other rivets, but I would not touch a rivet unless it was distinctly loose.

2173. Have you any record of the percentage of rivets that have actually become loose through the traffic? No, I have not. I never knew a bridge in which you could not find slightly loose rivets.

2174. If you had charge of the maintenance of the bridges would you recommend that the rivets should be tested periodically, and rivets that were absolutely loose replaced? Yes, I would.

J. Whitton, Esq.
18 Aug., 1885.

2175. And would you replace them indiscriminately, or by ascertaining what stress is brought upon the parts they connect? So long as the rivets did their work thoroughly I should not touch them, but I should take out any rivets I found absolutely loose. I think there are very few rivets in our bridges that would be found very loose.

2176. Is it your opinion that in all bridges only a proportion of the rivets are doing their work: that a certain proportion are not actually and always doing the work which they should do? A thoroughly loose rivet of course does no work.

2177. But in bridge-work generally do you think that every rivet does its work? Yes; every rivet is doing its work; either acting as a clamp or resisting the shear strain of the bridge.

2178. But as some rivets become loose, more strain is thrown on other rivets? No doubt, and therefore to prevent that I would take out all rivets that are perfectly loose, but only those.

2179. You are quite satisfied with the work on the Peel River bridge, the bridge over Peel-street, Tamworth, and the Macdonald River bridge? Yes; I do not think better bridge-work can be found in the world than we have in this Colony.

2180. *Professor Warren.*] Speaking of the wind pressure, what wind pressure has been calculated for in the case of the bridges generally? I think a pressure of 50 lbs., but I am not quite positive.

2181. To resist that wind pressure do you allow for the deck itself as well as the diagonal rods and the over-head arch? Yes.

2182. Did you place a test load on the cylinders in the piers of those bridges? Yes, in all cases.

2183. That is an important matter with reference to the Wellington bridge; what test load was placed on that? I think 150 tons over each cylinder, but we have put more on lately; I think the George's River bridge had 250 tons.

2184. *President.*] If the bridges were tested periodically, say every two years, do you think that the deflection would gradually increase if the same loads were applied? I do not think it would unless the plates became worn away to some extent; but I must say that if I had bridges under my control I would not have them tested by severe loads after being once tested when put up. I do not think you do a bridge any good by testing it with very heavy weights. All our bridges are tested with three heavy engines (we had four the other day at Narrandera), but I do not think it would be wise to test them every year with those weights, because as long as a bridge keeps its original camber there can be no fear of its tumbling down. Therefore, unless I saw some sign of weakness in that respect, I should never put on a very heavy load.

2185. But with the increase of traffic which is sure to take place in the course of time, and with perhaps heavier engines, it would probably be well to ascertain every four or five years whether the bridges showed any sign of weakness? Yes, it might; but there would never be more than two engines with a train. So long as the bridges retained their camber I would never test them with very heavy loads.

2186. *Professor Warren.*] But if we have two engines in the middle of either of the side spans, and a heavy train extending entirely over the middle span, I think that would produce a stress as great as with three engines in either span, so that it would not exceed the ordinary traffic to load with three engines? I think it would; I think a test beyond the ordinary load is dangerous to any bridge, more particularly after it has been up a number of years. But, of course, if I saw the slightest deflection in the camber itself, I would test the bridges at once, because then there must be something wrong with them.

2187. *Mr. Courtney.*] Would you regularly inspect the state of the camber? Yes, I would inspect the state of the camber and the riveting; I would keep a man employed in doing that and nothing else, and if he found anything wrong I should have it rectified at once. There could be no objection to testing any of the bridges at any time with a train and two engines; but the ordinary traffic would soon show if there was anything wrong with the bridges.

2188. *President.*] Have you remarked in any of the bridges that the expansion arrangement does not work properly? I have noticed it on the Penrith bridge and the Nepean bridge; I put a gauge upon them so as to notice the expansion. There is no doubt the expansion rollers do act. I forget what the expansion was; I think it was about 3 inches on the Penrith bridge.

2189. In the open-work girders, when the expansion rollers do not act properly, and after they have been exposed to the heat of the sun, a heavy goods train going over them will often cause a sudden jerk, as if the load combined with the expansion had produced a sudden deflection; do you think that would be injurious to the bridges? I have not found anything of the kind.

2190. In the testing we found that in some cases where the expansion had been stopped owing to want of proper attention, the effect was to cause almost a buckling of the bridge? I never noticed that. It would do so to some extent no doubt, if the expansion was stopped.

2191. Coming to the timber approaches of the Wagga bridge, what do you consider to be the life of good Colonial timber? Iron-bark will last from twenty to twenty-five years if properly attended to. Other Colonial timber, if thoroughly good when placed, should last fifteen years; stringy-bark should last that time.

2192. The co-efficient of safety is considered to be sufficient for the weakest timber? Yes; we could build the approaches with half the timber we use, but I do not think it would be safe to do so, though they might carry the load very well; but there is no economy in doing it. In fact contractors have often asked me to let them put in beams of 12 inches square to save them from having to cut 3 inches off them.

2193. Have you found what should be the limit of the length of the corbels? I have never taken the corbels into consideration at all, but if they are made long enough and bolted to the two main girders there is no doubt that they do add strength to a bridge; but if the corbels are bolted to the girders they will rock over the piers with the girders: that is to say, they will bring a kind of contrary flexture on the span, and as the deflection takes place on one girder the other will be slightly raised.

2194. Do you consider that would be injurious to the traffic passing over? Not at all.

2195. You would not attribute any jumping motion to that? No; the jumping is attributable to the train running over the solid pier at one time and then over the suspended portion.

2196. The deflection upon the timber approaches at the Wagga bridge is not likely to cause derailment more than upon the iron bridge? No, I do not think so at all. I do not remember an instance in which a train has left the rails unless the road has been in bad order. There is always a reason for an engine's getting off the rails and it should always be found out; but I have noticed lately that it is never found out, though it can easily be found out. An engine will never leave the rails unless there is some good cause for it.

2197.

J. Whitton, Esq. 18 Aug., 1885.

2197. *Professor Warren.*] Why was the original design departed from in respect to the length of the Wagga viaduct? I do not think there is more in it than the original design shows; if there is it must be in consequence of information I got about the floods.
2198. Why was the span of 29 feet 6 inches adopted instead of a span of 26 feet as used elsewhere both before and since? Simply to make it less expensive, but I always found it a difficult matter to get timbers of that length, and that we could get them better and cheaper by having them 3 or 4 feet shorter. They are 29 feet 6 inches at Tamworth; in fact the bridge there is similar to the one at Wagga.
2199. Has there been any difficulty or complaint with reference to the 29 feet 6 inches span at Tamworth? Not the slightest; nor in the case of any of the bridges.
2200. We have had complaints with reference to the Wagga viaduct, and I wanted to know whether you had had any similar complaints with reference to the Tamworth viaduct? None whatever. The difference between the two viaducts is simply this: that the timber in the Tamworth viaduct is better than that in the Wagga viaduct. The uprights are better; they are principally of stringybark, I think.
2201. With reference to the width in the Wagga and Tamworth viaducts and in the viaducts generally, which is 12 feet 6 inches, do you consider that absolutely necessary? They might be made narrower, but I do not think there would be any advantage in so doing. It makes a much steadier railway to have a width of 12 feet 6 inches. If the sleepers are 9 feet, it leaves only a space of 1 foot 9 inches on each side. Our sleepers now are 8 feet, though originally they were 9 feet, but we cheapened them by making them 8 feet, and so made a worse road.
2202. *Mr. Courtney.*] Could you give us your opinion with regard to the props used in cases where there is defective timber? They were only put in originally as a sort of scarecrow to make somebody believe that there was something wrong. There was no necessity for the props at all.
2203. But from time to time, out of 2,000 girders, some will fail; do you think the propping has a bad effect on the vibration? I do not see that any good is done by propping.
2204. Has it any bad effect? I do not know that it would have any bad effect, but it does no good. It would cause the girders to have less deflection to prop them in the centre, and you might put in a certain number of props so as to make them perfectly rigid, but there is no necessity for the girders to have any props.
2205. We have evidence that timber grown 500 feet above the site of a bridge shows a great difference in its wear as compared with the timber on the lower level;—have you ever experienced that? No; but the timbers are very different in different parts of the Colony.
2206. But a difference of 500 feet in elevation does not in your opinion make a difference in the timber? No; it is the soil more than anything else which causes the difference in the timber.
2207. If you were designing these bridges again would you be disposed to put a cover on the upper side of the compound beams over the corbels? No; I should not think it necessary to do so. No doubt the best thing would be to have an iron viaduct altogether, but we had not the money and could not afford it. At one time a resolution was passed by the Assembly that no iron should be imported for any bridges whatever, it being the general wish that timber should be used wherever possible; and in the case of the Singleton bridge the House refused to vote the money for it until I had laid the plans on the Table to show that I intended to use timber and not iron. That is the reason why it is a timber bridge now. In every instance it has been the wish of every Minister and every Government that timber should be used when practicable, so that all work should if possible be done in the Colony.
2208. Is it your experience of timber that the pipes inside the piles increase? I have never seen any timber with pipes in it. Of course pipes are in many timbers, even in the best; and sometimes the inside is quite rotten in parts while the outside is quite good, but I have never noticed pipes in the piles. It does not follow that the timber is bad because there is a pipe in it.
2209. No; but the question is whether they increase or not? If they grow of course it must be that the pile is decaying, but I do not think that the fact of there being a pipe causes them to decay. It must be some other cause, such as dry rot in the timber.
2210. Do you think that tarring the new timber as it goes up is favourable to its taking dry rot? I think it is very much in favour of its taking dry rot. The timber would be much better without tar. It should not be painted or tarred for twelve or eighteen months after being put up.
2211. *President.*] If you had to erect timber viaducts now would you use 29 feet 6-inch spans? I would if I could get the timber. The difficulty is to get the timber in that length. The contractors charge more if you use that length, because the timber is difficult to get.
2212. You would consider them perfectly safe? Yes.

George Cowdery, Esq., Engineer for Existing Lines, recalled and further examined:—

G. Cowdery, Esq. 18 Aug., 1885

2213. *President.*] We wish to ask you a few more questions before concluding our inquiry. We shall take the bridges in the order in which they come on the different lines. When you received information with respect to loose rivets in any of the bridges, were you supplied with a sketch or diagram showing the parts in which the rivets were loose? Yes, in most cases I think, excepting the bridges in the south—I am not sure whether there was a diagram with reference to them—but in those cases I went to examine the bridges myself before giving any instructions for the removal of rivets.
2214. Before you authorized the renewal of any rivets did you consider the rivet area of the parts which they joined? Oh yes, certainly.
2215. And did you ascertain the stresses that came upon those parts where the rivets were cut out? I do not say that I calculated them but I knew where the strains came, and I was careful not to have any more taken out than those that were loose before the new ones were put in.
2216. *Professor Warren.*] Do you say that you were careful not to have any rivets cut out, excepting those that were really loose? It is a difficult matter to convey the right meaning in terms like those. A rivet does not assist to carry the bridge if it is loose.
2217. Do you mean by a loose rivet one that you can shake with the hammer: do you mean to say that a rivet is not doing work if you can move it at all? Of course there are degrees of tightness. The rivets must assist the bridge if they are not very loose, if there is a strain on them.
2218. How can you ascertain that there is a strain? By the rivets being loose or tight.

G. Cowdery, Esq.
18 Aug., 1885.

2219. With or without a load on the bridge? I do not think that makes any difference, or next to none. Some other rivets must be carrying more than their due weight. I do not think the load or the absence of the load makes any difference to the tightness or looseness.
2220. You mean to say that a live load makes no difference? I do not think you wouldbe able to discover the difference.
2221. *Mr. Courtney.*] If you take four thicknesses of iron, and a rivet passes through three and a half tight, but in the last half does not bear up to the neck, if that rivet is struck on the head it will sound loose, and if you drive it out you have driven out a rivet that has been doing work? Yes, in the place where it was tight.
2222. And that was in three and a half plates out of four? I very much doubt if you would find a rivet under circumstances that would not feel absolutely tight.
2223. *President.*] What I want to know from you is whether before any rivets were cut out you ascertained what stresses those rivets were to transmit from one part of the girder to another? Perhaps not very definitely; but wherever there was or was likely to be a strain on the rivets I always instructed the men to be careful, and to take out only a limited number and those only that were quite loose, before putting other bolts in, screw bolts I mean, to bring the work close.
2224. The stresses vary in different places, and in some places it might not matter, while in others it might be of importance; but what I wanted to know is whether, before you sanctioned the cutting out of any rivets, you ascertained the stresses that came upon them, and the area they represented, in order to give instructions accordingly? I never gave instructions to have any large number of rivets taken out of any of the cover plates unless they were really loose, and then only as few as possible—just sufficient to enable the men to draw the plates together where they were not close. I believe they were careful in every case. Whenever I went on the work I saw no cause to complain of too many rivets having been taken out in one place.
2225. But the stresses were not ascertained? They were not calculated.
2226. In any of the bridges, when you renewed rivets, did you make any provision for supporting the girder while the rivets were being renewed? No. There was one instance where one of the small girders had dropped considerably, and which at one time I thought of stiffening, but instead of doing so I had it carefully reriveted.
2227. Had you the rivets taken out one by one? Very nearly so; a very few at a time.
2228. *Professor Warren.*] Where was that? On one of the bridges in the west; one of the Solitary Creek bridges; I forget which one.
2229. The President has asked you some questions with reference to the stresses which the rivets have to transmit, and the area in the rivets which transmit them. The stresses will vary in some parts more than others, and towards the end of the girders—for example in the discontinuous girders; you have a very low unit stress, about 1 ton on the square inch. Do you consider it necessary in such cases to take out rivets which are slightly loose and renew them? I do not know that I ever gave instructions to make any distinction between that and other parts of the girder so long as the rivets are really loose.
2230. The general principle has been to cut out rivets where they are loose without any reference to the part of the work? Yes.
2231. *Mr. Courtney.*] No instructions were given to discriminate between rivets that were found to vibrate under the hammer and those that were moved by trains passing by? You could not watch many rivets while a train was passing by, to ascertain whether they were loosened by the motion or not. You have to depend on the hammer.
2232. *Professor Warren.*] Do you consider loose rivets a source of danger? Yes.
2233. Then do you think that in any of the bridges you have had reriveted there was any danger of the bridge failing? It would depend on how many rivets were loose in certain parts of the bridge. For instance, if the bridge were resting on a few rivets, and those not of sufficient area to sustain it, or only just sufficient, the others being all loose; or if any of those that are bearing the strain gave way the strain would fall on the others and probably sheer the lot.
2234. But have you met with any instance in any of the bridges in question where not to have renewed the rivets would have caused failure? I think there are one or two cases where there are a great many more loose rivets than leave a sufficient number of tight ones for the area of the iron. I think you must have discovered that in the Aberdeen bridge in one or two places in the bottom boom of one of the girders, where there is a considerable number of loose rivets.
2235. You do not consider then that in any of the bridges with which you have had to deal there was any real danger of the bridge failing owing to loose rivets? No, certainly; I never intended that. If I had thought so in any one case I should have reported it before touching the bridges.
2236. *President.*] When what you consider as defects in the Menangle bridge were reported to you, was the question of the cleaning of the boxes, top and bottom, also brought under your notice? Certainly; they were shown to me in a bad state, with the water resting on the plates, which were very much corroded, and there were no holes to let the water out. We made a lot of holes to let the water drain. Not only that, but I also gave instructions to have the plates thoroughly cleaned and hammered before being painted. Many of them had gone a number of years without being looked at at all. They had never been seen by anyone until I instructed a thorough examination of them. I had been sufficiently long with Mr. Mason to know that no instructions had ever been given to clean them.
2237. Had you any drawings of these bridges given to you? None whatever.
2238. Did you apply for them? I applied for all the drawings in each district, but never could get them.
2239. *Mr. Courtney.*] The ends of the two inner cells on the Penrith bridge were stopped with timber? Yes.
2240. Was any complaint ever made that that was so? Not that I remember.
2241. You are aware of it? I have been aware of it since.
2242. And that those bottom cells have been stopped for seventeen years? They must have been closed ever since the bridge was erected. No one had ever looked at them either in the big boxes or the small ones until I instituted an examination. When I went through some of them and saw the state they were in I thought it was time to do something. After seeing some of the bridges in the south, I thought that if the others were anything like them it was time something was done, and therefore I had a thorough examination made of them.
2243. *President.*] Do you remember the expansion arrangement in the Wollondilly bridges? I cannot say that I do.

G. Cowdery, Esq.
18 Aug., 1885.

2244. On the small span—the 60-feet span—the girders only rest on lead? I am not aware that they rest on anything else, and I am almost certain that they rest on a sheet of lead.
2245. You find it difficult to clear the ashes and ballast between the girders and the piers? Yes, there has been some difficulty about that.
2246. Would it facilitate the cleaning of the ends of the girders if the parapets on the top of the piers were removed? I daresay it would. I do not see what use they are. They were only put there for ornament, but there is not much ornament about them. Their removal would certainly allow the girders to be got at very much more easily.
2247. To what extent were the Wollondilly bridges reriveted? A great many new rivets were put in.
2248. Have you not a list of the number of rivets put in? The number of rivets that are found loose by a man going over a bridge with a hammer is out of all proportion to the number you have to put in, because all the loose ones are not found at first. It is when you begin to replace the rivets that were first found loose—that is in the places where the work is apart—that you find out the extent of the defect. You do not find out anything like the whole number the first time you go through the bridge. In putting in the new rivets and drawing the work together you loosen a great many other rivets. It is almost impossible to leave off. You must go on till you come to a tight place where the work is close.
2249. Do you ever find a place where the plates and angle-irons are not in perfect contact and yet none of the rivets that unite those parts seem to be loose? I do not know whether you would find such a place, but you will find more rivets loose where the work is not close. In every case where the work is not close you will find some rivets loose.
2250. But there may be a very small space between the plate and angle-iron, as where there is a burr, which prevents perfect contact, and yet the work may be tight? There would be contact where the burr was.
2251. And if there was no sign of undue stress upon the rivets would you replace them? Certainly not in a case where I found the work tight, even if there was a small chink. But when you can put in a piece of hoop-iron I think the rivets ought to come out. I have seen places in the Menangle bridge where I could hit the rivets with a piece of hoop-iron.
2252. And yet some of the rivets were tight? Not one of those I speak of.
2253. When the loose rivets and other defects were pointed out to you first did you put yourself in communication with Mr. Whitton with regard to them? Never; nor with the Commissioner either.
2254. You acted on your own responsibility? Yes; I believed it to be my duty, as the person in charge of the maintenance, to repair the bridges. I did not put on a gang of men to make a show of doing something to them, because I was not so afraid of them as to think there was any great danger; but I simply put on a small gang to effect the necessary repairs without making a rush at the work; and the Commissioner, up to the time Mr. Whitton complained to him, did not know that I was doing anything more than necessary repairs.
2255. *Professor Warren.*] You considered yourself responsible for the safety of the bridges? Certainly; and that is my position now I hope.
2256. In that case have you checked the calculation of the bridges to see if the area provided is adequate to the stresses which they will undergo with the traffic? I have gone sufficiently far into them to ascertain that.
2257. With reference to the cross-girders in the Wollondilly bridges? The cross-girders in some of the bridges have shown a weakness in my opinion altogether.
2258. Have you calculated those cross-girders as cross-girders simply, or have you allowed for the effect of the longitudinal girders on top transmitting the weight from one to the other? Of course I made allowance for that.
2259. Have you renewed any of the timbers since you have had charge of the bridges? I do not know whether we have renewed the longitudinal timbers, but we have renewed the planking to a large extent.
2260. In the Wollondilly bridges the longitudinals have been joined between the same two girders, whereas at other places we find a breaking joint. The question is whether you put them in that way or whether they were so originally? I would not be certain about that, but I do not think we should make any difference in the length of them. We should only take out one at a time on account of the traffic.
2261. *President.*] If you renewed the whole length it would be in such a manner as to do it in the shortest space of time? Yes.
2262. You would not make any change in the scarf? It must have been a very exceptional case in which that was done.
2263. With regard to the Penrith bridge: do you think it is likely that the line which is now used for the road traffic may soon be required for the railway traffic? It is quite possible. I know that the Traffic Department very much want the road over the mountains to be duplicated. We are now duplicating the line from Parramatta to Penrith, and I think that in all probability we shall go over the bridge with a double line in that case, and then of course they would need to build a road bridge. There was a bridge for the road at one time, but it was washed away by a flood. On the Menangle bridge there is room for a double road, but the old road bridge stood the flood and I think it remains until the present day. I should have made all these big bridges for a double road.
2264. Were the timber approaches, a portion of which obstructed the entrance to the boxes of the bottom booms, put in by your department or by the Engineer-in-Chief? By the Engineer-in-Chief.
2265. They were part of the original design? Yes. The far end of the bridge was not; that was done on account of the flood coming up to it. It was all completed before the line was opened.
2266. *Mr. Courtney.*] Until lately you had never heard any report of the timber going wrong in the wall-plates on the Menangle and Penrith bridges? No; that part had not been examined. I do not suppose that the whole of the other bridges were thoroughly examined, but they would be examined from end to end before the repairs would be considered complete, but that has not been done until recently.
2267. *Professor Warren.*] In the Penrith bridge there is a line of rivets that unite the webs to the booms: those rivets are three-quarters of an inch in diameter;—did that strike you as being out of proportion to the rest of the work? I do not know that it did at the time but I see that it is out of proportion. I do not suppose that I paid the same attention to the bridges that you have, although I have examined them a good many times. In repairing a bridge I did not consider whether it was strong or not; if it was intended to last 50 or 100 years I thought it should be put into proper repair.
2268. *President.*] You have reported upon a great many defects or so-called defects in nearly all the bridges, such

G. Cowdery, Esq.
18 Aug., 1885.

such as want of closeness in the joint, and imperfect butting of the plates;—do you consider that those defects are injurious to the bridges? To a certain extent certainly. The work is not what it is supposed to be.

2269. Has there been any change inthose defects since the bridges have been built? I cannot tell you; they have not been long enough under my charge for me to ascertain that.

2270. You have not observed any change? No, I could not say so. You see the change would be so slight in a long time that you could not observe it without having special diagrams showing what they were when you first observed them. You would want to go into the matter very carefully and gauge every butt in order to see if there was any difference.

2271. Would you remedy those defects before you saw any change? Certainly I would wherever I could I would certainly try to improve those butts in every case and close the work. In fact I try to improve every part that I see any defect in.

2272. You state in some of your reports that the sagging of some of the Solitary Creek bridges was so bad that you thought at one time of proping up the girders? I mentioned that in only one case I think. I did not say that I had propped them, but that I thought seriously of doing it. I did not do it because it might have attracted people's attention and they might have thought the bridge dangerous. Instead of doing that I had the bridge carefully reriveted where the rivets were loose.

2273. *Professor Warren.*] In one of your reports you say that one or more of the Solitary Creek bridges would have been down if they had not been reriveted? I forget what I reported now. I was under the impression that all those bridges had some camber and I believe they had.

2274. And that they have gone down with the traffic? Yes.

2275. *Mr. Courtney.*] Do you find any indication of that in cutting out the rivets? No; I do not suppose we could tell by that. We might if the holes had been neatly drilled through, but it is seldom you find a hole of that kind.

2276. You found no indication in any of the rivets you cut that a couple of inches camber had gone? I could not say that, but I could show you a number of very crooked rivets.

2277. *Professor Warren.*] In reply to one of Mr. Whitton's letters you make this remark: "I am strongly of opinion that if the Solitary Creek bridges had not been properly attended to one or more of them would have been down by this"? Perhaps that is stronger than I intended. I might have been a little out of temper when I wrote that; it is certainly strong, but I have no doubt that they have all sagged.

2278. Have you remarked with regard to the Wellington bridge that there has been any settlement? I am perfectly certain that it has settled since the line was opened—by actual levelling and checking.

2279. Can you give us the different times when it has been tested? I can by my level book.

2280. Can you give us the difference of level at the different dates? I could send it to you.

2281. *Mr. Courtney.*] Have recent experiments shown that it is still sinking? I have not tried it since your inquiry commenced. Previous to that I know that between the two times of levelling there was about an inch of difference.

2282. Was everything thoroughly set when the first readings were taken? Oh yes; we had been running some time before that. It was the plate-layers who drew my attention to it in the first place. They could not keep the road up, and they could not make out how it was. I took a level and found there was some considerable difference, and I have levelled it since and found there was about an inch of difference. That is on one side. It is about five-tenths on the other. We have never had a flood in the river since the bridge has been built. The water has never been up to the piers on the embankment; and I feel sure that after a heavy flood, when the water has subsided, the pier will still go down. It is not down to the bed of the river by some 7 feet. I have pointed that out to Mr. Whitton since I knew that the pier had gone down, and he sent for the plan. Mr. Wade was in his room at the time. The plan he showed me was simply a section showing the depth the cylinders were sunk and the depth of the bore-hole for trying the ground. As soon as I saw it I said, "Those cylinders are not down to the bed of the river"; and he said, "Neither are they. How is that Wade?" I thought he was getting a little out of temper and I left; but there is no doubt that they are shown on that plan as something like 7 feet above the bed of the river.

2283. *President.*] Have you done anything to the northern bridges? Nothing except testing the rivets and the work generally—just a preliminary look through.

2284. What do you propose to do to those bridges? That is a difficult question to answer. In the case of one of them (that over the Peel River), although it is an excellent bridge as far as butting and all that goes, but still in my opinion the riveting is all loose. The rivets were never big enough for the work.

2285. *Professor Warren.*] Does the same remark apply to the Macdonald River bridge? Yes; but not to the same extent. I do not think there is much difference.

2286. And the Peel-street bridge? I forget what that was like. In the Aberdeen bridge the riveting is perhaps better on the whole than in the newer bridge over the Peel River, but the work altogether is not good. It is open. There is bad butting and bad riveting; I do not consider it a good job at all. You may have noticed in the Aberdeen bridge what a bad line there is in one of the girders. I call that a piece of sheer carelessness in putting the bridge together. If it had been in line it would have butted in that particular place; the butts would have been good. The extreme end is some 3 inches out of line.

2287. *President.*] You have been keeping the Wagga viaduct in good order? Yes, we have had a gang of men there, and it is very much improved, I believe. They say it is stiffer, and I believe it is; but there is one thing in connection with the tightening up that I wanted to speak to you about. In the bolts, those through the ends of the girders particularly, there is an immense strain in consequence of the long corbel being underneath. There is a great leverage causing a tremendous strain on the bolts, and thus causing them to draw through the timbers. There is a great deal more taken up in the thread by screwing up than is accountable for by the shrinkage of the timber.

2288. *Professor Warren.*] You mean to say that the deflection of the corbels draws the bolts? When the weight comes on the ends of the corbels it has a tendency to raise the end of the girder, and therefore draws the bolt through the timber. They cannot be got at easily, but where the girder has been taken out no washer has been found, but simply the head of the bolt in the girder.

2289. *President.*] How deep is the head now? They cannot tell, except in one or two cases where they have taken the girder out.

2290. *Professor Warren.*] How far do they sink in those cases? That I could not tell you. The bridge would have been all the better if there had been washers, independently of the drawing of the bolt, because it would have held the joints of the girders down when the weight came on.

2291.

G. Cowdery, Esq.

18 Aug., 1885.

2291. *Mr. Courtney.*] Have you or have your officers seen any increase of the pipes in the piles? They thought so the last time they went up there, when I sent an expert up, though how many of them are bigger than they were before I do not know.

2292. Do they find any of them stand still in their dimensions? It would be hard to tell that in a rough hole like that in the pile. The size of the pipes is not the great danger, but so many of them are dozy right through from the outside—soft or pithy—so that you can hardly get an auger through them. It is like boring into a piece of india-rubber.

2293. Have you had any experience or information with regard to the tarring of the piles? I have had a great deal of tarring done, but I do not know that it is of much use.

2294. I mean with reference to the idea that if new timber has any moisture in it it will retain it if tarred? Yes, it may retain it and do more harm than good; but we have some piles that have never been tarred, the same sort of wood, and yet it has all gone—all rotten. One or two piles that were taken out of the bridge the other side of Yass fell in three pieces when taken out, and every pile in that bridge I have to renew. The top is as good as can be.

2295. *President.*] You expressed the opinion that the corbels under the girders should not be longer than 6 feet? I do not think they are of any service when longer than 6 feet.

2296. You said that it caused the other end to kick up? Yes, and causes the racking of the timber work, and does more harm than good. That kicking up should not, in my opinion, be calculated on in a bridge of that description.

2297. But it will kick up with 6 feet as well as with 8 or 10 feet? Yes, to some extent, but not so much. Every corbel, however short, will have a tendency to kick up, and you must have a corbel of a certain length in order to make the joint.

2298. *Mr. Courtney.*] You assume that the corbel does not deflect? Just so. The long corbels do deflect. They gradually get round-backed as the girder settles down, and I dare say the reason why the Wagga bridge gets stiffer is because it is being constantly screwed up; but I do not think it is good after all that

2299. *Professor Warren.*] But the long corbels lessen the deflection of the main girder? By the other end of the corbel taking the weight of the next span.

2300. They shorten the span? They do not shorten the span very much because they lift the other end up when the weight comes on.

2301. Supposing now that you were to shorten the corbels, what would be the effect;—would the span deflect more or less? I do not think it would deflect any more. The girder in front simply would not lift so much.

2302. How would the corbels themselves be affected by shortening;—would they deflect more or less? Less. They would curve less.

2303. *President.*] Do you wish to make any remarks yourself with reference to the bridges? It is stated by one witness that Mr. Bewick, who is one of my officers, said that rivets in one of the bridges on the Northern Line had been loosened by a heavy hammer. I think in that case he should be further examined. I don't know whether he ever did say so or not.

2304. I will ask you a question on that point;—do you know for certain that a flogging hammer has never been used in testing the rivets? I believe that a flogging hammer has never been used in testing rivets.

2305. And if any workman engaged in this work under you has made a statement of that kind you think it is not a correct statement? I do. As to the calculations made by some witnesses holding high positions I do not intend to challenge them; but it must be distinctly understood that I do not concur in them.

2306. *Professor Warren.*] You mean with reference to the strength of the timber work? Timber and iron work too. I may say that I am utterly astonished that men holding such high positions should make the statements they have made as to the loosening of rivets in the several bridges with a 6 or 8 lb. hammer on such frivolous and unreliable evidence.

SPECIAL REPORTS.

INDEX OF SPECIAL REPORTS.

THE SPECIAL REPORTS are classified under the following heads, viz. :—

Iron Bridges.

	PAGES.	PLATES.
No. 1.—The riveting of the bridges	77–80	
No. 2.—Testing of the bridges	80–82	1–6
Bridges designed to carry a single line of rails.		
No. 3.—Wollondilly Bridges (Barber's Creek, Carrick, Wollondilly River, Boxer's Creek, and Mulwarree Creek)	82–84	7, 8
No. 4.—Wagga Wagga Bridge	84	9
No. 5.—Solitary Creek Bridges (Tarana, 4th crossing, 3rd crossing, 2nd crossing, 1st crossing)	85	8B, 14
No. 6.—Bathurst Bridge	86	15–24
No. 7.—Wellington Bridge	87–88	15–20, 25–28
No. 8.—Aberdeen Bridge	88–89	15–20, 29–32
No. 9.—Tamworth Bridge	89	33–36
No. 10.—Peel-street Bridge, Tamworth	90	8A
No. 11.—MacDonald River Bridge	90	33, 34, 37, 38
Bridges designed to carry a double line of rails.		
No. 12.—Menangle Bridge	91–92	6
No. 13.—Penrith Bridge	92–94	10–13

Timber Bridges.

No. 14.—Wagga Wagga Viaducts	94–96	39–41, 45
No. 15.—Clyde experiments	97–99	43, 44
No. 16.—Strength and elasticity of Colonial timber	99–101	42–44
Dubbo Bridge	101	
Timber Bridge at Singleton	101	

SPECIAL REPORTS.

No. 1.—THE RIVETING OF THE BRIDGES.

THE official reports upon loose rivets in the bridges, and the conflicting statements brought out in evidence, cannot be passed over without some remarks upon the inspection of the riveting of the bridges by the Commission, and quotations from authorities upon the subject in support of the Commission's decision.

The examination of the witnesses, and of the officers of the Department of Existing Lines, upon the inspection, workmanship, and reriveting of the bridges, tends to show that—

(1.) When any rivet showed a vibration under the stroke of a light hammer, it was to be cut out and replaced by another one irrespective of its position, or of the injury it might do by loosening adjoining rivets.

(2.) When an angle-iron wrapper or bar-iron cover admitted the insertion of a piece of clock-spring in the joint, it was, however good the rivets were, to be cut off, heated in a forge fire, and riveted up hot.

(3.) The selection of so-called loose rivets was to comprise all those that by sight, sound, or touch, showed a vibration, or that did not absolutely fill the holes when tapped with a testing hammer, no observation being made as to whether the rivet moved from the influence of a passing load.

(4.) When it was reported to the Engineer for Existing Lines that loose rivets were found in a bridge, he gave instructions to the District Engineer, who sent the Inspector or foreman to mark the loose rivets, and select those to be cut out and replaced.

It appears to have been assumed by the officers of the Department of Existing Lines that a rivet which does not fill the hole is loose. But the best experimentalists on this subject show that no rivet perfectly fills the hole, the nearest approach to this being those in the joints for testing purposes when the rivets have been turned in a lathe and put in nearly cold. In the case of the testing experiments by the Rivet Research Committee, as mentioned in the proceedings of the I. M. E., 1885, page 200, the rivets in the joints, though prepared with the greatest care, and riveted with 40 tons hydraulic pressure, are spoken of as "assumed to fill the holes," and there are many other proofs that a rivet cannot absolutely fill a hole. Proceedings I.M.E., 1885, No. 3, page 200.

The looseness of rivets being only a matter of degree it must be generally admitted that rivets should be cut out and replaced—

(1.) When they are so loose that the action of the rolling load causes them perceptibly to shake.

(2.) When rivets can be shaken with the test hammer either sideways or in direction of their length.

(3.) When rivets, through rust, under the head or by other sign, move under the influence of strain from rolling loads, expansion, wind pressure, or other causes.

When rivets which have a key-hole or half-hole in outside plate, under head or bat, do not fill the hole, it would be necessary to remove them and replace them by very hot rivets, nobbled down into the vacancy, unless such rivets are in a position where their efficiency or the pressure of the rivets is not against the bad side of the hole.

Rivets described in evidence as "not up," occur where a rivet has to be put in an awkward place, and struck into position with a hammer by the holder-up before the riveting is commenced; this forms a collar under the head which keeps it from perfect contact with the plate. There are often very efficient rivets comparatively tight and which should not be disturbed. The mistaken practice of condemning rivets in "bridge work," because of their sound under the testing hammer, without any consideration that they are but 4 or 5 per cent. weaker in their breaking strain than the best boiler rivets, is well shown in a correspondence of Mr. Ralph Tweddell, the eminent mechanical engineer, and one of the largest producers of riveting machinery. He writes: "I think the test by holding your fingers on one end, and then striking the other end with a hammer is utterly without value, except that the more inaccurate the punching the better probably would be the result of such a test, since the rivet would not be free to slide in the hole. . . . If the rivets show no vibration under heavy passing loads they apparently exactly fulfil the object of their being . . . and, there is no connection between 'boiler' riveting and girder work. I should say that if you commence knocking out the rivets you will do more harm than good."

The difficulty of obtaining the results of reliable experiments on ordinary riveted work led the Institution of Mechanical Engineers to appoint a Rivet Research Committee. The experiments were conducted by Professor Kennedy, Messrs. Tweddell, Kircaldy, and other eminent engineers.

The result of three years' work has lately been compiled by Professor Kennedy. The experiments were made rather for boiler construction, ship building, and steel bridge building in the future than for the consideration of existing works, and were carried out with Landore Siemen's steel, of a natural tenacity of 28 to 30 tons per square inch, with an elongation of 23 to 25 per cent. in 10 inches.

With very slight modification the results of these experiments may be applied to the design or investigation of ironwork.

The

The following are extracts from the reports of the Research Committee on riveted joints :—

THE OCCURRENCE AND EFFECT OF VISIBLE SLIP:

Proceedings Institute Mechanical Engineering, p. 252, No. 3, 1885.

"Visible slip or 'give,' occurs always in a riveted joint at a point very much below its breaking load, and is proportional to that load. It depends on the number and size of the rivets in the joint rather than anything else, and it is tolerably constant for a given size of rivet in a given type of joint. The loads per rivet at which a joint will commence to slip are :—

Diameter of rivets.	Type of Joint.	Riveting.	Slipping-load per Rivet.
¾ inch	Single-riveted	Hand	2·5 tons.
Do	Double-riveted	do	3·0 to 3·5 tons.
Do	do	Machine	7 ,,
1 inch	Single-riveted	Hand	3·2 ,,
Do	Double-riveted	do	4·3 ,,
Do	do	Machine	8 to 10 ,,

Experiments show that long before stresses are reached which could visibly stretch the plates of a joint there will be measurable shear of the rivet. The visible slip therefore will consist almost wholly of this shear, the magnitude of which will depend primarily on the number and size of the rivets.

"The value of hydraulic riveting as compared with hand riveting, in cases where sound hand riveting is possible, lies mainly, if not entirely, in the fact that it doubles the load at which the slip of a joint commences, . . . so that the advantage of hydraulic riveting may possibly be even greater than it is here assumed to be, but there is no indication that it is likely to affect the ultimate strength of the joint."

"The question of friction in the joint no doubt comes in the same way."

"The friction induced by the rivet will affect the point at which slip commences, but can hardly have much, if any, relation to the breaking load."

"It is thought that the load at which visible slip commences is probably proportional to the load at which leakage would begin in a boiler."

SLIP OF RIVETED JOINTS.

Page 240, pro. Inst. M.E., 1885.

"In single-riveted lap joints actual slip of the plates did not occur until the load was much higher than that at which the opening of the joint became visible, but it is again noteworthy that the joints with ¾ inch and those with 1 inch rivets show commencement of visible slip at the same total load (about 10·2 tons), not at the same load per square inch.

Page 241.

"The decrease of strength in the joint can be well understood when it is remembered how much tensile stress, in addition to the shear, is caused in the rivets by the bending of the joint as it opens out when stretched. The efficiency of the joint, or proportion borne by its strength to the strength of the solid plate was 55·1 per cent."

SHEAR OF RIVETS.

Page 249, Prof. Kennedy.

"It may be taken as established that the resistance per square inch in double shear is as great as that in single shear, so that allowance need not be made for the two shearing planes not being equally stressed. In single-riveted joints, however, the bending of the plates will put considerable tensile stress in the rivets; and this may diminish their apparent shearing resistance. In single-riveted joints it may be taken that about 22 tons per square inch is the shear resistance of the rivet steel, when the pressure on the rivets does not exceed about 40 tons per square inch. In double-riveted joints, with about ¾″ rivets, most of the experiments gave about 24 tons per square inch as the shearing resistance."

Page 250.

"The size of the rivet heads and ends plays a most important part in the strength of the joints, at any rate in the case of single-riveted (lap) joints. An increase of about one-third in the weight of the rivets (all this increase of course going to heads and ends) was found to add 8½ per cent. to the resistance of the joint, the plates remaining unbroken at the full shearing resistance of 22 tons per square inch instead of tearing at a shearing stress of only a little over 20 tons. The additional strength is probably due to the prevention of the distortion of the plates by the great tensile stress in the rivets."

Page 277. Mr. Moberly on boiler work.

"When first riveting steel boilers with steel rivets the heads came off; the rivet steel had been supplied too hard in quality, having a tensile strength of 50 tons per square inch. Later obtained better results, shearing strength 85 per cent. of tensile strength of the rivet steel. The tensile strength being 30 tons per square inch, the shearing 25, with punched holes in double-riveted joints, and in single-riveted joints 23 tons. What was wanted of a rivet was that it should fill the hole not when it was hot but when it was cold. Ordinary rivets are put in pretty hot, iron rivets especially at a very bright heat. They then cooled, and the arrangement was that they would rip or grip the plates together, but in doing so they also contracted laterally, and when the rivets were cold they did not fill the holes. This is less the case with steel."

The following scale of pressures was arranged several years ago for steel rivets, tolerably bright red heat :—

BOILER WORK—LAP JOINTS.

	Inch.	Inch.	Inch.	Inch.	Inch.
Thickness of plate	$\frac{9}{16}$ & $\frac{1}{2}$	$\frac{1}{2}$ & $\frac{7}{16}$	$\frac{7}{16}$ & $\frac{3}{8}$	$\frac{3}{8}$ & $\frac{5}{16}$	$\frac{5}{16}$ & $\frac{1}{4}$
Diameter, rivets	$1\frac{1}{8}$ & $1\frac{1}{16}$	1 & $\frac{15}{16}$	$\frac{7}{8}$ & $\frac{13}{16}$	$\frac{3}{4}$ & $\frac{11}{16}$	$\frac{5}{8}$ & $\frac{9}{16}$
	Tons.	Tons.	Tons.	Tons.	Tons.
Total pressure on rivet	35	30	25	20	15

BOLT JOINTS WITH DOUBLE COVERS.

	Inch.	Inch.	Inch.	Inch.
Thickness of plate	$\frac{9}{16}$	$\frac{1}{2}$	$\frac{7}{16}$	$\frac{3}{8}$
Diameter, rivets	$\frac{13}{16}$	$\frac{3}{4}$	$\frac{11}{16}$	$\frac{5}{8}$
	Tons.	Tons.	Tons.	Tons.
Total pressure on rivet	35	30	25	20

More recently the heat of the rivets had been reduced to a dull red heat, filling the holes much better, and making a better joint. The pressures of the colder rivets were 5 or 10 tons higher. To get the most perfect joint he considered the hole should be drilled and the rivets turned and riveted cold.

cold. In this matter he spoke from experience. Then, as to the heads, he believed these had often been made too small, as proved by Professor Kennedy's experiments. Hand riveting had proved inferior to hydraulic riveting, for the reason "that the rivet could not be made to fill the hole. It never did so in hand-riveting."

"The frictional resistance to slipping depends on the sectional area of the rivets; but, of course, it also varies with the pressure used in riveting and the temperature of the rivet at the moment of closing." Prof. Unwin, p. 272.

BEARING AREA OF RIVETS.

"The intensity of bearing-pressure on the rivets exercises, with joints proportioned in the ordinary way, a very important influence on their strength; so long as it does not much exceed 42 tons per square inch (measured on the projected area of the rivets), it does not seem to affect their strength; but pressures of 50 to 55 tons per square inch seem to cause the rivets to shear, in most cases, from 16 to 18 tons per square inch. The margin was made equal to the diameter of the drilled hole. Prof. Kennedy p. 252.

"In double-riveted butt-joints a higher pressure may be allowed, as the shearing stress may probably not exceed 16 or 18 tons per square inch when the plate tears; but in this case it would probably be wise to increase the margin. A margin (or net distance from the outside of the holes to the edge of the plate) equal to the diameter of the drilled hole has been found sufficient in all cases hitherto tried."

"To attain the maximum strength of a joint the breadth of lap must be such as to prevent it from breaking zig-zag. It has been found that the net metal measured zig-zig should be from 30 to 35 per cent. in excess of that measured across to ensure a straight fracture." Page 251.

EXCESS TENACITY OF A PERFORATED PLATE.

(1.) "The metal between the rivet-holes has a considerably greater tensile resistance per square inch than the imperforated metal. This excess of tenacity amounted to more than 20 per cent. both in $\frac{3}{8}$-inch and $\frac{3}{4}$-inch plates when the pitch of the rivets was about 1·9 diameters." Page 238.

It was further found that a deficiency in bearing reduced the amount of excess tenacity in the plate.

A large amount of useful information is further given in the reports—tables of sizes and rivets and pitches, as the result of experiment, the proportions which give the strongest joints, and other such matter.

All the experiments were in steel, and from each test-bar used in the joints a sample was taken and tested.

(2.) "In the result it was found that, with steel of about 30 tons tenacity in the form of $\frac{1}{4}$-inch and $\frac{3}{8}$-inch plates (unannealed as in all the other experiments) drilled with 1-inch holes and 2-inch pitch, the net metal between the holes had a tenacity 11 to 12 per cent. greater than that of the untouched plate. Even with punched holes the metal had a similar excess tenacity of over 6 per cent.; the diameter of the punched holes was assumed to be a mean between the measured diameters on each side of the plate. It was not found to make any difference whether the bolster was 1·32 or 3·32 inch larger than the punch."

This investigation will remove the feeling of doubt which has long existed regarding the effect of stresses on detailed parts of riveted work.

The following may be noted:—

The existence of visible slip and its occurrence at strains from 3 to $3\frac{1}{2}$ tons in a single riveted lap-joint, hand-riveted, the tested shearing resistance of the rivets being 24·8 tons, and of the plates from 28 to 30 tons per square inch area, show that in this form of connection a motion occurs in the rivet at about $\frac{1}{8}$ of the breaking strain of the joint. Visible slip.

This, no doubt, applies equally to iron as to steel.

The efficiency of the nip or grip of rivet heads has been over or under estimated in the evidence before the Commission. Rivets that had slipped into bearing under stress well within the margin of safety have been condemned as loose when judged only with a testing hammer. Shearing of rivets.

It has now been ascertained that it was an error in engineering practice to value the shearing resistance of a rivet in double shear, as only 1·5 or 1·8 times its resistance in single shear with similar plates and rivets, whereas reliable experiments show this shearing resistance to be in the proportion of 48 in the double shear with two shearing areas to 22 in the single shear.

It has also been demonstrated that the loss of shearing resistance of a rivet in a single-riveted joint is owing to the force of tension acting simultaneously with the shearing resistance, and that there is a loss of shearing resistance in a rivet under the influence of over-loaded bearing area.

Although it has been the general practice in calculating the plate area in a riveted joint not to measure it too closely, under the idea that the iron around the hole is more or less injured, it is now found that the plate is stronger per square inch remaining after perforation than it was before, even when the holes are punched. Excess tenacity.

This excess of tenacity over the natural tenacity taken by testing a piece of the same plate has been attested by the experiments in different machines and by several engineers independently during the last three years. An investigation is now being carried on to discover the cause.

It is also established that the difference between the excess tenacity of a perforated plate over natural tenacity of the same plate blank is decreased in any case where the plates have not sufficient area.

When iron is used instead of steel the following points require consideration:— Consideration when using iron instead of steel.

1. The excess of plate area between the holes measured diagonally over that measured straight across a double or manifold riveted joint, should be proportioned according to the tenacity of iron-plate with, and across the grain.
2. The margin of plate outside the rivet-holes requires similar modifications to adjust the detrusion of plates and the cross-grain strain of angle irons.
3. With the use of iron rivets the difference between the shearing resistance of the rivets and the plates does not exist as with the use of steel.

Regarding

Recommendations.

Regarding the construction, erection, and maintenance of our railway bridges, and considering that slightly loose rivets do not always occur by reason of being badly put in but from other causes, the Commission recommend that the Engineer in charge of the maintenance of the railway bridges before cutting out and replacing any rivets should make himself acquainted with the stresses which those rivets have to transmit and the effective area which is required to transmit the stresses.

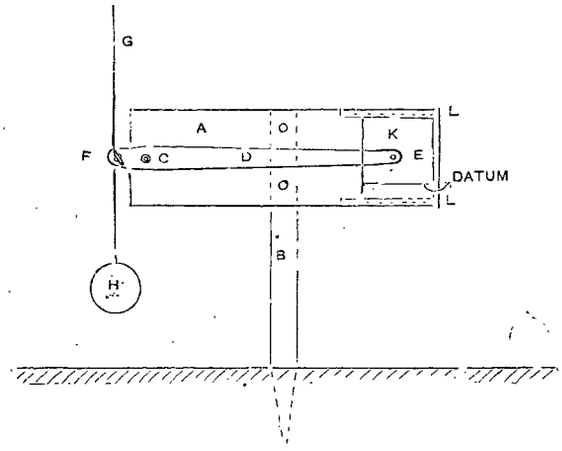
When rivets not sounding favourably under a testing-hammer occur in the flanges (except in the vicinity of joints) they should not be cut out before it has been ascertained what per centage of rivet area is in excess of the effective rivet area required, unless the looseness makes them vibrate under a passing load.

No. 2.—TESTING OF THE BRIDGES.

Deflection Testing Machine.

The apparatus used by the Commission for testing the bridges is shown on the accompanying sketch. It consists of a lever multiplying the actual deflection eight times,* thus giving lines which can be measured with great accuracy. It may be described as follows:—A board A is securely bolted to a stake B firmly driven into the ground, and a light lever D is accurately fitted with brass bearings, so as to move freely on a pin C fixed to the board. The long arm of the lever is provided with a lead-pencil at the end E, and the short arm with a small bolt and thumb-screw F and two small washers, between which is secured a fine steel wire G suspended from the point on the girder where the test is to be taken. A weight H is attached at the end of the wire to keep it perfectly tight. Any deflection or contrary flexure in the girder where the wire G is fastened causes a corresponding movement of the short arm of the lever F, and a movement eight times the extent at the point E where the pencil is fixed, and describes a line on a card K placed between the two fillets LL.

The *modus operandi* is as follows:—A number of instruments being erected at different parts of the girders or spans of the bridge to be tested, the cards are slipped into their places between the two fillets, and the pencils adjusted to the datum line marked on the cards by clamping the wire between the washers with a thumb-screw. At a given signal the load is applied to the bridge, and the slightest motion in the girders or spans is recorded (multiplied as before mentioned) by the pencils either above or below the datum according to the deflection or contrary flexure. It is necessary to slide the cards a little further along after each variation in the position of the load to obtain a continuous diagram of the deflections according to the magnitude of the load applied.



Diagrams of Deflections.

The appended diagrams are exact copies of the cards taken and recorded by the instruments during the testing of Penrith and MacDonald River Bridges respectively.

Discontinuous Girders.

Taking the MacDonald River Bridge card, for instance, and referring to plates Nos. 37 and 38, it will be seen that fifteen instruments were fixed to the down-stream girder, and the deflections recorded simultaneously on all the cards. The card referred to was at the third instrument. The pencil having been fixed at the datum line, the first test was made with the three locomotive engines coming slowly on to the bridge, and the deflection recorded as shown on plate No. 38 (experiment No. 1). The card was then moved slightly sideways, the engines placed in positions shown (experiment No. 2), and the additional deflection recorded; the card being again slightly shifted, the engines were moved further on, so as to distribute the load equally over the span (experiment No. 3), and the deflection again recorded. The card was then once more shifted, and the engines moved off the bridge, the pencil returning to the datum line.

These experiments were repeated with the three engines returning across the bridge in the opposite direction, and the deflections noted on the card, and marked Nos. 5, 6, 7, and 8, the loading being applied as shown on plate No. 38 (experiments Nos. 5, 6, and 7).

These experiments were checked by a repetition of the tests as shown on the card by Nos. 9, 10, 11, and 12 in one direction, and by 13, 14, 15, and 16 in the opposite direction. Full-speed tests were then made and recorded on the cards (Nos. 17, 18, and 19); and finally, two full-speed tests with the brakes applied when coming on the bridge (Nos. 20 and 21).

Prior to beginning the above tests the passage of a mail train over the bridge was recorded (plate No. 37). The fifteen sets of instruments on the down-stream girder each recorded every test in the same manner as shown on the card marked No. 3 lever, and the result was afterwards plotted, as given by the levers (plate 37), and reduced to the actual deflections (plate 38). Note.—

*At Menangle, Wagga Wagga, Bathurst, and Wellington bridges, the multiple was 8 times, but at all other bridges, 8·3 times.

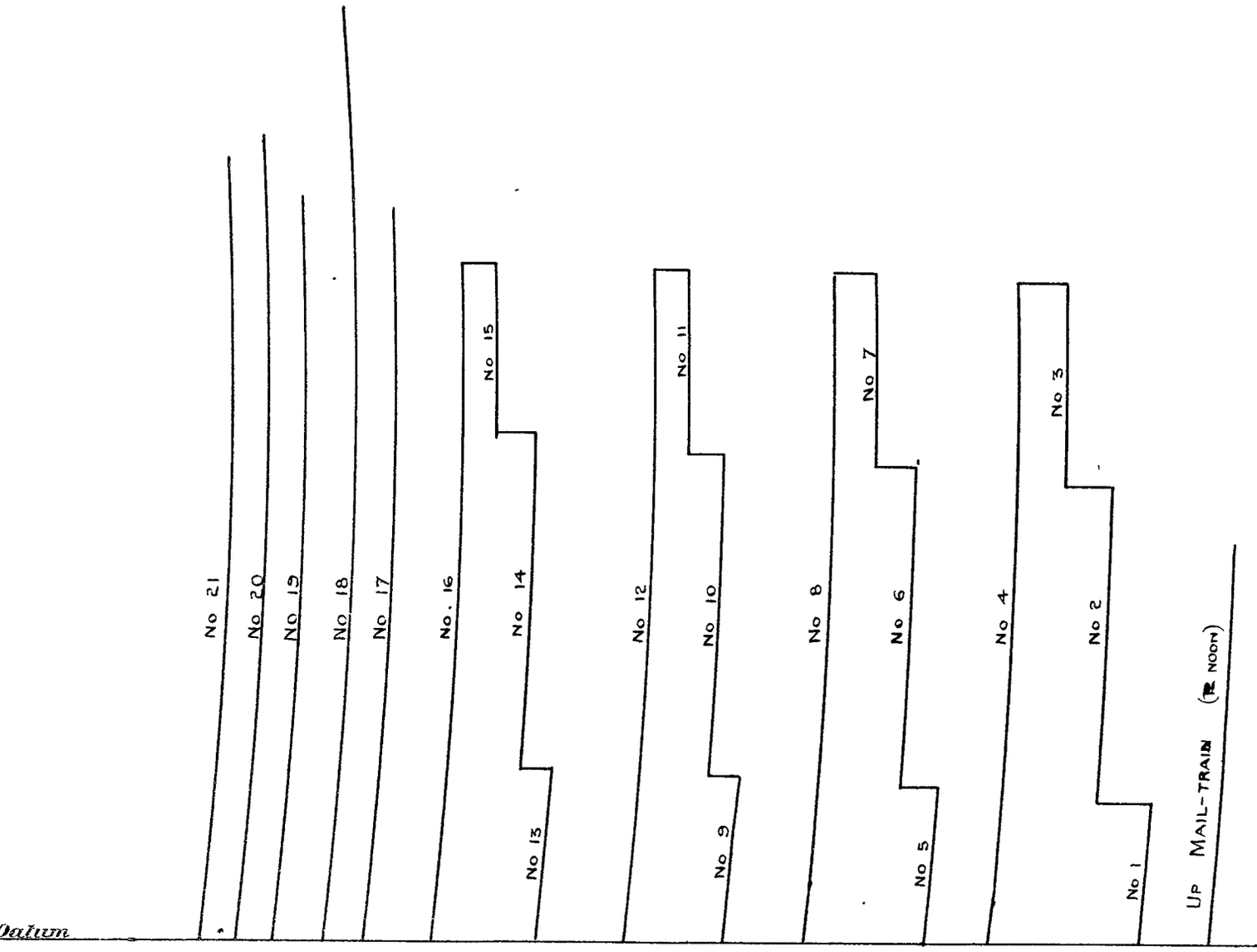
DEELECTION DIAGRAM

DISCONTINUOUS GIRDER

21st Feb. 1885.

Macdonald River Bridge

No 3 Lever (Down stream)



(Sig.866–)

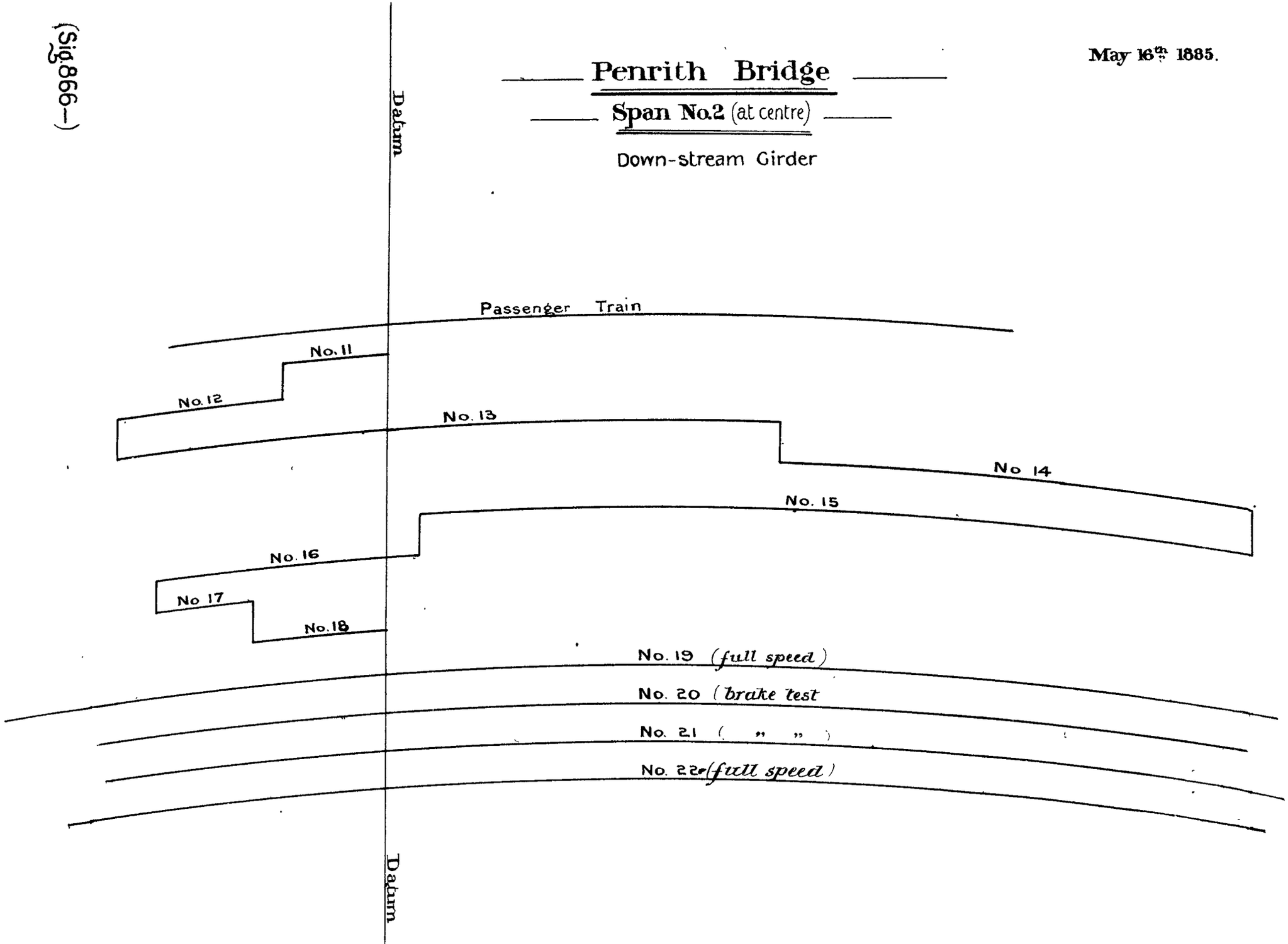
(Sig. 866—)

May 16th 1885.

Penrith Bridge

Span No.2 (at centre)

Down-stream Girder



DEFLECTION DIAGRAM

CONTINUOUS GIRDER

NOTE.—The plates Nos. 37 and 38 have been photo-lithographed from the full-size drawings, but the diagrams agree with the reduced scales shown thereon.

CONTINUOUS GIRDERS.

Seven testing instruments, placed in the position shown on plates 11, 12, and 13, were used in testing the down-stream girder of Penrith Bridge. The card referred to was at the centre of No. 2 span.

The pencil having been adjusted to the datum line in the same manner as previously described for the discontinuous girders, the first test was made by placing the engines on span No. 3, as shown on plate 13, experiment No. 11, and the contrary flexure produced by this load was recorded on the card (line No. 11 below the datum). The card was then slightly shifted sideways, the engines being moved as shown (experiment No. 12, plate No. 13), and the additional contrary flexure recorded below the datum line. The card being again shifted, the engines were moved in the position shown by experiment No. 13, when the centre span was partly loaded, producing a deflection which moved the pencil from under the datum to the point shown on line No. 13 above the datum. The card was again shifted and the engines placed as shown by experiment No. 14, which recorded the greatest deflection of the centre span. The card being again shifted and the engine moved as shown (experiment No. 15), the pencil returned nearly to the datum recording line No. 15 on the diagram; shifting the card again, and moving the engines on to the first span in the position shown by experiment No. 16, a contrary flexure was produced in the centre span, which was recorded by line No. 16 under the datum; the card was again shifted previous to the engines moving in the position shown by experiment No. 17, and the contrary flexure being reduced, the pencil came nearer to the datum; the card being once more shifted, and the load removed from the bridge, the pencil returned to the datum as shown by line No. 18 on diagram.

Thus a continuous diagram of deflection and contrary flexure was produced simultaneously on all the cards. These diagrams were afterwards plotted full size, as shown on plate No. 11, and reduced to the actual deflections and contrary flexure, as shown and noted on plate No. 13. "Full-speed" and "Brake" tests were then made, one of which (experiment No. 19) is plotted on plate No. 12, showing the greatest deflection and contrary flexure produced by the extension of the line No. 19 over and below the datum.

A diagram was also taken with a passenger train going over the bridge, as marked on the card.

LOCOMOTIVE ENGINES USED IN THE TESTING OF THE BRIDGES.

The following particulars of the locomotive engines of different classes, used in the testing of the bridges, were furnished by the Commissioner for Railways:— Appendices 29–32, pages 136–139.

Description of Engine.	Weight in Steam. Engine.	Tender.	Total.	Plate 1.
	Tons cwt. qrs.	Tons cwt. qrs.	Tons cwt. qrs.	
"Consolidation," Goods, 131 Class	49 11 3	25 11 2	75 3 1	Plates 2, 2A.
"Mogul," ,, 205 Class	42 8 1	24 6 1	66 14 2	Plates 3, 3A.
"Express," 255 Class	37 11 0	24 11 0	62 2 0	Plates 4, 4A.
"Express," 265 Class	38 19 0	24 17 3	63 16 3	Plates 5, 5A.

The locomotives used in testing the bridges, and the results of the testing, are given in the following table:—

Description.	Name of Bridge.	Number of Spans.	Length of girders in each span.	Engines used in Testing. Class.	No.	Weight.	Total Weight of Engines.	Load applied per foot run on span with engines used in testing.*	Live load, in tons per foot run the bridges were calculated to carry.	Remarks.
			feet.			tons. cwt. qrs.	tons. cwt. qrs.	tons.	tons.	
Southern Bridges	Menangle	3	162	205	212	66 14 2	194 8 0	1·2	1·4 on each line of way.	Double line.
				265	265	63 16 3				
				,,	269	63 16 3				
	Wollondilly (5)— Small spans	32	65′ 8″	205	247	66 14 2	66 14 2	1·1	1·5	
	Large spans	2	140	,,	,,	66 14 2	66 14 2	0·5	1·4	
Western Bridges	Penrith	3	198	131	135	75 3 1	225 9 3	1·1	1·25 on each line of way.	Double line.
				,,	137	75 3 1				
				,,	141	75 3 1				
	Solitary Creek (5)	6	65′ 8″	,,	141	75 3 1	75 3 1	1·25	1·5	
	Bathurst	3	159	,,	134	75 3 1	225 9 3	1·4	1·4	
				,,	137	75 3 1				
				,,	140	75 3 1				
	Wellington	3	159	,,	134	75 3 1	225 9 3	1·4	1·4	
				,,	135	75 3 1				
				,,	138	75 3 1				
Northern Bridges	Aberdeen	3	159	.....	222	64 6 3	192 10 1	1·2	1·4	
				.....	233	64 6 3				
				265	261	63 16 3				
	Tamworth	1	156	.....	222	64 6 3	192 10 1	1·23	1·4	
				.....	231	64 6 3				
				265	261	63 16 3				
	MacDonald River	1	156	.....	222	64 6 3	192 10 1	1·23	1·4	
				.....	237	64 6 3				
				265	261	63 16 3				
	Peel-street, Tamworth	1	65′ 9½″	.....	.....	.....	.....	1·5	1·5	Same engines as at Tamworth.
.....	Wellington Approach	2	65′ 8″	.....	.....	.....	.....	1·5	1·5	Same engines as at Wellington Bridge
Timber Bridges..	Wagga Wagga Viaduct.	316	29′ 6″	255	257	62 2 0	124 4 0	1·4	.....	
					259	62 2 0				

* This load is not the test load *reduced* to tons per foot run, but the actual load divided by the span.

Before

Appendix 10, page 121.

Before testing the bridges the Commission took into consideration the time they had been erected, and ascertained by careful inspection their actual condition, in order to determine the load with which each bridge should be tested.

The heaviest load brought on by the present traffic was compared with the live load per foot run taken in the calculations, and as it was found that only a portion of the latter could be applied by the heaviest traffic likely to pass over the bridges, the Commission decided to adopt a test-load as nearly as practicable equal to the live load taken in the calculations.

The passing of mail or goods trains was recorded when possible, and the deflections noted were, in every instance, less than those with the test-loads.

The deflection produced by the standing test—that is, with the locomotives standing on the bridge in various positions—was carefully examined at all its stages previous to applying the full-speed and brake tests, and the adjustment of the pencils to the datum lines of all the instruments was accurately checked before and after each test.

In every instance the pencils returned to the datum line after each test, showing that no permanent set had occurred under the test-loads.

Safe load.

The stability of the bridges to carry the traffic now passing over them is sufficiently shown by the diagrams of deflections produced by ordinary trains.*

On the single line bridges, however, it must be remarked that, with the test-load on the 130 ft. and 60 ft. spans of the Wollondilly bridges, as well as on the 60 ft. spans of the Solitary Creek bridges, the unit stresses recognized by the Board of Trade are slightly exceeded; but the unit stresses are not reached with the test-loads on the bridges at Bathurst, Wellington (and also its approach span), Aberdeen, Tamworth, Peel-street, Tamworth, and MacDonald River, leaving a margin of safety sufficient to ensure the stability of these bridges with the heaviest traffic likely to pass over them.

See Final Report, page 62.

On the double line bridges at Menangle the unit stresses with the test-load, equivalent to 1 ton per foot run of span on the loaded girder, are hardly exceeded; and at Penrith, with the same test-load, viz., 1 ton per foot run of span on the loaded girder, the unit stresses are exceeded both in the booms and the web. Recommendations to provide for heavier traffic on these bridges in the future are made in the special reports.

Recommendations.

Regarding the testing of the railway bridges in the future, the Commission recommend:—

1st. That all new bridges be tested, if possible, before the staging is removed, or otherwise as may be found practicable, to ensure applying a sufficient number of instruments to the girders to be tested.

2nd. That diagrams of deflections be carefully taken at the first testing of each bridge, before it is opened for traffic, and carefully recorded.

3rd. That all subsequent testing of new bridges, as well as the testing of the existing bridges, be carried on every three years, or oftener if found absolutely necessary, and the deflections compared with those previously recorded.

4th. That the test-loads (except at the first testing of the new bridges) be less than the calculated live load per foot run of span, and only slightly exceeding the heaviest traffic over the bridges.

No. 3.—WOLLONDILLY BRIDGES.

There are five of these bridges, of 60 ft. and 130 ft. spans, as follows:—

(1.) Barber's Creek Bridge, which consists of five spans of 60 ft. each.

(2.) Wollondilly 1st Crossing, or Carrick Bridge, consisting of eight spans in the following order, counting from the Sydney end:—Two spans of 60 ft., one span of 130 ft., and five spans of 60 feet.

(3.) Boxer's Creek Bridge, which consists of two 60-ft. spans.

(4.) Wollondilly 2nd Crossing Bridge, which consists of seven spans in the following order, counting from Sydney end:—One span of 60 ft., one of 130 ft., and five of 60 ft.

(5.) Mulwaree Creek Bridge, consisting of twelve spans of 60 ft. each.

Of these, Wollondilly 2nd Crossing and Mulwaree Creek Bridges are on the skew.

There are in the above bridges thirty-two spans of 60 feet each and two of 130 ft. each.

130 Feet Spans.

These spans consist of two main girders of the plate-web box type, having each a clear span of 130 ft. The main girders are 140 ft. long overall, and are 14 ft. apart in the clear, and 16 ft. 6 in. from centre to centre. Between the main girders transverse or roadway girders are placed, at a distance of 3 ft. from centre to centre.

The piers are built of brick and cement with stone caps on which cast-iron bed plates are fixed.

Each girder is 10 ft. 3 in. deep overall, and the effective depth is 10 ft.

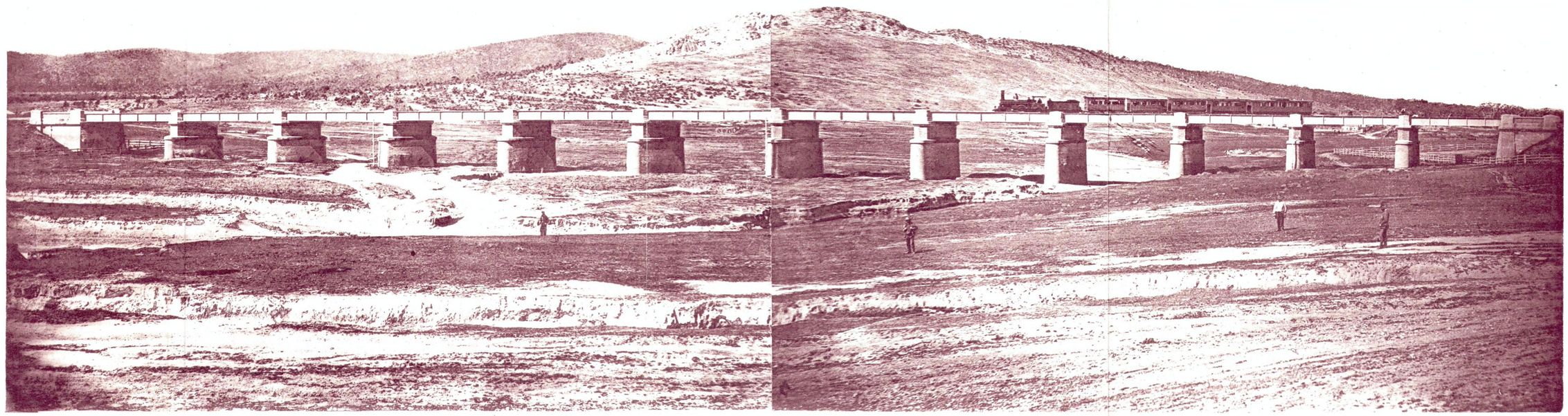
The top flange is formed of plates 2 ft. 6 in. wide, varying in thickness from $\frac{5}{16}$ in. to $\frac{13}{16}$ in., and having a total thickness of $\frac{10}{16}$ in. in the centre.

The bottom flange is formed of horizontal plates, varying in thickness from $\frac{3}{8}$ in. to 1 in., having a total thickness in the centre of 2 in.

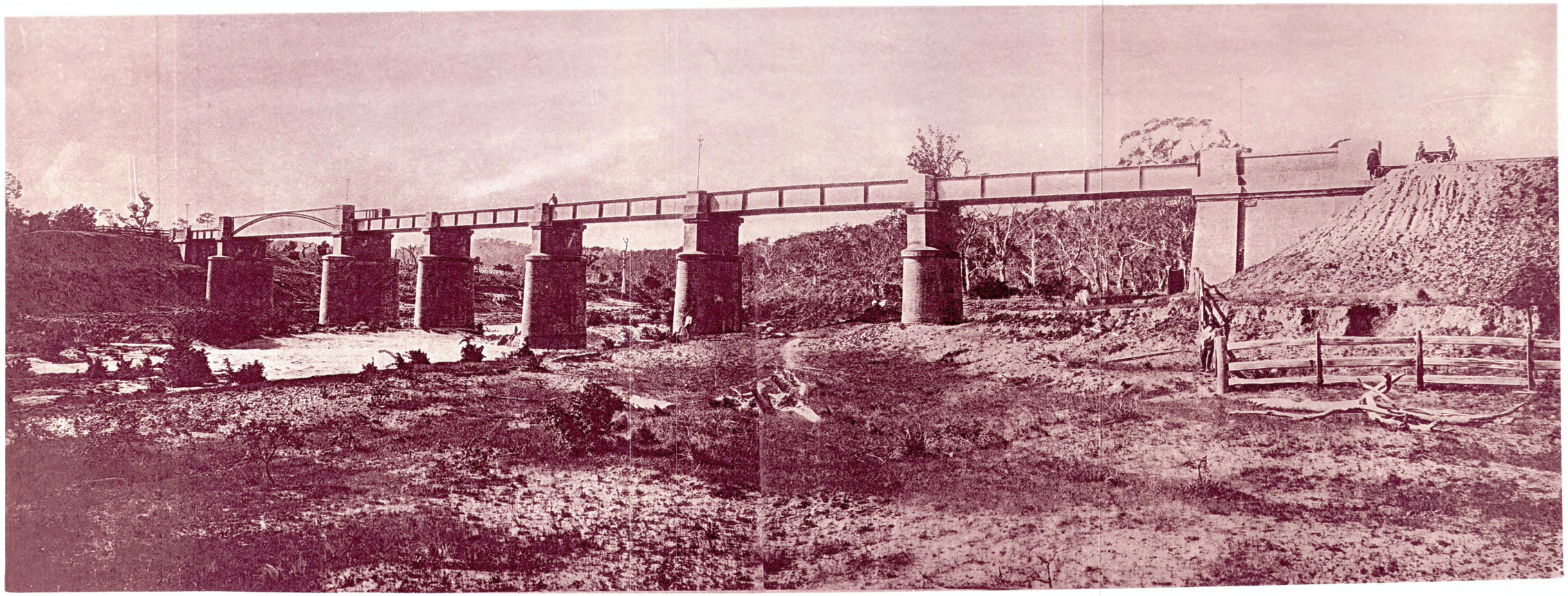
The angle-irons uniting the horizontal flange plates to the web vary from $3\frac{1}{2}$ in. x $3\frac{1}{2}$ in. x $\frac{1}{2}$ in. to 4 in. x $3\frac{1}{2}$ in. x $\frac{9}{16}$ in. There are two angle-irons in the top boom running the whole length of the girder riveted to the under side of horizontal plates with two packing pieces $7\frac{1}{2}$ in. x $\frac{1}{2}$ in. between the horizontal plates and the angle-irons. There are two packing pieces in the bottom boom, each $4\frac{1}{2}$ in. x $\frac{1}{2}$ in., between the horizontal plates and angle-irons. The

* The slight irregularity in some of the curves of deflections may be principally attributed to the difficulty experienced in fixing some of the testing instruments, and probably in a few cases to the improper action of the expansion rollers when the test load was applied.

866— Wollondilly Bridge, at Boxer's Creek—Great Southern Railway.



Wollondilly Bridge, at Mullwarree—Great Southern Railway.



Wollondilly Bridge, Second Crossing—Great Southern Railway.

The web is formed of plates varying in thickness from $\frac{3}{8}$ in. to $\frac{1}{4}$ in., and is stiffened at every 3 ft. with double angle-irons 3 in. x 3 in. x $\frac{1}{2}$ in., and T iron stiffeners 6 in. x 3 in. x $\frac{1}{2}$ in. for the first two bays from ends, and with T irons on the inside of box 6 in. x 3 in. x $\frac{1}{2}$ in., with web covers on the outside for the remaining length of the girder. The T irons are connected together on the inside with diaphragm plates, near top and bottom flanges.

The cross girders are 14 ft. long, and 1 ft. 1 in. deep, formed with double angle-irons 3 in. x 3 in. x $\frac{1}{2}$ in., riveted at top and bottom to a web-plate $\frac{1}{4}$ in. thick, with $\frac{3}{4}$ in. rivets, 4 in. pitch. On the cross girders, and directly under the rails, are laid longitudinal timber beams 14 in. x 7 in., with 3 in. planking over them to carry the ballast, sleepers, and rails. Timber kerbing runs the whole length of the bridge to retain the ballast.

The arrangements for expansion consist of cast-iron bed plates fixed into the cap stones of the piers. Brass strips 2 ft. 7 in. x 5 in. x $\frac{3}{4}$ in., planed, are fitted into the bearing surfaces on one pier.

60 Feet Spans.

The main girders are 65 ft. 8 in. overall, and 60 ft. in the clear, placed 14 ft. 1 in. apart from centre to centre, and 13 ft. in the clear. The cross girders are 3 ft. apart from centre to centre, and at right angles to the line of railway.

The piers are built of brickwork in cement, with stone caps and strings.

Each main girder is 4 ft. 9 in. deep. The top flange is formed of horizontal plates 1 ft. 3 in. wide, varying in thickness from $\frac{1}{4}$ in. to $\frac{5}{8}$ in., the total thickness in the centre being $1\frac{1}{8}$ in. The bottom flange is formed of horizontal plates 1 ft. 8 in. wide, varying in thickness from $\frac{1}{4}$ in. to $\frac{1}{2}$ in., the total thickness in the centre being $\frac{7}{8}$ in. The web consists of plates varying in thickness from $\frac{1}{2}$ in. at the abutments to $\frac{5}{16}$ in. at the centre; it is connected with the flanges by four angle-irons $3\frac{1}{2}$ in. x $3\frac{1}{2}$ in. x $\frac{1}{2}$ in. riveted to them and to the web-plates; it is stiffened with double angle-irons, and plate stiffeners at abutments, and at every 6 ft. along the girders, arranged alternately inside and outside. Web-plate covers are also riveted at the intermediate spaces of 3 ft. centres. At the second crossing, and at the Mulwaree Creek bridges, there is a packing piece between the angle-irons and bottom flange plates, and the upper and under covering plates of bottom flange are the full width of the flange.

The cross girders and deck platform are the same as in the 130 ft. spans, but the attachment of the cross girders to the main girders is not uniform, every fourth cross girder being riveted to the plate stiffeners of the main girders.

The expansion arrangement consists of a $\frac{3}{8}$ in. plate, riveted to the under side of the girder with countersunk rivets, and of a loose plate $\frac{1}{4}$ in. thick bedded on sheet lead on the pier. At the intermediate piers the $\frac{1}{4}$ in. plates are in one piece and form a bearing for both spans.

The main girders of the 130 ft. spans and the 60 ft. spans, having been reriveted by the Engineer for Existing Lines, no loose rivets were found. Inspection.

The webs of the main girders (130 ft. spans) were found out of plumb, and at the first crossing they were from $\frac{1}{2}$ in. to $\frac{11}{16}$ in. wider apart at the top than at the rail level. The webs of many of the main girders, 60 ft. spans, are also slightly out of plumb, from $\frac{1}{4}$ in. to $\frac{5}{8}$ in.

The camber in the 60 ft. spans is irregular, varying from nothing to $1\frac{1}{8}$ in. in some of the girders. A sag occurs in each of the five spans of the Barber's Creek viaduct. Appendix 21, page 129.

The expansion arrangement in the 130 ft. spans is not sufficiently protected, and in the 60 ft. spans the lead on which the girders rest is partly destroyed, and the cinder ballast accumulating between the ends of the girders and the parapets of piers, causes corrosion of the metal and prevents the proper cleaning of the bearings.

The testing of these bridges was performed as follows:—Deflection levers were attached to the centre of a number of the main girders, while at others the deflections were observed either with sliding rods held under the girders or with ordinary engineers' levels. Testing.

The engine used was No. 247, and when standing on the bridge in the least favourable position, it produced a load equivalent to a uniform distributed load of 1·5 tons per foot run on the 60 ft. spans, and of ·90 ton on the 130 ft. spans. The deflections were observed both with the engine standing on the bridge, and when passing at full speed over it. The maximum deflection produced on the small spans was ·625 in., and on the large spans ·59 in. The deflections and the loads producing them at the different crossings are shown in Appendices 37–39, pages 140–141, and in Special Report, No. 2, page 81. Plates 1, 3, and 3A.

Some of the girders on the 60 ft. spans are out of line, especially at the second crossing and Mulwaree Creek bridges which are on the skew. This irregularity in the line of the girders is no doubt due to the bed-plates having no guiding strips, and to the accumulation of cinders between the end cross girders. Some of the bed-stones are broken, and the brickwork unset under the bearings of the girders.

1. The design of the 130 ft. spans has not been carried out in accordance with the drawings supplied to the Commission, which show an upper box-boom. The alteration was made at the suggestion of Sir John Fowler. (*See Appendix* 20, *page* 128.) Conclusions.

The calculations show that the top boom of the 130 ft. girders can only carry 1·1 ton per foot run with a unit stress of 4 tons per square inch, whereas the other parts of the girder are of sufficient sectional area for a live load of 1·4 tons per foot run. Appendix 1, calculations, page 105. Plate 7.

The flange joints and the angle-iron wrappers in these girders are barely sufficient in rivet and plate area.

2. The 60 ft. spans have been carried out according to the drawings with the exception of a slight increase of the flange plates and some difference in the arrangement of plates and angle-irons in some of the bridges.

The calculations show that the flanges and web are of sufficient sectional area for a live load of 1·20 tons per foot run. Appendix 1, calculations, page 106. Plate No. 8.

The rivets in joints of flanges are barely sufficient, and the plates are spliced with a lap of 6 in., which leaves only $\frac{3}{16}$ in. of metal between the rivet holes and end of plates.

3. The cross girders are subjected to a unit stress in tension of 7·22 tons per square inch, and in compression of 6·23 tons per square inch.

4. The expansion arrangements are not sufficiently protected from cinders and ballast falling between the ends of the girders, and on the bed-plates.

5.

Workmanship and maintenance.

5. The Commission could not ascertain if the reriveting of these bridges by the Engineer for Existing Lines was absolutely necessary, nor if the loss of camber in some of the 60 ft. spans was attributable to the reriveting or to bad workmanship. They found that the maintenance was good with the exception of cleaning the cinders and the clinkers which fell on the expansion plates and into the spaces between the two end cross girders, forming in the latter case an indurated mass into which a chisel bar could with difficulty be driven with a sledge hammer.

Deflections. Safe load.

6. Considering the proportion of depth to span the deflections are not excessive, and the present traffic cannot affect their safety.

Recommendations.

1. The Commission recommend that the lead on which the 60 ft. spans rest be removed, and that a simple form of cast-iron bed-plate be inserted under the ends of the girders, two adjoining girders being fixed on a bed-plate and sliding at the opposite end on other bed-plates, provided with longitudinal strips to prevent lateral displacement.

2. A portion of the pilasters over piers should be cut away to facilitate the cleaning of the expansion plates.

3. The longitudinal timbers under rails to be jointed, when renewed, in alternate bays between the cross girders.

4. When heavier engines are required for the traffic over these bridges, an additional plate to be riveted to the top and to the bottom flanges, so as to bring the stresses within the limits allowed by the regulations of the Board of Trade.

No. 4.—WAGGA WAGGA BRIDGE.

The bridge consists of two lattice main girders continuous over four openings, each having a clear span of 150 ft. The main girders are 14 ft. apart in the clear, each forming a continuous girder 639 feet long, extending over three intermediate piers. Between the lattice girders transverse or roadway girders are placed at a distance of 3 ft. from centre to centre. The piers are 159 ft. from centre to centre, and together with the abutments consist of cast-iron cylinders 9 ft. in diameter, filled with cement concrete. The top cylinders of each pier are braced together with wrought-iron diagonals and ties.

The lattice girders rest on cast-iron bed-plates fixed on piers. Bessemer steel rollers are provided for expansion, over four piers.

Each lattice girder is 12 ft. 1 in. deep between the top and bottom table. The booms are trough-shaped, connected by double lattice web. A light lattice overhead bracing girder is riveted to the top table of main girders of the piers and at mid spans.

The top and bottom booms are each formed of horizontal plates 2 ft. 9 in. wide by $\frac{1}{2}$ in. thick, except over the piers, where they are $\frac{5}{8}$-in. thick, and of two vertical plates 15 in. deep x $\frac{1}{2}$ in. thick, riveted to four angle irons 4 in. by 4 in. by $\frac{1}{2}$ in. with $\frac{5}{8}$-in rivets, 4 in. pitch. The web is formed of a double set of lattice bars placed 3 ft. apart, centre to centre, at an angle of 45 degrees, and riveted at each end to the vertical plates of the booms. Each set of lattice bars consists of seven systems of triangulation, the flat tension bars varying in dimensions from 6 in. x $\frac{3}{4}$-in. to 4 in. x $\frac{1}{2}$ in., and the channel irons forming the struts from 5 in. x 2 in. x $\frac{1}{2}$ in. to $3\frac{1}{2}$ in. x $1\frac{3}{4}$ in. x $\frac{1}{2}$ in. The cross girders are spaced 3 ft. from centre to centre, and are 14 ft. 8 in. long by 1 ft. 2 in. deep, formed of two angle irons at top and bottom $3\frac{1}{2}$ in. x $3\frac{1}{2}$ in. x $\frac{1}{2}$-in., and web $\frac{1}{4}$-in. thick, riveted together with $\frac{3}{4}$ in. rivets.

Appendix 6, page 112, and diagram, page 109.

The deck platform consists of longitudinal beams 14 in. x 7 in. over the cross girders and immediately under the rails. A floor of planks 3 in. thick is laid upon the longitudinal beams, and timber kerbing runs the whole length of the bridge on each side. The wind bracing consists of bars 3 in. x 1 in. throughout, secured at the ends with $2\frac{1}{4}$ in. pins.

Inspection.

The Commission, after carefully inspecting this bridge, did not find any defects, except loose rivets.

The Engineer for Existing Lines had reported that there were 1,862 loose rivets in the entire bridge, but the Commission were unable to detect with testing hammers any sign of looseness in at least 50 per cent. of this number.

Conclusions. Design. Main girder.

1. The horizontal and vertical plate joints in the top and bottom booms, the angle-iron wrapper joints, and the attachment of the lattice bars, with the number and arrangement of rivets at these parts, provide rivet and plate areas consistent with the stresses they have to resist.

Wind-pressure.

2. The resistance of the superstructure against wind pressure and vibration is provided by diagonal tie-rods under the roadway, and by overhead bracing arches at the piers and at mid-spans. The tie-rods are of uniform section throughout, and the end attachments are fixed as shown on diagram, page 109, but should have been the reverse way. Although the resistance might have been increased, it is, however, sufficient when taking into consideration the additional resistance offered by the cross-girders and deck platform.

Cross-girders.

3. The cross-girders are to some extent relieved by the longitudinal bearers; but if these were not considered the stresses produced by the driving-wheels of the heaviest engines, added to the dead load, would be 5·12 tons in compression and 5·79 tons in tension.

Workmanship & maintenance. Safe load.

4. The workmanship generally is good, and the bridge is in good condition.

5. The calculations show that, with a live load of 1·4 tons per foot run on the bridge, the booms are subjected to a stress of 3·82 tons per square inch in compression, and 4·7 tons per square inch in tension. The web is consistent with the booms.

With the unit stresses allowed by the British Board of Trade Regulations, the bridge will carry a live load of 1·52 tons per foot run, and it is therefore strong enough for the heaviest traffic likely to pass over it.

Deflections. Appendix 10, page 121.

6. The bridge was not tested by the Commission, but the deflections previously obtained and recorded by the Engineer-in-Chief, viz., 0·74 in. for end spans, and 0·63 inch for centre spans, with three engines weighing 185 tons, is not excessive.

Recommendation.

The Commission recommend that only such rivets as are loose under a passing load should be replaced.

No. 5.—

866— Wagga Wagga Bridge—Great Southern Railway.

866— Solitary Creek Bridge, at Tarana—Great Western Railway.

No. 5.—SOLITARY CREEK BRIDGES.

THERE are five of these bridges, comprising six spans of 59 ft. 5½ in. in the clear. They are all erected on the skew (66 deg. 31 min.) The bridge at Tarana has two openings, the five other bridges having only one opening each. The main girders are 65 ft. 8 in. overall, placed 13 ft. apart in the clear, and 14 ft. 1 in. from centre to centre. The cross girders (excepting those at the ends, over the skew piers) are placed 3 ft. apart from centre to centre, and at right angles to the line of railway.

The piers, which are all on the skew, are built of brickwork, with stone caps and strings.

Each main girder is 4 ft. 9 in. deep. The top flange is formed of horizontal plates 1 ft. 3 in. wide, varying in thickness from ½ in. to ⅝ in., the total thickness in centre being 1⅛ in.; the bottom flange is formed of horizontal plates 1 ft. 8 in. wide, varying in thickness from ½ in. to ¾ in. in the centre. The web consists of plates varying in thickness from ½ in. at abutment to $\frac{5}{16}$ in. at centre; it is connected with the flanges by four angle-irons 3½ in. x 3½ in. x ½ in. riveted to them and to the web-plates. A longitudinal packing strip 7½ in. x ⅝ in. is placed under the angle-irons between the upper covering plates of bottom flange. The web is stiffened at every 6 ft. with double angle-irons 3 in. x 3 in. x ½ in. riveted over ⅜ in. covering plates; other web covering plates are riveted at the intermediate spaces of 3 ft. centres.

The covering plates in flanges are 2 ft. long. In the top flange, the upper covers only are the full width of plates, with two strips each 2 ft. x 3½ in. x ½ in. on the underside, but in the bottom flange both covering plates are the full width of the flange.

The cross girders are 14 ft. 1 in. long by 1 ft. 1 in. deep, formed with double angle-irons 3 in. x 3 in. x ½ in. riveted at top and bottom to a web-plate ¼ in. thick with ¾ in. rivets, 4 in. pitch. Over the cross girders and directly under the rails, are laid longitudinal timber bearers 14 in. x 7 in., on which is fixed 3 in. planking to carry the ballast, sleepers, and rails.

The expansion arrangements are similar to those of the Wollondilly bridges, 60 ft. spans.

During the inspection of this bridge by the Commission, it was observed that the brickwork of the piers was shaken and cracked in some places. The bed stones of the girders being of an inferior quality, or having cracked through being of an inferior quality, the defective portions were removed and replaced by brickwork in cement. Inspection.

The ends of the main girders are bedded on lead in a similar manner to those of the Wollondilly bridges.

The same defects occur regarding the want of access to the ends of the girders for cleaning the bearings.

The camber given originally to these girders has disappeared, and now shows a sag of from ⅛ in. to ⅞ in.

The girders have all been re-riveted by the Engineer for Existing Lines, and there are now no loose rivets.

The testing of these bridges was performed in the following manner:—

The apparatus for measuring the deflection was arranged with one lever in the centre of each main girder, and the deflections observed under the following conditions:—1st, with the engine standing on the bridge; 2nd, with the engine running at full speed over the bridge; 3rd, with the engine running at full speed, and the brake applied when passing over the bridge. Testing.

Observations were also made with regard to the lateral vibration produced by the speed tests. The engine used was No. 141 of the Consolidation Goods Class, weighing 75 tons. The engine when standing in the centre of the bridge represented a load equivalent to a uniform load of 1·56 tons per foot run. The maximum deflection produced by the engine running at full speed over the bridge was ·542 in. The deflection of the cross girders was also tested; the greatest deflection of those fixed to gusset stiffeners was ·556 in., and of those fixed to web covers ·625 in. (*See Appendix* 42, page 141.) Plates 1, 2, and 2A. Plate 14.

1. The calculations show that with a live load of 1·5 tons per foot run, and according to the Rules of the British Board of Trade, the metal will be subjected to a stress of 4·3 tons in compression and 6·75 in tension.* Conclusions. Appendix 2, calculations, page 107, and Plate No. 8A.

The Commission are informed that the "Consolidation Goods" engines, weighing 75 tons are used over these bridges. Such load is equivalent to 1·56 tons per foot run when occupying the least favorable position on the girders, which would be then subjected to a stress exceeding 7 tons per square inch.†

2. These bridges are stated to have been built with a camber of ¾ in., but as they have been entirely reriveted by the Engineer for Existing Lines, the Commission could not ascertain if the camber had disappeared before the reriveting was commenced. Workmanship and maintenance.

It is to be regretted that the Engineer for Existing Lines, having expressed doubts as to the stability of these bridges, did not adopt some more effectual means of strengthening them than reriveting. The cracked bed stones and brickwork, caused by the defective arrangement for expansion, should also have been repaired at the same time.

3. The deflections with a Consolidation Goods engine and tender, weighing 75 tons, was ·54 inch, and with an ordinary goods train ·50 inch. These are less than those recorded at the Wollondilly bridges (60 ft. spans.) The lateral vibration was observable, but was probably due to the spans being on the skew, and to the damaged or defective bearings. Deflections. Final Report, page 62. Special Report, No. 2, page 81.

The Commission recommend:— Recommendations.

1st. That, in view of the heavy traffic over these bridges, an additional plate be riveted to the top and to the bottom flanges, so as to bring the stresses within the limits allowed by the regulations of the Board of Trade.

2nd. That the lead over the piers, on which the girders rest, be replaced by a simple form of cast-iron bed-plate, as recommended for the Wollondilly 60 ft. spans.

3rd. That a portion of the brick pilasters over the piers be cut away to give access to the bed-plates for the purpose of cleaning.

4th. That the longitudinal timbers under rails when renewed be strengthened and jointed at alternate bays between the cross girders.

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* This amount of stress is calculated with an effective span of 62 ft. 6 in., but the slight assistance afforded to the booms by the moment of resistance of the web is not taken into consideration, nor the fact that all these bridges are built on the skew (66 deg. 31 min.)

† The span is taken as 60 ft. in the calculations.

No. 6.—BATHURST BRIDGE.

Plates Nos. 15, 16, and 17.

THE bridge consists of two lattice main girders, continuous over three openings, across the River Macquarie, at Bathurst, having each a clear span of 150 ft. The main girders are 14 ft. apart in the clear, each forming a continuous girder 480 ft. long, extending over two intermediate piers. Between the lattice girders transverse or roadway girders are placed at a distance of 3 ft. from centre to centre.

The piers and abutments are spaced 159 ft. from centre to centre, and consist of cast-iron cylinders 9 ft. in diameter, filled with cement concrete, the top cylinders of each pier being braced together with an arched box girder.

The lattice girders rest on cast-iron bed-plates fixed on the piers. Bessemer steel rollers are provided for expansion.

Each lattice girder is 12 ft. between the top and bottom tables; the booms are trough-shaped, connected by a double lattice web. A light lattice overhead bracing girder is riveted to the top table of main girders at the piers and at mid-spans.

The top and bottom booms are each formed of horizontal plates 2 ft. 9 in. wide by $\frac{1}{2}$ in. thick, except over the piers, where they are $\frac{5}{8}$ in. thick, and of two vertical plates 15 in. deep by $\frac{1}{2}$ in. thick, riveted to four angle-irons 4 in. x 4 in. x $\frac{1}{2}$ in. with $\frac{7}{8}$ in. rivets, 4 in. pitch. The web is formed of a double set of lattice bars placed 3 ft. apart centre to centre, at an angle of 45 degrees, and riveted at each end to the vertical plates of the booms. Each set of lattice bars consists of seven systems of triangulation, the flat tension bars varying in dimensions from 4 in. x $\frac{1}{2}$ in. to 6 in. x $\frac{3}{4}$ in., and the channel irons forming the struts from $3\frac{1}{2}$ in. x $1\frac{3}{4}$ in. x $\frac{1}{2}$ in. to 5 in. x $2\frac{1}{4}$ in. x $\frac{3}{4}$ in.

The cross girders and deck platform are similar to those of the Wagga Wagga Bridge, as also are the arrangements for expansion and wind bracing.

Inspection.

The Commission were informed that the second and third spans and about one-fourth of the first span had been reriveted, and, therefore, it was in the first span only that there was any evidence of the character of the work before these repairs were commenced by the Engineer for Existing Lines. In the portion of the span which had not been reriveted the defects were observed in the top booms as follows:—

UP-SIDE GIRDER.

The angle-irons were not riveted throughout in close contact with the horizontal and vertical plates of booms, nor the angle-iron wrappers with the angle-iron covered. Loose rivets were found in some of the angle-iron wrapper joints, viz., in the second and third joints from the end, in the fourth and fifth joints (where they were rather more numerous), and in the T iron stiffeners of the top boom. There were also a few loose rivets in the lattice bars, but not more than one in a group uniting the bars to the vertical plates of booms. Some rivets at the intersections of the bars were also loose.

DOWN-SIDE GIRDER.

The only defects were a few loose rivets.

Testing.

The arrangements for testing this bridge were as follows:—

Plates Nos. 21, 22, 23, and 24.

Deflection levers were attached to the girders at the points of contra flexure and in the middle of the effective spans, viz., on the up-stream girder, two levers in Nos. 1 and 3 spans, and three in No. 2 span; on the down-stream girder, two levers in No. 3 span, three in No. 2 span (arranged as in the up-stream girder) and five in No. 1 span (which had not been reriveted) placed—one in the centre and two on either side at a distance of 26 ft. 6 in. apart.

Plates Nos. 1, 2, and 2A.

The testing was made with three engines of the Consolidation class, Nos. 134, 137, and 140, weighing in all 225 tons, and equal to a uniform distributed live load of 1·4 tons per foot run of span.

The first test was made with the engines standing on the bridge in the various positions shown on Plate No. 23 (experiments 1 to 6), and the deflection and contrary flexure produced by the continuity of the girders were accurately noted. The diagram (Plate No. 21), reduced from the original and plotted to the increased scale recorded by the instrument, shows the result of each experiment. The test was repeated by beginning from the other end of the bridge, and the deflection and contrary flexure noted as shown on diagram (Plate No. 22). The last test was made with the same engines running twice over the bridge at full speed (30 miles an hour).

The maximum deflection produced with the full-speed tests in the end spans was ·82 inches, and in the middle span ·75 inches.

Conclusions. Design.

1. The detail of joints, covering plates, attachment of lattice bars, and arrangement of rivets, the strength of the cross girders, and the resistance of the superstructure against wind pressure, are the same as in the Wagga Wagga iron bridge.

Workmanship and maintenance.

2. The workmanship, with the exception of the defects stated, is good generally, and in the two spans which have been reriveted by the Engineer for Existing Lines, the work is well done, and above the average of bridge work.

3. The elevation and section of the girders of this bridge are shown in Plates Nos. 15 and 16. The calculations given in Appendix 5 (pages 109–111), and on diagrams (Plates Nos. 17, 18, 19, and 20), show that with a live load of 1·4 tons per foot run on the bridge, the booms are subjected to a stress of 3·68 tons per square inch in compression, and 4·33 tons per square inch in tension. The web is consistent with the booms.

See final Report, page 62.

Safe load.

With the unit stresses allowed by the Board of Trade Regulations, the bridge will carry a live load of 1·6 tons per foot run, which is in excess of the heaviest traffic likely to pass over it.

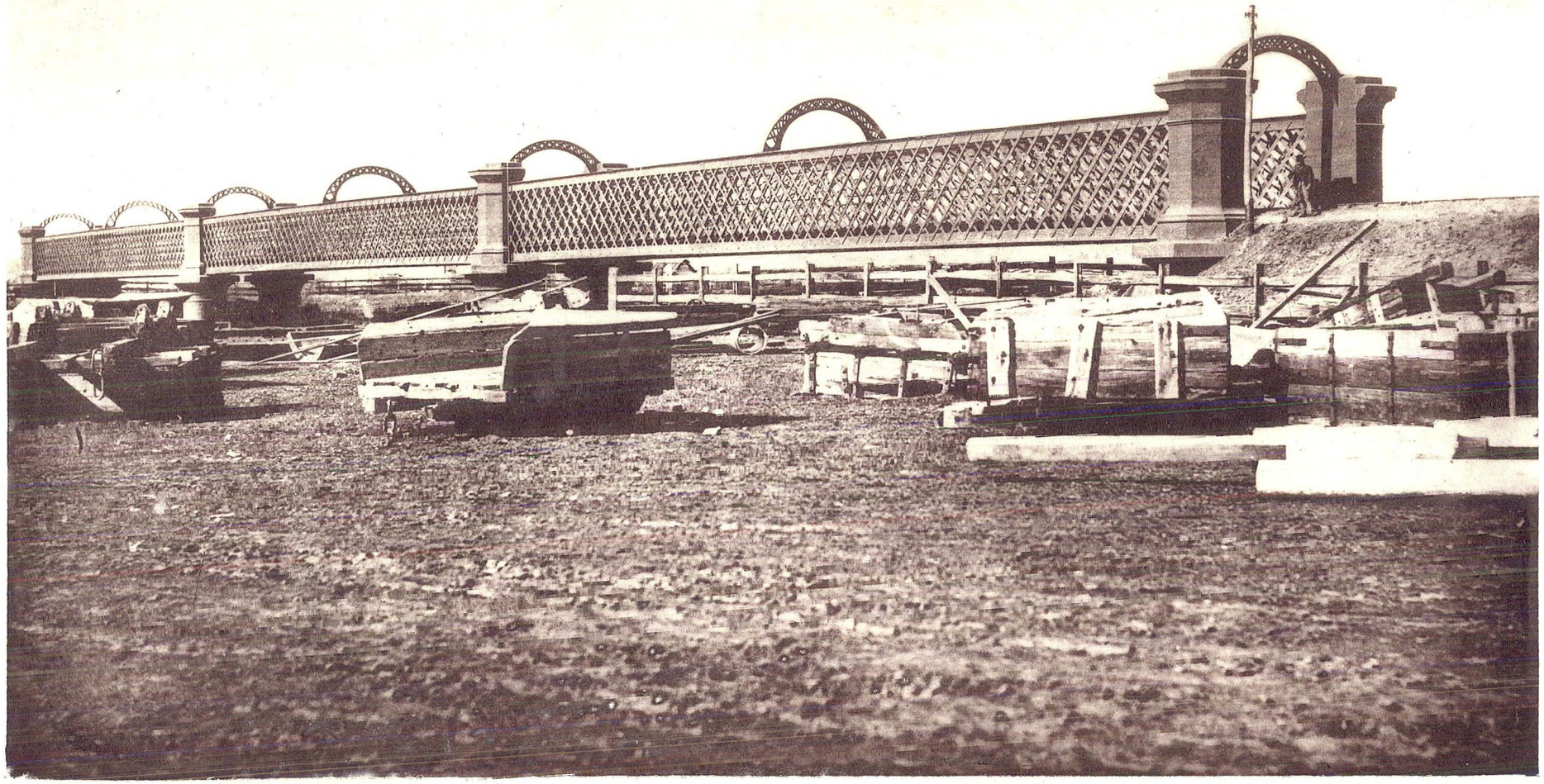
Deflection.

4. Considering the proportion of the depth of the effective span for the test load, the Commission do not consider that the deflections were excessive.

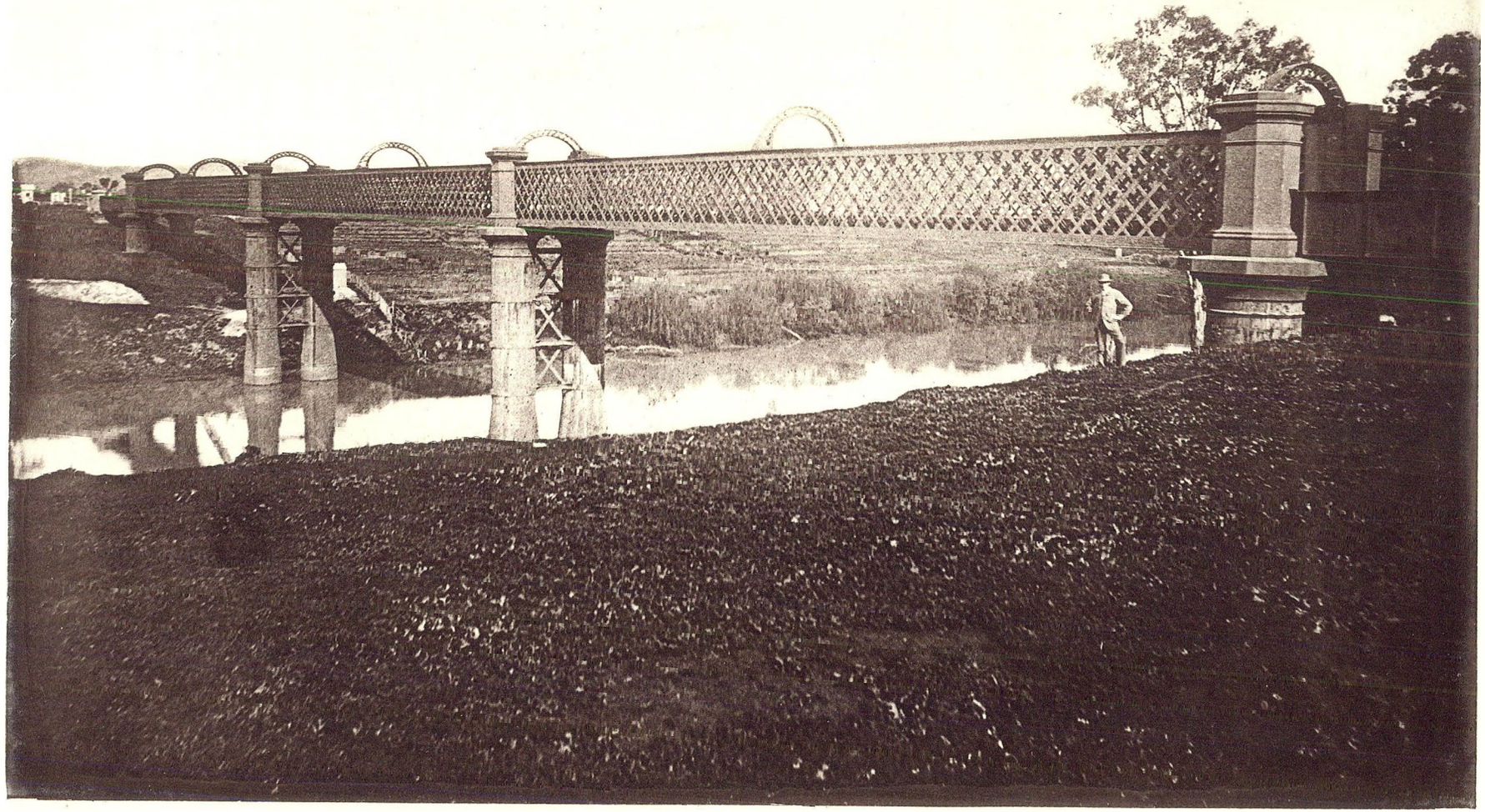
It should also be stated that the span which has not been reriveted does not show more deflection than the two others in which extensive reriveting has been carried out.

Recommendation.

The Commission recommend that only such rivets as are positively loose should be replaced.



866— Bathurst Bridge—Great Western Railway.



866— Wellington Bridge—Great Western Railway.

No. 7.—WELLINGTON BRIDGE.

The bridge consists of two lattice main girders continuous over three openings, each having a clear span of 150 ft. and of four plate main girders of 61 ft. span in the clear at each end of the lattice girders, the whole forming five spans over the River Macquarie at Wellington. The lattice main girders are placed at a distance of 14 ft., and the plate main girders at a distance of 14 ft. 8 in. apart in the clear. Transverse or roadway girders are riveted between them at a distance of 3 ft. from centre to centre. The piers are four in number, and consist each of two cast-iron cylinders braced together with wrought-iron diagonals and ties. The cylinders at each end of the central span are 11 ft. in external diameter from the bottom of the foundations to above ordinary water level, and reduced to 9 ft. in external diameter from that point to the underside of the girders. The cylinders in the outer piers are 9 ft. in external diameter. All the cylinders are filled with cement concrete.

Each lattice girder is 12 ft. 1 in. deep between the top and bottom tables. The booms, web, sectional area of the various parts, the length and thickness of the plates, the arrangement of joints, and other details of construction are similar to those of the Bathurst Bridge. The lattice girders rest on cast-iron bed plates fixed on the piers. Bessemer steel rollers are provided for expansion. The plate main girders rest at one end on cast-iron bed plates fixed on the outer piers, and at the other end on the abutments; sliding plates are provided for expansion. The cross girders are 1 ft. 2 in. deep and 15 ft. 10½ in. long over all, with a clear span of 14 ft. 3 in. They are constructed with top and bottom angle irons 3½ in. x 3½ in. x ½ in. on each side of a web ¼ in. thick riveted together with ¾ in. rivets. 150 ft. span. Plates 15, 16, and 17.

The plate main girders are 65 ft. 8 in. long over all and 6 ft. deep; the top flange is formed of plates 1 ft. 3 in. wide by $\frac{9}{16}$ in. thick, having a total thickness of 1⅕ in. in the centre, and the bottom flange of plates 1 ft. 8 in. wide, varying in thickness from ½ in. at the abutment to ¾ in. thick at the centre, and a packing strip 7½ in. wide by ⅜ in. thick. The web is ⅜ in. thick throughout, and is united to the top and bottom flanges with angle irons 3¼ in. x 3½ in. x $\frac{9}{16}$ in. It is stiffened with double angle irons 3 in. x 3 in. x ½ in. and ⅜ in. plate at abutments and at every 12 ft. along the girder. Other stiffners of T iron 6 in. x 3 in. x ⅜ in. over the vertical cover plates 5 in. x ⅜ in. are placed at intermediate lengths every 3 ft. The whole is riveted together with ⅞ in. rivets. The longitudinal bearers, roadway platform, and kerbs, are similar to those over the large spans. 61 ft. span.

It was observed by the Commission that the cast-iron cylinders forming the piers of this bridge are slightly out of plumb, and that the piers are not in true line; they have not been placed accurately at equal distances from centre to centre. The main girders have been placed unsymmetrically upon the cast-iron bed plates to the extent of from 4 in. to 9 in. There is also a difference of level in the underside of main girders on the piers. The east end of girder is lower than the west end by 3½ in. on the upside and by 2¼ in. on the downside. Inspection.

The Engineer for Existing Lines reported in a document submitted to the Commission that there were 2,222 loose rivets in top boom and 1,486 in bottom boom, or a total of 3,708. These rivets had been marked with chalk, but after carefully testing them the Commission could not detect vibration in 80 per cent. of them; the remaining 20 per cent. are not really loose rivets, except a few in the angle-iron wrapper joints and at the intersection of lattice bars.

It was observed that the angle-irons were not in all cases riveted in close contact with the horizontal and vertical plates of booms, nor were the angle-iron wrappers accurately fitted over the angle-irons which they cover. In a few cases the vertical boom plates project slightly above the flange of the angle-iron, and a space is consequently formed between the angle-iron and the horizotal boom plates. The channel lattice bars are slightly rounded at the back, so that they do not bed evenly upon the vertical boom plates to which they are attached.

The testing of this bridge was performed in a similar manner to that already described for the Bathurst Bridge. Deflection levers were attached to the girders at the points of contra flexure, and in the centres of the effective spans of No. 1 and No. 2 spans, but in No. 3 span, one lever was attached at the point of contra flexure and two additional levers in the effective span. Testing. Plates Nos. 25, 26, 27, and 28.

The engines were of the same class as those used in testing the Bathurst Bridge, viz., Consolidation Goods Engines, Nos. 134, 135, and 138, weighing in all 225 tons, and equal to a uniform distributed live load of 1·4 tons per foot run of span. The first test was made with the engines standing on the bridge in the various positions shown on plate No. 27, beginning on first span; and the test was repeated, beginning in the opposite direction on the third span. The last test was made with the engines running twice over the bridge at full speed (30 miles an hour). Plates Nos. 1, 2, and 2A.

The deflections recorded by the instruments to the increased scale (1 to 8) are shown on plates Nos. 25 and 26. The maximum deflections produced with the full speed tests were ·92 in the end spans, and ·57 in the centre span. Plate No. 28.

1. The 150 ft. spans of this bridge are similar to those of the Bathurst Bridge (plates 15, 16, 17, 18, 19, 20) and the calculations and details of construction apply to both. Conclusions.

2. The 61 ft. spans are referred to in the calculations (Appendix 3, page 108, and diagram plate No. 8B.) With a live load of 1·5 tons per foot run on the bridge, the booms are subjected to a strain of 3·5 tons per square inch in compression, and 4·42 tons in tension. The web is consistent with the booms. With the unit stress allowed by the Board of Trade these spans will carry a live load of 1·78 tons per foot run. See Table, final report, page 62.

3. The safe load the Wellington Bridge will carry is in excess of the heaviest traffic likely to pass over it. Safe load.

4. The difference of level of the piers will not affect the calculated stresses in the main girders to any appreciable extent; the observations regarding the difference of level in the piers have not been recorded with sufficient care to determine if the pier referred to has sunk. The information supplied by Mr. Cowdery in his memo. (Appendix 26, page 133) is not sufficiently complete to affirm that the pier has sunk; it may be due to an error in its erection.

5. With the exception of the defects stated the workmanship is equal to the average of good girder work, and the maintenance is good. Workmanship and maintenance.

6. Although the deflections produced by the test load are slightly greater than those obtained at the Bathurst Bridge, they are not excessive; the increase is probably due to the high speed attained by the engines in running down the approach which is on a slight gradient. Deflections.

1.

Recommendations.

1. The Commission recommend the cutting out and renewal of loose rivets in boom joints, and in attachments of lattice bars and cross girders; also the renewal of angle-iron wrapper joints in the worst cases.

2. The difference of level of the piers should be carefully watched and recorded from time to time, particularly before and after heavy floods, to ascertain positively if any settlement occurs. Should any sinking take place prompt measures should be taken to prevent injury to the large continuous girders.

No. 8.—ABERDEEN BRIDGE.

This bridge is similar to the Bathurst and Wellington bridges, which have already been described.

Inspection.

The Commission found the following defects in this bridge:—

Up-stream Girder, No. 1 Span.

The channel-iron lattice-bars are not in all cases in close contact with the vertical plates of booms, the rounded back of the channel-irons leaving spaces, varying from $\frac{1}{8}$ in. to $\frac{1}{4}$ in. between the sides and the vertical plates to which they are riveted.* The angle-iron wrappers over joints of angle-irons of the booms are not riveted throughout in close contact; about one in every six rivets is more or less loose. In the group of rivets uniting the lattice-bars to the vertical plates of the boom, there is about one in six rivets slightly loose. The butts of the plates in the boom-joints are open in some places from $\frac{1}{8}$ in. to $\frac{1}{4}$ in.

No. 2 Span.

The principal defect in this span is the loose and slightly loose rivets uniting the lattice-bars to the vertical boom-plates. At one place, out of eight consecutive bars on the inner side of the girder, the rivets are more or less loose in six bars. The fourth lattice-bar from the end of this span has all its rivets loose. In the six angle-iron covers the holes are elongated and the metal broken away round the edges in an irregular manner. Some of the rivets are more or less loose. In the bracing of one of the compression diagonals two of the rivets are omitted, and the holes filled up with putty.

No. 3 Span.

The principal defect in this span occurs in the plates of top booms, which have been riveted out of line sideways, and are nearly 3 inches out of line at about 20 feet from the end. The diaphragms at attachment of cross-girders are not in some cases in close contact with the vertical plates of booms, and some of the rivets uniting the cross-girder to the booms are loose.

Down Stream Girder, No. 1 Span.

The channel-iron lattice-bars are not in close contact with vertical plates of booms. Some rivets are loose at the angle-iron wrappers, and at four angle-iron wrappers the rivet-holes are elongated and broken away round the edges.

No. 2 and No 3 Spans.

Some of the defects already stated occur in these spans.

Piers.

A crack occurs in the first length of the cylinders of No. 3 pier, on the down-stream side.

Wind-bracing.

In the wind-bracing attachment at the Newcastle end of the bridge the rivets are badly riveted.

The Engineer for Existing Lines reported in a document before the Commission that there were 2,359 rivets loose in this bridge, principally in the top booms. After carefully testing the rivets referred to, which had been marked as being loose, the Commission did not find more than half the number apparently loose under the test-hammer. The Commission were unable to find the marks of violence in testing the rivets alluded to in the evidence of some witnesses.

Testing.

Plates Nos. 29, 30, 31, and 32.

The testing of this bridge was performed in a manner similar to that already described in the case of the Bathurst and Wellington bridges. Deflection levers were attached to the girders as follows:—On the up-stream girder seven levers were arranged on each side of the end spans, one in the centre and three on each side, spaced at equal distances of 18 feet; five levers were arranged in the middle span, one in the centre and two on each side, spaced at equal distances of 24 feet; on the down-stream girder one lever was arranged in the centre of the effective space for the maximum loading.

Plates Nos. 1, 2, 2a, 5, and 5a, and Special Report No. 2, page 81.

Three engines were used in the testing of this bridge—Nos. 222, 233, and 261—weighing 192 tons, and equivalent, when standing symmetrically over the bridge, to a uniform distributed load of 1·37 tons per foot run. The first test was made with the engines standing on the bridge in the various positions shown on plate No. 31. The deflections actually registered by the testing apparatus are shown on plates Nos. 29 and 30. The last test was made with the engines running over the bridge full speed (30 miles an hour), plate No. 32. The deflections were recorded by the instruments to increased scale of 1 in 8·3. The maximum deflection produced in the end spans was ·92, and in the centre span ·89.

Conclusions.

1. The conclusions on the design of the Aberdeen Bridge are the same as those arrived at for the Bathurst and Wellington bridges.

Appendix 5, pages 109–111, and plates Nos. 15 to 20.

The calculations of main girders are given in the appendix 5, pages 109-111, and the diagrams of bending moments produced by the live load, and detail of construction in plates Nos. 15 to 20.

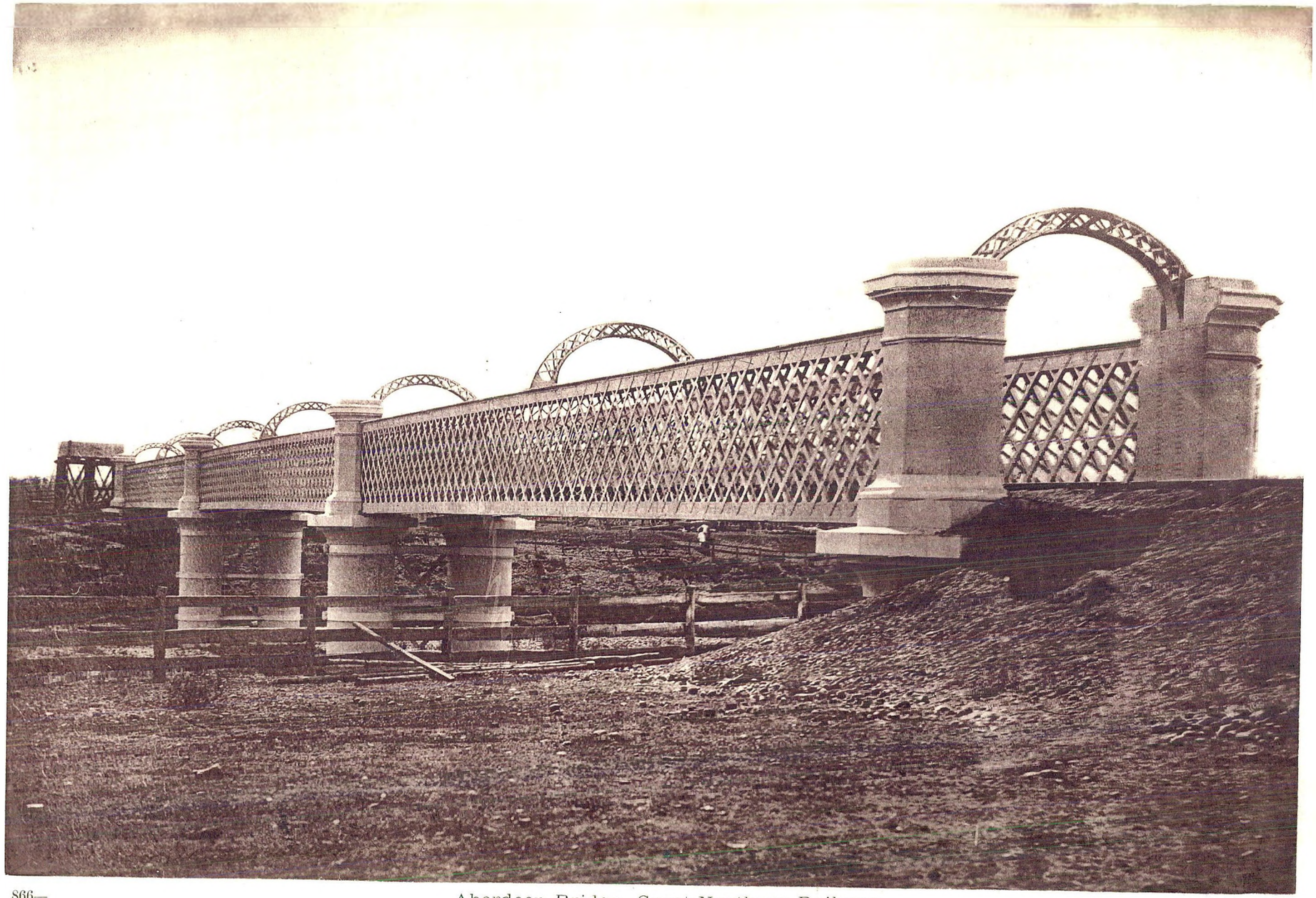
Safe load.

These bridges have been designed to carry a live load of 1·4 tons per foot run, but will safely carry, according to the rules of the Board of Trade, a live load of 1·6 tons per foot run, which is in excess of the heaviest traffic likely to pass over them.

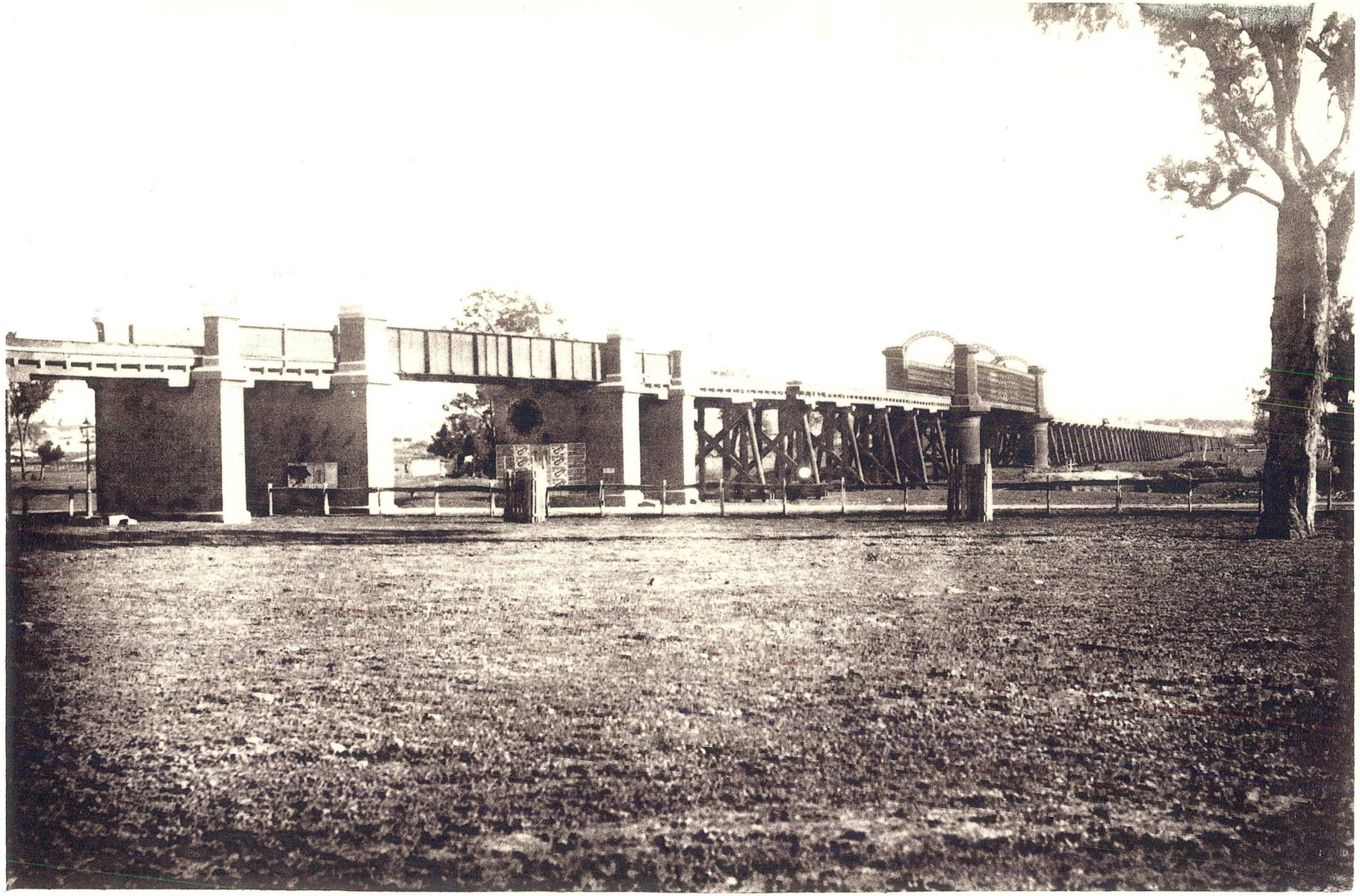
Workmanship and maintenance.

2. The Aberdeen Bridge was erected in 1871, and was the first of this type of lattice girder bridge constructed on the Government Railways. The defective fitting referred to does not affect the safety of the structure. It

* The rounding of the back of these channel-irons has occurred in the manufacture, in the process of rolling the bars.



866— Aberdeen Bridge—Great Northern Railway.



866— Peel-street and Peel River Bridges, Tamworth—Great Northern Railway.

It is well to remark, that since the erection of the Aberdeen Bridge, improvements appear in the workmanship of the same type of bridges at Bathurst, Wellington, Wagga Wagga, Albury, Dubbo, and George's River. In the three last bridges improvements have also been made in the design.

The Aberdeen Bridge is kept in a good state of repair.

3. The result of the testing of this bridge is not quite so favourable as that of the Bathurst and Wellington bridges; but comparing the deflections obtained by Mr. Whitton when testing the Aberdeen Bridge in 1871, with three engines weighing 170 tons, which gave ·79 in. on the end spans, and ·68 in. on the centre span, with the maximum deflections recorded by the Commission in 1885, when three engines were used weighing 192 tons, and giving on the end span ·92 in., and on centre span ·89 in., the latter deflections are not excessive, and indicate sufficiently that there has not been any sign of weakness in the bridge since its erection. Deflections. Appendix 10, page 122.

The Commission recommend the renewal of loose rivets in the boom-joints, and in the attachment of lattice-bars and iron girders. A few of the angle-iron wrappers, where loose rivets occur, should also be refitted and re-riveted. Recommendations.

No. 9.—TAMWORTH BRIDGE, OVER THE PEEL RIVER.

The bridge consists of two lattice main girders, forming a clear span of 150 ft. over the Peel River, at Tamworth. The main girders are each 161 ft. 9 in. over all, and placed 14 ft. apart in the clear. Between them, transverse or roadway girders are placed at a distance of 3 ft. from centre to centre. There are two piers, each of which consists of cast-iron cylinders, 9 ft. in diameter, filled with cement concrete, and braced together with wrought-iron diagonals andties.

The lattice girders rest at each pier on cast-iron bed plates fixed on the piers, with Bessemer steel rollers on one pier. Each lattice girder is 12 ft. 1 in. between the top and bottom tables. The booms are trough-shaped, connected by double lattice webs.

The two main girders are braced with a light overhead lattice girder over the piers and at mid span, and with wind bracing, diagonal bars, similar to those of the Aberdeen and Wagga Wagga bridges. The top and bottom booms are each formed of horizontal plates, 2ft. 9 in. wide by $\frac{1}{2}$ in. thick (except one of the plates, which is $\frac{5}{8}$ in. thick), and of two vertical plates, 15 in. deep x $\frac{1}{2}$ in. thick, riveted to four angle-irons, 4 in. x 4 in. x $\frac{1}{2}$ in., with $\frac{7}{8}$ in. rivets, 4 in. pitch. The web is formed of a double set of lattice bars, riveted to the vertical plates of booms at an angle of 45 degrees. Each set of lattice bars consists of seven systems of triangulation, the flat tension bars varying in dimensions from 6 in. x $\frac{5}{8}$ in. to 4 in. x $\frac{1}{2}$ in., and the channel irons, forming the struts, from 6 in. x $2\frac{1}{2}$ in. x $\frac{1}{2}$ in. to $3\frac{1}{2}$ in. x $1\frac{3}{4}$ in. x $\frac{1}{2}$ in. Appendix 22, page 129.

The cross girders, deck platform, and wind bracing are similar to those of the Aberdeen and Wagga Wagga bridges.

A few of the butt joints of the booms are not perfectly in close contact. The expansion arrangement is difficult of access. Inspection.

The Engineer for Existing Lines stated in a report submitted to the Commission that there were 2,458 loose rivets in top booms, 1,543 in bottom booms, 168 in lattice bars, and 316 in end boxes. After thoroughly testing these rivets, the Commission found that about one in five were apparently loose under the test hammer.

The marks of violence in testing rivets, alluded to by Mr. Russell in a report, were not found to exist.

The testing of this Bridge was performed in the following manner:—Fifteen deflection levers were connected with the down-stream side main girder, one in the centre, and seven on each side, spaced at equal distances of 9 ft. One lever also was connected with the centre of the up-stream girder. Testing. Plates Nos. 35 & 36.

Three engines, Nos. 222, 261, and 231, weighing in all 192 tons, were used in testing the bridge, and when standing symmetrically over it, were equivalent to a uniform distributed load of 1·4 tons per foot run. The first test was made with the engines standing on the bridge in the various positions shown on plate No. 36, experiments No. 5, 6, and 7. This test was repeated in a contrary direction, as shown by experiments Nos. 13, 14, and 15. Full-speed tests, with the engines running at 30 miles an hour, were made, as shown by experiments Nos. 30 and 31. Finally, a test was made with the engines running at full speed across the bridge, the brakes being applied when passing over it. The deflections were recorded by the instruments to the increased scale of 1 in 8·3, plate No. 35, from which the diagrams showing actual deflections, plate No. 36, have been reduced. The deflections produced by a mail train passing over the bridge were also recorded, as shown on plate No. 35. The maximum deflection produced with the dead load or standing test, was 0·83 in., with the full-speed test, 0·9 in., and with the brake test the deflection was slightly less than with the full-speed test, but the lateral vibration was observable. Plates 1, 5, & 5A.

1. The calculations and diagrams, plates Nos. 33 and 34, show that with a live load of 1·4 tons per foot run, the booms are subjected to a strain of 3·72 tons per square inch in compression and 4·37 tons per square inch in tension. The web has been calculated on the assumption that the booms are stiff enough to distribute the strains equally over the several systems of triangulation. The unit strains obtained show that the web is strong enough to cover any probable increase due to the unequal distribution of the load. Conclusions. Appendix 4, page 108. Calculations and plates 33 and 34.

2. With the unit strain allowed by the British Board of Trade the Bridge will carry a live load of 1·6 tons per foot run. Safe load.

3. The different parts of the bridge have been well fitted together, and the workmanship throughout is above the average of girder work. Workmanship and maintenance.

The bridge is kept in a good state of repair.

4. Considering the proportion of depth to span, the direct deflections are not excessive, but the vibration obtained by the brake test shows a want of horizontal resistance, probably due to the wind-braces not being screwed up tightly. Deflection.

1. The Commission recommend a judicious renewal of rivets in the attachment of lattice bars, in angle-iron wrappers, boom joints, and in the attachment of cross girders. At least one-fifth of the rivets marked as loose by the Engineer for Existing Lines should not be renewed. Recommendations.

No. 10.—PEEL-STREET BRIDGE, TAMWORTH.

THIS bridge consists of one span, 60 ft. in the clear, formed of two plate main girders, each 65 ft. 9½ in. long overall, placed 14 ft. 8 in. apart in the clear, and 15 ft. 10½ in. from centre to centre.

These main girders are 6 ft. deep and similar to the approach girders of the Wellington Bridge. The cross girders are 1 ft. 3 in. deep and 3 ft. from centre to centre, placed at right angles to the main girders; they are similar to those of the Wellington Bridge approach.

The piers are built of brickwork with stone caps, &c.

Inspection. It had been reported by the Engineer for Existing Lines that there were 336 loose rivets in this bridge, but the Commission after testing these rivets could not find more that 40 per cent. of the number apparently loose under the testing hammer.

Testing. The testing of the bridge was performed as follows:—A deflection lever was connected with the centre of the main girder in the up-stream side. The engines used were the same as those employed at the Peel River Bridge, Nos. 222, 261, and 231. Although only one engine could come into operation at a time the heaviest of these engines when standing in the bridge with the least favourable position produced a load equivalent to a distributed load of 1·5 ton per foot run.

Plates 1, 5, and 5A.

Experiments were made with an engine standing on the bridge and with the three engines running at full speed over the bridge. The greatest deflection produced was ·29 in. (*See Appendix* 35, page 140.)

Conclusions. Appendix 3. Calculations, page 108 and plate 8B.

1. The calculation referring to the approved spans of Wellington Bridge also apply to this bridge. With a live lead of 1·5 ton per foot run, the booms are subjected to a strain of 3·5 tons per square inch in compression and 4·42 tons per square inch in tension. The web is consistent with the booms.

Safe load.

2. With the unit stresses allowed by the Board of Trade, this span will carry a live load of 1·78 ton per foot run, which is in excess of the traffic likely to pass over it.

Workmanship and maintenance.

3. This bridge has been well constructed and may be considered high-class girder work. It is kept in good order.

Deflection.

4. The deflections with the test load are less on this bridge than at the Wellington approach spans, but the engines used at the latter bridge were heavier. (See Final Report, page 62, and Special Report No. 7.)

Recommendations. The Commission do not recommend anything to be done to the bridge except the usual maintenance.

No. 11.—MACDONALD RIVER BRIDGE.

THIS bridge is similar in design to the bridge over the Peel River at Tamworth, except that the piers are of brick, and the boom plates are ½ in. throughout.

Inspection. The inspection of this bridge disclosed similar defects to those of the Tamworth Bridge.

The Engineer for Existing Lines reported that there were 2,033 loose rivets in top booms, 1,102 in bottom booms, 269 in lattice work, and 409 in end boxes. The testing of these rivets by the Commission showed that only about one in five were apparently loose under the test hammer.

Testing. The testing of this bridge was conducted in a manner similar to that of the Peel River Bridge at Tamworth, which has been fully described.

Plates Nos. 37 and 38

The deflections, as recorded by the instruments, are shown on plate No. 37, and plotted to the natural scale on plate No. 38. The same engines were used in testing this bridge as were used at Tamworth. The maximum deflection produced with the dead load or standing test was 0·88, plate No. 38, and the maximum full speed deflection was 1·03. The deflection produced by a mail train passing over the bridge was also recorded.

It was observed that the lateral vibrations were very small with the mail train, but more observable with the test load.

Conclusions. (See special report, No. 9, Tamworth Bridge.)

1. The conclusions on the designs of the Tamworth Bridge, as shown in special report No. 9, and referred to in calculation, page 108, and plates Nos. 33 and 34, apply also to the MacDonald River Bridge.

Safe load.

2. The safe load these bridges will carry, according to the rules of the Board of Trade, is 1·6 ton per foot run.

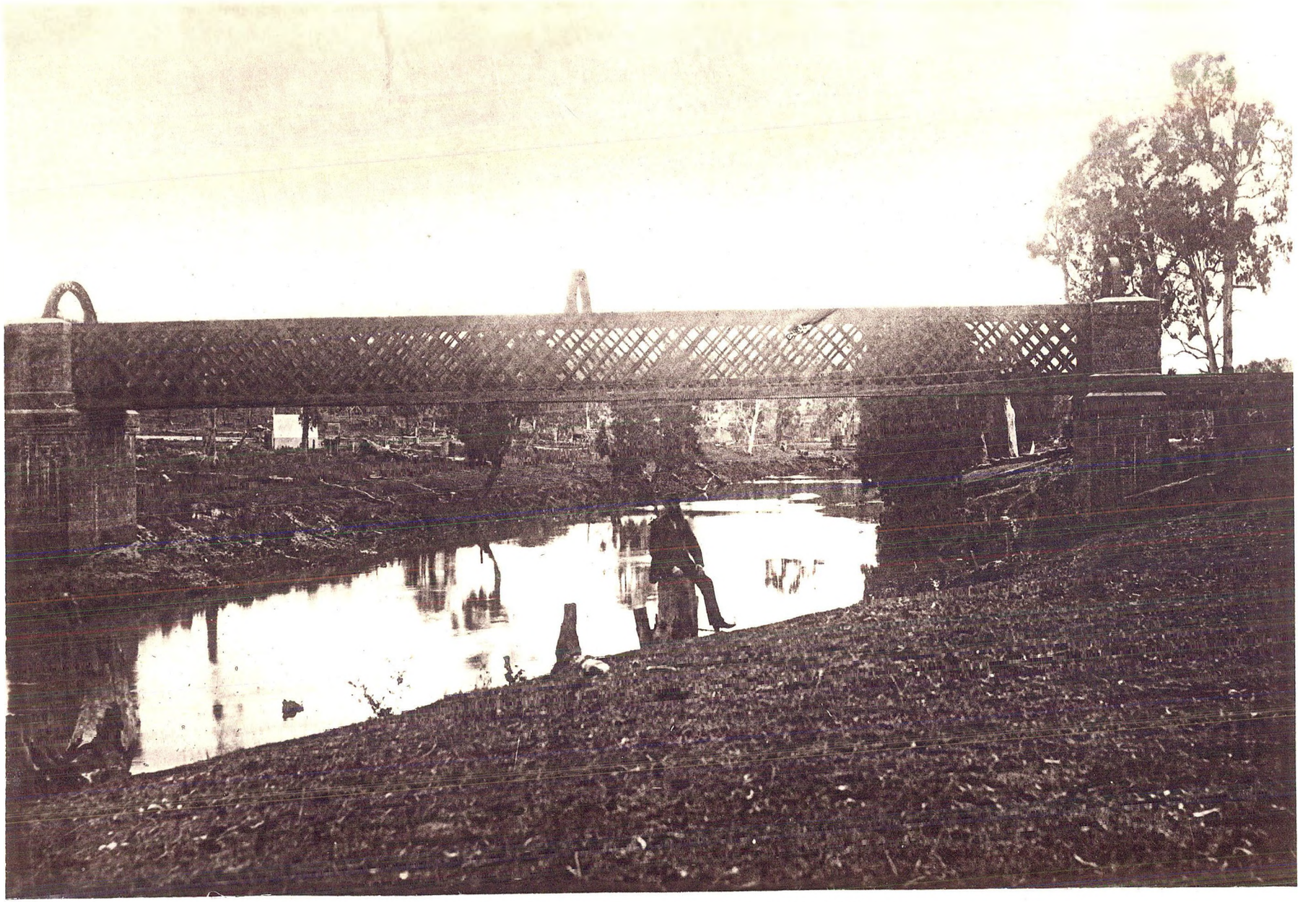
Workmanship and maintenance.

3. The workmanship is very good, and with the exception of loose rivets may be considered above the average of girder work.

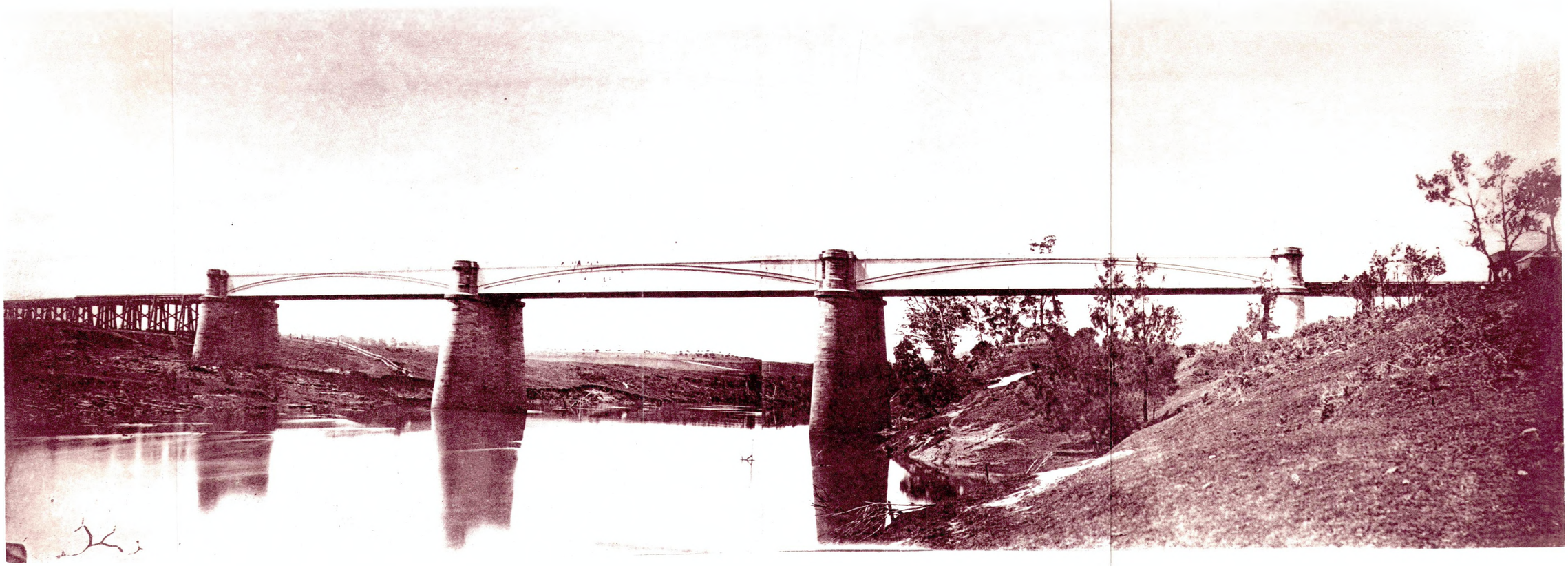
Deflection.

4. Although the direct deflections are slightly more than those obtained at the Tamworth Bridge, they are not excessive; the lateral vibrations with the break test were equally felt, and were probably due to the same cause in both bridges.

Recommendations. The recommendations made by the Commission with regard to renewal of rivets in Tamworth Bridge will apply to the MacDonald River Bridge.



866— MacDonald River Bridge—Great Northern Railway.



866—

Menangle Bridge—Great Southern Railway.

No. 12.—MENANGLE BRIDGE.

THIS bridge is designed to carry a double line of railway; it consists of two main box girders continuous over three openings across the river Nepean, at Menangle, having each a clear span of 150 ft. The main girders are 25 ft. 6 in. apart in the clear, each forming a continuous girder 486 feet long, extending over two intermediate piers. Between these girders transverse or roadway girders are placed at a distance of 3 ft. from centre to centre.

The piers are built of masonry, spaced 162 ft. from centre to centre.

The main girders are supported on a floor of planks 4 in. thick and 12 ft. long by 3 ft. 8 in. wide, resting on the top of the piers.

Expansion rollers are provided over three piers. Each set comprises sixteen rollers 4 in. diameter set in a frame and placed between two grooved cast-iron plates; the lower bed-plate is fixed to the timber planks, and the upper plate to the girders.

The main girders are 12 ft. 6 in. deep over all; the top and bottom booms are constructed on the box form 3 ft. wide by 1 ft. 4 in. deep, the side plates of the box varying in thickness from $\frac{5}{16}$ in. to $\frac{5}{8}$ in.; and a central plate of the same thickness divides the box into two compartments, the whole length of the girder; the top and bottom of the box booms are formed each of a pile of plates varying in thickness from $\frac{5}{16}$ in. to $\frac{3}{4}$ in.; the whole is put together with six angle-irons 4 in. x 4 in. x $\frac{1}{2}$ in., and rivets $\frac{7}{8}$ in. diameter. The web is 20 in. wide, and consists of a double line of vertical and parallel plates from $\frac{1}{2}$ in. to $\frac{5}{16}$ in. thick, and 9 ft. high, stiffened outside over the joints with T irons and cover strips $5\frac{1}{2}$ in. x $\frac{5}{8}$ in., and inside with double angle iron and T iron stiffeners placed 3 ft. apart; the angle and T irons are connected together by diaphragm plates, leaving a 2 ft. space between them.

The cross girders which are riveted to the bottom boom are 25 ft. 6 in. long by 1 ft. $4\frac{1}{2}$ in. deep, formed with double angle irons $3\frac{1}{2}$ in. x $3\frac{1}{2}$ in. x $\frac{1}{2}$ in. at top and bottom, and flange plates 8 in. x $3\frac{1}{4}$ in.; the web is $\frac{1}{4}$ in. thick. Over the cross girders, and directly under the rails are laid longitudinal timbers 14 in. x 7 in., upon which is placed a floor of 3-in. planking. The chairs for the rails are fixed on the floor exactly over the cross girders.

At present there is only one line of rails laid along the eastern side of the bridge.

The drawings of the Menangle Bridge having been destroyed in the fire at the Garden Palace, the Engineer-in-Chief was requested to supply the Commission with particulars relating to the design, testing, and deflection of the bridge. The papers received from Mr. Whitton are published in the Appendix 19, pages 126–128.

The Menangle Bridge was the first large railway bridge erected on the New South Wales Railways. Since its erection, in 1863, the design has only been reproduced in the Penrith Bridge.

Inspection.

The Commission observed that a large number of rivets had been cut out and replaced in the main girders on the inner or rail side, chiefly in the angle-irons uniting the web and the booms, in the angle-iron wrapper joints, and in the T iron stiffeners and web-covering plates. The new rivets have larger snap heads than the original rivets, but there is round the edge of the snap head of many new rivets an indentation or furrow in the plate, due to the effort made to produce a perfect head. On the outer side of main girders, which had not been interfered with since the bridge was erected, the Commission found that the angle-irons were not in all cases riveted in close contact with the plates of the booms and web, and that a piece of clock spring could be inserted in the angle-iron wrapper joints. Similar defects were found in the middle cell of the girders, and in a flange joint on the underside of top boom four rivets have been omitted in a cross row of five rivets. In testing the rivets of this bridge, the paint came off the heads of the rivets at each blow of the testing hammer, which gave them the appearance of having been tested with unusual severity.

Many of the rivets of the ornamental angle-iron arch on the outside of the web of main girders are loose, and a number of rivet holes have been drilled in the wrong place and filled up with putty, but as the angle iron is more for ornament than for use, this defect is not of much consequence.

The timber platforms over the piers on which the main girders rest are more or less decayed; the Commission had holes bored in each timber platform, and found one piece much decayed.

The plates in bottom booms are corroded, through water finding its way into the cells and no outlet having been provided to drain out the water.

Testing.

The testing of this bridge was performed as follows:—Deflection levers were attached at the centre of main girders, and at quarter span. Deflections were also observed with ordinary engineers' levels. Three engines were used—Nos. 265, 212, and 269, which, when standing, symmetrically on the bridge, were equivalent to a distributed load of 1·37 tons per foot run on the line loaded, and to 1 ton per foot run on the main girder tested. The experiments were made with the three engines standing on the bridge, and also with two engines, Nos. 265 and 212, running at full speed over the bridges. The greatest deflection produced was ·50 in.

Appendix, pages Special reports, No. 2, page and plates Nos. 1, 2, 2A, 5, and 5A; also Appendix 32, page 139.

Conclusions.

1. The bridge being designed to carry a double line of way, although one only is used at present, calculations were made to ascertain the safe load it will carry when the line is duplicated over the bridge. The sectional areas in the booms and web being sufficient for a double line with a load of 1·155 tons per foot run on each line, the bridge may therefore be considered strong enough for ordinary traffic.

Appendix 8, pages 117–119.

2. The cross girders may be subjected, when the two lines are used, to a stress of 6·46 tons per square inch in compression, and 7·62 tons per square inch in tension, with ordinary engines; but allowance should be made for the cross girders being partially fixed at the ends, and for the distributing influence of the longitudinal girders.

Workmanship and maintenance.

3. The workmanship generally is good, and compares favourably with bridge work erected elsewhere at the same time. The defects in some of the angle-iron wrappers are to some extent due to the burr left when shearing the ends. The bridge is kept in good condition, and the top and bottom booms which had not been cleaned for many years, can now be protected from corrosion. Man-hole doors should be placed where necessary to keep the rain from the cells of the girders. The expansion arrangements should be examined and cleaned from time to time.

4. The deflections observed for the various loads are not in any case excessive.

Deflection.

Recommendations.

1. The decayed timber platforms upon which the main girders rest should be carefully examined from time to time, and any decayed pieces renewed. The pieces at No. 3 pier, down side, should be replaced with sound timber.

2.

2. The T iron and web plates and angle-iron wrappers should be refitted and reriveted where improper contact and loose rivets occur.

3. Proper drainage and ventilation should be provided in the cells of booms to prevent corrosion, care being taken to preserve the sectional areas where holes are made for drainage.

4. When the longitudinal timber bearers under rails are renewed, they should be of larger dimensions, to distribute more effectually the weight of driving wheels on the cross girders.

No. 13.—PENRITH BRIDGE.

This bridge is designed to carry a double line of railway; it consists of two main box girders continuous over three openings across the River Nepean, at Penrith, having each a clear span of 186 ft. The main girders are 25 ft. 6 in. apart in the clear, and 28 ft. 6 in. from centre to centre, each forming a continuous girder 594 ft. long, extending over two intermediate piers. Between these girders, transverse or roadway girders are placed at a distance of 3 ft. from centre to centre.

The piers are built of masonry, and are 12 ft. wide at the top on the underside of the main girders, and placed 198 ft. from centre to centre.

The main girders are supported upon timber platforms each 12 ft. long by 4 ft. 8 in. wide, and the expansion rollers are similar to those of the Menangle Bridge.

The approach span, which is of later date, consists of two main box girders having a clear span of 127 ft. They are placed at a distance of 25 ft. 9 in, in the clear, and are each 135 ft. in length overall; between them the cross girders are riveted as in the larger spans. The main girders rest on cast-iron bed plates fixed to the piers, and rollers are provided for expansion.

The main girders over large openings (186 ft.) are 13 ft. deep. The top and bottom booms are constructed in the box form. The bottom member is 3 ft. wide by 1 ft. 4 in. deep, and is divided into two cells 1 ft. 6 in. by 1 ft. 4 in. by a central web. The top member is similar to the bottom member, except that the upper plates are curved. The web is double and formed with parallel vertical plates varying in thickness from $\frac{1}{4}$ in. to $\frac{1}{2}$ in.; it is stiffened at every 3 ft. with T irons on the inside, and covering plates on the outside; the T irons are connected together on the inside with diaphragm plates, the whole height of inner cell at the piers, but in three separate lengths at the intermediate positions.

The cross girders are 26 ft. 3 in. long by 1 ft. 9$\frac{1}{2}$ in. deep in the centre, diminishing to 1 ft. 4 in. at point of support. They are constructed with two angle-irons 3 in. x 3 in. x $\frac{1}{2}$ in., a flange plate top and bottom 7 in. x $\frac{3}{8}$ in. and a web $\frac{1}{4}$ in. thick, riveted together with $\frac{3}{4}$ in. rivets, 4 in. pitch.

On the cross girders are laid longitudinal timber beams 14 in. x 9 in., and close 3 in. planking upon which are laid the ballast and rails.

Each main girder over the approach span (127 ft.) is constructed in the box form for the top table with bottom tables plain. The top boom is 2 ft. 6 in. wide by 1 ft. deep; the depth of each girder is 9 ft. 10 in.

As the bridge is at present constructed, there is only one line of railway laid upon it, the remaining width being used for road traffic. A partition of galvanized iron and timber separates the road from the railway.

The dead load on the bridge is 2$\frac{1}{2}$ tons per foot run, and the bridge was designed to carry a live load of 1$\frac{1}{4}$ ton per foot run on each line of rails.

The live load is now unequally distributed over the two main girders.

Inspection.

The Commission inspected the interior of the girders, passing through the centre cell from end to end, and one of the Commissioners was drawn through the whole length of the top cell and made a close examination of the riveting. Only one of the two bottom cells of each main girder was accessible, on account of the timber framing of the approaches obstructing the other cell.

Appendix 25, pages 131–132

A list was made of the different portions of the top cells, dividing the whole length 590 ft. into 56 sections, and during the examination of this cell marginal notes were made of the condition of the work at each section, which corresponded with the flange plate joints.

The down-stream girder being the more important, as it carries the greater load, the inspection was commenced in its large central cell, starting from the end, on the Sydney side. The principal defects observed were defective rivets in vertical T irons of web, chiefly at junction of these T irons with boom plates. Some double holes and a few blank holes occur in a portion of the girder at junction of horizontal plates of top cells with central cell.

The rivets in the double holes are not loose, and the loss of sectional area in blind holes could not be replaced. Sufficient area, however, is left for safety, or for the stresses at those parts of the girder. There is no indication that the blank or double holes occur through more than one plate forming part of a pile of four plates.

The bottom pile of plates at top flange was originally intended to be joggled, but the joggling was dispensed with, and the triangular space was filled with putty.

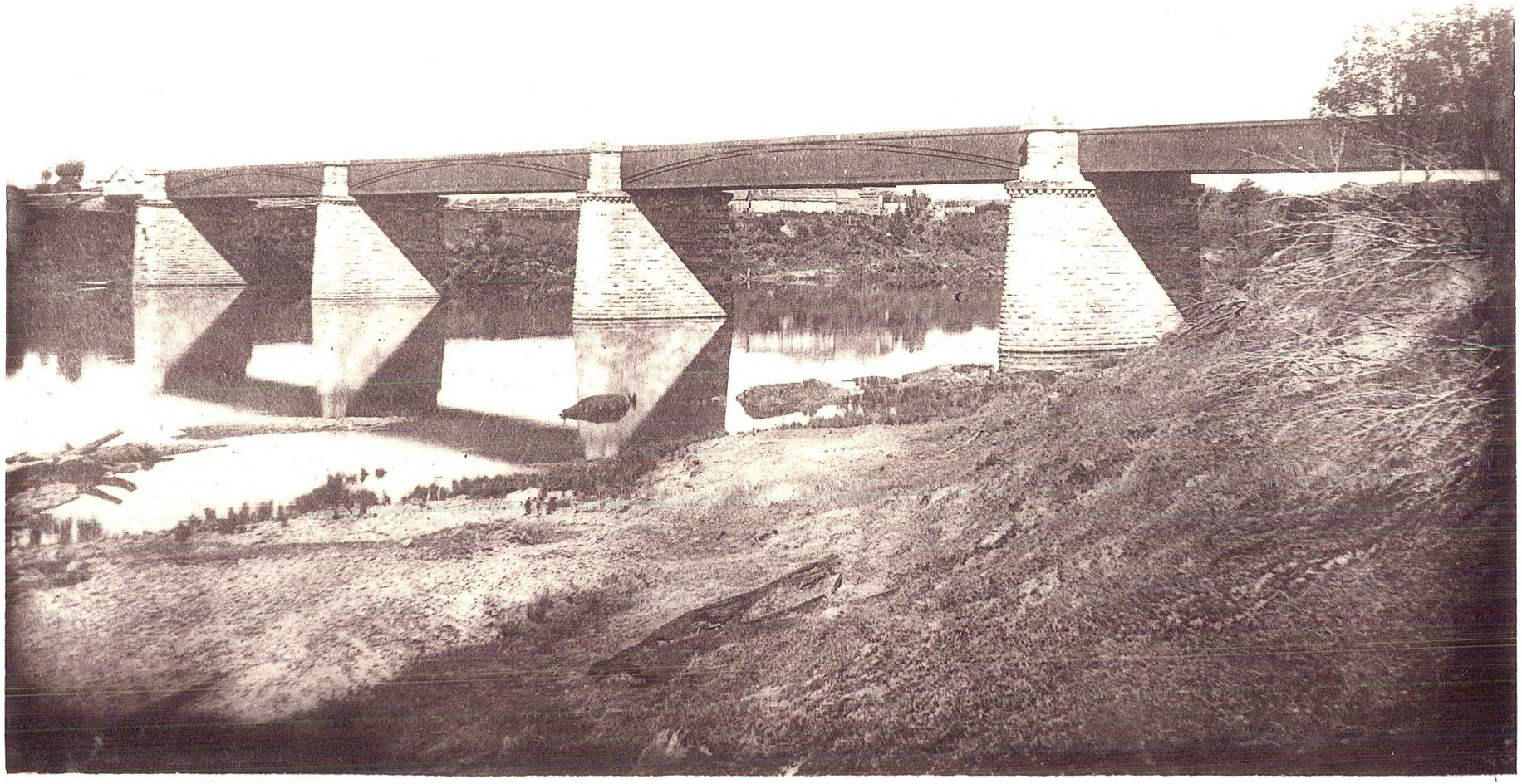
Some of the butting joints of the plates are not in close contact, and the spaces, about $\frac{1}{8}$ in. to $\frac{1}{4}$ in., have been filled up with lead or putty to protect the ends of plates.

A few loose rivets, and many vibrating under the test hammer, were found in the diaphragm plates of centre cell, but no appearance of buckling is shown under a passing load. The rivet holes made for fixing the ornamental angle-iron arches outside the main girders have, in many instances, been made in the wrong place. A number of these holes have been filled with putty or lead. A few other blind holes in diaphragm-plates have also been filled with lead. These defects do not affect the safety of the bridge.

The T iron stiffeners, to which the cross girders are attached, are not riveted in close contact with the plates.

The cross girders are secured to the main girders by sixteen rivets at each end passing through T iron and web-plate. Many of these rivets have bad heads, which is no doubt due to the difficulty of riveting in those places. These rivets, however, are not loose.

The inspection of the interior of one of the top cells by a member of the Commission, which is fully recorded in Appendix 25, pages 131–132, showed that the difficulty of access during construction caused imperfect



866— Penrith Bridge—Great Western Railway.

imperfect work. The upper part of the cells is better than the underside. The longitudinal angle-iron in top cell is not in close contact in many places with the plates, and the riveting is irregular on account of the difficulty of holding up rivets in such a confined space ($15\frac{1}{4}$ in. x $13\frac{1}{2}$ in.)

The Engineer for Existing Lines has had this made good by the insertion of tapered liners between the curved top-plates and the angle-irons, and by reriveting the whole together.

The Commission did not see any difference of rigidity between the parts of the booms thus treated and other places where these liners had not been inserted.

Amongst other defects may be mentioned a few false holes in angle-irons of top booms.

The inspection of the bottom boom did not disclose the defects stated in the top boom.

It had been reported to the Commission that the timber bed-plates, on which the main girders rest were much decayed. The Commission caused holes to be bored through these timbers to ascertain the extent of the decay. No danger need be apprehended from this decay and the Commission found that any portion of the timber might be renewed as it became necessary to do so. This timber had not been originally coated with any preparation to preserve it. At the time of the inspection of the bridge by the Commission, the bottom cells had not been entered nor cleaned since the bridge was erected in 1867. The outer cells of bottom booms were accessible, and could have been cleaned, but the entrance at the ends of the inner cells was blocked up by the timber framing of the approaches, which prevented access to these cells. The Commission requested the Engineer for Existing Lines to have the obstructions removed and the bottom cells cleaned. The water, which had been probably lying at the bottom of the cells for some years, was drained out, and a large quantity of rust removed. The plates were corroded to the extent of almost $\frac{1}{8}$ of an inch across half their width, but the rivets were sufficiently tight to prevent drainage, and the corrosion had not attacked the necks of the rivets. Appendix 24, page 130.

127 Feet Spans.

The principal defect in these girders is the difficulty of access to the top cells for inspection and repairs. 127-ft. span.

The testing of this bridge was performed in the following manner:—On the down-stream girder, deflection levers were attached approximately at the points of contrary flexure, and in the middle of effective spans. Thus two levers were attached to Nos. 1 and 3 spans, and three levers to the middle span. A deflection lever was also connected with the centre of the down-stream girder over the 127-ft. opening. Testing. Plates 11, 12, and

Three engines were used (Nos. 137, 135, and 141) of the "Consolidation" goods class, weighing together 225 tons. When standing symmetrically on the bridge these engines were equivalent to a uniform distributed load of 1·5 ton per foot run on the girder tested. Plates 1, 2, and 2A, and Special Report, No. 2, page 81.

The first test was made with the engines standing on the bridge in the various positions shown on plate No. 13, experiment Nos. 11 to 17. Full-speed tests, with the engines running at 30 miles an hour, were made, as shown on plate No. 12. The deflections were recorded by the instruments to the increased scale of 1 in 8·3, plate No. 11, from which the diagrams showing actual deflections (plate No. 13) have been reduced. The maximum deflection produced was ·93 inch. The greatest deflection produced with an ordinary goods train was ·75 inch.

1. The rapid progress made in bridge designing since the Penrith Bridge was erected renders it unnecessary to compare the type of girders adopted for that bridge with the designs of later railway bridges constructed in the Colony. Conclusions.

2. This bridge having a double line of rails, although one only is used at present, calculations were made to ascertain if the load it was designed to carry, viz., $1\frac{1}{4}$ ton per foot run on each line of rails, could be safely carried when the two lines are in operation. Appendix 7, pages 112-116.

The inspection of the girders showed that the connection between the booms and the web is made with angle-irons $4\frac{1}{2}$ in. x $4\frac{1}{2}$ in. x $\frac{9}{16}$ in. riveted to the booms with rivets 1 in. in diameter, and to the web-plates with rivets $\frac{3}{4}$ in. in diameter.

The analysis of stresses on the $\frac{3}{4}$ in. rivets in tons per square inch is shown on the following table:— See also diagram, plate No. 10.

No.	Description of load on Bridge.	Stress on $\frac{3}{4}$ in. rivets in tons per square inch.
1	From the dead load of the structure itself	4·5
2	From ordinary traffic on railway (no load being on the roadway)	6·8
3	From ordinary traffic on one line of way with $\frac{1}{5}$ ton per foot run on roadway	7·2
4	From a single line loaded with $1\frac{1}{4}$ ton per foot run on either side of end spans with $\frac{1}{5}$ ton per foot run on roadway.	8·4
5	From a double line of way, each loaded with $1\frac{1}{4}$ ton per foot run on either side of the end spans	9·3

As will be seen from the table of stresses in booms, the sectional area is sufficient for all ordinary traffic on a double line, but there is not sufficient area to cover all cases of complete loading, which would be possible with two lines of way, each loaded with $1\frac{1}{4}$ ton per foot run. With this load the pressure on the bearing area of the $\frac{1}{4}$ in. plates of the web would be 14 tons per square inch. Appendix 7. Calculations, pages 112-116

The rivet area is barely sufficient in the covering plates of booms, which exceed $\frac{1}{2}$ in. in thickness, nor in the angle-iron wrappers.

3. In the approach main girders the booms are united to the web with rivets 1 in. in diameter, although the stresses they have to transmit are less than in the larger continuous girders.

The strength of the approach main girders is sufficient for a double line of way.

Cross girders. Appendix 9, page 119.

4. With a double line of way the unit stresses in the cross girders will exceed those recognised by the Board of Trade. The dead load added to the weights on the driving wheels of the heaviest engines will give a concentrated load of 8 tons at four points immediately under the rails, and the unit stress in tension will be 9·4 tons per square inch, and in compression 8·06 tons per square inch.

Workmanship and maintenance.

5. The workmanship is inferior to that of Menangle Bridge, and to that of bridges more recently erected. The outer portions of the bridge and the centre cells of the girders have been generally cleaned and well maintained, but it is only recently that the upper cells were cleaned and painted. The cells of bottom booms had not been cleaned since the erection of the bridge.

Deflection.

6. Considering the proportion of depth to effective span for the test load, the deflections observed are proportionately greater than in Menangle Bridge, which is of similar design, but they are not, however, excessive.

Recommendations.

The Commission recommend:—

1st. That where loose rivets occur in vertical attachments of cross girders, in middle diaphragm plates, and in web covers, they should be renewed; also, that where rivets are loose in angle-iron wrappers, or where blank holes occur in them, a new wrapper should be fitted, and the joint entirely reriveted.

2nd. That the upper curved surface of the stone piers be cut down to the level of the underside of the timber platforms for a distance sufficient to allow of the withdrawal and renewal of the decayed timber where necessary. That the plates of bottom booms be thoroughly cleaned and protected from corrosion in future by being well painted or coated with asphalt paint, and that the ends and holes, not required for ventilation and drainage, be closed.

3rd. That the ¾ in. rivets uniting the webs to the booms in the main girder next to rails be removed for a distance of 40 ft. on either side of No. 2 and No. 3 piers, and for 10 ft. from ends of girders, and the holes drilled and fitted with 1-in. rivets. Not more than six rivets to be taken out and replaced at one time.

Before the line is duplicated the Commission also recommend:—

1st. That the ¾ in. rivets uniting webs and booms on the other main girder be replaced by 1-in. rivets in the manner described above.

2nd. That, to distribute more effectually the weight brought on the cross girders by the driving wheels of the engines when passing over them, a small longitudinal box girder be riveted to the cross girders the whole length of the bridge, or that a small lattice continuous girder be formed by fixing a double line of channel or angle irons at the top and bottom of the cross girders throughout the whole length of the bridge in the centre, and bracing them between the cross girders.

No. 14.—WAGGA WAGGA TIMBER VIADUCTS.

The Wagga Wagga Timber Viaducts, situated on the Great Southern Railway, have been erected over the low ground liable to flood near the Murrumbidgee River, and are a continuation of the Wagga Wagga Iron Bridge. These extensive timber structures comprise six viaducts, the details of which are given in the following table:—

Number of viaducts—Bowen to Wagga.	Number of spans in each viaduct.	Number of beams (29 ft. 6 in. long.)	Number of timber piers.	Number of piles in the piers.	Remarks.
I	113	904	114	456	
II	66	528	67	268	
III	4	32	5	20	
IV	72	576	73	290	
V	56	448	57	228	
VI	5	40	6	44*	*Including twenty extra batter piles at approach to iron bridge.
Totals	316	2,528	322	1,306	

Superstructure Plate No. 39.

The superstructure is of ironbark. All the spans are 28 ft. 6 in. in the clear, formed of beams 29 ft. 6 in. long, bolted to corbels fixed to the timber piers. Each span consists of four compound beams 29 ft. 6 in. long. Two of these are under the rails, at a distance of 5 ft. from centre to centre. The other two are outside of these at a distance of 3 ft., centre to centre. Between these beams are eight transoms 9 in. x 6 in. checked between the beams to bring them at a uniform distance apart (6 in.). The transoms over the piers are 12 in. x 9 in., checked in a similar manner. The lower beams are butted over corbels 12 in. x 12 in. and 10 ft. long, bolted to the piers. A close flooring of 3-in. planking is fixed upon the upper beams to receive the ballast, sleepers, and rails; ballast boards, 9 in. x 6 in., are bolted to the outer beams. The beams and transoms are bolted together with 1-in. bolts, except at the corbels, where the bolts are 1¼ in. The total width of the platform between the ballast boards is 11 ft. 1 in.

Piers.

The piers are constructed of round timber piles, tenoned at the top into headstocks, 12 in. x 12 in. and 15 ft. 6 in. long. The two piles under the rails are vertical and the two outside piles are built with a batter of 1 in 10, uniform throughout the piers. Two waling pieces, 12 in. x 6 in., are bolted on each side of the piles near the surface of the ground, and two diagonal braces, 9 in. x 6 in., notched into the walings are bolted to each pile and to the headstock as shown on drawing. Fifty-eight piers are driven into the ground to depths varying from 14 ft. to 57 ft., and 264 piers are tenoned into sills, 14 in. x 6 in., bedded in concrete at depths varying from 6 ft. to 8 ft. below the surface of the ground.

Plate No. 39.

The piles and bracing generally are of different kinds of Colonial hardwood. The

866— Wagga Wagga Timber Viaducts—Great Southern Railway.

The Commission made a minute inspection of the whole of the viaducts, and the result is given in the following table :— Inspection.

Description of Viaduct.	Species of Timber.	Pipes under 4 in. diameter.	Pipes over 4 in. diameter.	Dry knots.	Bad hearts.	Piles strutted.	Total faulty piles.	Girders split or rotten.	Girders knotty.	Girders strutted.	Total faulty girders.
VIADUCT I. 113 spans, 456 piles, 904 girders.	Ironbark	...	...	...	...	...	...	6	...	4	...
	Stringybark	1	4	1	...	...	6	...	...	...	...
	Ash	3	15	2	...	7	20	...	...	...	...
	Messmate	...	7	...	...	4	7	...	...	...	...
	Apple-tree	...	1	1	...	...	2	...	...	...	...
	Totals	...	...	...	...	...	35	...	...	...	6
VIADUCT II. 66 spans, 268 piles, 528 girders.	Ironbark	...	...	...	...	...	...	1	2	1	...
	Stringybark	1	3	...	...	...	4	...	...	...	...
	Ash	4	9	1	...	4	14	...	...	...	...
	Messmate	...	2	...	...	1	2	...	...	...	...
	Apple-tree	1	...	...	...	1	1	...	...	...	...
	Totals	...	...	...	...	...	21	...	...	...	3
VIADUCT III. 4 spans, 20 piles, 32 girders	Ironbark	...	...	...	...	...	...	1	...	...	...
	Total	...	...	...	...	...	...	...	...	...	1
VIADUCT IV. 72 spans, 302 piles, 576 girders.	Ironbark	...	...	...	...	...	...	6	...	5	...
	Ash	2	7	...	...	4	9	...	...	...	...
	Messmate	...	3	1	...	1	4	...	...	...	...
	Apple-tree	...	1	...	...	1	1	...	...	...	...
	Totals	...	...	...	...	...	14	...	...	...	6
VIADUCT V. 56 spans, 238 piles, 448 girders.	Ironbark	...	...	...	...	...	...	5	...	5	...
	Ash	...	...	1	...	...	...	...	...	...	...
	Box	...	...	...	1	...	...	...	...	...	...
	Apple-tree	...	...	1	...	...	...	...	...	...	...
	Spotted gum	...	...	1	...	...	...	...	...	...	...
	White gum	...	...	1	...	...	...	...	...	...	...
	Totals	...	...	...	...	...	5	...	...	...	5
VIADUCT VI. 5 spans, 24 piers, 40 girders	Stringybark	...	1	...	...	...	...	...	...	...	...
	Apple-tree	...	1	...	...	...	...	...	...	...	...
	Box	...	1	...	1	...	...	...	...	...	...
	Total	...	...	...	...	...	4	...	...	...	...

The analysis of the condition of the timbers may be summarized as under :—

Viaducts.	Number of Piles.	Faulty piles.	Proportion of faulty piles.	Number of girders.	Faulty girders.	Proportion of faulty girders.
Viaduct I	456	35	1 in 13	904	6	1 in 150·7
II	268	21	1 in 12·8	528	3	1 in 176
III	20	.....	.....	32	1	1 in 32
IV	302	14	1 in 21·6	576	6	1 in 96
V	238	5	1 in 47·6	448	5	1 in 90
VI	24	4	1 in 6	40	.....	
Totals	1,308	79	1 in 16·5	2,528	21	1 in 120

The difficulty of obtaining ironbark timber for the whole structure in the short space of time allowed for its erection, necessitated the use of other kinds of timber for the piers, such as stringybark, ash, messmate, apple, box, spotted and white gum, &c., of which a large proportion had to be cut when the sap was up, instead of during the winter months. In consequence of this the dry rot soon appeared in a certain proportion of the piles, and this decay, together with the cavity or pipe in some of them, reduced their effective sectional area, but not beyond the limit of safety.

The defective timbers may have escaped the notice of the Superintending Officers during the erection of the viaducts, but some of the faulty piles and girders in which the sun-cracks and knots have been filled with putty, should have been removed before the viaducts were opened for traffic. Bolts have since been put in to protect the sun-cracks, and the sapwood at the ground level has been cut away or burnt off the piles to stop further decay. White ants which had been found in some of the piles soon after the erection of the viaducts have been successfully eradicated by the use of kerosene, and of a mixture of arsenic and tallow.

Before

Before testing the viaducts the Commission obtained from the Locomotive Engineer particulars of the heaviest engines and trains passing over the viaducts. (*See Appendix* 31, page 138.)

Testing. Plates Nos 40 and 41.

The arrangements for testing the viaducts were as follows:—

Deflection levers were attached to the centre of the downside rail-bearing and outside girders in viaduct No. 1, and on the upside in viaduct No. 2.

Five consecutive spans were tested in each case, and in one bay of each viaduct the four girders were tested.

Plates 1, 4, and 4a.

The engines used were Nos. 257 and 259 of the "Express" class, weighing each 63 tons 16 cwt. 3 qrs., and producing a maximum load on each span, equivalent to a distributed weight of 42 tons. The deflections produced by the loads as arranged in some of the spans, are shown on diagrams, plates Nos. 40 and 41. The maximum deflection observed was ·59 in., with the full speed test. The side rocking was also tested with sliding rods on spans ·49 and ·50, viaduct No. 4, with the engines running at full speed, and found to be $\frac{3}{32}$ of an inch.

The longitudinal motion was likewise tested to ascertain the actual motion of the viaduct in the direction of its length, and it was found to be $\frac{1}{16}$ of an inch.

Plate No. 45. Special report No. 2 page 81 and No. 15 page 98

The comparison of the deflections obtained with full speed tests at the Wagga Wagga viaducts with those at the Tamworth Bridge approaches, which are of the same spans, and similar in construction, gave the following results:—

	Inches.
Maximum deflection at Wagga Wagga viaducts with two engines, weighing each 63 tons 16 cwt. 3 qrs.	·59
Maximum deflection at Tamworth Bridge approaches, with two engines weighing each 64 tons 6 cwt. 3 qrs., and one weighing 63 tons 13 cwt. 3 qrs.	·576

Conclusions.

1. The opinions of the Engineer-in-Chief and the Engineer for Existing Lines, and their respective officers, being so much at variance upon the rigidity of the Wagga Wagga viaducts, and upon the safety of running trains over them at a greater speed than 16 miles an hour, the Commission resolved to make experiments on a large scale, upon the strength and elasticity of compound beams, constructed of colonial timber, and similar in design to those at Wagga Wagga and other viaducts on the Government Railways. The particulars and results of these experiments will form the subject of a special report hereinafter.

Evidence, pages 68-69. Questions 2191-2212.

2. The Engineer-in-Chief has given satisfactory reasons for his adoption of compound beams 29 ft. 6 in. long, and the experiments referred to have proved that the actual deflection of such beams with corbels 10 ft. long, is less than with corbels 8 ft. or 6 ft. long under the same load.

The testing of the viaduct also showed that a considerable portion of the load was transmitted to the side beams by the transoms and deck planking.

3. The Commission could not discover any injury to the original fitting of the bridge caused by the reported oscillation, nor that the running of a train from a curve produced more oscillation than running from the straight.

Close observation did not show that the sills of the piers moved in the concrete blocks, nor that the piles moved in the sills.

Very careful attention was given by the Commission to the plunging motion mentioned by the officers of the Existing Lines Department in their evidence, and in the papers before the Commission. There was nothing more abnormal in this motion than is usually accumulated in a large number of small uniform spans of timber with a varying load passing over them. Observations were made with delicate levels inside a passenger carriage, from the overhanging platform of a bogie car, and from the engine tender and foot plates, and when finally the Commissioners rode on the engines when running at a speed exceeding 30 miles per hour, they could hardly detect any difference when passing over the viaducts or on the embankments.

Workmanship and maintenance.

4. The timber of the viaducts has been well framed and fitted together, and with the exception of the defects caused by shrinkage or decay, the workmanship generally is good.

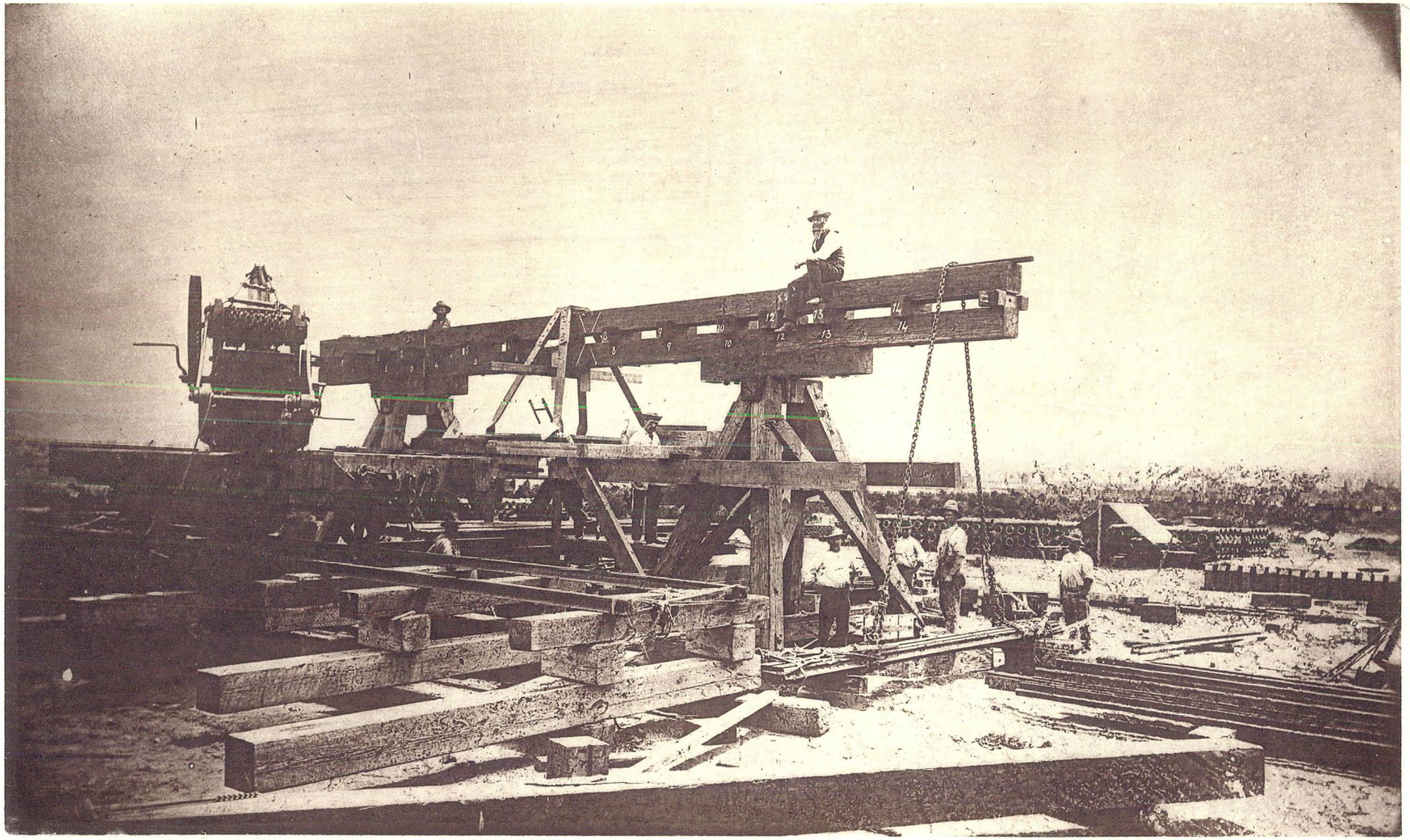
The viaducts are kept in good condition. Provision has been made for preserving the timber from insects and decay, the bolts are kept well screwed up, and measures are taken for the protection of the timber generally from causes attributable to atmospheric influences. The cost of maintenance of the viaducts, as reported by the Engineer for Existing Lines, from September, 1880 to 26th July, 1883, was £1,546 10s. 9d. Since the latter date the cost of maintenance has been considerably reduced and is not now excessive.

Recommendations.

1. The inspection and testing of the viaducts having shown that they are sufficiently stiff and strong to carry the heaviest traffic that passes over them, the Commission cannot see any reason why the ordinary speed of trains should be reduced on the Wagga Wagga viaduct more than upon any of the other similar viaducts, provided the structure is well kept and maintained.

2. The faulty girders should be replaced by well-seasoned ironbark beams, and the faulty piles which are reduced in sectional area by decay, pipes, or other defects to a greater extent than three-fourths their original size, should be replaced by new piles of well-selected and seasoned timber.

3. Considering the large number of timber bridges and viaducts on the different lines of the Colony, the Commission recommend, to ensure the thorough maintenance and repairs of these structures, that a sufficient stock of selected ironbark girders and piles be kept in stock in the Government yards, and protected from atmospheric influences.



866— Experiments made at the Government Yard, Clyde, for testing the strength of Timber girders—compound beam, 29 ft. 6 in.

No. 15.—CLYDE EXPERIMENTS.

EXPERIMENTS made at the Government Railway Siding at Clyde, near Granville, for testing the strength and elasticity of Compound Timber Girders, such as those used in the Wagga Wagga and other Viaducts.

The details of the construction of the Wagga Wagga viaduct are shown on drawing, plate No. 39. Plate 39.

The details of the experimental girder, both for 29 ft. 6 in. and 26 ft. spans, are also shown with the tables of deflections and loads producing the deflections, on drawing-plate No. 43. Plate 43.

The two appended photographs show the general arrangement of the apparatus. An iron cage was suspended from the centre of the experimental girder and was loaded with rails; the girder was supported at each end by trestles, and was extended for a distance of 10 ft. beyond each trestle with a length of similar girder representing a portion of adjoining spans, from which a bundle of rails was suspended by chains in the following manner:—In the 29 ft. 6 in. girders a weight of 1 ton 10 cwt. was suspended at a distance of 8 ft. 7 in. from centre of trestles; in the 26 ft. girders a weight of 1 ton 6¼ cwt. was suspended at a distance of 7 ft. 8½ in. from centre of trestles.

The cage with its load of rails, when not supported by the experimental girder, rested upon four screw-jacks, arranged one under each corner, in such a manner that the weight could be lifted entirely off the girder and allowed to come gradually upon it by simply working the screw-jacks either upwards or downwards.

The apparatus used for measuring the deflections was similar to that employed for testing the deflections of the Iron Bridges. This apparatus was attached to a beam parallel to the experimental girder, which was securely fixed to the trestles so as not to interfere with the motion of the cage. A deflection apparatus was also arranged in this manner on each side of the experimental girder, and the mean of the two deflections was noted. See diagram in Special Report No. 2, on Testing of Bridges, pages 80—81.

The following experiments were made, viz.:—

COMPOUND BEAM 29FT. 6IN. CENTRES.

1. The experimental compound beam was loaded with rails, until the total weight, including the weight of the cage, was 2·62 tons.

This represented the portion of the dead weight carried by one rail-bearing compound beam in the actual viaduct.

The weights suspended by the chains in the manner already described represented the effect of the dead weight of adjacent spans.

This was shown by the equal deflections at the extremities of the corbels which were observed by means of an ordinary engineer's level.

With this arrangement of loading, the conditions of a rail-bearing girder in a viaduct were fairly represented.

2. The two 12″ x 12″ beams were bolted together with blocks representing transoms separating them 12 in. apart, and rails were added to those already in the cage, making a total load of 8·67 tons, and the average deflection from experiments 3 to 5, namely ·84 in., was noted.

3. The 12 in. blocks were removed and 9in. blocks inserted, and the deflection with 8·67 tons again noted. The average of experiments 6 to 9 and 17 to 19 gave a deflection of ·713 inches, and consequently, 1·44 tons would have to be added in order to increase the deflection to ·84 in.

4. The 9 in. blocks were removed and 6 in. blocks inserted, and it was found that the stiffness of the girders with the 5 in. blocks was slightly less than with the 9 in. blocks.

5. Experiments No. 32 to No. 57 were made to ascertain the effect of shortening the corbels from 10 ft. to 8 ft., and from 8 ft. to 6 ft.

The original load of 8·67 tons was again applied, and four additional deflection levers were fixed, one under the extremity of each corbel.

The deflections at the centre of the compound beam and at the extremities of corbels are represented in the table. Plate 43.

These deflections prove that as the corbels were shortened the central deflection of the compound beam was increased, while the deflections of the corbels were diminished.

COMPOUND BEAM 26FT. CENTRES.

6. The trestles were moved to 26 ft. centres, and a 26 ft. compound beam erected similar to those in use in viaducts of this span, but projecting 10 ft. beyond the centre of trestles, and having rails suspended by means of chains in the manner before described.

The conditions of a rail-bearing girder in the actual viaduct were thus fairly represented.

In order to compare the relative stiffness of the two spans, experiments No. 78 to No. 93 were made, commencing as before with a weight of 8·67 tons, and experiments No. 78 to No. 80 gives the ratio as 1: 1·2.

7. Experiments No. 94 to No. 102 were made after unscrewing the nuts and loosening the bolts, and experiments No. 90 to No. 96 show an increase in deflection in the ratio of 1: 1·24, while experiments No. 100 to No. 102 show a still further increase in the ratio of 1: 1·74.

8. Experiments No. 103 to No. 105 were made after removing the transoms and bolting the two beams tightly together, which show that the stiffness was increased in the ratio of 1: 1·15.

9. Experiments No. 115 to No. 117 were made after unscrewing the nuts and loosening the bolts, and they show an increase in deflection in the ratio of 1: 1·4.

Appendix 11, page 122.

COMPARATIVE Stiffness of Experimental Compound Beam, 29 ft. 6 in. Span, in the Wagga Wagga and Tamworth Viaducts.

Plate 43.

From the table shown on plate No. 43, it is seen that 8·67 tons in the centre of the experimental beam produced a deflection of ·716 in. If this weight had been uniformly distributed over the compound beam, the deflection would have been $= \frac{5}{8} \times \cdot 716 = \cdot 447$ in.

From an inspection of the table it will be seen that 1 ton distributed is equivalent to a deflection in the centre of ·042 in.; so that 10·67 tons uniformly distributed would produce ·531 in. deflection, or about the average deflection observed in the rail-bearing girders of the Wagga Wagga and the Tamworth viaducts, with the engines at full speed. The average deflection of the outside girders, as determined from all the full-speed tests, is ·7 times that of the rail-bearing girders, or $= \cdot 7 \times \cdot 53 = \cdot 37''$.

In the experiments at Wagga Wagga Viaduct, two Dubs' & Co. Express Passenger Engines were used, and the maximum load produced by these engines on one span of viaduct is equivalent to a uniformly distributed load of 42 tons. Hence $\frac{42}{3 \cdot 4} = 12 \cdot 4$ tons on each rail-bearing compound girder.

Plates 41 and 45.

The greatest deflection observed with these engines at full speed was ·59 in.
The greatest deflection observed at the Tamworth Viaduct was ·576 in.

CALCULATION OF STRENGTH OF ONE SPAN OF THE WAGGA WAGGA VIADUCT.

Plate 44.

The breaking weight of top beam, 28 ft. 6 in. clear span, was found experimentally to be 19·5 tons in the centre, and the uniformly distributed weight would therefore be 39 tons.

The breaking weight of the bottom beam, which is 19 ft. 6 in. clear span, would be 57 tons uniformly distributed.

Hence the breaking weight of the two beams would be $57 + 39 = 96$ tons uniformly distributed.

From experiments with slack bolts, it has been shown that the decrease in stiffness, due to unscrewing the nuts and slackening the bolts, varied from 1 : 1·24 to 1 : 1·74, and hence it should be inferred that the relative strength of the compound beam to the sum of the strengths of the two beams would be approximately as 1·5 : 1, and the breaking weight of the compound beam $96 \times 1\frac{1}{2} = 144$ tons uniformly distributed.

Plates Nos. 40, 41, and 45.

From testing experiments made at Wagga Wagga and Tamworth viaducts (see diagrams, plates Nos. 40, 41, and 45, which have been already referred to), it will be seen that the probable breaking weight of one span of the viaduct would be $3 \cdot 4 \times 144 = 489$ tons. The maximum live load is equivalent to a distributed load of 42 tons, and the dead load to 20 tons, so that the factor of safety is $\frac{489}{62} = 7 \cdot 9$.

CALCULATIONS OF STRENGTH OF VICTORIAN TIMBER VIADUCTS.

15 ft. Spans.

The size and arrangement of the beams in these spans are identical with those adapted in the 30 ft. strutted spans. There are, however, no struts, and the piles used for the piers are of smaller size. Up to 10 ft. in height, only two piles are commonly used for each pier. In some cases the cast-iron caps on the top of the piles have been omitted, and a pair of walings used instead. This form of structure has been very extensively adopted. It requires fewer piles than the Wagga Wagga structure, and the amount of timber in the superstructure, not including the deck or gravel beam, is 46 cubic feet per span, if the beams are 16 in. deep, and 54 cubic feet per span if the beams are 18 in. deep.

The weight of structure, including timber work, ballast, sleepers, and rails $= \frac{1}{2}$ ton per foot run. The maximum bending moment $= \frac{wL^2}{8} = 14$-foot tons, due to the dead load only. For the live load, suppose a pair of engine-driving wheels, carrying 14-tons load exactly at mid span, the leading and trailing wheels would rest on the piers and would not therefore affect the beams.

Bending moment due to live load, $= \frac{wl}{4} = 53$-foot tons. Total bending moment $= 14 + 53 = 67$-foot tons. The moment of resistance $= \frac{1}{6} f b d^2$, where $f = 7{,}000$ pounds per square inch for red gum timber, and b = sum of breadths of four beams, equals 2 ft. 4 in., and the depth $d = 18$ in.

Moment of resistance $= \frac{7{,}000 \times 28 \times 28 \times 18 \times 18}{6} = 10{,}584{,}000$ in. pounds, $= 393 \cdot 75$ foot tons.

The gravel kerbs, 12 in. deep and 4 in. thick, which are well spiked down, will help to bear the load and will probably increase the moment of resistance to at least 440 ft. tons.

The factor of safety will therefore be $\frac{440}{67} = 6\frac{1}{2}$.

30-ft. spans.

Plate 42.

The 30-ft. spans (see drawing, plate No. 42) are divided by struts into a central span, 14-ft. centres, and two side spans of 8-ft. centres. These girders being continuous over the supports formed by the struts, the beam would be more favourably circumstanced than in the plain 15-ft. spans, and its factor of safety would be increased by a considerable, but not easily calculated amount above that already calculated. Allowing each strut to carry one-fourth of the weight of a 30-ft. span, with a locomotive weighing 40 tons upon it, the longitudinal compression would be $= \frac{15 + 40}{4} \times \sec. 45° = 20$ tons nearly.

The timber being 9 in. square, or 81 square inches sectional area, the compression is 550 lbs. per square inch. As the resistance of this timber to crushing is at least 7,000 lbs. per square inch, it will be seen that there is a factor of safety against crushing of more than 12. If a similar structure were to be built of New South Wales ironbark, its strength would be increased 1·8 times, and would therefore be stronger than our present timber viaducts.

COMPARATIVE

COMPARATIVE QUANTITIES OF TIMBER IN SUPERSTRUCTURE OF NEW SOUTH WALES AND VICTORIAN VIADUCTS.

Wagga Wagga Viaduct.

No. 8.—Beams 29 ft. 6 in. long x 12 in. x 12 in.	= 236	cub. ft.
„ Corbels 5 ft. long x 12 in. x 12 in.	= 40	„
Transoms	= 49	„
Total quantity of timber	= 325	„

The deck and gravel beam, which is common to each system of construction, is not included in the above.

Victorian 30-ft. strutted spans in Red Gum.

No. 4.—Beams 18 ft. x 7 in.	= 106	cub. ft.
Struts	= 22	„
Packing pieces	= 16	„
Total quantity of timber	= 144	„

In many of these viaducts the beams are not of red gum, but of other Colonial timber of greater strength against cross breaking. In this latter case the beams are reduced in depth to 16 in., and the quantity of timber in one span to 132 cubic feet.

It must be remembered that a considerable quantity of iron is used in this viaduct in the shape of shoes, caps, and fastenings, which do not appear to be absolutely necessary, and increase the cost.

No. 16.—STRENGTH AND ELASTICITY OF IRONBARK AND RED GUM TIMBER.

THE table of experiments on Colonial timber, made by the Victorian Railway Department in October, 1880, and the tables of experiments on red gum timber (*See Appendix* 28, *pages* 135–136) from the banks of the river Goulburn, which were completed in March, 1885, were sent to the Commission by Mr. R. Watson, Engineer-in-Chief.

The experiments made at the Sydney Mint by Captain Ward and Mr. Trickett, in 1861, were on timber of much smaller scantling.

The experiment made by Mr. John Whitton, Engineer-in-Chief for Railways, as well as those made by this Commission, were on timber of the scantling used in the New South Wales timber viaducts.

The following calculations have been made in order to compare the moduli of rupture and of elasticity as deduced from some of the experiments, with a view to their application in determining the strength and elasticity of timber beams such as those used in timber viaducts.

Ironbark timber, such as that used in the superstructure of all the Railway Viaducts in New South Wales, and red gum timber from the banks of the River Goulburn, which is used in some of the Victorian Railway Viaducts, are each considered in the following manner :—

Let l = span or distance between supports.
b = breadth of beam.
d = depth of beam.
w = breaking weight applied in centre of beam.
f = modulus of rupture.

Since the weight in the following experiments was in all cases applied in the centre, we have :—

Bendimg moment $= \frac{wl}{4}$

Moment of resistance $= \frac{fbd^2}{6}$

Therefore $\frac{wl}{4} = \frac{fbd^2}{6}$; and $f = \frac{6wl}{4bd^2}$

MODULUS OF RUPTURE.

The experiments made at the Sydney Mint were on specimens of timber 2 in. square, and on supports placed 48 inches apart in the clear, so that the bending moment

$$\frac{wl}{4} = \frac{48w}{4} = 12w$$

while the moment of resistance

$$\frac{1}{6}bd^2f = \frac{4}{3}f$$

Hence $12w = \frac{4}{3}f$; $f = 9w$

The breaking load in three cases being 1,526, 1,904, 2,034 lbs., we obtain for the modulus of rupture the following values :—

$f = 9 \times 1526 = 13{,}734$ (ironbark from Albury).
$f = 9 \times 1904 = 17{,}136$ (white ironbark from Berrima).
$f = 9 \times 2034 = 18{,}306$ (red ironbark from Berrima).

The

The experiment made by Mr. John Whitton, Engineer-in-Chief for Railways, was on a beam of of ironbark 12 in. x 12 in., on supports 26 ft. apart in the clear, which broke with 23 tons;

$$\text{Hence } \frac{23 \times 2240 \times 26 \times 12}{4} = f\frac{12^3}{6}$$

$$\text{and } f = \frac{23 \times 2240 \times 6 \times 26 \times 12}{4 \times 1728} = 13{,}953 \text{ lb.}$$

The experiments made by the Commission were on a beam of ironbark of excellent quality, 31 ft. long and $12\frac{1}{4}$ in. square.

Breaking Experiment.

Breaking of 29′ 6″ beam.

The beam was supported upon trestles spaced 28 ft. 6 in. apart in the clear, and 29 ft. 6 in. centre to centre. The weight was applied in the centre of the beam, and consisted of an iron cage loaded with rails, and resting upon four screw-jacks, placed one under each corner. The weight was gradually brought upon the beam by turning the screws of the jacks, so as to lower the cage, and the weight was taken off by turning the screws in the reverse direction. The deflections were measured by the apparatus already described, page 80–81. One multiplying lever was fixed on each side of the beam, and the mean deflection noted. The deflections were also observed with an engineer's level, by reading a graduated staff fixed at the centre of the experimental beam.

Plate No. 44.

The deflections, and the weights producing them, are recorded in diagram, plate No. 44. The general arrangement of the apparatus is seen in photographs annexed. It will be seen by an inspection of the diagram, that commencing with a weight of 3·8 tons, the load was increased by equal increments of ·75 ton until the beam broke, which occurred with a weight of 19·5 tons.

The deflections were observed after each increment of load had been applied, and the weight was entirely released before applying further load, and the permanent set (if any) measured.

The modulus of rupture is derived as follows:—

$$\text{Bending moment} = \frac{19{\cdot}5 \times 2240 \times 28{\cdot}5 \times 12}{4}$$

$$\text{Moment of resistance} = f\,\frac{12\frac{1}{4}^3}{6}$$

$$f = \frac{19{\cdot}5 \times 2240 \times 28{\cdot}5 \times 12 \times 6}{1838 \times 4} = 12{,}222 \text{ lbs.}$$

The mean of Mr. Whitton's experiments and those of the Commission give the modulus of rupture, $f = 13{,}088$ lbs.

This value may be taken for f in large size scantlings. It will be observed, however, that this value is smaller than those obtained from the experiments made at the Sydney Mint, which have been already referred to.

The modulus of rupture derived from the experiments made at Sandhurst, Victoria, on red gum timber, is as follows (*See Table of Experiments, Appendix* 28, *page* 135):—

It was found that 22,330 lbs. applied in the centre of a beam 11 in. x 7 in., on a span of 14 ft. 8 in. in the clear, produced fracture.

Hence, in a similar manner to that already explained, we obtain modulus of rupture $f = 6{,}960$ lbs.

In another experiment, 28,997 lbs. applied in the centre of a beam 11 in. x $7\frac{1}{2}$ in., on a span of 14 ft. 8 in. in the clear, was necessary to produce fracture;

Here $f = 8{,}436$ lbs.

Modulus of Elasticity.

The moduli of elasticity derived from the following experiments are computed from the deflection formula thus:—

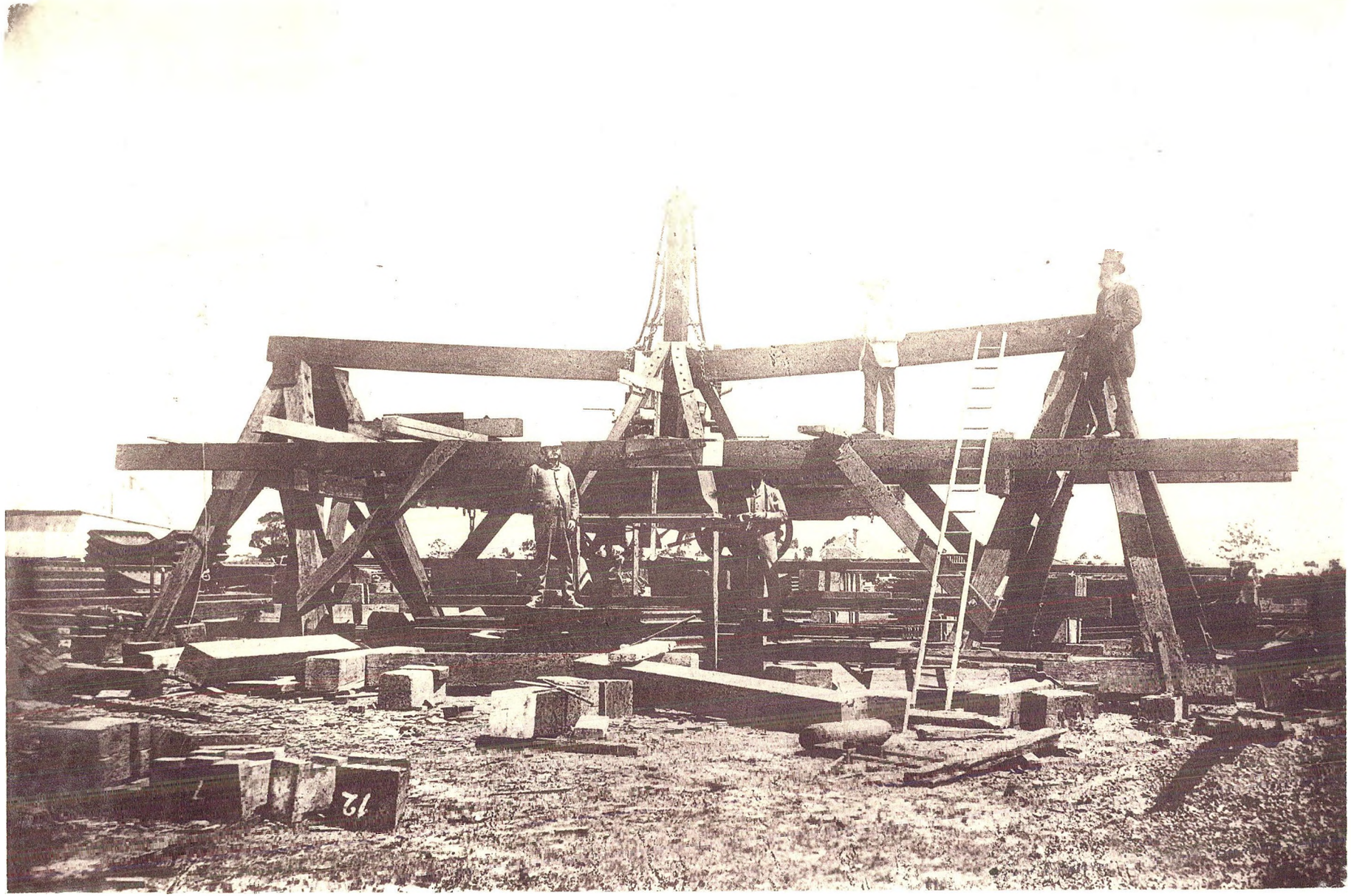
Let V = deflection.
„ W = load producing deflection.
„ E = modulus of elasticity.
„ I = moment of inertia.
„ n = co-efficient (which for a beam supported at both ends and loaded in the centre is $\frac{1}{3}$).
„ C = half span.

$$\text{Hence } V = \frac{nWC^3}{EI}, \text{ therefore } E = \frac{WC^3}{6VI}$$

From the experiments made at the Sydney Mint, on red ironbark and on white ironbark, both from Berrima, also on ironbark from Albury, the average of ten experiments gave a deflection of 1·2 inches, with a weight, applied at centre, of 1,437 lbs. The experiments were made on timber 2 in. square, on a span of 48 inches in the clear.

$$\text{Hence } E = \frac{1437 \times 24^3}{6 \times 1{\cdot}2 \times \frac{4}{3}} = 2{,}069{,}280.$$

The



866— Experiments made at the Government Yard, Clyde, for testing the strength of Timber girders—breaking 29 ft. 6 in. beam.

866— Dubbo Bridge—Great Western Railway.

866— Timber Bridge over the River Hunter, at Singleton—Great Northern Railway.

The experiments made by the Commission on the $12\frac{1}{4}$ in. x $12\frac{1}{4}$ in. beam of ironbark, before referred to, were on a span of 28 ft. 6 in. in the clear. (*See Diagram No.* 44.)

$$\text{Hence } E = \frac{W \times 171^3}{6 \times 1876{\cdot}5\ V} = \frac{5000211\,W}{11259\,V}$$

A load of 4·55 tons produced a deflection of 1·57 inches.

$$\text{Hence } E = \frac{4{\cdot}55 \times 2240 \times 5000211}{1{\cdot}57 \times 11259} = 2{,}883{,}028 \text{ lbs.}$$

A load of 5·3 tons produced a deflection of 2 inches.

$$\text{Hence } E = \frac{5{\cdot}3 \times 2240 \times 5000211}{2 \times 11259} = 2{,}636{,}224 \text{ lbs.}$$

A load of 6·05 tons produced a deflection of 2·29 inches.

$$\text{Hence } E = \frac{6{\cdot}05 \times 2240 \times 5000211}{2{\cdot}29 \times 11259} = 2{,}628{,}187 \text{ lbs.}$$

The mean of the three experiments gives the value of the modulus of elasticity.

$E = 2{,}715{,}813$ lbs.

It will be observed that this value is greater than that obtained from the experiments made at the Sydney Mint.

The experiments made at Sandhurst, on red gum timber, in March, 1885 (*See Table of Experiments*), were on timbers 11 in. x 7 in. and 11 in. x $7\frac{1}{2}$ in., on a span of 14 ft. 8 in. in the clear. Appendix 28, page 135.

$$\text{Here } E = \frac{W \times 88^3}{V \times 6 \times 776{\cdot}4} = \frac{681472\,W}{4658{\cdot}4\,V}$$

A weight of 7,228 lbs. produced ·5 in. deflection on a beam 11 in. x 7 in.

$$\text{Hence } E = \frac{681472 \times 7228}{4658{\cdot}4 \times {\cdot}5} = 2{,}114{,}756 \text{ lbs.}$$

A weight of 11,178 lbs. produced a deflection of 1 inch on a beam 11 in. x $7\frac{1}{2}$ in.

$$\text{Hence } E = \frac{681472 \times 11178}{4991{\cdot}25} = 1{,}526{,}169 \text{ lbs.}$$

Mean of the two experiments gives

$E = 1{,}820{,}462$ lbs.

THE DUBBO BRIDGE.

This bridge has been referred to in the special reports of the Commission and in Mr. Barnes' evidence (pages 11–13). Although of the same type as the bridges at Aberdeen, Bathurst, Wellington, and Wagga Wagga, improvements have been made in the design of the Dubbo bridge.

TIMBER BRIDGE AT SINGLETON.

In comparing the cost of timber and iron bridges of large spans, the bridge over the Hunter River, at Singleton, on the Great Northern Line, was considered. Mr. Whitton, in his evidence (No. 2207, page 69) states:—"At one time a resolution was passed by the Assembly that no iron should be imported for any bridges whatever, it being the general wish that timber should be used wherever possible; and in the case of the Singleton bridge the House refused to vote the money for it until I had laid the plans on the Table to show that I intended to use timber and not iron. That is the reason why it is a timber bridge now. In every instance it has been the wish of every Minister and every Government that timber should be used when practicable, so that all work should, if possible, be done in the Colony."

Mr. Bennett, Commissioner and Engineer for Roads, in a letter to the Commission, also states, "that the life of timber bridges depends upon the kind of timber grown in different localities;" and in reference to iron bridges, "that, except owing to accidental injuries, no repairs have been necessary to bridges of that material" erected in his Department. Appendix No. 13, page 124.

Considering the cost of maintenance and the short life of timber bridges, the Commission do not think it advisable to construct timber bridges of large spans; they also recommend that where large viaducts are necessary, the difference of cost of timber and iron structure should be ascertained, as well as the cost of maintenance, to determine the material to be used.

APPENDICES.

LIST OF APPENDICES.

CALCULATIONS—STRENGTH OF BRIDGES.

NO.		PAGE.
1.	Wollondilly Bridges	105
2.	Solitary Creek Bridges	107
3.	Plate web girders at Peel-street, Tamworth, and at Wellington Bridge	108
4.	Peel River and MacDonald River Bridges	108
5.	Bathurst, Wellington, and Aberdeen Bridges	109
6.	Wagga Wagga Bridge	111
7.	Penrith Bridge	112
8.	Menangle Bridge	117
9.	Stresses in cross-girders	119
10.	Particulars of Iron Bridges reported upon	121
11.	Wagga Wagga Timber Viaducts—Timber openings similar to those at Wagga Wagga	122
12.	Cost of Iron Bridges	122
13.	Cost of repairs to Bridges	123
14.	Appointments of Mr. Mason and Mr. Cowdery	124
15.	Mr. R. D. Stephens and the Wagga Wagga Viaducts (date of his appointment, &c.)	125
16.	Mr. Smithyman's Statement. (Appendix to his evidence)	125
17.	Mr. A. Williams, regarding the erection of the Penrith Bridge	125
18.	Difference between the design and the erection of Bridges	126
19.	Papers relating to the Menangle Bridge—Deflection, testing; extract from *The Engineer*, 18th December, 1883	126
20.	The Wollondilly Bridges—Alteration in design	128
21.	The Wollondilly Bridges—Camber in girders	129
22.	Bridges over Peel and MacDonald Rivers—Section of booms, particulars supplied by Mr. W. B. Wade	129
23.	Samples of rivets from Penrith and Menangle Bridges—Correspondence from the Office of the Engineer-in-Chief	129
24.	Bottom booms of Penrith Bridge—Correspondence from the Office of the Engineer for Existing Lines	130
25.	Penrith Bridge—Inspection inside of main girders by a Member of the Commission	131
26.	Wellington Bridge—Alleged settlement of east pier	132
27.	Mr. R. D. Stephens and the Wagga Wagga Viaducts. (Appendix to his evidence)	133
28.	Experiments in Victoria on elasticity and strength of Timber	135
29.	Locomotive Engines in use on the Southern and Western Lines	136
30.	The testing of the Northern Bridges—Particulars of Locomotive Engines used	137
31.	The heaviest traffic over the Wagga Wagga Viaducts	138
32.	Engines used in the testing of the Menangle Bridge—Diagram and table of deflections	139
33.	Table of Engines used and deflection produced in testing approach span of Penrith Bridge	139
34.	,, ,, ,, Wellington Bridge approach spans	140
35.	,, ,, ,, Peel-street Bridge, Tamworth	140
36.	,, ,, ,, Barber's Creek Viaduct	140
37.	,, ,, ,, Wollondilly, 1st Crossing	140
38.	,, ,, ,, Wollondilly, 2nd Crossing	140
39.	,, ,, ,, Mulwarree Creek Viaduct	141
40.	,, ,, ,, Cross-girders of Bathurst Bridge	141
41.	,, ,, ,, ,, of Aberdeen Bridge	141
42.	,, ,, ,, ,, Solitary Creek Bridges	141
43.	,, ,, ,, ,, Wollondilly Bridges	141

RAILWAY BRIDGES INQUIRY COMMISSION.

APPENDICES.

CALCULATIONS.

STRENGTH OF BRIDGES.

At the request of the Commission the following calculations were prepared by W. H. Warren, Professor of Engineering, University of Sydney, and checked by W. C. Kernot, Professor of Engineering, University of Melbourne :—

No. 1.

WOLLONDILLY BRIDGES.

MAIN GIRDERS, 140 FEET LONG. Plate 7.

First and Second crossing of Wollondilly River.

Clear span, 130′ 0″.

Effective depth, 10′ 0″.

Dead load, 1·2 tons per foot run on bridge.

Live „ 1·4 „ „

w_1 = dead load on each main girder = ·6 tons per foot.

w_2 = live „ „ = ·7 „

c = half span.

x = distance from centre of girder.

Bending moment $= \frac{w_1 + w_2}{2} \left\{ {}^2c - x^2 \right\}$

x	B.M. = ·65 (4225—x^2).	Stress.	Area required.		Area in Bridge.	
			Top.	Bottom.	Top Total Area.	Bottom Net Area, deducting rivet holes.
0	2746·25	274·60	68·65	54·92	64·52	55·70
10	2681·25	268·10	67·03	53·62	60·74	55·70
20	2486·25	248·60	62·15	49·72	60·74	55·70
30	2161·25	216·10	54·03	43·22	58·86	51·07
40	1706·25	170·60	42·65	34·12	47·61	40·40
50	1121·25	28·00	28·03	22·42	36·37	30·95
60	406·25	10·10	10·15	8·12	29·00	19·80
65	0 00	0·00	0·00	0·00	29·00	19·80

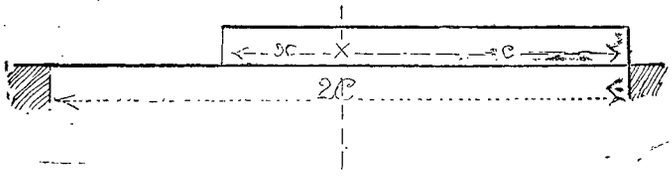
The maximum stress in compression $= \frac{274·62}{60·74} = 4·52$ tons per square inch.

The maximum stress in tension..... $= \frac{274·62}{55·70} = 4·93$ tons „

The girders will carry a live load of 1·1 tons per foot run with a compression stress of 4 tons per square inch.

Shearing Stresses.

130′ 0″ spans.



$$F = w_1 x + \frac{w_2}{4c} (c + x)^2.$$

$$= ·6 x + ·00269 (65 + x)^2.$$

When x = 0, F = 0 + 10·56 = 10·96 tons

„ 9, „ 5·4 + 14·68 = 20·08 „

„ 18, „ 10·8 + 18·53 = 29·33 „

„ 24, „ 14·4 + 21·31 = 35·71 „

„ 30, „ 18·0 + 24·28 = 42·28 „

„ 42, „ 25·2 + 30·93 = 56·13 „

„ 57, „ 34·2 + 40·04 = 74·24 „

„ 60, „ 36·0 + 42·03 = 78·03 „

„ 65, „ 39· + 45·46 = 84·46 „

CALCULATIONS—*continued.*

MAIN GIRDERS 65FT. 7IN. LONG.

Plate 8. *Barber's Creek, First and Second Crossing, Boxer's Creek, and Mulwarree Creek.*

Clear span, 60 feet.

Effective depth, 4·7 feet.

Dead load, ·76 tons per foot run.

Live load, 1·50 ,, ,,

w_1 = dead load on each main girder = ·38 tons per foot.

w_2 = live load ,, ,, = ·75 ,,

$c = \frac{1}{2}$ span.

x = distance from centre of girder.

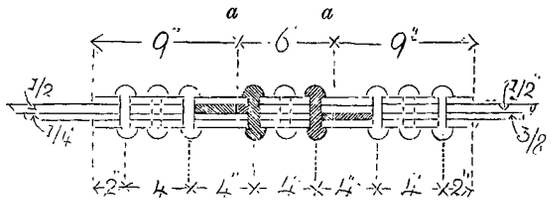
$$\text{Bending moment} = \frac{w_1 + w_2}{2}\left\{c^2 - x^2\right\}$$

x.	B.M. = ·565 (900—x^2).	Stress in tons.	Areas required.		Areas in Bridge.	
			Top.	Bottom.	Top.	Bottom.
0	508·50	108·20	27·05	21·64	23·37	20·04
3	503·40	107·10	26·77	21·40	23·37	20·04
6	488·16	103·90	25·90	20·80	23·37	20·04
9	462·73	96·30	24·10	19·46	21·50	17·97
12	427·14	90·90	22·70	18·18	21·50	17·97
15	381·37	81·14	20·28	16·20	17·75	17·97
18	325·44	69·20	17·30	13·80	17·75	13·75
21	259·33	55·10	13·70	11·00	14·00	13·75
24	183 06	39·00	9·70	7·80	14·00	13·75
30	0·00	0·00	0·00	0·00	14·00	13·75

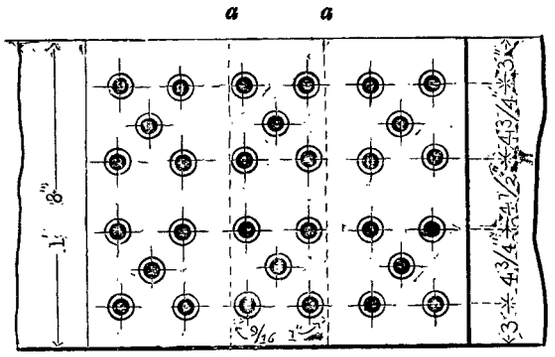
The maximum stress in compression $= \frac{108·70}{23·37} = 4·63$ tons per square inch.

,, tension..... $= \frac{108·20}{20·04} = 5·40$,, ,,

The girders will carry a live load of 1·20 tons per foot run, without exceeding a stress of 4 tons per sq. inch in compression, or 5 in tension.

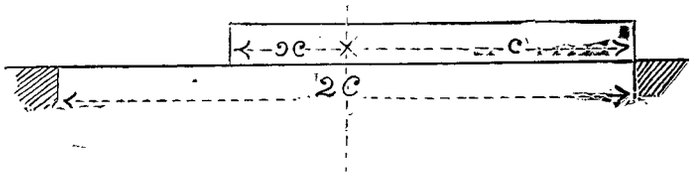


The joints in flanges, 7′ 6″ from centre of girder are spliced 6″ apart; the rivet area is ample, but the plate is pierced too near the end; this is specially seen in the bottom flanges on sketch *a a*.



SHEARING STRESSES.

60′ 0″ spans.



$$F = ·38\,x + ·00625\,(30 + x)^2.$$

When x = 0, F = 0 + 5·62 = 5·62 tons

,, 6, ,, 2·28 + 8·10 = 10·38 ,,

,, 9, ,, 3·42 + 9·51 = 12·93 ,,

,, 12, ,, 4·56 + 11·02 = 15·58 ,,

,, 18, ,, 6·84 + 14·40 = 21·24 ,,

,, 24, ,, 9·12 + 18·22 = 27·34 ,,

,, 30, ,, 11·40 + 22·50 = 33·90 ,,

CALCULATIONS—*continued.*

Considering the resistance of the web-plate against buckling between the stiffeners, and taking a strip of metal 1″ wide, inclined at 45°, as a column of length 1·4 (36—6) = 42 inches, this column will not buckle as an ordinary column fixed at ends of the same length, as the tension (which acts at right angles to the strip) exceeds the compression (since the load is on the bottom flange), and will therefore counteract more or less the tendency to buckle. Ignoring the effect of this tension and calculating by Rankine's formula—

$$u = \frac{f}{1 + \frac{1}{a}\left(\frac{l}{h}\right)} \qquad \frac{16}{1 + \frac{1}{3000}\left(\frac{42}{\frac{1}{2}}\right)^2} = 4{\cdot}8 \text{ tons per square inch.}$$

At end bay the shearing stress per foot horizontally and vertically $= \frac{33{\cdot}9}{4{\cdot}7} = 7{\cdot}21$ tons.

There is in the bridge at end bay $\frac{7{\cdot}21}{6} = 1{\cdot}2$ tons per square inch; hence the factor of safety is 4 against buckling.

At 9′ 0″ from centre, with $\frac{5}{16}$″ web-plates, the stress is $\frac{12{\cdot}93}{4{\cdot}7} = 2{\cdot}75$ tons per foot horizontally and vertically hence—

$$u = \frac{16}{1 + \frac{1}{3000}\left(\frac{42}{\frac{5}{16}}\right)^2} = 2{\cdot}28 \text{ tons per square inch.}$$

There is in bridge $\frac{2{\cdot}75}{3{\cdot}75} = {\cdot}73$ tons; hence the factor of safety against buckling is $\frac{2{\cdot}28}{{\cdot}73} = 3{\cdot}12$.

In the 130′ 0″ span girders there can be no danger of buckling at end bays; at 57′ from centre the shearing stress is 7·6 tons per foot horizontally and vertically on two webs $\frac{5}{16}$″ thick, or 3·8 tons on each web; hence—

$$u = \frac{16}{1 + \frac{1}{3000}\left(\frac{42}{\frac{5}{16}}\right)^2} = 2{\cdot}28 \text{ tons, while there is in bridge } 3{\cdot}75 \text{ square inches,}$$

or a stress of $\frac{3{\cdot}8}{3{\cdot}75} = 1$ ton; hence there is a factor of safety of 2·28 against buckling.

The bearing area of the web-plate is sufficient.

No. 2.

SOLITARY CREEK BRIDGES.

MAIN GIRDERS, 65FT. 7IN. LONG. Plate 8A.

Clear span ·60 feet.

Effective depth, 4·7 feet.

Dead load, ·76 tons per foot run.

Live load, 1·50 ,, ,,

w_1 = dead load on each main girder = ·38 tons per foot.

w_2 = live load ,, ,, = ·75 ,, ,,

$c = \frac{1}{2}$ span.

x = distance from centre of girder.

Bending moment $= \frac{w_1 + w_2}{2}\left\{c^2 - x^2\right\}$

x	B.M. = ·565 (900—x^2).	Stress.	Areas required.		Areas in Bridge.	
			Top.	Bottom.	Top.	Bottom.
0	508·50	108·20	27·05	21·64	25·03	17·47
3	503·40	107·10	26·77	21·40	25·03	17·47
6	488·16	103·90	25·90	20·80	24·03	15·40
9	462·73	96·30	24·10	19·46	24·03	15·40
12	427·14	90·90	22·70	18·18	24·03	15·40
15	381·37	81·14	20·28	16·20	23·13	13·35
18	325·44	69·20	17·30	13·80	23·13	13·35
21	259·33	55·10	13·70	11·00	23·13	13·35
24	183·06	39·00	9·70	7·80	23·13	13·35
30	0·00	0 00	0·00	0·00	23·13	13·35

The maximum stress in compression $= \frac{108{\cdot}2}{25{\cdot}03} = 4{\cdot}32$ tons per square inch.

The maximum stress in tension ..... $= \frac{103{\cdot}9}{15{\cdot}40} = 6{\cdot}75$ tons do

Taking the working stress at 5 tons in tension and 4 tons in compression, the bridge will carry a live load of ·91 tons per foot run.

The stresses in web are the same as in the Wollondilly Bridges, of 60 feet span, and the same remarks apply to these bridges.

NOTE.—The flange joints in these bridges are superior to the Wollondilly Bridges, as they have 8″ laps.

CALCULATIONS—*continued.*

No. 3.

Plate 8B.

PLATE WEB GIRDERS AT PEEL-STREET, TAMWORTH, AND AT WELLINGTON BRIDGE.

Clear span, 61′ 0″.
Effective depth, 6′ 0″.
Dead load, ·32 tons per foot run on each girder.
Live load, ·75 ,, ,,
Bending moment, ·535 (930·25 — x^2).

x =.	B.M. = ·535 (930·25—x^2.)	Stress.	Areas required.		Area in Bridge.	
			Top.	Bottom.	Top.	Bottom.
0	497·68	82·94	20·73	16·58	23·53	18·79
3	492·87	82·14	20·53	16·42	23·53	18·79
6	478·42	79·73	19·93	15·94	23·53	18·79
9	454·35	75·72	18·93	15·14	23·53	17·64
12	420·64	70·10	17·52	14·02	23·53	17·64
15	377·31	62·88	15·72	12·57	23·53	17·64
18	324·34	54·05	13·51	10·81	23·53	17·64
21	261·77	43·62	10·90	8·72	23·53	17·64
24	188 52	31·42	7·85	6·28	15·10	14·22
31	0·00	0·00	0·00	0·00	0·00	0·00

The maximum stress in compression $= \frac{82{\cdot}94}{23{\cdot}53} = 3{\cdot}5$ tons per square inch.

,, tension $= \frac{82{\cdot}94}{18{\cdot}79} = 4{\cdot}42$,, ,,

These girders will carry a live load of 1·78 per foot run without producing stresses exceeding 5 tons in tension and 4 tons in compression. The arrangement of packing strip in bottom flange, is much better than in the case of Wollondilly and Solitary Creek bridges.

The flange covers have sufficient rivet and plate areas.

The web is of uniform thickness throughout, namely, $\frac{3}{8}''$. Hence it is necessary to examine the strength of the end panels only.

Maximum shearing stress found from formulæ :—

$F = {\cdot}32\,x + \frac{{\cdot}75}{122}(30{\cdot}5 + x)^2 = 32{\cdot}63$ tons $= 5{\cdot}43$ per foot horizontally or vertically; hence number of rivets $\frac{7}{8}''$ diameter per foot $= \frac{5{\cdot}43}{6 \times {\cdot}6} =$ less than 2; hence 4″ pitch is ample.

Maximum unit stress in web against buckling found from formulæ :—

$$= \frac{f}{1 + a\frac{l^2}{h^2}} = \frac{16}{1 + \frac{1}{3000}\left(\frac{42}{\frac{3}{8}}\right)^2} = \frac{48000}{15544} = 3{\cdot}08 \text{ tons nearly.}$$

There is in bridge $= \frac{5{\cdot}43}{4{\cdot}5} = 1{\cdot}21$ tons; hence the factor of safety against buckling is 2·7.

No. 4.

Plates 33 and 34.

PEEL RIVER AND MACDONALD RIVER BRIDGES.

MAIN GIRDERS.

Effective span, 156′ 0″.
,, depth, 12′ 0″.
Dead load, 1·2 tons per foot run on bridges.
Live load, 1·4 ,, ,, ,,
w_1 = dead load on each main girder = ·6 tons per foot.
w_2 = live load ,, ,, = ·7 ,, ,,

x =.	M = ·65(6084 — x^2).	Stress.	Area Required.	
			Top.	Bottom.
0	3954·00	329·55	82·39	65·91
5	3938·35	328·20	82·05	65·64
10	3889·60	324·13	81·03	64·82
15	3808·35	317·36	79·34	63·47
20	3694·60	307·88	76·97	61·57
25	3548·35	295·69	73·93	59·14
30	3369·60	280·80	70·20	56·16
35	3158·35	263·19	65·79	52·64
40	2914·60	242·89	60·72	48·57
45	2638·35	219·86	54·96	43·97
50	2329·60	194·13	48·53	38·82
55	1988·35	165·69	41·42	33·14
60	1614·60	134·53	33·64	26·91
65	1208·35	100·69	25·17	20·14
70	769·60	64·13	16·03	12·82
75	338·35	28·19	7·05	5·62
78	0·00	0·00	0·00	0·00

The comparison of the above with the diagram of areas gives—
Maximum stress in compression 3·72 tons per square inch.
Maximum stress in tension 4·37 tons per square inch.
These bridges would therefore be safe for a live load of 1·6 tons per foot run.

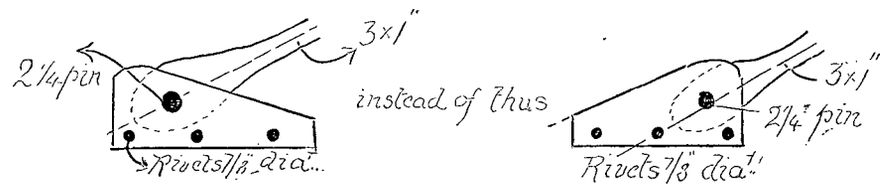
CALCULATIONS—*continued.*

The stresses in lattice bars in compression vary from 2 tons per square inch at abutments decreasing to .5 ton per square inch at mid span, while the stresses in tension vary from 3·4 tons per square inch at abutments, decreasing to about 1 ton per square inch at mid span.

In view of Wöhler's experiments this decrease in the unit stress towards the centre of bridge is judicious, but the unit stress might have been increased with a corresponding saving of material. The web, however, is consistent with the booms.

WIND PRESSURE.

The arrangement of wind bracing would have been better if the bars had not been uniform in size throughout; the attachment of the end diagonals is made thus—



It will not be necessary to comment on this attachment as the error has been corrected in later bridges (for example, the George's River bridge).

The resistance offered by the attachment of cross girders, by the deck and by the overhead bracing arches, will add considerably to the resistance against wind pressure.

No. 5.

BATHURST, WELLINGTON, AND ABERDEEN BRIDGES.

MAIN GIRDERS. Plates 15, 16, and 17.

Three spans each, 159′ 0″ centres.

Effective depth, 12′ 0″ between centres of gravity of effective booms.

Dead load, = 1·2 tons per foot run on bridges.

Live load, = 1·4 „ „ „

Dead load, = ·6 tons per lineal foot on each main girder.

Live load, = ·7 „ „ „ „

There are six cases to consider:— Plates 18, 19, 20.

CASE I.—Three spans loaded with 1·3 tons per foot run.

To find bending moments over piers the theorem of three moments is assumed:—

$$8\,m_n\,(l_n + l_{n+1}) + 4\,m_{n-1}\,l_{n+1} + 4\,m_{n+1}\,l_{n+1} = w_n\,l_n^3 + w_{n+1}\,l_{n+1}^3$$

here $l_1 = l_2 = l_3$.

let $n = 1$ then $8\,m_1\,(2\,l) + 4\,m_0\,(l) + 4\,m_2\,(l) = 2\,w\,l^3$.

$\therefore 8\,m_1 + 2\,m_0 + 2\,m_2 = w\,l^2$ .....(1)

let $n = 2$ then $8\,m_2\,(2\,l) + 4\,m_1\,(l) + 4\,m_3\,(l) = 2\,w\,l^3$

$\therefore 8\,m_2 + 2\,m_1 + 2\,m_3 = w\,l^2$ .....(2)

and $m_0 = m_3 = 0$ .....(3 and 4)

from (1) and (2) $\left\{\begin{matrix} 8\,m_1 + 2\,m_2 = w\,l^2 \\ 8\,m_2 + 2\,m_1 = w\,l^2 \end{matrix}\right\}$ hence $m_1 = m_2$ and $10\,m_1 = w\,l^2 \therefore m_1 = m_2 = \frac{w\,l^2}{10}$

substituting values for w and l then $m_1 = m_2 = \frac{1{\cdot}3 \times 159^2}{10} = \frac{1{\cdot}3 \times 25281}{10} = 3286{\cdot}5$ foot tons.

Hence the equation to the 1st and 3rd spans is—$y = {\cdot}65\,(159\,x - x_2) - 20{\cdot}67\,x$, where x = distance from 1st or 4th pier; therefore the point of contra flexure (making $y = 0$) is 127·2 feet from 1st or 4th pier.

The equation to middle span is—$y = -3286{\cdot}5 + {\cdot}65\,(159\,x - x^2)$, from which equation $x = 115$ and 44 (making $y = 0$); hence points of contra flexure occur 44 feet from pier.

Shearing stresses.

First and third spans.—The shearing stresses over No. 1 or No. 4 pier $= \frac{127{\cdot}2 \times 1{\cdot}3}{2} = 82{\cdot}68$ tons;

over No. 3 and No. 2 pier $= 95{\cdot}4 \times 1{\cdot}3 = 124{\cdot}02$ tons.

Middle span.

The shearing stresses over No. 2 and No. 3 piers $= \frac{159 \times 1{\cdot}3}{2} = 103{\cdot}35$ tons.

The bending moments and shearing stresses are set out on diagram of Case I.

CASE II.—First and second spans loaded with 1·3 tons per foot run; third span loaded with 0·6 tons per foot run.

Here $\left.\begin{matrix} 8m_1 + 2m_2 = w_1\,l^2 \\ 16m_2 + 4m_1 = w_2\,l^2 + w_3\,l^2 \end{matrix}\right\}$ where $w^1 = w^2$

$\therefore m_1 = (7w - w_3)\,\frac{l^2}{60} = (9{\cdot}1 + {\cdot}6)\,\frac{25281}{60} = 3581{\cdot}3$ foot tons.

$m_2 = 2106{\cdot}7$ „

Equation to 1st span is—$y = {\cdot}65\,(159x - x^2) - 22{\cdot}52x$; therefore point of contra flexure ($y = 0$) is $x = 124{\cdot}35$.

Equation to 2nd span is—$y = 0{\cdot}65\,(159x - x^2) - 2106{\cdot}7 - 9{\cdot}27x$; therefore the points of contra flexure ($y = 0$) are ($x = 130{\cdot}65$ and 42·65) 42·65 feet from 2nd pier and 28·35 feet from 3rd pier.

Equation to 3rd span is—$y = 0{\cdot}3\,(159x - x^2) - 13{\cdot}26$; therefore point of contra flexure ($y = 0$) is 44·2 feet from No. 3 pier.

CALCULATIONS—*continued.*

Plates 18, 19, 20.

Shearing stresses.

1st span—over No. 1 pier $= \frac{124{\cdot}35 \times 1{\cdot}3}{2} = 80{\cdot}82$ tons.

over No. 2 pier $= \frac{124{\cdot}35 \times 1{\cdot}3}{2} + 34{\cdot}65 \times 1{\cdot}3 = 125{\cdot}87$ tons.

2nd span—over No. 2 pier $= 86{\cdot}65 \times 1{\cdot}3 = 112{\cdot}64$ tons.

over No. 3 pier $= 72{\cdot}35 \times 1{\cdot}3 = 94{\cdot}05$ tons.

3rd span—over No. 3 pier $= 34{\cdot}4 + 44{\cdot}2 \times 0{\cdot}6 = 60{\cdot}96$ tons.

over No. 4 pier $= \frac{114{\cdot}8 \times {\cdot}6}{2} = 34{\cdot}4$ tons.

The bending moments and shearing stresses are shown on diagram of Case II.

CASE III.—First and third spans loaded with ·6 tons per foot run. Middle span loaded with 1·3 tons per foot run :—

Here $\left.\begin{array}{l} 16\,m_1 + 4\,m_2 = w_1\,l^2 + w_2\,l^2 \\ 16\,m_2 + 4\,m_1 = w_2\,l^2 + w_3\,l^2 \end{array}\right\} \therefore m_1 = m_2 = 2401{\cdot}7.$

Equation to 1st and 3rd spans is—$y = {\cdot}3\,(159\,x - x^2) - 15{\cdot}1\,x$; therefore (when $y = 0$) point of contra flexure occurs at $x = 108{\cdot}66$.

Equation to middle span is—$y = {\cdot}65\,(159\,x - x^2) - 2401{\cdot}7$; therefore (when $y = 0$) $x = 130{\cdot}73$ and $28{\cdot}27$ and the points of contra flexure occur 28·27 feet from piers.

Shearing stresses.

1st and 3rd spans—over No. 1 and No. 4 pier $\frac{108{\cdot}66 \times {\cdot}6}{2} = 32{\cdot}6$ tons

over No. 2 and No. 3 pier $= 32{\cdot}6 + 50{\cdot}34 \times {\cdot}6 = 62{\cdot}8$ tons.

Middle span— over No. 2 and No. 3 piers $= \frac{159 \times 1{\cdot}3}{2} = 103{\cdot}35$ tons.

See diagram of Case III.

CASE IV.—First span loaded with 1·3 tons per foot run. Second and third spans loaded with ·6 tons per foot run :—

Here $\left.\begin{array}{l} 16\,m_1 + 4\,m_2 = w_1\,l^2 + w_2\,l^2 \\ 8\,m_2 + 2\,m_1 = w_2\,l^2 \end{array}\right\}$ from which we find $m_1 = \frac{l^2}{30}\,(2\,w_1 + w_2)$.

$m_1 = 2696{\cdot}64$ foot tons.

$m_2 = 1222$,, ,,

Equation to first span is—$y = {\cdot}65\,(159\,x - x^2) - 16{\cdot}96\,x$; therefore when $y = 0$ $x = 132{\cdot}9$; hence point of contra flexure is 26·1 feet from No. 2 pier.

Equation to 2nd span is—$y = {\cdot}3\,(159\,x - x^2) - 1222 - 9{\cdot}27\,x$; therefore when $y = 0$ $x = 69{\cdot}45$ and $58{\cdot}65$; hence points of contra flexure occur 89·55 feet from No. 2 pier and 58·65 feet from No. 3 pier; this is shown on the diagram 95 feet from No. 2 pier, and 64 feet from No 3 pier.

Shearing stresses.

1st span—over No. 1 pier $= \frac{132{\cdot}9 \times 1{\cdot}3}{2} = 86{\cdot}38$ tons.

,, No. 2 ,, $= 86{\cdot}38 + 26{\cdot}1 \times 1{\cdot}3 = 120{\cdot}31$ tons.

2nd span—over No. 2 pier $= 94{\cdot}95 \times {\cdot}6 = 57$ tons.

,, No. 3 ,, $= 64 \times {\cdot}6 = 38{\cdot}40$ tons.

3rd span—over No. 3 ,, $= 40{\cdot}02 + 25{\cdot}6 \times {\cdot}6 = 55{\cdot}38$ tons.

,, No. 4 pier $= \frac{133{\cdot}4 \times {\cdot}6}{2} = 40{\cdot}02$ tons.

CASE V.—First and third spans loaded with 1·3 tons per foot run; middle span loaded with ·6 tons per foot run :—

Here m_1 and m_2 are the same as for Case III, viz., 2401·7.

Equation to 1st and 3rd spans is $y = {\cdot}65\,(159\,x - x^2) - 15{\cdot}105x$, from which (when $y = 0$) $x = 135{\cdot}76$.

Equation to middle span is $y = {\cdot}3\,(159\,x - x^2) - 2{,}401{\cdot}7$; here the value of y is always negative and is never $= 0$; hence there is no point of contra flexure.

Shearing stresses.

1st and 3rd spans— over No. 1 and No. 4 piers $= \frac{135{\cdot}76 \times 1{\cdot}3}{2} = 88{\cdot}25$ tons.

Over No. 2 and No. 3 piers $= 88{\cdot}25 + 23{\cdot}23 \times 1{\cdot}3 = 118{\cdot}45$ tons.

Middle span—over No. 2 and No. 3 piers $= 159 \times {\cdot}3 = 47{\cdot}7$ tons.

CASE VI.—A load of 1·3 tons extending from middle of 1st span to middle of 2nd span, or from middle of 2nd span to middle of 3rd span, the remaining portions of the spans being loaded with ·6 tons per foot run.

Area of curve $B\,Y\,A$ * $= \int_0^{79{\cdot}5} (41{\cdot}74\,x - {\cdot}35\,x^2)\,dx + \frac{79{\cdot}5 \times 1106}{2} + \frac{2 \times 1896 \times 159}{3}$

$= \frac{{\cdot}35}{3}\,(79{\cdot}5)^3 + \frac{41{\cdot}74}{2}\,(79{\cdot}5)^2 + 43{,}963{\cdot}5 + 200{,}976.$

$= 73{,}283{\cdot}3 + 43{,}963{\cdot}5 + 200{,}976.$

$= 318{,}222{\cdot}8.$

Moment of curve $B\,Y\,A$ about B is $= \int_0^{79{\cdot}5} (41{\cdot}74\,x^2 - {\cdot}35\,x^3)\,dx + 43{,}963{\cdot}5 \times 106 + 200{,}976 \times 79{\cdot}5.$

$= \frac{41{\cdot}74}{3} \times 79{\cdot}5^3 - \frac{{\cdot}35}{4} \times 79{\cdot}54 + 43{,}963{\cdot}5 \times 106\ \ 200{,}979 + 79{\cdot}5.$

$= 3{,}495{,}655 + 4{,}660{,}131 + 15{,}977{,}592 = 24{,}133{,}378.$

* See diagram, Case VI.

CALCULATIONS—*continued.* Plates 18, 19, 20.

Hence distance of centre of gravity from $B = 75{\cdot}83$.

" " $A = 83{\cdot}17$.

Therefore moment of curve $B\ Y\ A$ about $A = 318{,}222{\cdot}8 \times 83{\cdot}17 = 26{,}474{,}906{\cdot}4$.

Therefore $I\,K = P\,L = \dfrac{26{,}474{,}906{\cdot}4 \times 2}{25{,}281} = 2{,}094{\cdot}4$.

$$G\,H = Q\,R = \frac{24{,}133{,}378 \times 2}{25{,}281} = 1{,}909{\cdot}2.$$

The bending moments over piers and the points of contra flexure are determined as shown in the diagram of Case VI.

Bending moment over No. 2 pier = 1705 foot tons.
Do do No. 3 " = 2720 " "

If the load of 1·3 tons per foot run, had extended from centre of first span to the centre of second span No. 3 would take the place of No. 2.

Shearing stresses.

1st span—over	No. 1 pier	= 37·2	tons.
	No. 2 "	= 58·2	"
2nd span—over	No. 2 "	= 54·4	"
	No. 3 "	= 96·38	"
3rd span—over	No. 3 "	= 106·98	"
	No. 4 "	= 44·08	"

MAXIMUM STRESSES. Plate 17.

The maxima bending moments have been derived as follows:—In first and third span, from cases II and V; in middle span, from cases II, III, IV, and V. (See diagram of maxima bending moments.) The diagram of actual areas in bridges with the curve of areas required (as determined from diagram of maxima bending moments, taking 5 tons in tension and 4 tons in compression), show that the booms are of ample sectional area, and by comparing the excess of area throughout the bridge, the least excess occurs over No. 2 and No. 3 piers, where there is sufficient total effective area for a live load of 1·6 tons per foot run.

Shearing stresses.

1st and 3rd span—over	No. 1 and No. 4 pier	= 88·2	tons.
over	No. 2 and No. 3 "	= 125·9	"
Middle span—over	No. 2 and No. 3 "	= 112·7	"

Note:—The maximum shear over piers in Peel and M'Donald River Bridges = 103·35 tons. Plates 33, 34.

On comparing these results with the table of stresses in lattice-bars in Peel and M'Donald River Bridges, and comparing also the effective sectional areas of channel iron and bars adopted for the struts and tension bars in Peel and M'Donald River Bridges, with those of Bathurst, Wellington, and Aberdeen Bridges, it will be seen that the unit stress adopted is about the same in each; hence the web is consistent with the booms, and therefore these bridges are abundantly strong, vertically.

WIND PRESSURE.

The arrangement of the wind bracing is similar to that of Peel and M'Donald River Bridges.

No. 6.

WAGGA WAGGA BRIDGE. Plate 9.

MAIN GIRDERS.

Four spans of 159 feet centres.
Effective depth, 12 feet.
Dead load on bridge, 1·2 tons per foot run.
Live " " 1·4 " "
Dead load on each main girder, ·6 tons per ton run.
Live " " ·7 " "

There are eight cases of complete loading, of which three will be considered:—

CASE I.—The first two spans loaded with 1·3 tons per foot run; the third and fourth spans loaded with ·6 tons per foot run.

$$\left.\begin{aligned} 8\,m_1 + 2\,m_2 &= 1{\cdot}3\,l^2 \\ 16\,m_2 + 4\,m_1 + 4\,m_3 &= 1{\cdot}9\,l^2 \\ 8\,m_3 + 2\,m_2 &= {\cdot}6\,l^2 \end{aligned}\right\}\text{from which is obtained}$$

$$m^1 = \frac{16{\cdot}3}{8 \times 14}\,l^2 = \frac{16{\cdot}3 \times 25281}{112} = 3679 \text{ foot tons.}$$

$$m_2 = \frac{3{\cdot}8}{56}\,l^2 = \frac{3{\cdot}8 \times 25281}{56} = 1715 \text{ foot tons.}$$

$$m_3 = \frac{13}{16 + 14}\,l^2 = \frac{13 \times 25281}{224} = 1467 \text{ foot tons.}$$

The equation to 1st span is—$y = {\cdot}65\ (159\,x - x^2) - 23{\cdot}13\,x$ from which when $y = 0$; $x = 123{\cdot}4$.

The equation to 2nd span is—(origin at No. 3 pier) $y = {\cdot}65\ (159\,x - x^2) - (1715 + 12{\cdot}34\,x)$ from which when $y = 0$ $x = 22{\cdot}4$ and $117{\cdot}6$.

Shearing stresses.

1st span—over No. 1 pier $= \dfrac{123{\cdot}4 \times 1{\cdot}3}{2} = 80{\cdot}21$ tons.

Over No. 2 pier $= 80{\cdot}21 + 35{\cdot}6 \times 1{\cdot}3 = 126{\cdot}49$ tons.

2nd span—over No. 2 pier $= \dfrac{95{\cdot}2 \times 1{\cdot}3}{2} + 41{\cdot}4 \times 1{\cdot}3 = 115{\cdot}70$ tons.

CALCULATIONS—*continued.*

CASE II.—First span loaded with 1·3 tons per foot run; the remaining spans loaded with ·6 tons per foot run.

$$\text{Here } \left.\begin{array}{l} 16\,m_1 + 4\,m_2 = 1{\cdot}9\,l^2 \\ 16\,m_2 + 4\,m_1 + 4\,m_3 = 1.2\,l^2 \\ 16\,m_3 + 4\,m_2 = 1{\cdot}2\,l^2 \end{array}\right\} \text{from which}$$

$$m_1 = \frac{24{\cdot}9}{14 \times 16}\,l^2 = \frac{24{\cdot}9 \times 25281}{224} = 2810 \text{ foot tons.}$$

$$m_2 = \frac{1{\cdot}7}{56}\,l^2 = \frac{1{\cdot}7 \times 25281}{56} = 767 \text{ foot tons.}$$

$$m_3 = \frac{15{\cdot}1}{14 + 16}\,l^2 = \frac{15{\cdot}1 \times 25281}{224} = 1704 \text{ foot tons.}$$

The equation to 1st span is—$y = {\cdot}65\,(159\,x - x^2) - 17{\cdot}67\,x$ from which which when $y = 0$; $x = 131{\cdot}8$ feet.

Shearing stresses.

Over No. 1 pier $\frac{131{\cdot}8 \times 1{\cdot}3}{2} = 85{\cdot}67$ tons.

Over No. 2 pier $= 85{\cdot}67 + 27{\cdot}2 \times 1{\cdot}3 = 121{\cdot}03$ tons.

CASE III.—Second span loaded with 1·3 tons per foot run; the remaining spans loaded with ·6 tons per foot run.

$$\text{Here } \left.\begin{array}{l} 16\,m_1 + 4\,m_2 = 1{\cdot}9\,l^2 \\ 16\,m_2 + 4\,m_1 + 4\,m_3 = 1{\cdot}9\,l^2 \\ 16\,m_3 + 4\,m_2 = 1{\cdot}2\,l^2 \end{array}\right\} \text{from which}$$

$$m_1 = \frac{22{\cdot}1}{14 + 16}\,l^2 = \frac{22{\cdot}1 \times 25281}{224} = 2494 \text{ foot tons.}$$

$$m_2 = \frac{4{\cdot}5}{56}\,l^2 = \frac{4{\cdot}5 \times 25281}{56} = 2031 \text{ foot tons.}$$

$$m_3 = \frac{12{\cdot}3}{14 \times 16} = \frac{12{\cdot}3 \times 25281}{224} = 1388 \text{ foot tons.}$$

The equation to second span is—$y = {\cdot}65\,(159x - x^2) - (2494 - 2{\cdot}91\,x)$ from which when $y = 0$; $x = 136{\cdot}43$ and $27{\cdot}03$.

Shearing stresses.

1st span—over No. 2 pier $\frac{109{\cdot}4 \times 1{\cdot}3}{2} + 22{\cdot}57 \times 1{\cdot}3 = 100{\cdot}44$ tons.

2nd span—over No. 3 pier $\frac{109{\cdot}4 \times 1{\cdot}3}{2} + 27{\cdot}03 \times 1{\cdot}3 = 106{\cdot}24$ tons.

The bending moments and shearing stresses for the cases considered are set out in the diagram of Wagga Wagga Bridge, from which it will be seen that the sectional areas in booms are everywhere sufficient to resist the maxima stresses produced by the cases of loading considered. The shearing stresses do not differ very much from these produced on Bathurst, Wellington, and Aberdeen Bridges. (*See* calculations of these bridges, also table of stresses for Peel and Macdonald River Bridges.) It will not therefore be necessary to calculate the stresses in lattice-bars, as the unit stresses adopted are about the same as those adopted for the Bathurst, Wellington, and Aberdeen Bridges. Hence this bridge is abundantly strong vertically.

WIND PRESSURE.

The resistance of the structure against wind is similar to that of Bathurst, Wellington, and Aberdeen Bridges. (*See* remarks on wind bracing of these bridges.)

No. 7.

PENRITH BRIDGE.

Plate 10.

MAIN GIRDERS.

Three spans, each 198·0 centre to centre.
Dead load on bridge, 2·5 tons per foot run.
Live ,, ,, 2·5 ,, ,,
Dead load on each main girder, 1·25 tons per foot run.
Live ,, ,, 1·25 ,, ,,

Let m = bending moment at any point on girder.
Let A = area of each pile of plates in top or bottom boom in square inches.
Let f = intensity of stress on the extreme top or bottom pile in tons per square inch.

$$\text{Then } m = fA \times 13 + \frac{10}{13}\,fA \times 10$$

$$= 20{\cdot}7\,fA \text{ nearly}$$

$$f = \frac{M}{20{\cdot}7\,A} \text{ or } 2\,fA = \frac{M}{10{\cdot}35}$$

$$\text{therefore } f \times \text{total area of boom} = \frac{M}{10{\cdot}35} \quad \left(\text{since the area of each pile may be taken as } \frac{A}{2}\right)$$

Three cases of complete loading will be considered.

CASE I.—First span loaded with 2·5 tons per foot run; second and third spans with 1·25 tons per foot run.

$$\text{Here } \left.\begin{array}{l} 16\,m_1 + 4\,m_2 = 2{\cdot}5\,l^2 + 1{\cdot}25\,l^2 \\ 8\,m_2 + 2\,m_1 = 1{\cdot}25\,l^2 \end{array}\right\} \text{Hence } m_1 = \frac{l^2}{30}\,(5 + 1{\cdot}25).$$

$$m_1 = \frac{39204}{30} \times 6{\cdot}25 = 8167{\cdot}5 \text{ foot tons.}$$

Hence equation to first span is—$y = 1{\cdot}25\,(198\,x - x^2) - 41{\cdot}25\,x$ from which when $y = 0$; $x = 165$ feet.

CALCULATIONS—*continued.*

TABLE of stresses calculated from Case I.

x	Bending Moments. $y = 1{\cdot}25\,(198\,x - x^2) - 41{\cdot}25\,x$.	Stress.	Area required.		Area in Bridge.*	
			Top.	Bottom.	Top.	Bottom.
10	1937	187	47	37	100	88
20	3625	350	87	70	102	90
30	5062	489	122	98	119	101
40	6250	503	126	100	136	112
50	7187	694	173	139	152	127
60	7875	761	190	152	170	133
70	8312	803	201	161	181	137
80	8500	821	205	164	181	141
90	8437	815	204	163	181	141
100	8125	785	196	157	181	139
110	7562	730	182	146	181	134
120	6750	652	163	130	159	127
130	5687	549	137	110	143	113
140	4375	423	106	85	116	97
150	2812	272	68	54	114	90
160	1000	97	24	19	111	113
165	0	0	0	0	123	113
170	— 1062	— 103	21	26	123	145
180	— 3375	— 326	65	81	156	167
190	— 5937	— 574	115	143	193	200
198	— 8167	— 789	158	197	214	221

* These figures represent the gross area where the stress is compressive, and the net area deducting rivet holes when the stress is tensile.

CASE II.—Middle span loaded with 2·5 tons per foot run; side spans loaded with 1·25 tons per foot run.

$$\left.\begin{aligned} \text{Here } 16\,m_1 + 4\,m_2 &= 1{\cdot}25\,l^2 + 2{\cdot}5\,l^2 \\ 16\,m_2 + 4\,m_1 &= 2{\cdot}5\,l^2 + 1{\cdot}25\,l^2 \end{aligned}\right\} \text{from which}$$

$$20\,m_1 = l^2\,(1{\cdot}25 + 2{\cdot}5)$$

$$m_1 = \frac{3{\cdot}75 \times 39204}{20} = 7351 \text{ feet tons.}$$

Hence the equation to middle span is—

$y = 1{\cdot}25\,(198\,x - x^2) - 7351$. (Origin at No. 3 Pier.)

from which when $y = 0$; $x = 161{\cdot}6$ and $36{\cdot}4$.

TABLE of stresses calculated from Case II.

x	Bending Moments. $y = 1{\cdot}25\,(198\,x - x^2) - 7351$.	Stress.	Area required.		Area in Bridge.	
			Top.	Bottom.	Top.	Bottom.
0	- 7351	- 710	177	142	214	221
10	- 5001	- 483	121	96	195	200
20	- 2901	- 280	70	56	167	162
30	- 1051	- 101	25	20	125	131
36·4	0	0	0	0	125	131
40	451	43	11	9	111	113
50	1899	183	46	37	99	93
60	2999	290	72	58	99	85
70	3849	372	93	74	102	85
80	4449	430	107	86	113	87
90	4799	463	116	93	117	89
100	4899	473	118	95	117	94
110	4749	459	115	92	117	94
120	4349	420	105	84	113	89
130	3699	357	89	71	102	87
140	2799	270	67	54	99	85
150	1649	159	40	32	99	93
160	249	24	6	5	111	113
161·6	0	0	0	0	125	131
170	- 1401	- 135	27	39	125	131
180	- 3301	- 319	64	80	167	162
190	- 5451	- 527	105	132	195	200
198	- 7351	- 710	142	177	214	221

CASE III.—Two consecutive spans loaded with 2·5 tons per foot run; third span loaded with 1·25 tons per foot run.

$$\left.\begin{aligned} \text{Here } 8\,m_1 + 2\,m_2 &= 2{\cdot}5\,l^2 \\ 16\,m_2 + 4\,m_1 &= 2{\cdot}5\,l^2 + 1{\cdot}25\,l^2 \end{aligned}\right\} \text{from which}$$

$$m_1 = (7 \times 2{\cdot}5 - 1{\cdot}25)\,\frac{l^2}{60} = \frac{16{\cdot}25 \times 39204}{60} = 10618 \text{ foot tons.}$$

$$\text{and } 2\,m_2 = (2{\cdot}5 - 2{\cdot}1666)\,\frac{l^2}{2} = 6534 \text{ foot tons.}$$

Equation to first span is $y = 1{\cdot}25\,(198x - x^2) - 53{\cdot}62x$ from which when $y = 0$; $x = 155{\cdot}1$.

Equation to middle span is $y = 1{\cdot}25\,(198x - x^2) - (6534 + 20{\cdot}62x)$. (Origin at No. 3 pier), from which when $y = 0$; $x = 35{\cdot}9$ and $145{\cdot}6$.

CALCULATIONS—*continued.*

TABLE of stresses calculated from Case III.

Cantilever No. 1 Span.

x	Bending Moment. $y = 1{\cdot}25\,(198x - x^2) - 53{\cdot}62x.$	Stress.	Area required.		Area in Bridge.	
			Top.	Bottom.	Top.	Bottom.
155·1	0	0	0	0	111	113
160·0	− 979	− 95	19	24	123	113
170·0	− 3165	− 306	61	76	123	145
180·0	− 5602	− 541	108	135	156	167
190·0	− 8288	− 801	160	200	193	200
198·0	− 10618	− 1026	205	256	214	221

Cantilever No. 2 Span.

x	$y = 1{\cdot}25\,(198x - x^2) - (6534 + 20{\cdot}62x).$	Stress.	Area required.		Area in Bridge.	
			Top.	Bottom.	Top.	Bottom.
145·6	0	0	0	0	99	85
150·0	− 627	61	12	15	99	93
160·0	− 2233	216	43	54	111	113
170·0	− 4089	395	79	98	125	131
180·0	− 6195	598	119	149	167	162
190·0	− 8552	826	165	206	195	200
198·0	− 10618	1026	205	256	214	221

The inspection of the columns of *areas required* and *areas in bridges* will show that if the unit stresses of 5 tons in tension and 4 tons in compression be taken in the calculations there should be in Case I, in the middle span, 24 square inches in compression and 23 square inches in tension, more than provided in the bridge, and in Case III 35 square inches more in tension over piers. Taking the last case, which is the worst, the bridge has sufficient area in booms to carry $\frac{5 \times 221}{256} = 4{\cdot}3$ tons total load per foot run, or a live load on each line of way of ·90 tons per foot run, which, however, is in excess of the heaviest traffic on a double line.

The excess of sectional area at points of contra flexure (which is unavoidable from the design), is not really so great as that shown in tables (which have been formed by adopting a uniform stress throughout), as the booms are here subjected to alternating stresses due to the alteration in the position of the point of contra flexure.

HORIZONTAL STRESS ON LINE OF RIVETS $\frac{3}{4}$ INCHES DIAMETER, AND 4″ PITCH WHICH UNITE THE WEB WITH THE BOOMS.

The bending moment at any point:—$m = fA \times 13 + \frac{10}{13} fA \times 10.$

Horizontal stress $= fA + \frac{10}{13} fA = \frac{23}{13} fA$; but $fA = \frac{m}{20{\cdot}7}$ therefore horizontal stress $= \frac{23\,m}{13 \times 20{\cdot}7} = {\cdot}085\,m.$

Let m_1 be the bending moment at a point 1 foot distant from the first-mentioned point, in a similar manner the horizontal stress $= {\cdot}085\,m_1$.

Hence the shearing stress to be taken off by line of rivets uniting webs with booms per foot run will be $= {\cdot}085\,(m - m_1)$.

FROM CASE I.

Is obtained $m - m_1 = 289$ and $\cdot085 \times 289 = 24{\cdot}6$.

Hence the intensity of stress in tons per square inch on rivets $= \frac{24{\cdot}6}{2{\cdot}64} = 9{\cdot}3$ tons.

FROM CASE III.

Is obtained $m - m = 301$ and $\cdot085 \times 301 = 25{\cdot}6$.

Hence the intensity of stress on rivets $= \frac{25{\cdot}6}{2{\cdot}64} = 9{\cdot}7$ tons per square inch.

See Table of Stresses in Web for a double line of way.

CALCULATIONS—*continued.*

FROM DEAD LOAD OF THE STRUCTURE ITSELF.

Here the maximum bending moment occurs over piers, and is $\frac{wl^2}{10} = \frac{1{\cdot}25 \times 39204}{10} = 4900$ foot tons.

Equation to first span is—$y = {\cdot}625\ (198x - x^2) - 24{\cdot}74x$ from which when $y = o$; $x = 158{\cdot}4$ feet.

$$\left.\begin{array}{l}\text{if } x = 197, \text{ then } y = 4750 \\ x = 198, \text{ then } y = 4900\end{array}\right\} \text{diff.} = 150.$$

Hence stress on rivets $= {\cdot}085 \times 150 = 12{\cdot}75$ tons per foot run.

$$\text{Unit stress} = \frac{12{\cdot}75}{2{\cdot}64} = 4{\cdot}8 \text{ tons.}$$

STRESSES PRODUCED ON SINGLE LINE OF WAY.

From $1\frac{1}{4}$ ton per foot run on one span only.

Here the main girders next rails will carry $1{\cdot}25 \times \frac{18{\cdot}75}{25{\cdot}75} = {\cdot}9$ tons per foot run live load; or a total load of 2·15 tons per foot run.

$$\text{Hence } \left.\begin{array}{l}16m_1 + 4m_2 = 3{\cdot}4\,l^2 \\ 16m_2 + 4m_1 = 2{\cdot}5\,l^2\end{array}\right\} \text{from which is obtained } m_1 = \frac{39204 \times 11{\cdot}1}{60} = 7252{\cdot}74 \text{ foot tons.}$$

Hence the equation to curve of 1st span is—$y = 1{\cdot}075\ (198x - x^2) - 36{\cdot}63x$ from which when $y = o$; $x = 164$ feet.

$$\left.\begin{array}{l}\text{if } x = 197;\ y = 7004{\cdot}4 \\ x = 198;\ y = 7252{\cdot}74\end{array}\right\} \text{difference} = 248{\cdot}4.$$

Hence stress on the rivets $= {\cdot}085 \times 248{\cdot}4 = 21{\cdot}11$ tons per foot run.

$$\text{Unit stress} = \frac{21{\cdot}11}{2{\cdot}64} = 8 \text{ tons per square inch.}$$

MIDDLE span loaded with 2·15 tons per foot run; and side spans with 1·25 tons per foot run.

$$\text{Here } \left.\begin{array}{l}16\,m_1 + 4\,m_2 = 3{\cdot}4\,l^2 \\ 16\,m_2 + 4\,m_1 = 3{\cdot}4\,l^2\end{array}\right\} \text{from which}$$

$$\text{is obtained } m^1 = \frac{3{\cdot}4\,l^2}{20} = \frac{3{\cdot}4 \times 39204}{20} = 6664{\cdot}68 \text{ foot tons.}$$

The equation to middle span is—$y1 = 1{\cdot}075\ (198x - x^2) - 6664{\cdot}68$ from which when $y = 0$; $x = 159$ and 39

$$\text{when } \left.\begin{array}{l}x = 197;\ y = 6452{\cdot}9 \\ x = 198;\ y = 6664{\cdot}69\end{array}\right\} \text{difference} = 211{\cdot}79.$$

Hence the stress per foot run on rivets $= {\cdot}085 \times 211{\cdot}79 = 18$ tons.

$$\text{Unit stress} = \frac{18}{2{\cdot}64} = 6{\cdot}8 \text{ tons per square inch.}$$

With two engines weighing 118 tons placed in middle of first span, and $11\frac{1}{2}$ loaded trucks extending from engines to end of second span, each truck weighing 6 tons 17 cwt.

Here the two engines (which are Beyer and Peacock's Bogie Class) will produce a bending moment at centre of girders, considering it as discontinuous of 4469 foot tons. Therefore the equivalent distributed load which would produce the same bending moment at the centre is found from equation $\frac{wl^2}{8} = 4469$; from which $w = 1$ ton per foot run. Hence the main girder next the rails will carry ·7 tons per foot run. Hence the following cases of loading :—

FIRST span loaded with 1·95 tons per foot run; second span loaded with 1·47 tons per foot run; and third span with 1·25 tons per foot run.

$$\text{Here } \left.\begin{array}{l}16\,m_1 + 4\,m_2 = (1{\cdot}95 + 1{\cdot}47)\,l^2 \\ 16\,m_2 + 4\,m_1 = (1{\cdot}47 + 1{\cdot}25)\,l^2\end{array}\right\} \text{from which is obtained } m_1 = 7161 \text{ foot tons.}$$

Hence the equation to the curve of moments in first span is—$y = 975\ (198x - x^2) - 36{\cdot}16x$ from which when $y = 0$; $x = 161$

$$\text{when } \left.\begin{array}{l}x = 197;\ y = 6931 \\ x = 198;\ y = 7161\end{array}\right\} \text{difference} = 230.$$

Horizontal stress on rivets per foot run $= 230 \times 0{\cdot}85 = 19{\cdot}55$ tons.

$$\text{Unit stress} = \frac{19{\cdot}55}{2{\cdot}64} = 7{\cdot}4 \text{ tons per square inch.}$$

FIRST and second span loaded with 2·15 tons per foot run; and third span loaded with 1·25 tons per foot run.

$$\text{Here } \left.\begin{array}{l}8\,m_1 + 2\,m_2 = 2{\cdot}15\,l^2 \\ 16\,m_2 + 4\,m_1 = 3{\cdot}4\ \ l^2\end{array}\right\} \text{from which is obtained } m_1 = 9016{\cdot}92 \text{ foot tons;}$$

and the equation to 1st span is—$y = 1{\cdot}075\ (198x - x^2) - 45{\cdot}54x$ from which when $y = 0$ $x = 155{\cdot}64$

$$\text{when } \left.\begin{array}{l}x = 197;\ y = 8759{\cdot}60 \\ x = 198;\ y = 9016{\cdot}92\end{array}\right\} \text{difference} = 257{\cdot}3.$$

Hence the horizontal stress on the rivets per foot run $= 257{\cdot}3 \times {\cdot}085 = 21{\cdot}87$.

$$\text{Hence unit stress} = \frac{21{\cdot}87}{2{\cdot}64} = 8{\cdot}28 \text{ tons per square inch.}$$

CALCULATIONS—*continued.*

ANALYSIS OF STRENGTH OF WEB.

DOUBLE LINE OF WAY.

STRESSES in Side Spans when covered with a live load of $1\frac{1}{4}$ ton per foot run on each line of way.

Distance from pier in feet.	Thickness of web in inches.	Total shearing stress in tons.	Shearing stress per foot horizontally or vertically in tons.	Shearing stress in tons per square inch of area between the rivet holes	Bearing area per foot horizontally or vertically in square inches.	Pressure on bearing area in tons per square inch.	Intensity of stress on rivets ¾-inches in diameter uniting web with booms in tons per square inch.	Intensity of shearing stress at which the web will begin to buckle.	Shearing stress per square inch on gross area.	Factor of safety against buckling.
0	$\frac{1}{2}$	206	17 50	1·80	2·25	7 80	6 6	4 80	1·45	3 31
3	$\frac{7}{16}$	199	16 90	1·98	1·97	8 58	6 4	3 90	1·62	2·41
15	$\frac{3}{8}$	170	14·40	1·97	1 69	8 50	5·4	3 08	1·60	1 92
36	$\frac{5}{16}$	121	10 30	1·70	1·40	7·30	3 9	2·28	1·37	1 66
66	$\frac{1}{4}$	58	4 90	1 00	1·12	4·37	1·8	1 54	·81	1 90
132	$\frac{1}{4}$	129	11·00	2 25	1·12	9 80	4 1	1·54	1·83	·84
162	$\frac{5}{16}$	198	16 80	2 76	1·40	12 00	6 3	2 28	2·24	1·01
189	$\frac{3}{8}$	266	22 60	3·09	1 69	13 40	8·5	3·08	2 51	1 23
192	$\frac{7}{16}$	274	23 30	2 70	1 97	11 80	8 8	3 90	2 24	1·74
198	$\frac{1}{2}$	289	24 60	2 50	2·25	10 90	9·3	4 80	2 05	2·34

STRESSES in Middle Span loaded with a live load of $1\frac{1}{4}$ ton per foot run on each line of way.

0	$\frac{1}{2}$	247	21·0	2 0	2 25	9 30	7·9	4·80	1·75	2 74
6	$\frac{7}{16}$	232	19 8	2 3	1·97	10 00	7 5	3 90	1 90	2·05
9	$\frac{3}{8}$	225	19 1	2 6	1·69	11 30	7·2	3 08	2 12	1·45
36	$\frac{5}{16}$	157	13·4	2·2	1·40	9 57	5·0	2 28	1·78	1·28
66	$\frac{1}{4}$	87	7·4	1 5	1 12	6 60	2 8	1·54	1·23	1·25

First and second spans, loaded with a live load of $1\frac{1}{4}$ ton per foot run on each line of way.

STRESSES in Side Spans.

0	$\frac{1}{2}$	206	17 5	1 80	2 25	7·80	6 6	4 80	1·45	3·31
3	$\frac{7}{16}$	199	16 9	1·98	1·97	8 58	6 4	3 90	1·62	2·41
15	$\frac{3}{8}$	170	14·4	1 97	1·69	8 50	5 4	3 08	1 60	1·92
36	$\frac{5}{16}$	121	10 3	1·70	1 40	7 30	3 9	2 28	1·37	1 66
66	$\frac{1}{4}$	58	4 9	1·00	1·12	4·30	1 8	1 54	·81	1 90
132	$\frac{1}{4}$	138	11·8	2 40	1 12	10 00	4 4	1·54	1 96	·78
162	$\frac{5}{16}$	211	17 9	2·90	1·40	12 78	6·8	2 28	2·38	·96
189	$\frac{3}{8}$	279	23 7	3 20	1·69	14·00	9 0	3 08	2 63	1·17
192	$\frac{7}{16}$	286	24 3	2·80	1·97	12·30	9 2	3·90	2 33	1 67
198	$\frac{1}{2}$	301	25 6	2·60	2 25	11 30	9 7	4 80	2·13	2 25

SINGLE LINE OF WAY.

STRESSES in Side Spans when loaded with a live load of $1\frac{1}{4}$ ton per foot run.

0	$\frac{1}{2}$	176·2	14 98	1·54	2·25	6 66	5·67	4 80	1·25	3·84
3	$\frac{7}{16}$	169 8	14·43	1·70	1 97	7 32	5·47	3 90	1·40	2 78
15	$\frac{3}{8}$	144·6	12 29	1·68	1·69	7 27	4·65	3 08	1 37	2·25
36	$\frac{5}{16}$	102 5	8 71	1·43	1·40	6 22	3·30	2 28	1 16	1·96
66	$\frac{1}{4}$	46 5	3 95	·81	1·12	3·53	1·50	1·54	·66	2 33
132	$\frac{1}{4}$	110 3	9 37	1·92	1·12	8 37	3 55	1 54	1·56	1 00
162	$\frac{5}{16}$	172 0	14 62	2·40	1·40	10 44	5 54	2·28	1 95	1·12
189	$\frac{3}{8}$	230·1	19·56	2·68	1·69	11 60	7 41	3 08	2 17	1 42
192	$\frac{7}{16}$	236 5	20·10	2·36	1·97	10 20	7·60	3·90	1 93	2·02
198	$\frac{1}{2}$	249·4	21 21	2 17	2·25	9 43	8 03	4 80	1 77	2 71

STRESSES in Middle Span when loaded with a live load of $1\frac{1}{4}$ ton per foot run.

0	$\frac{1}{2}$	212 8	18 09	1·86	2·25	8 04	6·85	4 80	1·51	3 18
6	$\frac{7}{16}$	200·0	17·00	2·00	1·97	8 63	6 44	3·90	1·63	2·39
9	$\frac{3}{8}$	193·5	16 45	2 25	1·69	9 73	6 23	3 08	1·83	1 68
36	$\frac{5}{16}$	135·4	11·51	1·90	1·40	8 22	4 36	2·28	1·53	1 49
66	$\frac{1}{4}$	73 7	6 26	1·30	1·12	5·59	2 37	1 54	·52	2 96

STRESSES in Side Spans when first and second spans are loaded with a live load of $1\frac{1}{4}$ ton per foot run.

0	$\frac{1}{2}$	176·2	14·98	1·54	2·25	6 66	5·67	4 80	1·25	3 84
3	$\frac{7}{16}$	169·2	14·43	1·70	1·97	7·32	5 47	3 90	1·40	2·78
15	$\frac{3}{8}$	144·6	12 29	1·68	1·69	7 27	4 65	3 08	1·37	2 25
36	$\frac{5}{16}$	102 5	8 71	1·43	1 40	6 22	3 30	2 28	1 16	1·96
66	$\frac{1}{4}$	46·5	3 95	·81	1·12	3 53	1·50	1 54	·66	2·33
132	$\frac{1}{4}$	118·1	10 04	2 06	1 12	9 00	3 80	1 54	1 67	·92
162	$\frac{5}{16}$	181	15·38	2 53	1 40	11 00	5 82	2 28	2 05	1 11
189	$\frac{3}{8}$	239 04	20 32	2 78	1 69	12 02	7 70	3 08	2 26	1·36
192	$\frac{7}{16}$	245 5	20 87	2 41	1 97	10 60	7 90	3 90	2 01	1·94
198	$\frac{1}{2}$	258 4	21 96	2 25	2 25	9 80	8 32	4 80	1 83	2·62

CALCULATIONS—*continued.*

No. 8.

MENANGLE BRIDGE. Plate 6.

MAIN GIRDERS.

Three spans of = 162′ centres.
Effective average depth = 10 feet.*
Dead load = 2·2 tons per foot run on bridge.
Live „ = 2·8 „ „ „
Dead load on each main girder = 1·1 ton per foot run.
Live „ „ „ = 1·4 „ „

Three cases of loading will be considered:—

CASE I.—First (or third) span, loaded with 2·5 tons per foot run, middle and end span loaded with 1·1 ton per foot run.

$$m_2 = \frac{l^2}{30}(2\,w_1 + w_2) = (5 + 1{\cdot}1)\,\frac{162^2}{30} = 5336{\cdot}3.$$

Equation to 1st span is $y = 1{\cdot}25\,(162\,x - x^2) - 32{\cdot}94\,x$ from which when $y = 0$ $x = 135{\cdot}64$.

	Bending Moment.	Stress.	Area Required.		Area in Bridge.	
			Top.	Bottom.	Gross.	Net.
10	1571	157	39	31	108	86
20	2891	289	73	58	110	88
30	3962	396	99	79	117	93
40	4782	478	119	96	117	95
50	5353	535	134	107	119	100
60	5674	567	142	113	126	104
70	5744	574	144	115	131	106
80	5565	556	139	111	131	106
90	5135	513	128	103	124	99
100	4456	446	111	89	124	99
110	3527	353	88	70	119	95
120	2347	235	59	47	117	93
130	918	92	23	18	129	105
140	— 762	— 76	15	19	129	105
150	— 2691	— 269	54	67	153	122
162	— 5336	— 534	107	133	166	133

CASE III.—Middle span loaded with 2·5 tons per foot run, and side spans with 1·1 ton per foot run.

$$m_2 = m_3 = (w_1 + w_2)\,\frac{l^2}{20} = (1{\cdot}1 + 1{\cdot}25)\,\frac{162^2}{20} = 4{,}724 \text{ foot tons.}$$

Equation to middle span is $y = 1{\cdot}25\,(162x - x^2) - 4{,}724$, from which, when $y = 0$, $x = 133{\cdot}7$ and $28{\cdot}3$; therefore the results can be set out in the following table, remembering that x is measured from No. 3 pier.

x =	Moment.	Stress.	Area required.		Area in Bridge.	
			Top.	Bottom.	Gross.	Net.
0	— 4724	— 472	94	118	166	133
10	— 2824	— 282	56	71	139	111
20	— 1174	— 117	23	29	139	111
30	226	23	6	4	112	91
40	1376	138	34	27	112	91
50	2276	228	57	45	119	104
60	2926	293	73	58	119	104
70	3326	333	83	66	116	95
80	3476	348	87	69	116	95
90	3376	338	84	67	116	95
100	3026	303	76	60	119	104
110	2426	243	61	48	119	104
120	1576	158	39	31	112	91
130	476	48	12	9	112	91
140	— 874	— 87	17	22	139	91
150	— 2474	— 247	49	62	139	111
162	— 4724	— 472	94	118	166	133

CASE II.—First and second spans loaded with 2·5 tons per foot run; third span loaded with 1·1 tons per foot run.

$$m_1 = \frac{l^2}{60}\,(7w_1 - w_3) = (17{\cdot}5 - 1{\cdot}1)\,\frac{162^2}{60} = 7{,}173{\cdot}36 \text{ foot tons.}$$

$$m_2 = \frac{(wl^2 - 8m_2}{2} = 4{,}111{\cdot}5 \text{ foot tons.}$$

* Let m = bending moment at any point on girder; let $\frac{a}{2}$ = area of top or bottom pile of plates in either boom; let f = intensity of stress on the extreme top or bottom piles of plates:

Then $m = f\frac{a}{2} \times 12{\cdot}5 + \frac{9{\cdot}65}{12{\cdot}5} f\frac{a}{2} \times 9{\cdot}65 = 6{\cdot}25\,fa + 3{\cdot}725\,fa = 9{\cdot}975\,fa = 10\,fa$ nearly: therefore $fa = \frac{m}{10}$ nearly.

CALCULATIONS—*continued.*

Equation to 1st span is $y = 1{\cdot}25\ (162x - x^2) - 44{\cdot}29x$, from which, when $y = 0$, $x = 126{\cdot}6$; the moments of the cantilever portions only are given.

$x =$	Moment.	Stress.	Area required.		Area in Bridge.	
			Top.	Bottom.	Gross.	Net.
126·6	0	0	0	0	129	105·6
140·0	—2,349	—235	47	58·7	129	105·6
150·0	—4,392	—439	88	110·0	153	122·0
162·0	—7,173	—717	143	179·0	166	133·0

The equation to second span is (when origin is No. 3 pier) $y = 1{\cdot}25\ (162x - x^2) - (4{,}111{\cdot}5 + 18{\cdot}9x)$, from which, when $y = o$, $x = 119{\cdot}5$ and $27{\cdot}5$; hence the moments of cantilever portion of second span are

$x =$	Moment.	Stress.	Area required.		Area in Bridge.	
			Top.	Bottom.	Gross.	Net.
119·5	0	0	0	0	112	91
120·0	— 79	— ·8	2	2	112	91
130·0	—1,368	—137·0	27	34	112	91
140·0	—2,907	—291·0	58	73	139	91
150·0	—4,696	—470·0	94	117	139	111
162·0	—7,173	—717·0	143	179	166	133

The columns "Area required," are found by dividing the stress by 5 tons in tension, and 4 tons in compression throughout, whereas about the region of the point of contra-flexure a lower unit stress and a corresponding greater sectional area than that given are required. From an inspection of columns, "Area in Bridge," it will be seen that this excess of area is provided, although the sectional areas in the centre of side spans and over piers are not sufficient for *Cases I, II, and III,* but are ample for ordinary traffic. It was impracticable to measure these areas with accuracy from the bridge.

SHEARING STRESSES.

Side spans over No. 1 and No. 4 piers, from—

CASE I (see diagram) the shearing stress $= \frac{135{\cdot}64 \times 2{\cdot}5}{2} = 169{\cdot}55$ tons.

Over No. 2 and No. 3 piers the shearing stress $= \frac{135{\cdot}64 \times 2{\cdot}5}{2} + 26{\cdot}36 \times 2{\cdot}5 = 242{\cdot}95$ tons.

CASE II gives higher shearing stresses over No. 2 and No. 3 piers; thus $\frac{126{\cdot}6 \times 2{\cdot}5}{2} + 35{\cdot}4 \times 2{\cdot}5 = 246{\cdot}75$ tons.

Middle span over No. 2 and No. 3 piers, the shearing stress $= \frac{92 \times 2{\cdot}5}{2} + 42{\cdot}5 \times 2{\cdot}5 = 221{\cdot}25$ tons.

CASE III gives $\frac{105{\cdot}4 \times 2{\cdot}5}{2} + 28{\cdot}3 \times 2{\cdot}5 = 202{\cdot}5$ tons.

ANALYSIS OF STRESSES IN WEB AGAINST STRESSES PRODUCED BY CASES I, II, AND III.

Side Spans.

Distance from pier.	Thickness of web.	Shearing stress per foot horizontally or vertically.	Shearing stress per square inch in tons.	Shearing stress at which the web will begin to buckle.	Bearing area per foot in square inches.	Pressure on bearing area per square inch.	Factor of safety against buckling.
0	$\frac{1}{2}$	15 tons.	1·25	4·80 tons.	2·37	6·3 tons.	3·7
18	$\frac{5}{16}$	11·6 ,,	1·50	2·28 ,,	1·47	7·9 ,,	1·5
60	$\frac{1}{4}$	3·6 ,,	·60	1·54 ,,	1·18	3·0 ,,	2·6
105	$\frac{1}{4}$	9·5 ,,	1·58	1·54 ,,	1·18	8·0 ,,	1·0
126	$\frac{5}{16}$	14·1 ,,	1·80	2·28 ,,	1·47	9·6 ,,	1·2
147	$\frac{7}{16}$	18·8 ,,	1·80	3·90 ,,	2·07	9·1 ,,	2·1
162	$\frac{1}{2}$	21·8 ,,	1·82	4·80 ,,	2·37	9·2	2·7

Middle Span.

0	$\frac{1}{2}$	19·2 tons.	1·60	4·80	2·37	8·1 tons.	3·0
18	$\frac{3}{8}$	16·3 ,,	1·80	3·10	1·78	9·1 ,,	1·7
39	$\frac{5}{16}$	11·5 ,,	1·50	2·28	1·47	7·8 ,,	1·5
60	$\frac{5}{16}$	7·2	·96	2·28	1·47	4·9 ,,	2·3
81	$\frac{5}{16}$	2·7	·36	2·28	1·47	1·6 ,,	6·3

The column "Shearing stress at which the web will begin to buckle," is found by Rankine's formula $u = \frac{f}{1 + \frac{1}{3000}\frac{l^2}{h^2}}$ (See calculations of Peel-street and Wollondilly bridges). The column, "Factor of safety against buckling," is found by dividing the results of this formula for different thicknesses of web plates by the shearing stress in tons per square inch. It is necessary to state that this formula assumes the buckling to take place in a D curve, whereas it may buckle (if it buckles at all) in an S curve. The pressures on bearing areas are, however, larger than desirable.

CALCULATIONS—*continued.*

HORIZONTAL STRESS ON LINE OF RIVETS UNITING BOOMS TO WEB.

Let $m =$ bending moment over No. 2 or No. 3 pier.

$m_1 =$ " 1 foot from centre of pier in side spans.

$a =$ area of top or bottom boom.

$m = 10\,fa$ and the horizontal stress.

The horizontal stress is $\frac{fa}{2} + \frac{9{\cdot}65}{12{\cdot}5}\frac{fa}{2} = \frac{fa}{2}\left(1 + \frac{9{\cdot}65}{12{\cdot}5}\right) = \frac{22{\cdot}15}{25}\,fa$

Since $fa = \frac{m}{10}$ it follows that the horizontal stress $= {\cdot}0886\,m$, and the stress on rivets per foot run is ${\cdot}0886\,(m - m_1)$

The equation to first span from Case I is—$y = 1{\cdot}25\,(162\,x - x^2) - 32{\cdot}94\,x$, from which when

$\left.\begin{array}{l} x = 162,\ y = 5336 \\ x = 161,\ y = 5102 \end{array}\right\}$ difference $= 234$-foot tons.

Horizontal stress on rivets per foot run $= {\cdot}0886 \times 234 = 20{\cdot}73$ tons.

The rivets in question are $\frac{7}{8}$ inch in diameter and 4-inch pitch.

Unit stress $= \frac{20{\cdot}73}{3{\cdot}6} = 5{\cdot}78$ tons per square inch.

The equations to 1st span from Case III is—$y = 1{\cdot}25\,(162\,x - x^2) - 44{\cdot}29\,x$, from which when

$\left.\begin{array}{l} x = 162\,;\ y = 7173 \\ x = 161\,;\ y = 6929 \end{array}\right\}$ difference $= 244$-foot tons.

Horizontal stress per foot run on rivets $= {\cdot}0886 \times 244 = 21{\cdot}6$ tons.

Hence unit stress $= \frac{21{\cdot}6}{3{\cdot}6} = 6$ tons per square inch.

No. 9.

STRESSES IN CROSS GIRDERS.

In the following calculations the distributing effect of the longitudinal timber beams is not considered.

PENRITH BRIDGE.

Span	25′ 6″
Total depth	1′ 9½″
Thickness of web plate	¼″
Flange plates ...	7″ × ⅜″
Angle irons	3″ × 3″ × ½″

Rivets ¾″ diameter, 4″ pitch.

I.—Double line of way with ordinary engines will bring out 8·7 tons on girders from the driving wheels, which will be concentrated at each of the four points immediately under rails. The dead load, consisting of rails, chairs, sleepers, longitudinal timber girders, deck, and cross girder, is equivalent to a load of ·5 tons, also concentrated at each of the four points immediately under rails.

Bending moment in centre of cross girder $= 15 \times 4'\,8'' + 7{\cdot}5 \times 5'\,0'' = 107{\cdot}5$ foot tons.

Stress in flanges $= \frac{107{\cdot}5}{7{\cdot}75} = 61{\cdot}4$ tons.

Area of top flange ... ... $= 8{\cdot}12$ square inches.

Effective area of bottom flange $= 6{\cdot}81$ "

Unit stress in tons per square inch in top flange $= \frac{61{\cdot}4}{8{\cdot}12} = 7{\cdot}56$ tons.

" " bottom " $= \frac{61{\cdot}4}{6{\cdot}81} = 9{\cdot}01$ "

II.—With tank engines there would be 7·5 tons on each driving-wheel, which would give with dead load 8 tons concentrated at each of the four points immediately under rails.

Bending moment in centre $= 16 \times 4'\,8'' + 8 \times 5'\,0'' = 114{\cdot}66$ foot tons.

Stress in flanges $= \frac{114{\cdot}66}{1{\cdot}75} = 65{\cdot}5$ tons.

Unit stress in tons per square inch in top flange $= \frac{65{\cdot}5}{8{\cdot}12} = 8{\cdot}06$ tons.

" " bottom " $= \frac{65{\cdot}5}{6{\cdot}81} = 9{\cdot}62$ "

MENANGLE BRIDGE.

Span...	25′ 6″
Total depth... ...	1′ 5½″
Thickness of web plate	¼″
Flange plates ...	8″ × ¾″
Angle irons... ...	3½″ × 3½″ × ½″

Rivets ¾″ diameter, 4″ pitch.

I.—Double line of way with ordinary engines will bring about 7 tons on girders from driving wheel, which will be concentrated at each of the four points immediately under the rails. The dead load, consisting of rails, chairs, sleepers, longitudinal timber beams, deck, and cross girder, is equivalent to ·5 tons, also concentrated at each of the four points immediately under the rails.

Bending moment at centre $= 15 \times 4'\,8'' + 7{\cdot}5 \times 5'\,0'' = 107{\cdot}5$ foot tons.

Stress in flanges $= \frac{107{\cdot}5}{1{\cdot}33} = 80{\cdot}8$ tons.

CALCULATIONS—*continued.*

Area of top flange ... ... = 12·5 square inches.
Effective area of bottom flange = 10·6 ,,

Unit stress, top flange, in tons per square inch $= \frac{80 \cdot 8}{12 \cdot 5} = 6 \cdot 46$ tons.

,, bottom ,, ,, $= \frac{80 \cdot 8}{10 \cdot 6} = 7 \cdot 62$,,

II.—With tank engines there would be 7·5 tons in each driving-wheel, which would give with dead load 8 tons concentrated at each of the four points under the rails.

Bending moment at centre = 16 × 4′ 8″ + 7·5 × 5′ 0″ = 114·66 foot tons.

Stress in flanges $= \frac{114 \cdot 66}{1 \cdot 33}$ 86·2 tons.

Unit stress in top flange in tons per square inch $= \frac{86 \cdot 2}{12 \cdot 5} = 6 \cdot 90$ tons.

,, bottom ,, ,, $= \frac{86 \cdot 2}{10 \cdot 6} = 8 \cdot 13$,,

NOTE.—The cross girders in this bridge are partially fixed at ends, and are therefore stronger than shown in the above calculations.

PEEL-STREET, PEEL RIVER, AND M'DONALD RIVER BRIDGES.

Span ... ... = 14′ 3″.
Total depth ... ... = 1′ 3″.
Thickness of web plate = ¼″.
Angle-irons ... ... = 3½ × 3½ × ½.
Rivets, ¾″ diameter, 4″ pitch.

The bending moment in centre, produced by 8 tons concentrated at two points immediately under rails, is 37·3 foot tons.

Stress in flanges $= \frac{37 \cdot 3}{1 \cdot 2} = 31$ tons.

Area of top flange ... ... = 6·5 square inches.
Effective area of bottom flange = 5·75 ,,

Unit stress in top flange in tons per square inch $= \frac{31}{6 \cdot 5} = 4 \cdot 77$ tons.

,, bottom ,, ,, $= \frac{31}{5 \cdot 75} = 5 \cdot 37$ tons.

BATHURST, WELLINGTON, ABERDEEN, AND WAGGA WAGGA BRIDGES.

Span ... ... = 14′ 3″.
Total depth ... ... = 1′ 2″.
Thickness of web plate = ¼″.
Angle-irons ... ... = 3½ × 3½ × ½.
Rivets, ¾ diameter, 4″ pitch.

Bending moment in centre, produced by 8 tons concentrated at two points immediately under rails, is 37·3 foot tons.

Stress in flanges $= \frac{37 \cdot 3}{1 \cdot 12} = 33 \cdot 3$ tons.

Area of top flange ... ... = 6·5 square inches.
Effective area of bottom flange = 5·75 ,,

Unit stress in top flange $= \frac{33 \cdot 3}{6 \cdot 5} = 5 \cdot 12$ tons.

,, bottom ,, $= \frac{33 \cdot 3}{5 \cdot 75} = 5 \cdot 79$,,

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WOLLONDILLY BRIDGES AND THE BRIDGES OVER THE SOLITARY CREEK.

Span ... ... = 14′ 0″.
Total depth ... ... = 1′ 1″.
Thickness of web plate = ¼″.
Angle-irons ... ... = 3″ × 3″ × ½″.

Bending moment in centre, produced by 8 tons concentrated at each of the two points immediately under the rails, is 36 foot tons.

Stress in flanges $= \frac{36}{1 \cdot 05} = 34 \cdot 3$ tons.

Area of top flange ... ... = 5·5 square inches.
Effective area of bottom flange = 4·75 ,,

Unit stress in top flange $= \frac{34 \cdot 3}{5 \cdot 5} = 6 \cdot 23$ tons.

,, bottom ,, $= \frac{34 \cdot 3}{4 \cdot 75} = 7 \cdot 22$,,

NOTE.—The cross girders in these bridges are partially fixed at ends, and are hence stronger than shown by the above calculations.

No. 10.

PARTICULARS OF IRON BRIDGES REPORTED UPON.

THE FOLLOWING PARTICULARS WERE SUPPLIED, AT THE REQUEST OF THE COMMISSION, BY THE ENGINEER-IN-CHIEF FOR RAILWAYS.

GREAT SOUTHERN RAILWAY.

Name and Description.	Date of completion.	Effective spans.	Original camber.	Name of Engineer in charge.	Name of Inspector.	Name of Contractor.	Test load on one span.	Deflection in inches.
		ft. in.	ins.					
Bridge over Nepean River at Menangle, three spans, continuous plate girders, double web, cellular booms, double line.	1863	162 0	2	W. Morgan ...	G. Lacy	Peto, Brassey, and Betts, makers and erectors.	5 engines, 290 tons.	0·60
Two Bridges over Wollondilly River, one span each, plate girders, double web, plate booms, single line.	1869	130 0	No record.	G. F. Mann....	— Hampshire	De Bergue, maker. T. Smythiman, erector.	Tested by Mr. Mason. No record in this office.	
Five Bridges, comprising thirty-two spans, separate plate girders, single web, plate booms, single line.	1869	60 0	No record.	G. F. Mann....	— Hampshire	De Bergue, maker. T. Smythiman, erector.	1 engine, 50 tons.	0·25
Bridge over Murrumbidgee River at Wagga, four spans, continuous lattice girders, double web, plate booms, single line.	1880	159 0	3	C. E. Nicholas	J. Garforth ...	McClellan, Glasgow, maker. J. S. Bennett, for A. and R. Amos, erectors.	3 engines, 185 tons.	End 0·74 centre 0·63

GREAT WESTERN RAILWAY.

Name and Description.	Date of completion.	Effective spans.	Original camber.	Name of Engineer in charge.	Name of Inspector.	Name of Contractor.	Test load on one span.	Deflection in inches.
		ft. in.	ins.					
Bridge over the Nepean River at Penrith, three spans, continuous plate girders, double web, cellular booms, double line.	1867	198 0	4	T. R. Firth ...	G. Higginbottom.	Peto, Brassey, and Betts, makers and erectors.	No record.	
Additional span to above bridge, separate plate girder, double web, cellular top, and plate bottom boom, double line.	1869	127 0	2½	W. Wakeford,	daywork	Thames Iron Co. Blackwall, makers.	No record.	
Six bridges, comprising seven spans, over Solitary Creek, separate plate girders, single web, plate booms, single line.	1872	60 0	0¾	T. R. Firth ...	— Hampshire	C. De Bergue, maker. D. Williams, erector.	1 engine, 42 tons.	0·25 to 0·35
Bridge over Macquarie River, at Bathurst—continuous lattice girder over three spans, double web, plate booms, single line.	1876	159 0	3	W. B. Wade...	— Fernley.....	Handyside, maker. T. Smythiman, erector.	3 engines, 178 tons.	End, 0·77 centre 0·78
Bridge over Macquarie River, at Wellington—continuous lattice girder over three spans, double web, plate booms, single line.	1881	159 0	3	G. Clark	S. Maddock ...	Handyside, maker. T. Smythiman, erector.	3 engines, 174 tons.	End 0·72 centre 0·64
Two end spans to above, separate plate girders, single web, plate booms, single line.	1881	61 0	.....	G. Clark	S. Maddock ...	Handyside, maker. T. Smythiman, erector.	1 engine, 63 tons.	0·33

GREAT NORTHERN RAILWAY.

Name and Description.	Date of opening.	Effective spans.	Original camber.	Name of Engineer in charge.	Name of Inspector.	Name of Contractor.	Test load on one span.	Deflection in inches.
		ft. in.	ins.					
Bridge over Hunter River, at Aberdeen, three spans, continuous lattice girders, double web, plate booms, single line.	1871	159 0	3	W. B. Wade...	P. Morrison ...	Parkgate Co., makers. T. Smythiman, erector.	3 engines, 170 tons.	End 0·79 centre 0·68
Two bridges over Rivers Peel and Macdonald. One span each, lattice girders, double web, plate booms, single line.	1882	156 0	3	J. G. Griffin ...	T. Parkinson...	Brettell and Co., Worcester, makers. J. S. Bennett for A. and R. Amos, erectors.	3 engines, 174 tons.	End 0·78 centre 0·72
Bridge over Peel-street, Tamworth. One span, plate girder, single web, plate booms, single line.	1882	61 0	1	J. G. Griffin ...	T. Parkinson...	Brettell and Co., Worcester, makers, J. S. Bennett for A. and R. Amos, erectors.	1 engine, 63 tons.	0·30

NOTE.—The effective spans are measured between the points of support for the discontinuous bridges, and from centre to centre in the continuous bridges.

No. 11.

WAGGA WAGGA TIMBER VIADUCTS.

GREAT SOUTHERN RAILWAY.

THERE are five viaducts at Wagga Wagga, comprising 316 spans of 29 feet 6 inches each, making a total length of 322 feet. They were completed in 1880 by Messrs. A. & R. Amos, Contractors.

TIMBER OPENINGS SIMILAR TO THOSE AT WAGGA WAGGA.

THE following memorandum describes the timber openings of similar construction to those in the Wagga Wagga Viaduct, erected on certain lines of railway :—

Memorandum to the Secretary of the Royal Commission on Railway Bridges.

Department of Public Works, Railway Branch, Engineer-in-Chief's Office, Sydney, 12 June, 1884.

TIMBER openings of 29 feet 6 inches span, and of similar construction to the Wagga Wagga Viaduct, have been erected on the following lines of railway, viz. :—

G. N. Railway—Tamworth to Glen Innes.

At 182 miles, No. 96 spans over Peel River.
At 202 „ 50 chains „ 3 „
At 245 „ 44 „ „ 3 „

N.-W. Railway—Werris Creek to Narrabri.

At 158 miles 71 chains, No. 6 spans, Werris Creek.
At 165 „ 9 „ „ 3 „ Deadman's Swamp.
At 168 „ 55 „ „ 16 „ Mooki River.

J. W. DREWETT,
Assistant Engineer.

No. 12.

COST OF IRON BRIDGES.

THE following is the cost of some of the Iron Bridges inspected by the Railway Bridges Inquiry Commission, as obtained from the Engineer-in-Chief for Railways :—

	£	s.	d.	£	s.	d.
Menangle Bridge (over the river Nepean, on the G.S.R., Campbelltown to Picton)—						
Ironwork	33,214	5	11			
Masonry	46,194	19	6	79,409	5	5
Barber's Creek Bridge (on the G.S.R., Picton to Goulburn)—						
Ironwork in girders, &c.	5,234	2	2			
Cost of building piers, &c.	6,151	5	6	11,385	7	8
First crossing of Wollondilly Bridge (on the G.S.R., Picton to Goulburn)—						
Ironwork in girders, &c.	13,144	13	8			
Cost of building piers, &c.	15,064	13	7	28,209	7	3
Second crossing of Wollondilly Bridge (on the G.S.R., Picton to Goulburn)—						
Ironwork in girders, &c.	12,414	7	0			
Cost of building piers, &c.	17,893	11	5	30,307	18	5
Boxer's Creek Bridge (on the G.S.R., Picton to Goulburn)—						
Ironwork in girders, &c.	2,043	3	11			
Cost of building piers, &c.	5,475	18	8	7,519	2	7
Mulwaree Ponds Viaduct (on the G.S.R., Picton to Goulburn)—						
Ironwork in girders, &c.	13,405	7	0			
Cost of building piers, &c.	19,576	8	6	32,981	15	6

Penrith

Penrith Bridge (on the G.W.R., Kelso to Bathurst)—								
Ironwork in girders fixed complete				41,984	0	0		
Cost of building piers, &c.				43,597	5	3		
Planking superstructure				2,745	14	5		
Cost of additional span to bridge—								
Ironwork	4,808	9	9					
Addition to pier, fixing cylinders and erecting girders	3,739	6	5					
				8,547	16	2		
							96,874	15 10
Bridge No. 7, at 99m. 73ch. 67lks (on the G.W.R., Penrith to Bathurst)—								
Ironwork in girders				941	2	10		
Cost of building piers, &c.				2,475	18	8		
							3,417	1 6
Bridge No. 8, at 100m. 8ch. 28lks. (on the G.W.R., Penrith to Bathurst)—								
Ironwork in girders				941	19	7		
Cost of building piers, &c.				2,316	1	5		
							3,258	1 0
Bridge No. 10, at 100m. 62chs. 86lks. (on the G.W.R., Penrith to Bathurst)—								
Ironwork in girders				941	2	10		
Cost of building piers, &c.				2,743	17	5		
							3,685	0 3
Bridge No. 13, at 102m. 11ch. 60lks. (on the G.W.R., Penrith to Bathurst)—								
Ironwork in girders				941	2	10		
Cost of building piers, &c.				4,837	17	10		
							5,779	0 8
Bridge No. 15, at 102m. 57ch. 57lks. (on the G.W.R., Penrith to Bathurst)—								
Ironwork in girders				941	19	7		
Cost of building piers, &c.				2,786	18	1		
							3,728	17 8
Bridge No. 17, at 106m. 68ch. 87lks. (on the G.W.R., Penrith to Bathurst)—								
Ironwork in girders, &c.				1,883	19	6		
Cost of building piers, &c.				5,837	14	0		
							7,721	13 6
Bathurst Bridge (on the G.W.R., Kelso to Bathurst)—								
Ironwork				23,656	12	11		
Cost of fixing cylinders and erecting superstructure				7,480	9	7		
							31,137	2 6
Wellington Bridge (on the G.W.R., Orange to Dubbo)—								
Ironwork				14,788	7	9		
Railway carriage on above				5,704	1	0		
Cost of fixing cylinders and erecting superstructure				22,136	7	11		
							42,628	16 8
Dubbo Bridge (on the G.W.R., Orange to Dubbo)—								
Ironwork				18,061	10	4		
Railway carriage on above				7,463	11	2		
Cost of fixing cylinders and erecting superstructure				20,605	8	7		
							46,210	10 1
Aberdeen Bridge (over the Hunter River, on the G.N.R., Singleton towards Armidale)—								
Ironwork				13,314	16	6		
Cost of fixing cylinders and erecting superstructure				11,526	1	11		
							24,840	18 5
Peel-street Bridge (on the G.N.R., Tamworth to Uralla)—								
Ironwork				1,302	10	8		
Cost of building piers, &c.				2,418	12	0		
							3,721	2 8
Peel River Bridge (on the G.N.R., Tamworth to Uralla)—								
Ironwork				5,262	1	6		
Cost of fixing cylinders and erecting superstructure				3,957	6	3		
							9,219	7 9
M'Donald River Bridge (on the G.N.R., Tamworth to Uralla)—								
Ironwork				3,654	16	11		
Cost of building piers, &c.				5,690	12	0		
							9,345	8 11

W. H. QUODLING,
(For the Engineer-in-Chief.)

Office of the Engineer-in-Chief for Railways,
N.S.W., Sydney, 4th February, 1885.

No. 13.

COST OF REPAIRS TO BRIDGES.

In response to a letter from the Commission to the Engineer for Existing Lines, asking for a statement of the cost of the repairs to the bridges on the Southern, Northern, and Western lines of Railway during the time the bridges had been in his department, the following was received:—

Sir, Railway Department, Office of Engineer for Existing Lines, Sydney, 21 February, 1885.

Referring to your letters of 29th ult. and 15th inst. respectively, I have the honor to submit, for the information of the Railway Bridges Inquiry Commission, particulars of the cost of repairs to the principal bridges on the Great Southern, Western, and Northern lines since they have been in charge of this department.

The cost of repairing the minor bridges cannot be ascertained, as the expenditure was not charged in detail but to the item "Repairs of Bridges" generally.

	£
Great Southern Railway.	
Menangle Bridge—Repairs	1,566
Wagga—Timber Viaduct	1,600
Great Western Railway.	
Penrith Bridge—Repairs	2,244
Painting	95
	£2,339

Great

Great Western Railway.

	£
Bathurst—Repairs	869
Painting	1,238
	£2,107
Solitary Creek—Repairs	56
Painting	422
	£478
Wellington	Nil.

Great Northern Railway.

No expenditure, except for periodical painting.

I am, &c.,
GEORGE COWDERY,
per J. H. ARMSTRONG.

TIMBER BRIDGES.

WITH the object of having before them all the information available respecting the timber bridges erected on the different lines of railway in the Colony, the Engineer-in-Chief was requested to furnish a return showing the localities where timber bridges and approaches to iron bridges had been erected, the length of each bridge or approach, the number of spans, the date on which each bridge or approach was erected, and (if possible) the cost. And the Engineer for Existing Lines was asked to supply a return showing the cost of maintenance of each of the timber bridges and approaches. At the same time a letter was written to the Commissioner and Engineer for Roads, requesting him to favour the Commission with a statement of his opinion regarding the life of timber bridges in this Colony, and the cost of their maintenance, and to state what repairs had been necessary to the iron bridges in his Department. The following replies were received:—

Mr. W. H. Quodling to the Secretary to the Royal Commission on Bridges.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 7 August, 1885.

Sir,

In reply to your letter of the 5th instant, requesting that the Royal Commission may be furnished with a return showing certain details about timber bridges, &c., erected on the different lines of railway in the Colony, I have the honor to state that I cannot undertake to furnish the information required, as hundreds of timber bridges have been erected on the various railways, and the preparation of such a return would involve the necessity of searching the records and analysing the accounts of the Department for a period of nearly thirty (30) years.

I have, &c.,
W. H. QUODLING,
(For the Engineer-in-Chief.)

The Engineer for Existing Lines to the Secretary to the Royal Commission on Bridges.

Office of Engineer for Existing Lines, Sydney, 11 August, 1885.

Sir,

Referring to your letter of the 5th instant, requesting that the Railway Bridges Inquiry Commission might be furnished with a return showing the cost of maintenance of each of the timber bridges and approaches on the different lines of railway in the Colony, I regret to have to inform you that this information cannot be given, as the repairs to these bridges were not particularised but were charged generally to maintenance of bridges on the respective lines.

I have, &c.,
GEORGE COWDERY.

The Commissioner and Engineer for Roads to the Secretary to the Royal Commission on Bridges.

Department of Public Works, Office of Commissioner and Engineer for Roads,
Sydney, 7 August, 1885.

Sir,

With reference to your letter of the 5th instant, requesting, on behalf of the Railway Bridges Inquiry Commission, to be furnished with certain information regarding the life of timber bridges, &c., I have the honor to state that some of the bridges built by the Department are still good, though now twenty-seven years old, and they seem likely to last at least ten years more; but, on the other hand, many have had to be renewed after ten or twelve years. All depends on the timber, and as we have little or no choice but to use local timber the difference is so great.

Except owing to accidental injuries to one iron bridge, no repairs have been necessary to bridges of that material.

The timber floors are of course subject to the same wear as on other bridges.

I have, &c.,
WILLIAM C. BENNETT,
Commissioner and Engineer for Roads.

No. 14.

APPOINTMENTS OF MR. MASON AND MR. COWDERY.

Mr. Mason took charge of the management of Existing Lines, 1st October, 1876.
Mr. Cowdery took charge from Mr. Mason, 16th March, 1881.

QUALIFICATIONS OF THE ENGINEER FOR EXISTING LINES.

The following copy of the application, made by Mr. Cowdery in 1881, for the appointment of Engineer for Existing Lines, states the qualifications which that gentleman possesses for the position:—

The Commissioner for Railways,—

Burwood, March, 1881.

Sir,

I beg most respectfully to make application for the appointment of Engineer for Existing Lines of Railway and Tramways, made vacant by the resignation of Mr. Mason on the 14th instant, at which time I was temporarily appointed to the position. In making this application I may state that I am well qualified for the position, having had a long practical experience in carrying out similar works to those which the duties of the position I seek will call upon the holder to perform.

I may briefly state the chief incidents of my career: In England and North Wales I served eleven years under Messrs. Peto and Betts, the whole of the time being actively engaged. I was first employed on the Maidstone Branch Railway in Kent, in the drawing office. From there I went to the Isle of Anglesea, and was engaged on the Engineering Staff in making the portion of the Chester and Holyhead Railway, which runs through the island, and includes some heavy works. The development of the oblique arches, the making of patterns and moulds, and the instructions for their application devolved on me.

me. I was next employed on the Great Northern Railway and Toray Branch, where I was some time in the drawing office. I assisted in making drawings for the coffer dam for the Toray Bridge; measured and took a section of the branch line, and assisted in measuring up the works monthly, and setting out generally. I subsequently was engaged on some harbour works at Lowestoft, and having completed those was employed on the Oxford, Worsher, and Wolverhampton Line, where I had for some time full charge of works. I may mention that before the completion of these I had some important and difficult works, such as the lifting of the superstructure of three large bridges, specially entrusted to me, and which I successfully carried out without obstructing the traffic.

The Gloucester, Ross, and Hereford Railway was the next work, a portion of which I had charge of. The engineering upon this length (which was a considerable one, and included two tunnels and heavy viaduct), as well as the measurements of works and paying of all men (some 700), devolved upon myself.

Following this I had full charge of the construction of 14 miles of the East Suffolk Railway, and some 2 miles of sea wall near Lowestoft, which, after satisfactorily carrying out, I left in 1856 for Australia.

Upon arrival I was engaged upon the Melbourne and Mount Alexandria Railway in Victoria. I subsequently visited Sydney, and after working for a time for Messrs. Peto and Co. was appointed District Engineer on the Southern Line, where I continued until the works were completed to Bong Bong River, some 32 miles.

After some two months surveying on the Northern Railway, I was appointed to the Lithgow Zig Zag works, and these two most important undertakings I carried out without assistance to the satisfaction of the Engineer-in-Chief.

I have since had charge of some of the surveys, Clarence to New England, Orange to Dubbo, and Narromine, both via Molong and Ironbarks, and for nearly the last four years I have been Chief Assistant Engineer for Existing Lines.

Trusting you will favourably consider my claims,

I have, &c.,
GEORGE COWDERY.

No. 15.

MR. R. D. STEPHENS AND THE WAGGA WAGGA VIADUCTS.

R. D. Stephens was appointed District Superintendent, 1st November, 1881.
The approaches to the Wagga Wagga Bridge were completed in September, 1880.
The Wagga Wagga Viaduct was opened on 16th January, 1881.

See also Appendix, page 133.

No. 16.

MR. SMITHYMAN'S STATEMENT.

[*To evidence of Mr. Thomas Smithyman.*]

I FIRST knew Mr. J. Helsinger when he was employed riveting the Menangle bridge, about 1862, on piece-work. At that time I was superintending the erection of the iron bridge for the contractors Messrs. Peto, Brassy, and Betts, and it was my duty to see that the whole bridge was faithfully erected.

Mr. Higinbotham and the late Mr. Lacey inspected the work on behalf of the Department.

I afterwards superintended the erection of the Penrith bridge for the same firm, and the whole of that work was put together in the best possible manner. I had no interest whatever in the work beyond seeing that it was properly done. I tapped every rivet on both bridges myself as the men were paid on my certificate. The rivets were also examined by the Government Inspector.

I also fixed several iron bridges between Tourang and Goulburn for Mr. Mark Faviell the contractor. I was the sub-contractor for fixing the superstructure of these bridges, and the whole of the work was well and faithfully executed under the late Inspector Hampshire.

I was the contractor for erecting the superstructure of the Aberdeen bridge under Inspector Morrison, and sub-contractor for the erection of the superstructure of the Bathurst bridge for Mr. Mason, under Inspector Fernley; I was also sub-contractor for the erection of the Wellington bridge for the late Mr. Watkins, under Inspector Maddock.

I was personally engaged in the erection of these three bridges and can vouch that the whole of the work was well and faithfully executed.

I have had thirty years' experience in building iron bridges in England, and in Victoria, and Queensland.

I am aware of the treatment of the iron bridges by the Existing Lines Branch, and I consider that there is no necessity to cut out the rivets in the main booms, and that such treatment is injurious to the bridges.

I do not believe there were any dummy or defective rivets in any bridge erected by me, and I am satisfied that the whole of the iron was of first-class quality, and that the workmanship was also first-class.

20 March, 1883.

THOMAS SMITHYMAN.

No. 17.

MR. A. WILLIAMS REGARDING THE ERECTION OF PENRITH BRIDGE.

Mr. A. Williams to The Engineer-in-Chief for Railways.

Dear Mr. Whitton,

Harbours and Rivers, 110, Phillip-street, 3 April, 1883.

In reply to your note of the 22nd of March, respecting a leading article on the subject of Railway Bridges, and the Penrith Bridge in particular, I may say that no one is in a better position to give you reliable information as to the character of the work in the Penrith Bridge than I am, as I had full charge of the erection of the ironwork from first to last. I was employed for this purpose by Messrs. Peto, Brassey, & Betts, the contractors, and I resided on the work, and followed it through day by day, until it was completed.

You see by the endorsed copies of testimonials that my management was considered satisfactory; and I feel quite sure that any examination that may now be made of the bridge will only prove that I have not forfeited the confidence that was then placed in me. My orders were to carry out the work correctly and faithfully, regardless of cost; but I was urged to carry the work through as rapidly as possible, as the liability of the river to floods was considered a great contingency.

The whole of the work was made and fitted together in London, under Mr. Thos. Smithyman's inspection; and it was by him taken to pieces, marked, and shipped, and he came out with it, and acted as the foreman of the iron-workers all the time at weekly wages.

All the rivets and every requisite was sent out with the plates, bars, &c. The riveting and rimering were done by task-work, but the men were supplied with all rivets and tools, and every rivet was tapped and examined every day. As regards lead rivets, it is not likely that I should buy them in Sydney when I had more iron ones than I could use at the work; I should just as soon have thought of buying silver ones. Some of the iron-work got mixed, and the marks were obliterated, in consequence of its being transhipped on the way out at the Cape, so that we had great difficulty in sorting and arranging it at the work at Penrith; but each little deviation that had to be made did not alter the character of the work, and every matter of this kind was pointed out to Mr. Firth, your District Engineer.

I am, &c.,
ALFRED WILLIAMS.

Mr. S. Willcox to Mr. A. Williams.

My dear Sir,

Southern and Western Railway, Queensland, 20 June, 1867.

In compliance with your request, I have much pleasure in testifying my entire approval of the manner in which you have carried out for me the erection of the iron girders of the Western Railway Bridge over the River Nepean, at Penrith, New South Wales. This work (one of the finest in the Colonies) consists of three spans of 186 feet each, and is adapted for the road and railway.

During the erection of the staging and iron-work you had sole charge, and I am much pleased to state that the work has been well conducted and expeditiously performed.

I am, &c.,
SAMUEL WILLCOX,
Agent for Peto, Brassey, & Betts.

The

The Engineer-in-Chief for Railways to Mr. A. Williams.

My dear Sir, Department of Public Works, Engineer's Office, Sydney, N.S.W., 18 January, 1867.

In reply to your request, I have great pleasure in stating that you had the entire charge, under Messrs. Peto, Brassey, & Betts, of the erection of the timber-staging and wrought iron-work for the bridge over the River Nepean, at Penrith, on the Great Western Railway. The bridge, which consists of three openings of 186 feet each, and 60 feet above the bed of the river, was erected with great rapidity; and so complete were all the arrangements that not one accident occurred, nor was there the slightest check to the progress of the work by a single failure.

I am glad to bear testimony to the energy and ability displayed by you in carrying out this work, which was completed entirely to my satisfaction.

Believe me, &c.,
JOHN WHITTON, M.I.CE.,
Chief Engineer to the New South Wales Railways.

No. 18.

DIFFERENCE BETWEEN THE DESIGN AND THE ERECTION OF BRIDGES.

In consequence of the Commission finding that the drawings of some of the iron bridges did not correspond with the bridges as erected, and that it was therefore necessary to make special measurements of bridges, the following correspondence took place :—

Railway Bridges Inquiry Commission,
Board Room,
Colonial Secretary's Office, 19 December, 1884.

Sir,

I am directed to state that at the last meeting of this Commission it was resolved :—"That the Commission, having found that the bridges over the Wollondilly River (five in number) have not been carried out as shown in the drawings supplied to the Commission, the Engineer-in-Chief for Railways be requested to certify that the following bridges in the west and north have been carried out in accordance with the drawings of those bridges sent to the Commission, or if there is any difference between the design of those bridges and the bridges as erected, to supply the Commission with drawings showing that difference, and with a statement of the reasons for it :—Penrith, Solitary Creek (five bridges), Bathurst, Wellington, Aberdeen, Macdonald River, Peel River, Peel-street, Tamworth."

I am directed also to return to you with this letter the drawings in the possession of the Commission representing these bridges.

I have, &c.,
CHARLES LYNE, Secretary.

John Whitton, Esq., Engineer-in-Chief for Railways.

Railway Bridges Inquiry Commission,
Board Room,
Colonial Secretary's Office, 23 December, 1884.

Sir,

I am directed to request that the informatiom asked for in my letter of the 16th instant be supplied, as far as it relates to the Bathurst and Wellington Bridges, by next Tuesday, the 30th instant, and the information with reference to the other bridges mentioned as early as possible.

I have, &c.,
CHARLES LYNE, Secretary.

John Whitton, Esq., Engineer-in-Chief for Railways.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 24 December, 1884.

Sir,

I have the honor to acknowledge your letter of the 23rd instant, and in compliance with the request of the Commission certify that, to the best of my knowledge and belief, the iron bridges over the River Macquarie at Bathurst and Wellington were carried out strictly in accordance with the drawings previously furnished, and which are now returned.

I have, &c.,
JOHN WHITTON.

The Secretary to the Royal Commission on Railway Iron Bridges.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 19 January, 1885.

Sir,

In reply to your letter of 19th ultimo, having reference to the iron bridges on the railway lines of this Colony, I have the honor to state, for the information of the Bridges Commission, that the following iron bridges have been carried out, to the best of my belief, in strict accordance with the drawings now furnished, viz., Penrith, Solitary Creek (five bridges), Aberdeen, Macdonald River, Peel River, and Peel-street, Tamworth.

I have to express my regret that the correct drawings of the bridges over the Wollondilly River, &c. (five in number), were not in the first instance forwarded to the Commission, but as these bridges have been erected upwards of sixteen years, the fact of any alteration having been made in the details of the girders had escaped my recollection. The strength of the girders, however, was about the same as in the original drawings, and the correct information has since been given to the Commission.

The only drawings of the ironwork of the bridges over the River Peel at Tamworth and the Macdonald River are those now forwarded, and which show the erecting marks, but the details are similar to the end spans of the bridge over the Hunter at Aberdeen.

I have, &c.,
JOHN WHITTON.

The Secretary, Royal Commission on Iron Bridges.

No. 19.

PAPERS RELATING TO THE MENANGLE BRIDGE.

On the 2nd July, 1884, the Commission applied to the Engineer-in-Chief for Railways for all the information recorded in his office relative to the design of the bridge at Menangle, and to the testing of the bridge at the time of opening it for traffic, mentioning the camber and deflection in the centre of the girders and at points of contra flexure. The following papers were received in reply :—

Sir, Department of Public Works, Railway Branch, Engineer-in-Chief's Office, Sydney, 10 July, 1884.

Referring to your letter of 2nd instant, I have the honor to submit the following papers relating to the design, testing, &c., of the railway bridge at Menangle, viz.—

Copy of Inspector Morgan's report, dated 22 May, 1863.
Extract from Mr. Whitton's note-book, dated 29 June, 1863, *re* testing bridge.
Copy of article in *The Engineer* of 18 December, 1863.

The information asked for *re* the camber of this bridge is probably contained in the specification,* which is now before the Commissioner.

The Department has no information respecting the deflection of bridge at points of contra flexure.

I have, &c.,
W. H. QUODLING.

The Secretary to the Royal Commission on Iron Bridges.

* See extract from specification annexed.

MENANGLE

MENANGLE BRIDGE.

Extract from Specification, page 7, *re* camber of Bridge.

"It is intended that each span should have a camber of 2″ to ensure perfect curvature. Throughout each 150 a template must be laid down in the contractor's yard for making up the various lengths, and a platform having the true curve fixed for erection of the girders."

REPORT ON THE DEFLECTION OF MENANGLE BRIDGE.

Memorandum to John Whitton, Esq.

Sir, Great Southern Railway, Engineer's Department, 22 May, 1863.

I beg to inform you that the slack blocks have been struck from under the longitudinial girders between Nos. 1 and 2 openings, Menangle Bridge, which proved very satisfactory, the deflection in the centre of either opening not being more than 0·03 and less in proportion towards the piers or roller plates. The width in the clear of girders was equally satisfactory, the only perceptible difference being in the centre of No. 1 opening, which was ⅛ of an inch narrower after the blocks were struck.

I am, &c.,
W. MORGAN.

EXTRACT FROM ENGINEER-IN-CHIEF'S DIARY FOR 1863.

Monday, 29 June, 1863.

At Menangle testing wrought-iron girders. Box girders for double line span 150 feet.

3 engines on up road stationary, weighing about 110 tons.

Two engines weighing 90 tons, drawing twenty trucks, weighing about 200 tons; total weight, 290 tons.

First opening, deflection in centre $\frac{5}{10}$ of an inch on side dead weighted, on running side $\frac{6}{10}$ of an inch.

Centre opening similarly weighted dead load side $\frac{3}{10}$ of an inch, running side $\frac{4}{10}$ of an inch.

No. 3 opening similarly weighted, deflection dead load side $\frac{6}{10}$ of an inch, running side $\frac{5}{10}$ of an inch.

Permanent set $\frac{1}{10}$ of an inch.

Three engines were placed on up line over each opening and two engines took the waggons, &c., over the down road at a speed of about 25 miles an hour.

JOHN WHITTON.

THE MENANGLE VIADUCT ON THE GREAT SOUTHERN RAILWAY OF NEW SOUTH WALES.

From *The Engineer* of 18 December, 1863.

We promised some time ago to give some details with regard to the Menangle Viaduct, carried out by Messrs. Peto & Co., on the Great Southern Railway of New South Wales, and we now proceed to fulfil our pledge. It was at first intended that the bridge should be of stone or brick piers, with wrought iron girders; but in consequence of Mr. Rhodes demanding what was considered too high a price for ironwork, Mr. Whitton recommended a change in the design, and drawings were made for a timber bridge. Copies of the drawings were about being prepared, when, in February, 1860, disastrous floods occurred, and the rising of the river 5 feet higher than it had ever before risen, necessitated the preparation of fresh designs in order to raise the bridge 7 feet. Shortly afterwards Mr. Rhodes left the colony, and the Railway Department then worked more harmoniously with Mr. Wilcox, who now had the entire charge of the works for contractors.

It was decided that the original designs should be carried out, and that Mr. John Fowler, of London, should act on behalf of the Government of New South Wales in agreeing with Messrs. Peto, Brassey, & Co., in England, as to the price of the ironwork of the bridge, fixed in place, and instructions were sent home to him to that effect; at the same time Mr. Whitton's designs were forwarded to Mr. Fowler, who worked out the strength and thicknesses and superintended the work in England.

The Nepean at Menangle is in summer a mere rivulet of perhaps 40 feet width, but after rains it rises with fearful rapidity; in ordinary wet seasons it is 500 feet wide, and in 1860 it rose 55 feet above the summer level and overflowed the banks for some distance. The level of the rails is 66 feet above the bed of the river, but only 6 feet above the floods of 1860. The distance between the points at which the railway meets the opposite embankment is 1,912 feet.

The ironwork was made at Messrs. Peto & Co.'s works at Birkenhead, and in October, 1861, the whole of the plates and rivets were shipped in two vessels at Liverpool; one of the vessels arrived in Sydney in the following April, but the other vessel, which contained the ironwork for the first and third spans, was unfortunately wrecked shortly after leaving the Mersey; the loss was immediately replaced, and the vessels with the replaced plates arrived in Sydney, one in October and the other in December, 1862. The plates on being discharged from the ships were placed on trucks and taken along the tramway and the railway to within a few yards of their destination. It was about the middle of October that the fixing of the ironwork commenced; it was finished in July, and therefore the work has been done in little more than six months.

Consequently, besides the tubular bridge across the river, it was necessary to construct a timber viaduct upon either bank; that on the northern bank is 980 feet in length, and that on the southern 440 feet. The iron girders rests upon four stone piers, the proportions of which were designed with a regard to the weight they would have to sustain and the concussion from timber and debris brought down by the floods. Their extreme dimensions at the base are 80 feet by 20 feet, tapering upwards to 52 feet by 12 feet; they are oval in shape and terminate at the top with an impost course. They are not entirely solid, but are constructed with vertical openings, by which a large quantity of masonry is saved without any diminution of strength. Some difficulty occurred in finding the stone for the piers, that obtained from the quarry first opened proving unfit for the work. Subsequently a sandstone quarry was discovered on the bank of the river, about a mile and a quarter from the spot, and a railway was at once laid between the quarry and the bridge; being on an easy incline the loaded trucks ran down without any traction. A temporary staging was carried across the bed of the river, upon which double rails were laid, and by means of an endless rope the loaded trucks carried down the blocks of stone to the piers—their descent on the one line exerting the force for bringing up the empty trucks on the other.

The first pier stands on the northern bank and was erected without much trouble; but great difficulty was experienced in obtaining foundations in the bed of the river for the middle piers. Repeated and discouraging obstacles were encountered in sinking for foundation for the third pier; a vast quantity of debris and soil had to be removed and an immense coffer-dam to be constructed. Steam-engines were employed night and day to pump out the water, but it appeared impossible to prevent its inflow. To give an idea of the amount of labour and anxiety which the construction of the third pier involved, we may state that a depth of 28 feet below the water level had to be excavated to obtain the foundation. The fourth pier, which is on the southern bank, does not rest upon the rock, but upon a timber platform fixed upon parallel rows of bearing and sheathing piles; the former were driven down to the rock at depths of from 45 feet to 60 feet; the latter were only driven about 8 feet below the platform—their use being to prevent the sand from being washed away from around the piles. On the top of the bearing piles longitudinal and transverse sills were placed, covered with two layers of diagonal planking, and upon these the masonry was laid. The blocks of stone were cut at the quarry in 16-inch courses and dressed. The total amount of masonry, brickwork, and concrete contained in the piers is 7,300 cubic yards. Before the masonry of the fourth pier was finished a commencement was made with the fixing and riveting of the iron plates. These, as we have said, were conveyed by the tramway and railway from the ship's side to the vicinity of the bridge. As temporary supports for the girders while being fixed, three bays of piles were driven between each pier, and the staging brought to the required level.

The viaduct to the northern pier having been completed, a continuous line of rails was carried upon the staging between the piers, and by means of travelling-crabs, worked by steam, the plates were picked up and carried to their intended places, where they were properly fixed and riveted. In describing the shape of the bridge we may say that it consists of two parallel, upright, longitudinal, tubular girders, 25 feet apart, joined at their lower extremities with cross-girders, the shape being that of the letter U with corners squared. There are three spans of 150 feet each in clear, and the girders are riveted over the piers which, being 12 feet thick and with a bearing at each end, would make a continuous girder of 486 feet.

A section of either longitudinal girders presents one oblong upright compartment, 9 feet in length by 20 inches in width, with two small compartments below called bottom boxes, each about 18 inches square, and with two boxes above of similar size. The entire height of either longitudinal girder is 12½ feet, the top and bottom boxes projecting beyond the sides of the girders. The plates which are mostly half-inch in thickness are riveted together with angle and T shaped pieces, in addition to which there are inside the girders, at invervals of 3 feet, cross-girders above and below, leaving the centre open for a space of about 2 feet, so that until the pilasters are fixed a person can see from one end of the tube to the other. The cross or kelson girders are not tubular but merely plated girders; they are about 25 feet in length and are placed 3 feet apart, their ends being riveted to the bottom boxes. Ironbark close planking is laid above the girders the entire length of the bridge; a single line of rails is laid along the eastern side, the western side being available for road traffic in the event of its being required for that purpose. The ironwork contained in the girders amounted to 1,050 tons, and there were no less than 245,000 rivets used. The two viaducts, of which the approaches to the bridge upon either bank consist, are formed of bays of four upright piles and two battering piles, fixed with walings and braces, with openings of 25 feet. The superstructure consists of double longitudinal girders above the corbels, with transverse joints between; the planking is laid upon the upper girders, and above this is the ballasting and permanent-way. In the construction of these viaducts and in the joists and planking of the bridge, 76,000 cubic feet of timber were used. The entire cost of the bridge, including the approaches, has been about £80,000. At the official trial a test was made of the strength of the northern timber viaduct, by means of a rod attached at the top to a girder in the centre of one of the openings, and which pointed to a gauge resting on the ground underneath. A heavy train was driven down and up at full speed along the viaduct, and the deflection in each case was found to be only three-eighths of an inch. Subsequently the testing of the more important and interesting part of the structure took place. For the purpose of ascertaining the amount of deflection wire had been stretched close to each of the main girders; its ends were attached to posts resting on the tops of the end piers and kept tight by heavy weights. Along the side of either girder were a number of cards marked off with eights of an inch, and the elevation of the wire on any of these scales indicated the deflection of the girder at that part. A theodolite was also fixed on the parapet of one of the piers, from which observations were taken during the testing. The ordinary traffic along the bridge will be upon a single line of rails, but for the purpose of applying the most severe test that could be obtained a second line was laid down, and five of the heaviest locomotive-engines on the line were brought to the spot. Three of these engines coupled together were placed in succession over each of the openings upon one line of rails, and while there the other two engines, drawing a train loaded with iron, weighing about 200 tons, were driven at full speed on the other, the total weight at one time on the span being not less than 290 tons. The rapid motion of the long heavy train between the hollow tubes produced a loud rumbling noise and also considerable vibration, but, as will be seen from the following particulars, the deflection of the girders was very slight. On the first (northernmost) opening the deflection was on the up side half an inch, and on the down side three-sixteenths of an inch; on the centre opening the deflection was on the upside three-tenths of an inch, and on the down side four-tenths of an inch; and on the third opening on the up side the deflection was six-tenths of an inch, and on the down side five-tenths of an inch. These results were severally confirmed by the theodolite.

Afterwards the five engines, coupled together with all the trucks, were run over the bridge, and the total deflection was the same as with the previous experiment—six-tenths of an inch. Upon the weights being taken off it was found that the girders had settled down a little more than a tenth of an inch. We need scarcely state that, as compared with structures of the same character and dimensions that have been tested in England, the deflection is extremely small. The experiments satisfactorily demonstrated the immense strength of the girders.

No. 20.

THE WOLLONDILLY BRIDGES—ALTERATION IN DESIGN.

In the evidence of Mr. Whitton, as will be seen by questions 2122 and 2123, reference is made to an alteration in the construction of the Wollondilly Bridges at the first and second crossings as compared with the designs for these bridges, and on this subject the following letter was received from the office of the Engineer-in-Chief for Railways:—

IRON BRIDGES, CONTRACT No. 7.

Picton to Goulburn.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 16 September, 1884.

Sir,

In further reference to your letter of 2nd instant, I regret that the original drawings of the Wollondilly Bridges were forwarded in error, and that a slight alteration in design was forgotten.

The working drawings cannot be found, but I forward, for the information of the Commission, a copy of Mr. Fowler's letter of 26th June, 1866, describing the alteration in question, and a statement of the sectional areas of ironwork of the bridges, for 60ft. and 130ft. spans.

I have, &c.,
W. H. QUODLING.

The Secretary, Royal Commission on Iron Bridges.

[*Enclosure.*]

2 Queen Square Place, Westminister, S.W., 26 June, 1866.

My dear Sir,

Further tracings (Nos. 4 and 5) have been duly received through Captain Mayne by this mail for the wrought iron bridges on No. 7 contract; since my last to you on the subject I have to inform you that the contract has been let by Mr. Russell to Messrs. De Bergur & Co. for the whole quantity, and the plates for the Barber's Creek Bridge are nearly all delivered and tested; I am glad to say with very good results the Rhymney Company are rolling the plates, and De Bergur & Co. are a firm of such reputation that I think we have no fear of their turning out anything but first class work.

I enclose the calculations for the 60ft. spans, together with a diagram of strains and proposed sections at top and bottom; these differ a little from the diagram sent home, but I do not think the weight of the girders will be increased.

I also enclose the calculations for the cross girders by the plans received here, which give the height of rail, 7 inches above the floor; I see it is intended to spike the chairs down to the longitudinal. I would suggest that the chairs be spiked down *between* the cross girders so that the 14×7 ironbark timber may distribute the load between two girders or else *every* time the train crosses the bridge the maximum strain will come on them if the chairs are fastened down over the girders.

I would also suggest a slight alteration in your mode of laying the floor (as per tracing) so that you can get at your longitudinal sleepers for inspection and renewals without removing the planking; if you approve of this you will perhaps instruct me through Captain Mayne as to procuring the small fangs for attaching the plank to the cross girders.

As regards the 130ft. openings, finding that the cells would be so difficult to put together by reason of the very small space left inside, I have ventured to alter the form of the top table of the girder and enclose a tracing showing what I propose, and which will, I think, give equal stiffness, and enable your men at all times to paint and examine; the exact section indicated may not be adhered to because of joints, &c., but we will keep to it as closely as we can. I do not propose to differ from it in any other respect and hope you will approve of it. Will you kindly say by next mail, after receipt of this, whether the arch angle iron shall be supplied, as you had in the previous girders sent you, and which is shown in red lines; it gives a nice appearance, and relieves the effect of the elevation of a plate girder.

I am, &c.,
JOHN FOWLER.

John Whitton, Esq., Engineer-in-Chief, Railway Department, Sydney.

THE

No. 21.

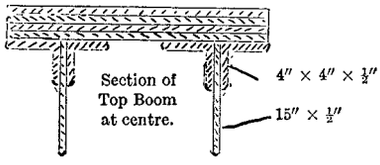
THE WOLLONDILLY BRIDGES—CAMBER IN GIRDERS.

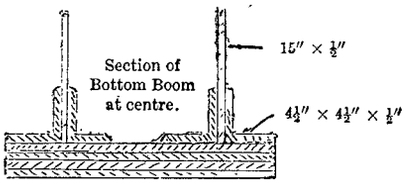
	Up side.	Down side.
Barber's Creek crossing :—		
First span	— ·04	— ·01
Second „	— ·08	— ·06
Third „	+ ·05	— ·01
Fourth „	— ·05	— ·04
Fifth „	— ·04	— ·01
Wollondilly, first crossing :—		
Second 60 ft. span	+ ·04	+ ·06
130 ft. span	.....	.....
Wollondilly, second crossing :—		
First 60 ft. span	+ ·05	+ ·06
Second „	+ ·07	+ ·06
Third „	+ ·02	+ ·07
Fourth „	+ ·06	+ ·02
Fifth „	+ ·05	+ ·02
Sixth „	+ ·05	+ ·06
130 ft. span	.....	.....
Mulwarree Creek viaduct :—		
First span	+ ·08	+ ·05
Second „	+ ·04	+ ·04
Third „	+ ·01	+ ·04
Fourth „	+ ·04	+ ·06
Fifth „	+ ·08	+ ·02
Sixth „	+ ·06	+ ·05
Seventh „	+ ·03	+ ·04
Eighth „	+ ·09	+ ·05
Ninth „	+ ·07	+ ·08
Tenth „	+ ·06	+ ·06
Eleventh „	+ ·08	+ ·05
Twelfth „	+ ·08	+ ·06

No. 22.

BRIDGES OVER PEEL AND MACDONALD RIVERS.

Particulars supplied by Mr. W. B. Wade.





Gross effective section.

		sq. in.	
Section at 60 ft. from centre.	2 side plates 15″ x ½″ (say ½ effective)	= 7·5	
	4 angle iron 4″ x 4″ x ½″	= 15·0	
	2 flange plates, 33″ x ½″	= 33·0	
			55·5
Section at 40 ft. from centre	Brought forward	55·5	
	1 plate, 33″ x ½″	= 16·5	
	1 „ 33″ x ⅜″*	= 12·3	
			84·3
Section at centre and 20 ft. from centre.	Brought forward	55·5	
	2 flange plates 33″ x ½″	= 33·0	
			88·5

Net effective section.

		sq. in.	
Section at 60 ft. from centre.	2 side plates 15″ x ½″ (say ½ effective)	= 7·5	
	4 angle-iron 4″ x 4″ x ½″ less rivet holes	= 13·0	
	2 plates, 33″ x ½″ less rivet holes	= 28·0	
			48·5
Section at 40 ft. from centre.	Brought forward	48·5	
	1 plate 33″ x ½″ less rivet holes	= 14·0	
	1 „ 33″ x ⅜″ less rivet holes*	= 10·0	
			72·5
Section at centre, and 20 ft. from centre.	Brought forward	48·5	
	2 plates, 33″ x ½″ less rivet holes	= 28·0	
			76·5

W. B. WADE.

* This plate ½″ thick in Macdonald River Bridge.

No. 23.

SAMPLES OF RIVETS FROM PENRITH AND MENANGLE BRIDGES.

SAMPLES of rivets from the railway bridges at Penrith and Menangle were forwarded to the Commission from the office of the Engineer-in-Chief for Railways, with the following correspondence :—

Department of Public Works, Railway Branch, Engineer-in-Chief's Office, Sydney, 12 August, 1884.

Sir,

I have the honor to forward, for the information of the Royal Commission, two reports, furnished by Inspector Ewing, of this department, on sample rivets brought from the sites of the railway bridges at Penrith and Menangle, same being samples from rivets cut out of these bridges and of rivets supplied for renewals by the Existing Lines Department respectively.

Accompanying the reports are the cut and broken rivets, showing cross section, numbered and labelled as per accompanying list.

I have, &c.,
W. H. QUODLING.

The Secretary to Royal Commission on Iron Bridges.

Penrith

Penrith Bridge.

Nos. 1, 2, and 3, ⅞″ rivets, cut out of bridge.

Nos. 4 and 5, ⅞″ rivets, supplied by Existing Lines Department for renewals.

Nos. 6, 7, 8, and 9, 1″ rivet, " "

Menangle Bridge.

A B and C, ⅞″ rivets, supplied by Existing Lines Department for renewals.

D, 1″ rivet " "

Penrith Bridge.

REPORT *re* sample of rivets (old and new) brought from site of railway bridge, Penrith.

Nos. 1, 2, and 3 are ⅞″ rivets, and have, I think, been cut out of the bridge; have since been cut and broken, showing section of iron, which is excellent, giving long tenacious fibre, with good lustre, two having only about 5 % crystal.

Nos. 4 and 5 are also ⅞″ rivets, similar, I suppose, to those used, replacing ones condemned. No. 4, cut and broken, shows a strong tenacious iron, with good fibre and lustre—a good specimen of rivet iron. No. 5, cut and broken, show section of very inferior iron—30 % of a coarse crystalline nature, 70 % fibrous, but short and dark, with no tenacity; broke short second blow.

No. 6, a 1″ rivet, cut and broken, shows a good sample of rivet, strong and tough, with good colour and long tenacious fibre.

No. 7, a 1″ rivet, cut and broken, 95 % fibrous, but short and dark, with no tenacity, broke short second blow.

No. 8, a 1″ rivet, cut and broken, 50 % crystalline, 50 % fibrous, but, even when bent and broken with the grain, gave no tenacity, breaking short off.

No. 9, a 1″ rivet, cut and broken, like the rest—the worst specimen of the lot; all the nature of the iron seems perished, and if the term rotten can be applied to iron it would surely be in keeping with this sample, for it broke "short as a carrot" first blow.

The original rivets give 95 % of really good chain or rivet iron, with only 5 % hard crystal. Renewing rivets give 33·3 % of good rivet iron and 66·6 % iron of very inferior quality, as per samples.

Respectfully yours,
ROBERT EWING.

6th August, 1884.

To the Engineer-in-Chief.

Menangle Bridge.

Report on sample rivets, cut and broken, showing cross sections of same.

Sir,

Herewith find the results of above.

A B C, ⅞″ rivets; D, a 1″ rivet.

A, cut and broken, shows good sample of iron, tough and fibrous, about 5 % crystalline; took five good blows to break it.

B, cut and broken, showing cross section, 50 % crystalline, portion of same firm and good, 50 % fibrous, but dark and short; no tenacity, broke off first blow.

C, cut and broken, showing section of inferior iron, 50 % coarse crystal, 50 % lustreless, dark and short in fibre; broke lean away first blow.

D, a 1″ rivet, cut and broken, showing section of badly refined iron, 80 %, with crystal as coarse No. 2 pig iron, 20 % good tough lustrous iron; broke short first blow.

19th July, 1884. ROBERT EWING.

To the Engineer-in-Chief.

No. 24.

BOTTOM BOOMS OF PENRITH BRIDGE.

DURING the inspection by the Commission of the Penrith Bridge the cells of the bottom booms were found in such a state of dirt that it was impossible for anyone to go through them. A letter was therefore written to the Engineer for Existing Lines requesting him to have the booms cleaned out, and the following reply was received:—

Sir, Railway Department, Office of Engineer for Existing Lines, Sydney, 20 June, 1885.

Referring to your letter of the 8th instant, requesting that the bottom booms of the Penrith Bridge may be swept and cleaned for inspection by the Railway Bridges Inquiry Commission, I have to inform you that the work is now in hand, but to do it thoroughly will take about four weeks, as the cleaners have to travel as much as half the length of the viaduct to get the dirt out. Otherwise the booms are ready to be inspected.

I am, &c.,
GEO. COWDERY,
per G. W. LANDER.

The Secretary Railway Bridges Inquiry Commission.

No. 25.

No. 25.

PENRITH BRIDGE.

INSPECTION inside of Main Girders, by a member of the Commission.

Division into sections at flange plate joints.	Through the middle cell of the upside girder. Starting from Sydney end.	Notes.	Plates in bottom pile of top flange.	Plate thickness in 32nds of inch.	Cover plates in plate joints, lower pile of top flange.	Notes and remarks, small top cell.	Through outside cell in top boom of upside girder. Starting from Sydney end.
1	4 blind holes, 2 dummies in corners, 10 loose rivets in top boom.	Dummy rivets over T irons generally (about ⅓ total number), after 15 cross girder attachment rivets nearly all nobbled, too small in nobbled end, very small average loose. Rivets in diaphragms and T irons many loose, most in second half girder.	3—3/16″	9	5/16″ x 2′ 8″	All central web or stringer rivets are nobbled. Spaces given in curved plates and side L joints are what they are open on the face and some way in, side joint liners are tapered down to nothing.	
2	Stay rivets bad generally, 5 flange rivets vibrating.		3—¼″	12	,, ,,		Nobble-headed rivets in vertical stringer.
3	Stay rivets loose, 8 not up in flange.		3—¼″	12	,, ,,		Fair average riveting, not quite up at curved plate.
4	Stay rivets bad, 5 rivets vibrating, 4 loose.		2—5/16″ + ⅜″	16	⅜″ ,,		L iron ⅛ off curved plate.
5	Stay rivets loose		2—⅜″ + ¾″	19	,, ,,		Some small packings under curved plate and stringer, average good riveting.
6	2 dummies over T iron, 4 loose flange rivets.		3—½″	24	,, ,,		Whole length small 4″ x 4″ x ¾″ washers between L iron and curved plate, 2 high on outside.
7	Stay rivets loose		3—9/16″	27	,, ,,		About 9 ft., same as last.
8	8 rivets loose		3—9/16″	27	,, ,,		10 ft. of ¼″ space at rivets, side L iron to curved plate.
9	Cross girder rivets small heads ...		3—½″	27	,, ,,		Liners in lengths ⅜ spaces alternately, ½″ taper liners and small washers, L iron on bottom pile badly off.
10	3 cross girder rivets without heads, 4 bad rivets bottom flange, vibrating rivets in both flanges.		3—½″	24	,, ,,		Unfilled spaces ¼″ x 9′, rivets loose, crooked, not close.
11	Rust in bottom 2 cross girder rivets, no heads; cross girder rivets, small heads.		⅜″ + 2—7/16″	24	,, ,,		
12	Dummies over T iron, 8 loose rivets		⅜″ + 2—7/16″	20	⅜″ x 3′ 4″		Rivets in top flange plate covers good throughout.
13	4 bad rivets in joint 11–12, 2 dummies.		3—5/16″	15	,, ,,		Well renewed.
14	4 bad rivets in flange joint, 4 dummies over T iron, 4 cross girder rivets no heads.		3—¼″	12	,, ,,		Dummies bottom flange.
15	Joint between 14–15, 10 bad rivets, 12 keyhole rivets top web to L iron, 4 dummies over T iron.		3—¼″	12	7/16″ ,,		Short liners in crown joint, 18 holes open at top side.
16	All dummies over T iron, T iron not close, 4 key-holed cross girder rivets.	.....	3—5/16″	15	,, ,,		2 bad holes and blanks L iron stringer to bottom pile, 4 bad holes at top, 12 blank at bottom outside web.
17	4 dummies on top web outside, T iron not close cross girder.	Damage by rust; does not require renewal of rivets or plates.	3—7/16″	21	½″ ,,		Liner.
18	4 dummies on top outside web ...		2—½″ + 9/16″	25	9/16″ ,,		Work generally better.
19	.....		3—11/16″	33	,, ,,	.....	Spaces chiefly at crown over middle web, lined at short intervals.
20	T irons not home across girders, 5 rivet holes blank in bottom flange.		3—11/16″	33	,, ,,	The bottom pile looks better above than underneath. The worst rivets are those that were carried into small cells at erection.	
21	2 cross girder rivets at bottom no heads.		2—½″ + 9/16″	25	½″ ,,		
22	.....		3—7/16″	21	7/16″ ,,		Work better.
23	Bad rivets outside web		3—5/16″	15	,, ,,		
24	Rust very bad on bottom flange...		3—¼″	12	⅜″ ,,		
25	.....		3/16″ + 2—¼″	11	,, x 2′ 8″		
26	3 blind holes in plate, 1 loose diaphragm at joint 26–27.		3/16″ + 2—¼″	11	5/16″ ,,		Work close.
27	4 rivets at edge cover plate not up by ⅛″, 12 key-holed rivets, web top, 6 each side.		3—¼″	12	,, ,,		Spaces between L iron and curved plate filled at pretty close interval.
28	3 bad rivets		3—5/16″	15	⅜″ ,,		With taper liners; new rivets put in for repair are good.
29	.....		3—5/16″	15	,, ,,		
30	.....		3—5/16″	15	,, ,,		
31	12 bad in flange joint, 3 bad headed cross girder rivets.		2—¼″ + 3/16″	11	5/16″ ,,		
32	Dummies over T irons bad, heads of rivets rusted.	.....	3/16″ + 2—¼″	11	,, x 3′ 4″		
33	.....	.....	3—3/16″ + 2—¼″	11	⅜″ ,,		
34	.....	.....	3/16″ + 2—¼″	11	,, ,,		
35	.....	.....	¼″ + 2—5/16″	14	7/16″ ,,		
36	.....	.....	5/16″ + 2—¾″	17	,, ,,		
37	Joint between 37 and 38 10 blind holes, diaphragm loose.	.....	3—7/16″	21	½″ ,,	.....	
38	.....	.....	2—½″ + 9/16″	25	9/16″ ,,	.....	
39	.....	.....	⅛″ + 2—11/16″	32	,, ,,	.....	Large quantity blank and key holes in bottom pile and outside web L iron to bottom pile.

Division into sections at flange plate joints.	Through the middle cell of the upside girder. Starting from Sydney end.	Notes.	Plates in bottom pile of top flange	Plate thickness in 16th of inch.	Cover plates in plate joints, lower pile of top flange.	Notes and remarks, small top cell.	Through outside cell in top boom of upside girder Starting from Sydney end.
40	Flange joint 40 and 41 5 holes empty, 1 blank in a cross row, T iron $\frac{1}{8}''$ off at cross girder.	.....	$\frac{5}{8}'' + 2-\frac{11}{16}''$	32	$\frac{9}{16}''$ x 3′ 4″	.....	
41	.....	.....	$\frac{9}{16}'' + 2-\frac{1}{2}''$	25	$\frac{1}{2}''$,,	.....	
42	Flange joint between 42 and 43, 17 blind holes, omitting 17 rivets one side of joint.	.....	$3-\frac{5}{16}''$	15	$\frac{7}{16}''$,,	.....	
43	.....	.....	$2-\frac{5}{16}'' + \frac{1}{4}''$	14	,, ,,	.....	Bad plating in bottom pile, riveting fairly good.
44	Flange joint between 43 and 44, 6 rivets out lengthwise and 5 across.	.....	$\frac{3}{16}'', 2-\frac{1}{4}''$	11	$\frac{3}{8}''$,,	.....	
45	1 key-holed flange rivet, 12 bad rivets, top of web, each side.	.....	$3-\frac{5}{16}''$	15	,, x 2′ 8″	.....	
46	Joint between 46 and 47, 5 rivets omitted.	.....	$2-\frac{3}{8}'' + \frac{3}{16}''$	15	,, ,,	.....	A few lengths of L iron of less "splay" than the rest, top outside web to curved plate making liners more taper, and not so good.
47	.....	.....	$2-\frac{7}{16}'' + \frac{1}{2}''$	22	,, ,,	.....	
48	.....	.....	$1-\frac{1}{2}'' + 2-\frac{9}{16}''$	26	,, ,,	.....	
49	Flange joint 49–50, 11 blind holes, 12 blind holes, 6 each side, at web top.	.....	$1-\frac{1}{2}'' + 2-\frac{9}{16}''$	26	,, ,,	.....	Needs no further repair.
50	.....	.....	$2-\frac{9}{16}'' + \frac{1}{2}''$	26	,, ,,	.....	Plating astray and blank holes.
51	.....	.....	$2-\frac{9}{16}'' + \frac{1}{2}''$	26	,, ,,	.....	
52	.....	.....	$\frac{1}{2}'' + \frac{7}{16}'' + \frac{9}{16}''$	24	,, ,,	.....	
53	Cross girder rivet heads too small	.....	$\frac{1}{2}'' + \frac{7}{16}'' + \frac{9}{16}''$	24	$\frac{5}{16}''$,,	.....	
54	.....	.....	$3-\frac{5}{16}''$	15	,, ,,	.....	
55	Diaphragm rivets bad.....	.....	$2-\frac{1}{4}'' + \frac{3}{16}''$	11	,, ,,	.....	
56	.....	.....	$2-\frac{3}{16}'' + \frac{1}{4}''$	10	.....	.....	

No. 26.

WELLINGTON BRIDGE—ALLEGED SETTLEMENT OF EAST PIER.

Mr. W. H. Quodling to The Secretary to the Royal Commission on Railway Iron Bridges.

WELLINGTON BRIDGE.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 6 January, 1885.

Sir,

I have the honor to forward, for the information of the Royal Commission, copies of official reports by Mr. G. C. Clark, District Engineer, dated 18th and 25th June, 1881, respectively, relating to an alleged settlement in the Wellington Bridge cylinders in 1881.

I have, &c.,
W. H. QUODLING.

Mr. G. C. Clark to The Engineer-in-Chief for Railways.

Wellington, 18 June, 1881.

Sir,

I have the honor to report there is no sign of a settlement in the Wellington Bridge cylinders. The levels taken give exactly the same result after a week of exceptionally heavy traffic, which has included the constant running of the ballast train, and a number of double goods trains with two locomotives to each.

I unfortunately did not take a set of levels over the road immediately on its completion, and before the traffic had commenced, and as most of the levellings during the progress of the works were done in company with Mr. Warren, the entries were not on every occasion booked or entered in the same book.

Mr. Warren's book, which had been taken to Sydney by Mr. Watkins, could not be obtained for a few days, and it contained the levels taken to check the tops of the cylinders in August, 1880, and these levels were taken from the cylinders of No. 4 pier, it being the first bottomed, and I adopted it as the one to complete the remainder of the work from. At this time it showed we had got the cylinder of No. 1 pier decimal ·14 too low, and I instructed that the work should be regulated, so as to absorb any little difference in the levels of the cylinders.

What gave rise to a report of a settlement was Inspector Hollis applying for packing under the rails on the bridge, and Mr. Cowdery came up to Wellington immediately, arriving here on the Sunday morning; but I did not know he was in Wellington, or anything about a supposed settlement in the bridge until Monday morning, when I immediately examined the work, and pointed out the apparent settlement was due to the road being lifted too much on the approach to the bridge, and that it was not consistent to suppose a settlement had taken place when only one of the bearings of the rails was off the timber; and that, if a settlement had taken place, it could only be expected that if the rails did originally bear on the timbers that the rails would have followed with the girders and cylinders, or that more than one bearing would be off.

I went under the bridge and pointed out that the right-hand cylinder was low; but in carrying out the superstructure the work was made transversely level for the road, and the levels on the road only show decimal ·02 low on the right-hand side, and this is due to the bearings being cut too deep, and it is only one of the bearings on this side, and near the change of camber, from the plate girders to the lattice girders, which change was made $\frac{3}{4}$ of an inch, and still shows the same.

From the conversation that took place at the time I did not anticipate you would be informed of what was only a supposition on the part of Inspector Hollis, and also, not having a set of levels obtainable at the moment, that I could positively identify with the work, I thought it better to wait and prove if any settlement was taking place.

I have, &c.,
GEO. C. CLARK.

Memo.

Memo. from Mr. G. C. Clark to The Engineer-in-Chief for Railways.

Government Railways, Wellington Station, 25 June, 1881.

I HAVE the honor to report there is no sign of any settlement in the Wellington Bridge cylinders. We have had another week of very heavy traffic, and the levels are exactly the same as those taken on the 13th and 18th instants, and show no alteration whatever since the bridge was built.

GEO. C. CLARK.

Memo. from Engineer for Existing Lines to the Royal Commission on Railway Bridges.

Gentlemen, 19/8/85.

I find, on referring to my level-book, I connot supply you with a section right over the Wellington Bridge, as I only took the east abutment and the next two piers.

On June 12th, 1881, No. 1 pier, on right side, was below the abutment	·17
And on April 25th, 1883	·245
	·075 lower.
June 12th, 1881, left side	·05
April 25th, 1883, do	·1025
	·0525 lower.

No. 2 pier is 0·03 higher than the abutment.

GEORGE COWDERY.

No. 27.

MR. R. D. STEPHENS AND THE WAGGA WAGGA VIADUCTS.

See also Appendices, page 125.

[*To evidence of Mr. R. D. Stephens.*]

Mr. R. D. Stephens to The Secretary Railway Bridges Inquiry Commission.

Sir, Goulburn, 26 August, 1884.

In reply to your letter of the 13th instant, asking me to examine my printed evidence, I beg to inform you that I find it very much as I gave it; in fact I believe that it is perfectly correct.

But there are two salient points which do not, in evidence, come out sufficiently clear. In question No. 199 I am asked, "Have you made any calculation in connection with this bridge. How did you calculate the strain and on what length of span? I answer, "20 ft., that is allowing a full distance for the corbels."

In all these calculations I treated the question theoretically and not practically.

Theoretically the corbels are perfectly rigid immovable projections absolutely reducing the span from 29ft. 6in. to 20ft., or more correctly speaking 19ft. 6in.

Practically for a moving load they do nothing of the kind. On the Victoria side they go to the length of having no corbels at all; at all events none of the numerous and important bridges between the river Murray and Wodonga have any corbels.

I, personally, do not go so far as that. I consider that corbels of a moderate length are of use, but I consider that corbels beyond the length requisite to make a proper joint for the two overlying girders are a detriment rather than a benefit.

And, secondly, I wish my answers to questions Nos. 252, 253, 254, and 255 to be specially borne in mind.

I may at once state that a far stronger and safer structure could have been constructed by taking the material from the outside girders, and putting it under the road-bearing girders.

One outside girder on each side is quite sufficient.

I have, &c.,
R. D. STEPHENS.

From District-Engineer Stephens to Secretary of the Bridges Inquiry Commission.

Wagga Wagga Viaducts.

Sir, Goulburn, 15 July, 1885.

Yours of the 17th ultimo received. I ought to have replied to it sooner, but continuous press of very important business prevented my doing so. The difference in cost between 26-ft. openings (the usually accepted span) and 29 ft. 6 in. openings is, of course, a matter of conjecture and estimate, but we have sufficient data to enable us to arrive at something very near the truth.

I attach detailed list, and on reverse of page I attach abstract.

R. D. STEPHENS.

Wagga Wagga Viaducts.

Estimated increase in cost, supposing 26-ft. spans, in the first instance, had been adopted, instead of the existing 29 ft. 6 in. spans.

Please see attached detailed list:—

	£	s.	d.
Viaduct No. 1—15 extra piers required	712	7	5
,, ,, 2— 9 ,, ,, ...	396	7	6
,, ,, 3 but very short, nothing more required	.....		
,, ,, 4—10 extra piers required	464	4	2
,, ,, 5— 8 ,, ,, ...	377	17	9
	£1,950	16	10
Deduct 3 ft. on each existing corbel; they now are 10 ft. in length, the 3 ft. extra, and more than useless length now giving us perpetual trouble, 3, 756 cub. ft. at 5s.	£939	0	0
	£1,011	16	10
Even say.....	£5,000	0	0

This £5,000 is certainly worth the additional security or rather *vice versa*. It must also be remembered that I have accepted the superstructure to be the same in both cases. Of course every practical man knows that it is far easier and far cheaper to procure a short stick than a long stick, and the handling and the accurately fixing of the greater length also adds to the cost.

In the preceding estimate I have not taken this into consideration, nor have I deducted for the extra ironwork required in the additional length of span.

Altogether I feel quite assured that although officially I say £5,000 extra cost, no money value whatever was in the first instance gained by increasing the recognized length of span. This is financially wrong, but what I consider to be of far greater importance, it is professionally wrong. We never feel absolutely safe; even now you can distinctly feel the wavy motion over each span. There is a greater likelihood of a serious undetected flaw in a long stick than in a short stick.

Weight of loaded engines and tenders, at present working this length of line, about 60 tons. Some of the western engines in steam weigh 76 tons. The additional 16 tons would, I believe by some, be considered to be a rather testing load.

But even granting that the additional number of spans would have cost £5,000 (which I privately deny) this £5,000 would have by this time been nearly recouped by the less necessity for continuous screwing up.

I have, &c.,
R. D. STEPHENS.

Incidentally I may mention that I do not see the necessity for the existing extraordinary number of spans, but that is a point which does not directly affect the present question, though it may indirectly affect your recommendation.

Mr.

Mr. Inspector Chapman to District-Engineer Stephens.

Sir, Goulburn, 4 July, 1885.

Wagga Wagga Viaducts,—additional estimated cost presuming the above has been constructed with 26 ft. bays.

No. 1 Viaduct—15 extra bays.

ft.	in.				£	s.	d.
300	0	cube.	15/20′ 12″ x 12″. Sills, labour and material,	at 4s.	60	0	0
232	6	,,	15/15^{6}′ 12″ x 12″. H. stocks, ,,	at 4s.	46	10	0
420	0	,,	60/7′ 12″ x 12″. Corbels, ,,	at 5s.	105	0	0
182	6	,,	30/22′ 9″ x 5″. Braces, ,,	at 3s. 8d.	33	19	2
187	0	,,	30/20′ 9″ x 5″. Walings, ,,	at 3s. 6d.	32	14	6
1200	0	run...	60/20′. Rd. piles, ,,	at 2s.	140	0	0
yds.	ft.	in.					
187½	0	0	Cube excavating, ,,	at 2s.	18	15	0
75	0	0	Cube concrete, ,,	at 26s. 1d.	97	16	3
6,090 lbs.			Ironwork, ,,	at 7d.	177	12	6
			Total	£	712	7	5

No. 2 Viaduct—9 extra bays.

ft.	in.	cube.			£	s.	d.
180	0	,,	9/20′, 12″ x 12″. Sills, labour and material,	at 4s.	36	0	0
139	6	,,	9/15^{6}′, 12″ x 12″. H. stocks, ,,	at 4s.	27	18	0
252	0	,,	36/7, 12″ x 12″. Corbels, ,,	at 5s.	63	0	0
101	3	,,	18/18, 9″ x 5″. Braces, ,,	at 3s. 8d.	18	11	3
96	0	,,	18/17, 9″ x 5″. Walings, ,,	at 3s. 6d.	16	16	0
576	0	run.	36/16. Rd. Piles, ,,	at 2s.	57	12	0
yds.	ft.	in.					
112½	0	0	Excavating, labour and material,	at 2s.	11	5	0
45	0	0	Concrete, ,,	at £1 6s. 1d.	58	13	9
3,654 lbs.			Ironwork,	at 7d.	106	11	6
				£	396	7	6

No. 3 Viaduct would not take extra bay.

No. 4 Viaduct—10 extra bays.

ft.	in.	cube.			£	s.	d.
200	0	,,	10/20, 12″ x 12″. Sills, labour and material,	at 4s.	40	0	0
155	0	,,	10/15^{6}′, 12″ x 12″. H. stocks, ,,	at 4s.	31	0	0
280	0	,,	40/7, 12″ x 12″. Corbels, ,,	at 5s.	70	0	0
137	6	,,	20/22, 9″ x 5″. Braces, ,,	at 3s. 8d.	25	4	2
125	0	,,	20/20, 9″ x 5″. Walings, ,,	at 3s. 6d.	21	17	6
800	0	run.	40/20. Rd. Piles, ,,	at 2s.	80	0	0
yds.	ft.	in.					
125	0	0	Excavating, labour and material,	at 2s.	12	10	0
50	0	0	Concrete, ,,	at £1 6s. 1d.	65	4	2
4,060 lbs.			Ironwork, ,,	at 7d.	118	8	4
				£	464	4	2

No. 5 Viaduct—8 extra bays.

ft.	in.				£	s.	d.
160	0	cube.	8/20′, 12″ x 12″. Sills, labour and material,	at 4s.	32	0	0
124	0	,,	8/15^{6}, 12″ x 12″. H. Stocks, ,,	,,	24	16	0
224	0	,,	32/7, 12″ x 12″. Corbels, ,,	at 5s.	56	0	0
110	0	,,	16/22, 9″ x 5″. Braces, ,,	at 3s. 8d.	20	3	4
100	0	,,	16/22, 9″ x 5″. Walings, ,,	at 3s. 6d.	17	10	0
640	0	run	32/20. Rd. piles, ,,	at 2s.	64	0	0
yds.	ft.	in.					
100	0	0	Excavating, labour and material,	at 2s.	10	0	0
45	0	0	Concrete, ,,	at 26s. 1d.	58	13	9
3,248 lbs.			Ironwork, ,,	at 7d.	94	14	8
				£	377	17	9

Yours, &c.,
GEORGE CHAPMAN,
Inspector.

Mr. Inspector Chapman to Mr. District-Engineer Stephens.

WAGGA VIADUCTS.

Sir, Goulburn, 29 June, 1885.

Presuming the above had been made 26 ft. spans this list shows deduction of 3 ft. from present 10 ft. corbels on Viaduct.

No. 1 Viaduct	less	1,356	cube feet.
No. 2	,,	792	,,
No. 3	,,	48	,,
No. 4	,,	876	,,
No. 5	,,	684	,,
Total	...	3,756	,,

Yours, &c.,
G. CHAPMAN,
per W.B.L.

No. 28.

No. 28.

EXPERIMENTS IN VICTORIA ON ELASTICITY AND STRENGTH OF TIMBER.

On the 16th June, 1885, the Commissioner, in a letter addressed to the Engineer-in-Chief for Railways in Victoria, requested to be furnished with the results of timber testing experiments carried out by the Railway Department of that Colony, and in reply received the following :—

Sir, Engineer-in-Chief's Office, Railway Department, Melbourne, 19 June, 1885.

I have the honor to acknowledge the receipt of your letter, dated 16th instant, and in reply to enclose the result of some experiments made by this Department on different Colonial and other timbers, in the year 1880.

I also enclose a copy of the report of the Carriage Timber Board, dated May, 1884, which I trust may contain information that will be useful to you.

I have, &c.,
ROBERT WATSON,
Engineer-in-Chief.

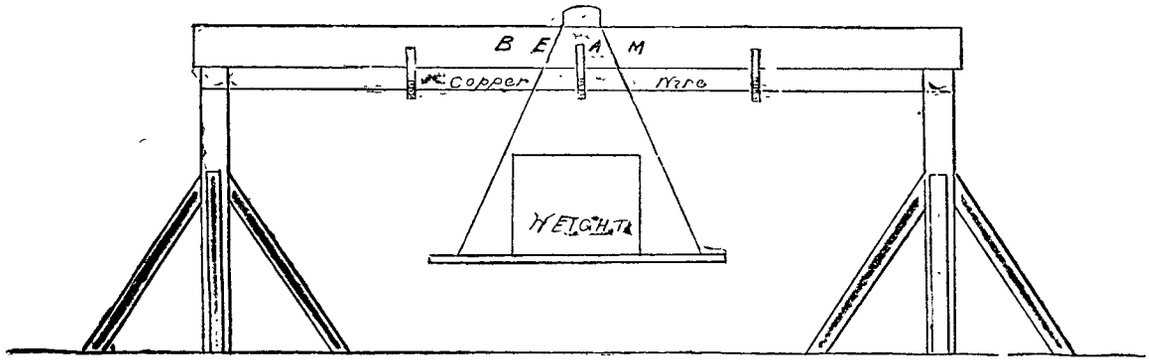
Secretary Railway Bridges Inquiry Commission, Sydney, N.S.W.

TRANSVERSE STRENGTH OF COLONIAL AND OTHER TIMBER.

Result of Experiments on the Elasticity and Strength of Red Gum Timber, made at Sandhurst, Victoria, March, 1885.

No. of Experiment.	Name of Timber and Dimensions.	Weight of Cube Foot.	Greatest Weight and Deflection. Weight exclusive of Beam.	Deflection in inches 3′ 8″ from centre of Beam.	Deflection on centre of Beam.	Deflection in inches 3′ 8″ from centre of Beam.	Weight that produced each additional ¼ inch deflection.	Ultimate Deflection.	Breaking Weight.
			Ts. ct. qs. lb.	Inches.	Inches.	Inches.	Ts. ct. qs. lb.	Inches.	Ts. ct. qs. lb.
1	Red Gum from the banks of River Goulburn, 11″ deep, 7″ thick, 14′ 8″ between bearings.	62·60 Lb.	3 4 2 4	0·00	0·50	0·00	3 4 2 4	2¼″	
			4 4 0 20	0·55	0·75	0·55	0 19 2 16		
			4 19 3 6	0·70	1·00	1·65	0 15 2 14		
			5 19 1 13	0·85	1·25	0·82	0 19 2 7		
			6 18 0 5	1·07	1·50	1·00	0 18 2 20		
			7 10 3 6	1·30	1·75	1·20	0 12 3 1		
			8 9 0 7	1·40	2·00	1·30	0 18 1 1		
			9 1 2 5	1·60	2·25	1·45	0 12 1 26		
			*9 12 1 18	*1·75	2·50	1·60	0 10 3 13		
			†9 19 1 14	1·94	†2·75	1·75	0 6 3 24		9 19 1 14
2	Red Gum from the banks of River Goulburn, 11″ depth, 7½″ thick, 14′ 8″ between the bearings.	62·60 Lb.	1 13 1 7	0·20	0·25	0·20	1 13 1 7	3½″	
			3 5 0 12	0·35	0·50	0·35	1 11 3 5		
			‡3 5 0 12	0·40	‡0·62	0·40	.....		
			4 4 0 16	0·53	0·75	0·52	0 19 0 4		
			5 9 1 14	0·67	1·00	0·66	1 5 0 26		
			7 0 0 23	0·85	1·25	0·85	1 10 2 9		
			§7 7 2 15	0·92	§1·35	0·90	.....		
			7 7 2 15	0·91	‖1·35	0 90	.....		
			7 15 1 23	1·02	1·50	1·00	0 15 1 0		
			9 2 3 11	1·20	1·75	1·20	1 7 1 16		
			10 0 0 27	1·35	2·00	1·33	0 17 1 16		
			11 7 2 6	1·53	2·25	1·50	1 7 2 7		
			11 13 0 10	1·68	2·50	1·68	0 5 2 4		
			12 2 1 18	1·84	2·75	1·83	0 9 1 8		
			12 9 3 6	1·98	3·00	1·97	0 7 1 16		
			12 12 1 18	2·15	3·25	2·14	0 2 2 12		
			¶12 18 3 17	.....	¶3·50	.....	0 6 1 27		12 18 3 17

Note.—* Commenced to splint out at the lower corners of beam in centre. † The beam gave way by slowly sinking down 8¾″ and splitting from the centre to end of beam. A part of the beam about 3″ thick near the neutral axis was left perfectly sound. ‡ Settled down 0·12″ after standing 21 hours with the weight on. § Removed the load and the beam became perfectly straight. ‖ Deflection after replacing load. ¶ The beam gave way by slowly sinking down about 2′ and making a break about 3′ 6″ long. There was a sun shake on side of this beam from end to end about ½″ open.



Transverse

TRANSVERSE Strength, &c., of samples of Colonial and other Timber; distance between supports, 8′ 0″; weight applied in centre. (Tested by the Victorian Railways Department, 15 October, 1880.)

Description.	Length.	Depth.	Breadth.	Weight.	Deflections at the following Weights:—																							Breaking Weight.
					cwt. 3	cwt. 4	cwt. 5	cwt. 6	cwt. 7	cwt. 8	cwt. 9	cwt. 10	cwt. 11	cwt. 12	cwt. 13	cwt. 14	cwt. 15	cwt. 16	cwt. 17	cwt. 18	cwt 19	cwt 20	cwt. 21	cwt. 22	cwt. 23	cwt. 24	cwt 25	
	′ ″	″	″	lbs.	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	″	cwt qr lbs
Red Gum, No. 1 ..	8 6½	2 15/16	2 1/16	31½	1 5/16	1½	1 15/16	2¼	2⅝	3	3⅜	4⅛	4⅞	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12 2 15
,, ,, 2 ..	,,	2 7/8	3 1/16	,,	1⅛	1½	1¾	2 3/16	2⅝	3	3 5/16	4	4⅞	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11 3 15
,, ,, 3 ..	,,	2 7/8	2¾	,,	1 3/16	1 5/16	1 11/16	2 1/16	2¼	2⅞	3 5/16	3⅞	4½	5¼	..	..	..	..	..	..	..	..	..	..	..	..	..	12 1 22
,, ,, 4 ..	,,	2 7/8	2 13/16	29	1¼	1½	1¾	2	2 5/16	2¾	3 1/8	3⅝	4	4½	5½	..	..	..	..	..	..	..	..	..	..	..	..	13 3 2
,, ,, 5 ..	,,	2¾	2⅞	28	1¼	1½	1⅞	2¼	2⅝	3⅜	3 1/16	4	4¾	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11 3 3
Red Deal, ,, 1 ..	,,	3	3	20	5/8	7/8	15/16	1 1/16	1¼	1 7/16	1⅝	1 13/16	2	2¼	2⅜	2 11/16	3	4⅝	..	..	..	..	..	..	..	..	..	16 2 0
,, ,, 2 ..	,,	2 15/16	3	19¼	11/16	7/8	1⅛	1 3/16	1 7/16	1⅝	1 13/16	2	2¼	2⅜	3	3 3/16	3⅞	..	..	..	..	..	..	..	..	..	..	16 0 0
,, ,, 3 ..	,,	3	3	19	11/16	7/8	1 1/16	1¼	1⅜	1½	1 11/16	1⅞	2¼	2½	2 13/16	..	..	..	..	..	..	..	..	..	..	..	..	13 0 0
Kauri, ,, 1 ..	,,	2 15/16	3 1/16	20¼	5/8	13/16	1 1/16	1 3/16	1 5/16	1⅝	1⅞	2⅛	2⅜	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11 0 0
,, ,, 2 ..	,,	2 13/16	3 1/16	19	7/8	15/16	1 1/16	1 3/16	1⅜	1½	1 9/16	1 11/16	1⅞	2 1/16	2 5/16	2½	2¾	3¼	..	..	..	..	..	..	..	..	..	16 2 0
,, ,, 3 ..	,,	3 1/16	3	17¾	5/8	7/8	15/16	1 1/16	1¼	1 7/16	1⅝	1⅞	2 1/16	2¼	2 9/16	2⅞	3⅛	..	..	..	..	..	..	..	..	..	..	15 0 0
Blackwood ,, 1 ..	,,	3 1/16	3	37	5/8	13/16	15/16	1	1 3/16	1 5/16	1½	1 11/16	1 13/16	2	2¼	2¼	3 1/16	3¾	..	..	..	..	..	..	..	..	..	16 0 8
,, ,, 2 ..	,,	3⅛	2 15/16	39½	7/8	7/8	13/16	7/8	1	1¼	1 7/16	1 11/16	1⅞	2 3/16	2½	2⅞	4	..	..	..	..	..	..	..	..	..	..	15 3 13
,, ,, 3 ..	,,	3 1/16	3 1/16	35½	7/8	7/8	13/16	15/16	1	1 3/16	1 5/16	1 7/16	1 9/16	1 11/16	1⅞	2⅛	2½	2¾	3⅞	5⅜	..	..	..	..	..	..	..	16 1 15
,, ,, 4 ..	,,	3 1/16	3 1/16	29	7/8	7/8	7/8	1	1⅛	1¼	1⅜	1½	1 11/16	1⅞	2	2 3/16	2 5/16	2¼	..	..	..	..	..	..	..	..	..	16 0 2
,, ,, 5 ..	,,	3	3 1/16	26½	7/8	7/8	7/8	15/16	1 1/16	1⅛	1¼	1 7/16	1½	1¾	2	2 3/16	2 5/16	2¼	3¼	3⅞	..	..	..	..	..	..	..	18 0 7
Blue Gum, ,, 1 ..	,,	2 15/16	3	38½	7/8	7/8	7/8	15/16	1 1/16	1⅛	1¼	1 3/16	1 3/16	2	2¼	2 9/16	2⅞	3¼	4¼	5⅛	6¾	..	..	..	..	..	..	19 0 7
,, ,, 2 ..	,,	2 15/16	3	39	7/8	7/8	15/16	1 1/16	1¼	1⅛	1¼	2	2¼	2½	2¾	3⅛	3¾	4¼	5½	..	..	..	..	..	..	..	..	16 3 25
,, ,, 3 ..	,,	3 1/16	3	40	7/8	13/16	1 1/16	1¼	1¼	1¼	2	2¼	2¼	2¼	2 15/16	3 7/16	4	5½	..	..	..	..	..	..	..	..	..	16 0 2
,, ,, 4 ..	,,	3¼	3	31	7/8	7/8	7/8	1¼	1 7/16	1	1⅛	1¼	1⅜	1½	1⅝	1⅞	1⅞	2	..	..	..	..	..	..	..	..	..	16 0 2
Box, ,, 1 ..	,,	2 15/16	3	39½	7/8	13/16	1	1 3/16	1 7/16	1 11/16	1 13/16	2	2 3/16	2⅜	2 9/16	2 13/16	3⅛	3⅝	3¾	4¼	4¾	5¼	..	..	..	..	..	19 3 1
,, ,, 2 ..	,,	3	3	42	9/16	13/16	7/8	1 1/16	1¼	1⅜	1 5/16	1 15/16	2	2 1/16	2⅜	2 9/16	2¾	2 15/16	3¼	3⅝	5	..	..	..	..	..	..	18 2 11
,, ,, 3 ..	,,	3⅛	3	41	9/16	13/16	7/8	1¼	1	1⅛	1¼	1 7/16	1⅝	1¾	1⅞	2	2⅛	2¼	2⅞	3¾	3	3½	..	..	..	..	..	20 0 0
Stringybark, No. 1	,,	2 15/16	2 15/16	29	9/16	13/16	7/8	1	1⅛	1¼	1⅜	1½	1⅝	1 13/16	2 1/16	2⅝	3⅜	..	..	..	..	..	..	..	..	..	..	15 2 12
,, ,, 2	,,	2 15/16	2 13/16	27	9/16	13/16	7/8	1	1⅛	1¼	1⅜	1½	1¾	2	2¼	2 9/16	3	4	..	..	..	..	..	..	..	..	..	16 2 0
,, ,, 3	,,	2⅞	2⅞	26	9/16	13/16	9/16	11/16	7/8	7/8	1 1/16	1 3/16	1⅜	1½	1⅝	1¾	2	2¼	3½	..	..	..	..	..	..	..	..	17 1 1
Messmate, ,, 1	,,	3	2⅞	28	9/16	13/16	7/8	7/8	1	1 3/16	1⅛	1⅛	1⅜	1¼	1 5/16	2 1/16	2 5/16	2¼	2 11/16	2⅞	3 3/16	3½	..	..	..	..	..	20 3 0
,, ,, 2	,,	2 15/16	2¾	28	9/16	13/16	7/8	7/8	1	1 1/16	1 1/16	1 3/16	1⅜	1¼	1⅝	1 9/16	2 1/16	2⅛	2½	2 13/16	3	3½	..	..	..	..	..	19 3 24
Oregon, ,, 1	,,	3	2⅞	18	9/16	13/16	7/8	1	1⅛	1⅛	1½	1⅝	1 13/16	2	2⅜	2⅛	2½	2⅞	3	3¼	3⅜	..	..	..	..	..	..	20 0 2
,, ,, 2	,,	2¾	2¾	20	9/16	13/16	7/8	1	1 1/16	1¼	1 5/16	1½	1 11/16	1 13/16	2	2 3/16	2 5/16	2 11/16	3½	3½	..	..	..	..	..	..	..	18 0 8
,, ,, 3	,,	2 15/16	2 15/16	19½	9/16	13/16	11/16	7/8	1 1/16	1¼	1 7/16	1⅝	1 13/16	2	2 9/16	2 7/16	2 11/16	2 15/16	3¼	3½	..	..	..	..	..	..	..	18 1 5

No. 29.

LOCOMOTIVE ENGINES.

WEIGHT of Locomotives and Tenders in use on Southern and Western Lines, New South Wales.

Class of Engine.	Engine in Steam.				Tender full.	Total—Engine and Tender.	Wheel base of Engine.	Wheel base of Engine and Tender.
	Leading.	Driving.	Trailing.	Total.				
							′ ″	′ ″
EXPRESS:—								
2-wheels coupled and double Bogie	6 18 1 6 15 3	13 3 0	11 12 0	38 19 0	24 17 3	63 16 3	19 9	38 7
GOODS:—								
6-wheels coupled.....	9 19 2	12 0 0	11 16 2	33 16 0	22 11 0	56 7 0	11 3	34 0
AMERICAN GOODS:—								
*8-wheels coupled and single Bogie, double Bogie Tender	.....	.....	.....	49 11 3	25 11 2	75 3 1	22 10	46 2
Tank Engine, 158—163, 6-wheels coupled.....	10 0 2	15 1 2	14 9 1	40 1 1	.....	.....	.....	.....

* American Engines are not running on the Southern Railway.

GEORGE COWDERY.

No. 30.

THE TESTING OF THE NORTHERN BRIDGES.

PARTICULARS of Locomotive Engines used in testing the bridges on the Great Northern Railway, supplied by Locomotive Foreman, Newcastle.

Weight of No. 222 Engine and Tender, G. N. Railway.

Engine in Steam.

	T.	c.	q.	T.	c.	q.
On bogie wheels	6	8	2			
On leading wheels	11	11	2			
On driving wheels	12	4	2½			
On trailing wheels	11	11	0½			
Total Engine				41	15	3
Tender full—						
On leading wheels	7	16	0			
On middle wheels	7	2	0			
On trailing wheels	7	13	0			
Total Tender				22	11	0
Total Engine and Tender				64	6	3

Exact distances between the wheels from centre to centre, Engine No. 222:—

	ft.	in.	ft.	in.
From bogie to leading wheels	8	0		
From leading to driving wheels	5	7		
From driving to trailing wheels	5	5		
Engine wheel base			19	0
From trailing (Engine) to leading wheels (Tender)	9	3		
From leading to middle wheels	5	6		
From middle to trailing wheels	5	6		
			20	3
Total wheel base of Engine and Tender			39	3

The weight and wheel base of engine No. 237, G.N.R., is precisely the same as No. 222, given above, both engines being of similar class.

Weight of No. 261 Engine and Tender, G. N. Railway.

Engine in Steam.

	T.	c.	q.	T.	c.	q.
On leading (bogie) wheels	13	14	0			
On driving wheels	13	13	0			
On trailing wheels	11	12	0			
Total, Engine				38	19	0
Tender full—						
On leading wheels	8	15	0			
On middle wheels	7	6	3			
On trailing wheels	8	16	0			
Total, Tender				24	17	3
Total, Engine and Tender				63	16	3

Exact distances between the wheels from centre to centre, Engine No. 261:—

	ft.	in.	ft.	in.
From first bogie to second bogie wheels, leading	4	0		
From second bogie to driving wheels	7	9¼		
From driving wheels to trailing wheels	8	0		
Engine wheel base			19	9¼
From trailing (Engine) to leading wheels (Tender)	8	1¾		
From leading to middle wheels	5	6		
From middle to trailing wheels	5	6		
			19	1¾
Total, wheel base of Engine and Tender			38	11

No. 31.

THE HEAVIEST TRAFFIC OVER THE WAGGA WAGGA VIADUCTS.

Particulars supplied by the Locomotive Engineer.

THE heaviest trains that pass over the Wagga Viaduct are double ones, viz. .—Live stock specials. The total weight of a train of this description, inclusive of two locomotives and guard-van, is 396 tons 5 cwt. 2 qrs.

Details as follows :—

	Tons	cwt.	qrs
2 Beyer and Peacock's bogie engines	118	9	2
1 goods brake-van	11	0	0
28 sheep trucks at 6 tons 17 cwt. each	191	16	0
2,800 sheep at 60 lbs. each	75	0	0
Gross total	396	5	2

The above-mentioned trains are also the largest. Total length from front of engine to rear of guards-van, 717 ft.—made up as follows :—

	ft.	in.
2 engines	93	8
28 trucks at 21 ft. 6 in. each	602	0
1 goods brake-van	21	6
	717	2

Beyer and Peacock's bogie Class.

	Tons	cwt.	qrs.
Weight in steam of engines and tenders in general use	59	4	2

	ft.	in.
Total length of engine and tender from extremes of buffers	46	10
Coupled wheel-base of bogie passenger engine	8	0
Wheel-base from leading wheel of bogie to trailing wheel of engine	19	7
Wheel-base of Beyer and Peacock's 6-wheel coupled goods engines	11	4

	Tons	cwt	qrs.
Weight of Beyer and Peacock's 6-wheel coupled goods engines, loaded	56	7	0

	Leading. T. c. q.	Driving. T. c. q.	Trailing. T. c. q.	Total T. c. q.	Leading T. c. q.	Middle T. c. q.	Trailing. T. c. q.	Total. T. c. q.
Load on each axle of Beyer and Peacocks or Dub's 4-wheel coupled Bogie Passenger engine	*12 7 3	13 0 0	12 4 0	37 11 3	7 14 0	6 11 0	7 8 3	21 13 3

		Tons	cwt.	qrs.		Tons	cwt.	qrs.
Load on each axle of Beyer and Peacock's 6-wheel coupled goods engines, loaded	Engine leading	9	19	2	Tender leading	7	16	0
	" driving	12	0	0	" middle	7	2	0
	" trailing	11	16	2	" trailing	7	13	0

	ft.	in.
Length of S. truck from end of buffers	21	6
Wheel-base of ditto	10	0

	Tons	cwt	qrs.
Weight of S. truck, loaded	9	10	2
Weight of Ordinary D. truck, fully loaded	10	15	0

	Tons	cwt	qrs
Counting truck at	4	15	0
and load at	6	0	0

WM. SCOTT,
Locomotive Engineer,
28/5/84.

Commissioner.

PARTICULARS OF ENGINE No. 207.

Description—Single Bogie Tender Goods Engine, commonly called Mogul Engines.

Makers' name—Beyer, Peacock, & Co.
Position of cylinders—Outside.
Diameter of cylinders—18 inches.
Length of stroke—26 inches.
Diameter of wheels—Leading, 2 feet 9 inches ; driving, 4 feet ; trailing, 4 feet.
Six wheels, coupled.
Wheel base—Rigid, 11 feet
Wheel base—Total, 19 feet.

Weight of Engine and Tender "in Steam."

	Leading. Bogie Tons cwt. qrs	Leading. Coupled. Tons cwt qrs	Driving. Tons cwt qrs.	Trailing. Tons cwt qrs.	Total. Tons cwt. qrs.
Engine	7 14 0	10 11 3	11 1 2	13 1 0	42 8 1

	Leading. Tons cwt. qrs.	Middle. Tons cwt. qrs.	Trailing. Tons cwt. qrs.	Total. Tons cwt. qrs.
Tender	8 5 0	8 2 2	7 18 3	24 6 1

W. SCOTT.

* The weight, 12 tons 7 cwt. 3 qrs., represents two leading bogie axles, and should be divided by 2 to give the weight on each axle.

No. 32.

ENGINES USED IN THE TESTING OF THE MENANGLE BRIDGE.

Weight of Engines and Tenders Nos. 265, 212, and 269, used in testing Bridge at Menangle, 5/9/84.

Engine No. 265 (Dubs & Co.)—

	Tons	cwt.	qrs.
Weight of engine full...	38	19	0
Weight of tender full...	24	17	3
Total... ...	63	16	3

Engine No. 212 (Beyer, Peacock, & Co.)—

	Tons	cwt.	qrs.
Weight of engine full...	41	15	3
Tenders filled up to within 2 feet from top with water; coal three quarters full charge	18	0	1
Total... ...	59	16	0

Engine No. 269 (Dubs & Co.)—

	Tons	cwt.	qrs.
Weight of engine full...	38	19	0
Tender filled up to within 2 feet from top with water; with full charge of coal...	21	6	3
Total... ...	60	5	3

MENANGLE BRIDGE.

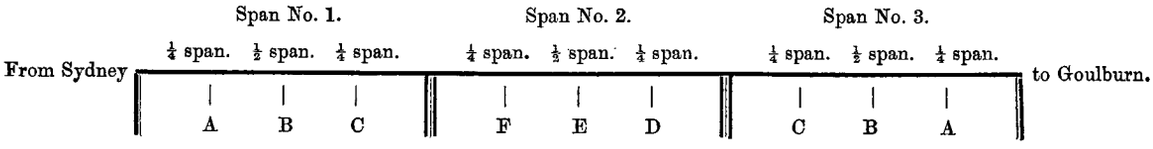


Table of Deflections.

Description of Test.	Deflections. A	B	C	D	E	F	Opposite E on up-side girder.	Remarks. (See Special Report No. 2, page 81.)
Two engines at full speed	+ ·44	+ ·50	+ ·25	+ ·25	+ ·375	.....	+ ·218	Express engine, No. 265, and Mogul, No. 212.
	− ·094	− ·14	− ·094	− ·094	− ·109	.....	− ·078	
Do	+ ·44	+ ·47	+ ·3125	+ ·22	+ ·3125	.....	+ ·188	Same test as above.
	− ·11	− ·125	− ·11	− ·094	− ·094	.....	− ·0625	
Do	+ ·44	+ ·50	+ ·44	+ ·25	+ ·344	.....	.....	do
	− ·156	− ·14	− ·047	− ·094	− ·0625	.....	.....	
Two engines, slow	.....	.....	+ ·156	.....	+ ·344	.....	.....	
	.....	.....	− ·094	.....	− ·11	.....	.....	
Three engines, standing on bridge.....	.....	.....	+ ·22	+ ·28	.....	.....	.....	
	.....	.....	− ·0625	− ·0625	.....	.....	.....	

No. 33.

The following tables show the engines used and the deflections produced in testing the approach span to Penrith Bridge, Wellington approach spans, and Peel-street Bridge, Tamworth; also the Wollondilly Bridges, and the cross girders of the Bathurst, Aberdeen, Solitary and Wollondilly Bridges.

PENRITH BRIDGE—APPROACH SPAN.

127 feet clear span.

Description of Test.	Deflection.	Remarks. (See Special Report No. 2, page 81.)
	″	
No. 1—3 engines passing slowly over	·536	In centre of span. Engines Nos. 137, 135, and 141.
No. 2—3 do full speed	·70	
No. 19—3 do do	·614	
No. 21—3 do do applying the breaks when on the bridge.	·65	

No. 34.
WELLINGTON BRIDGE—APPROACH SPANS.
61 feet span.

Description of Test	Deflections. Approach span Sydney side. Up stream.	Approach span Sydney side. Down stream.	Approach span Dubbo side. Up stream.	Approach span Dubbo side. Down stream.	Cross girder, No. 1 span.	Remarks (See Special Report No. 2, page 81.)
No. 7—3 engines full speed.....	·34	·28	·337	·293	·43	Engines Nos. 134, 135, and 138.
No. 8—3 do do	·36	·34	·33	·29	·47	

No. 35.
PEEL-STREET BRIDGE, TAMWORTH.
61 feet span.

Description of Test.	Deflection.	Remarks (See Special Report No. 2, page 81.
	"	
No. 1—3 engines full speed	·27	In centre of up-side girder. Engines Nos. 222, 231, and 261.
No. 2—3 do do	·29	
No. 11—3 do passing slowly over the bridge	·287	

No. 36.
BARBER'S CREEK VIADUCT.

Girder.	Span.	Deflections. Up side.	Deflections. Down side.	Remarks. (See Special Report No. 2, page 81.)
		"	"	
Main girder	1st span.....	.....	·50	Testing engine on bridge.
Do	do	.....	·56	Testing engine and train moving at about 20 miles an hour. Same deflection with passing passenger train.
Do	do	·47	.....	
Do	do	·50	.....	Passenger train at full speed.
Do	5th span	.....	·406	do do

No. 37.
WOLLONDILLY, 1ST CROSSING.

Girder.	Span.	Deflection. Up side.	Deflection. Down side.	Remarks. (See Special Report No. 2, page 81.)
		"	"	
Main girder	130 feet span ...	·59	·42	Taken with level, with testing engine on bridge.
Do	1st 60 feet span...	·44	·50	Tested with rods.

No. 38.
WOLLONDILLY, 2ND CROSSING.

Girder.	Span.	Deflection. Up side.	Deflection. Down side.	Remarks. (See Special Report No, 2, page 81.)
		"	"	
Main girder	130 feet span ...	·402	·36	Taken with level.
Do	do ...	·406	·406	Taken with apparatus.
Do	1st 60 feet span...	·375	·375	Testing train at 20 miles an hour.
Do	3rd do ...	·406	·344	
Do	Span nearest Goulbourn	·25	·19	

No. 39.
MULWAREE CREEK VIADUCT.

Girder.	Span.	Deflection. Up side.	Deflection. Down side.	Remarks. (See Special Report No. 2, page 81.)
		"	"	
Main girder	1st span	·375	·56	With goods train passing.
Do	do	·406	·625	With testing train at 20 miles an hour.
Do	3rd span	·344	·375	With goods train passing.
Do	do	·375	·406	With testing train at 20 miles an hour.

No. 40.
BATHURST BRIDGE.
Cross Girders.

Description of Test.	Deflection.	Remarks. (See Special Report No. 2, page 81.)
	"	
No. 7—3 engines full speed	·83	At span No. 1, 63 feet from the abutment. Engines Nos. 134, 140, and 137.
No. 8— do do	·85	
No. 6—3 engines distributed over span	·99	

No. 41.
ABERDEEN BRIDGE.
Cross Girders.

Description of Test.	Deflection.	Remarks. (See Special Report No. 2, page 81.)
	"	
No. 6—3 engines distributed over span	·44	At span No. 3, 25 feet from the abutment. Engines Nos. 222, 233, and 261.
No. 26— do do	·53	
No. 9—3 engines full speed	·53	
No. 19— do do	·57	

No. 42.
SOLITARY CREEK BRIDGES.
Cross Girders.

Crossing.	Description of Test.	Deflections. Cross girder fixed to gusset stiffener.	Deflections. Cross girder fixed to web cover.	Remarks. (See Special Report No. 2, page 81.
		"	"	
No. 2 crossing	1 engine full speed	·556	·625	Engine No. 141.
	1 do passing slowly over	·462	·537	
No. 3 crossing	1 do full speed	·47	·55	
	1 do passing slowly over	·35	·462	

No. 43.
BARBER'S CREEK VIADUCT.
Cross Girders.

4th span ..... Deflection, ·125
5th span ..... do ·0625

NOTE.—The deflection of cross girders varies with the mode of fixing to main girders, every 4th cross girder being pratically fixed. The engines for testing the cross girders were the same as those used for testing these bridges.

WOLLONDILLY, 1ST CROSSING.
Cross Girders.

1st 60-foot span ..... Deflection, ·09

WOLLONDILLY, 2ND CROSSING.
Cross Girders.

60-foot spans ..... Deflection ·125

MULWAREE CREEK VIADUCT.
Cross Girders.

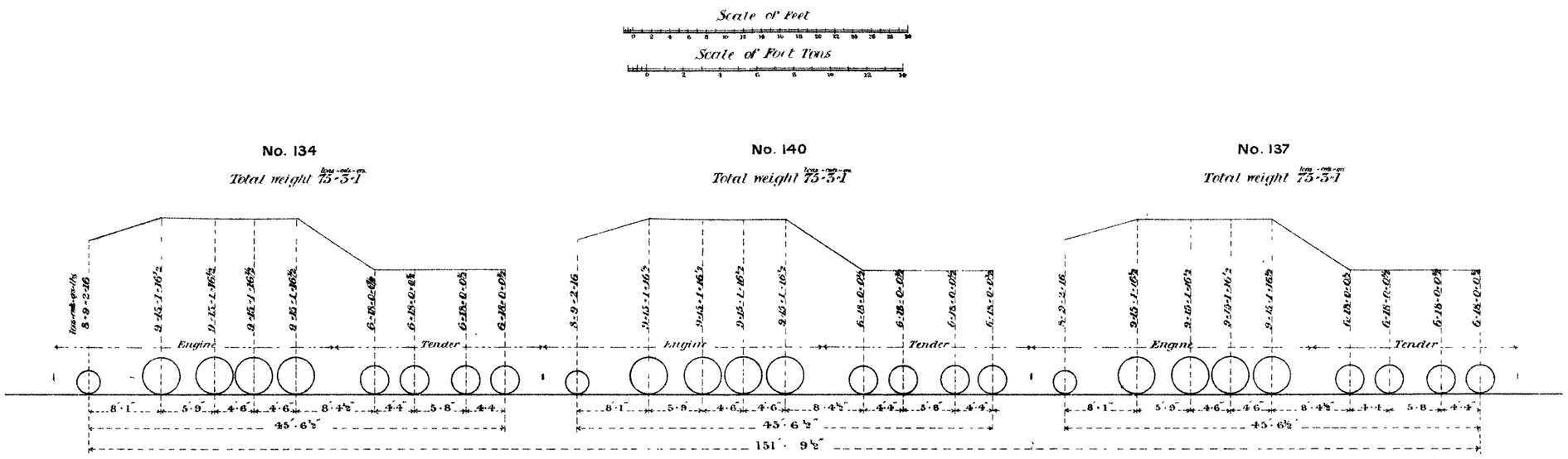
60-foot spans ..... Deflection ·25 nearly.

PLATES AND DIAGRAMS.

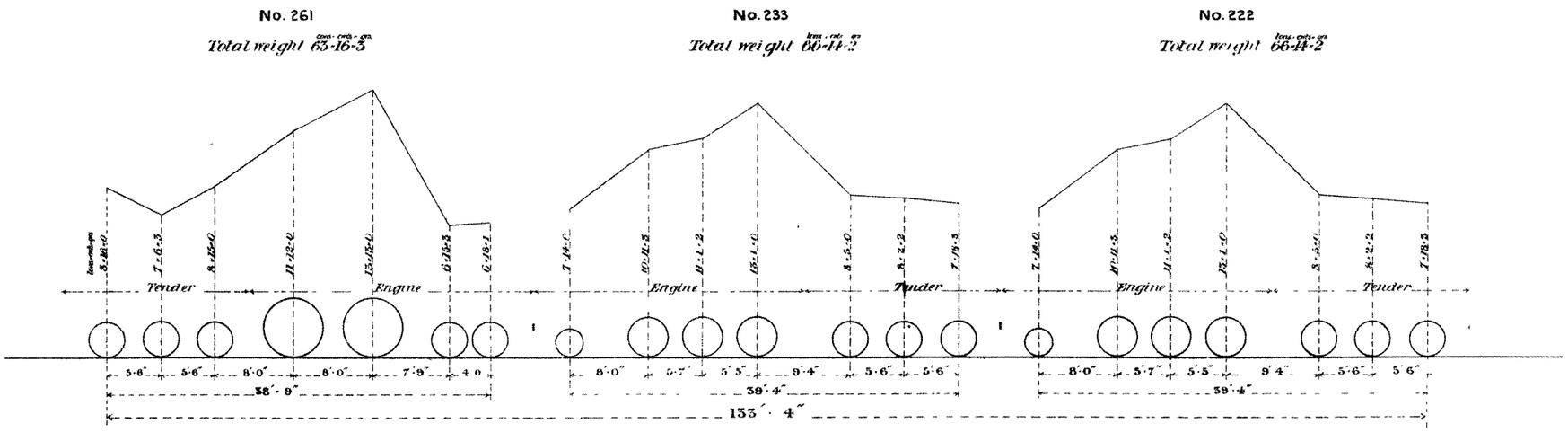
LIST OF PLATES AND DIAGRAMS.

No. of plate.	Name of Bridge.	Description or Title of Plate.	Page of Special Reports
1	.....	Diagram of engines used for testing	80–82
2	.....	Photo. of consolidation goods engine—131 class	,, ,,
2A	.....	Diagram showing wheel-base and weight of consolidation goods engine	,, ,,
3	.....	Photo. of Mogul goods engine—205 class	,, ,,
3A	.....	Diagram showing wheel-base and weight of Mogul goods engine	,, ,,
4	.....	Photo. of express engine—255 class	,, ,,
4A	.....	Diagram showing wheel-base and weight of express engine—255 class	,, ,,
5	.....	Photo. of express engine—265 class	,, ,,
5A	.....	Diagram showing wheel-base and weight of express engine—265 class	,, ,,
6	Menangle Bridge	Diagram of bending moments	91–92
7	Wollondilly Bridges	Diagram of effective and actual areas of booms of girders in 130 ft. spans.	82–84
8	Wollondilly, 60 ft. spans	Diagrams showing actual areas of booms and curves of areas required	,, ,,
8A	Peel-street, Tamworth		90
8B	Solitary Creek Bridges		85, 89
9	Wagga Wagga Iron Bridge	Diagram of bending moments and shearing stresses	84
10	Penrith Bridge	,, ,, ,,	92–94
11	,,	,, deflections exaggerated (slow tests)	,, ,,
12	,,	,, ,, (full speed tests)	,, ,,
13	,,	,, actual deflections showing positions of engines during each test	,, ,,
14	Solitary Creek Bridges	,, ,, (full speed tests)	85, 89
15	Bathurst, Wellington, and Aberdeen Bridges.	Details of main girders	87–89
16	,, ,,	Detail section of booms	,, ,,
17	,, ,,	Diagram of actual areas in booms and curves of areas required	,, ,,
18	,, ,,	Cases I to V	
19	,, ,,	,, I, II, and III. } Diagrams of bending moments produced by various positions of live load, including six cases.	
20	,, ,,	,, IV, V, and VI.	
21	Bathurst Bridge	Diagram of deflections exaggerated—1st set	86
22	,,	,, ,, 2nd set	,,
23	,,	Diagram of actual deflections, showing positions of engines during each test	,,
24	,,	,, ,, full speed tests	,,
25	Wellington Bridge	,, of deflections exaggerated—1st set	87–88
26	,,	,, ,, 2nd set	,, ,,
27	,,	,, of actual deflections, showing positions of engines during each test	,, ,,
28	,,	,, ,, full speed tests	,, ,,
29	Aberdeen Bridge	,, of deflections exaggerated—1st set	88–89
30	,,	,, ,, 2nd set	,, ,,
31	,,	,, of actual deflection, showing positions of engines during each test	,, ,,
32	,,	,, ,, full speed tests	,, ,,
33	Tamworth and MacDonald River Bridges.	,, of actual areas in booms and curves of areas required	89–90
34	,, ,,	Table of stresses in bracing	,, ,,
35	Tamworth Bridge	Diagram of deflections exaggerated	,, ,,
36	,,	,, actual deflections, showing positions of engines during each test	,, ,,
37	MacDonald River Bridge	,, deflections exaggerated	90
38	,, ,,	,, actual deflections showing positions of engines during each test	,,
39	Wagga Wagga Timber Viaducts.	Elevation and section of one span	94–96
40	,, ,, (No. 1.)	Diagram of deflections, showing positions of engines during each test	,, ,,
41	,, ,, (No. 2.)	,, ,, ,, ,,	,, ,,
42	Victorian Railway Timber Viaducts.	Detail of one span of timber viaduct over the River Goulburn, Victoria	98
43	.....	Diagram of experiments conducted at Clyde for testing the strength of timber girders.	97–99
44	.....	Diagram of breaking experiments at Clyde	100
45	Tamworth Bridge approach	Diagram of deflections, timber viaduct, 29 ft. 6 in. span	98

DIAGRAM OF ENGINES USED FOR TESTING



Engines used at Bathurst, Wellington, & Penrith Bridges



Engines used at Aberdeen, Tamworth, & Macdonald R. Bridges

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SYDNEY, NEW SOUTH WALES.

866—

N.S.W. RAILWAYS,

Locomotive Engine—"Consolidation Goods"—131 Class.

Railway Bridges Inquiry

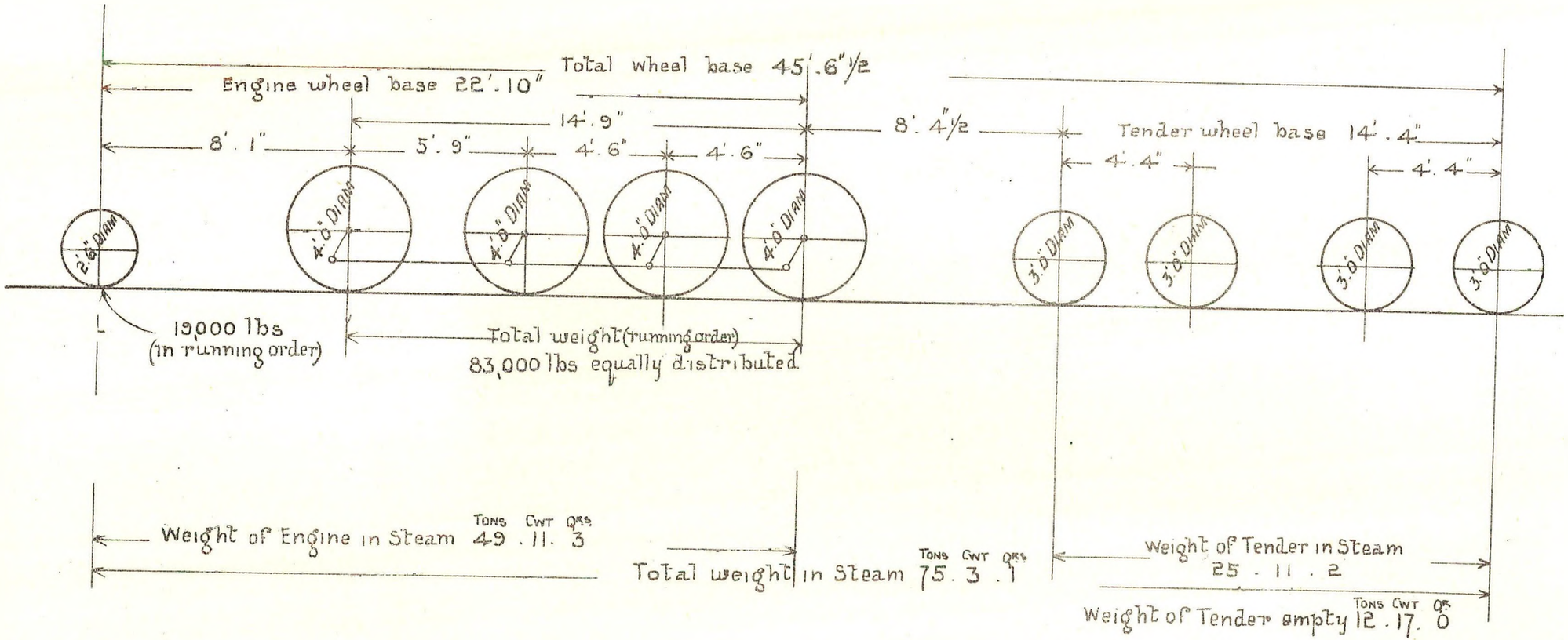
Plate No. 2A.

N. S. W. RAILWAYS

LOCO. DEPT.

"CONSOLIDATION GOODS"

131 CLASS



Weight of Engine in Steam 49 . 11. 3 (Tons Cwt Qrs)

Total weight in Steam 75. 3 . 1 (Tons Cwt Qrs)

Weight of Tender in Steam 25 . 11 . 2

Weight of Tender empty 12 . 17. 0 (Tons Cwt Qrs)

SCALE 1/2" = 1 FOOT

(Sd.) W. SCOTT
13. 2. 85

(Railway Bridges Inq.")

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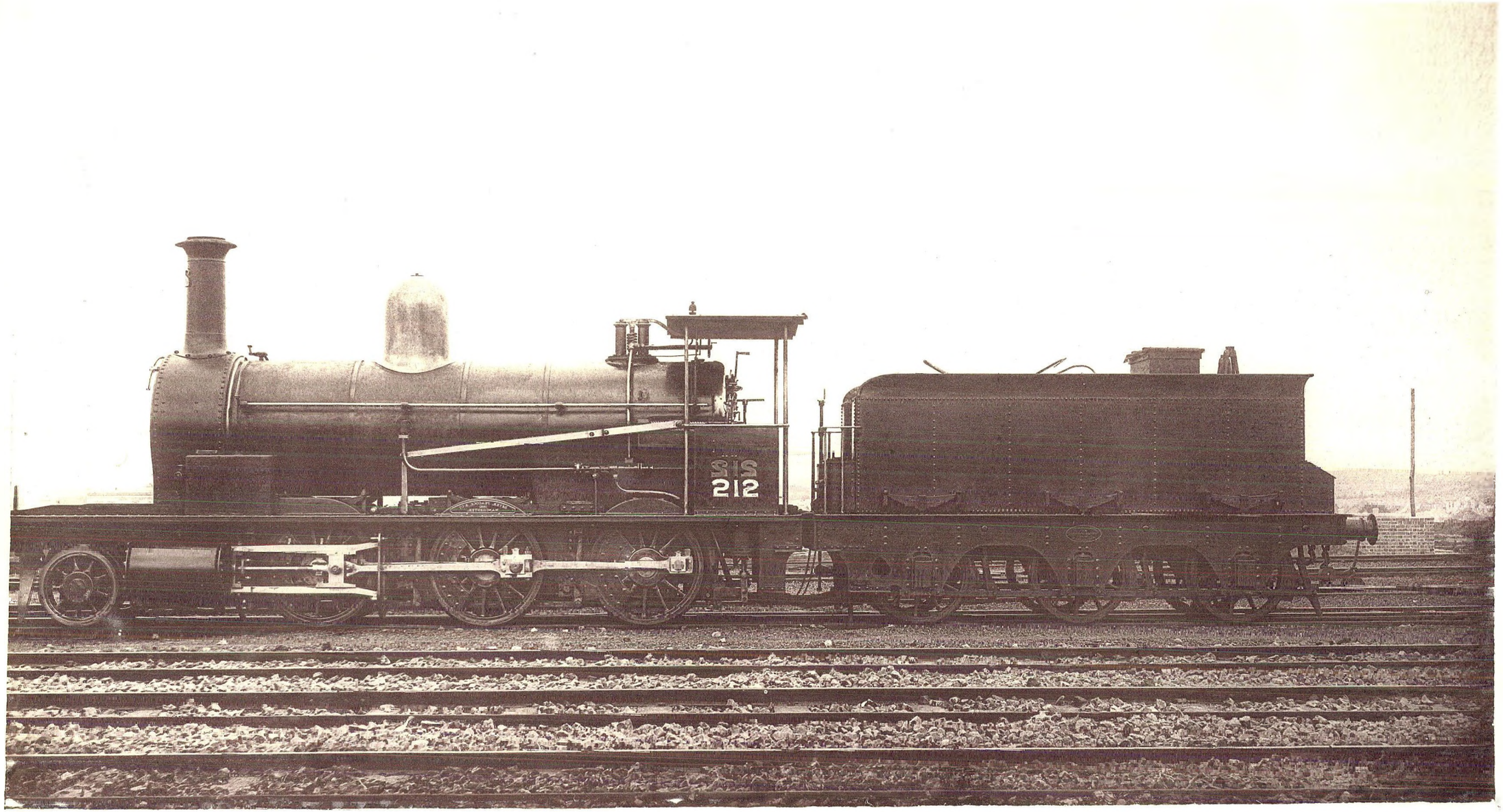


866—

N.S.W. RAILWAYS,

Locomotive Engine—"Mogul Goods"—205 Class.

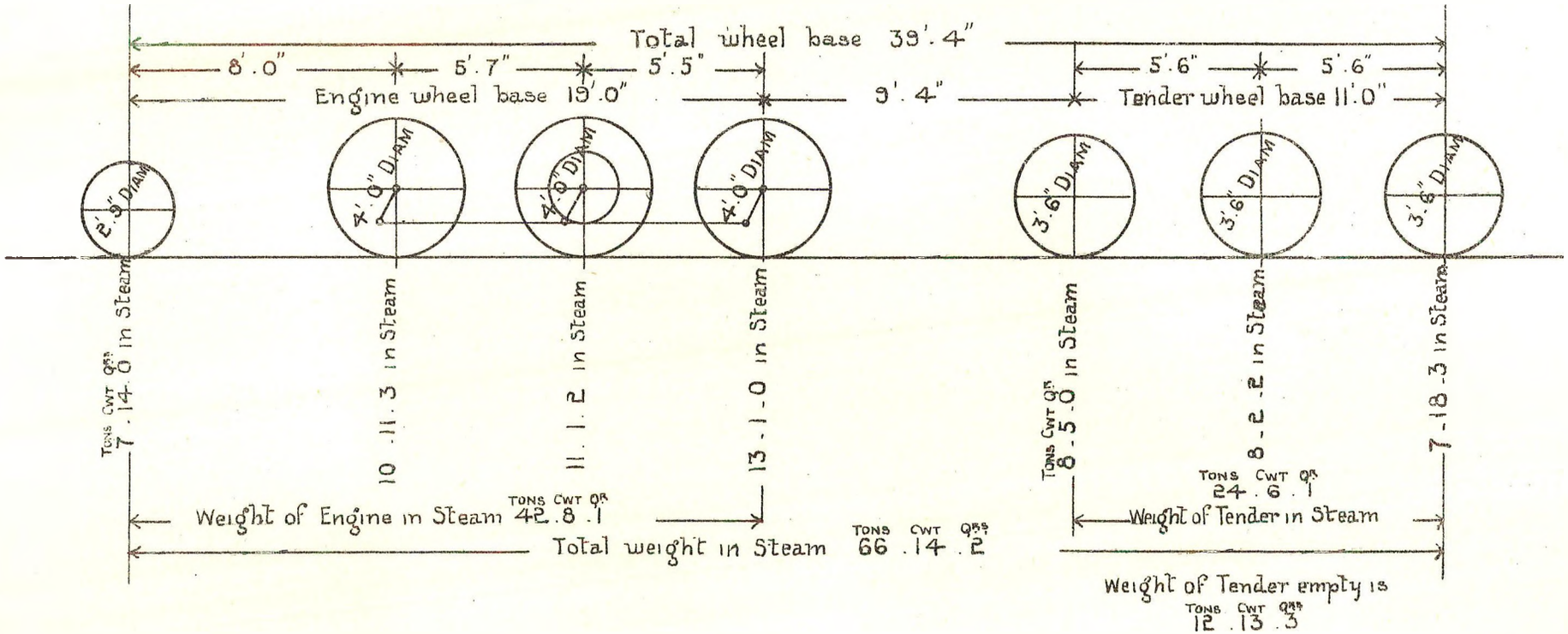
Railway Bridges Inquiry.

Plate No. 3A

N.S.W. RAILWAYS

LOCO. DEPT

"Mogul Goods" 205 Class

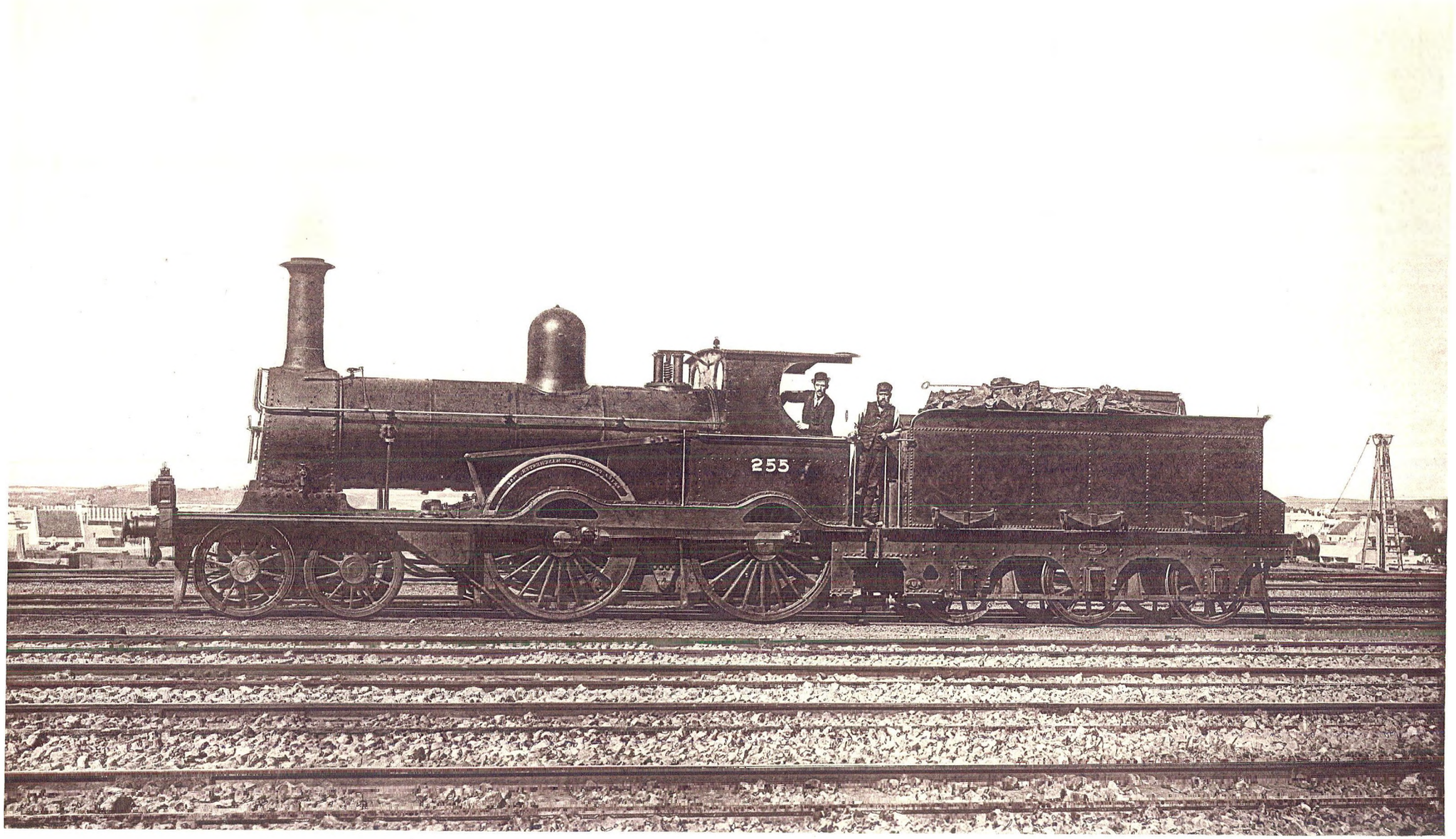


SCALE 1/2" = 1 Foot

W. SCOTT
13.2.85

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

Railway Bridges Inqy



866—

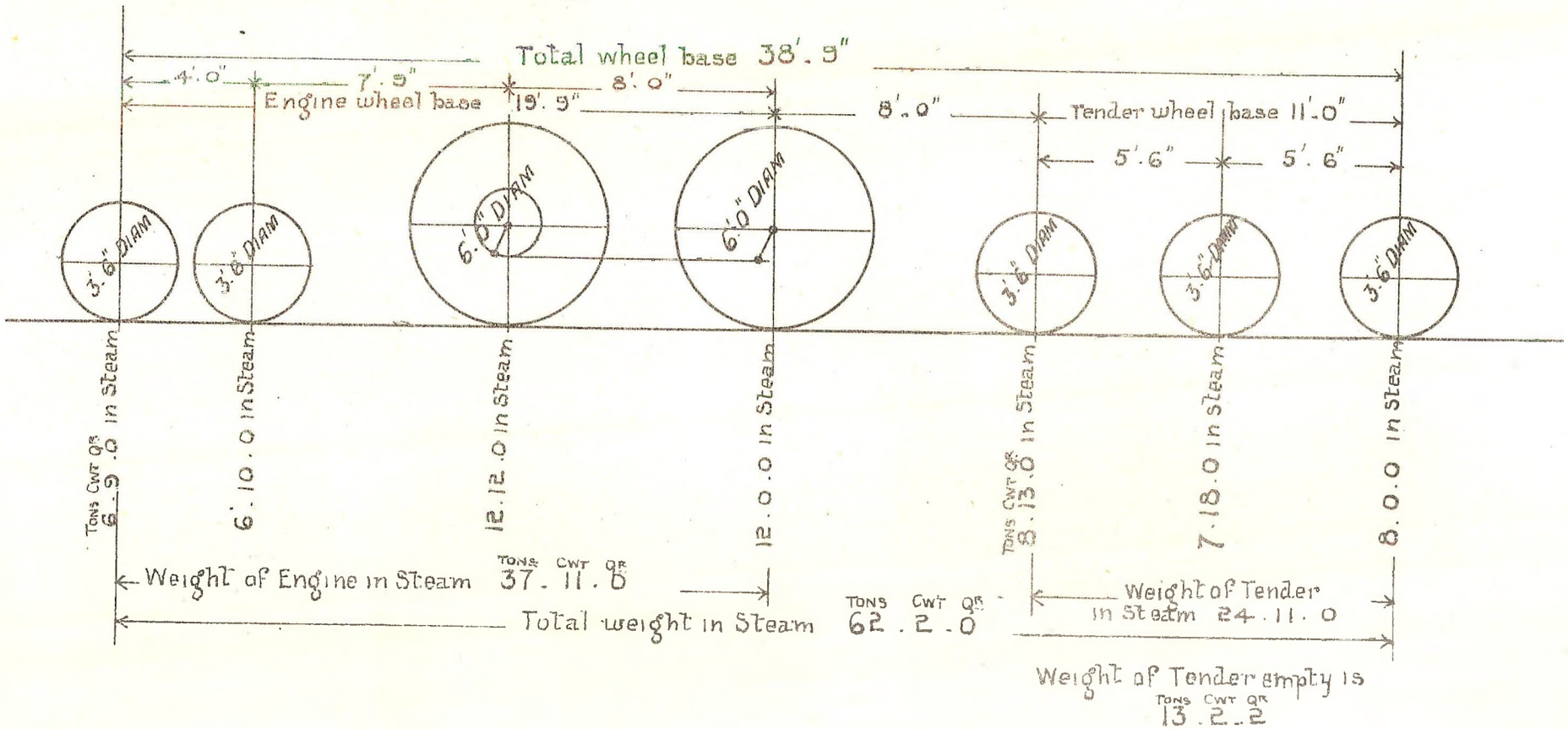
N.S.W. RAILWAYS,

Locomotive Engine—"Express"—255 Class.

N. S. W. RAILWAYS

LOCO. DEPT

"EXPRESS" 255 CLASS

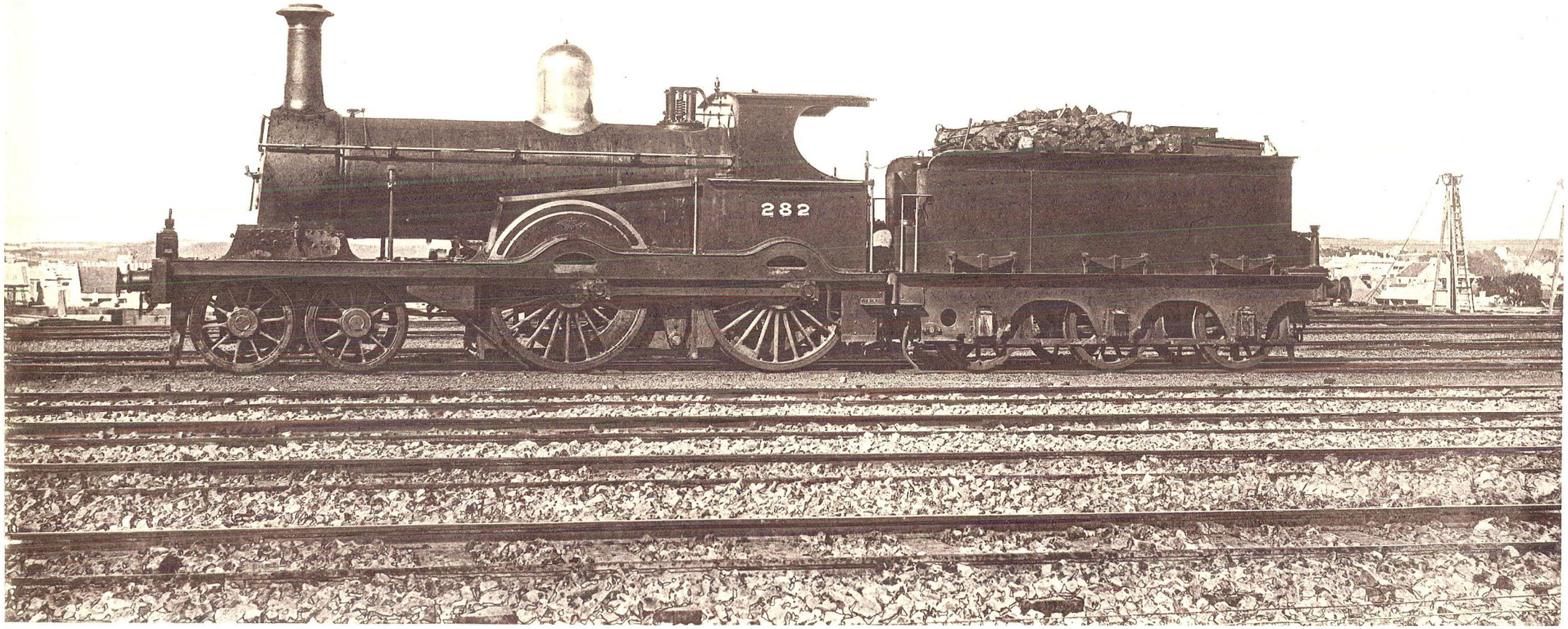


SCALE 1/2" = 1 FOOT

(Railway Bridges Insp.)

(Sd) W. SCOTT
13. 2. 85

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



866—

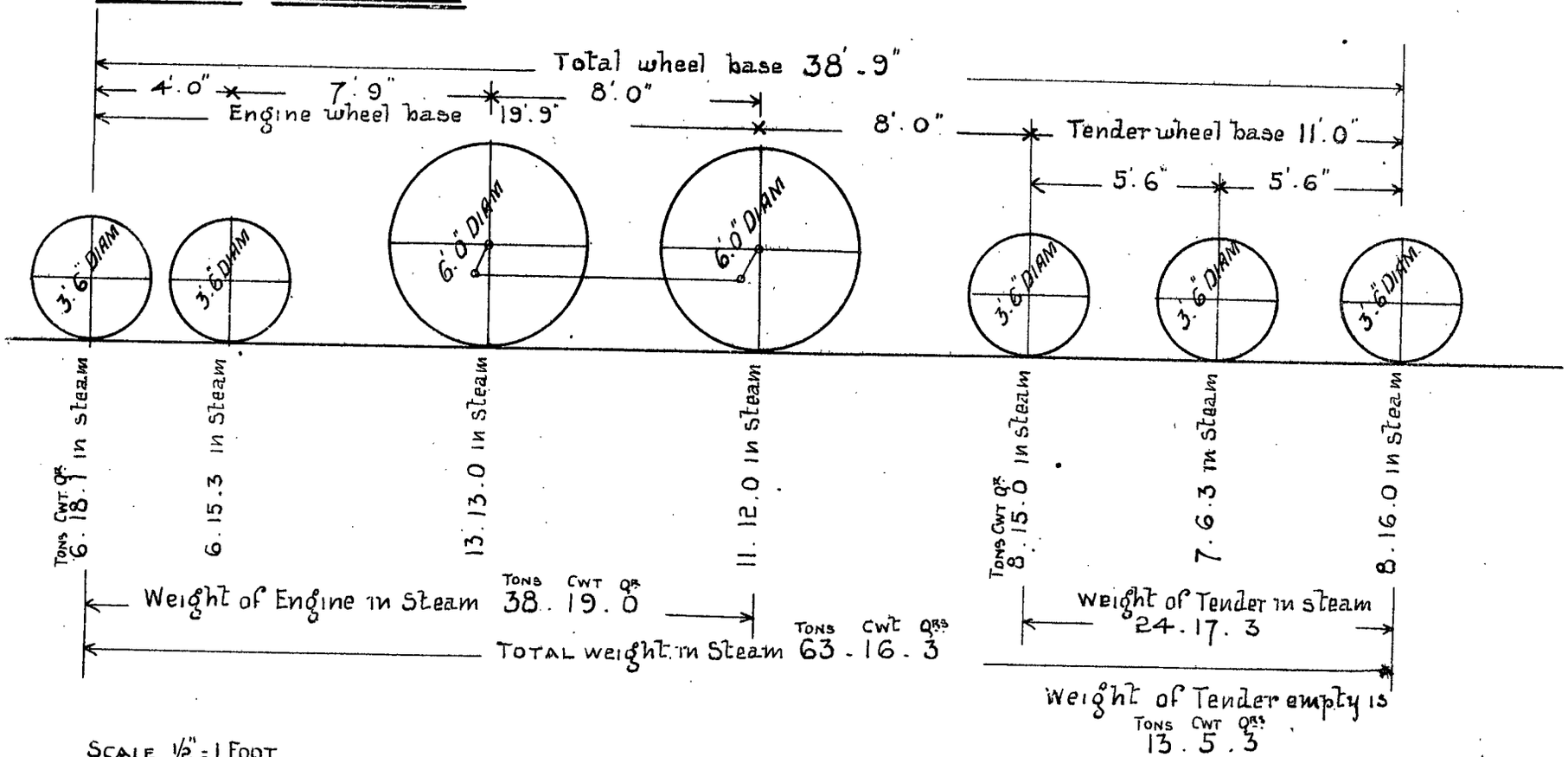
N.S.W. RAILWAYS,

Locomotive Engine—"Express"—265 Class.

N.S.W. RAILWAYS

LOCO. DEPT

"EXPRESS" 265 CLASS



SCALE 1/2" = 1 FOOT

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

(Sd) W. SCOTT
13.2.85

(Railway Bridges Engr)

MENANGLE BRIDGE.

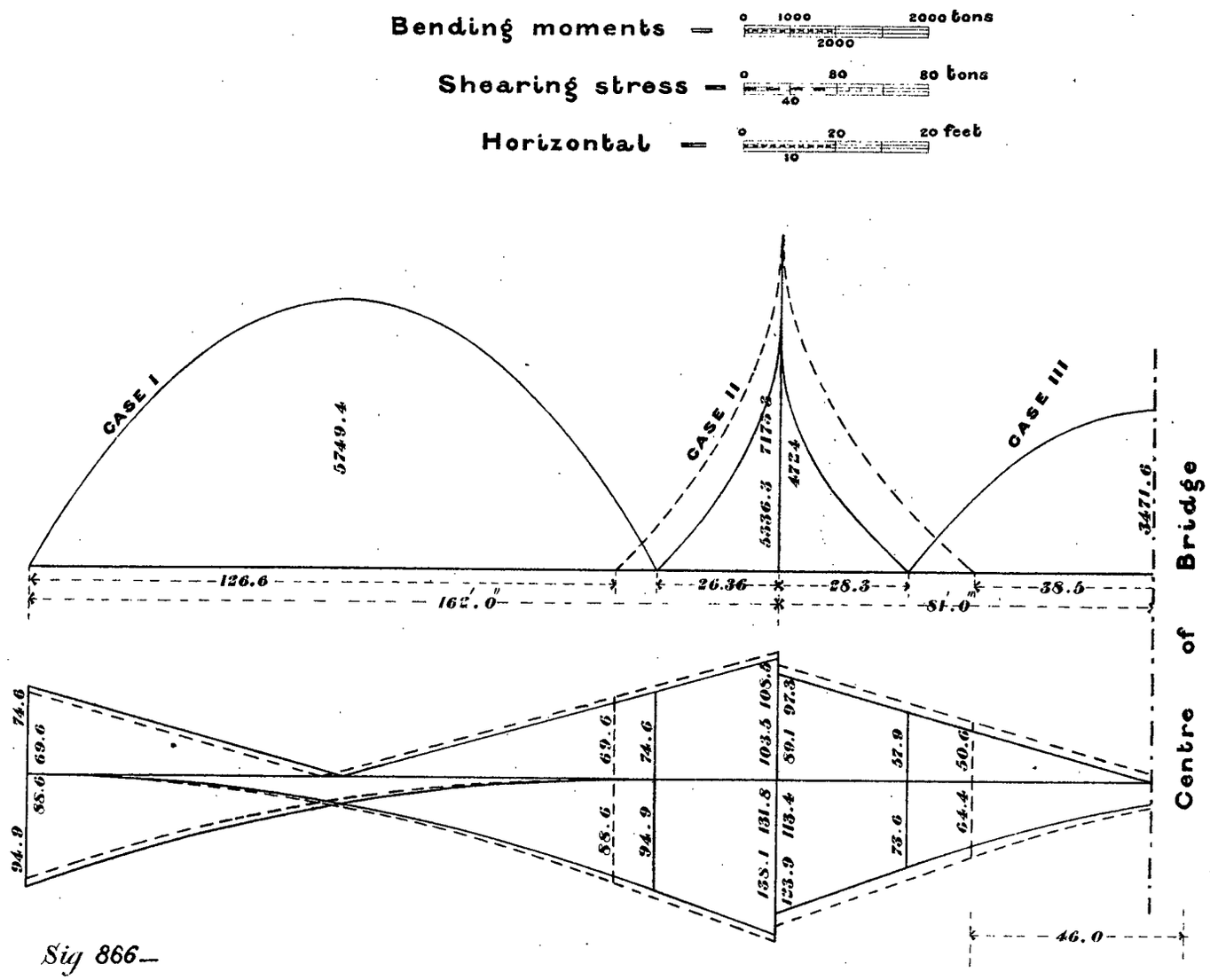
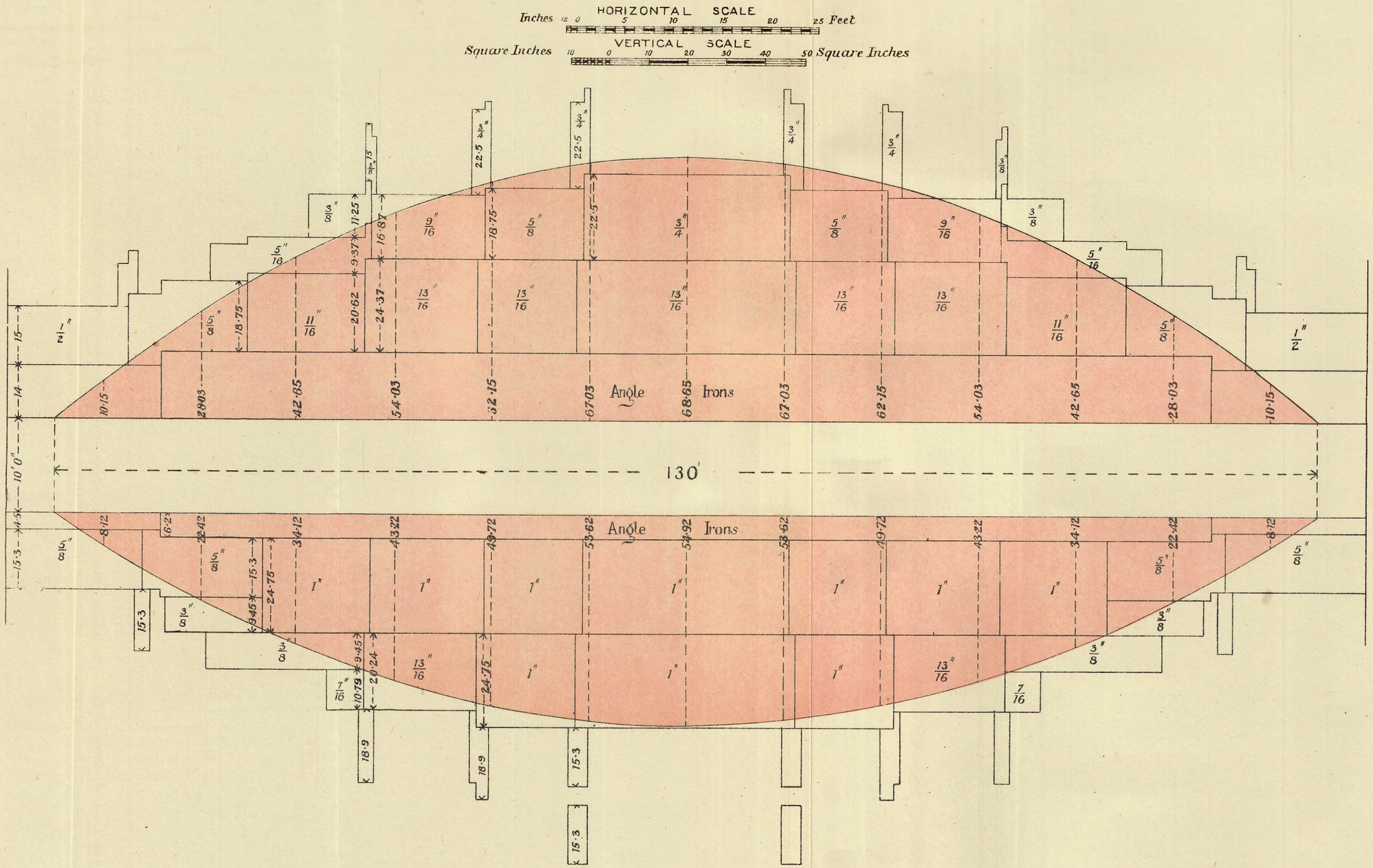


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

WOLLONDILLY BRIDGES.

Plate No. 7



(S16. 866—)

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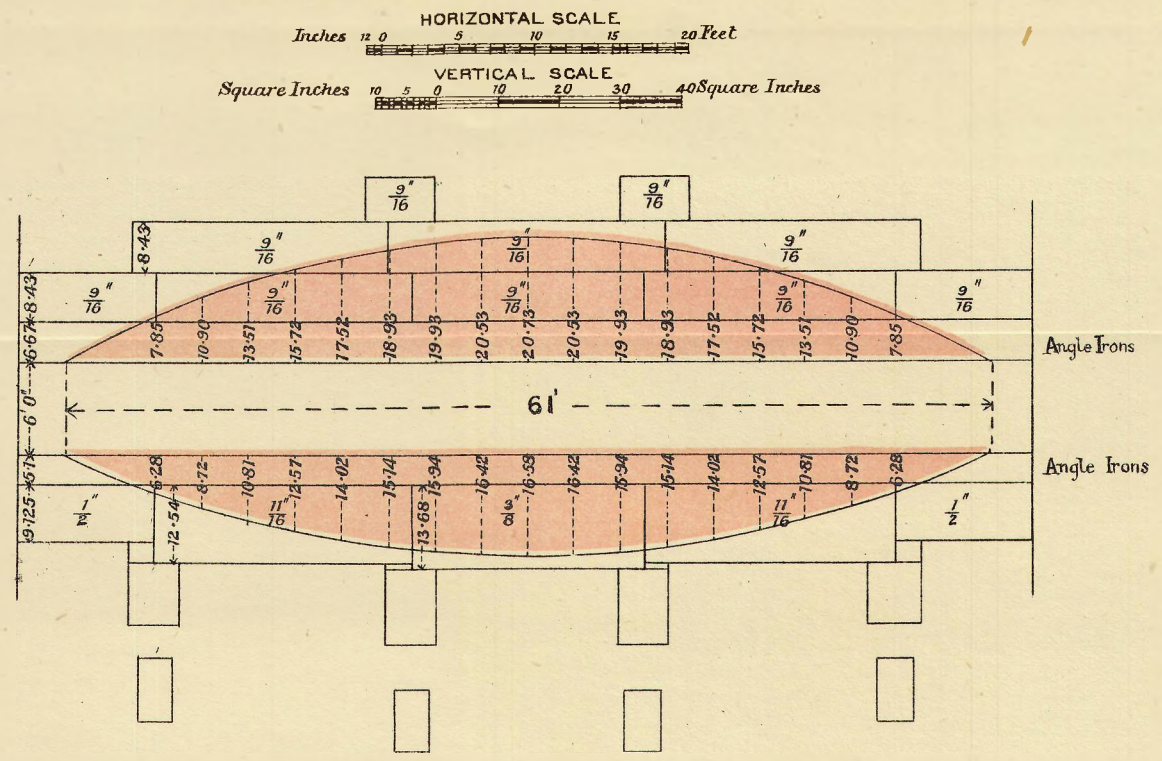
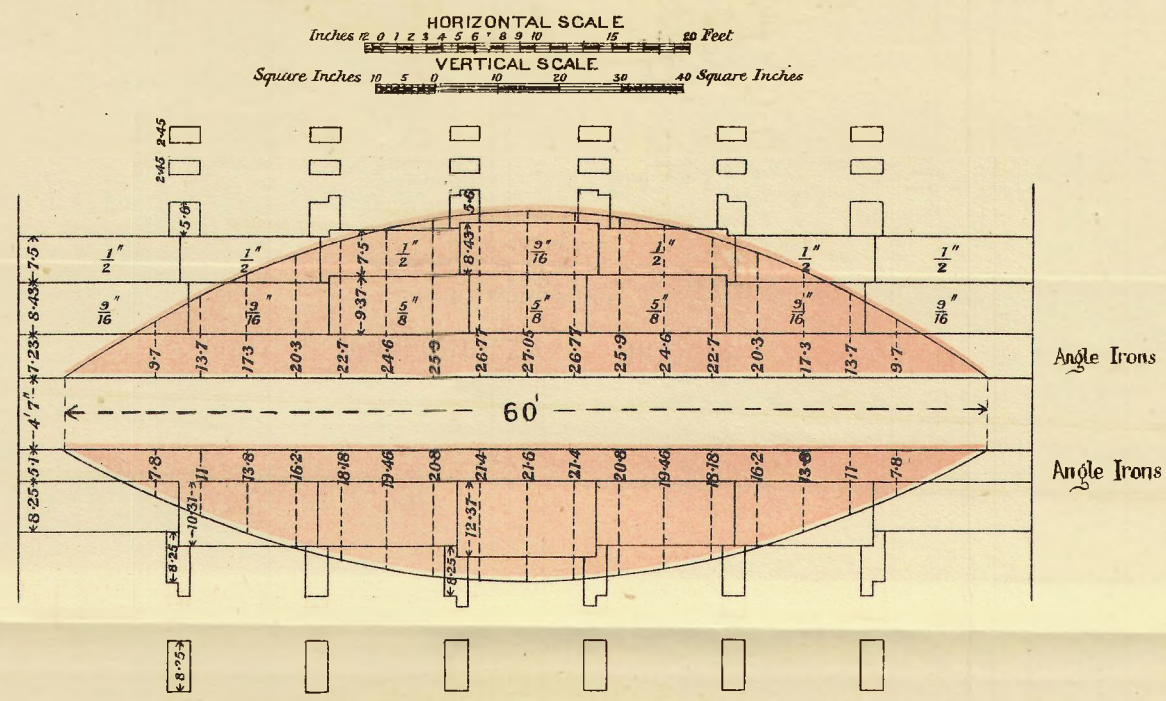
THE PEEL-STREET BRIDGE, TAMWORTH

Plate No. 8b



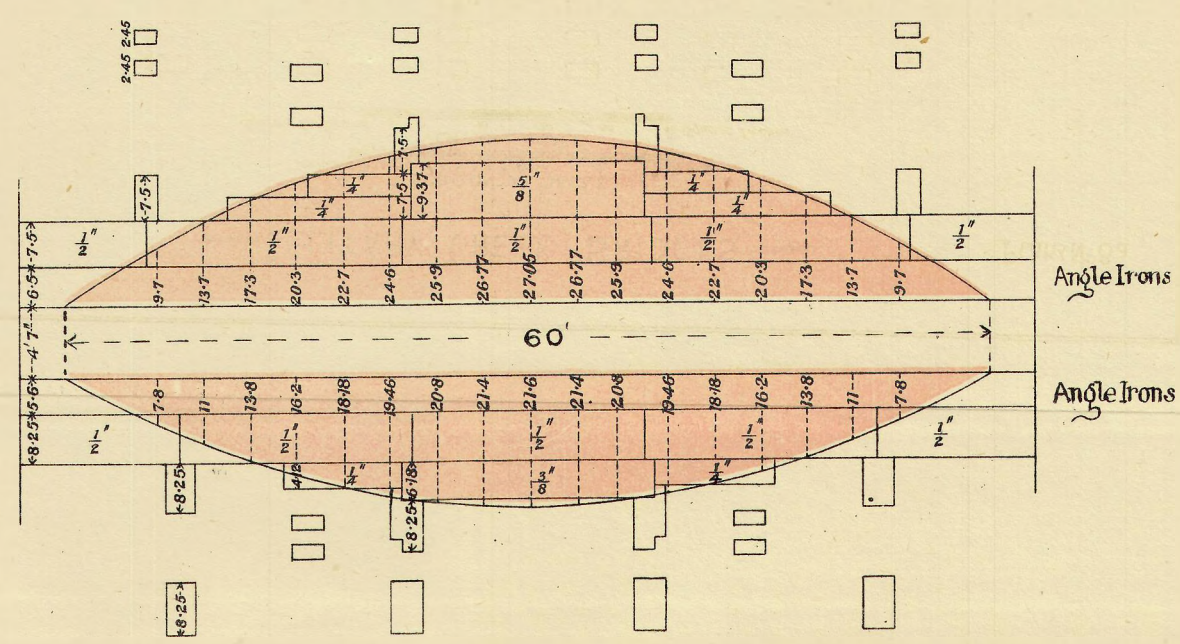
SOLITARY CREEK BRIDGES

Plate No. 8a



WOLLONDILLY BRIDGES

Plate No. 8



(Sig. 866)

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APPENDIX /

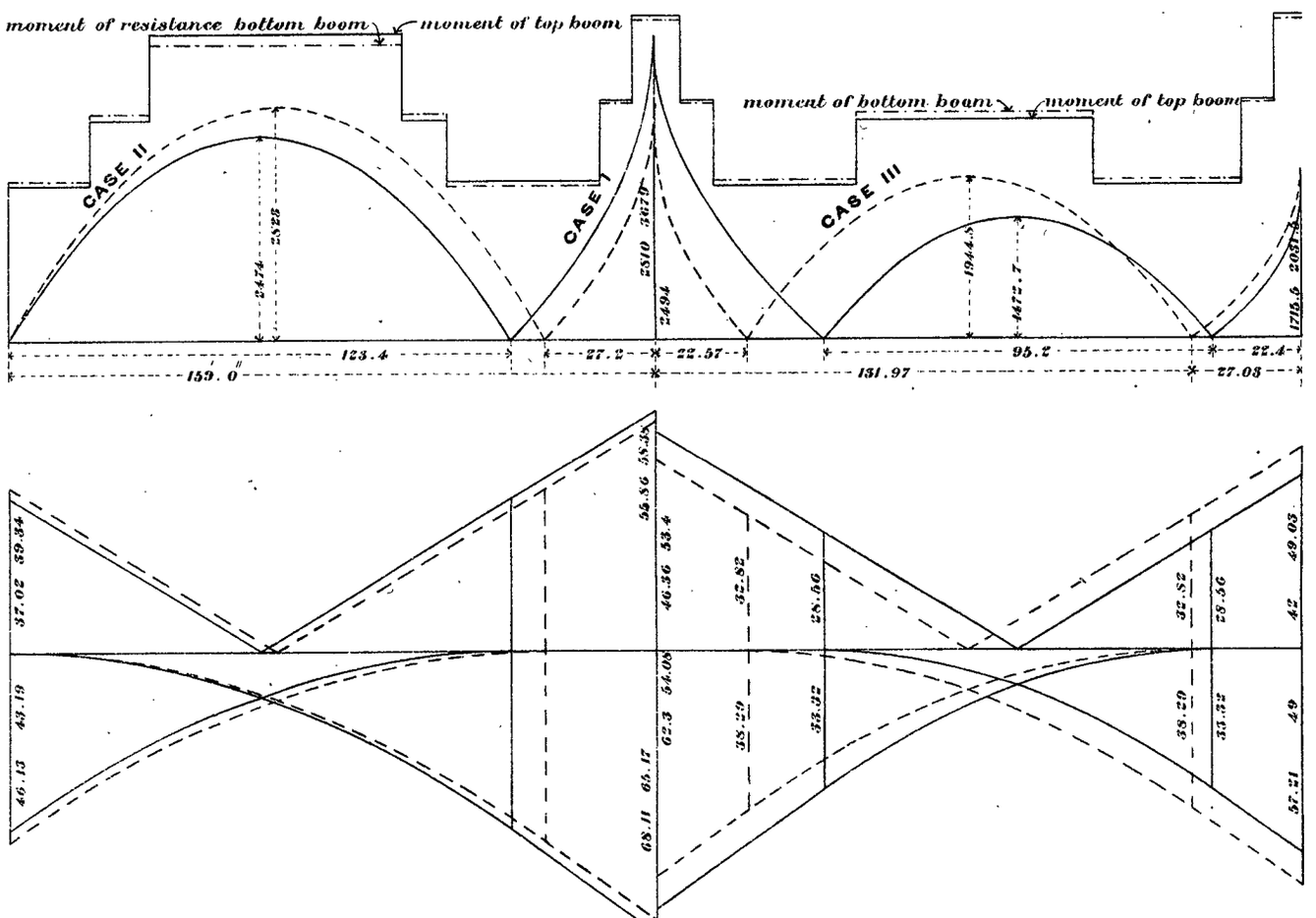
WAGGA WAGGA BRIDGE.

Plate .9

Bending moments — 0, 1000, 1000, 2000 tons

Shearing stresses — 0, 20, 40, 60 tons

Horizontal — 0, 20, 40, 60 feet



Sig 866—

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

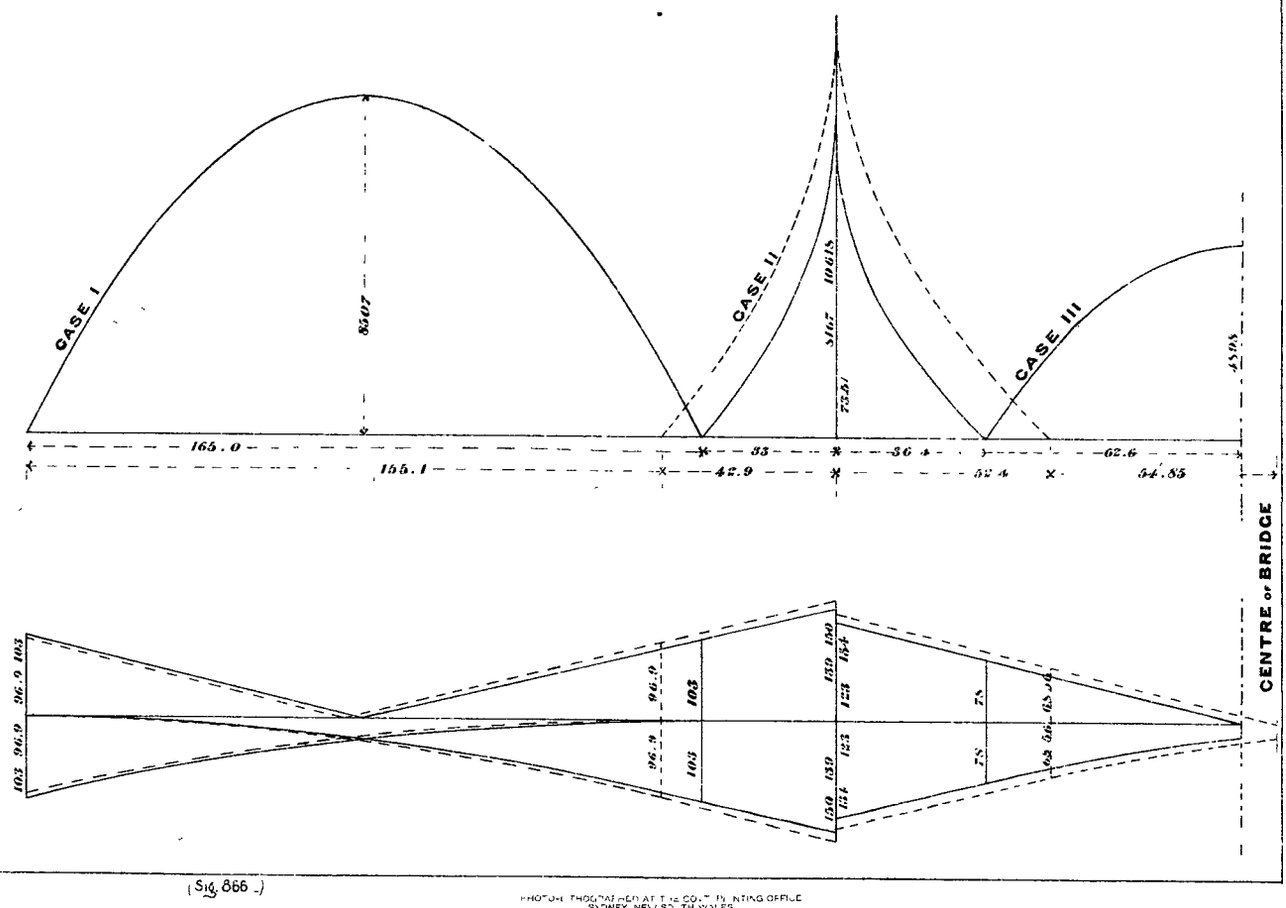
Plate No. 10

PENRITH BRIDGE

Bending moments 0 2000 2000

Shearing stresses 0 100 100

Horizontal 0 20 20



(Sig. 866.)

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

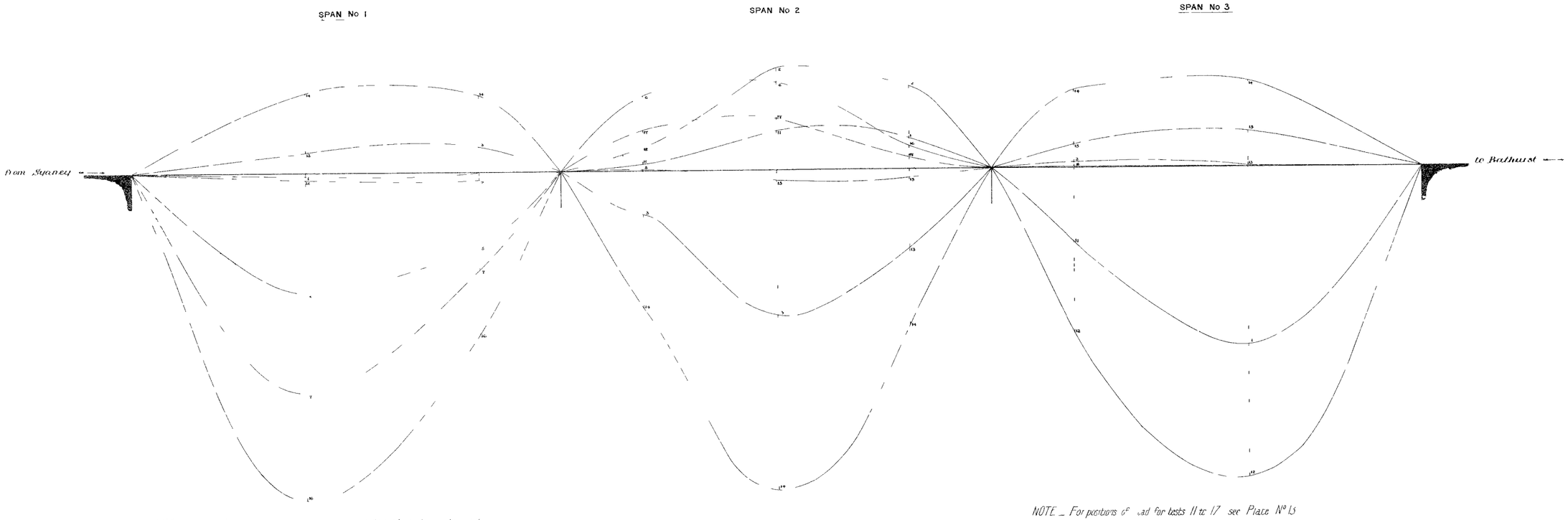
PENRITH BRIDGE

Diagram of Deflections

Down stream Girder

Horizontal Scale

Scale for Deflections



NOTE These deflections are plotted ex[illegible] registered by the [illegible] instruments [illegible] (1 in = 1 inch) 83 tons) for [illegible] see Plate No 3

NOTE – For positions of load for tests 11 to 17 see Plate No 13

(86F,

Plate No 12

PENRITH BRIDGE

Diagram of Deflections

DOWNSTREAM LINE R

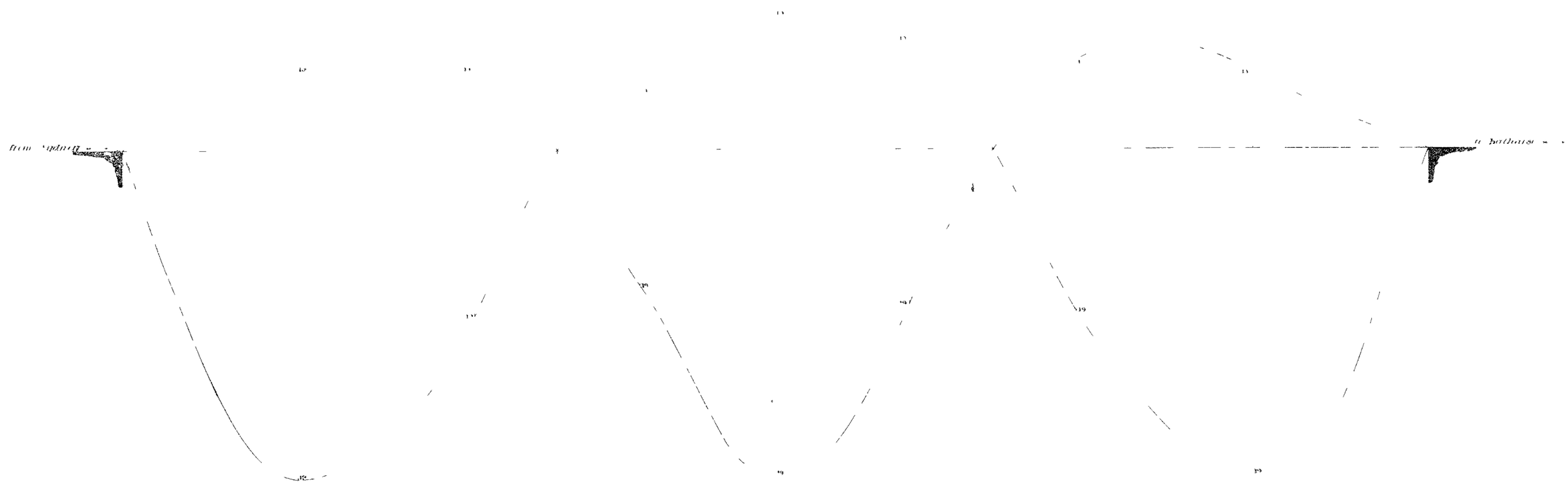
HORIZONTAL SCALE

SCALE FOR DEFLECTIONS

SPAN No 1

SPAN No 2

SPAN No 3



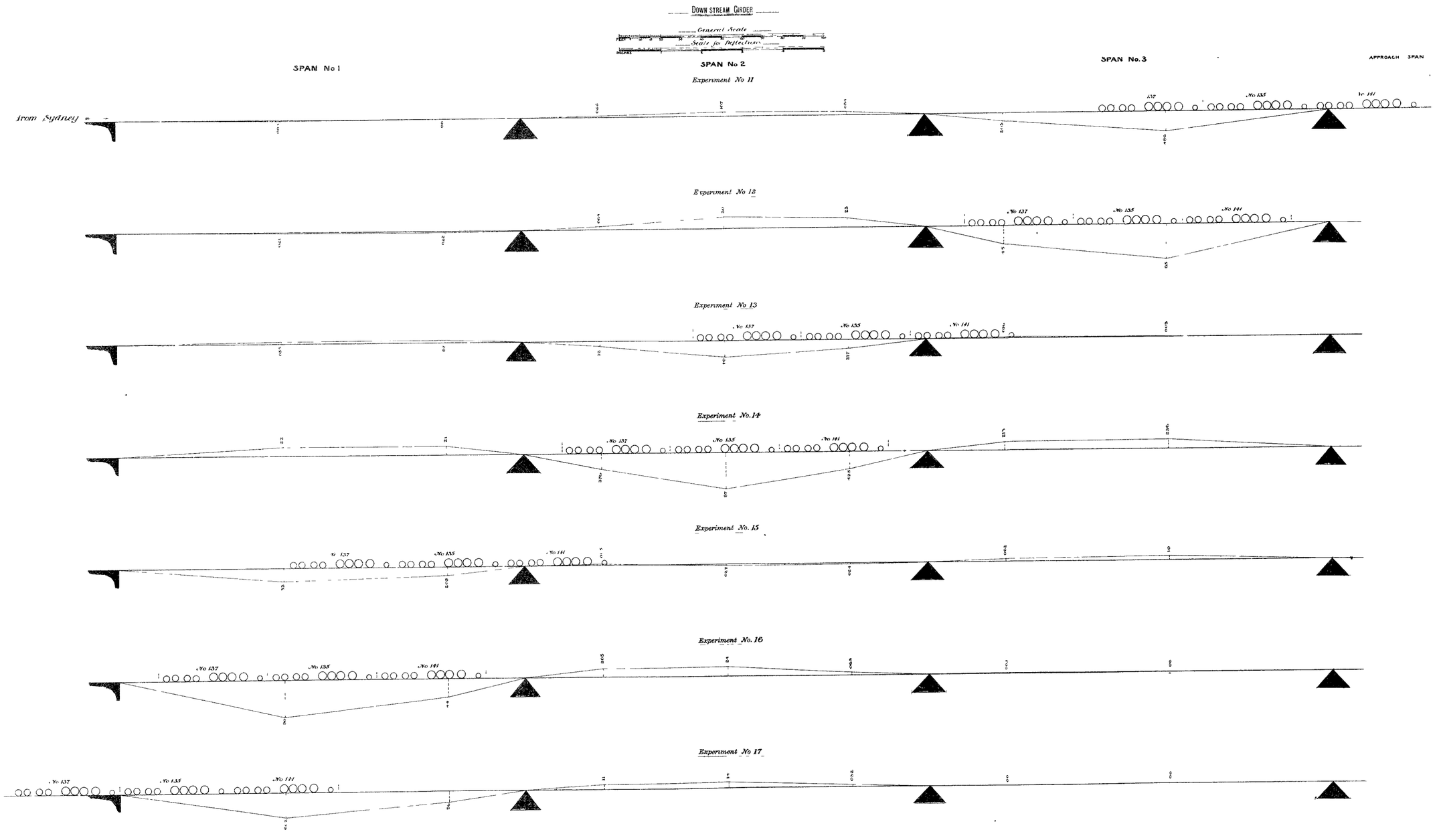
No 11 – Engines Nos 137 136 & 111 (American Goods) running at full speed

Sig 866 –

Plate Nº 13

PENRITH BRIDGE

Diagram of Deflections showing positions of Engines during each test.



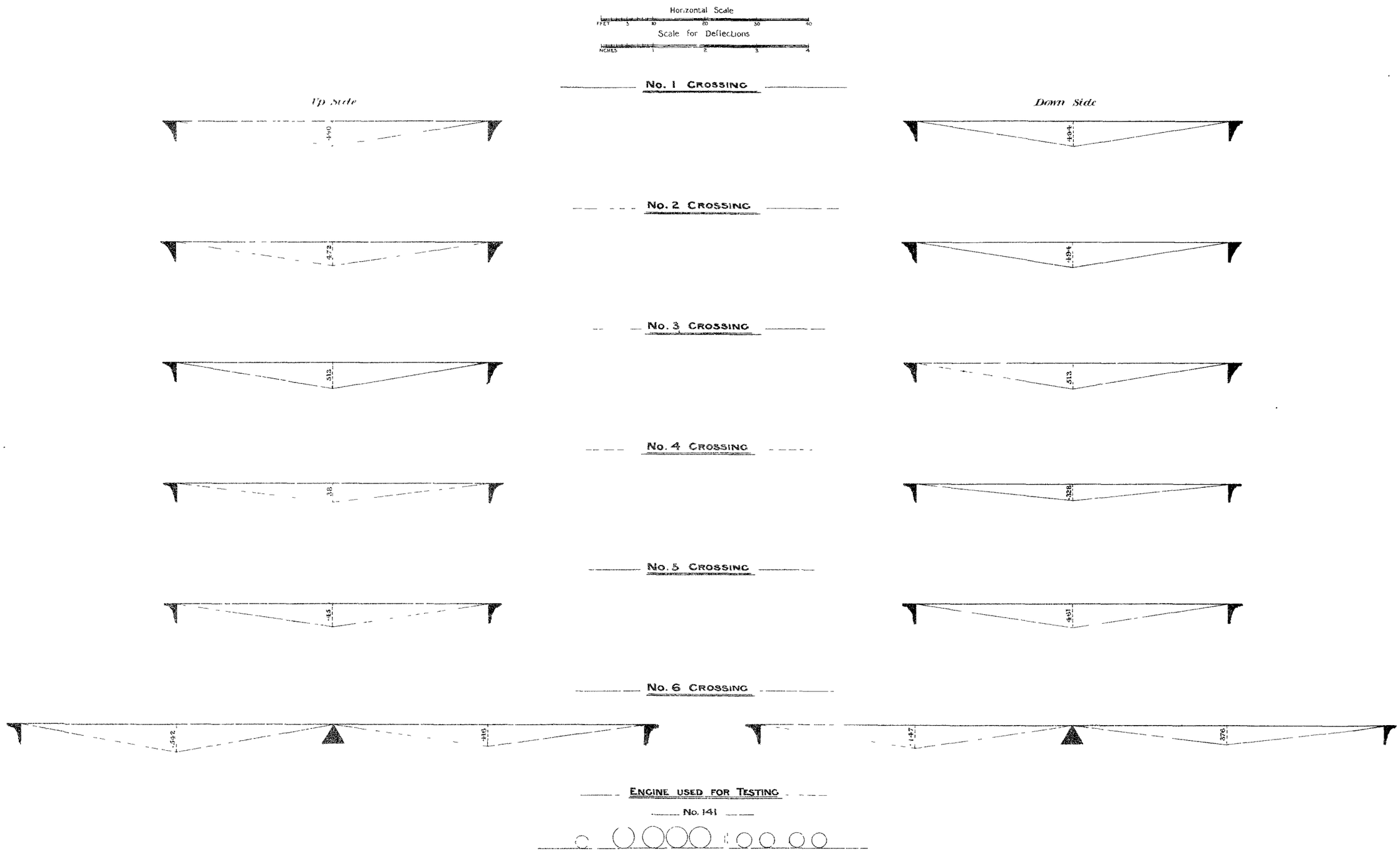
NOTE _ For deflections as actually registered by the testing instruments see Plate Nº 11.

(866_)

SOLITARY CREEK BRIDGES

Plate 14.

Diagram of Deflections for Full-speed Tests

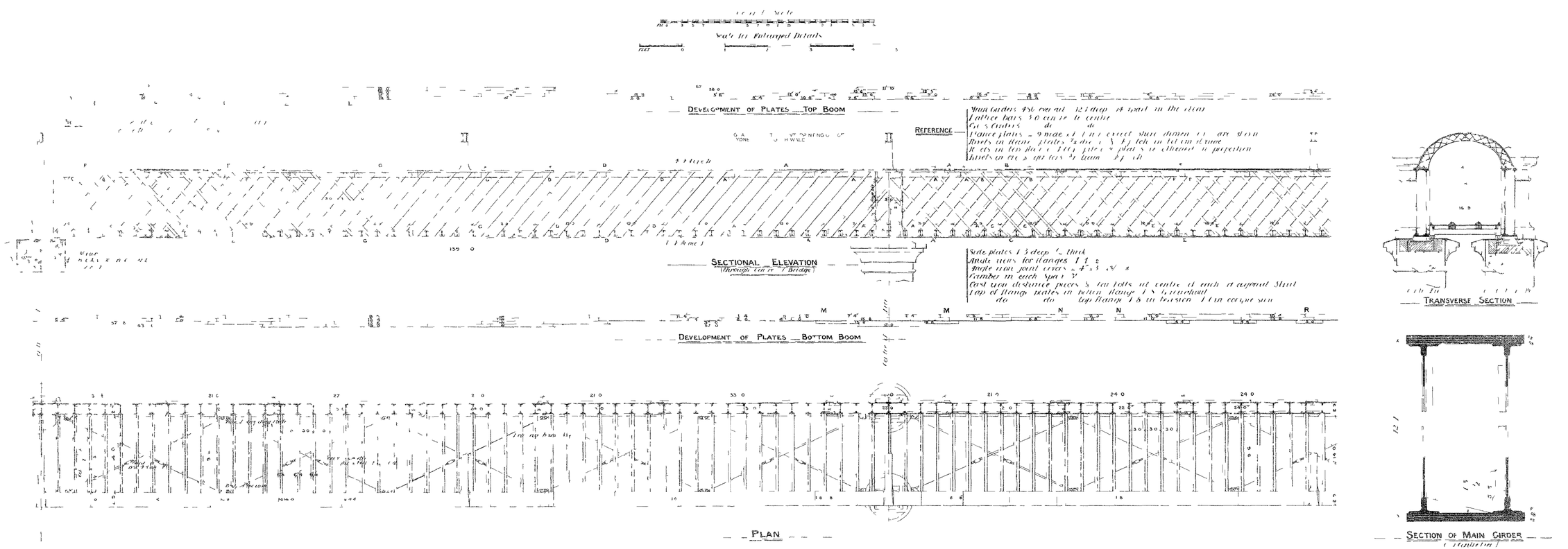


Sig 866–

BATHURST WELLINGTON & ABERDEEN BRIDGES

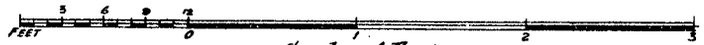
Plate 15

Details of Main Girders

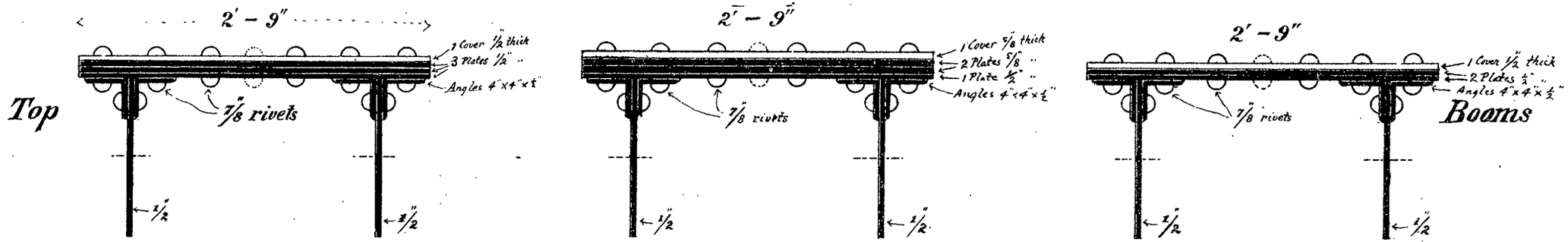


BATHURST, WELLINGTON, & ABERDEEN BRIDGES

Sections of Booms



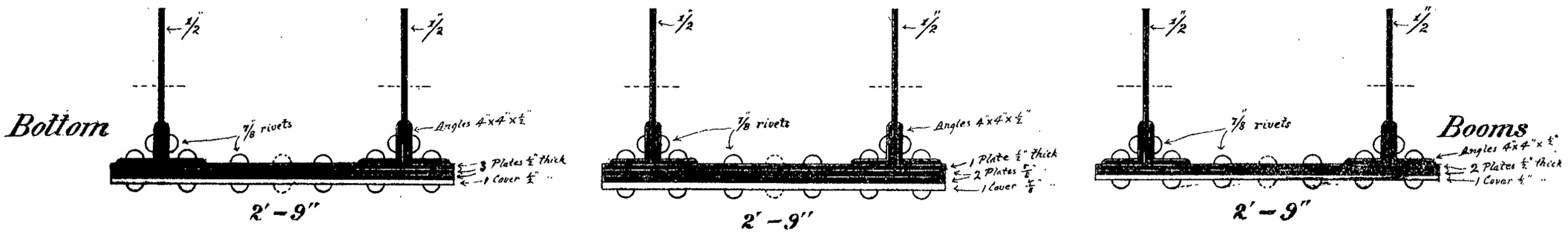
Scale of Feet



At middle of effective length 1st. Span

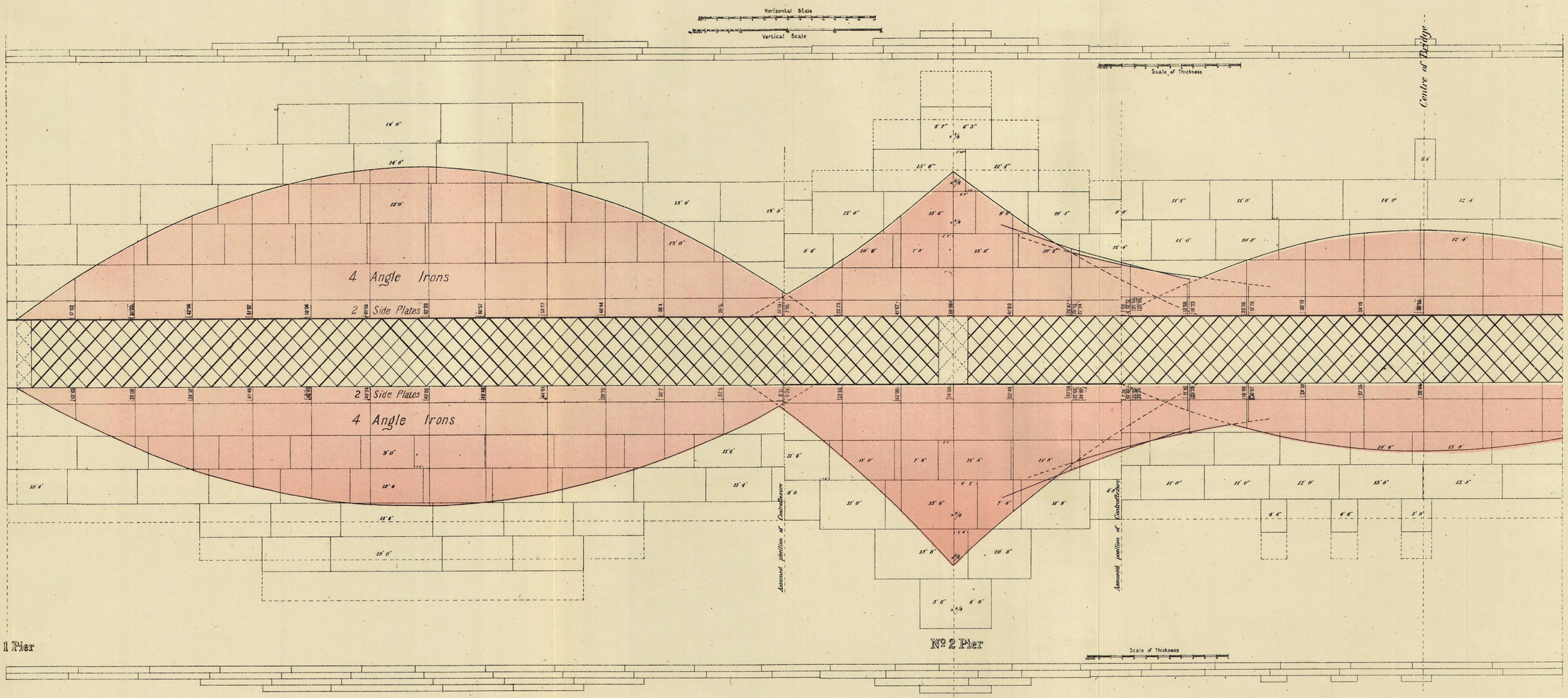
At 2nd. Pier

At centre of Bridge



BATHURST WELLINGTON AND ABERDEEN BRIDGES

Diagram showing Effective and Actual Areas in Booms, also the Curve of Areas calculated from maximum stresses



Notes
- Flange-Plates 12" x 2'-9" x ½ where not otherwise shown
- The dotted lines show the Areas of Booms
- Thick lines show parts in Compression
- Thin " " " Tension

(96. 866.)

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BATHURST, WELLINGTON, AND ABERDEEN BRIDGES.

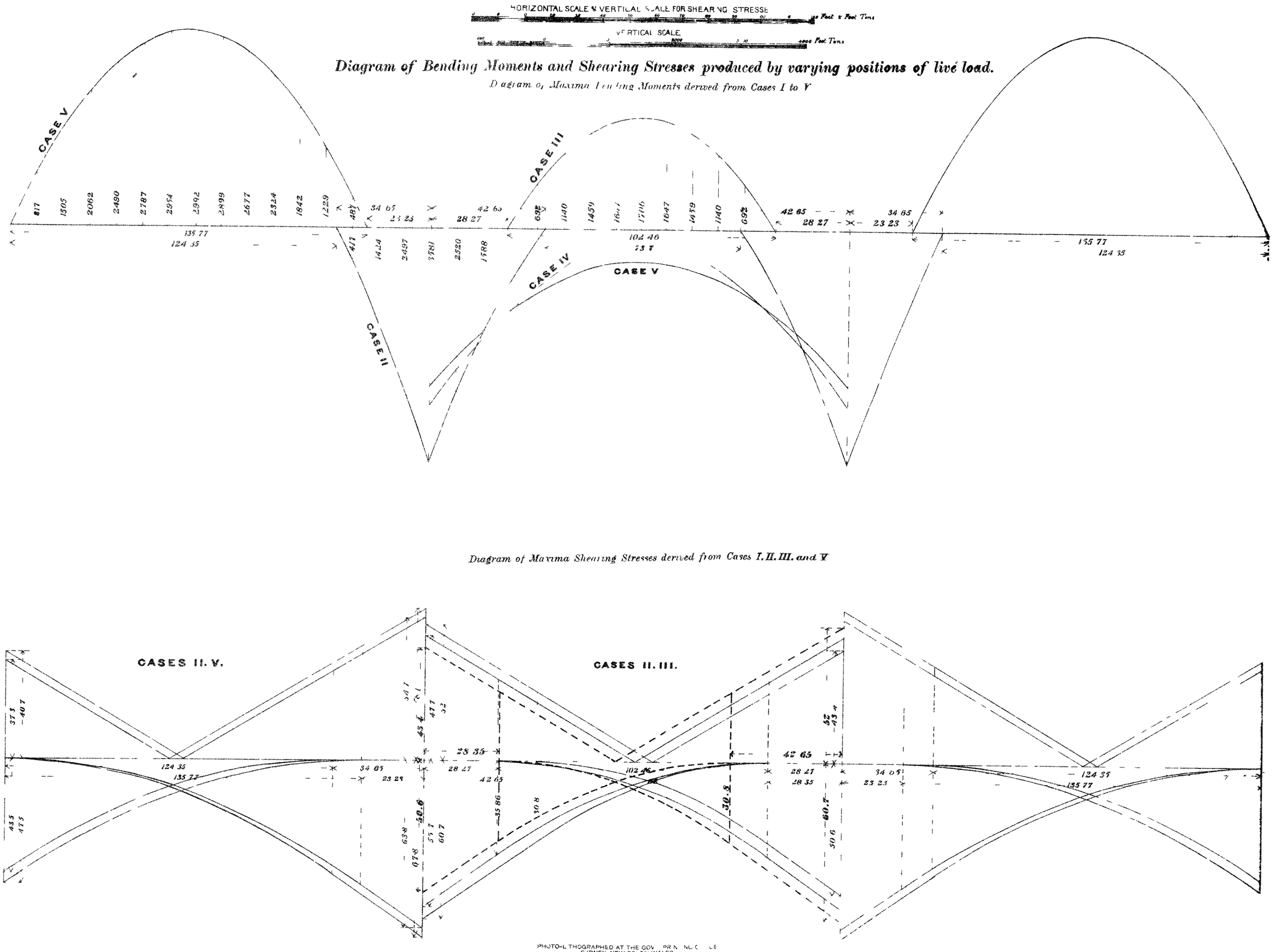

Diagram of Maxima Shearing Stresses derived from Cases I. II. III. and V

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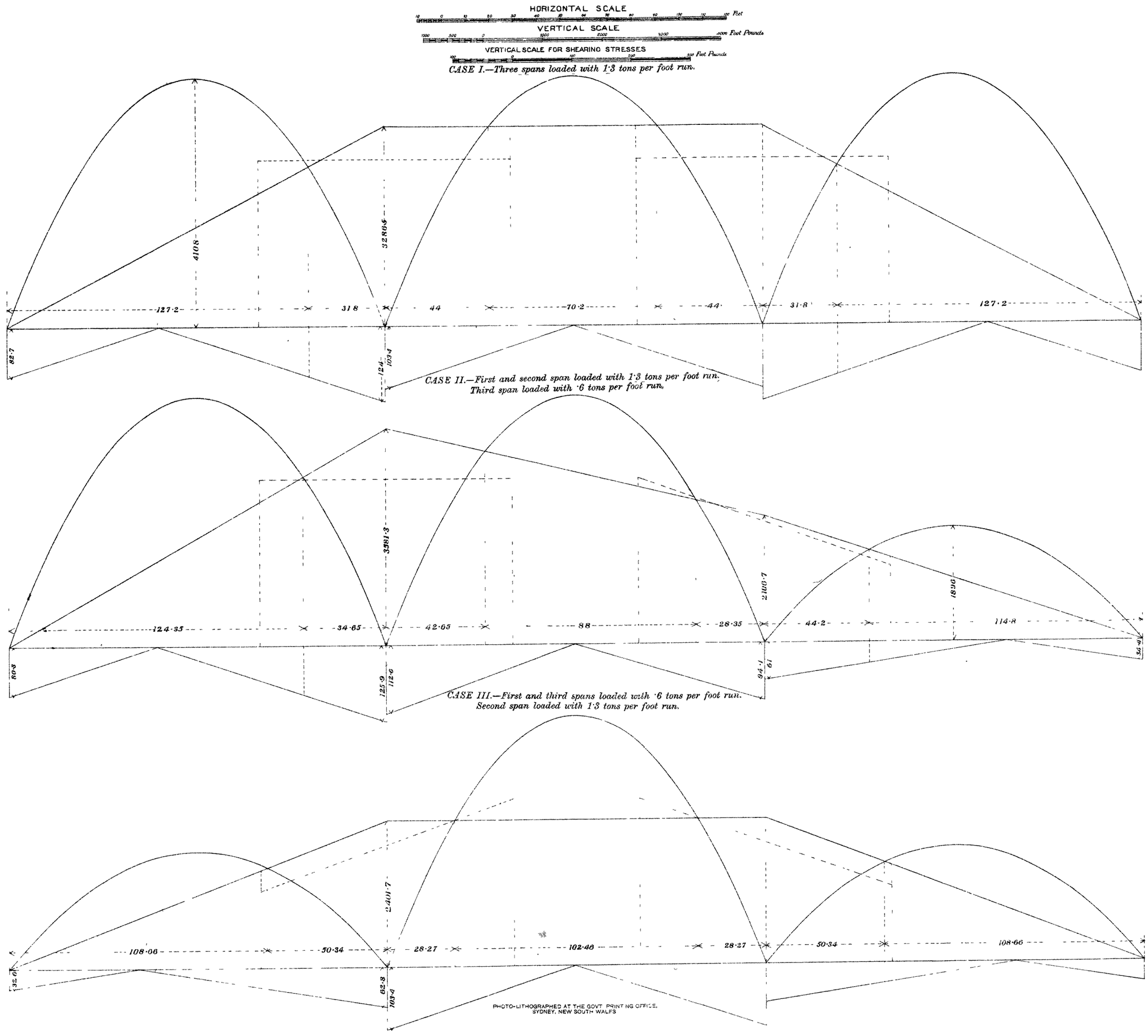
SYDNEY NEW SOUTH WALES

BATHURST, WELLINGTON, AND ABERDEEN BRIDGES.



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(Sig. 866.)

BATHURST, WELLINGTON, AND ABERDEEN BRIDGES.

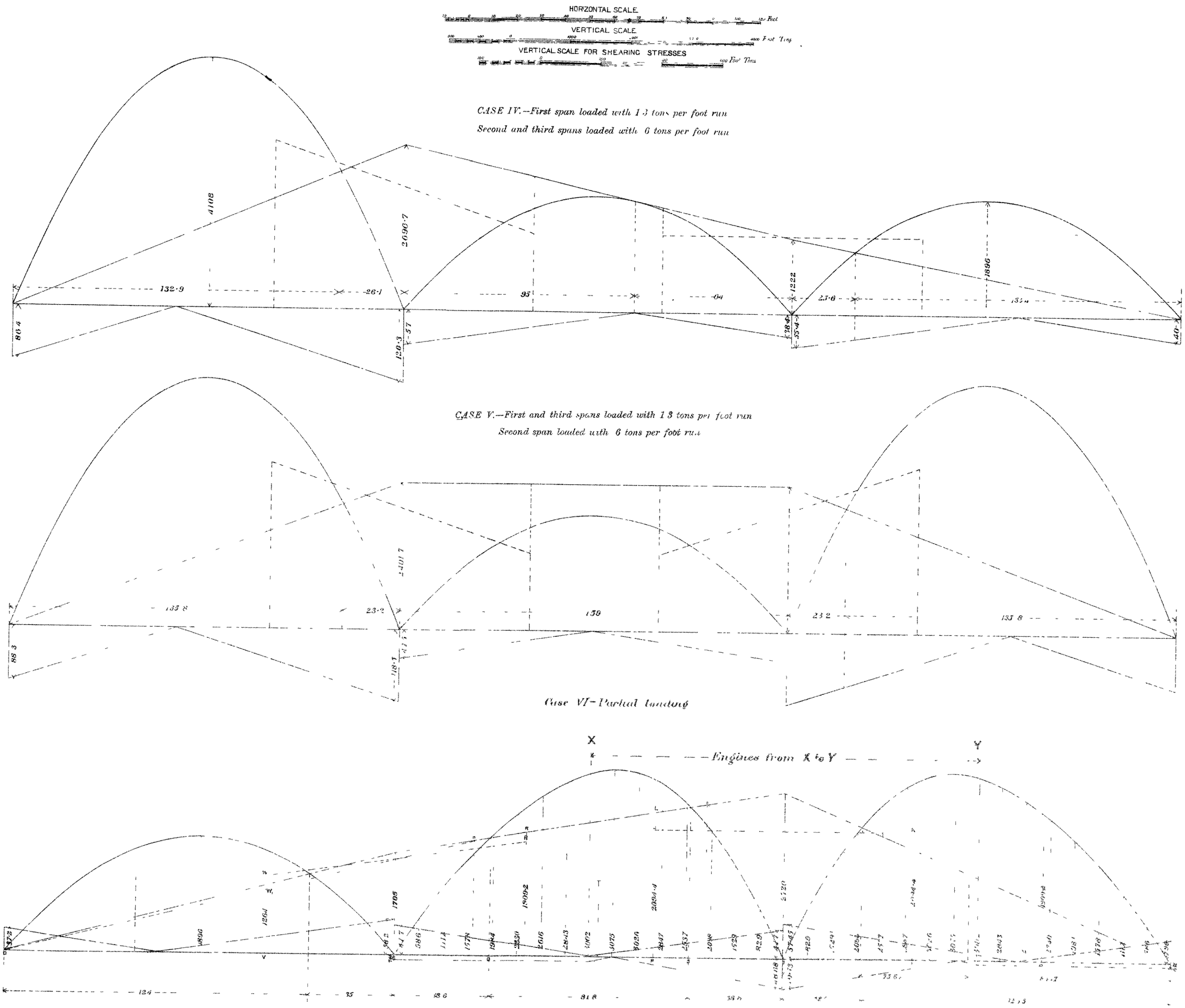


PHOTO-LITHOGRAPHED AT THE GOVT PRINTING OFFICE SYDNEY NEW SOUTH WALES

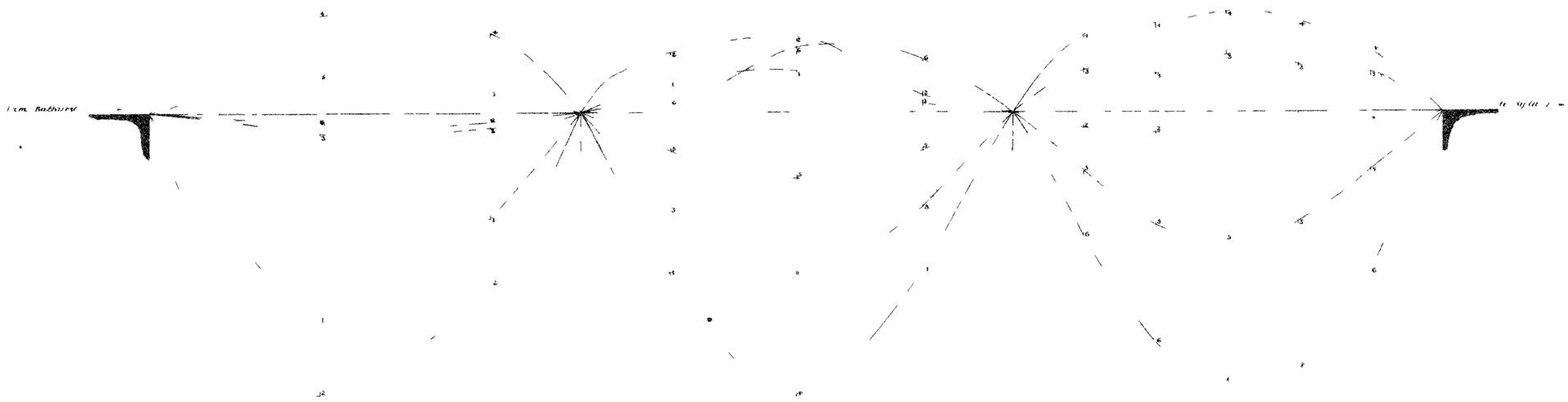
BATHURST BRIDGE.

Diagram of Deflections

Plate No 21

DOWN-STREAM GIRDER

SPAN No 3 — SPAN No 2 — AN No 1



NOTE

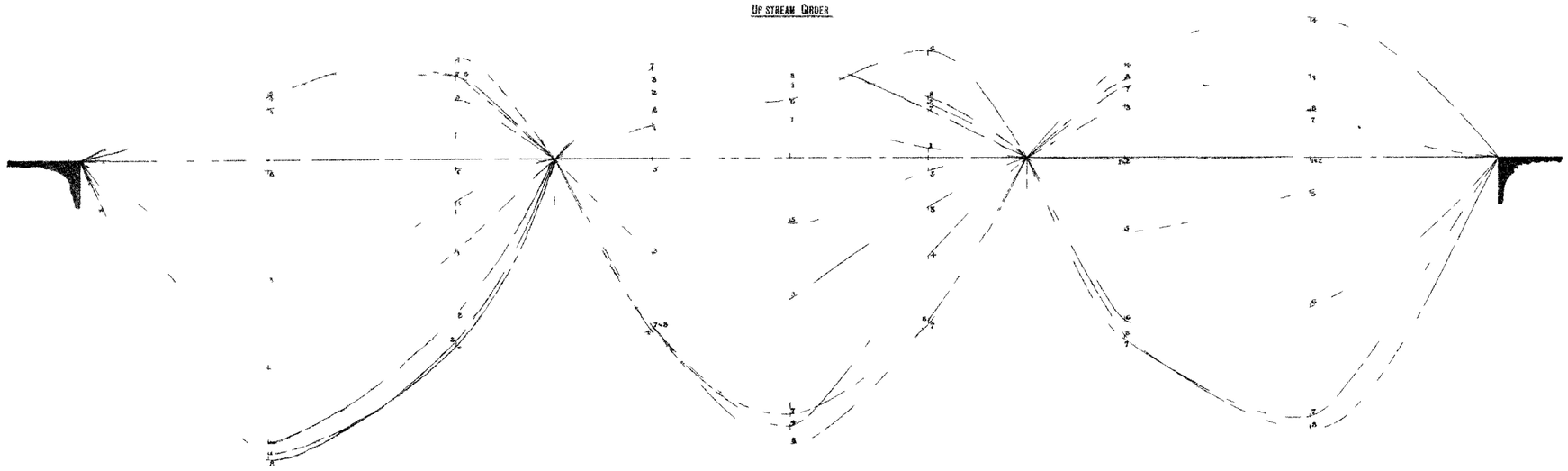
These Deflections are plotted exactly as recorded by the Testing apparatus (x multiplied by 8 times)

For actual Deflections see Plate No 23

NOTE

For positions of Load for Tests 1 to 6 see Plate No 23

UP STREAM GIRDER



HORIZONTAL SCALE

SCALE FOR DEFLECTIONS

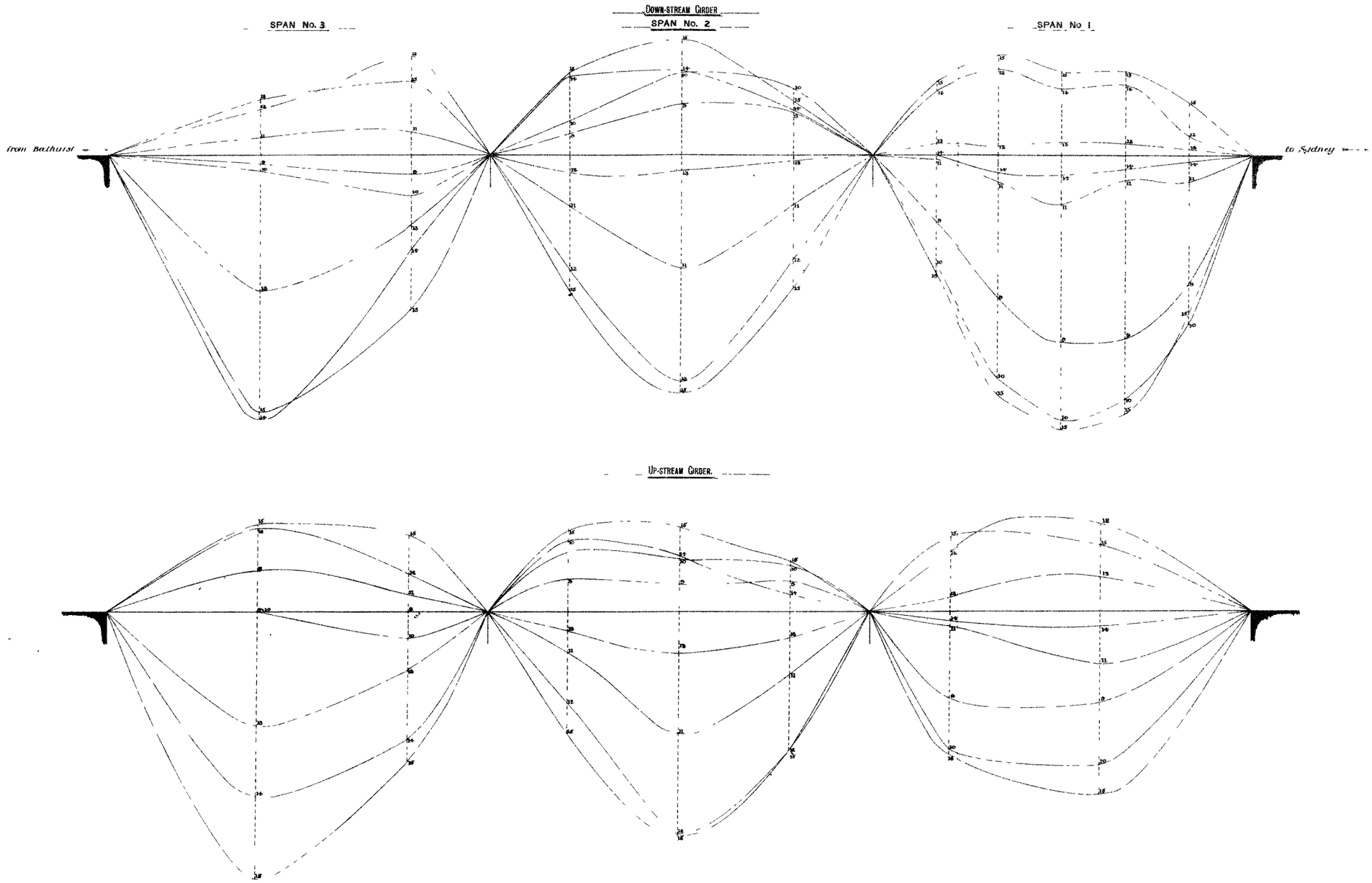
PHOTO LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY NEW SOUTH WALES

(Dec. 866—1

Plate No 22

BATHURST BRIDGE.

Diagram of Deflections



Horizontal Scale

Scale for Deflections

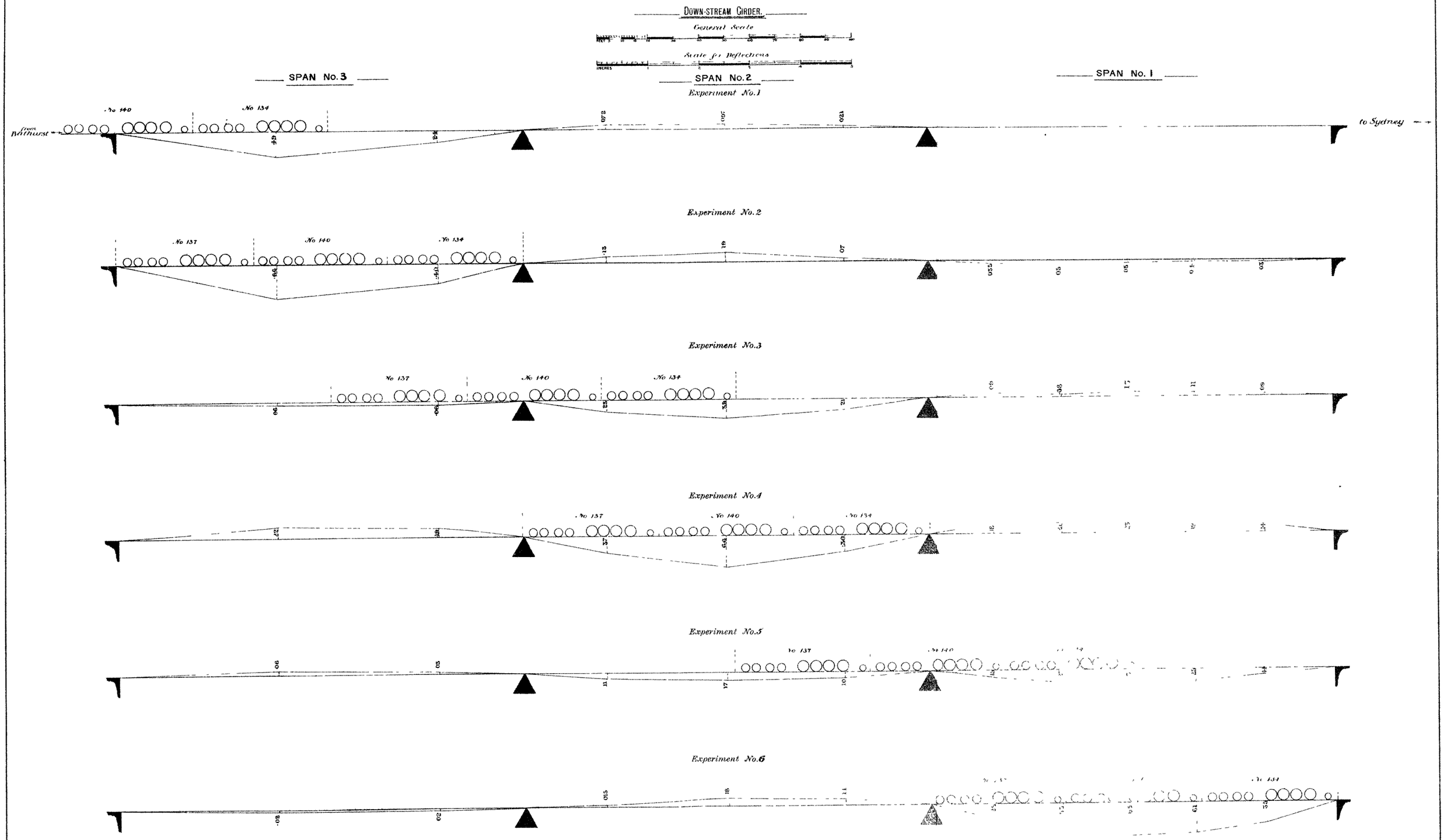
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE
SYDNEY N.S.W. SOUTH WALES

(Eg 566)

BATHURST BRIDGE.

Plate No. 23

Diagram of Deflections showing positions of Engines during each test.



NOTE.

For Deflections as actually registered by the Testing apparatus,

see Plate No. 21

(Fig. 866a)

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

BATHURST BRIDGE.

Plate No. 24

Diagram of Deflections for Full-speed Tests.

Up-stream Girder.

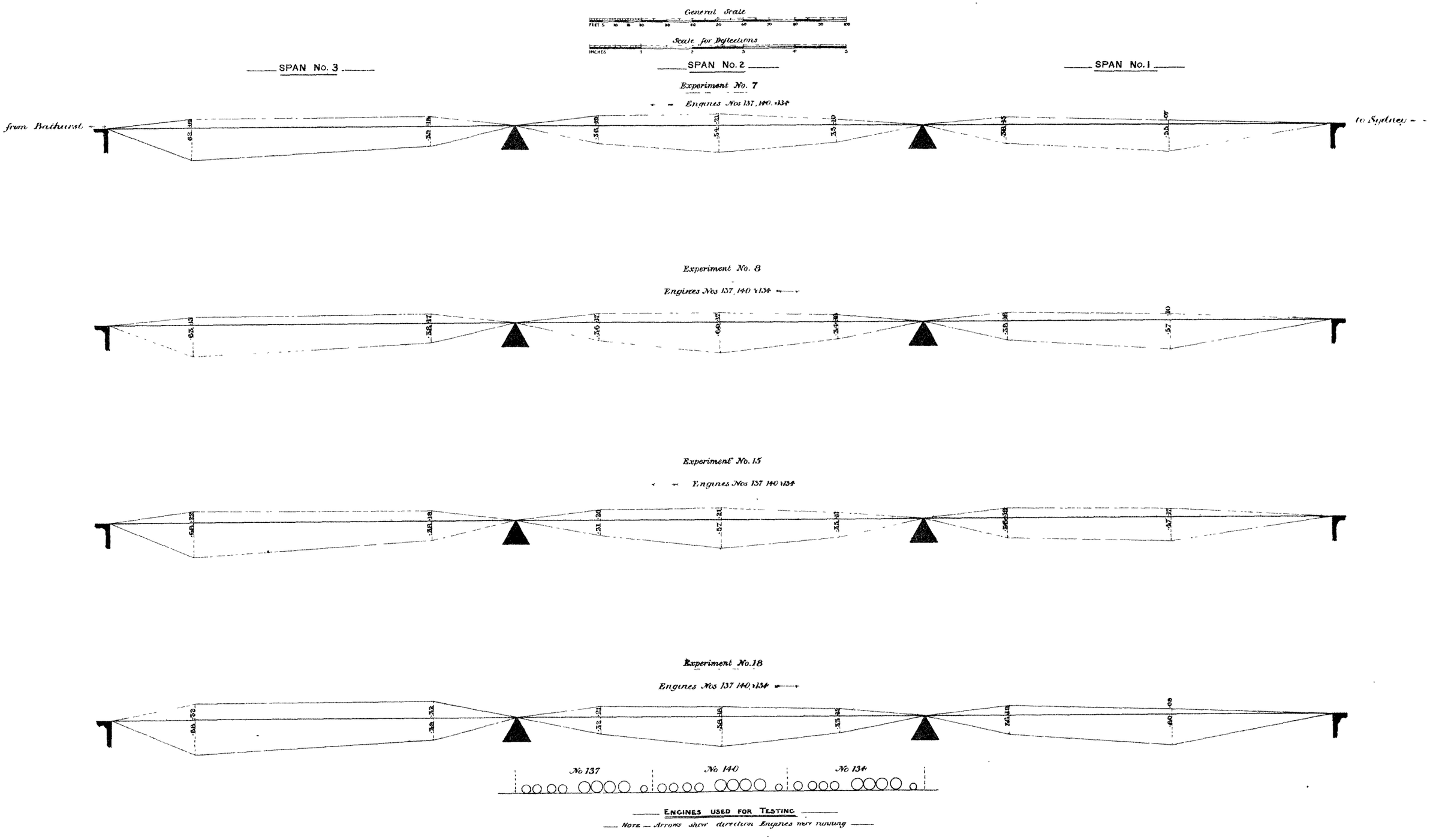


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE.
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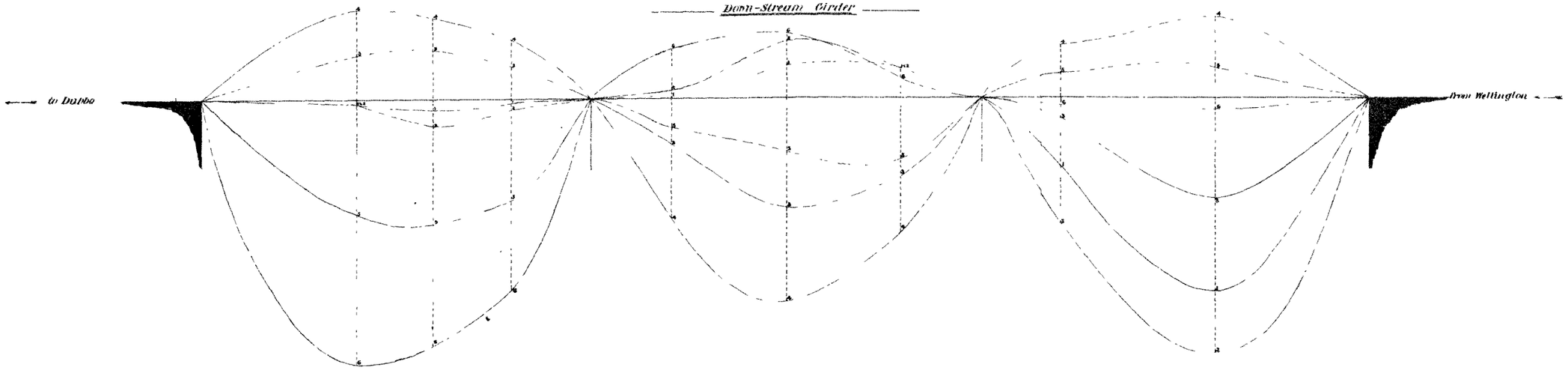
WELLINGTON BRIDGE

Plate No. 25

DIAGRAM OF DEFLECTIONS

SPAN No. 3 — SPAN No. 2 — SPAN No. 1

Down-Stream Girder



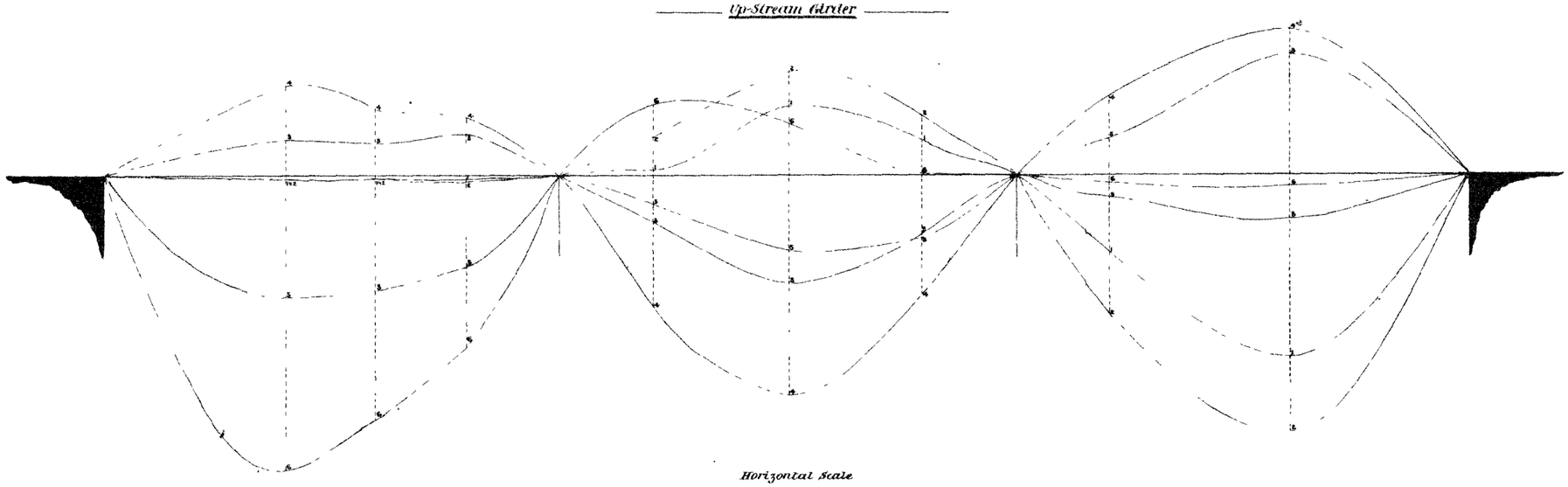
NOTE

These Deflections are plotted exactly as registered by the Testing apparatus (i.e., multiplied 8 times).
For actual Deflections see Plate No 27

NOTE

For positions of Load for Tests 1 to 6 see Plate No 27

Up-Stream Girder



Horizontal Scale

FEET 5 10 15 20 40 60 80 100

Scale for Deflections

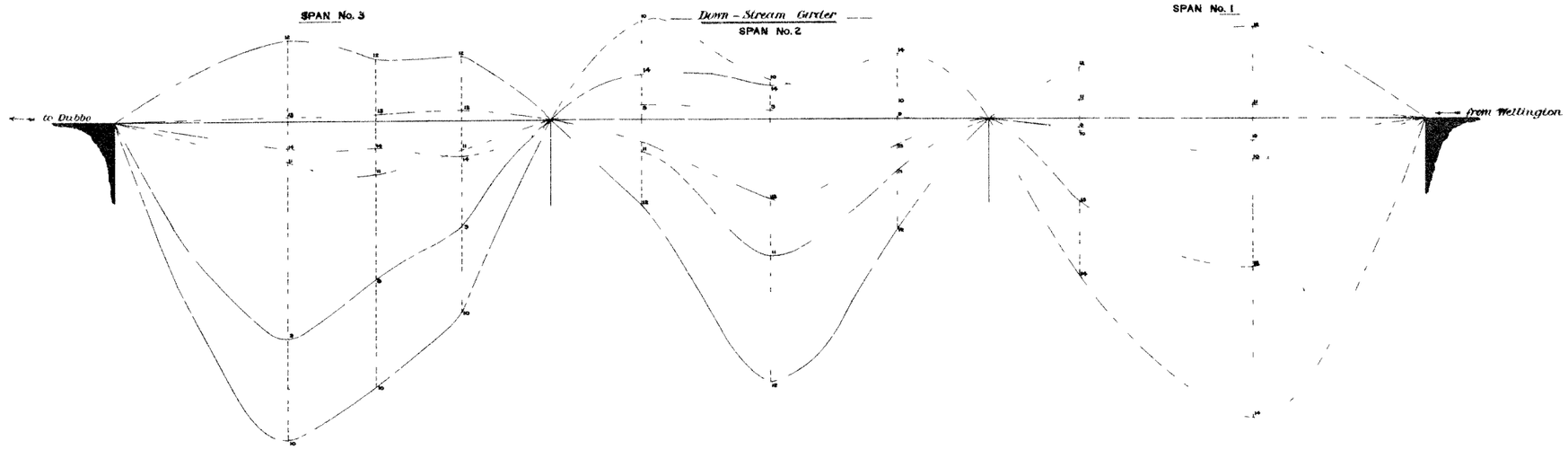
PARTS OF AN INCH 1/50 1/25 3/100 1/20 1/15 1/10 1/5 3/10 1 INCH

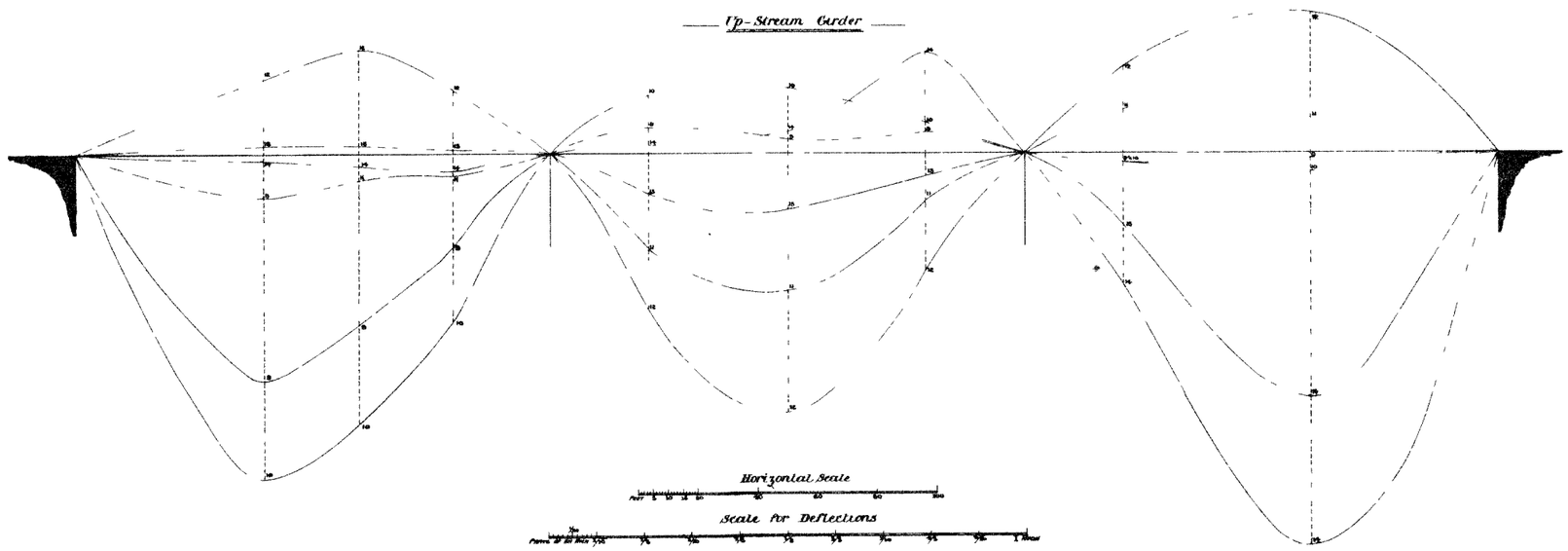
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES

WELLINGTON BRIDGE

DIAGRAM OF DEFLECTIONS

Plate No. 26





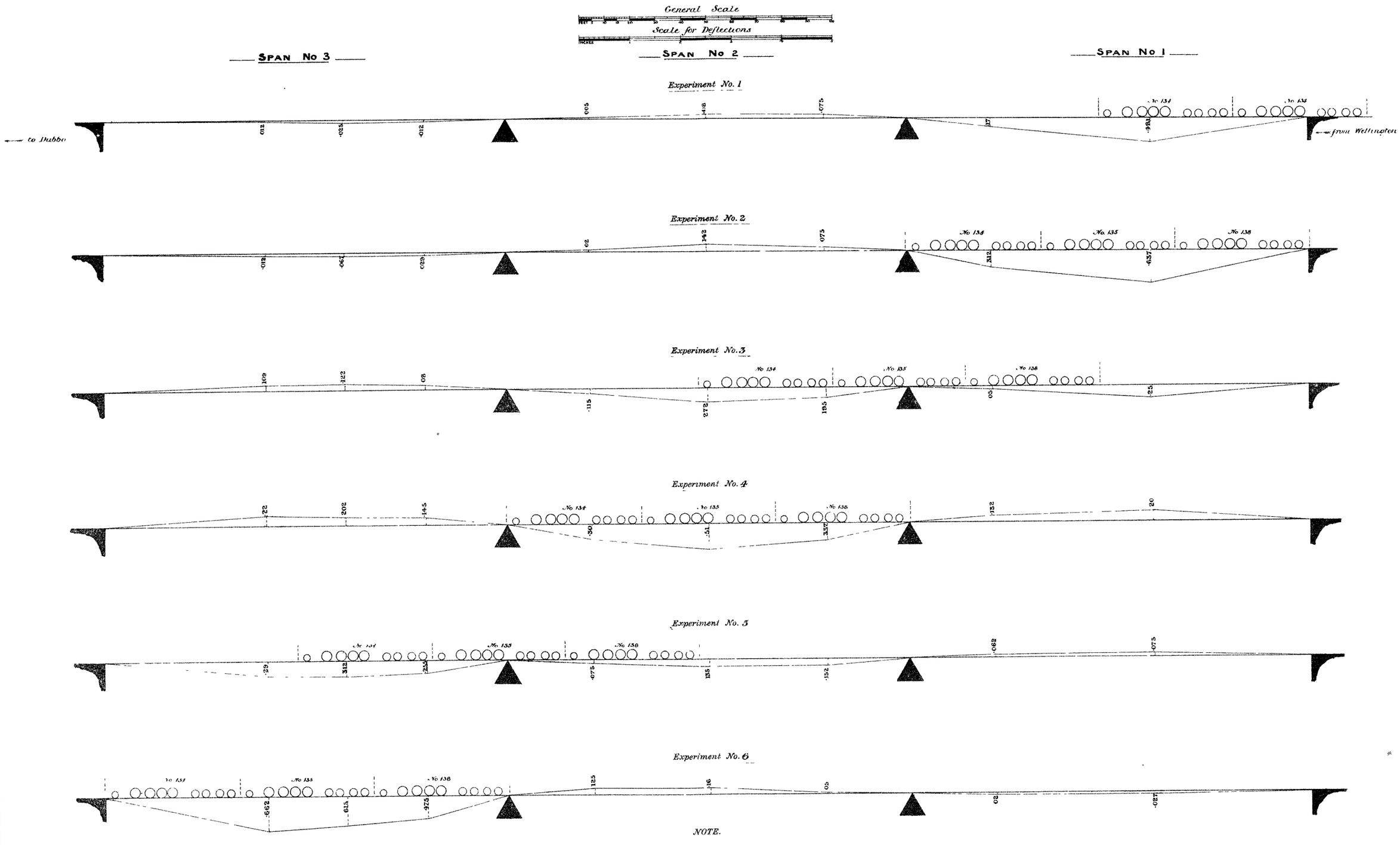
(Sig 8 L.K.)

WELLINGTON BRIDGE.

Plate No. 27

Diagram of Deflections showing positions of Engines during each test.

DOWN-STREAM GIRDER.



NOTE.

For Deflections as actually registered by the Testing apparatus,

see Plate No 25

866 – 1

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SYDNEY NEW SOUTH WALES

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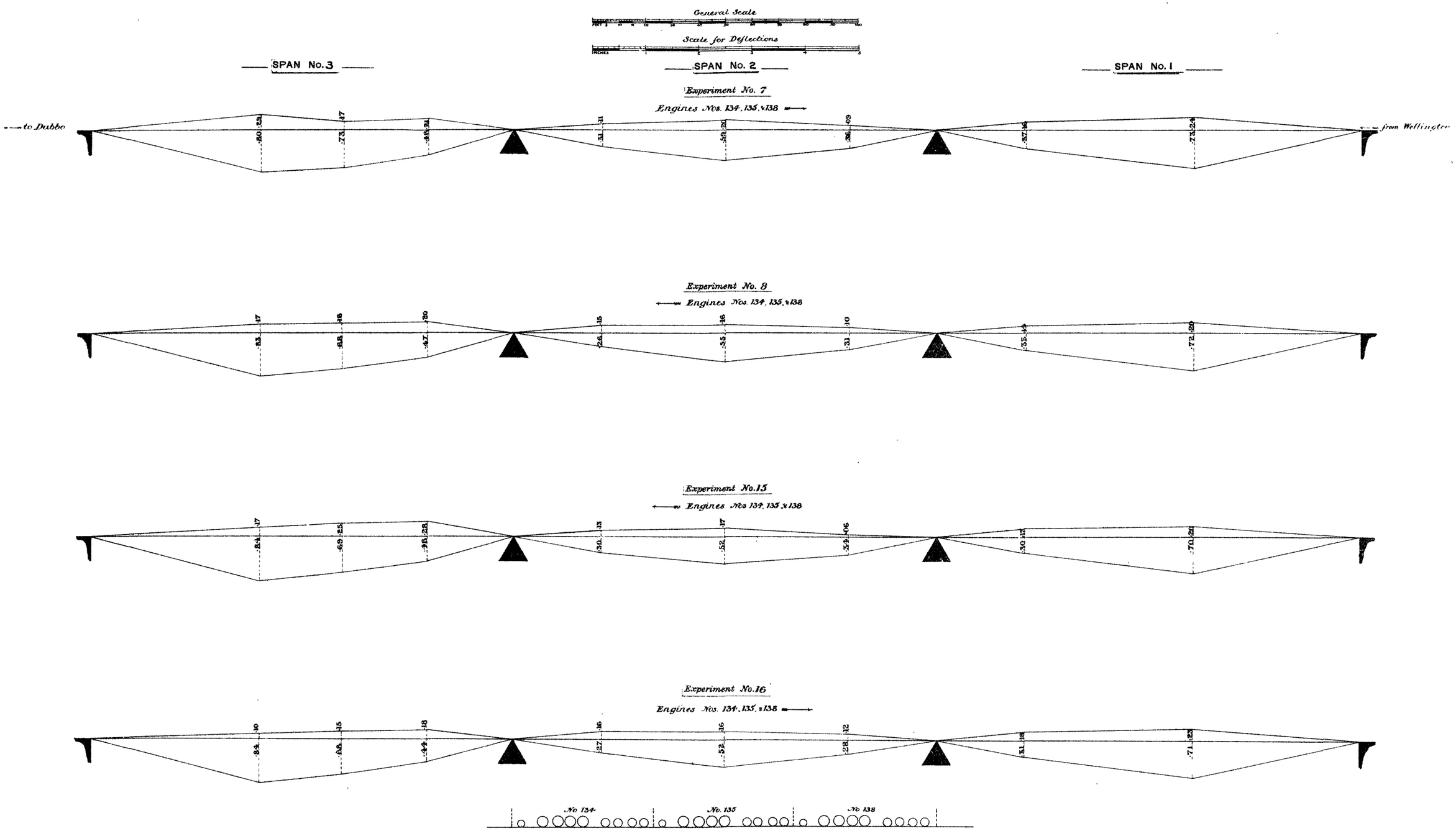
WELLINGTON BRIDGE.

Plate No. 28

Diagram of Deflections for Full-speed Tests.

Down-stream Girder.



Engines used for Testing.

Note — Arrows show directions Engines were running

866

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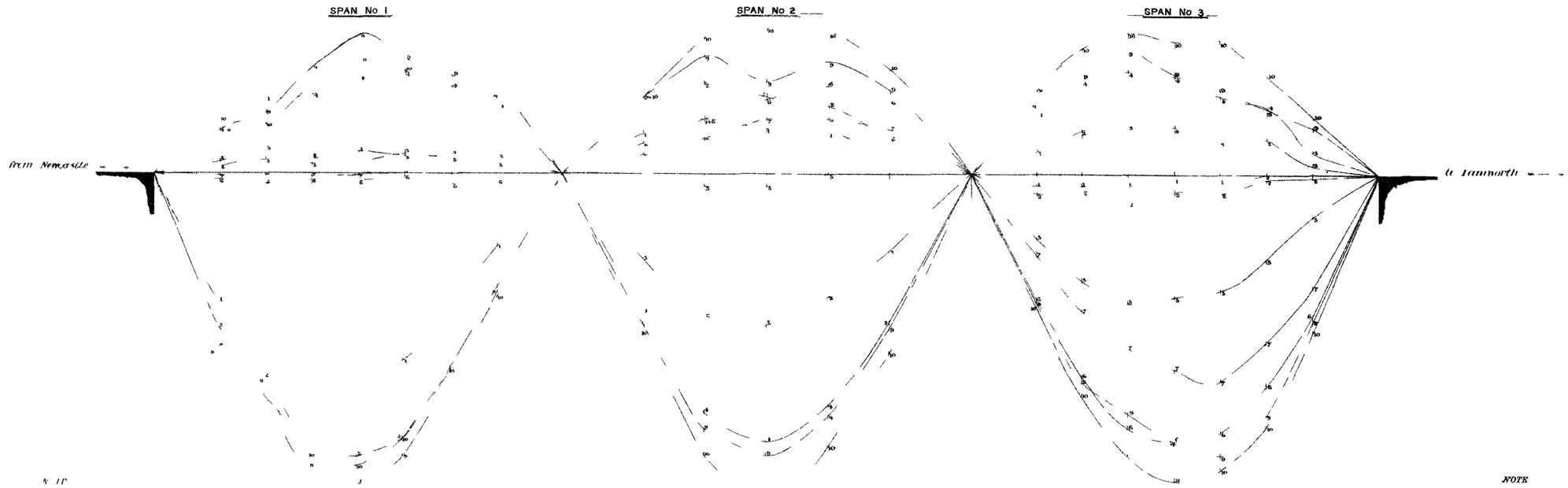
ABERDEEN BRIDGE

Diagram of Deflections

Plate No 29

UP STREAM GIRDER



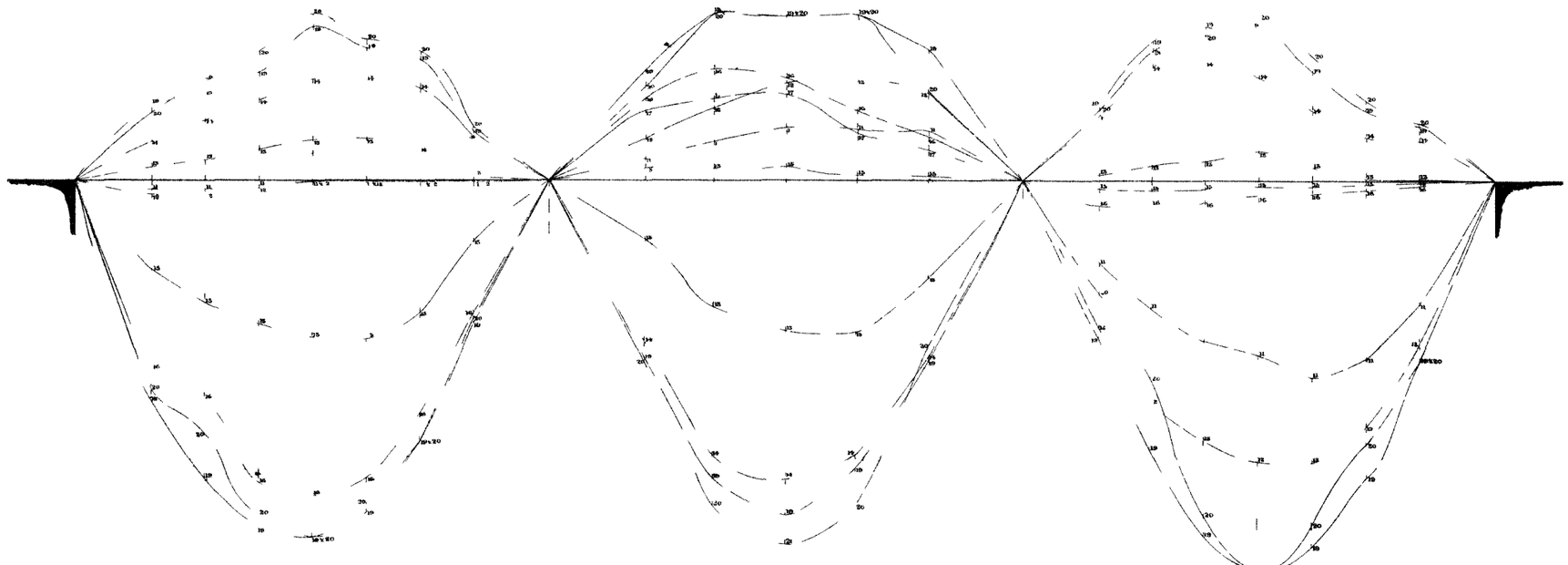
N 1P

[illegible] a registered by the Testing [illegible] 3 1

[illegible] s [illegible] N 31

NOTE

For positions of Load for Tests 1 to 7 see Plate No 31



HORIZONTAL SCALE

SCALE FOR DEFLECTIONS

PHOTO-LITHOGRAPHED AT THE GOVERNMENT PRINTING OFFICE
SYDNEY NEW SOUTH WALES

ABERDEEN BRIDGE.

Diagram of Deflections

UP-STREAM GIRDER.

Plate No 30

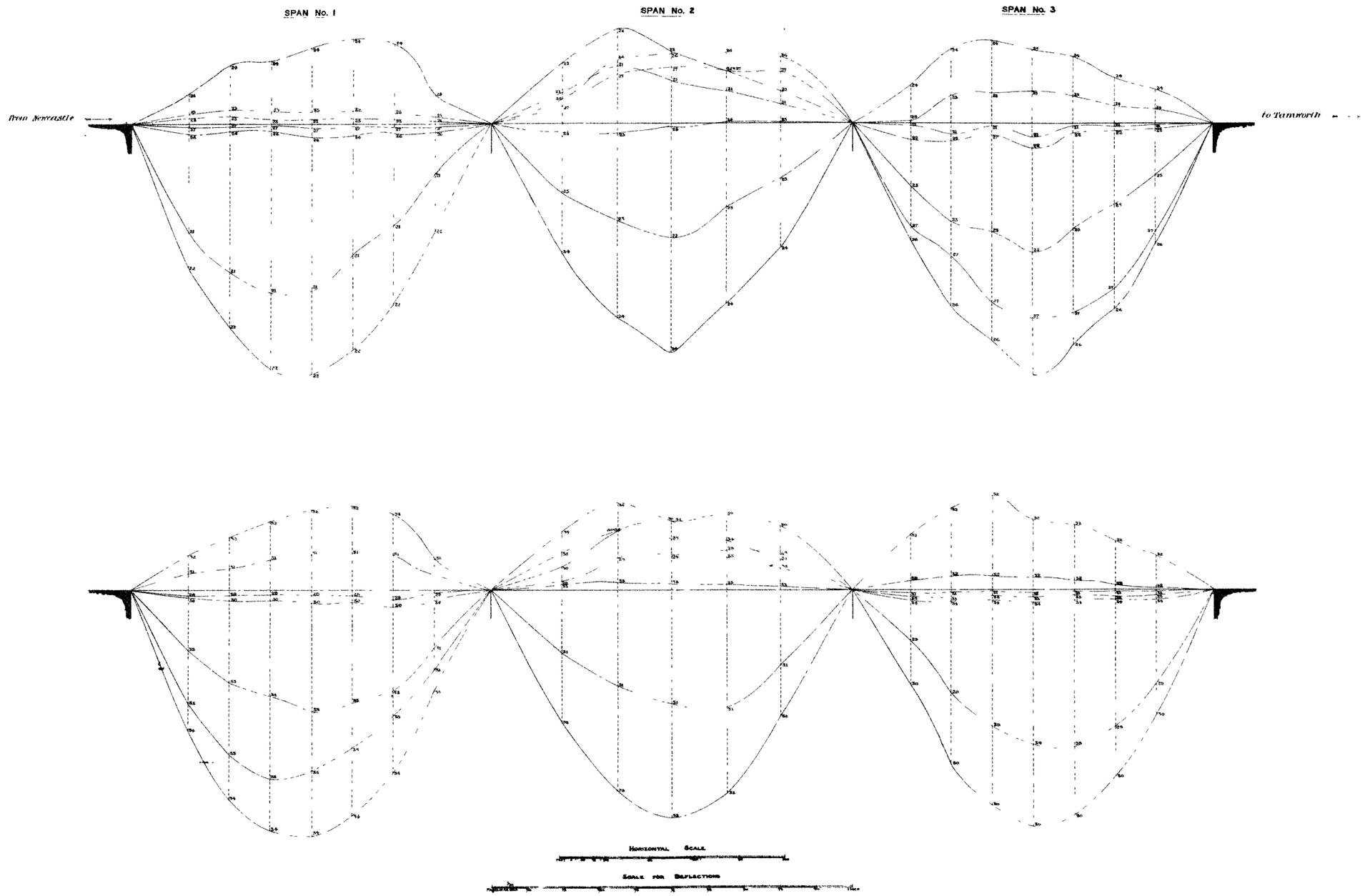


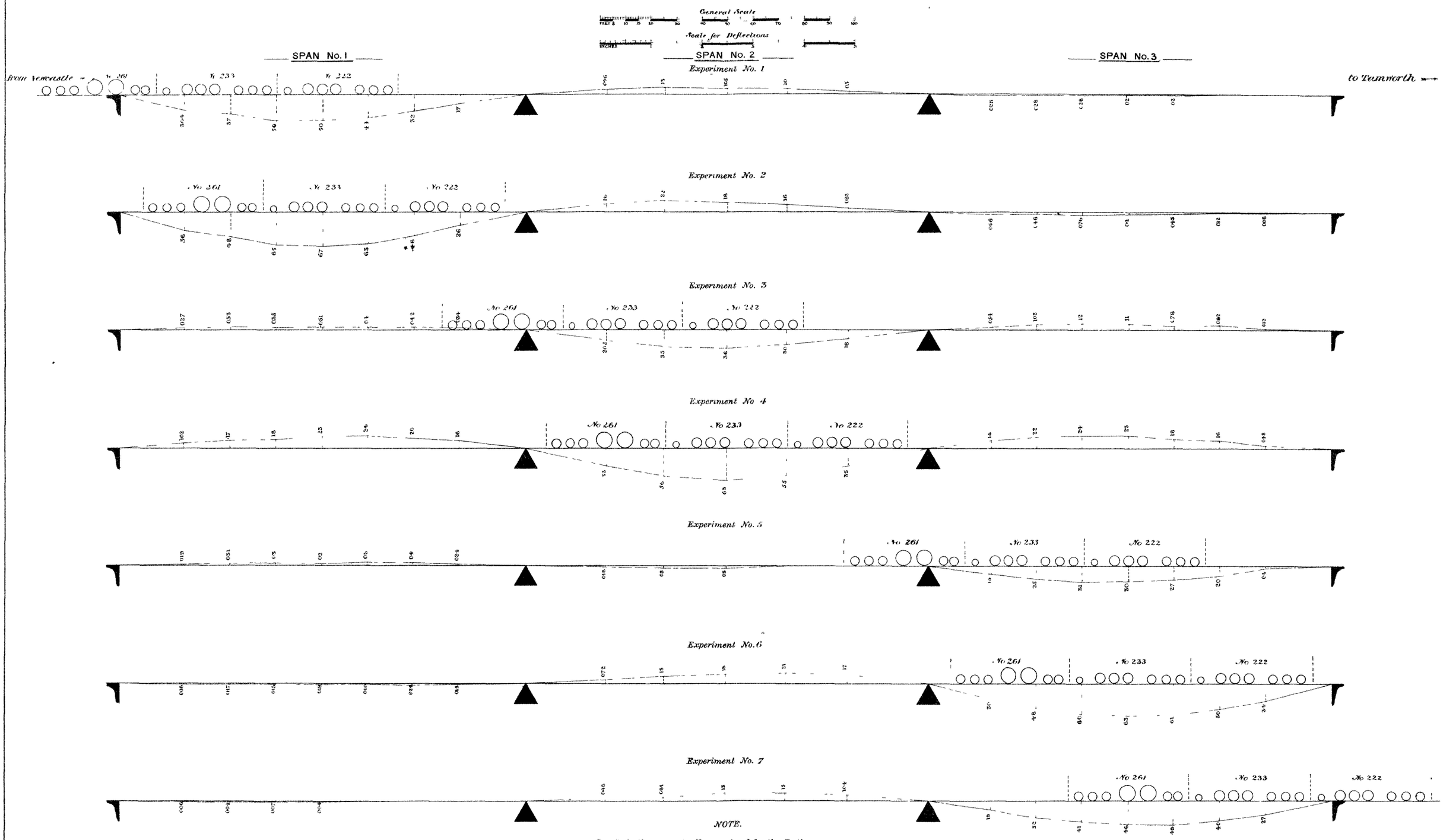
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE
SYDNEY, NEW SOUTH WALES.

ABERDEEN BRIDGE.

Plate No 31

Diagram of Deflections showing positions of Engines during each test.

UP-STREAM GIRDER.



NOTE.

For Deflections as actually registered by the Testing apparatus, see Plate No 29

(Sig. Table)

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ABERDEEN BRIDGE.

Plate No 32

Diagram of Deflections for Full-speed Tests.

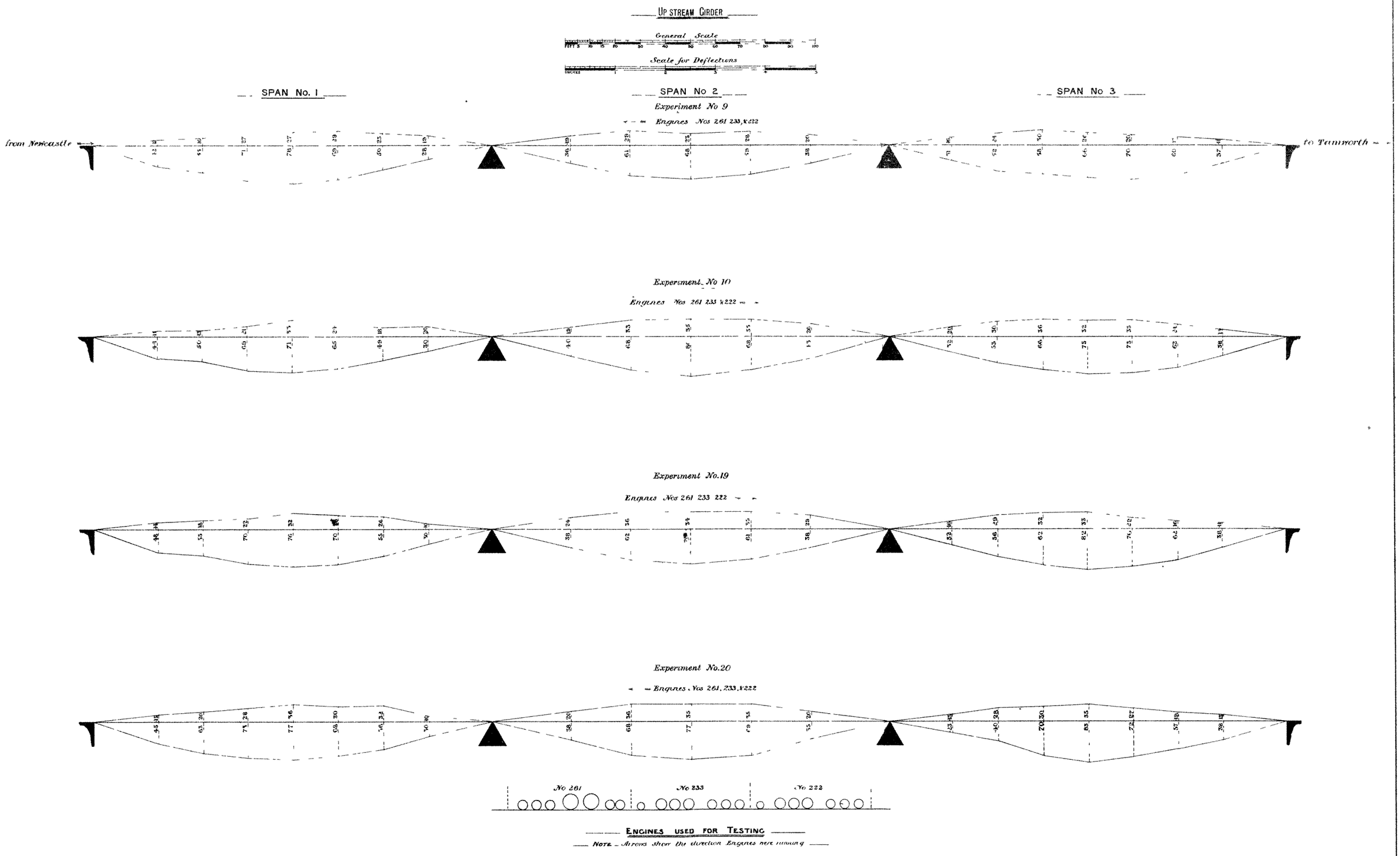


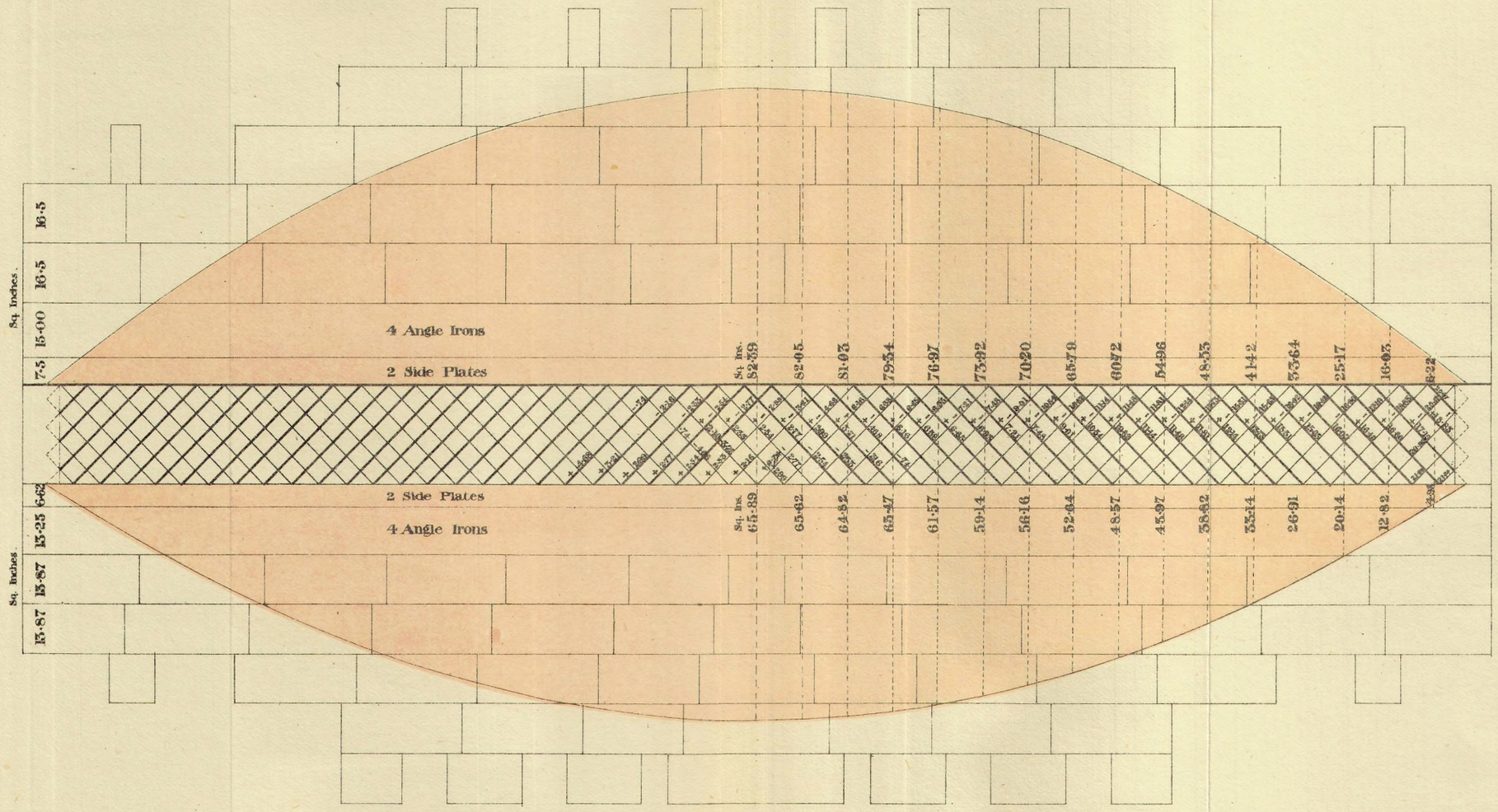
PHOTO-LITHOGRAPHED AT THE GOVT PRINTING OFFICE
SYDNEY NEW SOUTH WALES

TAMWORTH & MACDONALD RIVER BRIDGES

Diagram showing effective Areas in Booms; also Curve of Areas calculated from Bending Moments; also Maxima Stresses in the Web.

Live Load	·7 Tons per foot run
Dead Load	·6 " " " "

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



Horizontal Scale

Vertical Scale

(Dig. 866)

TAMWORTH & MACDONALD RIVER BRIDGES

Table of Stresses in Bracing

Live Load ·7 Tons per foot run

Dead Load ·6 " " " "

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

$W \sec\theta = 2{\cdot}5$

$\frac{W' \sec\theta}{7} = \frac{2{\cdot}1 \times 1{\cdot}37274}{52} = {\cdot}0554$

	W_1	W_2	W_3	W_4	W_5	W_6	W_7	W_8	W_9	W_{10}	W_{11}	W_{12}	W_{13}	W_{14}	W_{15}	W_{16}	W_{17}	W_{18}	W_{19}	W_{20}	W_{21}	W_{22}	W_{23}	W_{24}	W_{25}	W_{26}	W_{27}	W_{28}	W_{29}	W_{30}	W_{31}	W_{32}	W_{33}	W_{34}	W_{35}	W_{36}	W_{37}	W_{38}	W_{39}	W_{40}	W_{41}	W_{42}	W_{43}	W_{44}	W_{45}	W_{46}	W_{47}	W_{48}	W_{49}	W_{50}	W_{51}	C	T	Σ	C'	T'	Pairs of Bars in Bridge: Sec. Area in Struts	Sec. Area in Ties
1				2·66							2·27							1·88							1·50							1·11							·72							·33						10·47		10·00	20·47			6×2½×½
2					2·00							2·22							1·85							1·44							1·05							·66								·28					10·08		8·75	18·83			
3						2·33							2·16							1·77							1·38							1·00							·61								·22				9·69		7·50	17·19			
4							2·49							2·10							1·72							1·33							·94							·55								·17			9·30		7·50	16·80			
5	-·05							2·44							2·05							1·66							1·27							·89							·50								·11		8·92	-·05	7·50	16·42			6×2½×½
6		-·11							2·38							1·99							1·61							1·22							·83							·44								·05	8·52	-·11	7·50	16·02			5×2½
7			-·17							2·53							1·94							1·55							1·16							·78							·39							8·15	-·17	7·50	15·65			
8				-·22							2·27							1·88							1·50							1·11							·72							·33						7·81	-·22	7·50	15·31			
9					-·28							2·22							1·85							1·44							1·05							·66								·28					7·48	-·28	6·25	15·73			
10						-·33							2·16							1·77							1·38							1·00							·61								·22				7·14	-·33	5·00	12·14			
11							-·39							2·10							1·72							1·33							·94							·55								·17			6·91	-·39	5·00	11·81			
12	-·05							-·44							2·05							1·66							1·27							·89							·50								·11		6·48	-·49	5·00	11·48			5×2½
13		-·11							-·50							1·99							1·61							1·22							·83							·44								·05	6·34	-·61	5·00	11·14			4½×½
14			-·17							-·55							1·94							1·55							1·16							·78							·39							5·82	-·72	5·00	10·82			
15				-·22							-·61							1·88							1·50							1·11							·72							·33						5·54	-·83	5·00	10·54			
16					-·28							-·66							1·83							1·44							1·05							·68								·28					5·26	-·94	3·75	9·01			
17						-·33							-·72							1·77							1·38							1·00							·61								·22				4·98	-1·05	2·50	7·48			
18							-·39							-·78							1·72							1·33							·94							·55								·17			4·71	-1·17	2·50	7·21			
19	-·05							-·44							-·83							1·66							1·27							·89							·50								·11		4·43	-1·32	2·50	6·93			4½×½
20		-·11							-·50							-·89							1·61							1·22							·83							·44								·05	4·15	-1·50	2·50	6·65			3½×½
21			-·17							-·55							-·94							1·55							1·16							·78							·39							3·88	-1·66	2·50	6·38			
22				-·22							-·61							-1·00							1·50							1·11							·72							·33						3·66	-1·83	2·50	6·16			
23					-·28							-·66							-1·05							1·44							1·05							·66								·28					3·43	-1·99	1·25	4·68	-·74		
24						-·33							-·72							-1·11							1·38							1·00							·61								·22				3·21	-2·16		3·21	-2·16		
25							-·39							-·78							-1·16							1·33							·94							·55								·17			2·99	-2·33		2·99	-2·33		
26	-·05							-·44							-·83							-1·22							1·27							·89							·50								·11		2·77	-2·54		2·77	-2·54		
27		-·11							-·50							-·89							1·27							1·22							·83							·44								·05	2·54	-2·77		2·54	-2·77	¾×½	
28			-·17							-·55							-·94							1·33							1·16							·78							·39							2·33	-2·99		2·33	-2·99		4×½
29				-·22							-·61							-1·00							-1·38							1·11							·72							·33						2·16	-3·21		2·16	-3·21		4×½
30					-·28							-·66							-1·05							-1·44							1·05							·66								·28					1·99	-3·43	-1·25	·74	-4·68		4×½
31						-·33							-·72							-1·11							-1·50							1·00							·61								·22				1·83	-3·66	-2·50		-6·16		4×½
32							-·39							-·78							-1·16							-1·55							·94							·55								·17			1·66	-3·88	-2·50		-6·38		4×½
33	-·05							-·44							-·83							-1·22							-1·61							·89							·50								·11		1·50	-4·15	-2·50		-6·65		
34		-·11							-·50							-·89							-1·27							-1·66							·83							·44								·05	1·32	-4·43	-2·50		-6·93		
35			-·17							-·55							-·94							-1·33							-1·72							·78							·39							1·17	-4·71	-2·50		-7·21		4×½
36				-·22							-·61							-1·00							-1·38							-1·77							·72							·33						1·05	-4·98	-2·50		-7·48		5×½
37					-·28							-·66							-1·05							-1·44							-1·83							·66								·28					·94	-5·26	-3·75		-9·01		
38						-·33							-·72							-1·11							-1·50							-1·88							·61								·22					·83	-5·54	-5·00		-10·54		
39							-·39							-·78							-1·16							-1·55							-1·94							·55								·17				·72	-5·82	-5·00		-10·82		
40	-·05							-·44							-·83							-1·22							-1·61							-1·99							·50								·11		·61	-6·14	-5·00		-11·14		
41		-·11							-·50							-·89							-1·27							-1·66							-2·05							·44								·05	·43	-6·48	-5·00		-11·48		5×½
42			-·17							-·55							-·94							-1·33							-1·72							-2·10							·39							·39	-6·81	-5·00		-11·81		6×½
43				-·22							-·61							-1·00							-1·38							-1·77							-2·16							·33						·33	-7·14	-5·00		-12·14		
44					-·28							-·66							-1·05							-1·44							-1·83							-2·22								·28					·28	-7·48	-6·25		-13·73		
45						-·33							-·72							-1·11							-1·50							-1·88							-2·27								·22					·22	-7·81	-7·50		-15·31		6×½
46							-·39							-·78							-1·16							-1·55							-1·94							-2·33								·17				·17	-8·15	-7·50		-15·65		6×½
47	-·05							-·44							-·83							-1·22							-1·61							-1·99							-2·38								·11		·11	-8·52	-7·50		-16·02		
48		-·11							-·50							-·89							-1·27							-1·66							-2·05							-2·44								·05	·05	-8·92	-7·50		-16·42		
49			-·17							-·55							-·94							-1·33							-1·72							-2·10							-2·49								-9·30	-7·50		-16·80		
50				-·22							-·61							-1·00							-1·38							-1·77							-2·16							-2·55							-9·69	-7·50		-17·19		
51					-·28							-·66							-1·05							-1·44							-1·83							-2·22								-2·60					-10·08	-8·75		-18·83		
52						-·33							-·72							-1·11							-1·50							-1·88							-2·27								-2·66				-10·47	-10·00		-20·47		
53							-·39							-·78							-1·16							-1·55							-1·94							-2·33								-2·71			-10·86	-10·00		-20·86		
54	-·05							-·44							-·83							-1·22							-1·61							-1·99							-2·38								-2·77			-11·29	-10·00		-21·29		6×½
55		-·11							-·50							-·89							-1·27							-1·66							-2·05							-2·44								-2·82		-11·74	-10·00		-21·74		6×½

(Sig. 866)

TAMWORTH BRIDGE

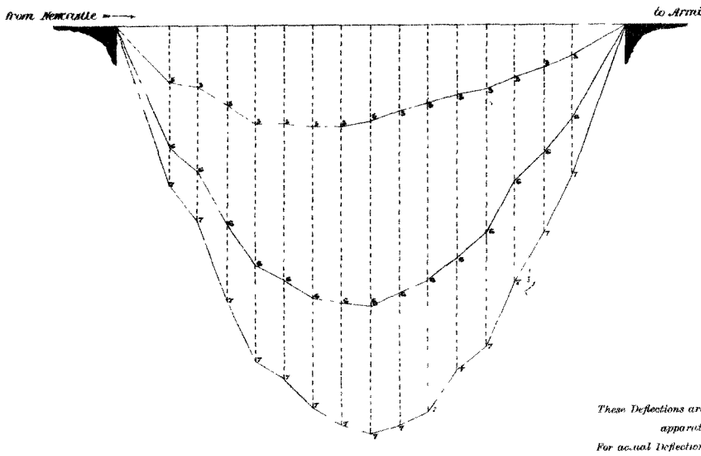
Plate No 35

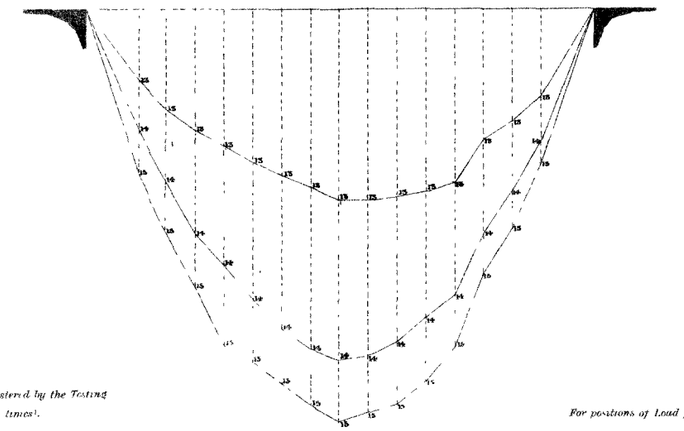
Diagram of Deflections

DOWN-STREAM GIRDER

HORIZONTAL SCALE

SCALE FOR DEFLECTIONS

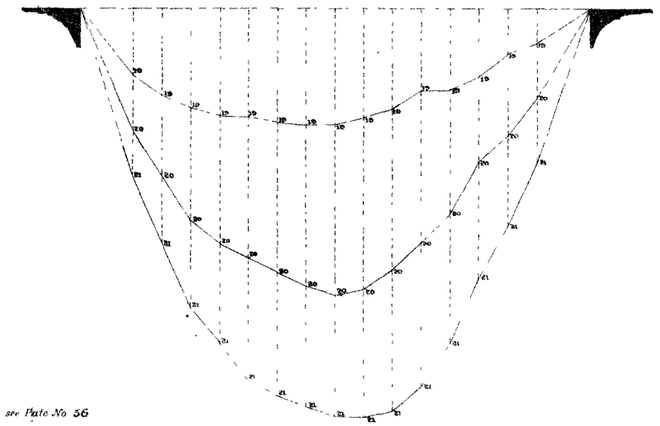




NOTE

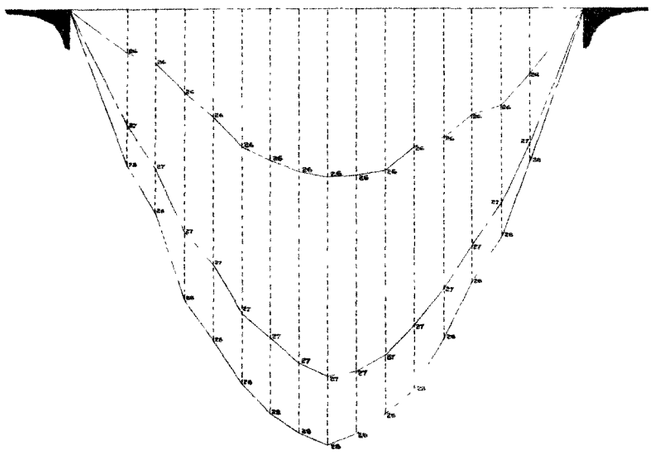
These Deflections are plotted exactly as registered by the Testing apparatus (i.e., multiplied 8.3 times).

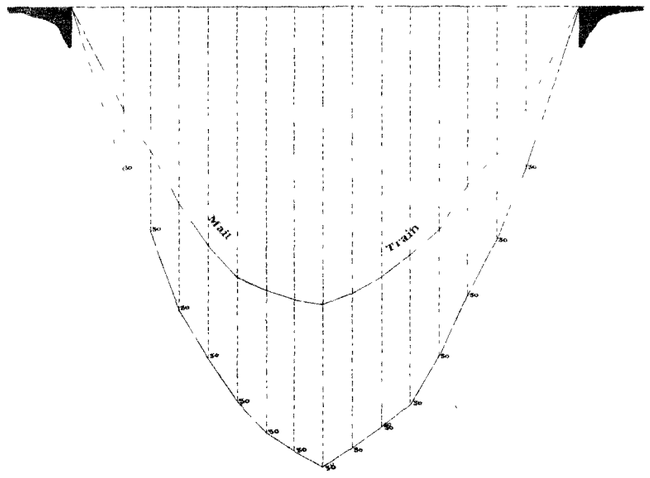
For actual Deflections see Plate No 36



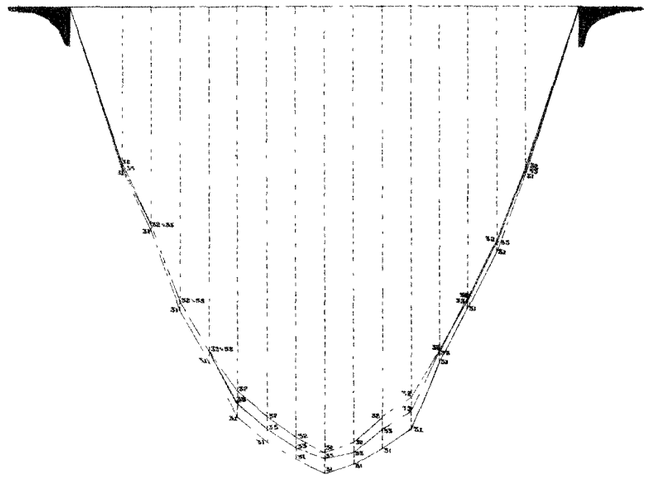
NOTE

For positions of Load for Tests 5 to 15 see Plate No 36





NOTE No 30 is a full speed test



NOTE No 31 is a full speed test
Nos 32 & 33 are brake tests

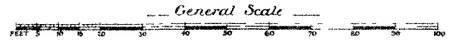
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE
SYDNEY, NEW SOUTH WALES

TAMWORTH BRIDGE

Diagram of Deflections showing positions of Engines during each test

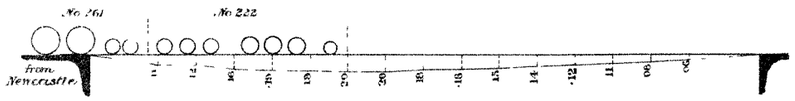
DOWN-STREAM GIRDER

General Scale

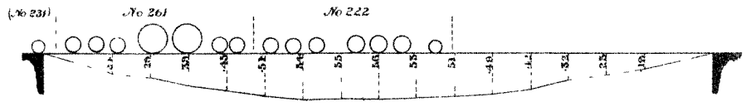


Scale for Deflections

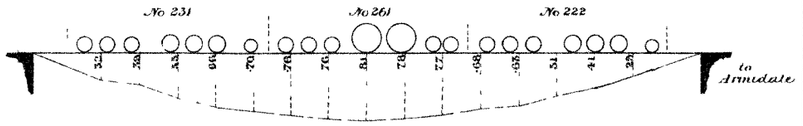
Experiment No. 5



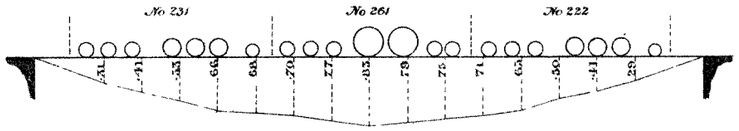
Experiment No. 6



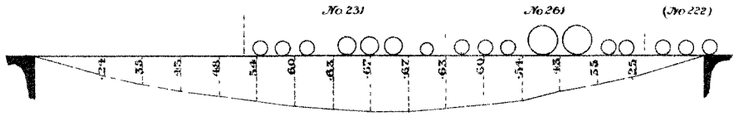
Experiment No. 7



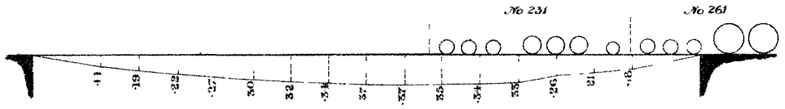
Experiment No. 15



Experiment No. 14

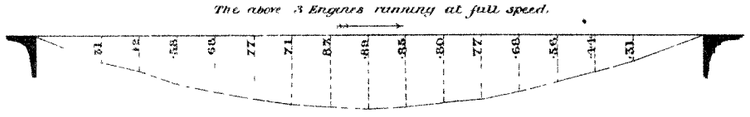


Experiment No 13



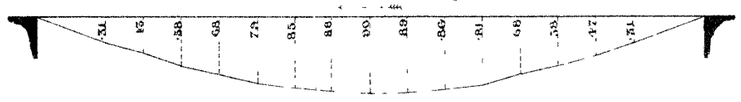
Experiment No. 30

The above 3 Engines running at full speed.



Experiment No. 31

The above 3 Engines running at full speed



NOTE.

For Deflections as actually registered by the Testing apparatus,
see Plate No. 35

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

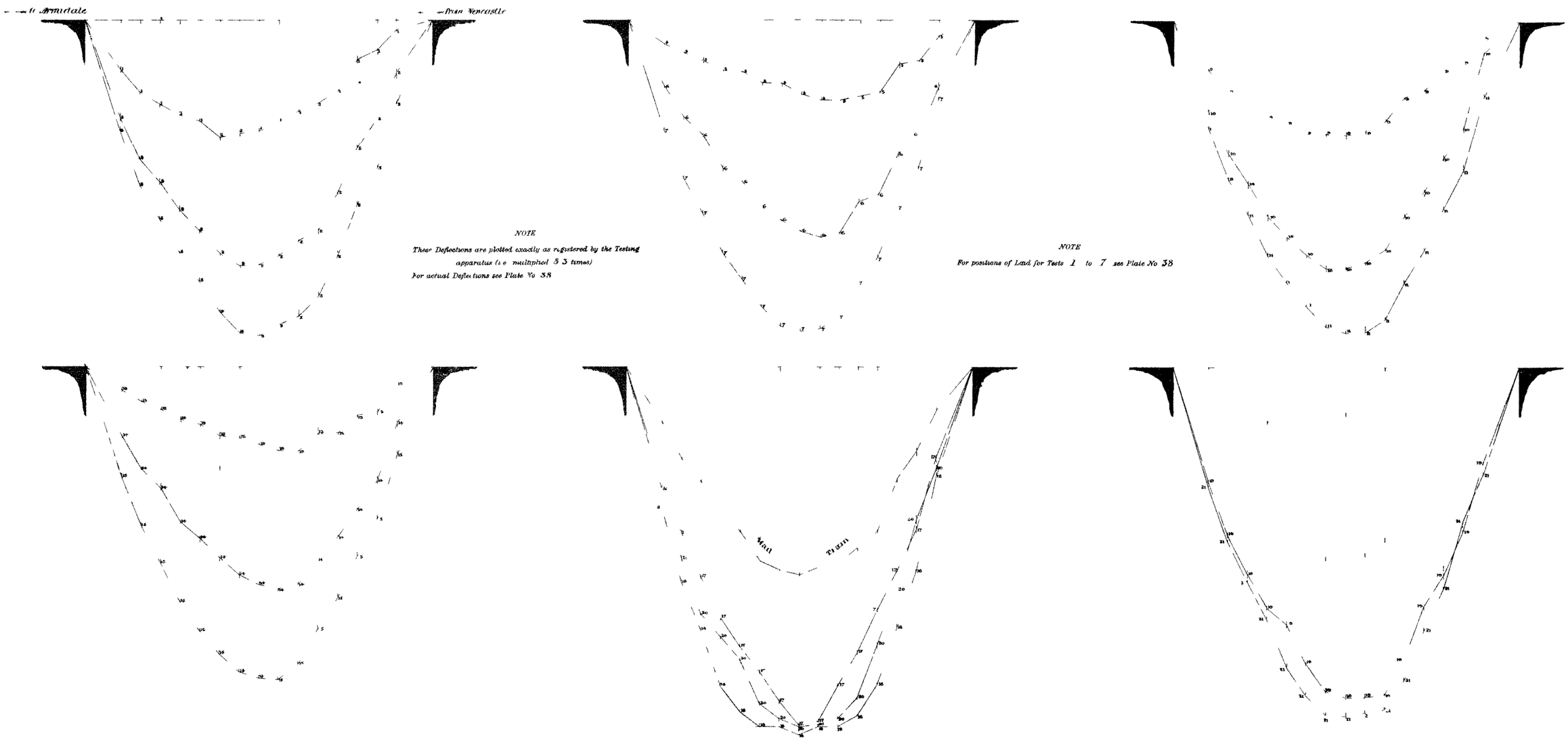
MACDONALD RIVER BRIDGE

Diagram of Deflections

DOWN STREAM GIRDER

HORIZONTAL SCALE

SCALE FOR DEFLECTIONS



NOTE

These Deflections are plotted exactly as registered by the Testing apparatus (i e multiplied 3 3 times)

For actual Deflections see Plate No 38

NOTE

For positions of Load for Tests 1 to 7 see Plate No 38

FULL SPEED TESTS

BRAKE TESTS

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

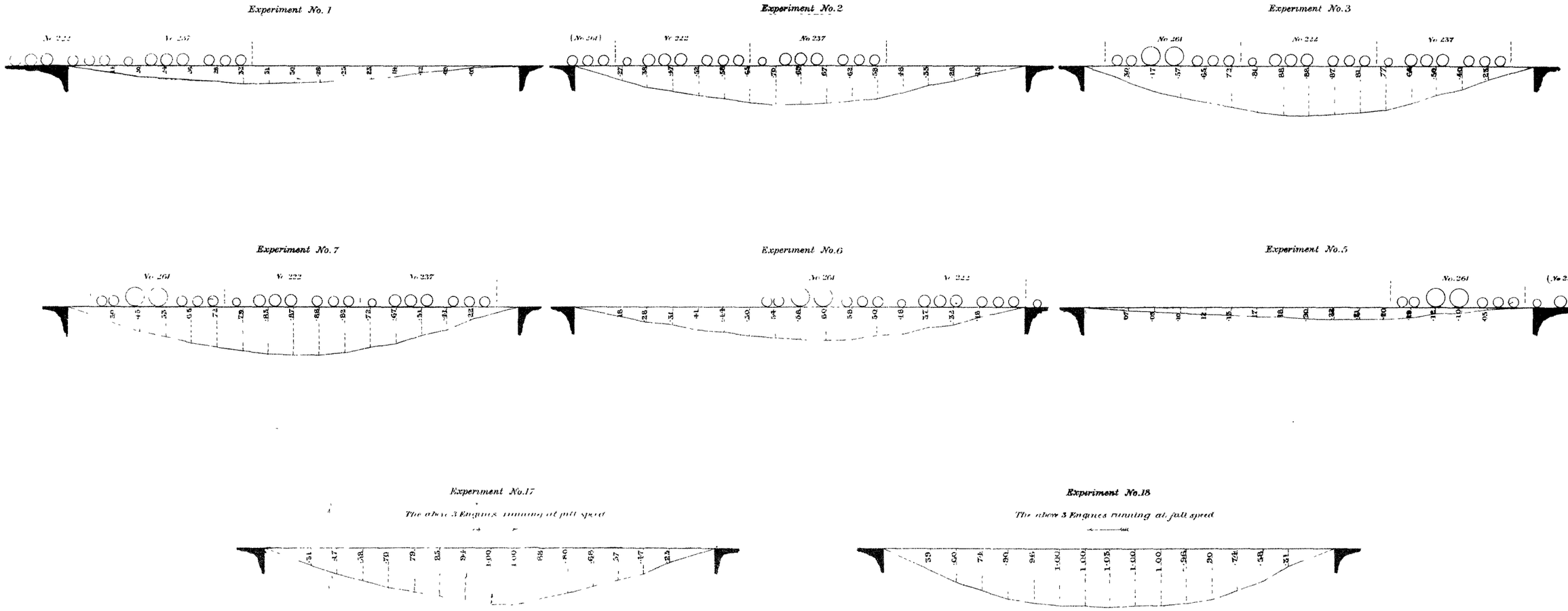
MACDONALD RIVER BRIDGE

Diagram of Deflections showing positions of Engines during each test

Down-stream Girder

General Scale

Scale for Deflections



NOTE.

For Deflections as actually registered by the Testing apparatus, see Plate No. 37

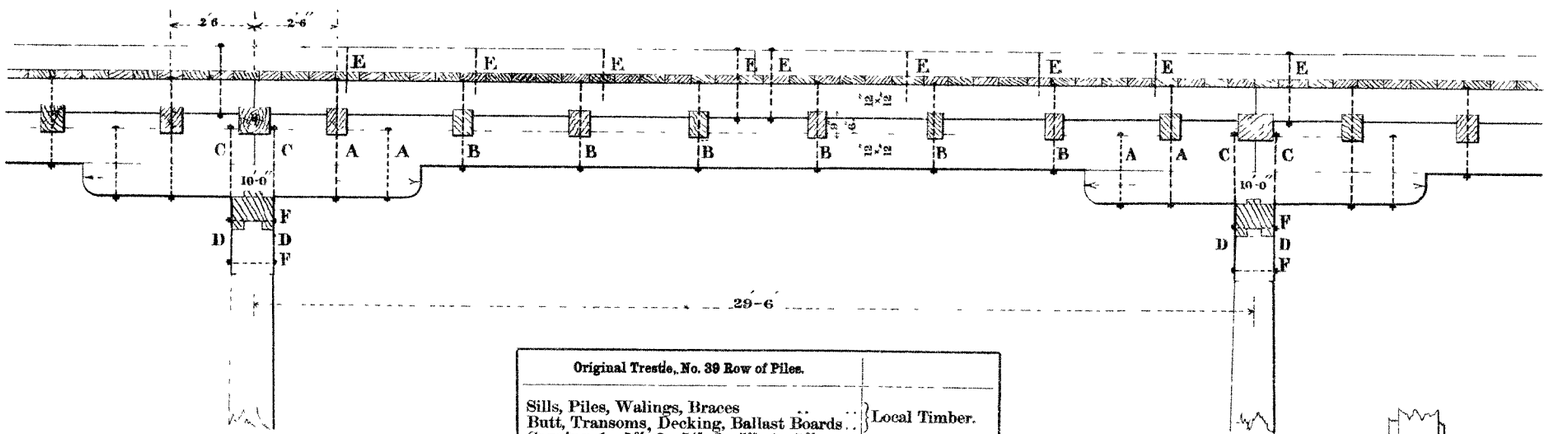
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE SYDNEY NEW SOUTH WALES.

WAGGA WAGGA VIADUCT

From Drawing supplied by the Engineer for Existing Lines.

FNO 0-L THOGRAPHED AT THE GOVT. PRINTING OFFICE SYDNEY NEW SOUTH WALES

Longitudinal Section of one 29-6 Span



Original Trestle, No. 39 Row of Piles.	
Sills, Piles, Walings, Braces	Local Timber.
Butt, Transoms, Decking, Ballast Boards ..	
Cogging, 1—5¾", 2—5½", 3—5¼", 4—5¾" ..	
Headstocks, Corbels, Girders	Ironbark.

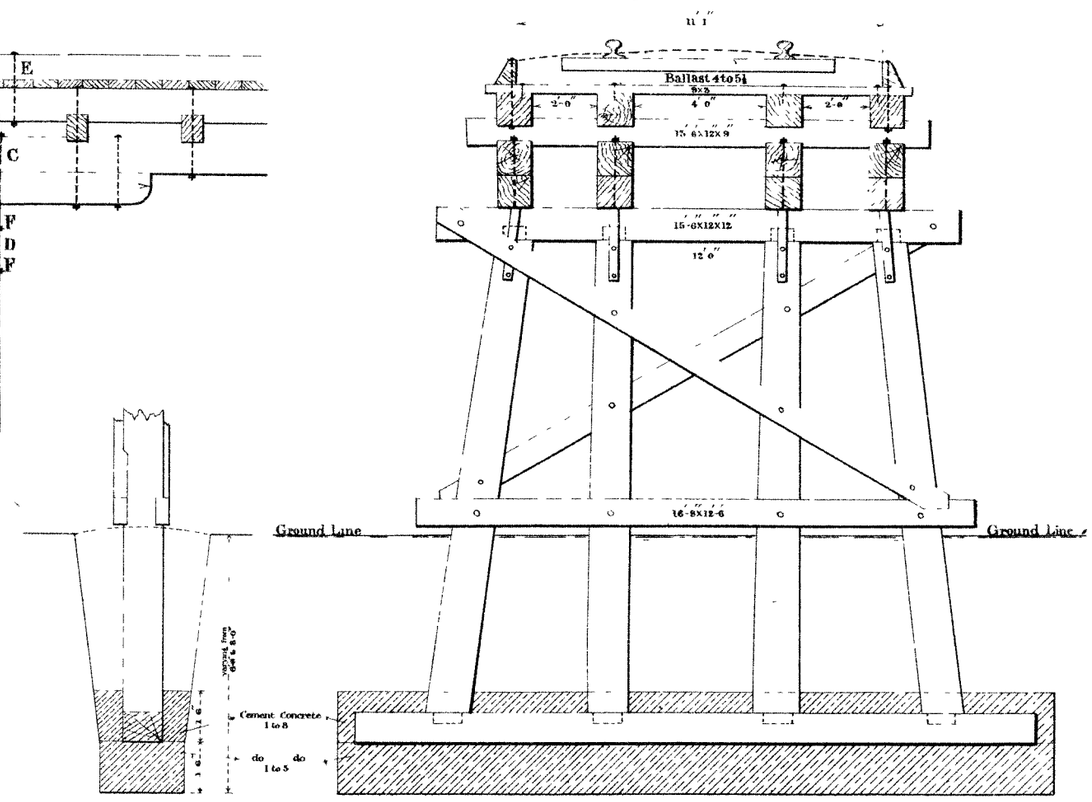
Iron in One Span.

		Bolts, &c. Diam.	No.	Length.	Weight. cwt.	qr.	lb.	oz.
Straps	A	1¼	8	3' 6"	2	0	25	8
	B	1"	24	2' 6"	1	2	12	0
	C	1¼"	8	2' 4"	1	0	25	0
	D	3" × ½"	3	2' 3"				
	E	¾"	4 × 6	spikes	0	0	20	2
	F	¾"	16	13"	0	2	4	0
Spikes	—	6" × ½"	160	—	0	1	12	0
Total					6	0	14	10

Timber in One Span.

Piles, Braces, Butt Pieces, Transoms, Deck Plating, Ballast Boards.	Local Timber.
Headstocks, Corbels, Girders	Ironbark.
Butt Pieces, 12" × 9", Transoms, 9" × 6", Decking, 9" × 3".	
Ballast Boards, 6" × 9" × 3"	
Average weight of Ironwork in each Bay ..	cwt. 6 qr. 0 lb. 14 oz. 10

Original Trestle No 39 Row of Piles

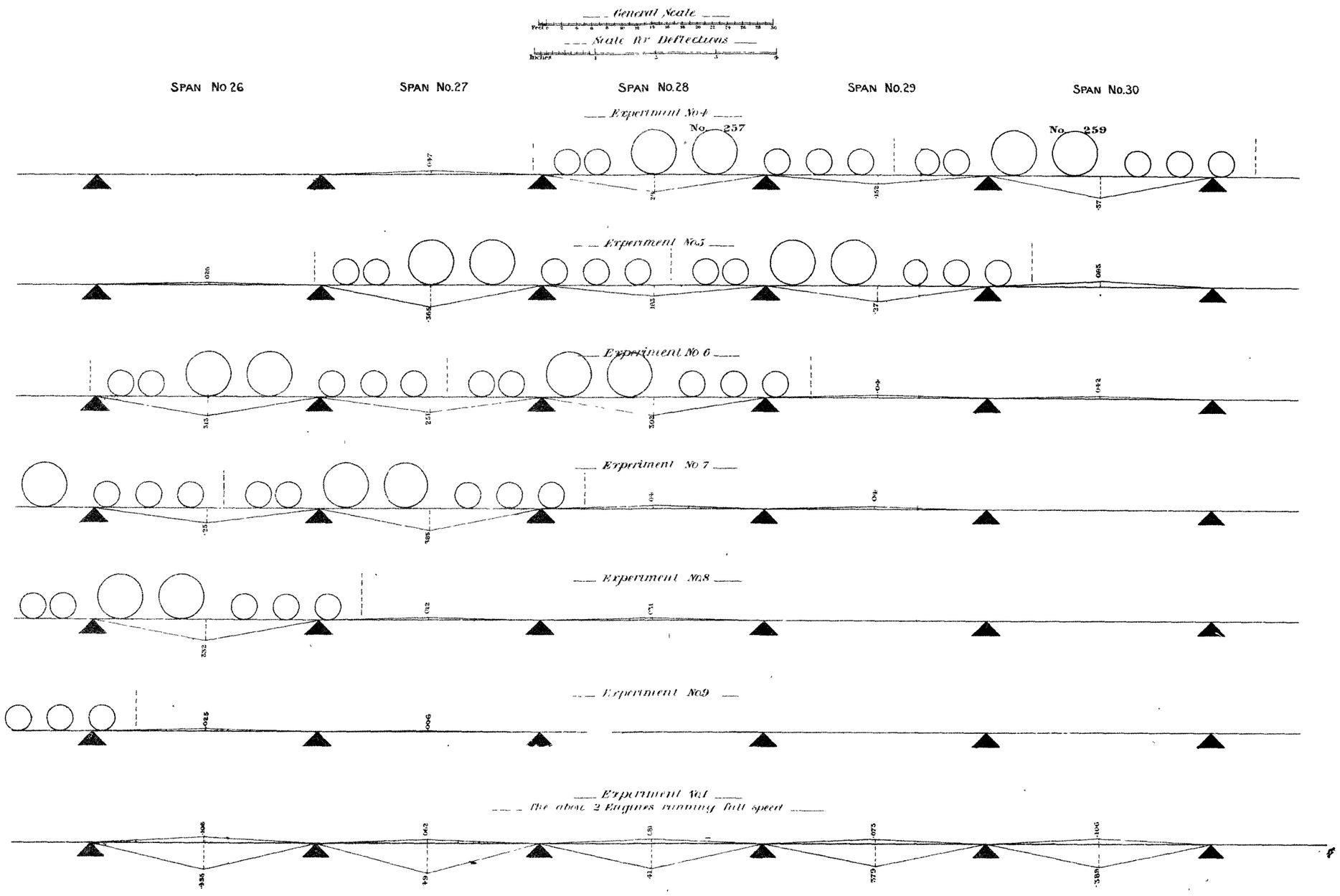


NOTE.—Level of top surface of concrete at every fifth trestle is at ground line.

Level of top surface of concrete at the four intermediate trestles is at the upper surface of the bottom timber bracing.

WAGGA WAGGA VIADUCT No.1

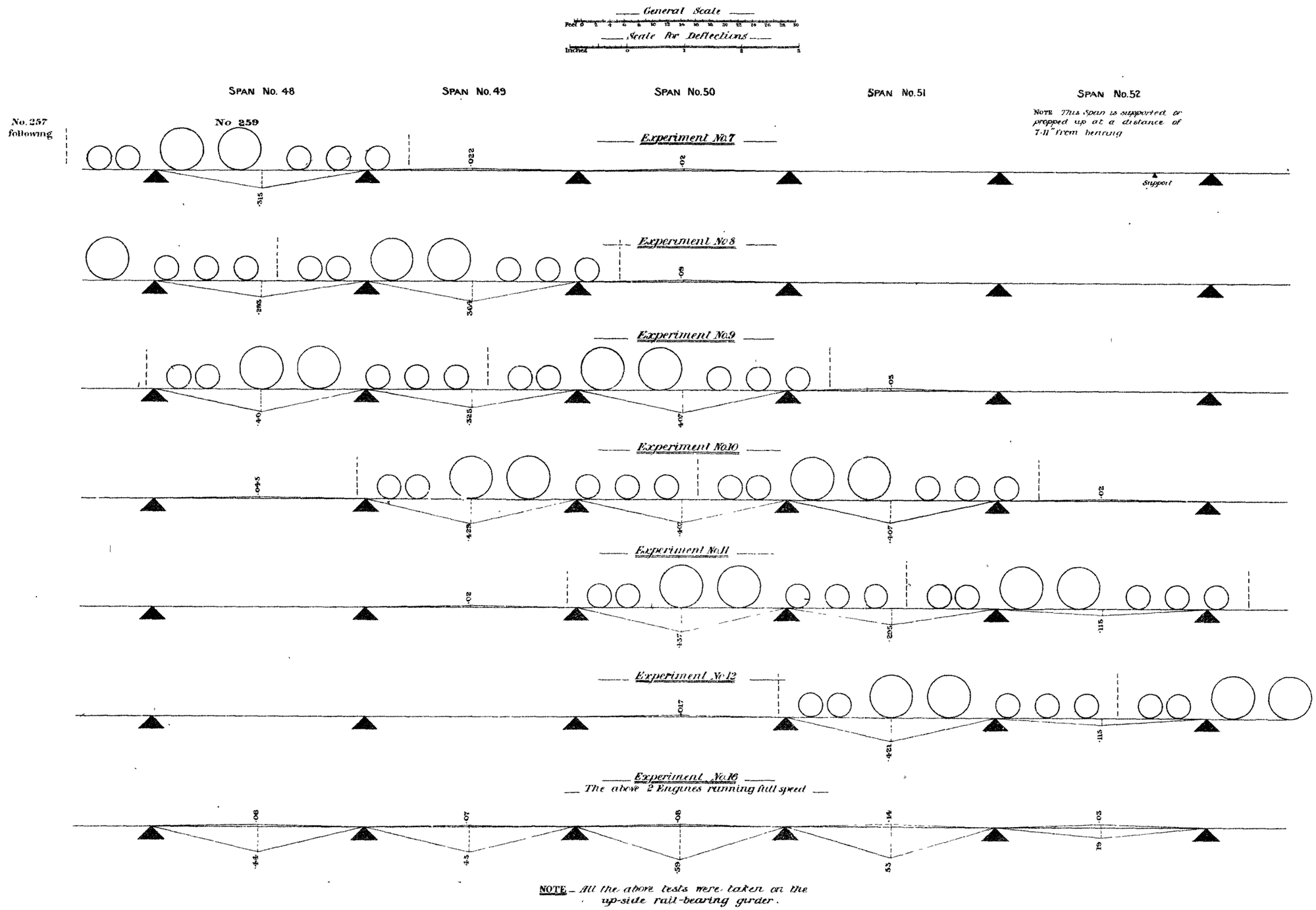
Diagram of Deflections showing positions of Engines during each test.



NOTE—*All the above tests were taken on the down-side rail-bearing girder.*

WAGGA WAGGA VIADUCT No. 2

Diagram of Deflections showing positions of Engines during each test.

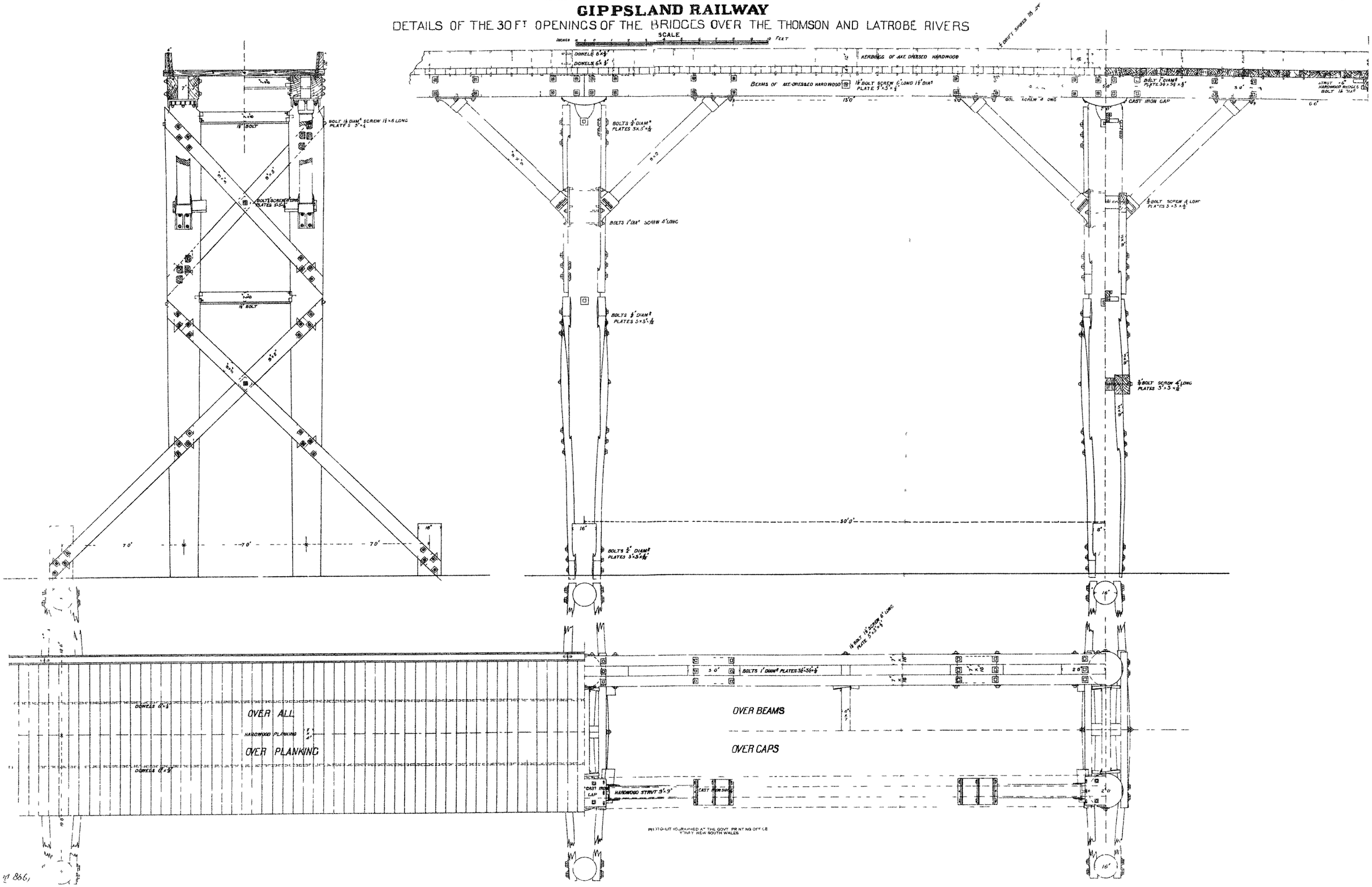


NOTE – *All the above tests were taken on the up-side rail-bearing girder.*

VICTORIAN RAILWAYS

GIPPSLAND RAILWAY

DETAILS OF THE 30 FT OPENINGS OF THE BRIDGES OVER THE THOMSON AND LATROBE RIVERS



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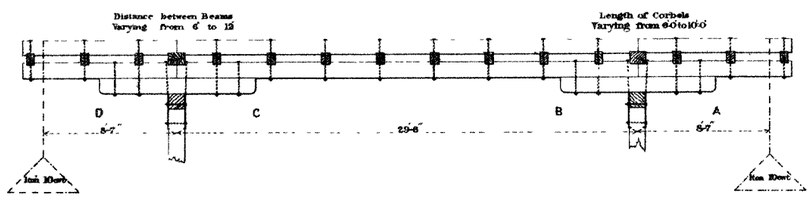
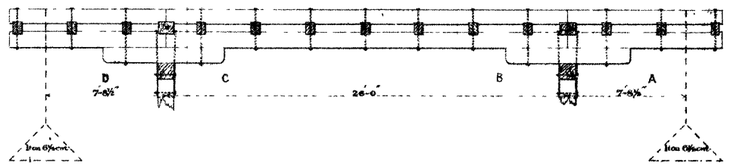
No 866.

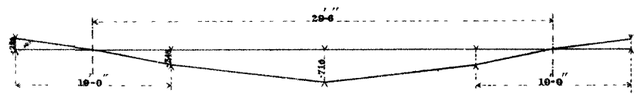
Diagram of Experiments made at the Government Yard, Clyde, for testing the strength of Timber Girders.

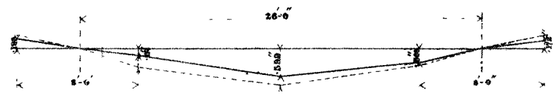
SCALE OF FEET

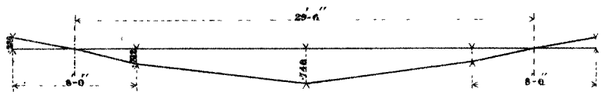
Compound Girder
Similar to those of Wagga Viaducts

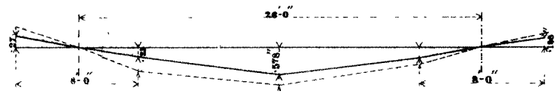


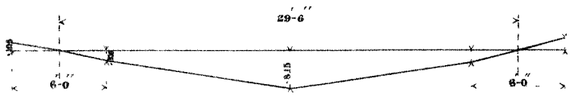












Test of Compound Beam, 29' 6" long.

(With 10ft. Corbels.) (Distance between Beams, 6'.)

No. of Exp.	Load in Tons.	Distance between Beams.	Deflection at Centre.
			Inches
3-5	8·67	12"	·84
6-9 } 17-19 }	8·67	9"	·713
10-11	9·61	9"	·804
13-16	9·98	9"	·828
20-23 } 32-34 }	8·67	6"	·716
24-29	8·30	6"	·692

No. of Exp.	Load in Tons.	Length of Corbel.	Deflection at Centre.	Deflection of Corbels. A	B	C	D
			Inches	Inches	Inches	Inches	Inches
32-34	8·67	10' 0"	·716	·235	·330	·348	·228
45-47	8·67	8' 0"	·746	·231	·300	·312	·228
42-44	8·30	8' 0"	·720	·204	·276	·300	·204
39-41	7·92	8' 0"	·680	·174	·252	·288	·204
48-51	8·67	6' 0"	·815	·192	·261	·216	·108
51-54	8·10	6' 0"	·787	·174	·235	·204	·102
55-57	7·5	6' 0"	·759	·159	·216	·186	·184

Test of Compound Beam, 26' 0" long.

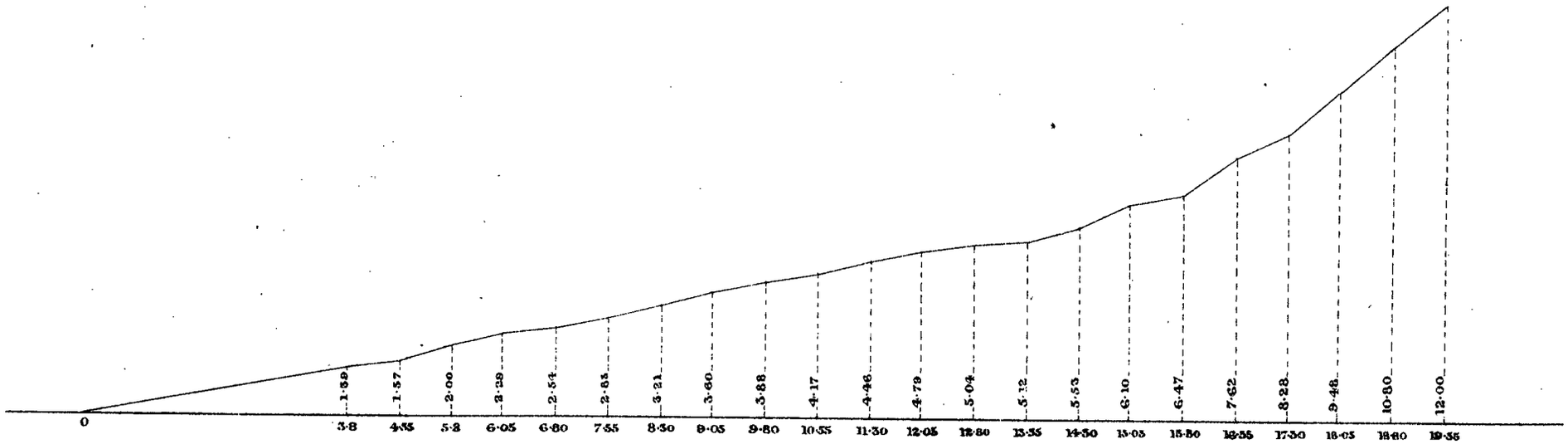
No. of Exp.	Load in Tons.	Length of Corbel.	Deflection at Centre.	Deflection of Corbels. A	B	C	D	Remarks.
			Inches	Inches	Inches	Inches	Inches	
78-80	8·67	8' 0"	·597	·172	·308	·174	·198	
81-83	10·55	" "	·756	·260	·366	·368	·294	
84-86	9·62	" "	·657	·228	·329	·324	·228	
87-89	9·98	" "	·679	·204	·384	·298	·210	
90-93	8·30	" "	·559	·180	·264	·270	·204	
94-96	8·30	" "	·797	·276	·357	·392	·294	Slack Bolts.
97-99	7·36	" "	·732	·252	·344	·360	·282	" "
100-102	6·42	" "	·762	·228	·296	·196	·240	" "
103-105	6·42	" "	·329	·108	·166	·210	·156	No Transoms.
106-108	7·36	" "	·402	·132	·256	·180	·204	" "
109-111	8·30	" "	·484	·148	·232	·294	·228	" "
112-114	9·23	" "	·578	·186	·260	·210	·270	" "
115-117	9·23	" "	·820	·288	·372	·512	·427	Slack Bolts.

(L. 866)

Diagram of Breaking Experiment

Ironbark beam 12¼"x12¼", Span 28'6" clear or 29'6" centres, loaded in centre

Horizontal Scale — 2 Tons to One Inch
Vertical " — 3 Inches to One Foot

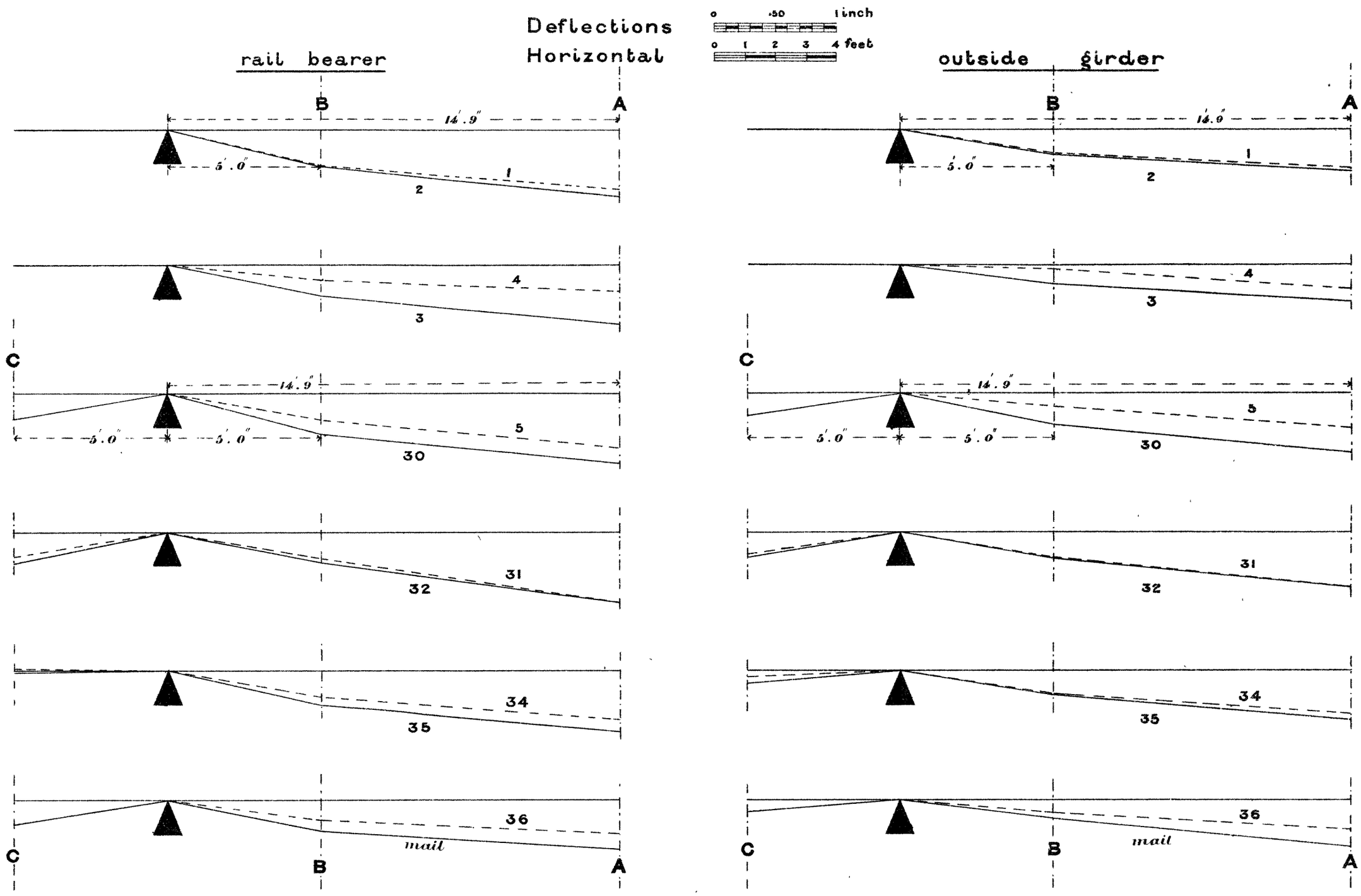


NOTE — The beam cracked with 16·55 tons, but did not break until 19·55 tons had been suspended from the centre.

(Sig. 866—)

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

DEFLECTIONS OF TIMBER VIADUCT AT TAMWORTH

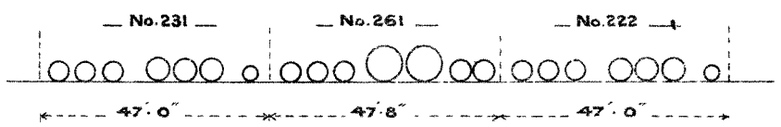


DESCRIPTION OF EXPERIMENTS

Nos. 1, 2, 30, 31 & 32	3 Engines (No. 222, 261 & 231) running at full speed
No. 3	Centre of Driving wheel of No. 222 over centre of Span
No. 4	Tender of No. 222 & Bogie wheels of No. 261 on Span
No. 5	" " No. 231 over centre of Span
No. 34	No. 222 evenly distributed over Span
No. 35	" Driving wheel over end of Corbel (B)
No. 36	" " " " other end of Corbel (C)
MAIL	Ordinary Northern mail train passing

Nº OF EXPERMT	DEFLECTION					
	RAIL BEARER			OUTSIDE GIRDER		
	C	B	A	C	B	A
1		·288	·456		·198	·336
2		·300	·546		·210	·348
3		·264	·450		·144	·318
4		·102	·222		·036	·204
5		·228	·432		·108	·288
30	·222	·336	·570	·174	·210	·492
31	·204	·324	·576	·174	·204	·468
32	·258	·342	·576	·204	·216	·468
34	·042	·228	·408	·108	·180	·36
35	·03	·276	·456	·048	·192	·408
36	·204	·168	·276	·096	·108	·24
mail		·246	·400	·096	·144	·384

ENGINES USED FOR TESTING



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Stg 866—

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY DEPARTMENT.

(RETURN OF EMPLOYÉS IN, WHO FIND FIDELITY GUARANTEES.)

Ordered by the Legislative Assembly to be printed, 27 *May*, 1886.

[*Laid upon the Table of the House, in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 8 *on Votes and Proceedings No.* 49, *of the* 21*st April*, 1886.]

RETURN showing all Employés in the Railway Department who are compelled to find a Fidelity Guarantee, the respective positions of each, the amount of the Guarantee, and in which Offices the Securities are accepted.

Name.	Position.	Amount.	Office accepting Security.
	GREAT SOUTHERN, WESTERN, AND RICHMOND LINES.		
		£	
Anderson, J.	Collector	500	Victoria Insurance Co.
Abbott, S.	Station-master	100	do
Anderson, John ...	Goods Clerk	100	do
Alliband, S. H. ...	Station-master	100	do
Alt, Hy.	Night Officer...	100	do
Attwood, Joseph ...	Officer-in-charge	100	do
Allen, H.	Station-master	100	do
Attwell, J.	Officer-in-charge	100	do
Anderson, Robt. ...	Station-master	100	do
Attwell, H.	Do	100	do
Addison, H. J. ...	Do	100	do
Allworth, S. E. ...	Pay Clerk	400	London Insurance Co.
Buchanan, R.	Inquiry Clerk...	500	Victoria Insurance Co.
Byrum, G.	Assistant Booking Clerk	100	do
Bannister, H.	Luggage Porter	100	Mercantile Insurance Co.
Burdett, G.	Clerk	100	do
Bryant, H.	Night Porter	100	do
Bonamy, Geo.	Station-master	100	Victoria Insurance Co.
Brabin, Jas.	Night Operator	100	do
Brogden, Stephen ...	Officer-in-charge	100	do
Bridges, James ...	Night Officer	100	do
Bennett, C.	Station-master	100	do
Baxter, J.	Parcels Porter	100	do
Booth, A. E. M. ...	Station-master	100	do
Burge, C.	Do	100	do
Boyce. A.	Do	100	do
Beston, M.	Relieving Operator	100	London Insurance Co.
Bell, James	Station-master	100	Victoria Insurance Co.
Badcock, E.	Clerk	100	do
Booth, J. T.	Station-master	100	do
Boughton, C.	Clerk	100	do
Bisset, J. G., jun. ...	Station-master	100	do
Beatty, L. S.	Night Officer	100	do
Bisset, J. G., sen. ...	Station-master	100	do
Brain, Thos.	Do	200	London Insurance Co.

Name.	Position.	Amount.	Office accepting Security.
	GREAT SOUTHERN, WESTERN, AND RICHMOND LINES—*continued.*		
		£	
Bradly, H. C.	Officer-in-charge	100	Victoria Insurance Co.
Bates, John	Porter-in-charge	100	London Insurance Co.
Byrne, John	Night Officer	100	do
Beattie, R.	Station-master	100	Victoria Insurance Co.
Bartlett, T.	Night Officer	100	do
Browne, H. S.... ...	Station-master	100	do
Bergan, F.	Assistant Clerk	100	London Insurance Co.
Bryant, J. T.	Cashier	4,000	do
Collins, H.	Station-master's Clerk	100	Victoria Insurance Co.
Carlisle, H.	Cloak-room Porter	100	do
Chapman, J. H. ...	Assistant Clerk	100	do
Court, Chas.	Station-master	100	do
Conlin, F. J.	Night Officer-in-charge	100	do
Cox, J. H.	Station-master	100	do
Corner, F. E.	Night Officer	100	do
Carruthers, H.... ...	Parcels Clerk	100	do
Crook, S. E.	Station-master	200	do
Crowe, T. E.	Goods Clerk	100	do
Cullen, T. H.	Do	100	do
Campbell, John ...	Station-master	100	do
Cross, Joseph	Operator	100	do
Colless, J. H.	Night Officer	100	do
Crawford, R.	Station-master	100	do
Crow, A.	Operator	100	do
Collier, T.	Night Officer-in-charge	100	do
Cochrane, F. N. ...	Goods Clerk	100	do
Claridge, A. E. ...	Operator	100	London Insurance Co.
Campion, H.	Station-master	100	do
Cavanough, T.... ...	Do	100	do
Coogan, F. B.	Assistant Cashier	300	Liverpool, London, and Globe
Cromack, A.	.....	100	Victoria Insurance Co.
Connellan, H.	Officer-in-charge	500	do
Duffy, W.	Relieving Clerk	100	do
Devine, F.	Night Officer	100	do
Dickey, Jas.	Acting Night Officer...	100	London Insurance Co.
Daley, J.	Porter...	100	Victoria Insurance Co.
Dengate, H.	Officer-in-charge	100	do
Darley, H.	Do	100	do
Dunneen, G.	Operator and Parcels Clerk	100	London Insurance Co.
Donnan, W. J... ...	Officer-in-charge	100	Victoria Insurance Co.
Donnellan, M. B. ...	Relieving Officer-in-charge	100	do
Davidson, F.	Station-master	100	London Insurance Co.
Daniel, F. T.	Night Officer	100	do
Davis, P. G.	Do	100	Victoria Insurance Co.
Duff, A.	Relieving Station-master	100	do
Dunneen, W. H. ...	Goods Clerk	100	London Insurance Co.
Day, John	Clerk	200	Victoria Insurance Co.
Engleburt, G.	Assistant Parcels Clerk	100	do
Evans, Geo.	Night Officer-in-charge	100	do
Evans, Jas.	Officer-in-charge	100	do
Enderby, C. H. ...	Assistant Station-master	100	do
Egan, Richard... ...	Officer-in-charge	100	do
French, H. R. ...	Assistant Booking Clerk	100	do
Fengurm, Geo. ...	Do	100	do
Fitzjohn, S.	Night Officer	100	do
Fletcher, Jas.	Booking Clerk	100	do
Fleming, John ...	Goods Clerk	100	do
Frankton, Alfred ...	Operator	100	do
Farquhar, Geo. ...	Station-master	100	do
Foodey, Jas.	Officer-in-charge	100	do
Foley, T. J.	Station-master	100	do
Fegan, E.	Officer-in-charge	100	do
Forshaw, H.	Night Officer	100	do
Fryer, T. H.	Operator	100	do
Griffien, Thos.... ...	Ticket Clerk	100	do
Gray, G.	Assistant Booking Clerk	100	do
Gilbert, Geo.	Acting Clerk	100	do
Graham, A.	Station-master	100	do
Grange, F. C.	Porter-in-charge	100	do
Gibbins, A. J.... ...	Station-master	100	do
Gibbons, Geo.	Officer-in-charge	100	do

Name.	Position.	Amount.	Office accepting Security.
	GREAT SOUTHERN, WESTERN, AND RICHMOND LINES—*continued.*		
		£	
Gazzard, J.	Goods Clerk	100	Victoria Insurance Co.
Gould, W.	Station-master	100	do
Giddy, H. T.	Do	100	do
Glynn, Jas.	Officer-in-charge	100	London Insurance Co.
Green, H. E.	Do	100	Victoria Insurance Co.
Glynn, John	Operator	100	do
Gray, J.	Parcels Clerk...	100	London Insurance Co.
Griffin, G. H.	Assistant Station-master	100	Victoria Insurance Co.
Griffiths, John ...	Goods Clerk	100	London Insurance Co.
Gill, Edward	Day Operator	100	Victoria Insurance Co.
Guthrie, Alex. ...	Night Operator	100	London Insurance Co.
Grimwood, R. H. ...	Do	100	Victoria Insurance Co.
Green, Joseph... ...	Officer-in-charge	100	do
Gray, F. O.	Goods Clerk	100	do
Geddan, F.	Operator and Clerk	100	do
Hayes, A. L.	Assistant Booking Clerk	100	do
Heness, A.	Do	100	do
Harper, J.	Station-master	.....	Private.
Hodgkinson, G. S. ...	Do	100	Victoria Insurance Co.
Hankin, J. C.... ...	Do	250	do
Higgs, E.	Goods Clerk	50	do
Henson, G. R.... ...	Station-master	100	do
Hankin, Jas.	Goods Clerk	100	do
Higgs, Jas.	Station-master	100	do
Hayes, Richard ...	Do	100	do
Havan, P. W.... ...	Assistant Station-master	100	do
Haughey, T. J. ...	Relieving Officer-in-charge	100	do
Huthwaite, G.... ...	Goods Porter	100	London Insurance Co.
Horn, Chas.	Station-master	100	Mercantile Mutual Co.
Harris, Walter ...	Do	100	London Insurance Co.
Hancock, Richard ...	Goods Clerk	100	Victoria Insurance Co.
Hall, Thos.	Station-master	100	do
Holland, A. S. ...	Night Officer	100	Mercantile Mutual Co.
Hawkins, J.	Operator	100	Victoria Insurance Co.
Holley, H.	Night Officer-in-charge	100	do
Heylin, J.	Clerk	100	do
Howard, C.	Goods Clerk	100	do
Haynes, M.	Night Officer	100	do
Hoologhan, D. ...	Officer-in-charge	100	London Insurance Co.
Hinds, S. E.	Station-master	100	Victoria Insurance Co.
Hickey, John	Relieving Night Officer	100	do
Howard, W. H. ...	Officer-in-charge	100	Mercantile Mutual Co.
Halligan, M. J. ...	Operator and Assistant Station-master	100	Victoria Insurance Co.
Holston, W.	Officer-in-charge	100	Mercantile Mutual Co.
Humphrey, J. C. ...	Head Ticket Collector	50	Victoria Insurance Co.
Harvey, ——	Operator	100	London Insurance Co.
Jamieson, J.	Clerk	100	Victoria Insurance Co.
Jessop, M.	Night Porter-in-charge	100	do
Jones, J.	Do	100	do
Judd, Wm.	Senior Porter...	100	do
Jacobs, J.	Officer-in-charge	100	do
Jones, A.	Station-master	100	do
James, C.	Do	100	do
Johnson, H.	Officer-in-charge	100	do
Jones, W. P.	Goods Clerk	100	do
Jones, H. T.	Operator	100	do
Kerridge, J.	Lost Property Porter	100	do
Kerid, O.	Porter...	100	London Insurance Co.
Keith, A.	Do	100	do
Keitley, H.	Operator	100	Victoria Insurance Co.
Kerin, H. A.	Relieving Station-master	100	do
Kilgannon, J. J. ...	Officer-in-charge	100	do
Kell, John	Do	100	do
Kennedy, R. J. ...	Do	100	do
Kellick, T. H.... ...	Assistant Station-master	100	do
Kennedy, H.	Officer-in-charge	100	do
Lupton, T. C.	Assistant Booking Clerk	100	do
Leeding, Andrew ...	Night Porter-in-charge	100	do
Liardet, F. E.	Station-master	100	do
Ludford, H.	Do	100	London Insurance Co.
Lenehan, H.	Do	100	Victoria Insurance Co.

Name.	Position.	Amount.	Office accepting Security.
	GREAT SOUTHERN, WESTERN, AND RICHMOND LINES—*continued.*		
		£	
Levenge, T.	Officer-in-charge	100	London Insurance Co.
Lansdown, R.	Do	100	do
Le Messurier, A. ...	Do	100	do
Long, J. L.	Assistant Station-master	100	do
Lockie, D. C.	Station-master	100	do
Lord, H. J.	Officer-in-charge	100	do
Laffin, Geo	Night Officer	100	do
Lay, Alfred	Station-master	100	do
Lucas, H.	Night Officer-in-charge	100	do
Lambert, C. T.	Clerk	100	do
Little, C.	Station-master	300	Victoria Insurance Co.
Lackey, W. H. ...	Do	.....	do
Langley, F. N.	Pay Clerk	400	do
Love, G. V.	Clerk	100	do
Leach, H.	Night Officer	100	do
Mahoney, T.	Tramway Ticket Clerk	100	do
Moody, J.	Parcels Clerk...	100	do
Moss, A.	Cloak-room Porter	100	do
Moore, H.	Station-master	100	Private.
Marsden, H. J. ...	Do	100	Victoria Insurance Co.
M'Carthy, T. P. ...	Night Officer	100	do
M'Donald, D.	Porter	100	London Insurance Co.
Mackardy, A. E. ...	Assistant Station-master	100	Victoria Insurance Co.
Monks, W.	Night Officer	100	London Insurance Co.
Morton, J. L.	Station-master	100	Victoria Insurance Co.
Mumford, H.	Goods Porter	100	do
M'Roberts, J. J. ...	Station-master	100	do
Menzie, A.	Night Officer	100	do
Murphy, J.	Porter...	100	do
Milne, E.	Station-master	100	do
Moodie, R. L.	Do	100	do
Morphy, H.	Night Officer	100	do
Morphley, W.	Porter	100	do
Morgan, C. J.	Officer-in-charge	100	do
Morgan, C. J.	Night Officer	100	do
M'Alister, F.	Operator	100	London Insurance Co.
Melville, H.	Station-master	100	do
M'Lean, A.	Officer-in-charge	100	Victoria Insurance Co.
Moodie, E.	Do	100	do
M'Kee, H.	Station-master	100	London Insurance Co.
Meiklejohn, F.	Relieving Station-master	100	Victoria Insurance Co.
M'Garrity, J.	Station-master	100	do
M'Coy, T.	Do	150	do
M'Donald, H.	Head Porter	100	do
Manuel, J.	Operator	100	do
M'Carthy, H.	Officer-in-Charge	50	do
M'Intosh, H.	Night Officer-in-charge	100	do
Mellbank, P.	Do	100	do
M'Alister, G.	Goods Clerk	100	do
M'Nab, J.	Station-master	100	do
Muir, J. E.	Do	100	do
M'Lean, John	Relieving Station-master	100	do
Moses, G.	Parcels Clerk	100	do
Moore, P.	Night Station-master...	100	do
Musgrave, A. J. ...	Officer-in-charge	100	do
Musgrove, H.	Goods Clerk	100	do
M'Garrity, J. R. ...	Officer-in-charge	100	London Insurance Co.
Meyer, H.	Night Officer	100	Victoria Insurance Co.
Morris, G.	Clerk	100	do
M'Nevin, H. J. ...	Do	100	do
M'Conville, T.	Operator	100	do
Nicholson, T.	Station-master	100	do
Nicholas, W. S. ...	Night Officer	100	do
Nugent, P.	Operator	100	do
Neale, J. R.	Cashier	2,000	Treasury.
Nixon, H.	Relieving Station-master	100	Victoria Insurance Co.
Oakley, John	Parcels Clerk...	100	do
O'Brien, J. B.	Assistant Clerk	100	do
O'Donnell, J.	Do Booking Clerk	100	do
Owen, G.	Porter...	100	do
O'Mara, J.	Officer-in-charge	100	do

Name.	Position.	Amount.	Office accepting Security.
	GREAT SOUTHERN, WESTERN, AND RICHMOND LINES—*continued.*		
		£	
Owens, R.	Porter-in-charge	100	Victoria Insurance Co.
O'Connor, H.	Porter...	100	London Insurance Co.
O'Rourke, H.	Porter-in-charge	100	Victoria Insurance Co.
Owen, J.	Goods Clerk	100	do
Paull, Chas.	Station-master	250	do
Pocock, E.	Bookkeeper	100	do
Primrose, H. E. ...	Porter...	100	London Insurance Co.
Payne, E. R.	Clerk	100	Victoria Insurance Co.
Porteus, J.	Do	100	do
Paterson, J.	Officer-in-charge	100	do
Pettingell, J. J. ...	Station-master	100	do
Powell, F. H.	Night Officer-in-charge	100	Mercantile Mutual Co.
Parsons, G.	Station-master	100	Private.
Potter, B. G.	Do	100	Mercantile Mutual Co.
Player, H.	Foreman	100	Victoria Insurance Co.
Pinen, E. J.	Clerk	100	do
Penrose, A.	Day Operator	100	London Insurance Co.
Pass, S.	Station-master	50	Victoria Insurance Co.
Primrose, A.	Clerk	100	do
Price, H.	Do	100	do
Pritchard, G. E. ...	Station-master	100	do
Quinlan, P.	Clerk	100	London Insurance Co.
Roberts, F. H. ...	Assistant Booking Clerk	100	Victoria Insurance Co.
Rothwell, G.	Porter...	100	do
Rose, Henry	Night Officer-in-charge	100	do
Rawlinson, H. ...	Day Operator	100	do
Regan, Danl.	Parcels Clerk	100	do
Reeves, Robert ...	Operator	100	do
Riley, J.	Night Officer-in-charge	100	Mercantile Mutual Co.
Rae, J. G.	Station-master	100	Victoria Insurance Co.
Reilly, John	Foreman	100	do
Rowe, James	Station-master	200	London Insurance Co.
Reilly, John	Coaching Clerk	100	do
Riches, H. C.	Goods Clerk	100	Victoria Insurance Co.
Ryan, G. W.	Officer-in-charge	100	do
Rowling, A. S. ...	Station-master	100	do
Reed, John	Night Officer-in-charge	100	do
Rodriquey, T.	Do	100	do
Richardson, F. ...	Station-master	100	do
Rae, J....	Parcels Porter	100	do
Ralph, H.	Chief Booking Clerk...	100	do
Roberts, R.	Booking Clerk	100	do
Richardson, A. ...	Superintendent of Stores	500	do
Ridshaw, S.	Relieving Station-master	100	do
Ramsden, R. J. ...	Pay Clerk	400	do
Rien, M. W.	Officer-in-charge	100	London Insurance Co.
Swift, Geo.	Assistant Booking Clerk	100	Victoria Insurance Co.
Schofield, J.	Night Officer-in-charge	100	do
Stevens, T. J.	Porter...	100	do
Salkeld, A.	Do	100	do
Salkeld, B.	Porter-in-charge	100	do
Schwarke, F.	Porter...	100	do
Stafford, J.	Station-master	100	do
Sheppard, D.	Do	100	do
Smith, J. R.	Parcels Clerk...	100	do
Simpson, R.	Station-master	250	do
Smith, H. C.	Assistant Station-master	100	do
Sidney, F.	Assistant Goods Clerk	100	do
Smaile, M. W. ...	Booking Clerk	100	do
Sheriff, J. M.	Night Officer	100	Mercantile Mutual Co.
Spence, J. M.	Officer-in-charge	100	Victoria Insurance Co.
Smith, Robt.	Station-master	100	do
Scarlett, G.	Relieving Station-master	100	do
Smith, A. R.	Officer-in-charge	100	do
Sydenham, H.... ...	Station-master	100	London Insurance Co.
Sweet, A.	Goods Clerk	100	Victoria Insurance Co.
Stafford, H. J. ...	Officer-in-charge	100	do
Scotland, D.	Station-master	100	do
Saunders, H.	Night Porter	100	do
Schey, H.	Clerk	100	do
Schwalke, —— ...	Do	100	do

Name.	Position.	Amount.	Office accepting Security.
	GREAT SOUTHERN, WESTERN, AND RICHMOND LINES—*continued.*		
		£	
Stuk, H.	Relieving Porter	100	Victoria Insurance Co.
Taylor, V.	Booking Clerk	100	do
Thompson, J. R. ...	Assistant Booking Clerk	100	do
Taylor, E.	Clerk	100	do
Titterton, W. J. ...	Station-master	100	do
Turner, J.	Officer-in-charge	100	do
Thomson, M. G. ...	Do	100	do
Thomson, W. L. ...	Goods Clerk	100	do
Treweeke, R.	Do	100	do
Thurston, J.	Operator	100	Colonial Mutual Co.
Thorburn, J.	Night Foreman	100	Victoria Insurance Co.
Threekeld, T.	Officer-in-charge	100	do
Tewkesbury, H. ...	Night Officer	100	do
Tweedie, J.	Station-master	150	do
Tanner, J.	Do	100	do
Tarrant, G.	Operator	100	do
Thomas, J. H.... ...	Night Officer-in-charge	100	do
Thomas, R. J.... ...	Clerk	100	Mercantile Mutual Co.
Tibbs, R. J.	Station-master	200	London Insurance Co.
Taylor, E.	Booking Clerk	100	Victoria Insurance Co.
Thompson, M.... ...	Pay Clerk	400	do
Tobin, R.	Collector	500	do
Taylor, E. B.	Cashier	400	do
Thompson, F. A. ...	Clerk	100	do
Upton, G.	Officer-in-charge	100	Mercantile Mutual Co.
Upton, C.	Night Officer	100	Victoria Insurance Co.
Upton, W.	Officer-in-charge	100	do
West, E. A.	Assistant Booking Clerk	100	do
West, E. H.	Do	100	do
Weedon, W.	Assistant Parcels Clerk	100	do
Windsor, L.	Luggage Porter	100	do
Williams, J.	Night Officer	100	do
Williams, E. R. ...	Chief Clerk, Coaching	100	do
Williamson, W. ...	Assistant Porter	100	do
Ward, T. G.	Station-master	100	do
Watsford, G H. ...	Do	100	do
Walker, H.	Night Officer	100	do
Willis, A.	Station-master	100	do
Winder, T.	Operator	100	do
Wright, S. H.... ...	Do	100	London Insurance Co.
Willis, F.	Night Officer	100	do
Waring, J.	Station-master	100	do
Walker, J.	Do	100	do
Wilbow, J.	Relieving Officer-in-charge	100	do
Woodall, G.	Station-master	100	do
Wormley, E. J. ...	Night Officer-in-charge	100	do
Wood, S. H.	Goods Clerk	100	do
Webb, Jno.	Head Porter	100	do
White, Jno.	Operator	100	do
Woodson, J.	Station-master	100	do
Watts, H. H.	Operator and Parcels Clerk	100	do
Williams, A.	Station-master	100	Victoria Insurance Co.
Webb, H. J.	Night Officer	100	do
Warburton, J.... ...	Do	100	do
Woodgate, E.	Station-master	100	do
Webb, Wm.	Officer-in-charge	100	do
Ward, J.	Assistant Goods Clerk	100	London Insurance Co.
Woodgate, J.	Officer-in-charge	100	Victoria Insurance Co.
Wilson, J.	Porter...	100	do
Walker, J.	Clerk	100	do
Webber, G.	Night Officer	100	United Australian Mutual.
Wakeling, J.	Operator	100	do
Watsford, J.	Station-master	100	Victoria Insurance Co.
Watson, S. C.	.....	100	do
York, S.	Station-master	100	do
	GREAT NORTHERN LINE.		
Abbott, H. N.... ...	Night Officer	100	Victoria Insurance Co.
Armstrong, G.... ...	Night Porter	100	do
Barrett, T. J.	Clerk	100	London Insurance Co.

Name.	Position.	Amount.	Office accepting Security.
	GREAT NORTHERN LINE—*continued.*		
		£	
Barrett, F. C.	Clerk	100	Victoria Insurance Co.
Bailey, C. A.	Station-master	100	do
Beal, G.	Do	100	do
Berman, J.	Night Officer	100	do
Bishop, T.	Operator	100	do
Brackenrig, A. E. ...	Station-master	100	do
Brookes, G. E.... ...	Acting Officer-in-charge	100	do
Benson, R. W. ...	Officer-in-charge	100	do
Burns, J., sen.... ...	Station-master	100	Private security.
Burns, J., jun.... ...	Paymaster	1,000	Victoria Insurance Co.
Burns, W.	Night Officer	100	do
Burns, R.	Do	100	do
Buxton, G.	Clerk	400	do
Buxton, P.	Do	100	do
Callaghan, G.	Do	100	do
Callcott, T.	Officer-in-charge	100	do
Cameron, J. P. ...	Clerk	100	do
Carpenter, A.	Station-master	100	do
Charlton, A.	Do	100	do
Charlton, R. P. ...	Clerk	100	do
Clissell, W. E.... ...	Operator	100	do
Chivers, D. J.... ...	Officer-in-charge	100	do
Clements, F. J. ...	Officer-in-charge	100	do
Cooper, C.	Clerk	100	Private security.
Coupar, A.	Do	100	Victoria Insurance Co.
Cox, F. W.	Station-master	250	Mercantile Mutual Co.
Crothers, G. E. ...	Do	100	Victoria Insurance Co.
Culnane, J. W. ...	Clerk	100	London Insurance Co.
Daly, J.	Night Officer	100	Victoria Insurance Co.
Dingle, B. H.	Station-master	100	do
Dove, G.	Clerk	100	do
Dowling, G. T. ...	Station-master	100	Private security.
Drewe, S. C.	Do	100	Victoria Insurance Co.
Duffy, W. J.	Relieving Clerk	400	do
Duffy, Thos.	Night Officer...	100	do
Dulling, T.	Clerk	100	do
Dunbar, R.	Officer-in-charge	100	do
Duncan, J. W. ...	Clerk	100	do
Duncan, E. G.... ...	Do	100	do
Dunne, R.	Officer-in-charge	100	do
Dwyer, P.	Station-master	100	do
Dwyer, W.	Clerk	100	do
Dwyer, J. W.... ...	Officer-in-charge	100	do
Eagleson, R.	Station-master	100	do
Eckford, H.	Do	100	do
Ferris, G. T.	Do	300	do
Fielding, E. S.... ...	Clerk	100	do
Fox, H.	Relieving Station-master	400	do
Fligg, H.	Storekeeper	350	do
Gallagher, P. E. ...	Clerk-in-charge	100	London Insurance Co.
Garran, D. A.... ...	Station-master	100	Victoria Insurance Co.
Gately, John	Night Officer	100	do
Goodyer, J. D. ...	Clerk	100	do
Grace, Thos.	Operator	100	do
Hall, W.	Night Officer	100	do
Hampton, W.	Clerk	100	do
Harris, J. R.	Do	100	do
Hartcher, A.	Officer-in-charge	100	do
Haslam, B.	Station-master	100	do
Higgs, J.	Traffic Manager	1,000	do
Holt, H. W. L. ...	Station-master	100	Private security.
Humphreys, J. ...	Do	100	Victoria Insurance Co.
Hudson, V.	Porter-in-charge	100	do
Humphreys, W. ...	Officer-in-charge	100	do
Irvine, C.	Cashier	500	do
Johnston, R.	Night Officer	100	do
Junor, F.	Do	100	do
Keating, J.	Do	100	do
Kenny, M.	Station-master	200	Private security, £100; Victoria Insurance Co., £100.

Name.	Position.	Amount.	Office accepting Security.
	GREAT NORTHERN LINE—*continued.*		
		£	
Keogh, E.	Night Officer	100	Victoria Insurance Co.
La Roche, G. O. ...	Operator	100	do
Lawrence, C.	Clerk	100	do
Levien, A.	Station-master	250	do
Lovett, J. H.	Weigh Clerk	100	do
Maguire, M.	Clerk	100	Private security, £50; Victoria Insurance Co., £50.
Maguire, T.	Do	100	Victoria Insurance Co.
Maher, J.	Officer-in-charge	100	do
Mannix, L.	Clerk	100	do
Manson, G. H. ...	Do	100	do
Markwell, S.	Station-master	100	do
M'Gee, R.	Relieving Station-master	400	do
M'Lean, J.	Station-master	100	Private security.
Miller, Thos.	Clerk	400	Victoria Insurance Co.
Moran, Jas.	Relieving Clerk	400	do
Morrin, T.	Clerk	100	do
Moxham, G. M. ...	Station-master	100	do
Mulherm, J.	Operator	100	do
Murray, P.	Do	100	do
Neary, W. H.	Officer-in-charge	100	do
Nicholl, T. A.	Relieving Clerk	400	do
Nield, J. R.	Relieving Station-master	400	do
Noad, Joseph	Clerk	100	do
O'Brien, T.	Station-master	100	do
O'Donnell, J.	Night Officer	100	do
Owen, Ed.	Clerk	100	London Insurance Co.
Paton, Jno.	Berthing-master	100	Victoria Insurance Co.
Patrick, P.	Operator	100	do
Pearcy, T.	Clerk	100	do
Perry, W.	Night Officer...	100	do
Pendleton, W. S. ...	Officer-in-charge	100	do
Rees, Hy.	Night Officer...	100	do
Richardson, E. ...	Officer-in-charge	100	do
Robins, W.	Station-master	500	do
Sarsan, W.	Night Officer...	100	do
Selden, O.	Clerk	100	do
Simpson, E.	Station-master	100	do
Smith, W. T. A. ...	Clerk	200	do
Smith, W. B.	Station-master	200	do
Spence, W.	Clerk	400	do
Stewart, W. F. ...	Do	400	do
Stewart, R.	Operator	100	do
Swan, H.	Clerk	100	do
Swan, W. E.	Do	100	do
Tate, G. B.	Night Officer...	100	do
Terry, J.	Station-master	100	London Insurance Co.
Thomas, T.	Do	100	Victoria Insurance Co.
Thompson, G.	Officer-in-charge	100	do
Thorpe, W.	Night Officer...	100	do
Treacy, T. J.	Clerk	100	do
Tuck, W.	Do	100	do
Usher, M.	Operator	100	do
Verdon, W. L. ...	Station-master	100	do
Verdon, W. U. ...	Do	100	do
Walker, J. H.... ...	Do	100	do
Wallace, J. W. ...	Do	200	Private security.
Walsh, M.	Night Officer...	100	Victoria Insurance Co.
Walters, J. J.... ...	Clerk	100	do
Watson, T. H.... ...	Do	100	do
Wilkinson, R.... ...	Station-master	100	do
Whybourne, J. ...	Night Officer...	100	do
Williams, W. J. ...	Officer-in-charge	100	do
Wise, George	Station-master	100	Private security.
Young, Saml.	Officer-in-charge	100	do

Sydney: Thomas Richards, Government Printer.—1886.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY EMPLOYÉS.

(AT REDFERN, EVELEIGH, AND DARLING HARBOUR, RECEIVING LESS THAN 8s. PER DAY.)

Ordered by the Legislative Assembly to be printed, 25 *November*, 1885.

[*Laid upon the Table of the House, in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 12, *on Votes and Proceedings No.* 4, *of the* 24*th November*, 1885.]

RETURN of Employés engaged in the Railway Yards at Redfern, Eveleigh, and Darling Harbour, receiving less than 8s. per day wages.

	Employed at Redfern.	Employed at Eveleigh.	Employed at DarlingHarbour.
PERMANENT-WAY AND WORKS DEPARTMENT.			
Labourers engaged in general work about the yards	51	.....	.....
Labourers engaged with bricklayers and carpenters	45	58	2
Labourers engaged repairing Permanent Way...	13	2	.....
Labourers engaged laying in sidings, &c.	.....	26	161
Labourers engaged on signal work, &c.	.....	.....	2
Strikers engaged in smiths' shop	34	.....	.....
Plumbers engaged on general work	7	.....	.....
Fitters' labourers engaged in smiths' shop	5	.....	.....
Painters engaged on general work	4	.....	.....
Storekeeper at interlocking signal-box	.....	1	.....
LOCOMOTIVE DEPARTMENT.			
Labourers with carriage and waggon repairers...	119	.....	4
Labourers with painters	7	30	.....
Labourers engaged on general work in yard	.....	27	.....
Labourers engaged with blacksmiths	30	6	.....
Labourers drying sand for engines	1	.....	.....
Strikers engaged with blacksmiths	45	5	.....
Engine-cleaners	25	41	.....
Fuelmen	14	20	.....
Night-watchmen	2	2	.....
Messenger	1	.....	.....
TRAFFIC DEPARTMENT.			
Porters (Coaching)	118	6	.....
Porters (Goods)	56	.....	121
Shunters	28	.....	.....
Watchmen...	2	1	.....
Gate-keepers	2	.....	.....
Weigh-clerk	1	.....	.....
Enquiry Officer	1	.....	.....
STORES DEPARTMENT.			
Storemen, receiving and issuing stores, &c.	.....	5	.....
Labourers, tallying timber, rails, &c.	.....	17	.....
Night-watchmen	.....	2	.....
Messenger	.....	1	.....
Total	611	250	290
GRAND TOTAL	1,151		

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY EMPLOYÉS.

(DISCHARGED SINCE 1ST MARCH, 1886—FOR CAUSES OTHER THAN MISCONDUCT.)

Ordered by the Legislative Assembly to be printed, 22 *June*, 1886.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 8, *in Votes and Proceedings No.* 50, *of the* 28*th April*, 1886.]

HAVE any Railway Employés been discharged from the Railway Service since the 1st March (ultimo) for causes other than misconduct; if so, how many from the Great Southern and Western Railway, and from the Great Northern and North-Western Railway, respectively, specifying the grade, and whether from the Permanent or the Temporary Staff?

RETURN of Railway Employés discharged from the Railway Service since 1st March last for causes other than misconduct.

Name.	Position.	Whether on Permanent or Temporary Staff.	Remarks.
TRAFFIC BRANCH—G. S. & W. RAILWAY.			
D. Nicholas	Porter	Temporary	Not required.
D. Moriarty	do	do	do
A. M'Kenzie	do	do	do
R. Hewitt	do	do	do
T. Edington	do	do	do
W. Robertson	do	do	do
LOCOMOTIVE BRANCH—G. S. & W. RAILWAY.			
A. Smith	Cleaner	Temporary	Not required.
A. Joyce	do	do	do
C. Peisley	do	do	do
J. Curran	Fuelman	do	do
R. Bram	Laborer	do	do
E. M'Cartney	Fuelman	Permanent	do
A. Ray	Oiler	do	do
GREAT NORTHERN RAILWAY.			
J. Handley	Fitter	Temporary	Not required.
J. Hatherington	do	do	do
J. D. Jenner	Coach-trimmer	do	do
C. Sadler	Brake-fitter	Permanent	do

Name.	Position.	Whether on Permanent or Temporary Staff.	Remarks.
Engineer for Existing Lines Branch—G. S. & W. Railway.			
	10 carpenters ...	Temporary ...	Not required.
	7 plumbers ...	do ...	do
	1 painter	do ...	do
	13 riveters ..	do ..	do
	1 tinsmith ...	do ...	do
	1 bricklayer ...	do ...	do
	2 carters	do ...	do
	6 boys	do ...	do
	43 laborers ...	do ...	do
	1 laborer	Permanent ...	do
Great Western Railway.			
	8 carters	Temporary ...	Not required.
	1 carpenter ...	do ...	do
	1 improver ...	do ...	do
	1 plasterer ...	do ...	do
	1 moulder ...	do ...	do
	47 laborers ...	do ...	do
Great Northern Railway.			
	21 laborers ...	Temporary ...	Not required.
	29 do ...	Permanent ...	do
	4 painters ...	Temporary ...	do
	7 carpenters ...	do ...	do
Traffic Branch—Great Northern Railway.			
J. Brown	Porter	Temporary ...	Not required.
J. Humphreys	do	do ...	do
J. Sweeney...	Gatekeeper ...	do ...	do
A. Donohoe	do ...	do ...	do
M. Brennan	Porter	do ...	do

Sydney: Thomas Richards, Government Printer.—1886.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(RAILWAY TRAFFIC MANAGER'S OFFICE.)

Ordered by the Legislative Assembly to be printed, 20 *September*, 1886.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 25th August, 1886, That there be laid upon the Table of this House,—

"The names and salaries of all Clerks permanently or temporarily employed "in the Traffic Manager's Office, Sydney, during the year 1880; also, the "names of all Clerks permanently or temporarily employed at the present "time, together with their date of appointment and salary paid to each."

(*Mr. Davies.*)

STATEMENT showing the names of persons employed in the Traffic Manager's Office in 1880, with their Salaries, &c.

Names.	Date of First Appointment.	Salary.
D. Kirkcaldie	19 December, 1876	£300 per annum.
G. H. Mingaye	1 April, 1874	12s. per day.
F. J. Kensett	1 September, 1867	£175 per annum.
Geo. Andrews	22 December, 1874	£175 "
M. S. Browne	1 October, 1874	£175 "
F. G. D. Smith	22 April, 1872	£175 "
W. H. Colquhoun	14 February, 1879	£150 "
G. C. Betheridge	1 December, 1872	£135 "
A. Smithers	26 November, 1873	8s. per day.
W. Church	14 October, 1878	£120 per annum.
J. Carter	29 April, 1879	£120 "
H. Evans	1 September, 1875	£110 "
G. Stevenson	1 July, 1878	42s. per week.
F. W. Wall	6 January, 1879	42s. "
J. H. Daley	15 January, 1880	40s. "
Jos. Hurley	29 October, 1879	7s. per day.
P. M'Kean	10 December, 1877	7s. "
A. R. Kerr	14 May, 1879	7s. "
A. Want	1 May, 1880	7s. "
T. A. Cochrane	9 December, 1878	7s. "
J. H. Underwood	29 October, 1879	6s. "
A. Underwood	28 May, 1880	6s. "
W. Gilbert	28 February, 1879	6s. "
T. D. Ford	1 November, 1880	6s. "
D. Donovan	28 May, 1878	6s. 6d. "

908—

[819 copies—Approximate Cost of Printing (labour and material), £2 4s. 3d.]

STATEMENT showing the names of persons employed in the Traffic Manager's Office at the present time, with their Salaries, &c.

Names.	Date of First Appointment.	Salary.
W. H. Colquhoun	14 February, 1879	£320 per annum.
F. J. Pye...	3 February, 1879	£260 ,,
F. J. Kensett	1 September, 1867	£250 ,,
A. Price	14 January, 1878	£220 ,,
J. S. Beach	1 July, 1879	£220 ,,
T. Hetherton	2 May, 1881	£205 ,,
W. A. Webb	2 January, 1885	£205 ,,
J. Carter...	29 April, 1879	£185 ,,
A. Shairp...	1 August, 1881	£170 ,,
E. W. Carter	25 September, 1882	£170 ,,
J. Vile	13 September, 1883	£200 ,,
E. Bromfield	12 March, 1885	£155 ,,
G. C. Betteridge	1 December, 1872	£150 ,,
A. Smithers	26 November, 1873	£150 ,,
T. Fox	3 February, 1879	£135 ,,
T. Ford	1 November, 1880	£150 ,,
M. Daley...	30 July, 1881	£120 ,,
E. W. Cooper	1 July, 1882	£105 ,,
F. Cole	2 April, 1883	£75 ,,
L. D. Eisenstaedter	18 July, 1883	£150 ,,
J. Andrews	7 January, 1884	£120 ,,
W. Collins	8 May, 1884	£75 ,,
G. Brown	25 September, 1884	£125 ,,
R. J. Darby	16 December, 1884	£75 ,,
J. Tate	31 December, 1884	£120 ,,
W. J. Morris	4 September, 1885	£75 ,,
F. Adams	8 February, 1886	£120 ,,
*H. Fry	24 September, 1885	7s. per day.
*J. C. Flanagan	11 June, 1878	£150 per annum.
*W. L. Thomson	31 July, 1885	£110 ,,

* These Clerks are only temporarily employed in Traffic Manager's Office.

Sydney: Thomas Richards, Government Printer.—1886.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY STATION-MASTERS.

(NAMES, DATES OF APPOINTMENT, &c.)

Ordered by the Legislative Assembly to be printed, 22 *October,* 1886.

[*Laid upon the Table of the House, in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 9 *on Votes and Proceedings, No.* 143, *of the* 8*th October,* 1886.]

RETURN showing names of Station-masters, date of first appointment to Railway Department, their present salary, and date of last increase.

Name.	Station.	Date of first appointment.	Present salary.	Date of last increase.
			£	
W. Allen	Jerilderie	19 June, 1878 ...	150	29 Oct., 1885.
W. Attwell	Byrock	Feb., 1867 ...	150	1 Nov., „
A. Jones	Whitton	27 April, 1878 ...	150	27 Oct., „
S. Abbot	Eveleigh	Feb., 1867 ...	150	1 Jan., „
A. Graham	St. Peter's	April, 1868 ...	150	4 May, „
J. H. Cox	Breadalbane	5 Oct., 1876 ...	150	20 Nov., 1884.
A. Boyce	Hanging Rock	1 May, 1877 ...	150	1 „ „
H. Melville	Culcairn	1 „ 1871 ...	150	12 „ „
B. G. Potter	Old Junee	10 Jan., 1876 ...	150	6 Dec., „
A. Lay	Bowenfels	23 July, 1879 ...	150	25 „ „
R. Smith	Wallendbeen	Aug., 1872 ...	150	18 „ „
J. Woodrow	George's Plains ...	5 Mar., 1877 ...	150	27 Oct., „
F. Davidson	Raglan	13 Jan., 1879 ...	150	18 Feb., 1885.
A. Williams	Millthorpe	12 Nov., 1877 ...	150	15 Oct., „
C. Horne	Coolaman	Sept., 1873 ...	150	27 Mar., „
R. Wilkinson	Hamilton	8 April, 1879 ...	150	1 April, „
R. Eagleson	Ravensworth	31 May, 1876 ...	150	1 May, „
G. E. Crothers	Farley	1 Jan., 1883 ...	150	1 Jan., 1886.
G. Benning	Deepwater	23 April, 1880 ...	150	1 Sept., „
Jas. P. Edwards	Newcastle	8 May, 1872 ...	150	17 Mar., „
C. F. Liardit	Macdonaldtown ...	Jan., 1867 ...	165	1 Jan., 1885.
A. J. Gibbons	Stanmore	29 April, 1877 ...	165	1 „ „
E. Milne	Bundanoon	9 Nov., 1876 ...	165	1 „ „
A. E. Booth	Tarago	1 May, „ ...	165	1 „ „
E. Aland	Molong	4 Jan., „ ...	165	1 „ „
G. Hodgkinson	Kogarah	15 Sept., 1877 ...	165	1 „ 1883.
J. Walker	Emu Plains	4 July, 1876 ...	165	1 „ 1885.
Thos. Hall	Fairfield	1 Sept., 1875 ...	165	1 „ „
C. James	Katoomba	1 Dec., „ ...	165	1 „ „
J. Tanner	Rylstone	8 „ 1876 ...	165	1 „ „
R. Anderson	Borenore	15 Mar., 1881 ...	165	1 „ „
S. E. Hinde	Narromine	19 June, 1876 ...	165	1 „ „
T. Canty	Spring Hill	15 Jan., „ ...	165	1 „ „
J. M'Lean	Aberdeen	29 „ 1861 ...	165	1 „ „
A. Brackenreg	Moonbi	25 Sept., 1877 ...	165	1 „ „
A. Charlton	Guyra	26 June, 1874 ...	165	1 „ „
Hy. Eckford	Glencoe...	14 Feb., 1877 ...	165	1 „ „

Name.	Station.	Date of first appointment.	Present salary.	Date of last increase.
			£	
Thos. O'Brien	Lochinvar	16 May, 1871 ...	165	1 Jan., 1885.
G. Pritchard	Croydon	Oct., 1873 ...	180	1 ,, ,,
G. Watsford	Menangle	28 Aug., 1875 ...	180	1 ,, ,,
A. Rowling	Gerogery	27 Feb., 1878 ..	180	1 ,, ,,
W. J. Marden	Arncliffe	24 Nov., 1873 ...	180	1 ,, ,,
H. Addison	Rockdale	18 Oct., 1875 ...	180	1 ,, ,,
J. M'Garrity...	Seven Hills	Jan., 1868 ...	180	1 ,, ,,
S. Yorke	Rooty Hill	April, ,, ...	180	1 ,, ,,
De C. Lockie	Springwood	5 May, 1878 ...	180	1 ,, ,,
John Booth	Lawson	Oct., 1871 ...	180	1 ,, ,,
Robert Tibbs...	Nevertire	1 Nov., 1877 ...	180	1 ,, ,,
H. Campion	Riverstone	Nov., 1867 ...	180	1 ,, ,,
T. Cavanagh	Mulgrave	Feb., 1870 ...	180	1 ,, ,,
G. Davies	Ryde	April, 1865 ...	180	17 Sept., 1886.
F. Rae	Binalong	Mar., 1875 ...	180	1 Jan., 1885.
L. Ludford	Summer Hill	April, 1867 ...	180	1 ,, ,,
R. Beattie	Nyngan...	27 Mar., 1879 ...	180	1 ,, ,,
W. Harris	Carrathool	8 Dec., 1876 ...	180	1 ,, ,,
C. Bennett	Bowral	Feb., 1871 ...	180	1 ,, ,,
J. Walker	Wallsend	8 June, 1863 ...	180	1 ,, ,,
C. A. Bailey	Breeza	1 ,, 1875 ...	180	1 ,, ,,
S. C. Drewe	Greta	18 May, 1869 ...	180	1 ,, ,,
S. Markwell	Branxton	5 June, 1877 ...	180	1 ,, ,,
T. Thomas	Willow-tree	20 July, 1874 ...	180	1 ,, ,,
B. N. Dingle...	Boggabri	26 Oct., 1877 ...	180	1 ,, ,,
W. Gould	Young	1 July, 1874 ..	195	11 May, ,,
S. W. Alliband	Gunning	Jan., 1873 ...	195	1 Jan., ,,
J. Pettingell	Bungendore	16 Dec., 1874 ...	195	9 Sept., ,,
W. Sydenham	Kelso	Nov, 1866 ...	195	7 Nov., ,,
R. Hayes	Waterfalls	22 Dec., 1875 ...	195	1 Jan., ,,
C. Burge	Yass	Feb., 1874 ...	195	1 ,, ,,
E. Simpson	Scone	10 June, 1875 ...	195	1 April, 1886.
W. L. Verdon	Quirindi	1 April, 1874 ...	195	1 Aug., ,,
Jas. Morton	Rookwood	Dec., 1869 ...	210	1 Jan., 1885.
A. Moodie	Marulan	Mar., 1856 ...	210	1 ,, ,,
T. Nicholson	Hurstville	26 May, 1876 ...	210	1 ,, ,,
J. Waring	St. Mary's	April, 1867 ...	210	1 ,, ,,
W. Lenehan	Moss Vale	July, 1869 ...	210	1 ,, ,,
J. M'Nabb	Rydal	Feb., 1870 ...	210	1 ,, ,,
J. G. Bissett, sen.	Brewongle	,, ,, ...	210	1 ,, ,,
J. Muir	Tarana	Mar., 1865 ...	210	1 ,, ,,
Charles Little	Newbridge	Oct., 1871 ...	210	1 ,, ,,
T. J. Foley	Wellington	Dec., 1867 ...	210	1 ,, ,,
H. W. L. Holt	Waratah	16 ,, 1866 ...	210	1 ,, ,,
A. Carpenter...	Hexham	17 Jan., 1868 ...	210	1 ,, ,,
J. Humphreys	East Maitland	6 May, 1863 ...	210	1 ,, ,,
W. U. Verdon	Werris Creek	21 July, 1859 ...	210	1 ,, ,,
B. Haslam	Walcha Road	27 Feb., 1877 ...	210	1 ,, ,,
J. Terry	Uralla	1 Jan., ,, ...	210	1 ,, ,,
G. Beal	Gunnedah	12 July, 1874 ...	210	1 ,, ,,
John Campbell	Narrandera	16 Oct., ,, ..	225	1 ,, ,,
P. Dwyer	H.-S. Point	6 June, 1856 ...	225	1 ,, 1882.
G. Woodall	Mt. Victoria	,, 1860 ...	240	10 Nov., 1885.
J. Stafford	Liverpool	April, 1865 ...	240	1 Jan., 1882.
T. Ward	Campbelltown	,, 1871 ...	240	1 ,, 1885.
J. M'Roberts...	Mittagong	Nov., ,, ..	240	1 ,, ,,
Geo. Parsons...	Harden	Feb., 1867 ...	240	1 ,, ,,
H. Giddy	Cootamundra	Jan., 1876 ...	240	1 ,, ,,
Jas. Rowe	Junee Junction ...	Feb., 1870 ...	240	1 ,, ,,
D. Shepperd	Picton	11 Nov., 1875 ...	240	1 ,, ,,
W. Morse	Marrickville	10 Sept., 1868 ...	240	1 ,, ,,
T. Brain	Blayney...	Feb., 1869 ...	240	1 ,, ,,
W. Lackey	Richmond	April, 1872 ...	240	1 ,, ,,
R. Darby	Mortuary	Sept., 1855 ...	240	1 July, 1886.
D. A. Garvan	High-street	1 Mar., 1862 ..	240	1 Jan., 1885.
Jas. Burns	Musclebrook	,, 1857 ...	240	1 ,, ,,
Geo. Wise	Tamworth	3 Feb., 1863 ...	240	1 ,, ,,
M. S. Brown...	Petersham	1 Oct., 1874 ...	255	1 ,, ,,
W. Titterton...	Burwood	Feb., 1868 ...	255	1 ,, ,,
S. Crook	South Wagga	,, 1864 ...	255	1 ,, ,,
Jas. Bell	Penrith	Sept., 1862 ...	255	1 ,, ,,
F. Richardson	Orange	Aug., 1871 ...	255	1 ,, ,,

Name.	Station.	Date of first appointment.	Present salary.	Date of last increase.
			£	
D. Scotland	Windsor	Mar., 1868 ...	255	1 Jan., 1885.
J. G. Bissett, jun.	Mudgee...	July, 1871 ...	255	1 ,, ,,
J. C. Hankin...	Newtown	Jan., 1863 ...	255	1 ,, ,,
J. Tweedie	Wallerawang	Oct., 1868 ...	255	1 ,, ,,
G. Dowling	Singleton	1 Jan., 1864 ...	270	1 ,, ,,
M. Kenny	West Tamworth ...	24 Mar., 1870 ...	270	1 ,, ,,
G. Moxham	Murrurundi	30 July, 1864 ...	270	1 ,, ,,
S. Pass	Bourke	April, 1867 ...	290	12 Dec., ,,
J. Harper	Sydney Goods	June, 1871 ...	290	1 Jan., ,,
R. Simpson	Goulburn	10 Nov., 1875 ...	290	1 ,, ,,
G. Bonamy	Ashfield...	Aug., 1862 ...	290	1 ,, ,,
J. Higgs	Granville	April, 1857 ...	290	1 ,, ,,
W. M'Kee	Hay	22 Oct., 1878 ..	290	1 ,, ,,
T. M'Coy	Blacktown	Feb., 1867 ...	290	1 ,, ,,
R. Crawford	Esk Bank	Sept., 1871 ...	290	1 ,, ,,
G. Farquhar	Bathurst	,, 1859 ...	290	1 ,, ,,
G. R. Henson	Homebush	Aug., 1867 ...	290	1 ,, ,,
M. Connellan	Central Office	Nov., 1871 ...	290	1 ,, 1886.
A. Levien	Morpeth	3 June, 1869 ...	290	Question of date of increase re-submitted.
W. Robins	Newcastle	1 Sept., 1863 ...	290	1 Jan., 1885.
G. P. Ferris	West Maitland... ...	1 June, 1865 ..	290	1 ,, ,,
F. W. Cox	Armidale	20 April, 1864 ...	290	1 ,, ,,
W. B. Smith	Glen Innes	20 Nov., ,, ...	290	1 ,, ,,
J. B. Wallace	Narrabri	1 ,, 1867 ...	290	1 ,, ,,
J. Watsford	Parramatta	Mar., ,, ...	310	1 ,, ,,
E. Woodgate...	Dubbo	,, 1868 ...	310	1 ,, ,,
E. Herald	Tenterfield	26 June, 1867 ...	310	1 Sept., 1886.
A. Willis	Albury	19 Sept., 1879 ...	330	1 July, ,,
F. Johnson	Sydney	1 Jan., 1870 ...	330	1 Jan., 1885.
C. Paul	Darling Harbour ...	Mar., 1865 ...	330	1 ,, ,,
J. Collins	Sydney	,, 1858 ...	400	1 ,, ,,

Sydney: Thomas Richards, Government Printer.—1886

[3d.]

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(AMOUNT DUE FOR CARRIAGE BY WRIGHT, HEATON, & CO.)

Ordered by the Legislative Assembly to be printed, 24 November, 1885.

LAID upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works in answer to Question No. 1 on Votes and Proceedings No. 15, of the 1st October, 1885,—

"A Return showing the amount due for Railway carriage by Wright, "Heaton, & Co. on the 25th March and 25th September, 1885, respectively, "and the period over which the account at each date had extended; and also "the amount of the Bond given by the same firm on the same dates."

(*Sir Henry Parkes.*)

RETURN showing the amount due by Messrs. Wright, Heaton, & Co. on the 25th March and 25th September, 1885, respectively, and the amount of security given by the same firm.

	March, 1885.			September, 1885.		
	£	s.	d.	£	s.	d.
Amount due at Southern and Western Stations	14,644	2	0	19,936	2	1
Do Northern Stations	1,919	0	3	1,662	8	11
Do Darling Harbour Branch	*265	1	10	*265	1	10
	16,828	4	1	21,863	12	10

* Freight on wine in dispute.

Security:—Bond covering security, £24,000.

Details showing period over which account extends attached.

GREAT SOUTHERN, WESTERN, AND RICHMOND RAILWAYS.

DETAILS of Return showing the amount due for Railway carriage by Messrs. Wright, Heaton, & Co. on the 25th March, 1885, and period over which such account extends.

Stations.	Date from.	Date to.	Amount.		
			£	s.	d.
Darling Harbour	12 March, 1885 ...	25 March	409	4	4
Mudgee	1 „ ...	25 „	806	11	8
Bathurst...	1 „ ...	25 „	199	19	4
Blayney	14 „ ...	25 „	209	0	2
Orange	1 „ ...	25 „	1,374	13	9
Wellington	1 „ ...	25 „	252	2	9
Dubbo	1 „ ...	25 „	578	8	0
Trangie	1 „ ...	25 „	30	3	2
Nevertire	„ ...	25 „	214	13	11
Nyngan	„ ...	25 „	783	16	8
Byrock	„ ...	25 „	1,615	5	11
Bourke	„ ...	25 „	.....		
Bowning...	„ ...	25 „	922	0	4
Binalong...	4 „ ...	25 „	95	9	4
Harden	1 „ ...	25 „	1,393	9	4
Young	„ ...	25 „	.....		
Cootamundra	1 „ ...	25 „	1,555	17	5
Junee Junction	„ ...	25 „	216	13	8
Wagga	3 „ ...	25 „	1,999	17	8
The Rock	„ ...	25 „	40	15	6
Narrandera	„ ...	25 „	397	19	10
Whitton	„ ...	25 „	206	11	5
Carrathool	„ ...	25 „	93	18	2
Hay	„ ...	25 „	428	14	8
Darlington	„ ...	25 „	.....		
Coolaman	1 February, 1885 ...	25 „	86	15	5
Old Junee	1 December, 1884 ...	25 „	7	14	2
Colombo...	1 October, 1884 ...	25 „	130	12	6
Jerilderie	1 March, 1885 ...	25 „	164	17	6
Bungendore	7 „ ...	25 „	428	15	5
		£	14,644	2	0

GREAT SOUTHERN, WESTERN, AND RICHMOND RAILWAYS.

DETAILS of Return showing the amount due for Railway carriage by Wright, Heaton, & Co. on the 25th September, 1885, and the period over which such account extends.

Stations.	Date from.	Date to.	Amount.		
	1885.		£	s.	d.
Darling Harbour	12 September ...	25 September ...	588	8	3
Mudgee	1 „	25 „	769	12	5
Bathurst...	1 „	25 „	230	9	1
Blayney	24 „	25 „	47	8	0
Orange	31 August	25 „	1,827	8	2
Wellington	1 September ...	25 „	156	10	9
Dubbo	31 August	25 „	470	11	11
Trangie	„	25 „	541	4	6
Nevertire	„	25 „	991	2	9
Nyngan	„	25 „	1,807	2	10
Byrock	„	25 „	906	18	8
Bourke	3 September ...	25 „	1,666	10	5
Bowning...	1 August	25 „	521	2	10
Binalong...	7 „	25 „	138	6	8
Harden	„	25 „	.....		
Young	1 „	25 „	1,517	11	11
Junee Junction	„	25 „	260	15	1
Wagga Wagga	3 „	25 „	1,986	12	7
The Rock	1 „	25 „	138	2	2
Narrandera	„	25 „	1,240	6	8
Whitton	„	25 „	193	8	10

DETAILS of Return, &c.—*continued.*

Stations.	Date from.	Date to.	Amount.
	1885.		£ s. d.
Carrathool	August	25 September ...	119 7 6
Hay	"	25 "	255 18 3
Darlington	2 September ...	25 "	300 9 7
Coolaman	1 August	25 "	248 14 2
Old Junee	"	25 "	29 17 10
Colombo	"	25 "	213 16 7
Jerilderie	"	25 "	500 10 8
Bungendore	"	25 "	697 15 9
Cootamundra	"	25 "	1,569 17 3
		£	19,936 2 1

GREAT NORTHERN RAILWAY.

DETAILS of Return showing the amount due for Railway carriage by Wright, Heaton, & Co., on the 25th March, 1885, and the period over which such account extends.

Stations.	Date from.	Date to.	Amount.
	1885.	1885.	£ s. d.
Morpeth	1 February	25 March	11 17 1
Musclebrook	1 March	25 "	14 0 5
West Tamworth	"	25 "	178 6 0
Uralla	"	25 "	32 7 11
Armidale	"	25 "	303 1 8
Guyra	"	25 "	118 7 4
Glen Innes	23 February	25 "	188 9 7
Gunnedah	1 March	25 "	14 14 10
Narrabri	.....	.....	1,057 15 5
		£	1,919 0 3

GREAT NORTHERN RAILWAY.

DETAILS of Return showing the amount due for Railway carriage by Wright, Heaton, & Co., on the 25th September, 1885, and the period over which such account extends.

Stations.	Date from.	Date to.	Amount.
	1885.	1885.	£ s. d.
Morpeth	1 September ...	25 September ...	30 6 10
Musclebrook	"	25 "	10 3 6
West Tamworth	"	25 "	163 6 6
Uralla	"	25 "	60 14 6
Armidale	"	25 "	362 18 7
Guyra	"	25 "	98 9 10
Glen Innes	10 August	25 "	294 8 2
Gunnedah	1 September ...	25 "	49 19 2
Narrabri	.....	.....	592 1 10
		£	1,662 8 11

Sydney: Thomas Richards, Government Printer.—1885.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(STATION BUILDINGS AT BATHURST, DUBBO, AND ORANGE.)

Ordered by the Legislative Assembly to be printed, 24 *November*, 1885.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 1, *on Votes and Proceedings No.* 9, *of the* 22*nd September*, 1885.]

(1.) What is the total cost of Railway station buildings, Station-master's residence, and goods' sheds at Bathurst?

(2.) The like information as to Dubbo?

(3.) The like information as to Orange?

(4.) The total amount of salaries and wages for the year 1884, paid at Bathurst to officials and other employés at the railway station and goods' sheds in that town?

(5.) The like information as to Dubbo?

(6.) The like information as to Orange?

(7.) The expenditure for the year 1884, in salaries and wages, on the workshops at Bathurst Railway Station?

(1.) *Question.*—What is the total cost of Railway station buildings, Station-master's residence, and goods' sheds at Bathurst?
Answer.—£18,884.

(2.) *Question.*—The like information as to Dubbo?
Answer.—£10,461.

(3.) *Question.*—The like information as to Orange?
Answer.—£7,463.

(4.) *Question.*—The total amount of salaries and wages for the year 1884, paid at Bathurst to officials and other employés at the railway station and goods' sheds in that town?
Answer.—£5,040 11s. 6d. (Traffic only.)

(5.) *Question.*—The like information as to Dubbo?
Answer.—£3,779 2s. 4d. (Traffic only.)

(6.) *Question.*—The like information as to Orange?
Answer.—£3,908 2s. 5d. (Traffic only.)

(7.) *Question.*—The expenditure for the year 1884, in salaries and wages, on the workshops at Bathurst Railway Station?
Answer.—£1,823 18s. 5d.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CARSON WOODS' PATENT PAVING.

(AT JUNEE RAILWAY STATION.)

Ordered by the Legislative Assembly to be printed, 1 *December,* 1885.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 14 *on Votes and Proceedings No.* 14, *of the* 30*th September*, 1885.]

COPIES of all Minutes, Documents, and Correspondence, having reference to the supply and use of what is known as Carson Woods' Patent Paving on the platform and approaches to the Junee Railway Station.

(*Mr. Sutherland.*)

SCHEDULE.

NO.		PAGE.
1.	Traffic Manager, urging necessity for platform, Junee, being asphalted. 13 July, 1883	2
2.	Mr. W. Harper to Commissioner for Railways, urging use of granolith paving. 10 March, 1884	2
3.	Commissioner for Railways to Mr. W. Harper *re* use of granolith paving. 3 April, 1884	3
4.	Mr. W. Harper to Commissioner for Railways, offering to lay Junee platform with granolith paving. 12 April, 1884	3
5.	Mr. W. Harper to Commissioner for Railways, further *re* above. 14 May, 1884	3
6.	*Précis* of case to date. 24 May, 1885	4
7.	Mr. W. Harper to Commissioner for Railways *re* laying down granolith paving at Junee. 31 May, 1884	5
8.	Mr. W. Harper to Engineer for Existing Lines, offering to supply metal for Junee platform. 20 June, 1884	5
9.	Traffic Manager to Commissioner for Railways *re* platform and verandah at Junee. 3 July, 1884	6
10.	Traffic Manager to Engineer for Existing Lines *re* paving at Junee. 13 March, 1885	7
11.	Extract from *Evening News re* Junee paving. 7 August, 1885	8

CARSON WOODS' PATENT PAVING.

No. 1.

The Traffic Manager to The Commissioner for Railways.

As it is decided that the present platform at Junee Junction is to remain, I shall be glad if the Commissioner will approve of its being asphalted over, because in wet weather it gets into a very bad state.

Further, there is no shelter there for passengers from the weather. I would therefore recommend further that a verandah be erected the whole length of the platform, similar to what has been done at Albury. This would prove a great convenience to passengers, besides being the means of keeping the luggage and parcels dry when transferring them in wet weather.

W. V. READ,
Traffic Manager,
(*per* D.K.),
13/7/83.

When at Junee recently I saw what an advantage the proposed improvements would be. What would be the cost?—CH. A.G. Mr. Cowdery, B.C., 18/7/83. Mr. Stephen, for estimate of cost.—G.C., *p.* G.L., 19/7/83. £1,920; detailed cost attached.—R.D.S., 10/8/83. Mr. Cowdery.

Mr. J. Rose to Mr. District-Engineer Stephens.

Covering present Platform, Junee Junction (similar to Victorian Platform, Albury).

Sir,

6 August, 1883.

I estimate the above at £1,914, as follows:—

	£	s.	d.
50 cast-iron columns, @ £5 14s. each	285	0	0
200 spandril brackets, @ 12s. 6d. each...	125	0	0
Wrought-iron superstructure (30 tons), @ £30 per ton	900	0	0
Corrugated iron for roof (4 tons), @ £26 per ton ...	104	0	0
Foundations and labour for erection	500	0	0
	£1,914	0	0

P.S.—I have calculated this estimate from prices paid for that now being erected at Albury, but I believe a considerable saving could be effected by having the wrought-iron superstructure made at the Permanent-way shops, Sydney.

I am, &c.,
JOHN ROSE.

You have omitted to include the cost of asphalting; also, give an estimate of the cost if wooden posts and plates are used.—G.C. (*p.* G.L.), 13/8/83. Mr. Stephen.

Asphalting, £230. If wooden posts and plates are used, cost £1,500. Wooden roof recommended; both cheaper and better and also really more artistic. Strictly speaking there is not much shelter to be derived from these narrow covered-in platforms in driving wind.—R.D.S., 15 Oct., '83. Mr. Cowdery.

The total cost of asphalting platform and erecting verandah in iron will be about £2,144; if wooden posts and plates are substituted for iron the cost will be about £1,730.—G.C. (*p.* G.L.), 16/10/83. Commissioner.

When Commissioner returns?—D.V., 17/10/83. End of year.—CH. A.G., 24/11/83. Resubmitted, 4/1/84. End of June, 1884.—CH. A.G., 12/1/84.

I beg to refer the Commissioner to my minute of the 13th July last, in which I recommended that the platform at Junee Junction be asphalted and a verandah erected over it, and should be glad if he would please direct the work to be carried out as early as possible.—W. V. READ (*per* D.K.), 12/1/84. Commissioner.

See papers herewith.—G.B., B.C., 17/1/84. Traffic Manager. Seen.—W. V. READ (*per* D.K.), 28/1/84. Commissioner.

No. 2.

Mr. W. A. Harper to The Commissioner for Railways.

Sir,

Sydney 10 March, 1884.

I have the honor to bring before your notice a sample of granolith paving which is now being used at all the principal Railway Stations in Europe and America, and I would respectfully solicit your patronage to encourage this very important local industry.

The cost of this material is fully 40 per cent. less than the sandstone paving now in use at your stations; and I have documentary evidence, of an indisputable nature, to prove that this material has withstood the heaviest foot traffic in London for ten years and still shows a good prospect of another five years' wear.

I am prepared to lay any station you may select at the rate of 1s. 3d. per foot, in slabs 12 feet by 6 feet, to which the freight must be added according to circumstances, and within 10 miles of Sydney, without extra charge. The average cost of sandstone is from 2s. to 3s. per foot within 10 miles of Sydney, according to the finish specified. The sandstone for Railway Station contracts, as far as Albury, is principally obtained in Sydney so that the item of freight is considerably in favour of the granolith.

Hoping that this matter will receive your favorable consideration,

I am, &c.,
WALTER A. HARPER, Civil Engineer,
Box 828, G.P.O.

Mr. Cowdery.—B.C., G.B., 13/3/84. I recommend that granolith paving be laid down in the interior of the urinal and passage at new station, Junee.—G.C. (*per* G.L.), 26/3/84. Commissioner. Approved.—CH.A.G., 1/4/84.

No. 3.

No. 3.

The Commissioner for Railways to Mr. W. A. Harper.

Sir, Department of Public Works, Railway Branch, Sydney, 3 April, 1884.

In reference to your letter of the 14th ultimo, offering to lay down granolith paving at any station I may select, in slabs 12 feet by 6 feet, at the rate of 1s. 3d. per foot, freight added, I have the honor to inform you that I have approved of this paving being laid down in the interior of the urinal and passage at the new station, Junee, and have to refer you to the Engineer for Existing Lines for instructions in the matter.

I have, &c.,
CH. A. GOODCHAP,
Commissioner for Railways.

No. 4.

Mr. W. A. Harper to The Commissioner for Railways.

Sir, Sydney, 12 April, 1884.

I have the honor herewith to offer to lay the Junee Railway Platform with granolith paving, in slabs 12 feet by 6 feet, for the sum of one shilling (1s.) per foot, freight added, to the satisfaction of the Engineer for Existing Lines.

I have, &c.,
WALTER A. HARPER.

Mr. W. A. Harper to The Commissioner for Railways.

Sir, Sydney, 11 April, 1884.

I have the honor to acknowledge receipt of your letter No. 84-7,306 *re* granolith, and have to thank you for your approval, and that of the Engineer of Existing Lines, for this material in lieu of that specified for Junee. I find that the railway platform is not included in the contracts let, which I understand is to be paved with galong stone or asphalt.

As I am very anxious to lay down a railway platform with this material, and a portion of the ingredients may be obtained at Junee, I have decided to offer to lay the whole of the platform at a lower rate. This price, which I forward in tender herewith, is only ⅓ of the cost of sandstone, and only slightly dearer than common asphalt, while I will guarantee it to outwear three sets of the others without removal.

The manager of the Paving Co. leaves next week to lay the small portion in the urinal and passage, so that I would take it as a great favour if you could afford this matter consideration, as I feel certain that no better opportunity could ever be found to bring this substance practically under your notice.

I have, &c.,
WALTER A. HARPER.

Mr. Cowdery.—G.B., B.C., 18/4/84. I cannot recommend this as the cost is nearly double that of asphalt, with which I propose to lay the platform at Junee.—G.C., 1/5/84.

Commissioner,—I have asked on other papers for some particulars. I should like to have a good trial of this granolith; it looks well, and if it is very durable it may be cheaper than asphalt in the long run.—Ch. A. G., 5/5/84.

Mr. Cowdery.—G.B., B.C., 10/5/84. Previous paper herewith.—G.C. (*per* G.L.), 13/5/84. Commissioner. Paving platform at Junee:—What has the contractor to do, and is there any balance of work to be done in this respect; if so, who is to do it—how and when?—Ch. A.G., 18/4/84. Urgent. Mr. Cowdery.—G.B., B.C., 18/4/84.

The balance of work in respect to the paving of the platforms, as provided for in the specification, is to be carried out by the Department, and I propose having them asphalted instead of using flagging or granolith paving.—G.C., 1/5/84.

I think it would be better to use granolith pavement; it is cheaper, much, than ordinary flagging, and though asphalting would be a little cheaper the durability of the granolith would make it cheaper in the long run. I should like to know what the respective cost would be of granolith and the best asphalt pavement.—Ch. A.G., 5/5/84.

Mr. Cowdery.—G.B., B.C., 6/5/84. The cost of paving the whole of the platforms at Junee with granolith, including freight at Class A, would be £951 6s. 10d.; and tar paving, £533 8s.—G.C. (*per* G.L.), 13/5/84. Commissioner.

See subsequent letter from Company, reducing their price 20 per cent. There are two platforms, and I think one should be paved with granolith, and the other with tar pavement. Let the platform in front of station-house be paved with granolith.—Ch. A. G., 17/5/84.

Mr. Cowdery.—G.B., B.C., 18/5/84. Noted; I presume the price will be that quoted by Mr. Harper (viz., 10d. per foot, including freight and all charges) quoted by him in his letter of the 15th May.—G.C., 20/5/84. Commissioner.

No. 5.

Mr. W. A. Harper to The Commissioner for Railways.

Sir, Sydney, 14 May, 1884.

I have the honor to inform you that as I can obtain part of the ingredients for granolith at Junee, I am prepared to carry out the arrangements proposed to you by Mr. Woods, viz., to lay granolith for paving Junee Station at a reduction of 20 per cent. on previous quotation. As the Manager of the Paving Company is now at Junee awaiting instructions, I should take it as a great favour if you would confirm the arrangement.

I have, &c.,
W. A. HARPER.

Mr.

Mr. Cowdery, for report. With 20 per cent. off the cost must be very close to tar paving. Let me know to-morrow.—CH. A.G., 14/5/84.

This will make the price as under :—

	£	s.	d.
16,000 sup. feet, at 1s. per foot	800	0	0
20 per cent. off	160	0	0
	640	0	0
Add freight for 25 tons, at 21s. 2d. per ton	26	9	2
	£666	9	2

A.L., 15/5/84.

Mr. C. Woods to Mr. G. Cowdery.

Sir, 253, George-street, 15 May, 1884.

Representing the Granolith Paving Company, I beg to send into you for your consideration an amended tender, consequent, as I explained to the Honorable the Commissioner for Railways, upon our finding gravel at Junee Station.

If all the paving required at Junee Station is given to that Company to be finished in their speciality, viz., the granolith pavement (acknowledged equal to blue stone flagging, if not better, as it does not wear smooth), the Company will undertake it at 1s. per foot, and also give a discount of 20 per cent. off this price.

Free freight to be given for about one-third of the granite to be used, as two-thirds of it can be found on the spot.

I have, &c.,
CARSON WOODS.

Our men are at Junee now, and we desire permission to go right along with this work, not to have to pay fares down and back.

Mr. C. Woods to Mr. G. Cowdery.

Sir, 253, George-street, 15 May, 1884.

We require to bring from Sydney the fine ground granite only.

Any quantity over 25 tons we may require for to finish this contract we will pay for. For 25 tons we ask carriage free.

If we can get the granite ground at Junee we will require no free carriage.

We have, &c.,
CARSON WOODS,
Granolith Paving Company.

On paper attached I recommend that Mr. Harper's tender be accepted for granolith paving at Junee Station at the price stated, 10d. per sup. foot.—G.C., 17/5/84. Commissioner.

Mr. W. A. Harper to The Commissioner for Railways.

Sir, Sydney, 15 May, 1884.

In reference to my offer of the 12th April, to pave Junee Station with granolith at the rate of 1s. per foot, freight added, I have the honor to inform you that, as a portion of the granolith can be found on the spot, I am prepared to undertake to do the same at a reduction of 20 per cent. The cost of the whole station (say), 15,000 feet, at the rate of 10d. per foot, would be £625, including freight and all charges. Hoping that this reduction will meet with your approval,—

I am, &c.,
W. A. HARPER,
Box 828, G.P.O.

This is a reduction in the price, and I recommend it be accepted.—G.C., 16/5/84. Commissioner.

No. 6.

Précis of Case.

Granolith Paving.

UNDER date of 10th March, 1884, Mr. Walter A. Harper brought under notice of Commissioner the granolith pavement, which he offered to supply at 1s. 3d. per foot, plus freight charges, within 10 miles of Sydney without extra charge, and, on the recommendation of Mr. Cowdery, he was authorised to pave the urinal and passage at Junee Station with the material.

Per letter of 11/4/84 Mr. Harper wrote that he was anxious to lay a railway platform with the granolith, and that presence of his people at Junee would afford a favourable opportunity of paving that station, and he offered to do the work for 1s. per foot, plus freight.

Per letters of 14th and 15th May, Mr. Harper amended his proposals, offering to do the work at 10d. per foot, including freight, but Carson Woods & Co. wrote to ask for freight to be allowed on 25 tons of granite, intimating that for anything over that quantity freight would be paid.

Commissioner minuted that he would like to have the granolith used; that it is cheaper than stone, and more durable than asphalt, and that for that reason it would be cheaper in the long run than asphalt. Directs attention to later letters of Mr. Harper further reducing price 20 per cent. Directs that one of the Junee platforms shall be paved with granolith and the other with tar paving.

* Mr. Cowdery notes, and presumes the price will be 10d., including freight and all charges.

C.A.B., 24/5/84.

* Will Commissioner please say ?—G.B., 26/5/84. Yes; I understand so; but Mr. Cowdery should have a proper understanding before giving order.—CH. A.G., 26/5/84. I have seen Mr. Harper, and have arranged for 10d. per super. foot, and he informs me he will have the work put in hand at once.—G.C. (*pro.* G.L.), 30/5/84. Commissioner.

No. 7.

Mr. W. A. Harper to The Commissioner for Railways.

Sir, Sydney, 31 May, 1884.

As we are preparing the materials for laying down the Junee platform with granolith I should take it as a great favour if you would cause the platform to be prepared for it. The coping stone has to be laid, and the earthwork made up to the level, viz., 1½ inch below the level of the finished platform. There are several large holes where the platform pillars have been placed; it would be of great service if these holes were filled with broken ballast, *well rammed*, to prevent future subsidence, and the material put on to bring the platform to the necessary level should be well and solidly rammed. Ballast or broken stone would be the best foundation.

I am informed that a considerable quantity of broken metal will be required for the space behind the station. If you would let me know the quantity I would take an engine and stone-crusher up, if the quantity and price would pay the cost.

Hoping to be favoured with your consideration for this subject,

I have, &c.,
W. A. HARPER,
Box 828.

Memo. from Mr. G. Cowdery to Mr. R. D. Stephens.

Railway Department, Office of Engineer for Existing Lines, Sydney, 30 May, 1884.

REFERRING to clause 27 of specification for the erection of new station at Junee, which provides that the platform will be built by the Commissioner, but the foundations under the iron columns must be built by the contractor. I wish to know at once what progress is being made with the construction of the platform, and if the coping has been laid, as the contractor for laying the platform with granolith is anxious to proceed with his portion of the work immediately.

G.C. (*per*. G.L.)

Very urgent.

The wall is built, and 211 feet of the coping has been supplied; this week we commence setting this 211 feet. The remainder of the coping is now being sent in.—R.D.S., June 3, 1884. Mr. Cowdery. Would not ballast from the Hanging Rock be the best foundation for the granolith; if so, put it on at once?—G.C., 14/6/84. Mr. Stephens.

No. 8.

Mr. W. A. Harper to The Engineer for Existing Lines.

Sir, Granolith Paving Company, Sydney, 20 June, 1884.

We beg to tender for excavating, removing, and carting away material from the back of the Junee Junction Railway Platform at the rate of three shillings (3s.) per cubic yard, and to supply and lay metal for the same at the rate of five shillings (5s.) per ton, to your satisfaction.

We have, &c.,
GRANOLITH PAVING CO.,
(*per* W. A. HARPER),
Box 828.

P.S.—We are anxious to supply this metal, as our granolith paving contract requires us to take an engine and stone-crusher to Junee.

Mr. Stephens for full report as to what this refers to; also as to cost.—G.C., 21/6/84. Report attached.—R.D.S., 1/7/84. Mr. Cowdery.

Memo. from Mr. R. D. Stephens to Mr. G. Cowdery.

Railway Department, Existing Lines Branch,
Office of District Engineer, Goulburn, 1 July, 1884.

I FORWARD for your sanction tracing showing approach road. Should you approve would you please have it returned to me.

I estimate that there is about 1,500 cubic yards of earthwork to be excavated; this we can ourselves do for 2s. 6d. per cubic yard (Mr. Harper's offer is 3s. the cubic yard). We want the stuff to widen out some of the banks adjoining Junee Junction.

We shall want some 500 cubic yards of pitching and about 400 cubic yards of broken metal. I notice that Mr. Harper makes no mention of the pitching; if you can get him to tender for this at a reasonable figure it would be an advantage to us.

The price, 5s. per ton for metal delivered and laid is satisfactory, and I would recommend that this offer be accepted on the understanding that one cubic yard weighs a ton—the metal to be measured in heaps previous to its being laid.

I may mention that the traffic is very anxious that this approach should at once be commenced.

There is about 420 cubic feet of stone kerbing required. Shall I make arrangements for this? I can readily and inexpensively procure the stone, the freight by rail being the only item which would run into money; but this should not much affect the question, the busy season being over.

R. D. STEPHENS.

As

As the traffic will be very light on this side of the line, cannot pitching be dispensed with and a little more metal used?—G.C., 2/7/84. Mr. Stephens.

Yes, I presume so, but the pitching would be preferable. The traffic will not be so light as is generally thought; Junee Junction is daily increasing in importance.—R.D.S., 4/7/84. Mr. Cowdery.

I recommend this offer to supply and spread about 600 cubic yards metal at 5s. per ton be accepted.—G.C., 7/7/84. Commissioner.

Recommended.—Ch.A.G., 11/7/84. Approved.—G.R.D., 16/7/84.

No. 9.

The Traffic Manager to The Commissioner for Railways.

On Commissioner's 84/10,370 it is stated that one of the platforms at Junee is to be paved with granolith and the other with stone.

If it is intended to erect a verandah at Junee, as proposed in my minute of 13/7/83, enclosed, perhaps it would be desirable to have this done before the paving is taken in hand.

W. V. READ,
(*per* W.H.C.), 3/7/84.

Mr. Cowdery.—R.J.S., B.C., 9/7/84. No authority has yet been received to erect verandah.—G.C. (*per* G.L.), 5/8/84. Commissioner.

Verandah at Junee.

Per minute of the 10th July, 1883, Traffic Manager wrote that as it had been decided that the present platform should remain, he would recommend that it should be asphalted, and that a verandah the whole length of platform should be erected.

Commissioner minuted that when at Junee he had seen what a convenience this would be, and asked for cost.

Mr. Cowdery submitted estimate. Asphalting, £230; verandah, if cast-iron columns, &c., and wrought-iron superstructure, £1,914; if wooden posts and plates, £1,500.

About this time the material called "granolith" was brought under Commissioner's notice, and an interchange of minutes ensued as to whether granolith should be used for the platforms or asphalt. Ultimately Commissioner decided that one platform should be asphalted and the other paved with granolith.

In the course of this discussion the verandah seems to have been overlooked. In any case no instructions were issued with reference to it, and per minute of 3rd July, 1884, Traffic Manager again refers to the matter, minuting that if a verandah is to be erected it should be done before the paving is put in hand.

Referred to Mr. Cowdery; that officer minutes that he has had no authority to erect a verandah.

C.A.B.,
11/8/84.

Will trains be started from the platform upon which it is proposed to erect verandah. If it will be largely used, and the public kept waiting there for trains, I certainly think the work will be absolutely necessary, especially in summer.—Ch.A.G., 13/8/84.

Traffic Manager, B.C., 13/8/84.—G.B.

Will the south-western trains or the up main line trains still start from the up platform after the new buildings are finished on the down platform? If not, it will not be necessary to do anything to the up platform. But what about the down one? Is it being asphalted and covered over?—D.K., 14/8/84. Inspector Roberts.

As soon as the new buildings are ready to occupy I propose, pending the erection of an overhead bridge or subway, to work the mail and south-west trains from the down platform. This will to a certain extent reduce the risk and inconvenience which passengers travelling by these trains will experience if both platforms are used. According to the plan of the proposed alterations in the station yard, provision is made for working both platforms. The mixed trains from Wagga will have to stand at the up platform, and passengers alight there; this will be very disagreeable in wet weather if the platform is not covered over as suggested. The down platform will be covered to a certain extent by the verandah of the new station building, but no more. I understand it is intended to granolith this platform. The amounts estimated for covering the up platform is in my opinion excessive, at all events would be considerably reduced if the same plan is adopted as that at Wodonga. I think a report might be obtained on the subject before anything is done. The new buildings will be ready to occupy in the course of five or six weeks, and I hope the question of covering the up platform will be settled and arrangements made for its erection by that time.—G. J. Roberts, 20/8/84. Traffic Manager.

But for all the passengers that will travel by the morning mixed train from Wagga Wagga I should hardly consider it necessary to erect a verandah on the up platform. If the mail and express trains, and also the south-western mixed trains, can always arrive at and depart from the down platform, all that is necessary I should think is to have that platform sufficiently protected.—D.K., 23/8/84. Inspt. Roberts.

It must be understood that my proposal is only a temporary arrangement pending the erection of an overhead bridge or subways, when one platform will be used as much as the other, and shelter will, therefore, be as much required one side as the other.—G. J. Roberts, 26/8/84. Traffic Manager.

But why will one platform be used as much as the other, seeing that the station buildings and the refreshment-room will be on the down platform. I should have thought that all passenger trains and the south-western mixed trains would arrive at and depart from that platform. Will that not be so?—D.K., 28/8/84. Inspt. Roberts.

In

In the morning we have the down mail, south-western, and No. 16 up mixed trains, all at the station at one time. The mail and south-western train might certainly stand alongside the down platform that being the most convenient. No. 16 up would run in alongside the up platform, and any passengers going south-west would have to cross over the line, pending the erection of an overhead bridge or subway. It would not be very pleasant for passengers going by 16 up to have to wait on the up platform without any shelter whatever. When an overhead bridge is provided or subways I shall use the up platform for the up south-western mixed trains, as there is only an interval of 10 minutes between the mixed south-west trains and the up mail, and this is not sufficient to tranship passengers, luggage, parcels, &c. This arrangement will be preferable to shunting passengers about in the train which would otherwise have to be done. Even to work the down mail and down south-west mixed train as proposed it would be awkward unless a dock is provided at the north end of the new station—which I presume will be made for the convenience of loading horses and vehicles,—to stand the south-western carriages in. The present dock will be useless when the new sidings are extended; in fact owing to the erection of the temporary refreshment-room it is almost useless to us now. The verandah on the new down side platform is an ordinary station verandah the length of the station; this will not be sufficient if we are to have the mail and south-west train at the platform at the same time. Passengers going from south-western to mail train, or *vice versa*, would not be under shelter as the mail train would take up all the space in front of the station. This would also make it awkward transhipping parcels and luggage in wet weather. I understood from the plans recently at Junee, that the Junction was to be so altered as to work trains to and from both platforms; this is when the interlocking is introduced at Junee.—G. J. Roberts, 30/8/84. Traffic Manager.

Send to Mr. Cowdery and ask if he will kindly let me have a look at the plan of Junee yard and station arrangements as they will be when finished.—D.K., 12/9/84.

After carefully considering this matter I think it is desirable that a verandah should be erected on the up platform, so that the south-western trains, as well as the mixed mail line trains, may arrive at and depart from it.—W.V.R., 31/10/84. Commissioner.

Verandah at Junee.

Précis of this matter is on the file. The Commissioner minuted that if the platform on which it was proposed to erect the verandah would be used to start trains from, the public would be kept waiting there, and the verandah would be an absolute necessity.

Inspector Roberts reported that as soon as the new buildings were ready, and pending the erection of foot-bridge or subway, the south and south-west trains would work from down platform; that according to the plans provision is made to work both platforms; that mixed trains from Wagga would have to stand at up platform and passengers alight there; that in his opinion the estimate for covering up platform was excessive, and might be much reduced if the Wodonga plan were adopted. Explained further that when the bridge or subway is provided one platform would be used as much as the other, and that the present verandah on the down side is only an ordinary station verandah, affording cover for one train only, whereas in the morning there are three trains all at the station at the same time, viz., the mail, the south-western, and No. 16 up.

Traffic Manager minuted that after carefully considering the matter he thought the up platform should be provided with a verandah, so that south-west and main line mixed trains might use it.

As will be seen by the *précis* Mr. Cowdery has furnished alternative estimates for the verandah. Shall the papers be sent to him for reconsideration in connection with Inspector Roberts' suggestion that a saving might be effected by the adoption of the Wodonga plan.—C.A.B., 6/11/84.

Mr. Cowdery, for further report.—D.V., 6/11/84. Mr. Overn.—G.C., 14/11/84. I wish to see Mr. Parry with plan of Junee station.—F.M.A., 16/12/84. Mr. Parry. I have seen Mr. Overn *re* verandah.—J.P., 22/12/84.

It seems that this station will shortly have to be worked as a double line station, and Mr. Parry thinks with me that what is required is that offices and verandah similar to those proposed for Goulburn and Bathurst are what is really required to meet this case. Will Traffic Manager please say if he is of this opinion.—F.M.A., 30/12/84. Traffic Manager.

That would involve too much expense. I think if the up platform is protected by a good verandah and a waiting-shed provided it will be sufficient.—W.V.R., 7/1/85. Engineer for Existing Lines.

No. 10.

The Traffic Manager to The Engineer for Existing Lines.

My attention has been drawn to the new platform at Junee Junction, which has worn badly in four or five places already. Will Mr. Cowdery please have it seen to at once? It ought not to be allowed to become unsafe for passengers.

W. V. READ,
13/3/85.

Mr. Cowdery.

Mr. Stephens, for report.—G.C., 16/3/85. Report attached.—R.D.S., 19/4/85. Mr. Cowdery.

Junee Junction Passenger Station granolithing.

Goulburn, 19 April, 1885.

This granolithing is, as you are of course aware, a complete failure; and from its component parts could not be expected to be anything else but a failure. It is expensive, weak, and totally unsuitable to the climate.

It being a patent we did not particularly care to interfere with its manufacture, as, should we have interposed, its failure would at once have been ascribed to our interference. I perceive that it has also been tried in Sydney, with what result you of course know. No doubt special care was taken in Sydney, but even there the result is simply a wearing into holes which might naturally be expected. The only thing to be done with it now is to pick out the 1½ inch of top layer of useless material, and substitute for it good asphalt,

asphalt, or rather, tar pavement, utilizing the—it is to be supposed—solid underlying foundation. It will be found to be by far the least expensive, and also by far the most effective substitute. In fact, when properly laid down as it is at the Goulburn and some of the suburban stations, I do not see what can be better than it for comfortable walking and even where it surpasses to my thinking the best flagging.

I would recommend that the above suggested course be pursued with regard to the Junee Junction new Passenger Station Platform. R. D. STEPHENS.

Mr. Cowdery.

I beg to refer Mr. Cowdery to my minute of the 13th ultimo, relative to the platform at Junee Junction requiring repairs, and to remind him that nothing has yet been done in the matter. Will he please have the necessary work carried out at once.—W. V. READ (*per* W.H.C.), 7/4/85. Mr. Cowdery.

Mr. Stephens' previous papers were forwarded to you on 16/3/85.—G.C. (*per* G.L.), 10/4/85. Report attached.—R.D.S., 19/4/85. Mr. Cowdery. What will be the cost of carrying out the work as suggested by you.—G.C. (*per* G.L.), 23/4/85. Mr. Stephens. £75.—R.D.S., 24/4/85. Mr. Cowdery.

This refers to the platform at Junee Junction which was paved with granolith. As the platform now requires repairs, and as Mr. Stephens reports the granolith a failure, I recommend it be asphalted at a cost of £75.—G.C., 28/4/85. Commissioner.

Approved.—CH.A.G., 4/5/85. Mr. Cowdery, B.C., 5/5/85.—G.B. Mr. Stephens, to carry out.—G.C. (*per* G.L.), 6/5/85. I have given the necessary instructions. Please state how cost is to be charged ?—R.D.S., 13/5/85. Mr. Cowdery. Please say how work is to be charged ?—G.C. (*per* G.L.), 14/8/85. Commissioner. Working expenses.—CH.A.G., 18/5/85. Mr. Cowdery.—G.B., B.C., 18/5/85. Mr. Stephens, to note.—G.C. (*per* G.L.), 19/5/85. Noted.—R.D.S. (*per* C.E.F.), 20/5/85. Mr. Cowdery.

Mr. R. D. Stephens to Mr. G. Cowdery.

Railway Department, Existing Lines Branch, Office of District Engineer,
Goulburn, 4 June, 1885.

REFERRING to my M.P., 85/1,327, in which I estimated the repairs at £75, I regret to inform you that this matter is far more serious than was at first anticipated, and far more will have to be taken up, and also to a greater depth than was at first contemplated. In fact my first estimate will now be more than doubled—it is now £160—which kindly authorize. This includes the relaying the whole of the platform. At first we thought that some of the not much used granolithing might be made to do, but somehow it appears to and does go whether it is used or not. In a previous report I mentioned to you that the component parts of this granolithing would never make a good pavement. I am sorry to say that my prediction has more than been realized ; in fact far beyond my own expectation. It is simply a complete failure ; and the worst of it is that you never seem to know when you have come to the worst. I suppose it would not do to take up the whole and throw it away for rubbish ; but that is precisely what it is.

I have made arrangements to start work next Monday, and do the most pressing portion of the platform ; but it will look very patchy unless you authorize me to do the whole length. Please authorize me. R. D. STEPHENS.

Mr. Cowdery,—I have seen this platform, and consider that the whole of the granolithing must be removed at a further cost of £85, and recommend it to be done.—G.C., 8/6/85. Commissioner. Approved—Working expenses.—CH.A.G., 11/6/85. Mr. Cowdery.—G.B., B.C., 11/6/85. Mr. Stephens to note and carry out work.—G.C. (*p.* G.L.), 11/6/85.

No. 11.

Extract from *Evening News* of 7 August, 1885, *re* Junee paving.

A defective pavement.

"THE Railway Department has put down at the Junee Junction a patent pavement which ought to create a row when Parliament opens. It has been in use only a few months, but is full of holes, and in places consists of nothing but loose sand. A puddled clay would have lasted twice as long."

Mr. Cowdery, for report.—G.B., B.C., 12/8/85. Urgent. What progress has been made with asphalting platform. Let me know on Saturday morning certain.—G.C. (*p.* G.L.), 13/8/85. Mr. Stephens. The greater part of the asphalt is made up, and a part of the granolith on Sydney end of platform taken up ; men will commence laying asphalt to-day.—R.D.S. (*p.* C.E.F.), 15/8/85. Mr. Cowdery.

Report herewith.—The renewal of this platform with asphalt was commenced on Saturday last.—G.C. (*p.* G.L.), 17/8/85. Examine for cost when completed.—B.C., M'L., 18/8/85. The cost of this work must be shown separate from ordinary repairs in the time sheets.—J.P.F., 11/9/85. Mr. Cowdery.

Mr. Stephens informed.—G.C. (*p.* G.L.), 14/9/85. Attached is a voucher in favour of Robert W. Johnston for asphalting platform at Junee, amounting to £150 14s. 8d. Authority was obtained on Commissioner's 85/2,865 to carry out the work at a cost of £160. Authority is required for payment of the voucher.—J.P.F., 21/10/85. Secretary,—Pay.—CH.A.G., 23/10/85.

Sydney : Thomas Richards, Government Printer.—1885

[6*d*.]

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ILLAWARRA RAILWAY.

(AMOUNTS OF CLAIMS AND OF VALUATIONS FOR LAND RESUMED FOR.)

Ordered by the Legislative Assembly to be printed, 5 *February,* 1886.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works, in answer to question No.* 17, *asked by the Hon. Member for South Sydney, Mr. J. Davies, on Votes and Proceedings No.* 21, *of the* 4*th February,* 1886.]

1. Total amount of the claims for compensation for land resumed by the Government for Railway purposes on the Illawarra line.
2. The valuations fixed by the Government Valuators.
3. The names of the proprietors of the land resumed by the Government, and the amount claimed by each of the owners.

ILLAWARRA RAILWAY.

Claimants	Amount of Claim.			Amount of Valuation		
	£	s	d.	£	s.	d
Wilson, Caleb (Trustees of)	9,265	12	6	9,265	12	6
Mighell, Henry (occupier)	470	0	0	70	0	0
Dumbarton, Henry	25	0	0	20	8	0
Frazer, Henry	135	0	0	68	12	6
M'Leish, Charles	400	0	0	175	17	6
Hinds, John	600	0	0	528	0	0
Tebbatt, E J.	750	0	0	750	0	0
Ludford, Henry	1,300	0	0	1,029	14	6
Yeldon, Richard	800	0	0	604	18	0
Kerr, Robert	10	0	0	10	0	0
Do	190	0	0	101	15	0
Jacobs, Edwin	10,112	19	5	5,443	4	4
Mooney, John	585	0	0	497	4	0
Hicks, John	195	0	0	58	0	0
Terbutt, James	500	0	0	400	0	0
Horsfall, Joseph	2,060	1	8	1,160	10	0
Starr Bowkett Building Society	840	0	0	572	0	0
Miller, Thos , and Rofe, Alfred	2,040	0	0	1,628	0	0
Stockwell, W.	220	0	0	123	15	0
James, T R	310	0	0	247	10	0
Hudson, Charles	480	0	0	363	0	0
Fallick, W C	1,530	0	0	990	0	0
Williams, B C.	600	0	0	358	4	0
Blake, Louisa	160	0	0	101	15	0
Owen, Richard	1,188	0	0	515	5	0
Fuchs, Francis	450	0	0	320	0	0
Bell, Henry (Executors of)	709	5	0	324	10	0
Bennett, B J.	1,340	0	0	442	4	0
Herbert, Christiana	759	0	0	504	8	0
Drew, Catherine	1,050	0	0	980	0	0
Bryen, Stephen J.	3,240	12	6	2,196	17	6
Heighington, M. (occupier)	65	0	0	26	0	0
Bray, G. C.	39	4	0	39	4	0
Bray, G. C.	5,887	10	0	2,913	15	0
Do	305	5	0	302	10	0
Cooper, Sir Daniel	2,058	0	0	1,883	4	0
Gentle, Josiah (occupier)	241	0	0	156	0	0
M'Kechnie, Andrew	500	0	0	114	8	0
James, Ben , & Son	6,718	15	0	4,633	9	3
Hardy, W H	200	0	0	108	5	7
Mitchell, Joseph	417	0	0	376	19	9
Allen, J J.	261	12	6	249	3	4
James, B , & Son	1,872	0	0	1,287	0	0
Curry, Thomas	180	0	0	108	5	7
Hoad, Elizabeth	509	0	0	66	17	6
Maloney, Bridget	200	0	0	111	7	6
Aiken, Thomas	180	0	0	108	5	7
Goodsell, J W & H W.	52,000	0	0	1,727	0	0
Smidmore, Albert	3,094	7	6	3,094	7	6
Alderson, George (occupier)	1,050	0	0	235	0	0
Baker, Thos L	9,485	0	0	9,485	0	0
Millar, C & E (occupiers)	600	0	0	500	0	0
Smidmore, Frank	2,403	0	0	2,403	0	0
Lipscombe, Henry	300	0	0	174	0	0
Do (occupier)	300	0	0	11	0	0
Griggs & Chappell	376	10	0	260	3	6
Fulton, John	180	0	0	94	12	0
Do	85	0	0	50	12	0
Barton, Thomas	600	0	0	600	0	0
Tomkins, Valentine	360	0	0	268	15	0
Midgley, Mrs F	967	0	0	721	17	0
Chivers, Elizabeth	679	0	0	411	12	0
Morrison, J	850	0	0	769	19	0
Toyer, George	1,854	0	0	452	0	0
Do	1,310	0	0	218	0	0
Do	250	0	0	212	7	10
Rose J J	240	0	0	189	15	0
Kingscote, W. A	692	10	0	692	10	0
Do	358	3	3	287	16	8
Gilder, A S	170	0	0	93	19	2
Payne, Mrs E	175	8	0	80	0	0
Nieman, J	90	0	0	82	10	0
Parker, Emma	200	0	0	82	10	0
Cooper, H S	145	6	8	99	18	3
Fripp, Edward	1,558	15	0	541	4	0
Do	538	0	0	191	8	0
Fripp, Thomas	240	0	0	99	0	0
Do	285	0	0	90	15	0
Rose Elijah	180	0	0	80	0	0
Fischer, Dr	1,190	0	0	434	10	0
Do	190	0	0	104	10	0
Brian, Wm (Executors of)	1,762	0	0	825	0	0
Do	1,075	0	0	448	16	0
Curran, Edward	860	0	0	722	18	6
Gallagher, Barnet	1,200	0	0	811	10	0

Claimants	Amount of Claim			Amount of Valuation		
	£	s.	d.	£	s.	d.
Moyes, William	650	0	0	440	5	0
Jackson, Dr. H. W	3,480	0	0	856	0	0
Way, H R.	11,587	0	0	6,778	6	7
Toyer, George	1,250	0	0	459	5	0
Buswell & Hamilton	320	0	0	60	10	0
Holdsworth Richard	843	15	0	500	0	0
Birrill, John (Executors of)	615	0	0	615	0	0
Dreis, Jacob (occupier)	350	0	0	17	0	0
Excelsior Building Society	2,606	1	8	1,782	12	0
Tidswell Frederick	1,775	0	0	1,000	0	0
Do	120	0	0	30	0	0
Frank, Conrad	640	0	0	362	14	0
Gannon, Alfred	3,459	10	0	1,500	0	0
Newton, Thos (occupier)	200	0	0	100	0	0
Gannon, Michael	605	0	0	227	16	0
Do	136	10	0	82	10	0
Gannon, Joseph	16	10	0	6	17	6
Gannon, Alfred	171	0	0	110	0	0
Uhde, Louis (occupier)	300	0	0	100	0	0
Favell, Eleanor	33	0	0	33	0	0
Cavanagh, Edward	60	0	0	49	10	0
Campbell, Samuel	214	10	0	36	6	0
Cranney, James	15	0	0	10	0	0
Eustace, William	120	0	0	45	7	6
Beckett, O J	100	0	0	36	6	0
Hebblewhite, S (Executors of)	300	0	0	99	0	0
Gannon, M	143	0	0	99	0	0
Selkirk, Thomas E	150	0	0	99	0	0
Gannon, Frederick	800	0	0	800	0	0
Johnson, Herbert	1,000	0	0	479	0	0
Do	300	0	0	46	16	0
Do (occupier)	50	0	0	25	0	0
Jacobs, G R	100	0	0	37	8	0
M'Innes, John	10,000	0	0	5,835	0	0
Dale, J F	750	0	0	495	0	0
Fripp, Thomas	480	0	0	78	10	0
Meinard, Morris	1 309	0	0	97	12	6
Fripp, Agnes	250	0	0	86	19	4
Fripp, Thomas (occupier)	10	0	0	10	0	0
Cliff, J W.	2,250	0	0	1,793	10	1
Latham, Henry F.	1,000	0	0	1,000	0	0
Draper, Thomas	685	0	0	105	0	0
Do	200	0	0	88	10	0
M'Innes, John	2,178	15	0	522	17	6
Luscombe, Martha	177	10	0	113	8	0
Do	160	0	0	90	15	0
West Botany Corporation	100	0	0	100	0	0
Hannam, Mary	250	0	0	101	10	0
Do	197	10	0	108	15	0
Judd, William	776	0	0	585	4	0
Do	405	0	0	379	1	0
Richardson, C. T.	2,414	13	4	407	8	0
Do	1,109	19	8	473	0	0
Bayman, Margaret	500	0	0	200	4	0
Do	300	0	0	195	16	0
Adams, Thomas	850	0	0	279	0	0
Do	96	0	0	96	0	0
Maloney, M	528	15	0	304	10	0
Barden, Frederick	75	0	0	6	1	0
Do	240	0	0	33	0	0
Strafford, Wm (Trustees of)	30	0	0	13	4	0
Bayman, Margaret	300	0	0	100	17	0
Clune, Susan	500	0	0	158	8	0
Terry, S H	250	0	0	231	0	0
Roach, W R	2,000	0	0	776	17	6
Jones, William F	1,467	10	0	793	15	0
Geering, George G	720	0	0	217	12	6
Do	200	0	0	94	3	9
Sturgan, Thos (occupier)	250	0	0	100	0	0
Do	80	0	0	5	0	0
Best, George	300	0	0	97	12	6
Ferrier, Rachael	500	0	0	85	0	0
Do	200	0	0	44	0	0
Perigo, Thomas	838	0	0	241	9	9
Do	150	0	0	145	0	0
Morse, Thomas	441	10	0	387	7	6
Do	218	0	0	139	3	0
Tillock, James	527	10	0	474	10	0
Do	200	0	0	40	3	0
Do	45	19	0	45	19	0
Baker, H J (occupier)	42	10	0	4	0	0
Do do	29	0	0	6	15	0
Hindmarsh, Joshua	733	2	6	520	2	0
Do	350	0	0	126	10	0
Do	120	0	0	52	5	0

Claimants	Amount of Claim £	s.	d	Amount of Valuation £	s	d
Arnold, Joseph (occupier)	20	0	0	5	10	0
Geeves, Yeoman	1,670	0	0	500	0	0
Walz, Joseph	2,772	0	0	1,152	10	0
Do	1,000	0	0	334	8	0
Do	150	0	0	150	0	0
Cunningham, A	850	0	0	62	13	0
Barden, Frederick	750	0	0	225	10	0
Skidmore, Frederick	556	0	0	216	15	7
Ocean View Estate	1,308	15	0	674	6	0
Sydney Permanent Land and Building Society	939	15	0	278	16	0
Do do	471	17	6	382	4	0
Education Department	10	0	0	10	0	0
Do	15	0	0	15	0	0
Kingscote, W A	4,100	13	1	1,896	1	3
Do	1,200	0	0	598	14	0
Do	362	10	0	130	0	0
Do	2,086	15	0	1,080	4	0
Australian Mutual Building Co	1,665	0	0	876	12	0
Roberts, John	1,431	11	3	864	17	6
Chappellow, William	1,996	17	6	1,320	0	0
Wood, William	3,425	0	0	1,507	0	0
Treacy, D J	825	0	0	116	4	0
Kingscote, W A	2,828	3	4	1,435	4	6
Humphreys, Martha	90	0	0	90	0	0
Do	1,600	0	0	1,054	16	0
Do	350	0	0	132	0	0
Flood, James	1,449	0	0	1,449	0	0
Do	156	5	0	110	0	0
Do	112	10	0	99	0	0
Loudan, Jas & Co	959	10	0	621	10	0
Do	227	10	0	156	4	0
Fripps, Charles	30	0	0	30	0	0
Do	60	0	0	60	0	0
M'Mahon, Dora	173	10	0	30	5	0
Doyle J K	3,113	6	8	2,400	15	0
Minnett, William	1,500	17	0	1,405	17	6
Do	200	0	0	200	0	0
Precious, Robert	1,000	0	0	676	10	0
O Brien, Patrick	50	0	0	44	0	0
Byron, Michael	500	0	0	117	0	7
Do	100	0	0	55	0	0
Lauchlan, M H & Co	587	0	0	390	5	7
Connolly, Thomas	1,000	0	0	231	5	0
Jones, Anne	1,149	0	0	801	19	0
Haymarket Building Co	279	7	6	102	8	9
Ryland, Joseph	700	0	0	664	14	0
Kemp, George	1,375	10	0	629	1	3
Newman, James	358	2	0	322	10	0
Doust, Isaac	488	15	0	108	12	6
Griffith, Cecil	3,000	0	0	905	0	6
M'Crea, Myles	427	13	9			
Holt, Thomas	1,547	10	0	500	0	0
Holt Sutherland Co	4,292	6	3	461	13	4
Wilson, Rev John	170	0	0	44	8	3
Do	190	0	0	44	19	3
Do	345	0	0	197	3	6
Coghlan, John	247	10	0	24	14	3
Do	100	0	0	16	10	0
Nagle, Joseph H	850	0	0	72	9	3
Harber, Abel	144	7	6	65	6	4
Do	470	10	0	218	14	0
Walker, Thomas	2,351	5	0	1,149	10	0
Hamilton, William	3,826	0	0	905	5	0
North Illawarra Coal Company	92,596	8	0	1,959	7	6
Hargraves, Gilbert	412	5	0	282	10	6
Hargraves, Ralph	200	0	0	75	0	0
Hargraves, Lawrence	1,000	0	0	233	9	6
North Illawarra Coal Company	4,594	0	0	28	10	0
Hargraves, Lawrence	500	0	0	72	16	9
Walker, Thomas	5,932	7	6	4,559	11	3
North Illawarra Coal Company	79,064	1	1	537	18	0
Parsons, A (occupier)	225	0	0	90	0	0
Broadhead, A (occupier)	20	0	0	20	0	0
North Illawarra Coal Company	138,687	1	4	3 555 0 4 *11 276 11 9		
Collings, J & J (occupiers)	335	0	0	85	0	0
Allen, Sir G, & Hay, Sir John	3,118	15	0	559	14	3
North Bulli Coal and Iron Mining Co	9,507	16	3	1,431	14	4
Do do	224	4	4	49	6	6
North Illawarra Coal Company	13,802	7	0	601	14	0
Do do	340	19	0	11	16	0
Allen, Sir G Wigram	3,075	0	0	415	7	9
Do	340	0	0	94	18	9
Hicks, H T	619	2	6	450	5	0
Kennedy, P	664	14	6	664	14	6
Beatson, A	2,013	15	0	903	17	6
M'Cauley, William (occupier)	50	0	0	13	0	0
Robins, Frederick	330	0	0	178	11	3
Fry, H S	75	17	6	75	17	6

Claimants	Amount of Claim £	s	d	Amount of Valuation £	s.	d.
Powell, Charles	103	3	0	75	15	0
Round, Edward	61	16	8	27	1	9
Peck, James	459	0	0	454	6	0
M'Geary, Terence	321	0	0	156	0	0
Turnbull, George	300	0	0	97	0	0
Robinson, Francis	504	0	0	228	12	6
Do	63	0	0	50	0	0
Do	120	0	0			
M'Cauley, George	504	4	0	401	19	0
Bond, C B	1,365	0	0	955	8	9
Bulli Coal mining Co	4,601	17	6	2,512	1	1
Voigel, Catherine	482	10	0	187	2	6
Bateman, Thomas	285	10	0	256	19	0
Black, Allan	306	1	0	306	1	0
Orvad, Peter & H	352	10	0	33	0	6
Croft, George	600	0	0	541	10	10
Do	133	0	0	128	1	4
Do	176	10	0	162	8	3
Do	145	0	0	145	0	0
Morris, Edward	249	8	0	198	6	9
Do	50	7	0	17	5	0
Skinner, T	412	10	0	363	0	0
Wilson, Elizabeth	130	0	0	79	0	0
Tressider, Henry	102	5	0	73	15	0
Charlesworth, Edward	135	6	0	133	6	0
E S & A C Bank	200	0	0	127	0	0
Walshe & Carolan	95	0	0	12	2	0
Smithers, A	173	0	0	127	0	0
Brown, Fred (occupier)	110	0	0	55	0	0
Do	37	0	0	10	0	0
Dumbrell, Wm	113	10	0	89	15	0
Reeves, Henry	125	0	0	81	5	0
Taylor, William	61	8	0	61	8	0
Hennes, William	350	0	0	193	10	0
Floyd, Rose Ann	260	0	0	196	0	7
Heard, Roger	1,175	0	0	490	1	9
Organ, George	20	0	0	11	0	0
Collins, J and J (occupiers)	100	0	0	13	10	0
Campbell, Robert	1,610	10	0	526	0	0
Collins, James	271	11	3	219	14	0
Collins, Thomas	603	0	0	358	0	9
Mitchell, John	495	7	9	337	11	6
Farraher, M ry	400	0	0	269	3	0
Collaery, Edward	1,118	1	3	640	10	0
Farraher P	440	0	0	330	9	6
Wilson, John	64	10	0	21	9	0
Cauley, J	450	0	0	84	3	0
Anderson, G, (Trustees of)	572	16	0	500	0	0
Reid, Robert J.	350	0	0	229	5	6
Beatson, A	667	10	0	238	12	6
Tratt, John	277	16	6	219	17	6
Griffin, Sophia	469	10	0	268	12	3
Clark, Matthew	1,012	10	0	325	4	0
Carmichael, M	462	0	0	201	6	4
Do (occupier)	100	0	0	11	0	0
Flanagan, M	185	9	7	132	6	3
Townsend, John	538	0	0	231	18	0
Elyard, Samuel	76	2	0	76	2	0
Madden, John	176	5	0	100	5	0
Do	100	0	0	100	0	0
Anderson, James	637	0	0	637	0	0
Bode, Theodore	247	10	0	203	14	0
Musgrave, Thomas	2,100	0	0	1,409	4	9
Robinson, Arthur	936	8	9	936	8	9
Ahearn, William	509	6	0	321	6	3
McCourt, William	1,725	0	0	661	8	0
Sing War (occupier)	150	0	0			
Gilmore, R (occupier)	30	0	0	20	0	0
Wiley, William	2,159	13	9	1,990	14	4
Parsons, Aquila	578	0	0	578	0	0
Kelly, Alexander	464	0	0	399	4	0
Kennedy, Mrs	200	0	0	200	0	0
Jenkins, C (Trustees of)	600	0	0	600	0	0
Dakin, Truman	5,300	0	0	2,839	14	6
Gilmore, Charles	522	0	0	487	12	0
Osborne, William	4,261	17	6	2,954	9	0
Woods, Edward (occupier)	483	15	0	456	0	0
Hung War & Co (occupiers)	114	0	0	30	8	6
Goodsell and Wright	2,724	9	4	877	5	6
Jolliffe, John (occupier)	41	13	4	13	0	0
Owen, Robert (Trustees of)	452	9	10	300	0	0
Waldron, C V	566	17	6	146	16	3
Martin, Jas (occupier)	235	0	0	200	0	0
Elliot, Andrew	750	2	6	574	2	9
James, Robert	798	6	0	687	11	0
Jenkins, W W	4,946	15	0	4,051	16	0
Cullen, Chas Jas (occupier)	648	16	10	365	12	6
Irvine, Henry (occupier)	74	0	0	74	0	0
Burgess, John (occupier)	156	5	0	132	13	0
Richards, J & Sons (occupiers)	533	0	0	259	2	6

* Amended valuation when Department was advised value of coal should be included

Claimants.	Amount of Claim.			Amount of Valuation.			Claimants.	Amount of Claim.			Amount of Valuation.		
	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.
Presbyterian Church	285	0	0	273	11	3	Osborne, Captain	650	19	1	637	5	0
Hughes, John (occupier)	65	0	0	29	11	3	Gibson, Edward (occupier)	188	0	0	177	0	0
Fackender, R. (occupier)	95	10	0	46	10	0	Brown, George	1,543	17	0	976	5	8
Smith, Alice (occupier)	10	0	0	6	5	0	Brown, John	806	0	0	416	14	7
Beatus, Phinneas (occupier)	96	0	0	53	10	0	Musgrave, William (occupier)	70	10	0	70	10	0
McPaul, George (occupier)	50	0	0	35	0	0	Marshall, Robert and Anne	1,314	3	3	1,282	2	0
Swan, E. J. (occupier)	70	0	0				Evans, Evan R.	2,365	0	0	1,000	0	0
Howarth, R. (Trustees of)	2,778	3	8	1,623	7	0	Osborne, Geo. and others	381	10	0	381	10	0
Gorrell, Mrs. (occupier)	80	0	0	65	5	6	Musgrave, Wm. L. (occupier)	75	0	0	23	15	0
Griffin, Jas. (occupier)	67	10	0	67	10	0							
Phillips, Miss (occupier)	415	15	0	75	0	0							
Ryan, Peter	1,060	12	6	536	3	0	Total amount of claims.....£	714,106	8	10			

Sydney : Thomas Richards, Government Printer.—1886.

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1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ILLAWARRA AND HOMEBUSH-WARATAH RAILWAYS.

(CLAIMS FOR, AND VALUATIONS OF LAND RESUMED FOR.)

Ordered by the Legislative Assembly to be printed, 19 *May*, 1886.

[*Laid upon the Table of the House, in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 11 *on Votes and Proceedings No.* 34, *of the* 24*th March*, 1886.]

RETURN showing the names of the claimants in each case, the quantity of land taken, the amount demanded, and the Government Valuator's estimate of the values in each case.

Claimants.	Quantity of Land taken.	Amount demanded.	Government Valuators's estimate of value.	Remarks.
	ILLAWARRA RAILWAY.			
	a. r. p.	£ s. d.	£ s. d.	
Bell, Henry, Executors of	0 0 29	709 5 0	324 10 0	
Bray, George C.... ...	1 2 2	5,887 10 0	2,913 15 0	
Goodsell, J. W. and H. W.	1 3 24	52,000 0 0	1,727 0 0	
Smidmore, Albert ...	1 0 0	3,094 7 6	3,094 7 6	In this case, Hardie & Gorman, who were requested to make a re-valuation, assessed the same at £1,975, which was offered to claimant and refused.
Baker, Thomas L. ...	2 1 11	9,485 0 0	9,485 0 0	In this case, Hardie & Gorman, who were requested to make a re-valuation, assessed the same at £4,500, which was offered to claimant and refused.
Toyer, George	0 1 12	1,854 0 0	452 0 0	
Way, H. R.	5 2 14	11,587 0 0	6,778 6 7	
Roach, W. R.	3 2 5	2,000 0 0	776 17 6	
Woid, William	2 2 35	3,425 0 0	1,507 0 0	
Holt–Sutherland Estate Co.	30 3 31	4,292 6 3	461 13 4	
North Illawarra Coal Co.	44 2 5	92,596 8 0	1,959 7 6	
Do. lessees	2 3 17	4,594 0 0	28 10 0	
Do. do.	42 2 21	79,064 1 1	537 18 0	
Do. do.	0 3 23½	304 19 0	11 16 0	
Do.	13 2 28	13,802 7 0	601 14 0	
Do.	27 0 12	138,687 1 4	3,555 0 4	
			*11,276 11 9	
M'Court, William ...	3 0 10	1,725 0 0	661 8 0	
	HOMEBUSH TO WARATAH RAILWAY.			
Pearson, Stephen John...	2 2 4	5,000 0 0	1,304 16 3	
New Lambton Coal Co...	7 0 23	25,899 3 0	492 18 0	

* Amended valuation when Department was advised value of coal should be included.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(GREAT NORTHERN RAILWAY EXTENSION—TENTERFIELD TO THE QUEENSLAND BORDER.)

Ordered by the Legislative Assembly to be printed, 19 *February*, 1886.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 3rd December, 1885, that there be laid upon the Table of this House,—

"Copies of all correspondence, letters, minutes, reports, and other papers "having reference to the fixing of the terminal point of the Great "Northern Railway at the Queensland Border."

(*Mr. Lee.*)

SCHEDULE.

No	Date	Subject	Page
1	5 Mar., 1878	Memorandum by Engineer in Chief, *re* proposed junction at Queensland Border	2
2	11 May, 1878	Memorandum by Mr Palmer, *re* connection of trial surveys with Queensland trial surveys	2
3	19 May, 1878	Report by Mr Surveyor Francis	2
4	21 May, 1878	Report by Mr Surveyor Francis	3
5	29 May, 1878	Mr Palmer to Mr Francis, *re* Ballandean road survey	3
6	1 June, 1878	Same to same—further instructions	3
7	8 June, 1878	Mr. Quodling to Mr Francis—information to be given to Queensland Railway Surveyor	3
8	3 June, 1878	Chief Engineer, Queensland (Mr Stanley), to Engineer in Chief (Mr Whitton), *re* Border surveys, &c	3
9	10 June, 1878	Mr Quodling to Chief Engineer, Queensland, in reply to foregoing	3
10	7 Aug., 1882	Minister for Works, Queensland, to Minister for Works, New South Wales, *re* point of junction of lines	4
11	14 Nov., 1882	Same to same, reverting to the subject, and sundry official minutes thereon	4
12	9 May, 1883	Same to same, again drawing attention to the subject	4
13	31 May, 1883	Colonial Secretary, N S W., to the Colonial Secretary, Queensland, replying *re* point of junction	4
14	30 June, 1884	Minute by Engineer in Chief, *re* suitability of selected site for junction	5
15	9 Aug., 1884	Minute by Commissioner for Railways on same subject	5
16	15 Aug., 1884	Memo by Mr Higgs, Traffic Manager, Great Northern Railway, *re* proposed station arrangements at junction	5
17	9 July, 1884	Petition in favour of Tenterfield being made the Border station	5
18	16 Aug., 1884	Mr C A Lee to the Hon Sir John Robertson, K C M G., *re* fixing of border station site	6
19	7 Aug., 1884	Acting Commissioner for Railways, Queensland, to the Commissioner for Railways, N S W., *re* questions in Queensland Legislative Assembly (sundry minutes thereon)	6
20	21 Aug., 1884	Commissioner for Railways, N S W., to Acting Commissioner for Railways, Queensland, in reply to foregoing	6
21	12 Aug., 1884	Mr Quodling to Mr Palmer, forwarding tracing left by Chief Engineer Stanley	6
22	9 Dec., 1884	Memo by Mr Palmer to Engineer in Chief, reporting completion of working section, &c., with exception of connection, and minutes by Engineer in Chief and Commissioner for Railways	7
23	16 Dec., 1884	Mr C A Lee to the Hon the Minister for Works, in favour of break of gauge at Tenterfield	7
24	20 Dec., 1884	Same to same, *re* mineral conditional purchases at Border	8
25	26 Jan., 1885	Same to same, further *re* site for break of gauge	8
26	22 Dec., 1884	Minute by Mr Secretary Wright to Engineer in Chief, requesting report on point of junction, &c	9
27	12 Feb., 1885	Engineer in Chief to Minister for Works, reporting in reply	9
28	1 April, 1885	Same to same, requesting Minister's decision as to site of changing station	9
29	17 April, 1885	Mr C A Lee, M P., to Minister for Works, forwarding petition from residents of Tenterfield, &c., in favour of break of gauge at Tenterfield	9
30	1885	Petition as above	11
31	18 April, 1885	Telegram from Mr C A Lee, M P., to Minister for Works, inquiring if break of gauge is settled	11
32	16 May, 1885	Mr C A Lee, M P., to Minister for Works, further *re* question of Border station site, &c	11
33	27 June, 1885	Minutes by Colonial Secretary and Mr Secretary Wright on same subject, and approval of Cabinet of latter's minute	11
34	14 July, 1885	Mr Quodling to Mr Drewett, forwarding plans, &c., and instructions *re* Border station	12

136—A
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RAILWAYS.

No. 1.

The Engineer-in-Chief to The Minister for Works.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 5 March, 1878.

Proposed Junction of the New South Wales Lines with Queensland Railways near Tenterfield.

I HAVE seen Mr. Stanley, as requested by the Minister, with reference to forming a Junction between the Railways of New South Wales and Queensland, on the New England border.

It appears that the Queensland Government have invited Tenders for the construction of their Railways as far as Stanthorpe, and that surveys are in progress towards the boundary of this Colony, following generally the course of Accommodation Creek, through Tenterfield North, to about the head of Tarban Creek in this Colony. This would bring the Queensland line within 12 miles of Tenterfield.

The trial surveys in this Colony are completed as far as Tenterfield, and I have arranged with Mr. Stanley to send a surveyor to complete that portion between Tenterfield and the Queensland boundary, to ascertain if a practicable line can be found.

The surveyors on the Queensland side are not yet finished, and it is possible that, in order to avoid what is considered to be a difficult country, some other point of junction will have to be determined upon.

JOHN WHITTON.

No. 2.

Mr. Palmer to The Engineer-in-Chief.

Government Railways, Engineer-in-Chief's Branch, 11 May, 1878.

IN accordance with your verbal instructions, that our Northern Railway trial surveys at Tenterfield should be connected with the trial surveys made by the Queensland Railway Department from Stanthorpe to the boundary of the two Colonies, I have to inform you that Mr. Francis left yesterday for Brisbane to proceed with this survey.

I gave Mr. Francis a letter to Mr. Stanley, asking him to supply the necessary information as to the terminal point of their surveys.

Mr. Francis takes one man with him, and no equipment, and I have instructed him to make inquiries at Tenterfield concerning the cost of the conveyance of himself and his men to and from work, while the distance is too great to walk, and to submit the price for your approval before settling.

HERBERT PALMER.

No. 3.

Mr. Francis to The Engineer-in-Chief.

SIR, Brown's Hotel, Tenterfield, 19 May, 1878.

I have the honor to report that, in compliance with instructions received at your office, I called at the office of the Engineer-in-Chief for Railways at Brisbane, on my way to Tenterfield, and received there all the information necessary to enable me to find the points on the New South Wales and Queensland borders at which the surveys made by the Queensland Government in direction of Tenterfield terminate.

The Engineer-in-Chief for the Queensland Railways proposes two routes from Stanthorpe in direction of Tenterfield. One (of which the survey is completed) terminates at a point on the New South Wales and Queensland Borders, at the head of a creek and swamp known as M'Namara's Swamp; the other (of which the survey is now in progress) terminates at the intersection of the Ballandean Road with the New South Wales and Queensland Borders. This point is about 4 miles to the eastward of the first-named point. On my arrival at Tenterfield I engaged Mr. Cubis, who has a thorough knowledge of the Tenterfield district, to accompany me to the Queensland border, and to assist me in examining the country between Tenterfield and the points at which the Queensland surveys terminate. On Friday, the 17th, I examined the route by the Ballandean Road, and found the country generally easy, the only place likely to offer any difficulty being a gap or saddle in the range known as the Eight-mile Gap; but there is nothing very bad about this place.

Yesterday I examined the route by M'Namara's Swamp, and found the country easy until I arrived at the top of the Boundary Range, where the ground is steep and broken on the New South Wales side, and does not afford the same facilities for getting away from the range as the ground at the Ballandean Road. The distance from the Tenterfield Mill to the Queensland border, by the Ballandean Road, I estimate at about 12 miles, and by M'Namara's Swamp at about 15 miles The route by the Ballandean Road therefore possesses the advantage of being the shortest by about 3 miles, and would afford a better plan and section at the Boundary Range. I consider this the best route for the New South Wales side. I purpose to commence staking out this route to-morrow, and wish to be informed whether it will be sufficient to survey this route only, or whether you wish to have a survey made of both routes.

I have, &c.,
A. FRANCIS.

The Queensland survey ends at a stake on the boundary marked 28M over 0.594, and a B.M. marked broad-arrow over QL over RY over B-M over 76. There is also a stake and B-M–75 at 28 miles.

No. 4.

Mr. Francis to The Engineer-in-Chief.

Sir, Brown's Hotel, Tenterfield, 21 May, 1878.

I have the honor to report that Mr. Phillips, of the Queensland Railway Department, called on me yesterday on the work, and wished me to ride with him to the Queensland Border. I therefore went with him and rode over both the routes described in my report of the 19th inst. Mr. Phillips, after seeing both routes, concluded that the route by the Ballandean Road (the route recommended in my report as the best) is the best for both sides, and will recommend it to Mr. Stanley for adoption. I think, therefore, that there will be no necessity for me to survey more than one route—the one by the Ballandean Road.

I have, &c.,
A. FRANCIS.

No. 5.

Mr. Palmer to Mr. Francis.

29 May, 1878.

THE route recommended in your report of the 19th inst., and described as following the direction of the Ballandean Road, is the only one that you need survey.

HERBERT PALMER.

No. 6.

Mr. Palmer to Mr. Francis.

1 June, 1878.

A TRAVERSE connecting our trial line at Tenterfield with the Queensland survey on the Border, showing the practicability of joining the railways of the two Colonies, is all that is required at present, so do not stake out curves or take up time in working up your first rough trial line, and on completing the field-work you may send in June books to this office to be plotted.

HERBERT PALMER.

No. 7.

Mr. Quodling to Mr. Francis.

8 June, 1878.

WHEN you have completed this survey from Tenterfield to the Queensland Border *via* the Ballandeen Road be good enough to furnish Mr. Surveyor Cannon, of the Queensland Railway Staff, with the necessary information for properly connecting the work of the two surveys at their point of junction, and obtain from that gentleman similar information.

W. H. QUODLING.

No. 8.

The Chief Engineer, Queensland, to The Engineer-in-Chief, Sydney.

Department of Public Works, Railway Branch, Chief Engineer's Office,

Sir, Brisbane, 3 June, 1878.

Referring to the interview I had with you when recently in Sydney on the subject of connecting our railway surveys at the Border, near Tenterfield, I have the honor to inform you that, according to arrangement, an officer of my Department, Mr. Surveyor Phillips, has, in company with Mr. Surveyor Francis of your staff, made an examination of the country lying between Tenterfield and Nicholl's Gap, on Accommodation Creek, through which our trial line passes.

Mr. Phillips reports that both Mr. Francis and himself have formed a decided opinion in favour of the route *via* the Ballandean Road, as against that by Macnamara's Creek, the latter route being that which would join into the original trial survey on the Queensland side. In consequence of this I have instructed Mr. Surveyor Cannon, who is engaged upon these surveys, to make a deviation from the original trial line with the object of joining the survey now being made by Mr. Surveyor Francis *via* the Ballandean Road; and I should be obliged, therefore, if you would request that gentleman, when he has completed his survey to the Border, to furnish Mr. Cannon with the necessary information for properly connecting the work of the two surveys at their point of junction.

I have, &c.,
HENRY C. STANLEY,
Chief Engineer.

No. 9.

Mr. Quodling to The Chief Engineer, Queensland.

Sir, Sydney, 10 June, 1878.

I am instructed by the Engineer-in-Chief to acknowledge the receipt of your letter of the 3rd inst., requesting that Mr. Cannon of your Department might be furnished with the necessary information for properly connecting the surveys on the Border at their point of junction, and, in reply, to state that Mr. Francis has been instructed in accordance with your request.

I have, &c.,
W. H. QUODLING,
Chief Clerk.

No. 10.

The Minister for Works, Queensland, to The Minister for Works, New South Wales.

Sir, Public Works Department, Brisbane, 7 August, 1882.

Referring to a telegram which I had the honor to address to you on the 2nd inst., regarding the extension of your Northern Line to Tenterfield, and your reply duly received, I have the honor to invite your consideration to the subject of the point of junction of the New South Wales and Queensland Railways.

It appears important that this matter should receive consideration as soon as possible.

I have, &c.,
JOHN M. MACROSSAN,
Secretary for Public Works.

Minute on No. 10.

By arrangement with the Engineer-in-Chief for Queensland, a survey was made (in 1878) from Tenterfield to Ballandean, on the border of the two colonies.—J.W., 16 Oct., /82. The Under Secretary for Works, B.C.

No. 11.

The Minister for Works, Queensland, to The Minister for Works, New South Wales.

Department of Public Works, Railway Branch,
Brisbane, 14 November, 1882.

Sir,

Reverting to the question of the probable junction near the Border of the New South Wales and Queenland Railways, I have the honor to address you upon the subject, and would invite your co-operation in the matter.

As time is pressing, I would suggest that the Government of New South Wales should appoint an officer of the Railway Department to meet an officer under the Queensland Government with the view of this subject being discussed, and the respective Governments advised thereon.

I have, &c.,
JOHN M. MACROSSAN,
Secretary for Public Works.

Minutes on No. 11.

It would seem that the Queensland Government is not aware that their Engineer-in-Chief for Railways arranged with Mr. Whitton that a survey should be made from Tenterfield to Ballandean (the latter on the Border of the two Colonies) with a view to a junction being made there. The survey was made in 1878. (See Mr. Whitton's report of 16 October last, on 82/12,826.) What the result of that survey was is not shown by these papers, nor whether any determination was arrived at as regards the point of junction.

I have stated that the Queensland Government do not seem to be aware, &c. I assume that they are not from the terms of their communication, and I am aware that Mr. Stanley, the Chief Engineer for the Queensland Railways, is in England on leave of absence.

Would it not be well to give the Queensland Government a reply of some kind?—CH. A.G., 12/2/83.

This matter has only now been brought under my notice, and I am desirous of immediately sending to Queensland an answer, already too long delayed. To enable me to do so, I will be glad to know from the Engineer-in-Chief whether the survey to Ballandean alluded to in his minute of 16/10/82, led to any conference with the Chief Engineer of Queensland, or otherwise, as to approval of a place of junction (if such a term be applicable to railways of differing gauges), or have any circumstances since 1878 (the date of such survey) transpired to cause any change in Ballandean being the place of junction? —A.S., 7/4/83.

How far is Ballandean from our farthest north contract,—and has sanction been obtained for carrying it to the Border?—A.S.

Mr. Surveyor Francis, of this Department, met Mr. Surveyor Phillips, of the Queensland Railway Department, by arrangement, and decided that the best place for the junction of the two railways would be at a point 12 miles from Tenterfield, *via* the Ballandean Road, and indicated by a stake on the Border marked thus:—28 M over 0,594, and a B. M. marked broad-arrow over QL over RY, over BM over 76. The Engineer-in-Chief of the Queensland Railways was furnished with information for properly connecting the two surveys at the point indicated. (See Assembly Papers, No. 71a, 1881, page 143.) I am not aware of any circumstances having occurred since the date of survey to necessitate a change in the proposed point of junction.—J.W., 17 May, 1883.

To be communicated to Queensland Government.—A.S.

No. 12.

The Minister for Works, Queensland, to The Minister for Works, New South Wales.

Sir, Commissioner for Railways Office, Brisbane, 9 May, 1883.

Referring to a communication addressed to your Department on the 14th November last, regarding the probable junction of the New South Wales and Queensland Railways at the Border, I have the honor to ask you to favour me with the views of your Government on this matter, as discussion upon the subject with the object of a mutual understanding being arrived at as soon as convenient appears desirable.

I have, &c.,
A. NORTON,
Secretary for Public Works.

No. 13.

The Colonial Secretary, New South Wales, to The Colonial Secretary, Queensland.

Sir, Colonial Secretary's Office, Sydney, 31 May, 1883.

Referring to a letter of 14th November last, addressed by the Secretary for Public Works of Queensland to the Secretary for Public Works of this Colony, with reference to the junction of the railways of the two Colonies, I have the honor to inform you that it appears that a railway surveyor from each Colony met by arrangement, and decided that the best place for the junction of the two railways would

would be at a point 12 miles from Tenterfield, *via* the Ballandean Road, and indicated by a stake on the border marked thus, 28M over 0594, and a BM marked broad-arrow over QL over RY over BM over 76, and that no circumstances have occurred since the date of survey to necessitate a change in the proposed point of junction.

I have, &c.,
ALEXR. STUART.

No. 14.

Minute by Engineer-in-Chief.

I HAVE been over this proposed extension from Tenterfield to the Queensland Border, and should it be decided to make a connection with the Queensland lines at the boundary of the Colonies, the ground is favourable for such a purpose. Naturally, the inhabitants of Tenterfield wish the connection to be made at Tenterfield, 12 miles from the border. J.W., 30/6/84.

No. 15.

Minute by Commissioner for Railways.

I LEARN from Mr. Stanley, Engineer-in-Chief, Queensland, that the Queensland Government have accepted the site indicated in the enclosed letter from this Government. Mr. Stanley showed me a plan of station arrangements at this site, and I suggested some improvements in it, notably the lengthening of platform to 400 feet, the construction of a refreshment room, the placing of the sheds (two) for local goods on the same side of the line, instead of one on each side as proposed. The Traffic-manager North will be good enough to report on plan herewith, and furnish a time-table showing probable time of arrival and departure of through trains. Mr. Stanley promised to submit detailed plan of station building, which I suggested, as they are in advance of us with their construction towards the Border, should be built by them at joint expense. There will be, of course, final arrangements made in regard to this.

CH.A.G., 9/8/84.

[Urgent.] Plan herewith. Report herewith.—J. HIGGS, 15/8/84.

No. 16.

Memorandum by Mr. Higgs, Traffic Manager, Great Northern Railway.

Re Interchanging Station arrangements at the junction of Queensland and New South Wales Railways.

WITH the exception of the passenger platforms, which are far too short, I think the proposed arrangements would suit very well, assuming that the present table wili be extended when the Border is reached. The down mail would arrive at the Border station at about 1·30 a.m., and depart about 4·30 a.m.

J. HIGGS, 15/8/84.

As the trains will arrive and depart at hours not usually given to the refreshment table, it would seem to be unnecessary to erect a refreshment station at the Border.—CH.A.G., 19/8/84. Send on with other papers to the Engineer-in-Chief.—CH.A.G.

No. 17.

Petition.

To the Honorable the Minister for Works, Sydney.

Sir,

The Humble Petition of the residents of Tenterfield and surrounding districts respectfully showeth,—

That the near approach of the Great Northern Railway to Tenterfield induces your petitioners to respectfully request you to take into your favourable consideration the question of the break of gauge between this Colony and that of Queensland.

That your Petitioners are of opinion that if the break of gauge is made at the Border line, some 12 miles from Tenterfield, it will seriously affect the vested interests and trade of Tenterfield and northern New England, without giving any adequate return to this Colony in the shape of the sale of Crown Lands or otherwise. That it will necessitate the erection of a Border Station and other buildings, and the maintenance of a large staff of officials, as well as of Customs officers.

That the convenience of the necessarily large passenger traffic that will ensue upon the opening of the through line could be more effectively studied at the established town of Tenterfield than at a Border station, while the excellent and central site selected for the Tenterfield Railway Station would render it a comparatively easy matter to control the intercolonial goods traffic, which could be under the supervision of the resident Customs officer.

That your Petitioners beg most respectfully to request when the question of the break of gauge is before the Government for consideration that it will be determined to have the same at the Tenterfield railway terminus—to which place the Queensland line could be run at a nominal cost—and thus conserve to this portion of the Colony its legitimate traffic, and avoid the necessity for expensive Border stations and officials.

That your Petitioners desire to point out that in the erection of the Railway Station and other buildings at Tenterfield you will be pleased to give due consideration to the question of the break of gauge, so that sufficient accommodation may be provided to efficiently carry on the traffic between the two Colonies at Tenterfield.

And your Petitioners, as in duty bound, will ever pray.

(Here follow signatures.)

No. 18.

Mr. C. A. Lee to The Hon. Sir John Robertson, K.C.M.G.

My dear Sir John, Railway League Office, Tenterfield, 16 August, 1884.

* * * Respecting the break of gauge between here and Queensland, I hear it is likely to be fixed at the Border; could you also wire me if anything has been definitely fixed about it. We are most anxious for a reply to both matters. I send a letter to your care, addressed to Sir Henry Parkes; will you kindly see it is delivered to him on his arrival?

I am, &c.,
CHARLES A. LEE,
Hon. Secretary.

So far as I know, this matter has not yet been decided.—J.W., 27/8/84.

No. 19.

The Acting Commissioner for Railways, Queensland, to The Commissioner for Railways, Sydney.

Sir, Commissioner for Railways Office, Brisbane, 7 August, 1884.

Referring to the enclosed copies of questions put to the Hon. Secretary for Public Works in the Legislative Assembly of your Colony, and of Mr. Dibbs's replies thereto, I have the honor, in connection with Mr. Dibbs's reply, No. 2, to enclose for your information copy of report from the Select Committee of the Legislative Council of this Colony relative to the extension of the Southern Railway to the Border, and to invite your special attention to pages 5 and 6 thereof.

I have, &c.,
F. CURNOW,
Acting Commissioner for Railways.

Thursday, July 31.

Junction with Queensland Railways:—Mr. W. J. Fergusson asked the Secretary for Public Works,—

(1.) If he has received any communication from the Queensland Government in reference to the junction of the New South Wales Railway with that Colony?

(2.) Will he state to the House what arrangements (if any) have been made about the joint Railway Station?

Mr. Dibbs answered,—

(1.) No communication on this subject has been received from the Queensland Government since June, 1883.

(2.) No arrangement has yet been made.

Prepare minute for the Executive Council for approval of the site. The Engineer-in-Chief will at once proceed with the survey, and furnish the plans, book of reference, &c., for approval of Parliament. Mr. Whitton will be good enough to inform me if this can be done before the close of the present Session, say in six weeks time.—G.R.D., 15/8/84.

Inform Queensland Government that the site has received the approval of the Governor and Executive Council, and the approval of Parliament will be asked for as speedily as possible.—G.R.D. Informed, 21/8/84.

Send Mr. Francis and as many other surveyors as you think can be profitably employed to make the working survey of this extension, and urge upon them the necessity of completing the surveys as early as practicable.—J.W., 27/8/84.

Mr. Francis is to leave for Tenterfield to-night, and Mr. Jamieson will proceed to the Queensland Border on Monday or Tuesday next. These two surveyors will work to meet each other, and will forward plottings of their traverses and sections as quickly as possible, so that a parliamentary plan and section may be prepared, if practicable, during the present Session.—J.W., 28/8/84.

No. 20.

The Commissioner for Railways to The Acting Commissioner for Railways, Queensland.

Sir, Department of Public Works, Railway Branch, Sydney, 21 August, 1884.

Referring to the proposed junction of the New South Wales and Queensland Railways, I have the honor to inform you that the site indicated in Mr. Stuart's letter of the 30th May, 1883, to the Hon. the Colonial Secretary of Queensland, has been approved of by the Governor and Executive Council of this Colony. The approval of Parliament will be asked for as speedily as possible.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways.

No. 21.

Mr. Quodling to Mr. Palmer.

Junction with Queensland.

12 August, 1884.

Herewith I forward a tracing presented by Mr. H. C. Stanley, Chief Engineer, S.D., of Queensland Railways, showing the proposed junction with that Colony at the Border.

You are requested to see the Engineer-in-Chief on the subject at an early date.

W. H. QUODLING.

No. 22.

Memorandum from Mr. Palmer to The Engineer-in-Chief.

Sydney, 9 December, 1884.

THE working section of the Tenterfield and Queensland Border Extension is now completed, with the exception of the grade at the junction with the Queensland Railway on the Border.

To make this connection it will be necessary to procure a copy of the final portion of the working section of the extension from Stanthorpe to the Border, for which application may, I presume, be made to the Queensland Railway Department.

HERBERT PALMER.

I shall be glad to have the Minister's instructions as to where the break of gauge is to take place, whether at the border between the two Colonies or at Tenterfield.—J.W., 10/12/84.

The Minister has asked me for my views in this matter.

There will be an active competition for a good deal of the traffic, as between Sydney and Brisbane, for the port of shipment, and even Grafton, if the line from Glen Innes is made—if the Queensland Railway is brought to Tenterfield the handicap against our successfully competing for the traffic in question will be proportionately increased.

I can see no good reason for making the break of gauge at Tenterfield. By making it on the Border we should have the control of the charges as far as that point, and should Queensland be inclined to follow the tactics of Victoria and make unfair differential charges for goods coming into New South Wales from Queensland, we should be able to checkmate such a movement. The capital of Queensland being by distance so much nearer to the debatable area, the trade of which will have to be competed for, we have only our cheaper charges for carriage to aid us, cheaper because the light engines of Queensland (made light necessarily owing to the lightness of their rails) cannot haul more than a very moderate load, and consequently higher charges than ours have to be levied. But we have experience that Queensland will not always consider remunerative freight charges if their object is to secure a trade. To give encouragement to their coal mines in competition with Newcastle coal they established a rate which did not even pay working expenses, and brought the coal to Brisbane at a direct loss; but I believe they accomplished the object they had in view, and made Brisbane the terminus for the line of mail-boats. I would strongly recommend that Queensland be not allowed to come further than the Border with their railway.—CH. A. G., 16/12/84.

No. 23.

Mr. C. A. Lee to The Minister for Public Works.

Sir,

Tenterfield, 16 December, 1884.

As the question of the break of guage between this Colony and that of Queensland at the Border north of Tenterfield is likely to receive the early attention of the Government, and as the continued prosperity of this portion of the Colony depends in a large measure upon the settlement of this momentous question, I venture to lay before you a few reasons why the break of gauge should be at the town of Tenterfield, and not on the Border.

I freely admit that the Government may have to consider the Colony of Queensland in settling this matter; but I am conscious of the Government being desirous of approaching it on its broadest basis; and while refraining from interfering with any vested interests in Queensland, yet not disposed to allow its own interests to be sacrificed, and therefore I have no hesitation in addressing you now upon the subject.

1. I desire to refer you to the annexed copy of the petition that was presented through Sir John Robertson in August last, to which was atttached some 1,200 signatures.

2nd. In alluding to the second paragraph of the petition it will be necessary to consider what are the vested interests of Tenterfield and Northern New England; how they arose and are maintained; how the fixing of the break of gauge at the Border would affect them, and consequently the prosperity of the Colony generally to a certain extent. And I cannot more clearly do so than by pointing out that the large vested interests in the district have arisen more from the *bonâ fide* nature of the conditional purchases than from any other cause, whereby the population has steadily increased; produce of every kind has increased; the demand for all classes of labour has increased; large and expensive public buildings have had to be erected to meet the steady progress of population, causing a corresponding increase in the value of Crown Lands, which in 1874 sold for £10 per acre in central positions, and in 1884 for £50 per acre on the outskirts of the main streets, thus causing an amount of vested interests to be set up on a sound and progressive basis, and which would certainly be severely checked if the important break-of-gauge station was erected at the Border, at which place another township would spring up—certainly of a sickly and uncertain character—but quite sufficient to divert the traffic and ruin the interests of the old established town of Tenterfield. If the land on the Border was suitable for agricultural or pastoral purposes it would have been selected years ago; but owing to its barren and rocky nature it is perfectly useless for such purposes, and is still unalienated. Consequently the Government would not receive any revenue from the sale of land there, while, on the other hand, the large number of unsold allotments on the southern side of the town of Tenterfield would materially increase in upset value if the break of gauge were at Tenterfield.

The fact of there being no water at the Border, and none nearer than 5 miles, proves how unsuitable it would be as a site for a township or for railway purposes.

Among other reasons why it would not be desirable to have a Border township may be mentioned that the line of demarcation between the two Colonies at that point is simply a "marked-tree line," and not an obstructive feature, such as a river, &c.; and it will be seen how easily the evil disposed could carry on a system of smuggling by obtaining an allotment on either side of the line, the back boundaries of which would almost adjoin, while the dissimilarity between the two Publicans' Licensing Acts would lead to great annoyance; and the ease with which any person committing an offence could step across the marked-tree line and defy the authorities would bring about a most undesirable state of disorder and contempt for the law; and further, it would unfortunately afford great facilities for the evasion of the payment of civil debts, which is already too largely availed of in Border districts, but which our civil process of law is unable to deal with. To attempt to cope with these several matters would require a permanent staff of police, Customs officers, and a resident Magistrate; in addition to which would be

necessary

necessary a staff of railway officials, for whom quarters would have to be erected. Besides which, expensive railway buildings would be required, which, in the aggregate, would amount to a very large item. The whole of this expense could be saved to both Colonies by the adoption of the suggestions I have to make further on.

In the event of making the Border the terminal point, it must follow that access be given to it by way of roads; and as it is situated some distance away from the main western road, down the Dumaresque River, from the main eastern road towards the Clarence, and from the northern and southern portion of the Great Northern Road, in all about 25 miles of dray roads would have to be made, at a cost of £25,000; besides, a bridge across the Tenterfield rivulet, at a cost of about £2,000; and after all this enormous outlay it would for all time prove a general inconvenience to everybody; indeed I do not know of one single reason why the Government of New South Wales should entertain the idea for one moment, other than the alleged opposition shown by the Queensland Government, which I will now proceed to show is untenable.

The Queensland Government has no township nearer than Stanthorpe, distant some 26 miles from the Border, and is well known to be a rapidly-failing mining township. From there to the Border their railway line passes through two cattle stations, and there are about six selections, most of which are nearest to Stanthorpe. They could not, therefore, argue that they would either benefit or destroy any existing or vested interests on their side. They have an idea of laying out a township at the Border, but as the land there is like our own at that point—barren, rocky, and waterless—it could not attract a population, consequently would not deprive the Government of any revenue from the sale of Crown Land; hence no injustice would be done that Colony by having the break of gauge at Tenterfield.

My suggestion is simply this: That as our Government have already voted more than sufficient money to construct the line from Tenterfield to the Border, it would be wise policy to lay down a *third* rail on the same sleepers, and which would carry our own rolling stock as well as the narrower gauge of Queensland. That our Government could fairly allow the Queensland Government the use of it at a rate to be agreed upon. That by this arrangement the Queensland traffic and that of New South Wales would be deposited at the Tenterfield Railway Station; could be attended to in the one set of buildings, under the supervision of one set of railway employés and the local resident Customs officer, without any additional police protection than the ordinary staff employed at Tenterfield. That it would greatly facilitate the transferring of the goods traffic, and be a great boon to the passengers. That every main road passes the excellent and commodious site selected for the Tenterfield Railway Station—which is about five minutes walk from the town. That the cost of expensive Border stations and various staffs of officials would be saved, and, besides being a convenience to all concerned, it would preserve the vested interests of this portion of New South Wales without in the slightest degree injuring those of Queensland.

I have based my remarks upon a personal knowledge of the trade and the country in question after an experience of over fifteen years' residence, and I have been over the surveyed railway route within the past week.

I venture to hope our Government will not readily consent to make the break of gauge at the Border, as it would prove to be a disastrous mistake.

I have, &c.,
CHARLES A. LEE.

No. 24.

Mr. C. A. Lee to The Minister for Works.

Sir,

Tenterfield, 20 December, 1884.

Since the date of my last communication *re* the break of gauge on the Border, I have seen a notice in a Queensland paper to the effect that the Minister for Works for that Colony had stated in the House that his Government and that of New South Wales had agreed to make the break of gauge at the Border, and that they had mutually agreed to erect station buildings.

Would I be asking too much to be informed whether such is really the case, or whether the question is still unsettled.

I deem it expedient to inform you that on Thursday last, the 18th instant, a Sydney land-jobber, in his own name and the names of three dummies, selected the whole of the water reserve 112 extended, 20th December, 1880, in all 1,280 acres, as mineral conditional purchases, through which the surveyed railway line runs, and completely blocking access to it at the Border, thus rendering it imperative for the Government to purchase land from them to get to the Border point; and I urge this as a further reason why the break of gauge should not be at the Border, and prevent this monopoly on the part of speculators whose sole desire is to enrich themselves at the expense of the country.

I have, &c.,
CHARLES A. LEE.

No. 25.

Mr. C. A. Lee to The Minister for Works.

Dear Sir,

Tenterfield, 26 January, 1885.

As the matter of the break of gauge is exercising a good deal of attention here, and having in view my previous communications addressed to you in your official capacity, I do not want to be troublesome, but I would be glad if you could see your way clear to give me some idea when the matter is likely to be settled, and whether there is any prospect of the terminal point being at Tenterfield? The completion of the section to Tenterfield from Glen Innes will no doubt be completed before the end of the year, and as the question of station buildings for Tenterfield must soon be decided it seems that the early settlement of the break-of-gauge point would greatly facilitate the progress of the necessary drawings, &c. I venture to hope that if the Queensland Government will not consent to run their rolling stock into Tenterfield that you will not consent to the erection of costly buildings at the Border, but place a temporary building there, and the principal buildings, sheds, &c., at Tenterfield; and I have no hesitation in saying that the ultimate result will prove the correctness of your action, for it must be remembered that the Queensland Government have already determined to lay down a portion of their new rail tracks to admit of the same gauge as ours being used; in fact, it is the pervading opinion in Queensland that they must discontinue the narrow gauge.

I

I would also point out that unless the break of gauge is determined during the reign of the present Queensland Government that there will be much more difficulty in doing so if Sir J. M'Ilwraith comes into office again, as that gentleman is averse to joining our Great Northern Line at the present part of the Border. His idea is, and he expressed himself in emphatic terms, to carry the line from Stanthorpe to the New South Wales Border at Wilson's Downfall, a distance of about 10 miles. This would of course necessitate our line being continued to that point, a distance of 28 miles, through exceedingly heavy and worthless country. I am aware that your time is fully occupied during the recess, but I consider the settlement of the question of such great moment to the country that I venture to urge upon you to have the matter fixed as early as convenient.

I am, &c.,
CHARLES A. LEE.

No. 26.

Minute from Mr. Secretary Wright to The Engineer-in-Chief.

I SHALL feel obliged if the Engineer-in-Chief will give me his views with regard to the break of gauge between the Railway system of this Colony and that of Queensland, and a *précis* of the negotiations that have taken place between himself and Mr. Stanley, Engineer-in-Chief for Queensland.

I understand that the distance from Stanthorpe to the border of New South Wales is 26 miles, and from Tenterfield to the Border, 17 miles, for which distances lines will have to be constructed by the respective Governments. The inhabitants of Tenterfield are naturally anxious to have the break of gauge in that town, and I shall be glad if the Engineer-in-Chief will give me his views in the matter as regards the most convenient place for the break of gauge, whether any engineering difficulties exist on either the New South Wales or Queensland side, and information as to the nature of the country at the proposed junction.

F.A.W., 22/12/84.

No. 27.

The Engineer-in-Chief to The Minister for Works.

I FORWARD, for the information of the Minister, a compiled map of the district round Tenterfield, showing the direction of the proposed Railway extension from Tenterfield to the Queensland Border.

The Minister, in his memo. dated 22nd December, 1884, having asked for my opinion as to where an interchange of traffic should take place between the Railways of New South Wales and Queensland, I have to state that I have always considered the Junction Station should be at Tenterfield, and not at the Border.

The distance from Tenterfield to the Border is 12 miles, and from the Border to Stanthorpe is 26 miles, and it has been suggested to run the New South Wales trains to Stanthorpe, and the Queensland trains to Tenterfield. This arrangement I do not think desirable, as it would necessitate laying down a mixed gauge for a distance of 38 miles.

If the New South Wales trains stop at Tenterfield, I think there would be no difficulty in obtaining Parliamentary sanction to the passing of a short Act, empowering the New South Wales Government to lay down the Queensland gauge of 3′ 6″ from the Border to Tenterfield, and thus permit the Queensland trains, on terms to be hereafter arranged, to run into the Tenterfield Station, where the interchange of traffic could take place much more conveniently than at the Border.

If this were done, all the station work could be performed at Tenterfield, and the expense of a separate staff and station at the Border avoided.

To place a station at the Border is, in fact, to build it in a wilderness, where there are no roads, no water, no inhabitants; and I cannot but think that if proper representations be made to the Queensland Government it will consent to the interchange of traffic taking place at Tenterfield.

I have made no arrangement with Mr. Stanley, the Chief Engineer for the Queensland Government; but he called upon me in Sydney, and laid before me a plan which he had prepared, and which provided for the interchange of traffic at the Border. I, however, offered no opinion on his proposal, as I knew it was a matter which must be settled by the respective Governments.

JOHN WHITTON, 12/2/85.

No. 28.

The Engineer-in-Chief to The Minister for Works.

REFERRING to my minute of 12th February last, No. 85/234, *re* Tenterfield to the Queensland Border line,—as the plans have now been approved by Parliament, I shall be glad to obtain the Minister's decision as to where the changing station is to be, Tenterfield or the Border.

JOHN WHITTON, 1/4/85.

No. 29.

Mr. C. A. Lee, M.P., to The Minister for Works.

Sir,

Tenterfield, 17 April, 1885.

I have the honor to transmit herewith a large and influential Petition from the residents of Tenterfield and the surrounding districts, bearing 1,239 bona fide signatures, praying for the break of gauge to be fixed at Tenterfield. I feel assured that in considering this momentous intercolonial question you will give due weight to the views expressed by so large a number of the people resident in this portion of the Colony, who, from their long residence in this district and nature of their varied occupations, are capable of giving a practical expression of opinion on this question, and whose vested interests have arisen in consequence of the steady development of the resources of this district, and who are alive to the fact that the establishment of a Border changing station or break of guage would so depreciate the value of all classes of property that it would virtually be a direct blow levelled at the interests they have through long years of industry built up, and the consequence would be general discouragement, and at the same time no advantage would be gained by the country.

In

In my previous correspondence, which includes a very numerously signed Petition, I have endeavoured to point out all the bearings on the question, which can be briefly enumerated as follows:—

1. The barrenness of the land at the Border line.

2. The unsuitability of that point as a railway station site in consequence of the utter absence of water.

3. The surrounding land having been taken up under mineral conditional purchases on the last land day in December last by land non-resident speculators, with a view of fleecing the country.

4. That there is not any land left available for selection or a township, the sale of which would benefit the revenue.

5. The first and enormous outlay required to erect station buildings, goods sheds, quarters for officials, Customs officer's quarters, police quarters, Telegraph and Post Offices, stockyards for shipping stock, and the innumerable minor requirements incidental to forming a terminal station, must all be looked upon as duplicates, inasmuch as the position and importance of Tenterfield must necessitate a similar or increased provision at that terminus.

6. The distance of the Border line from all the main roads on which large sums of money have for years past been expended, and the cost of making dray roads from the Border to these main thoroughfares, will necessite an expenditure of at least £20,000.

7. The line of demarcation between the two Colonies being simply one that is devoid of any distinctive or obstructive character by which the traffic in contraband goods could be controlled renders it a grave question whether, in the interests of good government, it would be desirable to offer further facilities for this demoralising traffic by the fixing of a terminal station there; and which traffic could not be prevented unless a large staff of Customs officials and police were permanently maintained there and further, the difficulties existing in enforcing the intercolonial Criminal Law by warrant and backing of warrants would render it imperative that a resident Magistrate be stationed on the spot. Otherwise the greatest confusion would prevail, and contempt for the law ensue, as the perpetrators of misdemeanours would escape before the necessary process of law could be obtained to legally arrest them.

8. The great disadvantage the travelling public would have to submit to for all time in having to change at a miserable wayside station in the wilderness (so aptly named by yourself), and the damage to goods, inconvenience, and extra expense to shippers in retranshipping at the Border, would be felt to be so irksome that the railway would not be so largely availed of as it should be.

9. The great natural advantages that Tenterfield offers as a site for an intercolonial break of guage or changing station are many, viz:—The large area of land already resumed is more than ample for all purposes of a changing station. The abundant water supply. The main roads all running past the station doors. The convenience it would be to through passengers from one metropolis to the other wishing to break the journey. The ease and cheapness with which the goods traffic could be controlled and effected. The saving of the cost of all duplicate buildings at the Border; of all extra officials and quarters for them. No extra roads to be made. No extra Customs officials required. No more police protection, and the benefit from all the Government establishments already located in the town. These items would in the aggregate prove to be a formidable sum, and would materially affect the interest on the expenditure.

10. The only real question that could influence the Government of this Colony in erecting a Border changing station would be consideration for the views of the Queensland Government; and now that it is so broadly asserted that that Government is not offering any objection to the break of gauge being at Tenterfield (and from my personal interviews with several of the members of that Government I can confirm the reports) it may be fairly assumed the greatest difficulty has been overcome and I am bound to state that that Government is to be commended for its broad views on the important intercolonial question, which I feel assured are in accord with the wide and just views you have always held upon the matter, and which reciprocal views I am satisfied would be unanimously endorsed by Parliament, and the country as the happy and amicable settlement of one great step towards intercolonial federation.

11. That the settlement of this question on any lines akin to that at Albury and Wodonga would not be nationally approved of is I think beyond all doubt. And it is satisfactory to note that the Hon. the Colonial Secretary, Mr. Stuart, expressed himself in the House on the 1st June, 1884, in reply to Mr. Lyne's motion condemning the running of trains to and from Albury and Wodonga, in these words "that he considered it was a very undesirable arrangement, and his belief was that a short experience would show that a single station would be preferable"; and further, when the plans and book of reference for the section from Tenterfield to the Border were before the Assembly, a number of Members expressed the desire that similar arrangements would not be made on the northern Border as were made on the southern, and hoped the break of gauge would be fixed at Tenterfield. I maintain that as a spontaneous expression of Parliament the latter is very significant.

12. The manner in which the Queensland trains could be brought into Tenterfield is, I take it, a matter of easy accomplishment, as, in the first place:—"We are pledged to construct our line to the Border. The amount granted, viz., £173,500, is considerably more than sufficient for the construction of that section. That the rails could be laid to the gauge of Queensland to admit of their trains passing in. That if it was not necessary to obtain an Act of Parliament to run our trains into Wodonga and permit the Victorian trains to run into Albury, it would not be necessary to ask for parliamentary sanction to allow the Queensland trains to run into Tenterfield."

Supposing, however, that we laid our broad gauge to the Border, it would be an easy matter to lay an inner or third rail to suit the gauge of the Queensland rolling stock, and the cost of which would not exceed £7,000.

The Queensland Government would of course have no objection to pay the proper rates for use of rail and station accommodation.

I do not think it necessary that I need further enlarge upon this subject, and I must be pardoned if I have dealt at too great a length upon the details, but as the question is one of such great moment to this Colony, I am impelled to lay aside all purely local considerations, and, as a representative of the people, approach the question on its merits, as I would do if the question was to be settled by Parliament; but as it must necessarily be decided by the Cabinet at an early date, in order that the construction of the remaining section may be proceeded with, I now beg to urge upon the Cabinet, through yourself, the necessity for fixing the break of gauge or changing station at Tenterfield, which will in every sense be a desirable settlement of a great intercolonial question, and one that will meet with the approval of Parliament and prove satisfactory to the country.

I have, &c.,

CHARLES A. LEE.

The Petition and sheets of signatures are forwarded by this mail under separate registered cover.—C.A.L.

No. 30.

No. 30.

Petition.

To the Hon. the Minister for Public Works, Sydney.

Sir,

The humble Petition of the residents of Tenterfield and surrounding districts respectfully showeth:—

That in consequence of the plans and books of reference for the remaining section of the Great Northern Railway to the Queensland Border to a point near Tenterfield having received Parliamentary sanction, and the last section on the Queensland side being in course of construction, your Petitioners are again induced to urge for the early and favourable consideration of the break of gauge between this Colony and that of Queensland.

That your Petitioners beg to reiterate their opinion that if the break of gauge is made at the Border line some 12 miles from Tenterfield it will seriously affect the vested interests and trade of Tenterfield and Northern New England, without giving any adequate return to this Colony in the shape of the sale of Crown Lands or otherwise.

That it will necessitate the erection of a Border station and other necessary buildings, and the maintenance of a large and duplicate staff of Railway officials and Customs officers, besides extra police protection.

That there is no water, permanent or otherwise, at the Border line of demarcation, which consequently renders it quite unsuitable for a railway site.

That it is 12 miles away from the Western, Eastern, and Northern roads, and would necessitate a large expenditure to make roads fit for dray traffic, besides requiring a bridge across the Tenterfield Creek *en route*.

That the whole of the expenditure for Border stations, extra Railway officials, Customs officers, and police protection, would be avoided by running the Queensland trains into the Tenterfield Railway Station at Tenterfield, which is so centrally situated that it commands the whole of the roads diverging to the north, east, west, and south. and at which place the convenience of the necessarily large passenger traffic that will ensue could be more effectively studied, and the intercolonial goods traffic carried on free from difficulty, and under the immediate supervision of the existing Customs and other officers.

That your Petitioners beg most respectfully to request that the break of gauge may be fixed at Tenterfield, to which place the Queensland trains could be run at a nominal cost, and to the great advantage of and saving of unnecessary expenditure to both Colonies.

And your Petitioners, as in duty bound, will ever pray, &c., &c.

(Here follow signatures.)

No. 31.

Telegram from Mr. C. A. Lee, M.P., to Minister for Works.

GREAT excitement prevails *re* settlement of break of gauge, and monster petition course of signature praying for the same to be fixed at Tenterfield. Will you kindly inform me if matter is yet settled?

CHAS. A. LEE.

Not determined. Will submit matter to Cabinet on early date.—MINISTER, 14/4/85.

No. 32.

Mr. C. A. Lee, M.P., to The Minister for Works.

Dear Sir, Tenterfield, 16 May, 1885.

The enclosed paragraph is from the *Brisbane Courier*, and purports to give a very emphatic expression by Mr. Miles, the Minister for Works, *re* the settlement of the break of gauge, that for your information I deem it advisable to bring under your notice.

I do not of course attach the slightest importance to it, because I have so frequently had your assurance to the contrary.

You will notice his statement is twofold:—

1st. That the respective Engineers had agreed as to the site of the Border terminus.

2nd. That the two Governments had approved of the plans, and agreed that the change of gauge should be at the Border.

Yours, &c.,

CHARLES A. LEE.

No. 33.

Minutes by Colonial Secretary and Mr. Secretary Wright.

Railway Junction with Queensland.

Colonial Secretary's Office, Sydney, 27 June, 1885.

I HAVE read the papers herewith. I consider that Tenterfield would have been the best point of junction, but it does not rest solely with us to decide; the concurrence of the Queensland Government is necessary, and it seems to me that the site of Ballandean has already been approved by it, as well as by our officers. Whether it ought now to be changed is a subject for consideration, the worthless barren character of the land about Ballandean renders it extremely unsuitable, and I see no difficulty as to running the narrow gauge into our territory. It is not for our running, but for that of the Queensland trains, and is therefore no more contrary to our Railway Act than was our laying the broader gauge at Albury for the Victorian trains. Nor do I see much force in the Commissioner's argument as to the competition. The distance is so short (12 miles) that no differential rate that we could impose would prevent such competition.

On

On the whole, I think that negotiations might be opened with the Queensland Government with the view of adopting Tenterfield, but if they have strong ground for opposing it then we had better adhere to Ballandean. I would, however, like to know whether it is the case that all the available land round about the proposed jnnction has been secured by speculators?

A.S.

In submitting the matter, *re* break of gauge, to my honorable colleagues, I beg to recommend that the break of gauge take place on the Borders of the Colonies at the site decided upon by the Engineer's-in-Chief of Queensland and New South Wales. I would suggest that no accommodation be provided at this place further than what is absolutely necessary for the interchange of traffic, both passengers and goods; that wooden buildings be erected, and a running shed capable of holding one or two engines, while the depôt for our engines, workshops, &c., should be established at Tenterfield.

At the Border where the break of gauge will take place there is no population, the country is of the most sterile description, and it is questionable whether water is obtainable unless at great expense; while at Tenterfield there is an abundance of water, a settled population, and comparatively good country.

For these reasons I think Tenterfield should be the site selected for the depôt.—F.A.W., 1/7/85.

Cabinet approved this suggestion of the Minister for Works.—A.S. ,3/7/85.

No. 34.

Mr. Quodling to Mr. Drewett.

14 July, 1885.

HEREWITH I have the honor to forward the working plan and section of the proposed extension of the Northern Railway from Tenterfield to the Queensland Border, together with an extract from the minute conveying the Cabinet's decision as to where the break of gauge shall take place, and the accommodation to be provided.

I forward also plan and section of the Queensland line from 120½ miles to the New South Wales Border.

W. H. QUODLING.

Sydney: Thomas Richards, Government Printer.—1886.

[9*d*.]

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(MESSRS. STEVENS & CO.'S CONTRACT—TENTERFIELD TO QUEENSLAND BORDER.)

Ordered by the Legislative Assembly to be printed, 20 *April,* 1886.

LAID upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works in answer to Question No. 1, on Votes and Proceedings No. 34, of the 24th March, 1886,—

"All correspondence relative to the tendering, acceptance of tender, and "transfer asked for by Stevens & Co. from them to others."

SUMMARY.

No.	Date.	Subject.	Page.
	1886.		
1	20 Jan.	Schedule of tenders for extension—Tenterfield to Border	2
2	25 ,,	Commissioner for Railways to Messrs. Stevens & Co. accepting tender	2
3	3 Feb.	Messrs. Ahearn, M'Ardle, & Co., to Commissioner for Railways asking for transfer of contract	2
4	3 ,,	Messrs. Stevens & Co. to Commissioner for Railways asking for transfer of contract	2
5	15 ,,	Messrs. Stevens & Co. to Minister for Works *re* transfer	3
6	15 ,,	Messrs. Ahearn, M'Ardle, & Co., to Minister for Works	3
7	17 ,,	Engineer-in-Chief to Minister for Works recommending cancellation of Messrs. Stevens' contract	4
8	19 ,,	Crown Solicitor to Under Secretary *re* cancellation of contract	4
9	16 ,,	Messrs. Stevens & Co. to Commissioner for Railways *re* lodgment of deposit as security	5
10	19 ,,	Crown Solicitor to Commissioner for Railways *re* cancellation of contract	5
11	24 ,,	Commissioner for Railways to Messrs. Ahearn, M'Ardle, & Co., *re* security	6
12	24 ,,	Messrs. Ahearn, M'Ardle, and Co., to Commissioner for Railways in reply to above	6
13	25 ,,	Commissioner for Railways to Messrs. Ahearn, M'Ardle, & Co., further *re* security	6
14	26 ,,	Messrs. Ahearn, M'Ardle, & Co., to Commissioner for Railways in reply to above	6
15	6 March	Minute of Secretary for Public Works *re* proposed transfer, &c.	6
16	9 ,,	Messrs. Ahearn, M'Ardle, & Co., to Minister for Works *re* security	7
17	12 ,,	Mr. C. A. Lee, M.P., to Minister for Public Works *re* commencement of work	7
18	16 ,,	Secretary for Public Works to Mr. C. A. Lee, M.P., *re* contract	8
19	16 ,,	Minute of Secretary for Public Works that Messrs. Stevens & Co. must be allowed to proceed with work	8
20	22 ,,	Commissioner for Railways to Messrs. Stevens & Co. *re* proceeding with contract	8
21	23 ,,	Messrs. Stevens & Co. to Commissioner for Railways *re* contract and submitting names of firm	9

RAILWAYS.

No. 1.
Schedule of Tenders.

SCHEDULE of Tenders opened 19th January, 1886, for the construction of the Railway from Tenterfield to the Queensland Border, being "Section 4," Great Northern Railway Extension. (Length, 10 miles 76 chains 69 links.)

No.	Tenderer.	Amount.		
		£	s.	d.
1	W. John Blunt & Co., Paddington, Sydney	96,778	2	4
2	M'Ardle & Thompson, Forest Lodge	82,849	1	8
3	Cobb & Co., Sydney	98,228	11	8
4	George Bashford, Sydney	91,511	10	0
5	Monie & Co., Sydney	79,916	16	8
6	Stephens & Co., Sydney	79,673	0	0
	Engineer's Estimate	89,617	10	6

The tender of Messrs. Stephens & Co. is the lowest, and I therefore recommend it for acceptance. Messrs. Stephens & Co. are unknown to me, but I suppose they have had experience as contractors on railway works.—J.W., 20/1/86.

The Under Secretary for Railways.—J.R., 22/1/86. For Minister's approval.—CH.A.G., 22/1/86. Approved.—J.G., 22/1/86.

No. 2.
The Commissioner for Railways to Messrs. Stephens & Co.

Department of Works, Railway Branch,
Sydney, 25 January, 1886.

Gentlemen,

I have the honor to accept your tender, dated the 19th instant, for the construction, in accordance with plans and specification, of the railway from Tenterfield to the Queensland Border, being section 4, Great Northern Railway Extension, at the Schedule of prices named therein, and have to refer you to the Crown Solicitor for the purpose of executing the necessary bond.

I have at the same time to inform you that the Government have had under their consideration the practice which has obtained of allowing contractors for railway works additional time beyond that named in the conditions, and to inform you that under no circumstances, excepting of course for those delays which are referred to in the 14th clause of the general conditions, will any extension of time for the completion of the contract be allowed.

This intimation is made to you at this time to urge upon you the necessity for making such arrangements as will enable you to complete the work within contract time.

Your tender is accepted, subject to your depositing within the stipulated time the money required as security and executing the required agreement and bond.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways.

No. 3.
Messrs. Ahearn, M'Ardle, & Co. to The Commissioner for Railways.

Sydney, 3 February, 1886.

Sir,

Herewith enclosed is an application from Stephens & Co. to have their contract for the construction of the railway from Tenterfield to the Queensland Border transferred to us, and should such transfer be accepted by the Government, we hereby agree to accept the contract under the same conditions as the said Stephens & Co. held it.

We herewith also enclose a Bank deposit receipt for the sum of £5,000, which amount is to your credit in the English, Scottish, and Australian Chartered Bank as security for the due performance of the contract.

We are, &c.,
JOHN AHEARN,
M'ARDLE, & THOMPSON,
Trading as Ahearn, M'Ardle, & Co.

No. 4.
Messrs. Stephens & Co. to The Commissioner for Railways.

Care of Briscoe, Drysdale, & Co., Sydney, 3 February, 1886.

Sir,

We have the honor to request that you will consent to a transfer of our contract for the construction of the railway from Tenterfield to the Queensland Border, to Messrs. John Ahearn, Hugh M'Ardle, and William Murray Thompson, trading as Ahearn, M'Ardle, & Co.

STEPHENS & CO.

I can see no objection to this transfer. Is the Engineer-in-Chief aware of any?—CHAS. A. GOODCHAP, B.C., 3/2/86. I have the strongest objection to speculative tenderers, and advise that the acceptance of Messrs. Stephens & Company's tender be cancelled and their deposit forfeited. It is currently reported that this contract has been offered to contractors, and also to financiers, and that it has been sold to Messrs. Ahearn & Co.; such proceedings cannot in the interests of legitimate tenderers, and also of the public works of the Colony, be tolerated for a moment; and I recommend that the tender of Messrs. Monie & Company, which is only £243 16s. 8d. in excess of Messrs. Stephens & Co.'s, be accepted.—J.W., 12/2/86.

Under Secretary.—B.C. Railways.—J.R., 13/2/86. Submitted.—13/2/86. Submitted to Minister—of course if the transaction bears the complexion the Engineer-in-Chief puts upon it the Department should not encourage such proceedings, which it would do if the transfer was agreed to, but there may be some legal difficulty in the way of cancelling the acceptance of Stephens & Company's tender. —CHAS. A. GOODCHAP, 18/2/86.

No. 5.

Messrs. Stevens & Co. to The Minister for Public Works.

Sir, 33, Pitt-street, Sydney, 15 February, 1886.

Referring to the matter of the application of even date, in which Messrs. Ahearn, M'Ardle, & Co. have unconditionally placed their £5,000 deposit in favour of the Commissioner for Railways as security for the due fulfilment of my contract for the railway line from Tenterfield to the Queensland Border, I wish respectfully to point out certain reasons why the contract should be continued in my name as accepted by the Government.

The deposit of £5,000 was made by Messrs. Ahearn, M'Ardle, & Co. in accordance with the terms of the general conditions on the 3rd instant; and had the Engineer-in-Chief for Railways (who was unavoidably absent) been in Sydney on that day the deposit would, upon his refusal to accept transfer that evening, have been placed unreservedly to the credit of Stephens & Co.

I think, therefore, it would be very hard upon me to now forfeit the contract and my deposit of £500 through no fault of my own.

I have all through endeavoured to act up to the strict terms of the conditions, but the party that originally agreed to pay his portion of the deposit, having failed to carry out his part, I was compelled to look for other partners, and I respectfully submit that having now complied with the terms of the general conditions at the earliest possible moment, and my doposit being in, I am entitled to your favourable consideration in this, to me, most important matter.

I have, &c.,
STEPHENS & CO.

Engineer-in-Chief will obtain papers.—J.G., 16/2/86.

No. 6.

Messrs. Ahearn, M'Ardle, & Co., to The Minister for Public Works.

Sir, 33, Pitt-street, Sydney, 15 February, 1886.

Referring to our letter of the 3rd instant to the Commissioner for Railways, applying to have the contract for the railway line Tenterfield to the Queensland Border, transferred from Stephens & Co. to us, on accompanying which application a Bank deposit receipt for £5,000 in favour of the Commissioner for Railways; we have now to request that you will now agree to accept the £5,000 deposit for Stephens & Co., as we have arranged to join Mr. Stephens as partners in the contract.

We have to state further that Stephens & Co. would have had this amount placed to their credit by us on the 3rd instant, if any doubt existed in our minds, if any objection would have been held to the proposed transfer. To protect Stephens & Co. from the loss of the contract, we place the deposit unconditionally to their credit.

We have, &c.,
AHEARN, M'ARDLE, & CO.

Place with other papers that are with the Engineer-in-Chief for report.—J.G., 15/2/86. Engineer-in-Chief. Urgent.

Tender—Tenterfield to Queensland Border.—As Messrs. Stephens & Co. failed to comply with the conditions of the specification, viz., to deposit £5,000 within six days from the date of the acceptance of their tender, and have in the meantime offered the contract for sale, as currently reported, I think there should be no difficulty in carrying out my recommendation of the 12th instant. As the matter now stands they propose to hand over the contract to Messrs. Ahearn & Co., for, no doubt, a monetary consideration; this should not be permitted, and I consider that the next lowest tender, that of Messrs. Monie & Co., should be accepted.—J.W., 15/2/86.

Under Secretary,—Let me know the date on which the £5,000 deposit was made in favour of the Commissioner for Railways, as security for this contract—who made the deposit; get as many particulars as possible.—CHAS. A. GOODCHAP, 15/2/86.

The deposit was received on the 4th instant, with Messrs. Stephens & Co.'s letter, asking to be allowed to transfer the contract. The two letters were pinned together, and had the deposit receipt attached to the back of the under one. Please see M.P. 86/808 herewith.—D.C.M'L., 16/2/86.

In advocating caution in adopting the course recommended by the Engineer-in-Chief, I am animated solely by a consideration of the consequences that may follow. The letter of acceptance of Stephens & Co.'s tender is dated 25th January, that is to say, it was written on that date. The messenger's book shows that it did not leave this office till the 27th (the 26th was a public holiday). I think, therefore, the 28th would have to be considered the first clear day; the sixth clear day expired on February the 2nd. The 22nd clause of the conditions of contract stipulates that "within six days after notice of his tender shall have been given, the contractor shall deposit, &c., &c., &c." The deposit made in Commissioner's favour is dated 3rd February, so it seems to be clear that the deposit was not made till one day after the stipulated time. Notice of the deposit was given on the 3rd February, by letter from M'Ardle, Thompson, & Co., who at the same time forwarded the Bank deposit receipt. It is to be inferred that the money was deposited not by Stephens & Co., but by M'Ardle, Thompson, & Co., although as it was absolutely at the disposal of the Commissioner

Commissioner for Railways as security for the due performance of the contract, it does not, I think, much matter who paid in the money. If the Minister shares the belief of the Engineer-in-Chief, that the circumstances of the case justify the course he recommends, I believe that course can be taken, in consequence of the one day's delay in paying the deposit; but still, I would advise that the matter be referred to the Crown Solicitor, in case "the practice of the Department" in regard to the time within which those deposits are accepted, may have a bearing on the transaction.—CHAS. A. GOODCHAP, 16/2/86.

Forward to Crown Solicitor, with copy of conditions, for his opinion on the case as set forth in Commissioner's minute. An early reply will oblige.—J.G., 16/2/86.

No. 7.

The Engineer-in-Chief to The Minister for Public Works.

Engineer-in-Chief's Office, Sydney, 17 February, 1886.

THE deposit receipt for £5,000 (now enclosed) I had not previously seen, nor was I aware of its existence but from the letter which accompanies it. It appears the deposit has not been made by Messrs. Stephens & Co., but by Messrs. Ahearn & Co., on the condition that the contract be transferred to them.

The conditions of the specification are, that the contractor shall deposit £5,000 within six days after notice of the acceptance of his tender; or should such deposit not be made, the Commissioner shall have the option of, and full power and authority of, declaring such acceptance to be annulled.

In this case no deposit was made by Messrs. Stephens & Co., and therefore the acceptance of their contract is null and void, and their deposit should be forfeited.

The deposit by Messrs. Ahearn & Co. was made on the assumption that the contract was to be transferred to them; but surely the Department will never permit a contractor to sell his contract not only to escape the forfeiture of his deposit (of £500), but most probably to make a profit out of the transaction.

The tender of Messrs. Monie & Co. is the next lowest, and I again recommend the acceptance of their offer.

JOHN WHITTON.

Forward to Crown Solicitor, in accordance with my minute of yesterday. Urgent.—J.G., 17/2/86.

Crown Solicitor.—J.R., 17/2/86.

No. 8.

The Crown Solicitor to The Under Secretary.

Sir, Crown Solicitor's Office, Sydney, 19 February, 1886.

I have the honor to return herewith the Engineer-in-Chief's minute, of date 17th February instant, with reference to the tender of Messrs. Stephens & Co. for the construction of the railway from Tenterfield to the Queensland Border, and to state that I do not think it clearly appears by the letter of Messrs. Ahearn & Co., with which the deposit receipt was forwarded, that such deposit was made by them on account of the contract if same is transferred to them, or on the condition that the contract should be so transferred; nor does it appear to me that it can be said that it appears by the letter referred to that the deposit was made on the assumption that the contract was to be transferred to them.

In forwarding the deposit receipt, Messrs. Ahearn & Co. say,—"We herewith enclose a Bank deposit receipt for the sum of £5,000, which is to your credit, for the due performance of the contract."

The only contract mentioned in the letter is the contract with Stephens & Co., which was the only contract then existing. Messrs. Ahearn & Co. say,—"Herewith enclosed is an application from Stephens & Co. to have their contract for the construction of the railway from Tenterfield to the Queensland Border transferred to us; and should such transfer be accepted, we hereby agree to accept the contract under the same conditions as the said Stephens & Co. held it."

It may no doubt be inferred that Ahearn & Co. intended this deposit to be the security for their carrying out the contract if same should be transferred to them, but they do not say so in express terms; and it is quite possible that, by an arrangement between Stephens & Co. and Ahearn & Co., the latter have found the deposit money, and paid same into the Bank to keep alive Messrs. Stephens & Co.'s contract, having arranged with them as to how the deposit is to be refunded if the transaction is not assented to by the Government.

It will be noticed that Messrs. Ahearn & Co., in their letter of 15th February, state that "Stephens & Co. would have had this amount placed to their credit by us on the 3rd instant if any doubt existed in our minds if any objection would have been held to the proposed 'transfer.' To protect Stephens & Co. from the loss of the contract, we placed the deposit unconditionally to their credit."

In a letter from Messrs. Stephens & Co., of same date, they refer to the deposit made on 3rd February instant, and state that, if the Engineer-in-Chief had been in Sydney, the deposit would, upon the refusal to accept the transfer, have been placed unreservedly to the credit of Stephens & Co., from which it would seem that the deposit was made by Messrs. Ahearn & Co. in the expectation that the contract would be transferred to them; but, as before stated, this is not made a condition in their letter of 3rd February. *It was open to the Commissioner to contend that the deposit was made without condition, and as they in their letter of 13th February directly assent to the money so deposited being dealt with as placed unconditionally to the credit of Stephens & Co., I do not see how the Government can contend that the deposit has not been made, and claim a forfeiture of the money sent in with the tender.

Upon the question as to payment into the Bank on the 3rd February instant being out of time, I have advised fully in my letter to the Commissioner for Railways on this subject of this day's date.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

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* I do not really contend that this is so. The use of the term conveys to me the idea that I am supposed to be in favour of Stephens & Co. obtaining the contract if possible; that is to say, if it could be done without risking the chance of a successful action for breach being brought against the Department. I should be glad to see the work taken from them, as I believe, from what I have heard, that it was quite a speculative tender.—CHAS. A. GOODCHAP, 22/2/86.

No. 9.
Messrs. Stephens & Co. to The Commissioner for Railways.

Sir, 33, Pitt-street, Sydney, 16 February, 1886.

Referring to our letter of yesterday's date, addressed to the Honorable the Minister for Public Works, I have the honor to inform you that the letter, accepting our tender for the Tenterfield to the Queensland Border Railway Contract, and bearing date the 25th ultimo, only reached me on the morning of the 28th ultimo, and, as a matter of fact, the envelope bears the Post Office date of 6·30 p.m. of 27th ultimo.* I may also point out that the communication from the Works Department of 2nd instant, requesting us to pay the deposit of £5,000 at our earliest convenience, was complied with, as per Ahearn, M'Ardle, & Co.'s letter of 3rd instant, without delay.

We may also point out that a holiday having intervened would not affect our position, as the general condition gives us six clear days from receipt of notification of acceptance, which was the morning of the 28th ultimo.

We have, &c.,
STEPHENS & CO.

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* This is the first I have heard of this communication. Will the Under Secretary let me have a copy, it may bear on the case materially.—CH. A.G., 17/2/86. Copy herewith; it is the usual notice we send.—G.B., 17/2/86.

Gentlemen, Department of Railways, Sydney, 2 February, 1886.

Referring to your contract (No. 4) for the construction of a line of railway from Tenterfield to the Queensland Border, I shall be glad if you will forward, at your earliest convenience, a Bank deposit receipt for £5,000, in the name of the Commissioner for Railways, as security for the due and proper performance and completion of the contract, as provided for in clause 22 of the general conditions relating to same, and apprise me of the names (in full) of the members of your firm for preparation of bond.

Yours, &c.,
H. M'LACHLAN,
pro Chief Clerk.

The papers, I understand, are with the Crown Solicitor,—this paper should go to him also. It seems to me that, under the circumstances of the case, it is a most unfortunate communication, as it would seem to be a waiver of the condition that the deposit should be made within six days. I am informed that it is the usual practice for the Chief Clerk to write such letters to the contractors if the deposits are not made, but I certainly never authorized the course either in this or in any other case.—CHAS. A. GOODCHAP, 17/2/86. Crown Solicitor.

No. 10.
The Crown Solicitor to The Commissioner for Railways.

Sir, Crown Solicitor's Office, Sydney, 19 February, 1886.

I have the honor to return herewith Messrs. Stephens & Co.'s letter to you, of date 16th February instant, and to state that if your letter, intimating the acceptance of the tender, was posted on 27th January and received by the contractors in due course of post on the 28th January, the deposit was, I think, made a day late; but this has been waived by your letter of date 2nd February instant, which requests that the money shall be paid in at the contractor's "earliest convenience," and they, in response thereto, paid same into the Bank on the following day.

I think also, that irrespective of this letter, as the deposit was made on 3rd February and the receipt forwarded to you on that day, and retained ever since, it would be considered as accepted by you.

From other papers forwarded from the Department of Works, it appears that it is questioned whether the deposit has been in fact made by Messrs. Stephens & Co., or by Messrs. Ahearn & Co., a letter from whom accompanied the receipt. It is suggested that the money has not been deposited on account of Messrs. Stephens & Co., but by Messrs. Ahearn & Co., in expectation of the contract being transferred by Messrs. Stephens & Co. to them.

Messrs. Stephens & Co., in their letter of date 16th February instant, assert that the deposit was made by Messrs. Ahearn & Co. in accordance with the general conditions, "That the contractor shall make deposit, &c." As the proposed transfer to Messrs. Ahearn & Co. had not at the time been assented to, the contractors were clearly Messrs. Stephens & Co.; and if Messrs. Ahearn & Co. assert that the deposit was made by them on account of Stephens & Co., to keep alive the contract, I do not see how the Government can refuse to accept it as so deposited.

The letter of 3rd February, from Messrs. Ahearn & Co., does not in terms state that the deposit has been made by them on condition that the contract shall be transferred to them, although probably this was intended. This letter forwards a request for the transfer of the contract to Ahearn & Co., and concludes by stating that the Bank deposit receipt is sent as security for the due performance of the contract; whether this performance is to be by Stephens & Co. or Ahearn & Co. is not stated.

* As the deposit receipt was accompanied by the letter which does not clearly state upon whose account the deposit was made, both should have been at once returned.

As the letter referred to raises a doubt as to the person on whose account the deposit was made, I suppose the only course will be to inquire of Messrs. Ahearn & Co. whether the deposit was made by them on behalf of Messrs. Stephens & Co. or not, before further action be taken in the matter.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

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* Not being aware of the reasons which have since transpired, I saw at the time no objection to the proposed transfer. Had the Engineer-in-Chief been in Sydney the objection would have been taken, and action decided upon at once.—CHAS. A. GOODCHAP, 22/2/83.

I see very little use of making the inquiry proposed by the Crown Solicitor. It would seem that Ahearn & Co. are acting in the interests of Stephens & Co., and will doubtless say that the deposit was made on account of the latter. However, I suppose, the inquiry may be made.—CHAS. A. GOODCHAP, 22/2/86. For Minister's decision.

Let the inquiry be made, as suggested by Crown Solicitor.—J.G., 23/2/86. Let me see letter; write cautiously.—CHAS. A. GOODCHAP, 23/2/86.

No. 11.

No. 11.

The Commissioner for Railways to Messrs. Ahearn, M'Ardle, & Co.

Gentlemen, Department of Public Works, Railway Branch, 24 February, 1886.

Referring to your letter of the 3rd instant, forwarding an application from Messrs. Stephens & Co., the successful tenderers for the railway extension from Tenterfield to the Queensland Border, for the transfer of the contract to you, and enclosing a Bank deposit receipt for the sum of £5,000 as security in connection with the contract, I shall be glad if you will say on whose account the deposit referred to was made.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways.

No. 12.

Messrs. Ahearn, M'Ardle, & Co., to The Commissioner for Railways.

Sir, 33, Pitt-street, Sydney, 24 February, 1886.

We have the honor to acknowledge the receipt of your letter of to-day's date, No. 86/1,066, asking us to say on whose account the deposit of £5,000 (as security for the contract for the railway line, Tenterfield to the Queensland Border) was made.

In reply we have to state that the deposit was made by us to your credit as security for the due fulfilment of the contract, and we have further to state that £2,000 of the money is the absolute property of George Stephens, the head of the firm of Messrs. Stephens & Co., for which he holds our receipt, and we assure you most positively that we received the money.

We have, &c.,
AHEARN, M'ARDLE, & CO.

Enclose copy of our letter, to which this is a reply, and forward the two documents to Crown Solicitor to say whether, under the circumstances, this means that in effect the amount was deposited in the interests of Stephens & Co.—CHAS. A. GOODCHAP, 24/2/86. Crown Solicitor.

This is not a reply to the question put in your letter. Messrs. Ahearn should state that it was made on account of Stephens & Co.'s contract, if the fact was so.—J.W. The Commissioner for Railways.

No. 13.

The Commissioner for Railways to Messrs. Ahearn, M'Ardle, & Co.

Gentlemen, Department of Public Works, Railway Branch, 25 February, 1886.

Referring to your letter of yesterday's date, respecting the deposit made by you in connection with the contract for the railway extension to the Queensland Border, I have the honor to point out that the statement therein contained is scarcely a reply to the question put in my letter of the 24th instant. I shall be glad if you will furnish me with a definite answer thereto.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways.

No. 14.

Messrs. Ahearn, M'Ardle, & Co., to The Commissioner for Railways.

Sir, 33, Pitt-street, 26 February, 1886.

We are in receipt of your letter of yesterday's date, No. 86/1,107, referring to our previous letter of the 24th instant, in reply to your own of same date, in the matter of the deposit of £5,000 as security in connection with the railway extension from Tenterfield to the Queensland Border.

In reply we have to state that if our letter of the 24th instant is scarcely a reply to your letter of the 24th instant, then we must frankly admit that we do not understand the tenor or purport or meaning of your question. We have assumed that your question "on whose account was the deposit made" meant by whom and in whose name was it paid into the Bank, which we have, we submit fully answered.

Any more definite answer than that we cannot give, beyond stating that the money was placed to your credit by us in the English, Scottish, and Australian Chartered Bank, as security for Stephens & Co.'s contract, Tenterfield to the Queensland Border.

We trust the Department will see their way clear to have the bond prepared for signature without delay, in terms of Stephens & Co.'s letter to the Minister for Works, of the 19th instant.

We have, &c.,
AHEARN, M'ARDLE, & CO.

Crown Solicitor, *pro* Commissioner.—G.B., B.C., 26/2/86. This is sufficient.—J.W., 27th February, /86. The Commissioner for Railways.

No. 15.

Minute of Secretary for Public Works.

Extension—Tenterfield to the Border.

Department of Public Works, Sydney, 6 March, 1886.

MESSRS. Ahearn, M'Ardle, and Thompson waited upon me to-day with reference to the acceptance of Messrs. Stephens & Co.'s tender for the construction of the railway from Tenterfield to the Border.

It will be remembered that Ahearn, M'Ardle, & Co. have applied for the transfer of the contract from Messrs. Stephens & Co. to them, and they state that they have been waiting for a reply to their application. Mr. Stephens was not present at the interview.

I informed them that the whole proceedings in connection with Messrs. Stephens & Co.'s relation to the contract were most unsatisfactory, the intimation had been made to them that their tender had been accepted, and they appear immediately in a speculative spirit to have offered the contract for sale to any firm that would agree to give them the terms demanded; it was a matter of common report that the tender had been hawked about, and I had myself seen one letter where Stephens & Co. had written to one firm offering to sell them the tender. This course of procedure was most objectionable, and if it were allowed would tend to seriously prejudice the system of tendering. It would further lead to dishonest practices, as one firm might send in two tenders, one low (a bogus tender), the other high; if the low tender were accepted and their second tender was the next in order to it, they could withdraw the first offer on the assumption that their next tender would be accepted. If there happened to be an intermediate tender then the first and lowest tender could be taken up, and a transfer asked for from the firm in whose name the first tender had been submitted. I did not wish to say that there had been any dishonesty in the present transaction, or that their application was not "*bonâ fide*," but the procedure in itself was most objectionable, and if recognized would open the door to serious evils, and tend to bring the system of public tendering into disrepute.

Further, their letter dated 3rd February, asking for the transfer covered the security under the contract, and as the letter of acceptance was sent on the 25th January, the security was not therefore lodged within the six days provided in the general conditions and rendered the acceptance liable to cancellation.

Messrs. Ahearn & Co. stated that there had been no underhand work so far as they were concerned. Mr. Stephens had found that his partner had not sufficient means to carry on the contract, and he had therefore to cast about for a firm that would join him in carrying out the work, they had no knowledge of the contract having been hawked about, and certainly were not paying such a consideration as was represented; they were unaware such a feeling existed against a transfer, as they knew they had a good name for the work they did, and thought the transfer would have been accepted without demur. They had, however, decided to withdraw the application for a transfer, and Mr. Stephens was prepared to go on with the work in which they would act as his partners, and together constitute the firm of "Stephens & Co."

They pointed out that Mr. Stephens had to deposit £500 with the tender, which would be lost if he failed to go on with the work, and in view of the risk he would hardly put in a speculative tender.

Further, with regard to the security they pointed out that the letter of acceptance did not reach Mr. Stephens till the 28th January, and the deposit was put in within the stipulated time, and in accordance with the request made to them by letter of the 2nd February. Even this time would not have elapsed only it was understood there would be no objection to the transfer.

I intimated to them that the matter would have my further consideration and that I would submit the case for the decision of Cabinet.

W.J.L.

No. 16.

Messrs. Ahearn, M'Ardle, & Co. to The Minister for Public Works.

Sir, 33, Pitt-street, 9 March, 1886.

Referring to our conversation at the interview you did us the honor to grant on Saturday *re* Stephens & Co.'s deposit as security for the railway, Tenterfield to the Queensland Border, you stated that our deposit was not made until the 4th day of February last, and was consequently one day too late to fulfil the conditions under which Stephens & Co. tendered. To place the matter fairly before the Cabinet meeting, we have now to assure you most positively that the deposit was made and the receipt handed in to the Commissioner for Railways on the 3rd of February, and not on the 4th, as stated in the minute that you quoted from.

We attach great importance to this fact, and trust that in deciding the matter you will give it every consideration.

We have, &c.,
AHEARN, M'ARDLE, & CO.

The question of extension from Tenterfield to the Queensland Border was considered by the Cabinet, and it was decided the exchange should be as formerly decided with the Queensland Government, and the Minister to accept such tender as desirable.—P.A.J., 10/3/86.

No. 17.

C. A. Lee, Esq., M.P., to The Minister for Public Works.

Sir, Tenterfield, 12 March, 1886.

I have the honor to address you on a matter of urgent and public importance, viz., "The construction of the G. N. Railway from Tenterfield to the Queensland Border, 11 miles."

I am aware that the lowest tender was accepted, but am informed the tenderer has not complied with the conditions of the contract, and consequently has not started the work, nor am I aware that any other tender has been subsequently accepted. I am also aware that one of the conditions were that the work should be finished by the end of the year. This no doubt was wisely provided for on account of the Queensland section to the same point having to be completely finished by that time.

It must now be remembered that three months of the time has elapsed, and not a stroke of work done, consequently it will require capital and energy on the part of a contractor now to complete the work in the time.

I am persuaded that no contractor can complete the work within the time, and at the price of the lowest tenderer. I am also strongly of opinion that several of the lowest tenders were below what the work would actually cost, and taking these facts into consideration, and having in view the necessity for completing the work simultaneously with the Queensland section, it is necessary that more vigorous steps be taken to complete our remaining section for reasons in addition further urged below. The question then is how can it be done? My suggestion is a simple and a practical one. 1st.

1st. Consult the contractors of the sections from Glen Innes to Tenterfield, they are good substantial men of means, they have the whole of the working plant, tools, and running gear at command, and consequently could do these 11 miles much cheaper than any outside contractor, who would have to provide all working plant, and who could not possibly construct the work so cheaply, besides could not get into work for some weeks. If the Glen Innes to Tenterfield contractors were tenderers for the section, would it not be advisable to see if they would reduce their price so as to enable the Department to accept it.

2nd. One condition should be that if the contractors named would reduce their price, and the Department would accept, it would be that they should employ a number of the unemployed men in the city, and whom the Government are attempting to provide work for. By this arrangement a large number of the unemployed could be drafted up here, and immediate work found for them without causing any additional expenditure of public money.

3rd. There are over 200 unemployed men camped around the town awaiting work when this section commences, and I am urged daily by these men to induce the Government to go on with the work to keep them from starving.

4th. I have taken the trouble to interview the manager for the contractors named to see if they would now be willing to meet the Government, and if possible agree to a price, and to execute the work by the end of the year, and I am assured that they would do so and would be prepared to employ many of the men now seeking work in the city, and could employ and put to work within 48 hours after signing contract, not less than 600 to 800 men.

I am induced to urge you to come to terms, if possible, with the contractors, because they are men of means, and have been and are good and prompt paymasters, consequently any men employed by them would be sure of getting their wages promptly, and further it cannot be denied that there is a great deal of unemployed labour at present, through the prevailing and universal depression, and I know of no readier and better means of finding employment for a number of the men than by drafting them on to this urgent work, which will not cost the country one shilling more than if the contract was carried out in the ordinary employment of labour.

I cannot too strongly urge this matter, and would ask your early consideration so that in the first place the contractors may be availed of before they dispose of their plant, and secondly to alleviate some of the distress that undoubtedly exists among the working classes.

I have, &c.,
CHAS. A. LEE.

No. 18.

The Minister for Public Works to C. A. Lee, Esq., M.P.

Dear Mr. Lee, Department of Public Works, Sydney, 16 March, 1886.

I am duly in receipt of your communication of the 12th instant, further respecting the contract for the extension, Glen Innes to Tenterfield, and note your suggestion that endeavours should be made to arrange with Messrs. Cobb & Co. for the carrying out of the work.

The whole matter I may say is now having my best consideration, and I will as early as possible bring the question to a settlement.

I am afraid, however, that we could not in the face of the excessive price submitted for the work by Messrs. Cobb & Co. offer them the contract, and to ask them to amend their tender now would be opposed to the spirit and system of public tendering.

The lowest contractor, Stephens, is now urging his claim to be allowed to proceed, and I am afraid as we have accepted his tender formally that we must let him proceed with the work.

He has associated with him, Messrs. Ahearn, M'Ardle, & Co., who bear good names as contractors, and I dare say they will, if entrusted with the extension, carry it out with expedition and satisfactorily.

I am, &c.,
WILLIAM JOHN LYNE.

No. 19.

Minute of Secretary for Public Works.

I HAVE given the matter further and fuller consideration, and in view of the opinion expressed by the Crown Solicitor in his letter of the 19th ultimo, it seems to me that Stephens & Co. must be allowed to proceed with the contract.

I wish, however, to express very strongly my disapproval of their action in "hawking" the contract about for sale, and if I could have done so without creating any legal difficulties, I would certainly have cancelled contract.—W.J.L., 16/3/86.

Inform.—G.B., 20/3/86. Stephens & Co. informed,—22/3/86.

No. 20.

Commissioner for Railways to Messrs. Stephens & Co.

Gentlemen, Department of Public Works, Railway Branch, 22 March, 1886.

With reference to correspondence which has passed respecting the proposed transfer of your contract to Messrs. Ahearn, M'Ardle, & Co., I understand that you have withdrawn the request for transfer, and that the contract will therefore be carried out in your own name as originally intended.

I

I have, however, to direct your attention to the minute of the Minister for Public Works (copy enclosed*) in reference to this matter.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways.

* Minute, 16/3/86. The papers should be forwarded at once to the Engineer-in-Chief, upon their return the Crown Solicitor will be instructed in regard to preparation of contract bond.—CHAS. A. GOODCHAP, 22/3/86. Seen by Engineer-in-Chief.—H.H.Q., 23/3/86.

No. 21.

Messrs. Stephens & Co. to The Commissioner for Railways.

Sir,

33, Pitt-street, Sydney, 23 March, 1886.

We are in receipt of your letter of the 22nd instant, No. 86/1,134 with reference to the carrying out of our contract for the railway line—Tenterfield to the Queensland Border.

In reply we have to state that we are anxious to go on with the work and regret that the Department should have so long delayed us the necessary authority to do so.

We herewith submit the names of the firm to be named in the bond, and trust that you will as soon as possible have it prepared and ready for signature.

We have, &c.,
STEPHENS & CO.

Names constituting firm { GEORGE STEPHENS.
JOHN AHEARN.
HUGH M'ARDLE.
WILLIAM MURRAY THOMPSON. }

9d.]

Sydney: Thomas Richards, Government Printer.—1886.

383—B

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY EXTENSIONS.

(SANCTIONED UNDER PUBLIC WORKS LOAN ACT OF 1884.)

Ordered by the Legislative Assembly to be printed, 27 *May,* 1886.

[*Laid upon the Table of the House, in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 5 *on Votes and Proceedings No.* 46, *of the* 15*th April,* 1886.]

RETURN showing estimated cost for preliminary work, and amount expended (up to 28th February, 1886) on permanent surveys, &c., for each proposed Extension.

Railway Survey.	Estimated Cost of Preliminary Work.			Amount expended charged to Extension.		
	£	s.	d.	£	s.	d.
City Extension	2,113	11	1	2,063	11	1
Perth to near Rockley	1,298	18	5	680	16	10
Inverell to Glen Innes	2,514	1	11	2,168	2	3
South Grafton to Glen Innes	5,759	14	5	3,777	5	11
Grafton to the Tweed River	5,422	0	4	110	9	4
Musclebrook to Cassilis	3,000	0	0	805	18	4
Tarago to Braidwood	2,087	13	2	1,687	18	1
Gundagai to Tumut	2,100	0	0	1,700	0	0
Kiama to Jervis Bay	1,235	5	4	64	6	8
Bega to Eden	2,645	3	6	944	5	10
Goulburn to Crookwell	1,342	4	1	694	16	4
Galong to Braidwood	970	4	4	945	4	4
Wagga to Tumberumba	2,178	6	2	900	12	3
Tenterfield to the Queensland Border	642	8	3	578	16	11
Orange to Forbes, *via* Cudal	4,090	17	7	4,090	17	7
LIGHT LINES.						
Forbes to Wilcannia	3,200	0	0	503	16	8
Nyngan to Cobar	1,115	6	5	1,115	6	5
Narrabri to Moree...	2,062	7	9	1,970	15	0
Culcairn to Corowa	1,417	13	0	297	18	9

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY, ORANGE TO MOLONG.

(PARTICULARS OF LAND RESUMED FOR.)

Ordered by the Legislative Assembly to be printed, 17 *June,* 1886.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 3rd June, 1886, That there be laid upon the Table of this House,—

"The area of land that has been resumed for Railway purposes on the "Orange and Molong Railway, the name of the owner of the land, the "area, and the amount of compensation paid to each respectively."

(*Dr. Ross.*)

Name	Area taken.			Amount offered.			Amount paid.			Remarks.
	a.	r.	p.	£	s.	d.	£	s.	d.	
Moulder, Edward H	14	3	28	1,365	6	0	.....	.....	.	In course of completion.
Gardner, John A.	20	0	15	1,361	6	3	1,361	6	3	
Dalton, Thomas	3	2	22	82	0	6	.....	..		Amount not yet accepted.
Walsh, John J. (occupier)	3	2	22	15	0	0	15	0	0	
Whitely, Charles	1	1	26	34	15	9	.....	...		In course of completion.
M'Kay, G.	2	2	9	84	7	0	84	7	0	
Astill, William	4	1	24	831	0	6	831	0	6	
West, John, sen	7	0	27	1,179	0	0	1,179	0	0	
Stibbard, Mrs. James	0	0	1	5	0	0	.....	.....		Amount not yet accepted.
Burridge, Joseph	4	3	20	105	11	3	105	11	3	
Murray, John	3	1	31	40	7	6	40	7	6	
Murray, Adam	21	0	5	465	1	8	465	1	8	
Caldwell, James	9	1	24	177	2	0	177	2	0	
Fuller, Robert	4	3	13	86	15	0	86	15	0	
Cantrill, Joseph	17	0	36	211	9	6	211	9	6	
Cantrill, Thomas	0	1	6	11	6	6	.....	.....	. .	In course of completion.
Cantrill, John	7	1	9	88	0	10	88	0	10	
King, N. (Trustees of)	10	3	25	218	0	0	.....			In course of completion.
Watts, William	0	1	20	5	0	0	5	0	0	
Schmich, Kasper	8	3	11	99	10	0	99	10	0	
Cantrill, William	12	0	27	214	10	11	214	10	11	
Keenan, Mary	45	2	17	999	8	7	999	8	7	
Stibbard, George	11	1	39	240	19	9	240	19	9	
M'Nab, James	2	2	24	63	11	6	63	11	6	
Falvey, D. (Executors of)	5	1	33	83	8	0	83	8	0	
Coyte, William	6	2	23	95	0	0	95	0	0	
Tunny, Owen	1	0	30	23	1	3	23	1	3	
Wright, Thomas	3	1	37	61	7	9	61	7	9	
Keenan, Thomas	4	1	23	101	7	6	101	7	6	
Carrol, James	7	3	18	122	13	6	122	13	6	
Sullivan, Michael	2	3	18	63	10	0	63	10	0	
Fuller, Robert	8	2	15	181	10	6	181	10	6	
Lemon, Samuel	7	0	20½	183	14	0	183	14	0	
Keenan, James	14	1	17	257	18	5	257	18	5	
Ford, Henry	7	2	14	171	5	4	171	5	4	
Wilson, Walter	1	2	28	26	10	0	26	10	0	
Johnstone, Henry	13	1	11	303	1	6	303	1	6	
Smith, John	87	2	4	3,031	10	6	2,884	16	0	£146 14s. 6d. remains unpaid. Matter in course of completion.
Caldwell, James	0	2	23	15	10	0	15	10	0	
Keenan, James	3	3	13	63	5	0	63	5	0	
Cantrill, W.	0	0	11½	...	.	.	...	....	.....	With Executive Council for approval of valuation.
Keenan, Mary	7	2	21½	...	..	...	...	....	.....	
Stibbard, George	2	0	35	100	8	9	100	8	9	
Pilcher, George de V.	2	0	29	35	19	9	.....	....		In course of completion.
Smith, John	10	1	1	...	.....	.	.	.....		Valuation not yet made.

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1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY FROM PEARCE'S CORNER TO BALL'S HEAD.

(CORRESPONDENCE, REPORTS, &c.)

Ordered by the Legislative Assembly to be printed, 29 *June*, 1886.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 13, *on Votes and Proceedings No.* 14, *of the* 11*th December*, 1885.]

HAS the Minister any objection to lay upon the Table of the House copies of all correspondence, plans, &c., including the Engineer-in-Chief's report on the practicability of the proposed Railway Line from Pearce's Corner to Ball's Head.

SCHEDULE.

No.	Date.	Paper.	Page.
1	12 June, 1883...	Minute by Secretary of Public Works, to make resurvey of line	2
2	18 Oct., 1883...	Assistant Engineer to Engineer-in-Chief, *re* survey	2
3	13 March, 1884...	Mr. B. Holtermann to the Minister for Works, *re* railway, Pearce's Corner to North Shore..	2
4	8 April, 1884...	Under Secretary to Mr. Holtermann, *re* railway	3
5	4 April, 1884...	Report of deputation to Minister for Works, *re* railway	3
6	13 May, 1884...	Assistant Engineer to Engineer-in-Chief, *re* survey	3
7	9 July, 1884...	Minute by Under Secretary, *re* plans	3
8	4 Aug., 1884...	Assistant Engineer to Engineer-in-Chief, forwarding tracings	4
9	4 Aug., 1884...	Engineer-in-Chief to Minister for Works, forwarding plans, section and book of reference ...	4
10	11 Sept., 1884...	Mr. Surveyor Bell to Engineer-in-Chief, *re* survey	4
11	8 Oct., 1884...	Chief Clerk to Assistant Engineer, *re* plan and section of railway	5
12	8 Oct., 1884...	Engineer-in-Chief to Minister for Works, forwarding plan and estimate of line	5
13	12 Oct., 1884...	Engineer-in-Chief to Colonial Secretary, *re* tenders being invited for railway	5
14	20 Oct., 1884...	Mr. Deane to Engineer-in-Chief, *re* Ball's Head Branch	6
15	24 Oct., 1884...	Assistant Engineer to Mr. Surveyor Bell, *re* section of line	6
16	3 Nov., 1884...	Assistant Engineer to Engineer-in-Chief, *re* plans and sections	6
17	18 Nov., 1884...	Mr. Surveyor Bell to Engineer-in-Chief, *re* survey	6
18	18 Nov., 1884...	Mr. Surveyor Wells to Engineer-in-Chief, *re* survey	7
19	23 Nov., 1884...	Mr. Armstrong to Secretary for Works, *re* sale of Berry Estate	7
20	24 Nov., 1884...	Report of deputation to Minister for Works, relative to resumption of land in Berry's Estate	7
21	30 Nov., 1884...	Engineer-in-Chief to Minister for Works, *re* estimate for railway	7
22	7 Dec., 1884...	Commissioner for Railways, *re* approval of Executive Council of plans	8
23	29 Nov., 1884...	Chief Clerk (Engineer-in-Chief's Branch) to Mr. Surveyor Bell, *re* destruction of trees in survey	8
24	12 Dec., 1884...	Mr. Surveyor Bell to Engineer-in-Chief, *re* junction of line	8
25	15 Dec., 1884 ..	Under Secretary to Engineer-in-Chief, forwarding tenders for report	9
26	17 Dec., 1884...	Engineer-in-Chief to Minister for Works, forwarding report on tenders received	9
27	22 Dec., 1884...	Engineer-in-Chief to Minister for Public Works, forwarding plan and book of reference	9
28	6 Jan., 1886...	Messrs. Morton & Hardy to Commissioner for Railways, withdrawing tender	10
29	20 Jan., 1886...	Mr. I. E. Ives, M.P., to Minister for Works, asking how matter of railway stands	10
30	25 Jan., 1886...	Minute of Mr. Secretary Garrard, that acceptance of tender be delayed	10
31	16 March, 1886...	Acting Land Valuer to Commissioner for Railways, forwarding estimate of value of land ...	10
32	15 March, 1886...	Mr. J. G. Edwards to Secretary for Works, *re* deputation	11
33	23 March, 1886...	Report of deputation to Minister for Works, respecting railway	12
34	24 March, 1886...	Mr. R. Harnett to Minister for Works, *re* land for railway	13
35	26 March, 1886...	Mr. Chapman to Minister for Works, offering to carry out tender	13
36	17 April, 1886...	Mr. H. E. Macintosh and others to Railway Committee, *re* offer of land	13
37	5 May, 1886...	Mr. I. E. Ives, M.P., to Minister for Works, *re* deputation	14
38	11 May, 1886...	Report of deputation to Minister for Works, relative to railway	14
39	17 June, 1886...	Mr. I. E. Ives, M.P., forwarding petition *re* purchase of land	18

RAILWAY FROM PEARCE'S CORNER TO BALL'S HEAD.

No. 1.

Minute by Secretary for Public Works.

Proposed Railway from North Shore to Pearce's Corner.

(Extract from M.P. 83/2339.)

12 June, 1883.

INSTRUCTION from the Minister for Works (Hon. F. A. Wright) to make a resurvey of line from St Leonards to Pearce's Corner.

The Assistant Engineer for Trial Surveys to Mr. Surveyor Whitlock.

Post Office, Gordon, 14 July, 1883.

CARRY out the instructions already given to you verbally, viz., to resurvey the trial line as staked by Mr. Wells from the junction with the Southern and Northern Junction Railway near to Pearce's Corner towards Blue's Point, to meet Mr. Jones, who is making a survey to meet you; and be careful to plot both plan and section (4 chains to vertical inch) from right to left, so that they can be joined to Mr. Jones' plan and section, and so be made continuous from St. Leonards to Pearce's Corner. Your survey may be designated "Trial Survey, St. Leonards to Pearce's Corner.''

HERBERT PALMER.

The Assistant Engineer for Trial Surveys to Mr. Surveyor Whitlock.

23 August, 1883.

ON the completion of the field work of your length of the resurvey of proposed line from the North Shore to a junction with the Homebush and Waratah line, near Pearce's Corner, you may come to this office to complete the plotting of plan and section. I cannot give you instructions as to your next field work until I have examined both the plan and section of trial survey. Your men, while you are in the office, may be employed in making and distributing pegs for the permanent staking.

HERBERT PALMER.

No. 2.

The Assistant Engineer for Trial Surveys to The Engineer-in-Chief.

[*Extract.*]

North Shore to Pearce's Corner.

18 October, 1883.

"A RESURVEY has been completed of the original trial from Blue's Point to a junction with the Southern and Northern Junction Railway. This line commences at Blue's Point, thence round the head of Berry's Bay, thence across the Lane Cove Road at a point about a quarter of a mile to the east of the Cemetery, and thence generally in the direction of that road to near Pearce's Corner, where the line bears in a more northerly direction to a junction with the Homebush and Waratah line at a point nearly 21 miles from Redfern; the length of the branch line being about 12½ miles. An alternative line is now being surveyed, which will remove the starting-point of this line from Blue's Point to Ball's Head."

No. 3.

Mr. B. O. Holtermann to The Secretary for Public Works.

Sir,

I have the honor to inform you that a deputation from St. Leonards and the surrounding districts will wait upon you on Friday next, 21st instant, at noon, with reference to certain resolutions recently passed at a public meeting at St. Leonards, copy of which resolutions are herewith attached.

I have, &c.,

B. O. HOLTERMANN.

That, in the opinion of the people of North Shore and Lane Cove, the fork line of railway from Pearce's Corner should be carried out upon the original survey to Blue's Point.

Resolutions unanimously adopted by public meeting held at the "Green Gate Hotel," Lane Cove, on Wednesday evening, 12th March, 1884:—

1st. That, in the opinion of this meeting, the Government should adopt the line originally surveyed from Pearce's Corner to Ive's Point, or some other line east of Ive's Point, instead of that recently surveyed to Ball's Head.

2nd. That the Government be requested to construct steamboats similar to those which they recently proposed to employ between St. Leonards and Sydney, to run between the proposed terminus and the city.

3rd. That the following gentlemen, viz., B. O. Holtermann, Esq., M.L.A., R. B. Smith, M.L.A., J. F. Burns, Esq., M.L.A., George Withers, Esq., M.L.A., and Messrs. Dodds, Seldon, Pockley, Richardson, McKeown, and Edwards, form a deputation to wait upon the Minister for Public Works, with the view of bringing the foregoing resolutions under his notice.

W. H. McKEOWN,
Chairman.

Engineer-

Engineer-in-Chief for Railways, for report.—F.A.W., 25/3/84. Blue's Point is not suitable either for a coal line or a passenger line, and sufficient information has not yet been obtained to justify any definite expression of opinion as to the best position for the termination of any line to the North Shore.—J.W., 27/3/84.

Under Secretary, B.C. Submitted, 31/3/84.—J.R. Will Mr. Whitton see me about this matter.—F.A.W., 2/4/84. B.C., 3/4/84.—J.R. I saw the Minister as requested.—J.W., 3/4/84. Under Secretary, B.C. Submitted, 5/4/84.—J.R. Seen.—Mr. W. Matter is under consideration.—F.A.W., 7/4/84.

No. 4.
The Under Secretary for Public Works to Mr. B. O. Holtermann.

Sir, Department of Public Works, Sydney, 8 April, 1884.

Referring to your communication on the subject of the proposed line of railway from Pearce's Corner to Blue's Point, North Shore, I am directed by the Secretary for Public Works to inform you that the matter is at present under consideration.

I have, &c.,
JOHN RAE.

No. 5.
Minutes of Secretary for Public Works.

Railway to North Shore.

Department of Public Works, Sydney, 4 April, 1884.

An influential deputation, accompanied by Messrs. Holtermann, Burns, Ferguson, Sutherland, Withers, R. B. Smith, Dalton, Chapman, Murray, and Slattery, waited upon me to-day to ask that no delay might be allowed to occur in carrying out the construction of the Railway to St. Leonards, and that the original survey should be adhered to.

I informed the deputation that the junction point—Pearce's Corner—had been definitely decided upon, the place chosen being the most suitable from an engineering point of view, and the most suitable for the residents. The site for the terminus at North Shore had not been definitely fixed, and I had asked the Engineer-in-Chief to take time and give full consideration to the matter, in order that the site would not be disputed afterwards.

I thought that two terminal points would have to be selected, one for the discharge of coal, and the other for passengers and ordinary goods.

F.A.W., 4/4/84.

No. 6.
The Assistant Engineer for Trial Surveys to The Engineer-in-Chief.

Sydney, 13 May, 1884.

As Mr. Wells has returned to the office, after satisfactorily completing the trial survey between Parkes and Wellington, I can recommend his being employed on the North Coast trial survey from Port Macquarie in a southerly direction to meet Mr. Thornbury, who is working from Maitland.

HERBERT PALMER.

I arranged with Mr. Palmer to-day to send Mr. Wells to obtain information for completing the trial survey from Pearce's Corner to St. Leonards.—J.W., 14/5/84. H.P., 15/5/84.

Mr. Surveyor Wells to The Engineer-in-Chief.

Railway Survey Camp, North Shore, 10 June, 1884.

I have the honor to report that I have completed the staking of trial line from Crow's Nest Junction with loop line to Ball's Head. I will finish the levelling on Thursday.

SAMUEL S. WELLS.

Mr. Surveyor Wells to The Engineer-in-Chief.

Railway Survey Camp, North Shore, 12 July, 1884.

I have the honor to report that I will complete trial survey, from Milson's Point to Kerosene Bay junction, with line from Ball's Head, on Tuesday next (15th instant). In consequence of the broken weather we had lately and the many obstacles in the way, such as houses and back-yards, and more especially the heavy scrub, which retarded my progress very much.

SAMUEL S. WELLS.

Mr. Palmer.—W.H.Q., 14/7/84. This work would have been completed by the date mentioned had the weather been fine; as it is the levels will not be completed before the 17th instant.—H.P., 15/7/84.

No. 7.
Minute by Under Secretary for Public Works.

Subject:—Branch line of railway from Pearce's Corner to the waters of Port Jackson at St. Leonards.

Department of Public Works, Sydney, 9 July, 1884.

When will the plans for the branch railway line from Pearce's Corner to the waters of Port Jackson, St. Leonards, be ready to lay upon the Table of the House? The Engineer-in-Chief for Railways, B.C., 9/7/84.—J.R. Very urgent. Mr. Palmer.—W.H.Q., 10/7/84.

The survey of the last proposed route to Milson's Point will be completed this week. It will then be necessary to trace copies of the plan and section of the route it may be decided to submit for the approval of Parliament. These tracings should be ready by the end of next week.—H.P., 10/7/84. An estimate of cost must also be made.—J.W., 15/7/84. Mr. Palmer. Will

Will the Engineer-in-Chief please say if the earthwork quantities of each through line from the water at St. Leonards to Pearce's Corner are to be computed as for a single or a double line of railway.—H.P., 16/7/84. The Engineer-in-Chief. I think a single line will be sufficient for the present, but land should be taken for a double line.—J.W., 16/7/84. Parliamentary plan, section, and book of reference, with approximate estimate, handed to the Engineer-in-Chief.—H.P., 31/7/84.

No. 8.
Memo. by Assistant Engineer in charge of Trial Surveys.

THE accompanying tracings show the plan and section of a proposed line of railway from Ball's Head, on the North Shore, to a junction with the Southern and Northern Junction Railway near Pearce's Corner, with a branch line, starting from the summit of St. Leonards at the Crow's Nest to a junction with the Ball's Head line at Chatsworth.

The first of these lines starts at the point known as Ball's Head, and skirts the shore of Ball's Head Bay, thereby securing a site with deep water frontage for the shipping of coal, exceeding half a mile in length; thence the line crosses Kerosene Bay, thence by a tunnel to Gore Cove, and by a second tunnel under the Greenwich Road to Gore Creek; thence, passing about half a mile from Longueville, ascends by a grade of 1 in 50 to the Lane Cove Road at Chatsworth, and follows along the eastern side of this road throughout to a point about half a mile east of Pearce's Corner, and thence to a junction with the Homebush and Waratah line at a point 20¾ miles from Redfern, the length from Ball's Head being 12¾ miles. The passenger branch connecting with this line starts in the vicinity of the Crow's Nest; thence bears in a straight direction past Magney's brickworks to a junction with the Ball's Head line at Chatsworth, at a point about 4¼ miles from Ball's Head, the length of the branch from Crow's Nest being 2¾ miles.—H.P., 4/8/84.

No. 9.
The Engineer-in-Chief to The Secretary for Public Works.

4 August, 1884.

PURSUANT to clause 9 of the "Government Railways Act of 1858," I have the honor to forward, to be laid before Parliament, copies of the plan, section, and book of reference of the proposed railway from the North Shore to Pearce's Corner.

Description.

The accompanying tracings show the plan and section of a proposed line of railway from Ball's Head on the North Shore to a junction with the Southern and Northern Junction Railway near Pearce's Corner, with a branch line starting from the summit of St. Leonards at the Crow's Nest to a junction with the Ball's Head line at Chatsworth.

The first of these lines starts at the point known as Ball's Head, and skirts the shore of Ball's Head Bay, thereby securing a site with deep water frontage for the shipping of coal exceeding half a mile in length; thence the line crosses Kerosene Bay; thence by a tunnel to Gore Cove, and by a second tunnel under the Greenwich Road to Gore Creek; thence, passing about half a mile from Longueville, ascends by a grade of 1 in 50 to the Lane Cove Road at Chatsworth, and follows along the eastern side of this road throughout to a point about half a mile east of Pearce's Corner; and thence to a junction with the Southern and Northern Junction Railway to a point 20¾ miles from Redfern, *via* Homebush, the length from Ball's Head being 12¾ miles.

The passenger branch connecting with this line starts in the vicinity of the Crow's Nest; thence bears in a straight direction past Magney's brickworks to a junction with the Ball's Head line at Chatsworth, at a point about 4¼ miles from Ball's Head, the length of the branch from Crow's Nest being 2¾ miles.

JOHN WHITTON.

No. 10.
Mr. Surveyor Bell to The Engineer-in-Chief.

Sir, Railway Survey Camp, Gordon, 11 September, 1884.

The traverse and section of the proposed alteration at Gordon I finished yesterday, but had not the plotting done in time for last night's mail. To-night I send you tracing with traverse of deviation, commencing 3 m. 20 ch., shown in red. As the ground between B and C (on plan) is sideling, I kept the traverse as near the road as possible; but to avoid the dwelling-houses at B and C—a villa and a cottage—it might be advisable to adopt for the centre line the line shown green on plan. On the other hand, if the houses are interfered with, the line should be taken half a chain nearer to the road than the red line. The continuation of the green line past the end of the traverse shows the proposed route from "D" to the junction with S. and N. Jn. Railway.

The red ground line (full) on section from A to D is the section along the traverse on plan; its continuation (dotted) from D onwards is the section along the green line from D to the junction.

One of my men will call at the Trial Survey Office on Saturday, if you will kindly have the plan ready to return to me with instructions, if you cannot have it posted to me on Friday night.

I have, &c.,
WM. REID BELL.

The Assistant Engineer for Trial Surveys to Mr. Surveyor Bell.

17 Sept., 1884.

WITH reference to the clearing of lines on the permanent staking of the North Shore and Pearce's Corner Railway, the Engineer-in-Chief has directed that, unless absolutely necessary, no fruit-trees are to be cut down, and then only after an interview with the owner. Compensation will be paid when any damage is done; and you must be careful to report in every instance the number of trees, and their probable value, which you cut down on each property.

H. PALMER.

Copy of letter as above sent to Mr. Wells on same date.—H.P.

No. 11.

The Chief Clerk to The Assistant Engineer for Trial Surveys.

8 October, 1885.

THE plan and section of the Pearce's Corner to North Shore Railway returned herewith.

The Engineer-in-Chief is much surprised that they are not finished, and wishes them to be completed immediately. As many draughtsmen as possible are to be employed on the work, and the plan and section are to be returned completed to this office within a week.

W. H. QUODLING.

No. 12.

The Engineer-in-Chief to The Secretary for Public Works.

North Shore Railway, single line—Pearce's Corner to Crow's Nest, &c.

8 October, 1885.

I FORWARD, for the consideration of the Minister, the plan and estimates of the above railway from Pearce's Corner, on the Southern and Northern Junction Railway, to the Crow's Nest, in the parish of St. Leonards, being a distance of 11 miles 15 chains, with a branch line for the conveyance of coal to Ball's Head, of a length of 3 miles 37 chains. The estimated cost (exclusive of land and compensation) of the passenger line from Pearce's Corner to Crow's Nest, is £330,000, or at the rate of £29,511 per mile for a single line.

The earthworks are very heavy, being about £9,500 per mile. I have included £70,000 for stations, which, though apparently high, will I think be required, as it will be a suburban line, with stations very close together, for the whole distance.

The branch to Ball's Head for the coal traffic is to be a single line, and leaves the passenger line to St. Leonards at a distance from Pearce's Corner of 8 miles 30 chains, and is 3 miles 37 chains in length.

After passing through a rough country, with very heavy cuttings, and two tunnels of an aggregate length of 968 yards, it reaches the waters of Port Jackson, on the western side of Ball's Head, where the erection of coal-shoots is proposed, of sufficient elevation to load the largest ships without the use of cranes. The estimated cost of this length, including tunnels, *for a double line*, sidings at Ball's Head, coal staiths, over-bridges, &c., is £380,000.

The total estimated cost of these lines, being a length of 14 miles 52 chains, is £710,000, of which amount a sum of £140,000 has been voted by Parliament *towards* their construction.

I informed the Minister this morning that the working plans and sections of these lines were ready; but on sending for them I found, I regret to state, that for some reason or other (which in Mr. Palmer's absence I cannot ascertain) they appear to have been laid aside for the last few weeks.

I have however directed that they be completed within a week from the present date, as there is not much to be done to them.

JOHN WHITTON.

Railway from North Shore to Pearce's Corner.

9 October, 1884.

PURSUANT to the Minister's instructions, I forward for the Honorable the Colonial Treasurer a tracing from the Parliamentary plan of the Railway from North Shore to Pearce's Corner.

JOHN WHITTON.

No. 13.

The Engineer-in-Chief to The Under Secretary for Public Works.

WITH reference to the Minister's verbal instructions to invite tenders for the North Shore Railway, I shall feel obliged if you will please ascertain if tenders are to be invited for the railway from Pearce's Corner to the North Shore, with a branch line for coal traffic to Ball's Head, or *for the passenger line only?*

J.W.

Under Secretary, 12 Oct., 1885. Submitted, 12/10/85.—J.R. Call for tenders at once for line, Pearce's Corner to North Shore, including coal traffic line to Ball's Head.—H.S.B., 12/10/85. Mr. Whitton, for forms of notice.—J.R., 12/10/85. Forwarded, 12/10/85.

Minute Paper.

Engineer-in-Chief to Secretary for Public Works.

Pearce's Corner to North Shore, Railway, including Ball's Head Branch.

12 October, 1885.

HEREWITH I forward a draft advertisement, inviting tenders for the construction of a line of railway from the Southern and Northern Junction Railway at Pearce's Corner to St. Leonards, North Shore, including a branch line for coal traffic to Ball's Head, being a total length of 14 miles 52 chains.

JOHN WHITTON.

The Chief Clerk to The Assistant Engineer for Trial Surveys.

13 October, 1885.

Pearce's Corner to North Shore.

REFERRING to my memo. of the 8th instant—the Gazette notice inviting tenders for this line having been issued—I have the honor, by direction, to request you to be good enough to push forward the working plans, &c., in time for the preparation of lithograph plans by the 3rd proximo.

W. H. QUODLING.

No. 14.

Memo. to Engineer-in-Chief.

Sydney, 20 October, 1885.

Pearce's Corner to St. Leonards.

THE branch to Ball's Head crosses three bays, named respectively Gore Creek, Gore Cove, and Kerosene Bay, besides another indentation of the coast-line between the latter and the Head. As the bottom in these bays may possibly prove as treacherous as is the case in Mullet Creek, on the Southern and Northern Junction, it will be desirable to take borings on the centre line in these places, and also to the left and right of the centre line, at 1 chain or 2 chains distance, as circumstances may decide, so that cross sections of the firm bottom may be plotted.

If the Engineer-in-Chief wishes me to mark the position of the borings required, I have to request that Mr. Palmer will furnish me with a tracing of the line from 11m. 10c. to the end; otherwise, perhaps, the Engineer-in-Chief will be good enough to instruct Mr. Palmer to get the borings sunk.

Robert Stanley has put in a price for the work. H. DEANE.

If these borings are required on the proposed contract for the Branch to Ball's Head, Mr. Palmer had better supply Stanley with a tracing, and mark where the borings are to be taken.—J.W., 22/10/85.

Mr. Palmer. I have given Stanley instructions as to the boring required at Gore Creek, and will continue to give him particulars of the remaining borings wanted as he proceeds with the work.—H.P., 26/10/85.

No. 15.

The Assistant Engineer for Trial Surveys to Mr. Surveyor Bell.

24 October, 1884.

I HAVE examined the section of the portion of the North Shore and Pearce's Corner line staked by you, and find that there is no necessity to make any further alterations in the centre line. You may therefore proceed with the survey of details; and it will be necessary to survey everything between the centre line and Lane Cove Road, and to the boundaries of all properties on the other side of the centre line, so that the notices of resumption may show the entire property, and the portion resumed in each case. H. PALMER.

The Assistant Engineer for Trial Surveys to Mr. Surveyor Bell.

25 October, 1884.

IT has been decided that the through chainage of the permanently staked centre line of the North Shore and Pearce's Corner line shall be commenced at the junction with the Homebush and Waratah line, and not at Ball's Head. You will therefore be good enough to start the chainage without delay, so that you can give it over to Mr. Wells as early as practicable. You will of course understand that your starting-point will be 0 ms. 0 chs. 0 lks., thence to 0 ms. 10 chs., and so on; and that the working plan and section will be plotted from left to right, as usual, starting at Pearce's Corner.

H. PALMER.

No. 16.

Memo. from Mr. Assistant-Engineer Drewett to Engineer-in-Chief.

Southern and Northern Junction Railway, Pearce's Corner to St. Leonards.

Sydney, 3 November, 1885.

THE plans, sections, drawings, and specification for the above works, which are advertised to be seen this day (3rd November) are not yet ready, and as yet I have not received the plan from Mr. Palmer's office, where, I understand, that as many hands as it is possible to employ on this work, in order to get it finished quickly, have been put on; but as there has not been sufficient time allowed for the preparation of this contract, I would suggest that the time for the exhibition of the drawings, &c., should be extended.

J. W. DREWETT.

May be extended to the 16th for seeing plans, and for receipt of tenders to the 15th December.—J.W., 3/11/85.

Railway line, North Shore to Pearce's Corner, &c.—Extension of time for inspection of plans, &c., and receipt of tenders.

4 November, 1885.

As the specification, &c., for the above railway could not be got ready in time for inspection on the 3rd instant, as advertised in the Government Gazette, I have the honor to request that the date for inspection of the plans, &c., may be extended to Monday, the 16th instant, and for the receipt of tenders to Tuesday, the 15th December proximo.

Urgent. JOHN WHITTON.

No. 17.

Mr. Surveyor Bell to The Engineer-in-Chief.

Railway Survey Camp, Gordon, 18 November, 1884.

IN reply to your memorandum of yesterday, I have to inform you that there are 2½ miles of my section to permanently stake, and I shall have the levelling for the permanent section completed on the 25th instant, when I shall send you the level-book made up. The chainage is checked, and the track has been cleared of all logs and stumps, and the pegs are being ringed as I go along.

WM. REID BELL.

No. 18.

Mr. Surveyor Wells to The Engineer-in-Chief.

Railway Survey Camp, St. Leonards, 18 November, 1884.

I HAVE the honor to acknowledge the receipt of your memo. of yesterday, No. 84/251. I beg leave to state that I have not got the through chainage from Mr. Bell yet; my work is all ready; it will not take me long, once I get it. While waiting I have made a most accurate survey of the foreshore, from Berry's Bay to Greenwich Point, together with roads, houses, and subdivisions that are upon and close to the centre line. At present I am traversing creeks and watercourses.

SAMUEL S. WELLS.

No. 19.

Mr. A. Armstrong to The Secretary for Public Works.

Sir, Lands Agency Office, 26 Bridge-street, Sydney, 23 Nov., 1885.

The Mayors of St. Leonards, East St. Leonards, and Victoria, and many others wish to wait upon you without delay to bring before your notice the fact that a subdivision of the Berry Estate has been effected, and sale is advertised to take place on next Saturday, and will embrace a large portion of the surveyed line at its terminus, inclusive of station site.

May I name 11 o'clock to-morrow to wait upon you in the matter?

I have, &c.,
A. ARMSTRONG.

Yes, inform.—W.J.L., 23/11/85.

The Under Secretary for Public Works to Mr. A. Armstrong.

Sir, Department of Public Works, Sydney, 23 Nov., 1885.

In reply to your letter of this day's date, I am directed to inform you that the Secretary for Public Works will receive the deputation on the subject of sale of Berry Estate subdivision to-morrow, Tuesday, at 11 o'clock.

I have, &c.,
JOHN RAE.

No. 20.

Minute of Secretary for Public Works.

Land resumption—Pearce's Corner to North Shore.

Department of Public Works, Sydney, 24 November, 1885.

A DEPUTATION from the North Shore, introduced by Mr. I. Ives, M.P., and comprising Messrs. Jenkins, Smith, Armstrong, M'Mahon, Clarke, and Richardson, waited upon me this morning with reference to land resumption for the railway to the North Shore. It was stated that it was proposed to sell the Berry Estate on Saturday next, and the site of the proposed railway station would be then sold in small allotments. They thought it would be greatly to the advantage of the Government if they at once served the notice of resumption upon the original owner rather than have to deal with a number of owners who would purchase on Saturday if no action is taken. Consequently, instead of having simply to deal with Mr. Berry's claim, we would have to meet numerous small owners who would require a profit upon their transactions, and in view of the after resumption a fictitious value might be put upon the land on Saturday.

I admitted, with them, the importance of the matter, but whether the resumption took place before or after Saturday's sale I did not think it would much affect the value of the land. However I promised to look into the question at once so that if any action was necessary it might be taken to-morrow.

W.J. L., 24/11/85.

Cabinet approves of resumption of land from the Crow's Nest to Pearce's Corner; from the former point a division can be made to Ball's Head, or to some other point on St. Leonards; the approval of the House will be required as to the course the line will take from the Crow's Nest. This decision has been arrived at in view of the increased estimate of the Engineer-in-Chief for Railways for the extension to Ball's Head.—G.R.D., 25/11/85.

Let the resumption notices be issued in time for Friday's Gazette.—W.J.L., 25/11/85. The plans have not been approved by the Governor and Executive Council. This will be necessary, and the line proclaimed in accordance with the provisions of the Railway Act before any resumption can legally be made.—CH.A.G., 26/11/85. What was the decision arrived at? The matter is very urgent; sale takes place to-morrow. Submitted, 27/11/85.—J.R. When were the plans, &c., of the line from Pearce's Corner to Ball's Head approved by Parliament?—CH.A.G., 28/11/85.

Approved by Assembly, 26 August, 1884. Approved by Council, 10 September, 1884. Commissioner,—G.B., 28/11/85.

No. 21.

The Engineer-in-Chief to The Secretary for Public Works.

Report—Railway from North Shore to Pearce's Corner, &c.

Land resumption.

30 November, 1885.

IN the minute of the Hon. the Colonial Treasurer, dated 25th November, 1885, having reference to the resumption of land for the proposed railway from Pearce's Corner to the Crow's Nest, St. Leonards, the following paragraph occurs:—

"This decision has been arrived at in view of the increased estimate of the Engineer-in-Chief for Railways for the extension to Ball's Head."

This statement requires explanation. The amount of £140,000, placed on the Estimates, and voted in April, 1883, was not an estimate in any sense, but was placed in the loan votes *towards* the construction

tion of the line from Pearce's Corner to Crow's Nest. At this time no surveys of the North Shore line had been made from which any estimate could be made, nor at that time was it decided where the terminus of the line for passengers and goods would be. Therefore *one estimate* only has been made by me of this extension.

With reference to the resumption of land on this line, I carefully avoided proclaiming it, as I knew it was subdivided into very small allotments along the centre line of railway, which would render the cost of the land *only* very expensive, and therefore, before proclaiming it, I desired to have the express authority of the Minister.

The works also on this line are heavier than on almost any other line in the Colony.

My impression has always been that for some time to come the traffic on this line would be very small; and it is also doubtful if any considerable coal traffic would be obtained from the northern districts to justify a separate arrangement for the shipping of coal; and as an arrangement for the coal traffic from the Southern and Western districts will have to be provided, probably at Glebe Island, the one arrangement might be sufficient for all the lines.

I therefore recommend that, in lieu of the passenger railway proposed from Pearce's Corner to Crow's Nest, a light railway or tramway be made on the existing road as far as possible, joining the present cable tramway at the top of Miller-street, and the Northern and Southern Junction Railway at Pearce's Corner.

Considering the valuable orangeries through which the railway would pass, and the manner in which the land has been cut up for sale in small allotments, I have an impression that the light railway or tramway along the road would cost little more than would have to be paid for the land and compensation alone on the proposed passenger line.

I have no section of the Lane Cove Road, but by making a few deviations I have no doubt a practicable line can be obtained.

A line of this description would, in my opinion, give every reasonable accommodation to the Lane Cove District.

JOHN WHITTON.

No. 22.

Minute for Executive Council.

Railway from Pearce's Corner to North Shore.

THE Secretary for Public Works having decided that the plan and book of reference of the above are to be submitted to the Governor and Executive Council for the approval of the line from Pearce's Corner to a point marked "A" upon the said plan, I have to request you to be good enough to have a minute prepared for submission to the Governor and Executive Council for the necessary approval.

CH.A.G., B.C., 7/12/85.

Prepare minute for Executive Council. Done.—8/12/85.

Department of Public Works, Sydney, 8 December, 1885.

I HAVE the honor to submit, for the approval of his Excellency the Governor and the Executive Council, plan and book of reference of a proposed line of railway from Pearce's Corner to a point marked "A" in said plan in terms of the Act 22 Victoria No. 19.

WILLIAM JOHN LYNE.

The Executive Council advise that the intended formation of the railway line referred to be notified in terms of the Act 22 Victoria, No. 19.—ALEX. BUDGE, Clerk of the Council.

Approved.—A.S., 8/12/85. Confirmed, 15/12/85. Railways, B.C.—J.R., 18/12/85.

No. 23.

The Chief Clerk to Mr. Surveyor Bell.

Cutting down fruit-trees on Railway Survey, North Shore to S. & N. Junction Railway.

Railway Survey Camp, Gordon, 29 November, 1884.

IN reference to your report, dated 28th September (? November), forwarding a list of fruit-trees cut down by you on this survey, I am desired to direct your attention to the enclosed copy of a minute, dated to-day, by the Engineer-in-Chief, on this subject, who expresses his surprise to learn that you should have found it necessary to destroy so many valuable trees.

W. H. QUODLING,
per A.R.M.

[*Enclosure.*]

Engineer-in-Chief's Minute, dated 29th November, 1884.

IF orange or other valuable trees are cut down, the Department will have to pay for them, at probably a most extravagant rate, and therefore do not cut any such trees down if by any possibility such a course can be avoided.

The list you have sent to me of trees cut down is sufficiently extensive, and will amount to a very large sum, and I must express my regret that such destruction was a necessity. J.W., 29/11/84.

No. 24.

Mr. Surveyor Bell to The Engineer-in-Chief.

Railway Survey Camp, Gordon, 12 December, 1884.

THE junction of this line with the Southern and Northern Junction Railway at Pearce's Corner is at 20 m. 6,810·8 lks. from Sydney, being the tangent point of the first curve.

By this mail I send you a sketch of the centre line of my section, for the purpose of plotting, with a table of particulars of curves.

WM. REID BELL.

No. 25.

No. 25.
Minute from Under Secretary for Public Works.

Sir, Department of Public Works, Sydney, 15 December, 1885.

The tenders, eleven in number, for the work specified in the margin, are referred to you for report, and you will have the goodness, as early as possible, to return them to me direct for submission to the Minister.

I have, &c.,
JOHN RAE.

Construction of railway from Pearce's Corner to the North Shore, with a branch line for coal traffic to Ball's Head.

No. 26.
The Engineer-in-Chief to The Secretary for Public Works.

17 December, 1885.

Railway from Pearce's Corner to North Shore, with a branch line to Ball's Head.

Report on tenders.

THE enclosed tenders (eleven in number) for the construction of the North Shore lines, have been received. The lowest tender is that of Messrs. Morton & Hardy, the amount being £207,647 15s. This amount, however, includes the line to Ball's Head; but as the Government decided, after the tenders had been invited, not to construct this branch, the cost of the works on this portion of the line has been deducted at the prices stated in Messrs. Morton & Hardy's tender.

	£	s.	d.
The amount of tender including the Ball's Head branch, is	207,647	15	0
The cost of Ball's Head branch, to be deducted, is	77,486	14	8
The amount of the tender for the main line from Pearce's Corner to Crow's Nest is therefore	130,161	0	4

Before this tender can be accepted, the contractors should be communicated with, and their sanction obtained to the omission of the works on the Ball's Head line, and the consequent reduction of their tender.

Should the contractors agree to this reduction, and their tender be accepted, it should not be forgotten that the proclamation of this line has not been made, and that under the Railway Act no building or ornamental grounds can be entered upon in less than six months. *Portions of the line, therefore, could not be entered upon in less than six months from the date of notice to resume such lands, and to act in contravention of this provision might give rise to considerable litigation.*

It would therefore, in my opinion, be better to delay the acceptance of any tender for this length, and to obtain a careful estimate of the probable cost of the land and compensation to be paid to owners and occupiers of the ground required for the railway, before the construction of the line be determined upon.

I may remark that this tender (£130,161 0s. 4d.), does not include land, permanent way materials, stations, gate-houses, engineering, and other incidental expenses, which will add considerably to the cost of construction.

I annex schedule of tenders.

JOHN WHITTON.

SCHEDULE of tenders opened 15th December, 1885, for the construction of a railway from Pearce's Corner to the North Shore, including a branch line for coal traffic to Ball's Head.

No.	Tenderer.	Amount. £	s.	d.	Remarks.
1	Lemm & Spence	241,436	8	4	
2	Richd. Rothwell	226,730	5	0	
3	Carey & Maund	245,402	5	0	
4	Mondy & Co.	271,934	8	4	
5	G. Blunt	254,801	5	0	
6	John Chaplin & Co.	245,813	13	4	Reduced by deduction of Ball's Head Branch, £77,486 14s. 8d., to £130,161 0s. 4d.
7	Morton & Hardy	207,647	15	0	
8	Edw. Pritchard	232,778	3	4	
9	A. & R. Amos	277,148	16	8	
10	M'Ardle & Thompson	218,128	6	8	
11	Monie & Co.	216,133	13	4	
...	Engineer's estimate, £259,630 17s., from which deduct the estimated cost of Ball's Head branch, £91,929 13s.	167,701	4	0	

JOHN WHITTON.

No. 27.
The Engineer-in-Chief to The Secretary for Public Works.

22 December, 1885.

North Shore to Pearce's Corner railway.

IN accordance with the request of 21st instant, I forward herewith the proclaimed plan and book of reference of the proposed railway from North Shore to Pearce's Corner, Southern and Northern Junction Railway.

Description: Commencing at Pearce's Corner on the Southern and Northern Junction Railway, and terminating at a point marked A in the township of St. Leonards, being a length of ten (10) miles sixty-nine (69) chains and thirty-five (35) links.

JOHN WHITTON.

No. 28.
Messrs. Morton & Hardy to The Commissioner for Railways.

Sir, Sydney, 6 January, 1886.

We have the honor to bring under your notice our tender for the construction of the proposed railway from Pearce's Corner to North Shore. We have been informed by the Department that our tender is the lowest given in for said work, but notwithstanding our repeated applications we are unable to learn whether it is intended for the works to be carried out, and as this suspense is prejudicial to our interest in tendering for other works we hereby beg to notify that we withdraw our tender, and will esteem it a favour if you will have the necessary steps taken for returning our deposit.

We are, &c.,
MORTON & HARDY.

Address—Care William Shenstone, 359, George-street, Sydney.

No. 29.
I. E. Ives, Esq., M.P., to The Secretary for Public Works.

Sir, Sydney, 20 January, 1886.

I shall esteem it a favour if you will kindly furnish me with all particulars in reference to the North Shore Railway from Pearce's Corner to the Crow's Nest, tenders for which were to be in on 15th December last, and were opened by your predecessor, Mr. W. J. Lyne, on or about that date.

The resumptions necessary were also to have been gazetted, but this has not yet been done.

Full particulars showing the exact state of affairs will enable my constituents to decide what steps are necessary (if any) to have this most important work immediately proceeded with.

Yours obediently,
I. E. IVES.

Railways inform tenders now under consideration.—J.G., 21/1/86.

The Commissioner for Railways to I. E. Ives, Esq., M.P.

Sir, Department of Public Works, Railway Branch, Sydney, 27 January, 1886.

In reply to your letter of the 20th instant, asking to be furnished with particulars respecting the projected railway from Pearce's Corner to the Crow's Nest, tenders for which were opened on the 13th ultimo, I have the honor to inform you that the matter is now under the consideration of the Government.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways.

No. 30.
Minute for Cabinet.

Department of Public Works, Sydney, 25 January, 1886.

Railway Pearce's Corner to North Shore.

THIS extension was authorized in 1882—46 Victoria, No. 23—the wording of the authority being:—"Towards construction of a line from North Shore to junction with Southern and Northern Junction Railway. Amount of appropriation, £140,000. The plans for the line were approved of in the Assembly on the 26th August, 1884."

Tenders were subsequently invited and opened on the 15th December, 1885.

The contract, including the line to St. Leonards, Crow's Nest, and also a branch to Ball's Head, the total distance being 14 miles 46 chains. Eleven tenders were received, the lowest being that of Messrs. Morton & Hardy for £207,647 15s. This of course including the Ball's Head branch. It was proposed after the tenders were opened to omit the Ball's Head branch, and Mr. Whitton found that the value of Morton & Hardy's tender for the direct line to St. Leonards would be £130,161 0s. 4d.

This price it must be mentioned includes only the mere excavation, forming culverts, &c., in fact making the road bed, and to it would have to be added the cost of the permanent-way materials, &c., land required, stations, gates, houses, engineering and other incidental expenses which will be very considerable.

Mr. Whitton estimates the cost of line Pearce's Corner to Crow's Nest, exclusive of land, but including rails, stations, &c., at £330,000, or with the Ball's Head branch, wharves, &c., at £710,000.

Since the receipt of tenders, Morton & Hardy, the lowest tenderers, have withdrawn offers. In view of all the circumstances of the case I recommend that the acceptance of a tender be delayed until an estimate of the cost of resumption of the land required be made, and that the tenderer's deposit be returned.

J. GARRARD, 25/1/86.

The Cabinet concur. Approved.—JOHN R., 25/1/86. Let the valuators see to this matter at once.—J.G., 25/1/86. Land valuer.—D.C.M'L., 27/1/86. Approximate estimate herewith.—F.S.M., 16/2/86.

No. 31.
The Acting Railway Land Valuer to The Commissioner for Railways.

Railway Department, Land Valuator's Office, Sydney, 16 March, 1886.

Approximate estimate of the cost of the land, &c., proposed to be taken for railway purposes, Pearce's Corner to North Shore.

IN compliance with the Commissioner's instructions of 25th January last, the land valuer submits herewith an approximate estimate of the value of the land proposed to be taken from private persons for railway purposes, from Pearce's Corner to North Shore; considerable time has been spent in this inquiry, and

and a close inspection made of all the properties in question and all the information available respecting them obtained.

The land valuer believes the estimate here given to be a fair and sufficiently liberal one.

F. S. MACDERMOTT,
Acting Railway Land Valuer.

ESTIMATE of probable cost of Land, Pearce's Corner to North Shore.

	Area.			Rate per acre.			Amount of Valuation.		
	a.	r.	p.	£	s.	d.	£	s.	d.
Bush land	29	3	8	50	0	0	1,490	0	0
	8	0	26	90	0	0	734	12	6
	26	2	38	120	0	0	3,208	10	0
	11	1	22	180	0	0	2,049	15	0
	12	3	37	200	0	0	2,596	5	0
	4	3	7	600	0	0	2,876	5	0
	4	3	22	700	0	0	3,421	5	0
	5	2	0	800	0	0	4,400	0	0
	5	1	12	1,200	0	0	6,390	0	0
Cleared land	8	1	25	100	0	0	840	12	6
	27	0	17	130	0	0	3,523	16	3
	6	2	32	200	0	0	1,340	0	0
	1	0	31	300	0	0	358	2	6
Orchards	11	2	18	175	0	0	2,032	3	9
	14	3	10	245	0	0	3,629	1	3
	4	1	21	325	0	0	1,423	18	1
							40,314	6	10
Forced sale at 10 per cent							4,031	8	8
Houses							3,500	0	0
Severance							15,200	0	0
Total							£63,045	15	6

No. 32.

Mr. J. G. Edwards to The Secretary for Public Works.

Sir, 278, Pitt-street, Sydney, 15 March, 1886.

I beg to inform you that at a public meeting held at St. Leonards on the 22nd ultimo, several resolutions relative to the construction of the railway from Pearce's Corner to St. Leonards were unanimously passed.

A committee was also appointed by that meeting to bring the resolutions adopted under your notice.

A meeting of the committee was held at the Exchange this afternoon, and the following gentlemen were appointed a deputation to wait upon you, viz.:—Sir Henry Parkes, K.C.M.G., I. E. Ives, M.P., J. C. Neild, M.P., B. Jenkins (Mayor of St. Leonards), M. M'Mahon (Mayor of Victoria), H. Fleming (Mayor of North Willoughby), Hon. Alexander Dodds, M.L.C., and Messrs. W. H. M'Keown, G. R. Whiting, F. Smith, Blomfield, and A. Achison.

If you would early appoint a time when you could give a deputation audience we should feel obliged.

I have, &c.,
JAMES G. EDWARDS.

Minister will see deputation Tuesday (23rd) at 11 a.m. Informed.

North Shore, 23 March, 1886.

WE, the undersigned, owners of land through which the proposed North Shore to Pearce's Corner Railway is to pass, hereby agree to give the land to be resumed for the construction of the said line, as shown on plan prepared by the Railway Department, provided we are compensated for our improvements, and that the line is proceeded with at once.

A. G. BLOMFIELD, 1½ chain.
T. HARNETT, JUNIOR.
R. & W. GREEN, Lane Cove Road.
R. ARCHIBALD.
E. ABRAHAM.

North Shore, 23 March, 1886.

WE, the undersigned, owners of land through which the proposed North Shore to Pearce's Corner Railway is to pass, hereby agree to accept the amount opposite our names for the land to be resumed for the said line as shown on plan prepared by the Railway Department, provided we are compensated for improvements on such land, and that the line is proceeded with at once.

A. G. BLOMFIELD, 1½ chain.
R. & W. GREEN, Lane Cove Road.
GERALD ARCHIBALD.
JAMES MONTGOMERY.
PHILIP J. RICHARDSON.

Mr.

Mr. J. Edwards to The Secretary for Public Works.

Sir, North Shore, 23 March, 1886.

At a large and representative meeting, convened by the Mayors of St. Leonards, East St. Leonards, Victoria, and North Willoughby, held at the Masonic Hall, North Shore, on Monday, the 22nd day of February last, the following resolutions were unanimously carried:—

1. That this meeting respectfully requests the Government to proceed at once with the construction of the railway from Pearce's Corner to St. Leonards.
2. That this meeting pledges itself to use its influence collectively and individually to induce proprietors along the said proposed line to accept the Government valuation of lands to be resumed.
3. That the following gentlemen, with power to add to their number, be a Committee to act as a Deputation to submit results of this meeting to the Government, and generally to proceed as they deem advisable, until the objects of this meeting are fulfilled, viz.:—B. Jenkins, Mayor of St. Leonards; Mr. McMahon, Mayor of Victoria; H. Fleming, Mayor of North Willoughby; Hon. Alexander Dodds, M.L.C.; P. F. Richardson, J.P.; W. H. McKeown, J.P.; H. Cornwell; J. G. Edwards; G. R. Whiting; W. F. Muston; T. Forsyth; A. Armstrong; G. T. Clarke; F. Smith; J. Ward; Vernon; N. P. McBurney; W. Wilson; W. Sayers; J. W. Cliffe; R. Harnett; Blomfield; Donnelly; Fisher; J. Robertson; W. Waterhouse; F. Punch; J. Monday; James Hobson; Captain Brett; J. C. Neild, M.P.; Gracey.

In presenting the foregoing resolutions we would submit that the North Shore to Pearce's Corner Railway, for the following reasons, should be proceeded with at once:—

1. Land along the proposed route is daily increasing in value, which must considerably add to the cost of resumption unless the land is taken at once.
2. The proposed line forms an important link in the railway system of this Colony.
3. The construction of the said line will open up the most beautiful, attractive, and productive district existing within many miles of the city.
4. The deep waters on the north side of Port Jackson cannot be fully utilized till this line is constructed.
5. Our suburban lines have proven themselves to be the best paying lines in the Colony.
6. The line has been approved of by Parliament, and its immediate construction has been promised by every Government holding office during the last five or six years. We therefore respectfully beg to urge that you will at once resume the land along the proposed route, and take immediate steps for the construction of the said railway.

I have, &c.,
JAMES G. EDWARDS,
Secretary N.S.R.C.

No. 33.

Minute of Secretary for Public Works.

Department of Public Works, Sydney, 23 March, 1886.

Railway—North Shore to Pearce's Corner.

A DEPUTATION, consisting of Messrs. I. Ives, M.P., the Hon. A. Dodds, J. C. Neild, M.P., Captain Jenkins, Mr. M'Mahon, Fleming, Allison, Smith, Whiting, Blomfield, M'Keown, and Edwards, waited upon me to-day with reference to the railway from Pearce's Corner to the North Shore.

The statement enclosed was presented in favour of the objects of the deputation.

The deputation urged that the construction of the line should be at once proceeded with in pursuance of the implied promises previously given. The proposed line would pass through a splendid residential area and give facilities for settling a large suburban population in most healthy localities. At the present time the district was only sparsely populated through the want of facilities, but a great portion of land had been taken up and would be built upon if the line were constructed.

They urged that the line would not merely be a local one but that it would be of national importance, and sooner or later would have to be undertaken.

The coal traffic too would pass over this extension, and furnish a large source of revenue.

I informed them that when previously in office, some four months ago, a deputation waited upon me to urge the Government to invite tenders for the line, and also to provide for the resumption of land for the terminus at Crow's Nest. I promised that no time would be lost, and although a little delay occurred in arranging the necessary legal forms, I ultimately had tenders invited, but shortly afterwards the then Government vacated office.

The tenders were in due time received but action was delayed by the succeeding Government presumably on account of the cost that would be entailed in resuming the land required, and the matter was then further complicated by the lowest tenderers withdrawing their offer and there the matter seemed to drop.

One of the most important considerations in the matter was that of the cost of the land that would have to be resumed.

I had had a rough estimate prepared and found that the cost would probably be from £60,000 to £70,000, and this was standing in the way of carrying out the line. I understood it was the intention of the Committee appointed to watch this matter to endeavour to arrange for the land as far as possible to be given free, or the Government valuation accepted, and in view of the enhanced value that would be given to the properties by the construction of the railway, I thought it only reasonable that the Government should be treated liberally, and the land required given free; of course I did not expect all to give their land free, as in the case of small allotments perhaps nearly the whole of the holding would be taken and consequently there would be no enhanced value.

The amount voted for this work was £140,000 and the tender for the earthworks alone to the Crow's Nest was £130,000; if the cost of the land, permanent way, and stations had to be added, the cost would be nearer £300,000 altogether, so that in view of the excess over the vote, the question had to be carefully

carefully considered, but if the land were given free matters would be very much facilitated, and I urged upon them to take definite action in the matter. I had done all in my power to complete the matter, and had not altered my opinion if the item of land compensation was reduced. I did not think there would be anything further that would prevent the line being carried out.

It was not the practice to ask for the free gift of land for railway purposes, but the present was an exceptional instance, as the cost would so largely exceed the vote that something would have to be done to give a reduction. It was a strong reason in favour of the construction of the line that it would improve Government land, and this matter would not be lost sight of. Another reason was that the line would probably form a coal branch, the coal being taken to the deep waters of Port Jackson. The original proposal in this connection had been abandoned in the first instance, because of the cost involved, but another scheme was under consideration, and no doubt something definite would ultimately be adopted.

With regard to the amount of the reduction that I would consider necessary, I stated I would fix no amount but if the sum was reduced by a fair proportion I would submit the matter to my colleagues, with a view of obtaining their approval to the work.

I was informed that Mr. Harnett and Mr. Gracey would give the land required so far as they were concerned, free, and I thought this an evidence of public spirit that should be imitated.

With regard to land compensation I took occasion to mention that I knew of many cases in the interior where the railways had run through large properties, increasing their value two and three fold, and yet in addition the owners claimed and received large sums for compensation.

This it seems to me is wrong in principle, as I think the Government should receive some consideration in view of the enhanced value given to land by the construction of the railway.

W.J.L., 23/3/86.

No. 34.

Mr. R. Harnett to The Secretary for Public Works.

Sir, 310, George-street, Sydney, 24 March, 1886.

I have the honor to state that the great interest I have taken in the welfare of North Shore and its inhabitants for the last quarter of a century has induced me to wait upon you in furtherance of the views of the inhabitants.

A railway from Pearce's Corner to Cremorne is urgently wanted with a lead off at one or more intermediate points of the harbour. As I purchased large areas of land in the district or parish of Willoughby I am prepared to allow the Government to construct a railway to go through my land so purchased, and such railway to be completed within three years, and not to exceed one (1) chain in width, and where the area did not exceed one-tenth of the block through which the line may pass—for which I shall never require compensation, and I have little doubt that my co-partner will approve of my action in the matter.

I have, &c.,
R. HARNETT.

Further, since the first sod was turned in Australia for railway purposes the interests of Australians have suffered immensely through alienation of funds in payment of compensation for lands resumed, which lands had been previously useless, and which were only made valuable by the action of the authorities in pushing forward railway lines.

I have, &c.,
R. HARNETT,
(*pro* HENRY CHAS. CATT.)

Please acknowledge, and put with papers to await the result of action to be taken by the North Shore Committee in regard to having the land required conveyed free as far as possible.—W.J.L, 25/3/86.
Acknowledged.

No. 35.

Mr. J. T. Chaplin to The Secretary for Public Works.

Sir, Sydney Sewerage, Section 8, Brown-street, 26 March, 1886.

Seeing that a deputation of influential gentlemen have waited on you *re* the construction of the North Shore and Pearce's Corner Railway, in the event of your deciding to carry out the work as per plans and specifications upon which Tenders have been called for, mine being the second tender and the lowest having withdrawn his, I beg most respectfully to offer to return the £500 and leave my tender open for your acceptance.

I have, &c.,
JOHN T. CHAPLIN,
Attorney for EDW. PRITCHARD.

Acknowledge.—W.J.L., 27/3/86. Done, 29/3/86. Put with tender papers.—CH.A.G., 30/3/86.

No. 36.

Mr. H. E. M'Intosh to The Secretary of the North Shore Railway Committee.

Sir, Church Hill, Gordon, 17 April, 1886.

I am willing to give 2 chains in width out of the 4½ chains required for railway purposes through my orchard (2 chains being the ordinary width of line), provided that the present survey is adhered to; also, that I receive full compensation for all fruit-trees and improvements, and for all other land required for station, railway roads, or other purposes; also, for all loss or damage whatever sustained by me.

This offer will hold good for the term of twelve months from this date.

I am, &c.,
H. E. M'INTOSH.

Mr.

Mr. D. Roberts to The Committee of the North Shore Railway.

Gentlemen, The Premier Property Investment Co. (Limited), Sydney, 20 April, 1886.

I am authorized by the Directors of the above Company to offer as a subscription towards the Railway fund one hundred and twenty guineas, equal to £1 per acre of land held by the Company near the proposed line.

I am, &c.,
D. ROBERTS,
Manager.

Mr. M. A. Johnson to Mr. P. F. Richardson.

Sir, Gordon, 20 April, 1886.

I send this according to promise to inform you that I have concluded to accept the sum of one hundred pounds per acre as compensation for what land the railway requires of mine.

Hoping this may prove satisfactory,

I am, &c.,
M. A. JOHNSON.

Mr. S. H. Lewis to Mr. J. G. Edwards.

Sydney and Suburban Mutual Permanent Building and Land Investment Association (Limited).

Sir, 126 Pitt-street, Sydney, 21 April, 1886.

I duly received your esteemed favour of 17th instant, and laid the same before my Directors yesterday.

I am instructed to say that they have no objection to join with other proprietors in giving the land necessary for the railway to pass through.

I am, &c.,
S. H. LEWIS,
Manager.

Mr. W. Clarke to Mr. J. G. Edwards.

Anglo-Australian Investment, Finance, and Land Company (Limited),

Dear Sir, Sydney, 20 April, 1886.

My Board of Directors have this day agreed to convey to the Commissioner for Railways the land required by him from the block in Lane Cove Road, we own.

The width to be taken is not to exceed a chain in measurement. This offer is conditional on the line of railway from North Shore to Pearce's Corner being at once proceeded with.

I have, &c.,
WILLIAM CLARKE.

No. 37.

I. E. Ives, Esq., M.P., to The Secretary for Public Works.

Dear Sir, Sydney, 5 May, 1886.

After I had a conversation with you yesterday evening I received the enclosed note. Will you make an appointment to receive the report of the Committee.

I am, &c.,
I. E. IVES.

[*Enclosure.*]

The Acting Secretary to I. E. Ives, Esq., M.P.,

Dear Sir, 16 Macquarie-place, Sydney, 4 May, 1886.

Will you be kind enough to write to the Minister, asking if he will receive a deputation of the Railway Committee to present their report on the cost of compensation of the land between Pearce's Corner and St. Leonards, for Friday next, or, if not convenient for him on that day, will he be kind enough to appoint a day.

I am, &c.,
A. G. BLOMFIELD,
Acting Secretary.

The Under Secretary for Public Works to I. E. Ives, Esq., M.P.

Sir, Department of Public Works, Sydney, 6 May, 1886.

In reply to your letter of the 5th instant, I am directed to inform you that the Secretary for Public Works will receive the deputation of Railway Committee, on the subject of cost of compensation for land between Pearce's Corner and St. Leonards, on Tuesday, 11th instant, at 11 o'clock a.m.

I have, &c.,
JOHN RAE.

Are the plans &c., for North Shore Railway, in a sufficiently advanced state to enable tenders to be called? Have they been laid upon the table of the House and passed?—W.J.L., 16/4/86.

The plans were approved by Parliament in August and September, 1884, but they have not been approved by the Governor and Executive Council. Tenders were received in December last, but no offer was accepted. The drawings and specifications are available for the invitation of fresh tenders, but before any further action is taken in regard to this railway I should like to have an interview with the Minister.—J.W., 16/4/86. The Hon. the Minister. Will see Mr. Whitton, in reference to this matter, on Wednesday next.—W.J.L., 22/4/86.

No. 38.

Minute of Secretary for Public Works.

Department of Public Works, Sydney, 11 May, 1886.

North Shore to Pearce's Corner Railway.

A DEPUTATION from the North Shore, consisting of Sir Henry Parkes, Mr. Ives, M.P., Jenkins, McMahon, Cliff, and McKeown, waited upon me to day with reference to the above. At a previous deputation I informed them that the action of the Government in connection with the construction of the railway would largely depend upon the cost of the resumptions of the land required, but if they could induce the landowners to give the land free, or accept a nominal amount, it would greatly aid the Government in coming to a decision. They

They stated that the matter had been taken up by a Committee, who had interviewed the various owners, whose lands would be taken for the railway; and the result of their labour is shown in the accompanying report. Briefly stated, the valuation of the whole resumptions necessary was about £63,000, but so many owners had decided to give their lands free, or to accept a nominal amount, that the valuations would be reduced they believe to about £30,000, and in this estimate was included the cost of Mr. Berry's land, valued at from £10,000 to £15,000; it was probable that Mr. Berry would give the land or accept a nominal sum, and thus further reduce the amounts to be paid. It was also said that if necessary a sum of money would be contributed towards the expense of the line.

I stated that I thought it rather unfair to those who promised to give the land free that a number should demand compensation, but I promised that if Mr. Berry would give his land free, or accept a nominal amount as compensation, I would unhesitatingly recommend the construction of the line as soon as possible. When they were here previously I had made it a condition they should attempt to get the land at the lowest price, and I thought they had meritoriously carried out that condition, and in my opinion the same principle should operate in all railway resumptions, as I thought it very unjust that a man should have his land greatly improved by the Government Railway, and at the same time receive a large value for the land actually taken.

The Committee offered to give any further assistance in their power in connection with the settlement of the resumptions, and I promised finally, that if they could induce Mr. Berry to give his land free, or accept a nominal amount, I would recommend to my colleagues that no time should be lost in going on with the line.

Mr. Ives further mentioned that a contractor had informed him that he would be prepared to construct the line at £30,000 less than the lowest tender previously submitted. W.J.L., 11/5/86.

THE RAILWAY COMMITTEE'S REPORT.

APPENDED is the North Shore Railway Committee's report to the Government:—

Gracey's 35-acre block.—Mutual Provident Building Company will give their consent.

Jacob Price's is the second portion, and the land taken is entirely orchard and improved. He requires to be paid for improvements, and will no doubt accept anything in reason; but it must be remembered that it takes 1a. 0r. 4p. out of his small area.

Messrs. Ross, Robertson, and Macrae. The next private property, at the north corner of Bush-street, and is unimproved. The railway will require about 6½ acres; and we saw them, and they are willing to give the land to the Government if the railway is proceeded with at once.

Pomeray—the next property the railway touches—we have not seen, but as it only takes a corner of about 17 perches it is not worth considering, and we can safely guarantee it.

Henry Ingram.—Same as Penning; only 25 perches, and cannot hurt his property. Did not see him, but not considered necessary.

Herbert Fowler.—Will give land at cost. Now National Building Company.

Frank Mooney and L. Hamel will give land.

Peter Kershlaw.—A. G. Blomfield has signed an agreement to give the land required for actual railway line if the works are proceeded with at once.

Patrick Norman.—The railway merely takes in 20 perches, or ten young orange trees. We saw Mrs. Norman, and they will give the land, provided they get paid for improvements, but we believe they will give everything in any case.

J. B. Lucas.—He was absent, but the railway takes his house and orchard, ruins his small property of about 5 acres entirely, and we were informed by Mrs. Norman and Mr. Dobson, his neighbour, that he will require compensation, and we agreed that his was a case in which we could not ask him to give, but in which the committee hope themselves to assist the Government in bringing forth evidence, and assisting them in getting it at a fair and reasonable cost.

Joseph Dobson.—We saw Mr. Dobson, who was very willing to assist, but pointed out that the railway took the best part of his orchard, and that so long as he was paid for improvements he would give the land, and would take what the Government offered. We, however, apprehend no difficulty in dealing with Dobson, as he is anxious for the railway.

R. B. Smith and others—the next on the line—have agreed to give the land for nothing, provided the railway is proceeded with at once.

Reuben Tawyer—the next on the list—we interviewed at considerable length, but could do nothing with him; he will stand out for all he can get. All his land taken is orchard land, and consisting of young trees. His arguments are too absurd to dwell on, and his claim will be absurd, but the committee will act with the Government, and it can be cut down to a reasonable sum.

Trustees late J. F. Jones.—Bush land; no one living on the land. We have not seen Jones and Jones, solicitors, but feel confident of getting the land for nothing.

John Brodie, sen. and jun.—Will accept Government valuation.

Henry Hare.—Will accept Government valuation.

David Ryan.—Orchard and bush land. Take the Government valuation that all his neighbours are doing.

E. K. Wilson.—Saw him, but could do no good, as he is one to be fought with. Committee will assist the Government, but if he is reasonably paid for improvements the cost of the land will be nominal.

Wm. Ray.—Saw him, and he was agreeable to take whatever was offered to him; but as his land was of so small an area he could not afford to give it for nothing, but he appeared to us a very fair and reasonable man.

Captain Craig.—His land is highly improved, but the proper men to see are Messrs. Jones and Jones, solicitors, Pitt-street, and will see them later on.

Peter Gilroy.—Saw him, but he would give nothing, and uses the arguments of the ignorant, and is blind to his own interests, so he must be looked upon as one to fight; a fair thing can be arrived at, as it takes his dwelling, &c. Committee will assist Government.

Port Jackson Land Co.—Will give all land required.

John Brodie.—Will accept Government valuation.

Mr. McMillan.—Government valuation.

Wm. McMahon.—Bush land, not being other land. Decided to leave him to Mr. Cornwall to arrange with.

A.

A. J. Brady.—Bush land; no dwelling or improvements. This land is owned by Mr. Brady and Mr. J. A. Brown. Will give the land for nothing.

Henry Cornwall.—We called and saw Mr. Cornwall, who was most kind and hospitable, and said at once that he would give all his land required for the railway unreservedly, and would also do what he could in the neighbourhood.

Porter Bros.—Richard, Thomas, and Michael.—We saw Michael, who said he was not going to give Government anything, and required to be paid handsomely, and he was so narrow-minded and stubborn that it was useless wasting time with him; his brothers are the same. Their claims were absurd, but we will gladly act with the Government, and they can be reduced to a reasonable figure.

Mrs. Drewell.—Decided to leave her to Mr. Cornwall. Will report later on.

George McIntosh.—Will accept Government valuation.

James Jones.—Part of small allotment; will take what is offered.

Osborne.—Part of small allotment; area too small to bother about.

Michael O'Grady.—Ditto; nominal sum we should say.

Edwin McIntosh.—Will accept Government valuation.

Buckingham.—Report later on.

Ann Hill.—Small allotment. Would require to be paid, as the railway ruins her small property.

Jane Pymble.—Did not see her. She has a small allotment, and will no doubt require to be paid, but a nominal sum would satisfy her.

H. C. Buckingham.—Did not see him; to be interviewed, and report further on. We think that he will give the land; if not a very small sum need be paid.

W. McKeown.—Will give all but improvements.

McMahon Family.—Will take Government valuation.

Menzies.—Will take Government valuation.

Trustees of the late John Brown.—Saw Mr. Brady, solicitor, Phillip-street, who says he acts for trustees, that they will no doubt give the land.

Menzies and Vernon (now Waterhouse).—Will take Government valuation.

McIntosh Family.—Will take Government valuation.

R. Precious, G. Precious, H. Kitchin, Miss Gazelly.—Government valuation.

George Waterhouse.—Will take Government valuation.

Robert Neville, Wm. McIntosh, Mrs. Edwards, J. E. Connors.—Will give the land, we understand, if paid for improvements.

Mrs. Powell.—We saw this old lady, who is very old, will give nothing, but agreed to accept at the rate of £100 per acre for her land.

Capt. Pockley.—We believe he will give his land if paid for improvements.

McGillvery (Bell and Scott).—Wrote Mr. Bell, but no reply, yet every reason to believe he will give the land.

M. Johnstone.—We saw Mr. Johnstone, who was very fair and reasonable, and agreed to take what was offered.

W. Johnstone.—Now property of Mrs. W. Johnstone, widow. Will accept Government valuation.

William Bickle.—Saw Mr. Bickle, who admitted the advantages of the railway, and said if he could afford it he would gladly give the land and improvements, but he pointed out that he had only just given the Government a 66 ft. road out of his land, but he would take whatever the Government gave him.

W. Braham will give the land.

Precious and Doust, now Curran and Johnson.—We understand from Mr. W. Clarke, M.P., that they will give the land.

John Kent, Jas. Burns, and Erwin.—Think they will want to be paid. Saw Erwin next day, and he says he is agreeable to give the land, but before signing he must consult his partners, Kent and Burns, but we think can consider it as given.

Seldon, trustees of late Robert Seldon.—Will give the land required.

J. F. Montgomery.—To be seen in town.

Thos. Coleman.—Saw Coleman, who was unreasonable, and would not give the land, as he said he did not want the railway, and we could see that he was simply living on waiting for the railway, as his fruit trees and place generally is going to decay. However, he agreed later on to accept the Government valuation, whatever it may be.

Precious.—This land belongs to Anglo Investment Company. Mr. W. Clarke, M.P., the manager, has written stating that he will give the land required for railway for nothing if proceeded with at once.

Richard Archibald.—We saw Mr. Archibald, and had a very long interview, and at first he refused to give the land for nothing, but would take Government valuation. However, after considerable amount of argument, and Mr. McMahon's seductive eloquence, Mr. Archibald agreed to give the land for nothing, and signed a paper to that effect; and as the area taken by the railway amounts to 5 acres 1 rood and 18 perches, Mr. Archibald's liberality should be thoroughly appreciated.

Gerald Archibald.—We saw this gentleman, who refused to give the land for nothing, as he said it cut off his frontage to the road, but he agreed to take the Government valuation.

Geo. Waterhouse.—He is not agreeable to give the land, we understand, so he must be looked upon as one to be fought.

John Haughton.—Will accept Government valuation.

F. B. Treatt.—All small lots, and cannot well be asked to give the land, but will take Government valuation.

Edward Haines.—Only half perch required; not worth bothering about.

Harnett and Stuart (Sir A.)—Have already agreed to give the land all along the line owned by them, as required by the railway, as advertised in the *Sydney Morning Herald.*

Mr. M'Keown (William).—Will give the bush land for nothing, but the other small lots he agrees to take the Government valuation for.

John Basham.—Will accept Government valuation.

Harnett and Stuart.—Will give land, as aforesaid.

Rev. Geo. M'Intosh.—Did not see him, but look upon it as useless, as they are all small lots, and ruined by the railway, so to speak, but will no doubt take Government valuation.

Minis

Minis Asher.—Did not see this gentleman, as all his land is comprised of small lots, and he not being noted for liberality will no doubt require to be paid for the land, and we might look upon him as one to be fought. Committee will assist the Government.

E. H. Day.—Will accept Government valuation.

Harnett and Stuart.—Will give the land, as aforesaid.

Phillip F. Richardson.—All comprise small lots, and whole area of holding only about 6 acres, and the railway ruins the property, but Mr. Richardson is agreeable to take the Government valuation whatever it may be.

Harnett and Stuart will give the land, as aforesaid.

James Montgomery.—Saw Mr. Montgomery, who was very reasonable, and although the railway cut up his small allotments purchased by him at subdivision sales, he is agreeable to accept the Government valuation whatever it may be, if railway is proceeded with at once; signed to that effect.

Thomas Dalton.—Bush land, no buildings or improvements. To see Mr. Dalton in Sydney.

Dr. On Lee.—Will take Government valuation.

James Walsh.—Publican in St. Leonards to be left to Mr. M'Mahon to interview.—Government valuation.

Henry Piddleton.—Will accept Government valuation.

Francis Murphy.—Not at home when we called. To be left to Mr. M'Mahon.—Government valuation.

James Medley.—Will accept Government valuation.

Henry Ingram.—Will accept Government valuation.

J. F. Burns and Edward Lee.—Will give the land.

John Cardwell.—1 rood 23 perches—will accept Government valuation.

William L. Horsley.—Area taken by railway, 3 perches. Too small to bother about. Not being on the ground we did not see him.

Geo. Jones.—Area taken only 14½ perches. Not being on the ground we did not see him. Area too small to be worth considering.

E. E. Brett.—Area taken, 16 perches and only one small allotment owned by Mr. Brett. Will not give it for nothing, but will accept Government valuation.

John Clatworthy.—Small allotment; not occupied and is unimproved. Report later on, but do not expect him to give it.

Sir Alexander Stuart and Henry Russell.—Will give the land required for railway, if proceeded with at once by the Government.

Thomas Broughton.—Have written him to his residence, Glenmore Road. No reply yet, title to land being contested.

Francis Lord.—This gentleman agreed to give the land, provided he was paid for the house and improvements, which the line takes.

Ann Archibald.—Will give the land; improvements to be paid for.

Sydney and Suburban Mutual Permanent Building, Land, and Investment Association (Limited).—Will give the land.

John Dawson, late Sergeant of Police, is the owner of the next block, and we saw him. He is not agreeable to give the land, but will accept the Government valuation.

David Berry.—Five blocks, containing an aggregate of 20 acres 32 roods 12 perches.

Summary.

The foregoing may be briefly summed up as follows:—

1. That the most important man to induce to give his land is Mr. David Berry, because of the extent of his claims should he demand compensation. The committee hope, however, to get the land for nothing, or at a comparatively nominal figure.

2. That there are considerable number of persons who own land near where the railway passes. The railway will not actually touch those properties, but it will greatly increase their value, and the owners are willing to contribute to a fund to help to pay compensation to those who may require it.

3. That the committee are happy to find only a few instances in which the people are unreasonable, and simply looking forward to the railway as a means by which to extort money from the Government; but against these owners the committee are willing to assist the Government in reducing the compensation to a fair and reasonable amount.

4. That the committee, when going over the land to be taken for the railway, noticed that in many instances where it passed through orchards or improved land the fruit trees were either in a decayed or almost useless condition, or that young trees had been put in, with a view, no doubt, of making the Government pay for them. They noticed also that any building, &c., included in the resumed portions, were of a miserable description, and comparatively of little or no value.

5. That it must be remembered in the case of those who refuse to give their land that it must be valued only at its cost or market value without the railway, and not what it would be worth when the railway is completed. And while admitting that the claims of the stupid and unreasonable will be ridiculously high, the fair price to pay all through after passing Chatsworth or the "Great Northern Hotel," up to Hornsby, will only be from £35 to £50 per acre, and from the "Great Northern Hotel" to the terminus at St. Leonards, from £200 to £400 per acre at the outside. The committee consider that very few, if any, of the property owners will go to law or arbitration.

6. That the committee are agreeably surprised at the result of their undertaking, as most of the land along the line has been offered for nothing. The amount to be paid for compensation will, they can see, be absolutely so small that the matter of compensation can be reduced to a minimum, so as in no way to form a bar to the commencement of the railway.

7. That if the Government is not prepared to carry out this railway at once, they might be willing to support a private Bill to enable its being done by a private company, on the condition that the line should be put into full working, and that the Government should have the right, should it so desire, of taking the line over on terms to be specially provided.

8. That the present committee, appointed by the public meeting previously referred to, pledge themselves, if the Government will accept their services, to assist them in reducing the cost of resumptions in

in all cases to the lowest possible amount, and they humbly consider that they could be of great service in that respect to the Government.

9. That if the Government do not see their way to proceed with the line at once, after this report and previous promises, which, if taken in the liberal sense, would mean nothing more or less than repudiation, it surely could have no objection to pass a Bill through Parliament, enabling a private company to construct the line upon the Government survey, plans and specifications which the committee presume the Government would have no objection to hand over to a private company for the purpose. It would, of course, be understood that the company did not intend to touch the Ball's Head line, but simply the one from Hornsby Junction to St. Leonards.

10. That the matter of this railway is to all intents and purposes one that could be carried out by rough labour, and that the present time is the most fitting to get it done cheaply, as there are so many unemployed about, and the Government might save the enormous profits of contractors, were it to consider the subject in a practical light.

11. That the railway would improve thousands of acres of Crown land, which otherwise would be comparatively worthless. That, apart from any other considerations, the carrying out of this line, even if the Government had to pay for every inch of land at full value, the increase in the value of the Crown lands would more than pay the cost. The committee is convinced that the line would pay handsomely, even at first, and that as time went on it would become one of the best paying lines in the Colony, for the simple reason that there is not another place to compare with St. Leonards and the North Shore as a future suburb of the city. The district contains all the facilities for health at present obtainable at Bowral, Mossvale, or Mittagong on the southern railway line, and the Blue mountains on the western line, whilst possessing the advantages of close proximity to the City of Sydney.

Engineer-in-Chief, *pro* Commissioner.—G.B., B.C., 18/5/86. Seen.—J.W., 19/5/86. Resubmit when Mr. Berry's determination about the land is known.—Ch. A.G., 25/5/86.

No. 39.

I. E. Ives, Esq., M.P., to The Secretary for Public Works.

Sir, Argyle Bonded and Free Warehouses, Sydney, 17 June, 1886.

I have the honor to enclose a statement signed by twenty-four landowners on the line of rail from Pearce's Corner to the Crow's Nest, and as I understand it is your intention to visit this district to-morrow, I have no doubt you will have an opportunity of hearing personally from some of the persons whose signatures are attached.

I am, &c.,
I. E. IVES.

[*Enclosure.*]

To the Hon. the Minister for Works.

We the undersigned wish to call your attention to the report laid before you by the self-appointed committee, who have been traversing the proposed line of railway from Pearce's Corner to St. Leonards.

We wish to show that that report is not true, and that we are not a lot of ignorant stupid people. Each of those men that came up here to assist the Government as they say in reducing the cost of this line are all connected with some land syndicate or are speculators themselves. We have circulars from some of these men, wishing to become our agents, and not succeeding with us they have forced themselves upon the Government.

By the report they state that the land from Chatswood to Hornsby is only worth £35 to £50 per acre, yet the first block mentioned, 35 acres, has only been bought since the line has been surveyed at £90 per acre by a company of land speculators, and every available acre has been bought up that was on or near to the line at £70 to £130 per acre, all since the line has been surveyed.

This land has not been bought for cultivation but to be sliced up into small lots and sold on the time payment system.

We are told that manufactories will spring up if this line is made; the only manufactory will be the making small lots of land out of large ones for the benefit of these speculators.

Cherry's old orchard and bush has been sold to a company for £200 per acre, and yet these men say our cultivated land is only worth £50 per acre. This plainly shows that those speculators are pressing the Government to make the line for their own benefits. It cannot help the fruit-growers; if we each had a station against our own door we should have to cart our fruit from the shore to the markets.

It is not true that any of us are willing to give our land. Some of us are classed as ignorant and absurd and some are to be fought with; if we had taken the *whiskey* these men wished us to do, and brought up for the express purpose of bamboosling us out of our lands, we might have been called ignorant, and some of us might have been fightable; but the fruit-growers of Gordon are a peaceable law abiding class of people; but seeing by the report laid before you that our character and good names have been defamed, we take this means of letting you know the truth that this line is being forced upon the Government by land speculators only.

EDWARD K. WILSON & OTHERS.

Sydney: Thomas Richards, Government Printer.—1886.

[1*s.* 3*d.*]

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY TRIAL SURVEYS.

(EXPENDITURE OF VOTE FOR.)

Ordered by the Legislative Assembly to be printed, 4 *May*, 1886.

[*Laid upon the Table of the House, in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 13 *on Votes and Proceedings No.* 40, *of the* 6*th April*, 1886.]

RETURN showing the Surveys upon which the Vote for Railway Trial Surveys has been expended, and the sums paid for each Survey.

Questions.

1. What was the amount of the last vote for Railway trial surveys?
2. The date of such vote?
3. Upon what surveys has the vote been expended?
4. The sums paid for each survey?

Answers.

1. £25,000.
2. 1st November, 1884.

3 and 4.—

RETURN showing the Surveys upon which the Vote for Railway Trial Surveys has been expended, and the sums paid for each Survey.

Surveys.	Amount.		
	£	s.	d.
Tarago to Braidwood	73	3	4
Wellington to Parkes	32	16	8
Colo Valley Line	3,794	19	11
Moss Vale to Robertson	73	6	6
Musclebrook to Cassilis	452	18	4
Wagga to Tumberumba	456	15	1
Mudgee to Coonamble	26	0	0
Narrabri to Moree	37	0	0
Wellington and Dubbo to Werris Creek	983	0	1
Cooma to Bombala	666	7	3
Goulburn to Crookwell	827	11	0
Forbes to Wilcannia	491	3	2
Orange to Forbes	72	14	3
Morpeth to Grafton	2,570	14	10
Gundagai to Tumut	478	9	3
City Extension	165	14	3
Culcairn to Corowa	13	7	2

Surveys.	Amount. £	s.	d.
Uralla to Inverell	760	3	1
Dubbo to Parkes	30	10	0
Byron Bay to Tweed River	869	4	10
Inverell to Bengalla	208	0	0
West Maitland to Manning River	1,229	17	10
Narrabri to Walgett	595	10	10
Nyngan to Cobar	1,273	15	1
Mundaroon to Narrabri	336	6	8
Mundaroon to Walgett	247	0	10
Mudgee to Walgett	12	0	0
Dubbo to Walgett and Coonamble	60	2	4
Byrock to Brewarrina	20	0	0
Tenterfield to Queensland Border	459	14	4
Culcairn to Germanton	4	0	0
Perth to Rockley	219	13	0
North Shore to Junction of N. and S. Railway	38	11	7
Kiama to Jervis Bay	6	5	0
Penrith to Wallerawang	415	11	8
Clarence to New England	73	10	7
Wolumla to Bega	8	0	0
Casino to Byron Bay	4	10	0
Grafton to Casino	192	7	4
Manning River to Hastings River	635	11	7
Cooma-Bombala Line to Bega District	1,012	16	3
Galong to Burrowa	59	7	0
Eden to Bega	50	0	0
Crookwell Line to Taralga	59	16	8
Bombala Line to Eden	800	9	0
Marrickville to Liverpool	777	4	6
St. Peter's to Liverpool	191	14	0
Adelong to Tumberumba	28	14	0
Tarana to Oberon	403	12	9
Morpeth to Manning River	337	13	4
Manning River to Gloucester	271	3	5
Granville to Rose Hill	48	17	1
Nevertire to Warren	69	17	9
Yambla to Tumberumba	33	1	8
Grafton to Tweed River	33	6	8
Generally—Staff Salaries, &c., to be apportioned	1,905	18	3
£	25,000	0	0

[3d.]

Sydney: Thomas Richards, Government Printer.—1886.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(SUBWAY UNDER LINE AT ALT-STREET, ASHFIELD.)

Ordered by the Legislative Assembly to be printed, 17 *August*, 1886.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 6th April, 1886, That there be laid upon the Table of this House,—

"All correspondence having reference to the subway under the Railway "line at Alt-street, Ashfield."

(*Mr. Henson.*)

SCHEDULE.

NO.		PAGE.
1.	Report of Deputation from Borough Council of Ashfield, *re* state of culverts under Liverpool Road and Railway crossing at Ashfield. 16 October, 1874	2
2.	Letter from Commissioner for Railways to Mr. John Pope, *re* crossing, and his reply thereto. 6 November, 1874	3
3.	Letter from Commissioner for Railways to Council Clerk, Ashfield, informing of Mr. Pope's views on site for under-bridge, and decision of Department. 3 December, 1874	4
4.	Letter from Council Clerk, Ashfield, in reply to above. 31 December, 1874	4
5.	Minute of Secretary for Railways, showing facts of the case. 5 April, 1875	4
6.	Memo. from Station-master, Ashfield, to Traffic Manager, respecting petition to Minister, *re* subway at Alt-street. 3 July, 1876	5
7.	Letter from Mayor of Ashfield, forwarding petition *re* crossings over Railway within the borough; minutes thereon, and letter of Commissioner for Railways in reply. 25 November, 1876	5
8.	Letter from Council Clerk, Ashfield, *re* estimated cost of bridge under Railway at Alt-street, and letter of Commissioner in reply. 13 April, 1877	6
9.	Letter from Council Clerk, Ashfield, enclosing letter from Dr. Jones, and pointing out dangerous crossing at Alt-street, and minutes thereon. 7 June, 1877	6
10.	Letter from Commissioner for Railways to Council Clerk, Ashfield, in reply to above. 29 June, 1877	7
11.	Letter from Council Clerk, Ashfield, to Commissioner, for Engineer for Existing Lines to meet Mayor of Ashfield, *re* crossing at Alt-street, and Engineer's minute. 7 July, 1877	7
12.	Letter from Council Clerk, Ashfield, to Minister for Works drawing attention to dangerous nature of crossings, and asking for construction of subway at Alt-street, and letter in reply. 13 June, 1879	7
13.	Letter from Council Clerk, Ashfield, to Commissioner, *re* construction of subway at Alt-street, and Commissioner's minute thereon. 13 August, 1879	8
14.	Letter from Council Clerk, Ashfield, enclosing letter and enclosure from Dr. Jones *re* Deputation relative to Railway crossings. 21 November, 1879	8
15.	Report of Deputation to Minister, *re* Railway crossing at Ashfield. 13 December, 1879	9
16.	Letter from Council Clerk, Ashfield, *re* level-crossing at Ashfield, and minute of Commissioner thereon. 1 November, 1880	9
17.	Letter from Council Clerk and Mayor of Ashfield respecting Deputation to wait upon Minister *re* crossings at Ashfield. 17 and 26 March, 1881	9
18.	Letters from Council Clerk, Ashfield, to Under Secretary Public Works *re* subject of crossings to be introduced by Deputation. Under Secretary's replies thereto, with minute of Commissioner, giving estimate of cost of subway at Ashfield. 14 June and 11 July, 1881	10
19.	Letter from Council Clerk, Ashfield, *re* Alt-street crossing. 22 December, 1881	11
20.	Extract from *Herald*, *re* report of Deputation—Railway crossing accommodation at Ashfield. 14 January, 1882	11
21.	Letter from Mayor of Ashfield to Minister for Works, enclosing resolutions passed at Public Meeting *re* Railway crossing at Alt-street. 31 January, 1882	11
22.	Letter from Mr. Henson, M.P., to Minister for Works, asking to appoint day to receive Deputation *re* subway at Alt-street, and reply thereto, together with minutes of Commissioner and Minister's decision that the subway be made at Alt-street. 6 February, 1882	11
23.	Extract from *Herald*, *re* report of Deputation, Railway crossing at Ashfield, and minutes thereon, to prepare plans, &c. 17 February, 1882	12

814—A

[817 copies—Approximate Cost of Printing (labour and material), £25 2s. 9d.]

NO. PAGE
24. Minute of Commissioner *re* cost of subway, and Crown Solicitor asked to advise *re* resumption of land 29 July, 1882 12
25 Crown Solicitor's opinion in reference to above 10 August, 1882 13
26 Letter from Council Clerk, Ashfield *re* subway at Alt street, and minutes thereon 28 December, 1882 13
27 Letter from Council Clerk, Ashfield, *re* state of foot paths in Hercules street, minutes thereon, and also letter from Mr Mills 4 April, 1882 14
28 Letter from Mr Mills to Minister for Works *re* receiving Deputation, and minute of Commissioner thereon 30 January, 1883 14
29 Extract from *Herald re* Deputation, and Minister's minute thereon 24 February, 1883 14
30 Letter from Mr Mills to Minister for Works *re* subway at Alt street, Minister's minute and reply to Mr Mills 7 March, 1883 15
31 Letters from Mr Rodd *re* Railway crossing at Ashfield, and minutes thereon 13 March and 7 May, 1883 15
32 Letters from Mr Marshall *re* dangerous crossing at Alt street, Ashfield, minutes thereon, and reply thereto 30 June and 3 July, 1883 16
33 Letter from Mayor of Ashfield to Minister for Works *re* Railway crossing at Ashfield, asking for Engineer for Existing Lines to meet Council, minute of Commissioner as to cost, &c 25 July, 1883 17
34. Letter from Council Clerk, Ashfield, requesting answer to Mayor's letter of 25 July, reply thereto, and result of interview 15 August, 1883 17
35 Letters from Mayor and Council Clerk of Ashfield, to Minister for Works, respecting public meeting held, and asking that Deputation will be received *re* subway under Alt street, minutes thereon, and reply thereto 13 September, 1883 18
36 Minute of Minister *re* result of Deputation and extract from *S M Herald* 28 September, 1883 19
37 Letter from Mr Marshall, *re* subway at Alt street, Minister's and Commissioner's minutes thereon 28 November, 1883 19
38 Letters from Mr John Mills and Mayor of Ashfield to Minister for Works, and Minister's decision that subway should be constructed at Alt street, replies sent to Messrs Mills and Hammond 29 and 31 January, 1884 20
39 Question asked by Mr Abigail, M P, in the House, when subway will be constructed, and Minister's reply thereto 22 April, 1884 20
40 Letter from Council Clerk, Ashfield, asking when subway will be commenced 14 July, 1884 20
41 Letters from Mr Mills, asking when tenders will be called for construction of subway at Alt street, and minutes thereon 30 July and 26 August, 1884 21
42 Question asked by Mr Hammond, M P, in the House, *re* construction of subway at Alt street; Minister's reply and minutes thereon, and letter sent to Council Clerk 19 September, 1884 21
43 Letter from Mr Abigail, M P, to Minister for Works, stating that tenders have not yet been called for construction of subway, and urging that work be carried out, reply thereto 22 November, 1884 22
44 Letter from Messrs M'Culloch & Pope, on behalf of Mr John Pope, claiming £6,000 as compensation for damage to his property, minute of Commissioner, and letter in reply 24 December, 1884 22
45 Letter from Mayor of Ashfield to Minister for Works, respecting alterations at Alt street and responsibility of Government *re* claims, &c, minutes and precis of case, and reply thereto 30 December, 1884 23
46 Letter from Council Clerk, Ashfield, enclosing letter received from Mr Pope *re* subway, minutes, &c, and reply 6 February, 1885 23
47 Question asked by Mr Hammond, M P, in House, *re* proceeding with construction of subway, with Minister's reply and minutes 24 March, 1885 24
48 Letter from Council Clerk, Ashfield, in reply to Commissioner, respecting responsibility of proclaiming levels of Alt street, and minutes thereon 17 June, 1885 24
49 Question asked by Mr Henson, M P, in House, when subway will be commenced, and Minister's reply, together with minutes and report from Land Valuer 22 September, 1885 24
50 Letter from Mr Mills *re* Minister receiving Deputation, Minister's decision, and Council informed, and letter from Council acknowledging receipt 16 November, 1885 25
51 Letter from Council Clerk, Ashfield, to arrange for Deputation *re* subway at Alt street Deputation received, and Minister's arrangements and decision 16 December, 1885 25
52 Letter to Mr Pope, conveying Minister's decision 21 January, 1886 26

No. 1.

Extract from the *Sydney Morning Herald* of 16th October, 1874

Report of Deputation from Borough Council of Ashfield

A DEPUTATION from the Borough Council of Ashfield, consisting of the Mayor (Mr D Holborow, J P) with Aldermen Fyle and Muir, waited on the Honorable the Minister for Public Works on Wednesday, the 14th instant, for the purpose of calling attention to the state of the culverts under the Liverpool Road and the railway line, at Ashfield, which cause the flooding of the road and adjoining lands during rains, and also to request that something might be done to place the approach to the Railway station from the Parramatta Road in proper repair The deputation was courteously received by Mr Sutherland, who expressed his willingness to meet the views of the Municipal Council of Ashfield as far as lay in his power In the course of conversation, the subject of the inconvenience and danger of the crossings on the railway line at Ashfield was introduced and discussed Mr Sutherland stated that the proper officers would be directed to inspect the works to which attention was thus called, with the view of remedying the defects The deputation then withdrew, after thanking the Minister for his courtesy

---

End of month—for Mr Whitton's report about culvert —CH A G, 19/10/74.

Memorandum to Engineer-in-Chief

Government Railways, Engineer-in-Chief's Branch, 21 October, 1874

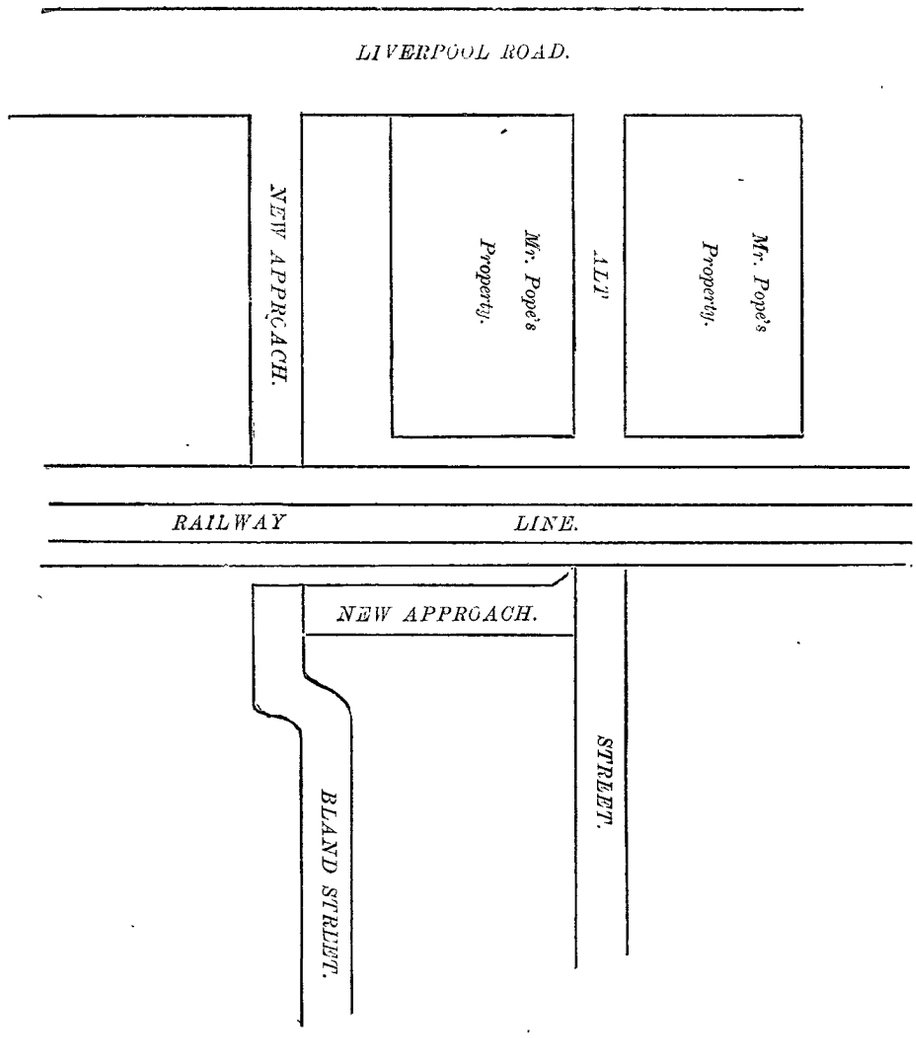
I HAVE taken a section of the present approaches to the level-crossing immediately beyond Ashfield station, for which the Municipal authorities there wish to substitute a bridge under the Railway

It will be seen from the enclosed section that if a bridge be put under the line it would destroy the entrance to Mr Pope's property, and would involve retaining walls to be built on each side of the approach, that on the lower side is embanked, and might be removed without injury to the adjoining lands.

I have also taken levels with reference to the lowering of the culvert under the line (See sketch on other side)

The Mayor of Ashfield suggested that the road might be diverted to a deeper portion of the embankment in the direction of Parramatta Of course this can be done, but would involve great expenditure W M., 21/10/74.

What does Mr. Pope think?—J R



It is proposed by the Ashfield Corporation to dig a drain 6 feet deep in the proposed street A to drain the whole of this land. I can see no necessity for a drain of that depth. It will be seen that the inlet of the culvert which they ask to have lowered is already 3·30 feet below the surface of ground about where the drainage would be discharged from street A, and supposing a drain were made 2 feet deep and sufficiently wide this would then allow 1·30 feet fall from the street A to the culvert without any alteration.—W.M., 21/10/74.

I advise the Commissioner not to make any alteration to the drainage, which appears to be sufficient for all purposes. To build the bridge under the railway on line A B on sketch enclosed would not only be expensive in itself but would necessitate the purchase of Mr. Pope's property on the side of the road.—J.W., 23/10/74. Commissioner.

No. 2.

The Commissioner for Railways to J. Pope, Esq.

Sir, 6 November, 1874.

I have the honor to inform you that the Borough Council of Ashfield waited upon the Honorable the Minister for Public Works, on the 14th September last, and represented the desirability of a bridge being constructed at the gates beyond Ashfield Station, so as to afford a crossing under the line, instead of the present level-crossing.

The Engineer-in-Chief has furnished me with a sketch (which I now enclose, with a request for its return), showing that if a bridge were put under the line it would affect the entrance of your property.

Before proceeding further in the matter, it is desirable that you should express your views thereupon, and I have to request that you will favour me with an early reply.

I have, &c.,
CHAS. A. GOODCHAP,
(Pro. Commissioner for Railways.)

J. Pope, Esq., to The Commissioner for Railways.

Sir, Ashfield, 11 November, 1874.

I have the honor to acknowledge your letter of the 7th instant, relative to the proposal for a bridge to be constructed at the gates beyond the Ashfield Station.

To this I will give you a reply in the course of a day or two.

I am, &c.,
JOHN POPE.

J. Pope,

J. Pope, Esq., to The Commissioner for Railways.

Sir, Ashfield, 19 November, 1874.

I have the honor to acknowledge your letter of the 6th instant, referring to an application made by the Councillors of the Borough of Ashfield to have a bridge constructed at the gates beyond Ashfield Station, to afford a crossing under the railway line. Upon this you request my views.

I have, therefore, the honor to submit that, in my opinion, the present crossing is the only one that any practical man could consider suited to the position of the ground on either side of the line of rails.

The cutting, as per plan, would wholly destroy my property and frontages in the street for about 1,000 feet, and access to my house and ground could only be attained by flights of steps from 10 to 16 feet from the cutting up. As my house and property would thus be rendered next to useless to me, I should seek a compensation of, at least, six thousand pounds (£6,000.) I, therefore, have to request that before any further proceedings are taken in the matter, you will cause an inquiry to be made and obtain such further information as will confirm to you the correctness of my statement, and I trust the examination of the line and the land on either side of it, both east and west of the present crossing, will afford more desirable places for opening up other means of passing both under and over the rails than by altering the existing one alluded to.

As a resident of Ashfield for many years, I shall be glad to render any aid to carry out such scheme as may be considered of advantage to the residents of the Borough, respecting the additional convenience for crossing the railway line, *i.e.*, from the south to northward, and will meet any one you may appoint to confer on the matter.

I have, &c.,
JOHN POPE.

Under these circumstances, the work cannot be done. Inform.—J.R., 30/11/74.

No. 3.

The Commissioner for Railways to The Council Clerk, Ashfield.

Sir, Department of Public Works, Sydney, 3 December, 1874.

In reference to your letter of the 2nd October last, suggesting, at the instance of the Mayor of Ashfield, that a bridge at the gates beyond the railway at that place should be constructed so as to afford a crossing under the railway line instead of over it, as at present, I have the honour to inform you that Mr. Pope, to whom the land belongs, has been communicated with, and in reply states that in his opinion the present crossing is the only one that any practical man could consider suited to the position of the ground on either side of the railway; and that if a bridge were constructed at the place mentioned, it would entirely destroy his property and necessitate his seeking for heavy compensation.

Under these circumstances the work proposed by the Municipality of Ashfield cannot be carried out.

I have &c.,
JOHN RAE,
Commissioner for Railways.

No. 4.

The Council Clerk, Ashfield, to The Commissioner for Railways.

Sir, Municipal Council Chambers, Ashfield, 31 December, 1874.

In reply to your letter of the 3rd instant, respecting the proposed alteration in the railway crossing at Alt-street, in this Borough, I am directed by his Worship the Mayor, to point out:—

1. That it does not appear clear what is meant by your statement that the land belongs to Mr. Pope, the road in question having been a public road for many years before that gentleman became possessed of the land on either side.
2. That as regards the practical nature of the proposal, there cannot be the slightest doubt that, compared with the present dangerous crossing, the plan suggested is the only remedy that can be applied, and one, which in view of the rapidly increasing traffic, must at no distant period be carried out, there being in fact no safe crossing except the bridge on the Main South Road, which is too remote and circuitous to be available for a large portion of the traffic.
3. That as to the distinction of Mr. Pope's property, and his consequently being compelled to seek heavy compensation, it is not easy to perceive what material damage can be done to that person's property by the proposed alteration. Nothing more than his personal convenience could be interfered with, as no part of his property would be touched, and as Mr. Pope's claim to the road is not greater than that of any other resident in the Borough, the convenience or caprice of one person should not be allowed to obstruct an improvement which would be undeniably beneficial to a very large number, and in no way deteriorate his property.
4. That the expense of the alteration and compensation (if any) that might be payable, would soon be more than repaid by the saving effected in the expense of maintaining a gatekeeper at the present crossing.

I have, &c.,
W. BEAMES,
Council Clerk.

Seen.—J.W., 12/2/75. Commissioner.

No. 5.

Minute of Secretary for Railways.

Re Subway, Ashfield.

When the deputation waited upon Mr. Sutherland, they brought under his attention the desirability of an under-bridge being made in place of the level-crossing, about 200 yards beyond the Ashfield Station, towards Burwood.

As the present deputation refer to other matters which they wish to bring to Mr. Lackey's notice, this bridge will probably be one of them.

Mr.

Mr. Pope owns the land on either side of the level-crossing, and the construction of this bridge would necessitate an immense cutting, which would injure Mr. Pope's property to the extent, he states, of £6,000, for which sum he would seek compensation.

In addition to this, there appears to be no great necessity for the bridge; as to the danger, there is nothing to make crossing at this place more dangerous than it is at many other parts of the line; indeed, there are several level-crossings over which the traffic is greater than it is at Ashfield.

There is a gatekeeper at the place, and no accident has occurred.—CH.A.G., 5/4/75.

The Council were informed of Mr. Pope's objection, and they replied in effect that Mr. Pope's interest should be sacrificed to the larger interests of the Borough. This was in December, 1874. Nothing has been done since.

No. 6.

Memorandum from Station-master to Traffic Manager.

Sir, Ashfield Station, 3 July, 1876.

I am informed that a petition to Minister for Works is in course of signature, praying that a road be cut under the railway, at King's gate, alongside Mr. Pope's property, Alt-street. Amongst other grievances they state that several accidents have happened at the crossing they wish to be abolished. I cannot help thinking that such a remark is something approaching to a "slur" on your branch of the Department, also your Officers, as well as an "untruth."

I have been here nearly four years; had there been any accident, or the probability of one, I certainly should have known it. However, if possible, I will obtain for your information a copy of this petition. In the event of my not doing so, I trust you will inform the Hon. the Minister for Works that the petition (that is forthcoming) is not founded on facts.

Yours, &c.,
G. BONAMY, S.M.

No. 7.

The Mayor of Ashfield to The Colonial Secretary.

Sir, Borough Council Chambers, Ashfield, 25 November, 1876.

I have the honor to forward herewith a petition signed by a large number of the residents of this Borough and others respecting the crossings over the railway within the Borough, which I beg to request you will have the goodness to lay before the Executive Council.

The Municipal Council of Ashfield fully endorse the complaint therein set forth, and respectfully request the favourable consideration of the Executive, with a view to applying a remedy most urgently required.

I have, &c.,
DANIEL HOLBOROW,
Mayor.

To The Honorable the Minister for Public Works of the Colony of New South Wales.

The petition of the undersigned residents of Ashfield and others interested,—

RESPECTFULLY SHEWETH:—

That most of the crossings on the railway line within the Borough of Ashfield are dangerous and inconvenient, and for the rapidly increasing traffic totally insufficient.

That since the closing of the station crossing to wheel traffic, vehicles are compelled to use either the crossing in Alt-street, where a gatekeeper is stationed, or the very inadequate small bridge near the Main South Road, the route by the bridge by that road being too circuitous for the greater portion of the traffic within the Borough.

That the crossing in Alt-street, which is principally used on account of its central position is, as already stated, so dangerous as to be a source of much annoyance to all who are compelled to use it, the crossing being attended with considerable risk, and several accidents have occurred.

That further, the locking of the gates at an early hour in the evening is also the cause of much inconvenience to those requiring to cross at night, and your petitioners do humbly submit that Alt-street, having been a public road for many years before the formation of the railway should at all times of the day and night be available for traffic of every kind.

That your petitioners believe that the only effectual remedy to be the carrying of the road under the railway by a cutting and a bridge which would render it a safe crossing, and by saving the expense of maintaining a gatekeeper at that point soon repay the cost of the alteration.

Your petitioners, therefore, trust that such steps will be taken as will afford the accommodation so much required.

And your Petitioners, as in duty bound, will ever pray.

JOHN H. GOODLET and Others.

Minister for Public Works.—J.R., 1/12/76. The Under Secretary for Public Works, B.C., 5/12/76.—W.H. The Engineer for Existing Lines, B.C., 11/12/76.—CH.A.G.

See my former report on this, dated October 21, 1874. I cannot recommend a bridge to be built under the railway on account of the great expense it would involve.—W.M., 15/12/76. The Commissioner for Railways.

The Commissioner for Railways to The Mayor of Ashfield.

Sir, Department of Public Works, Sydney, 27 March, 1877.

In reference to your letter of the 25th November last, addressed to the Colonial Secretary, forwarding a petition signed by a large number of the residents at Ashfield, praying for alterations to be made at the railway crossing at Alt-street, by a cutting being made and a bridge erected, I have the honor to inform you that I cannot authorize the large expenditure which would be incurred in carrying out the prayer of the petitioners.

I have, &c.
JOHN RAE,
Commissioner for Railways.

No. 8.

No. 8.

The Council Clerk, Ashfield, to The Commissioner for Railways.

Sir, Council Chambers, Ashfield, 13 April, 1877.

In acknowledging the receipt of your letter of the — March, 77-391, I am directed by his Worship the Mayor to request the favour that this Council may be informed of the estimated cost of the much required bridge under the railway, in Alt-street.

I am further to state that the continual expenses under the present system of gatekeeper and repairs would, in a very few years, more than repay any outlay made.

I have, &c.,
W. BEAMES,
Council Clerk.

W. Mason, B.C., 18/4/77.—J.R. I have not made any estimate of the cost of such a bridge, and certainly have not time to do so for the information of the Municipal Council of Ashfield. I consider the Council ought to employ some one to give them this information.—W.M., 23/4/77. The Commissioner for Railways. The Council might be so informed.—J.R., 1/5/77.

The Commissioner for Railways to The Council Clerk, Ashfield.

Sir, Department of Public Works, Sydney, 7 May, 1877.

In reference to your letter of the 13th ultimo, requesting that the Municipal Council of Ashfield may be furnished with the estimated cost of the proposed bridge under the railway in Alt-street, I have the honor to inform you that the matter has been referred to the Engineer for Existing Lines, who reports that, as his time is fully occupied with the ordinary business of his Department, he is unable to spare the time necessary to make an estimate of the cost of the bridge in question, and suggests that your Council should employ some person from whom the information sought may be obtained.

I have, &c.,
JOHN RAE,
Commissioner for Railways.

No. 9.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Council Chambers, Ashfield, 7 June, 1877.

I am directed by his Worship the Mayor to hand you the enclosed, at the same time to urge your earnest attention to the dangerous crossing of the railway line in Alt-street, and that you would be pleased to give instructions for preparing plans and estimates for the cutting the much needed bridge in Alt-street, in this Borough.

I have, &c.,
W. BEAMES,
Council Clerk.

Dr. R. T. Jones to The Borough Council of Ashfield.

Gentlemen, Ashfield, 2 June, 1885.

Seeing that there is no immediate prospect of having uninterrupted communication along Alt-street from one side of the railway line to the other, I respectfully beg to suggest that Thomas-street be put into a fit state for traffic as early as possible.

My reasons for proposing this improvement are the following:—

1. The great inconvenience experienced at present by all, except foot-passengers, in getting from one side of the railway line to the other at night time.
2. Communication from Croydon, a portion of Burwood, Parramatta Road, Concord, and Five Dock, to the centre of Ashfield is much more speedy *via* Thomas-street than any other route except Alt-street.
3. The gates at Croydon crossing are opened at night with very little delay; whereas at the Alt-street crossing much time and trouble is expended in turning the old man out of his bed, in order to let one through.
4. At present, on account of the bad state of Thomas-street, traffic has to go direct into the Liverpool Road and then along the Seven-mile Hollow into Ashfield. This round-about way more than counterbalances the benefit of the quick opening of the gates.

By taking this matter into your favourable consideration, gentlemen, you will confer a boon on those who have occasion to cross the line at night, and especially on the doctors.

I remain, &c.,
R. T. JONES, M.D.

Railways, B.C., 12/6/77.—J.R. Mr. Mason, B.C., 18/6/77.—CH.A.G.

I cannot recommend that drawings and estimates be prepared as asked for by the Mayor. I have no time to spare myself for this purpose. I have no assistants capable of doing this work; and I now suggest again that, if the Mayor require this information, let it be furnished by the Corporation of Ashfield. It would form a very awkward precedent to comply with such requests.—W.M., 19/6/77. Commissioner for Railways.

As the Engineer for Existing Lines is of opinion that the crossing of the line at Alt-street provides ample and safe accommodation for the residents of the locality, and as Mr. Mason further considers that it would not be advisable to have an over-bridge at this place, having in view the large amount which would be required for compensation by the persons whose land adjoins the railway there, as well as to there not being any necessity for such a structure, I cannot accede to this application, but now instruct the Traffic Manager to send a younger man to act as gatekeeper at Alt-street. The Mayor of Ashfield to be informed.—J.H., 23/6/77.

No. 10.

The Commissioner for Railways to the Council Clerk, Ashfield.

Sir, Railway Department, 29 June, 1877.

In acknowledging the receipt of your letter of the 7th instant, in further reference to the dangerous crossing of the railway line in Alt-street, and requesting that instructions may be given to have plans prepared and estimates made of the proposed bridge under the railway in that street, I have the honor to inform you that as the Engineer for Existing Lines is of opinion that the crossing of the line at Alt-street provides ample and safe accommodation for the residents of the locality, and considers that it would not be advisable to have an over-bridge at this place, having in view the large amount which would be required for compensation by the persons whose land adjoins the railway there, as well as to there not being any necessity for such a structure, your application cannot be acceded to. Instructions have, however, been given to have a younger man appointed to act as the gatekeeper at Alt-street.

I have, &c.,
JOHN RAE,
Commissioner for Railways.

No. 11.

The Council Clerk, Ashfield, to The Commissioner for Railways.

Sir, Borough of Ashfield, Council Chambers, 7 July, 1877.

Referring to your letter of the 29th ultimo, I am directed by his Worship the Mayor to request that the Engineer for Existing Lines of Railways be instructed to meet him at the crossing, in Alt-street in this Borough, as the inhabitants and others crossing the line at that point, do not consider the crossing in question either ample or safe, and unless the required bridge is made some fatal accident will occur which would be far more expensive to the Government, than any sum expended in carrying out the work.

I have, &c.,
W. BEAMES,
Council Clerk.

Mr. Mason will be good enough to meet the Mayor as requested, and report the result of meeting.—J.R., 9/7/77.

I met the Mayor as requested on the 12th instant; he wished to have the approach to level-crossing improved, to which I agreed as far as the Commissioner's boundary, the Corporation of Ashfield to do the rest of the work outside. The Mayor promised to call at my office to arrange this work on the 16th instant, but has not yet done so.—W.M., 30/7/77. Commissioner.

No. 12.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Borough of Ashfield, Council Chambers, 13 June, 1879.

I am directed by the Council of this Borough to bring under the notice of the Hon. the Minister for Public Works the urgent necessity for some improvement in the crossings over the railway line within this Borough. This subject has been repeatedly brought under notice by the Council by letters, deputations, and by a petition numerously signed and presented nearly three years since, calling attention to the inconvenient and dangerous nature of the crossings, with special reference to that in Alt-street, where a gatekeeper is stationed, which is beyond doubt the most dangerous, and at the same time the most easily capable of improvement by an archway under the line. This was pointed out in the petition referred to, and its completion urged on the Minister.

The necessity for this alteration is becoming daily more apparent from the great addition to the number of trains and the large traffic across the railway, consequent on the rapid increase of the population of this Borough, and the fact that there is no safe and convenient crossing suitable for the requirements of traffic within this Borough, renders it desirable to provide without delay for its accommodation. Reference was also made in the petition to the locking of the gates at a comparatively early hour in the evening, which is a cause of great inconvenience to those having occasion to cross at night.

The Council trusts that these representations may be favourably considered, and the necessary alterations authorized.

I have, &c.,
W. R. MUIR,
Council Clerk.

I think the Council should be informed that there will be no objection to the construction of the under-bridge, and the work will be carried out on condition that the Council arrange for the payment by them of all claims to compensation for injury to lands affected by this alteration.—CH.A.G., 29/6/79. Approved.—J.L., 23/7/79.

The Commissioner for Railways to The Council Clerk, Ashfield.

Sir, Railway Department, 30 July, 1879.

I am directed by the Secretary for Works to acknowledge the receipt of your letter of the 13th ultimo, bringing under his attention, by direction of the Municipal Council of Ashfield, the necessity for some improvement in the railway crossings over the line at Ashfield, and making special reference to the need for an archway under the line at Alt-street, and to inform you that Mr. Secretary Lackey will have no objection to authorize the construction of an under-bridge at the point mentioned if your Council will arrange for the payment by them of all claims for compensation for injury to lands which will be affected by this alteration.

I have, &c.,
CHAS. GOODCHAP,
Commissioner for Railways.

No. 13.

The Council Clerk, Ashfield, to The Commissioner for Railways.

Sir, Council Chambers, Ashfield, 13 August, 1879.

I have the honor to state that your letter of the 30th July, No. 3,205, in reply to the application from the Council of this Borough for the construction of an archway under the railway line, at Alt-street crossing, has been duly considered, and I am directed to inform you that the Council does not consider that it should be asked to undertake responsibility in respect of such a work for the reason that the obstruction to the traffic in this street is entirely caused by the railway embankment, and that, therefore, the street should be restored as nearly as possible to its former condition by the Railway Department without requiring the Borough to be responsible for alterations rendered necessary by such works and urgently needed for security to life and property.

I have, &c.,
W. R. MUIR,
Council Clerk.

Mr. Mason, B.C., 20/8/79.—G.B. Seen.—W.M., 21/8/79. Commissioner. We have given a level-crossing over the line. This level-crossing has been in use for twenty years; the Council now want an underway. It is only reasonable to ask them to pay the land claims which would arise. If we made the underway they must lower the street to avail themselves of it. In so doing neighbouring properties would be injured, and claims would be preferred which certainly the Railway Department should not be called upon to pay.—CH.A.G., 25/8/79.

No. 14.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Council Chambers, Ashfield, 21 November, 1879.

I am directed by the Mayor of this Borough to enclose for your information, copy of a letter and enclosure received from Dr. Jones, of Ashfield, respecting the inconvenience of getting from one side of the railway line to the other after certain hours, and respectfully to request that you will inform me at your earliest convenience upon what day it will be convenient to you to receive a deputation upon the subject.

I have, &c.,
P. T. SAYERS,
Council Clerk.

Dr. R. T. Jones to The Borough Council of Ashfield.

Gentlemen, Ashfield, 15 November, 1879.

Loud and frequent complaints I often hear from persons who come in a hurry to me at night-time on account of the gates at the crossing places being locked and consequently having to make a long detour to come to the Liverpool Road side of the railway line. I have asked one of these persons to put his grievance in writing in order to forward it to the Ashfield Municipal Council. I now beg to enclose for your perusal the few lines he wrote.

Seeing that our former petition for a roadway under the railway line in the centre of Ashfield have been of no avail, I think that another effort should be made as we now have a member, the Premier, who is personally acquainted with the great disadvantages we are under in the matter of communication.

Compare Burwood and Ashfield, and see the difference between the two Boroughs in this respect. The former has two bridges at convenient distances and a level-crossing in the centre, with one man by day and another man by night always ready to open to any one requiring to cross. The latter (Ashfield) has one bridge at a very inconvenient place, and only serving to perform a semi-circle instead of leading direct to main roads, then three crossing places in succession, all of which are locked from 8 p.m. until 6 a.m.

This is not a creditable state of affairs for so populous and influential a place as Ashfield. I question whether any other place on the line is so badly off in this matter of communication from one side of the Borough to the other.

Until we get a clear course under the railway, I think the Government should be urged to put a man to attend to the gates by night and not expect us to shout ourselves hoarse in trying to awaken a man from his sleep, who has been fourteen hours at his post, and then waiting patiently for over a quarter of an hour for him to dress and unlock the gates.

Trusting that you will take this matter in hand early,

I remain, &c.,
R. T. JONES, M.D.

Mr. Chas. M. Kerr to Dr. Jones.

Dear Sir, Burwood, 16 October, 1879.

On leaving your house the other night I tried to cross at King's crossing, found it locked. Went from there to Croydon, found that locked also, asked the man at the gate to let me pass through; he said it was against orders to open after eight o'clock at night, the result was I had to ride some 3 miles out of my way to get home. I think it is high time some alterations were made in reference to the above crossing.

Yours, &c.,
CHAS. M. KERR.

Submitted, Friday, 12th, 11 a.m.—J.L., 28/11/79. Will Traffic Manager let me have by the 10th a report upon the proposal to place a man in charge of gates at night? What amount of traffic is there after night-fall? Compare with Burwood in this respect, B.C., 5/12/79.—CH.A.G. Report herewith.—THOS. CARLISLE, 8/12/79. Commissioner.

To the Commissioner for Railways.—With reference to the proposal to place a man in charge of King's gates, Ashfield, at night, I have made inquiry as to the number of vehicles passing through between 8 p.m. and 6 a.m. The gateman informed me that the average number could not exceed one per night; occasionally four or five vehicles pass through in one night, then again for five or six nights not a single vehicle would pass through. As regards the crossing at Burwood Station, twenty to thirty vehicles pass through

through the gates every night. The man in charge cleans lamps, oils points, &c., in addition to his occupation as night gateman. King's gate cannot be compared with Burwood crossing as far as the number of vehicles passing through is concerned, and if a man is put on at night he could render no assistance at Ashfield Station owing to the distance from the station to the gates—nearly a quarter of a mile.—THOS. CARLISLE, 8/12/79.

No. 15.

Report of Deputation to Minister.

THE Mayor of Ashfield, Mr. D. Holborow, with Aldermen Clissold, Hammond, Muir, and Read waited on the Minister for Works yesterday, to ask for some improvements in the construction of the crossings of the railway line at and near Ashfield, and desired to call the Minister's attention to the closing of the gates after dark, which compelled vehicles to make a detour of 3 miles to get from the north to the south side of the line. The heavy traffic at the Croydon crossing, in consequence of instructions being given to open the gate there after dusk, make it a dangerous undertaking. The Mayor stated that 150 vehicles used that crossing daily, and the Minister he thought would easily understand that the traffic concentrated in this way was extremely inconvenient and dangerous. There were 1,400 tax-payers in the Borough, and he thought the importance of making some better provision would be apparent. They had been led to understand some time ago that a bridge would be erected, but he would suggest that an underground crossing would get rid of the difficulty, and be more suitable for vehicles.

Mr. Lackey said, in the course of his answer, no doubt proper provision ought to be made for the convenience of the public. He thought the underground road was a matter well worthy of consideration. Already the Department had made arrangements to make these roads in some places, and although he had not hitherto had time to reflect much on the matter he would be happy to place the proposal before the Government and see what could be done.

13 December, 1879.

No. 16.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 1 November, 1880.

Referring to previous communications upon the subject of a low-level crossing at Alt-street, in this Borough, I am directed by the Mayor to inform you that the want of a crossing is so much felt that the residents have, through one of the aldermen, again brought the matter before the Council. His Worship, therefore, requests that you will inform him if any steps have been taken by the Government in the matter.

I have, &c.,
E. T. SAYERS,
Council Clerk.

Railways, B.C., 5/11/80.—J.R. An underway at Alt-street is, on account of the large compensations which would have to be paid owners of adjoining property, out of the question if the expense is to be provided from railway funds. Will Mr. Mason report on the other proposal, viz., an underground way at Bland-street. B.C., 8/11/80.—CH.A.G.

No. 17.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 17 March, 1881.

I am directed by the Mayor of this Borough to request that you will inform him when it will be convenient for you to to receive a deputation from this Council upon the subject of the crossing under the railway, at Alt-street.

I have, &c.,
E. T. SAYERS,
Council Clerk.

Deputation appointed, Friday, 1st April, at noon. Railways, B.C., 29/3/81.—J.R. Mr. Cowdery for report, B.C., 30/3/81.—G.B. Most urgent.

I have visited the ground at Ashfield, and find it practicable to build an under-bridge some 2½ chains beyond the down platform, but it would be a very expensive job if the Department have to purchase land for approaches. Alt-street is not a suitable place for a bridge, the embankment being too low. —G.C., 6/4/81. Commissioner.

The Mayor of Ashfield to The Secretary for Public Works.

Sir, 118 King-street, Sydney, 26 March, 1881.

I have the honor to request that you will inform me of the earliest date and hour that it will be convenient for you to receive a deputation that was appointed at a public meeting, of which I was Chairman, held at the Odd-fellows' Hall, Ashfield, on the 23rd instant, respecting the vehicle crossing at the Railway Station, Ashfield.

I have, &c.,
THOS. L. NICHOLSON,
(*Pro* G.S.)

1st April appointed. Railways, B.C., 29/3/81.—J.R. Mr. Cowdery for report, 30/3/81.—G.B. Most urgent.

This crossing has always been a very dangerous one, and should be closed on that account; but it is also a very inconvenient one, as the station and railway cannot be properly fenced in as long as it (the crossing) remains open. The foot-bridge now being erected cannot be put in any other place to answer the purpose for which it was designed. Matilda-street bridge is about to be taken down and another erected in line with the street, which will be a great improvement.—G.C., 6/4/81. Commissioner.

Extract from *Sydney Morning Herald* of 9th April, 1881.

THE same deputation then asked the Minister for Works for a crossing over the railway, at Ashfield, that would not interfere with the vehicular traffic. Mr. Lackey said he had already consulted the Engineer on the matter, and when a report was received from that officer he would see to it at once.

Railways, 14/4/81.—J.R. Mr. Cowdery will please say what the cost of the underway would be without the land for the approaches, and submit a plan showing the area of ground required for approaches on both sides. Perhaps if the Municipal Council were to obtain the land for the approaches the Minister might not be unwilling to approve of the formation of approaches and construction of underway at the Government expense.—CHAS. A. GOODCHAP, 21/4/81.

Estimated cost about £4,000. Tracing showing land required for approaches marked red herewith. —G.C., 22/7/81. Commissioner. What will be cost of land—will Land Valuer please say?—CH.A.G., 27/7/81. Urgent.

Memo.

URGENT instructions have been received from the Commissioner for an estimate of the cost of land, at Ashfield, required as approaches to a proposed crossing there. Will the Engineer for Existing Lines be good enough to have the names of the owners supplied on the accompanying tracing, and also information as to whether the land comprises the whole or only part of original blocks, &c. If this information can be supplied this afternoon the Land Valuator will carry out the instructions to-morrow.

J.B.T., 27/7/81.

Engineer for Existing Lines. The land required for this underway is in each case only *a portion* of a block. The names of the owners are written on the accompanying tracing.—E.M.H., 28/7/81. Mr. Thompson.—G.C., 29/7/81.

Estimate of cost of land at Ashfield, required for approaches to proposed under-bridge.

The Commissioner for Railways, Sydney.

The portion south of the railway, containing 2 roods 4 perches 8 feet, has a frontage of 66 feet to the Liverpool Road by a depth of about 5 chains to the railway fence, and will cost about £12 10s. per foot, or altogether about £825. The portion north of the railway, containing 1 rood 24 perches, 3104, has a frontage of 66 feet to Elizabeth-street by a depth of about 4 chains to the railway fence, and will cost about £8 per foot, or altogether about £528. The land south of the railway is occupied by Mr. W. G. Williams as part of a timber yard, but as I have no information as to the tenure upon which he holds it I am unable to give any estimate of the amount of compensation to which he would be entitled.

The total cost for land will be about £1,353, and with Mr. Williams' claim it will probably amount to about £1,500 or £1,600.

J. B. THOMPSON, 30/7/81.

No. 18.

The Council Clerk, Ashfield, to The Under Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 14 June, 1881.

I am directed by the Mayor of this Borough to request that you will inform me at your earliest convenience at what time the Minister for Works will receive a deputation to urge upon him the necessity of at once providing an under-crossing convenient to the Ashfield Railway Station.

I have, &c.,
E. T. SAYERS,
Council Clerk.

Railways, B.C., 17/6/81.—J.R.

The Council Clerk, Ashfield, to The Under Secretary for Public Works.

Under-crossing at Ashfield Railway Station.

Sir, Municipal Council Chambers, Ashfield, 11 July, 1881.

Referring to my letter of the 14th ultimo, respecting an under-crossing convenient to the Ashfield Railway Station, I am directed to ask if the deputation which will wait upon the Minister by appointment on Friday, the 15th instant, upon the subject of a crossing to connect Carlton with Grosvenor Crescents, might be permitted to introduce the former subject, and thus save the valuable time of the Minister. An early answer will oblige.

I have, &c.,
P. T. SAYERS,
Council Clerk.

The Under Secretary for Public Works to The Council Clerk, Ashfield.

Sir, Department of Public Works, 13 July, 1881.

In compliance with request contained in your letter of the 11th instant, I am directed to inform you that there will be no objection to the deputation appointed to wait upon the Minister on Friday next, representing the subject of the necessity for an under-crossing convenient to the Ashfield Railway Station, as an additional matter.

I have, &c.,
GERALD HALLIGAN,
(For U.S.)

	£
The cost of the underway at Ashfield, will be	4,000
Cost of land for approaches	1,600
	£5,600

The only justification there is for this expenditure, is that the Department has recently closed a level crossing over the line at Ashfield. This crossing was allowed only in sufferance, there was no claim to it on the part of the public, but they have had the use of it for many years, over twenty.—CHAS. A. GOODCHAP, 4/8/81.

The

The Under Secretary of Public Works to The Council Clerk, Ashfield.

Sir, Department of Public Works, Sydney, 24 September, 1881.

Referring to your letter of the 14th July last, requesting an interview for a deputation on the subject of a crossing to connect North and South Ashfield, I am directed to request that you will be so good as to substitute for the proposed deputation a statement of the circumstances in writing, to which the full consideration of the Secretary for Public Works will be given, and the result promptly communicated to you.

I am to add that this course is rendered necessary by the largely increased applications from deputations, which have become inconvenient to the arrangements and business of the Department.

I have, &c.,
JOHN RAE.

No. 19.
The Council Clerk, Ashfield, to The Under Secretary for Public Works.

Sir, Council Chambers, Ashfield, 22 December, 1881.

Referring to your letter of the 24th September, asking that the circumstances of the Alt-street crossing might be submitted to the Minister in writing, I am now directed to bring under his notice the following facts, upon which the Council bases, on behalf of the ratepayers, its claim for an under-crossing at this place.

It is the opinion of this Council that the Government have supposed that this road has been opened since the railway was made, but the road has really existed for over forty years, and, until blocked by the railway, was most extensively used, being the connection of the Liverpool and Parramatta Roads, and since its obstruction the Council has been inundated with petitions and complaints, and have in their turn urged upon the Government to restore the thoroughfare, the absolute necessity of which I am to hope has forced itself upon the Minister.

The present gate is an expense, and the gradient on the north side of the line is so great that horses become restive. Several narrow escapes from accident have occurred through vehicles blocking the line, thereby endangering the lives of hundreds of passengers, the gate being closed. The gate being closed at 6 o'clock is also a source of great annoyance, more particularly to medical men, one recently having failed to get across here went to Croydon, and from thence positively to Burwood before a crossing could be effected. Since the closing of the line at the station, the want of a crossing without obstruction has been very much felt; goods arriving on the north side, intended for parties on the south, have to be carted at least 2 miles additional to reach their destination.

The Council, therefore, respectfully demand a restoration of the rights and privileges enjoyed by the inhabitants before the obstruction by the railway embankment, and hope that the Minister will give instructions for an under-crossing to be commenced without delay.

I have, &c.,
E. T. SAYERS,
Council Clerk.

No. 20.
Extract from the *Sydney Daily Telegraph*, 14 January, 1882.

"THE attention of the Minister for Works was yesterday drawn to the want of crossing accommodation over the railway line, in the district of Ashfield, by Messrs. Pigott and Henson, M.'sL.A. The Minister for Works pointed out that difficulties existed in the way of the construction of a subway, as land would have to be purchased by the Railway Department, and for which there was at present no funds available. There was no doubt that the street crossings would be made so as to meet the requirements of the district, and that the gates would be widened and road-way cut away in order that traffic might be assisted."

No. 21.
The Mayor of Ashfield to The Secretary for Public Works.

Sir, Ashfield, 31 January, 1882.

At a numerously and influentially attended public meeting, held at the Oddfellows' Hall, Ashfield, on the 30th instant, I was empowered to transmit to you the following resolution in regard to the reply received from you by Messrs. Henson and Pigott, M.'sP., relative to the through and uninterrupted vehicular crossing asked for at Alt-street, Ashfield, viz.:—

"That the answer given by the Hon. Minister for Works to Messrs. Henson and Pigott, as reported in the *Herald* of the 14th instant, will not in any way remove the difficulty complained of, and that this meeting is of opinion that the commercial prosperity and general convenience of the inhabitants of the Borough of Ashfield alike demands and fully justifies the Government proceeding immediately to construct a through and uninterrupted vehicle crossing under the railway, at Alt-street.

I have, &c.,
THOS. L. NICHOLSON,
(Mayor of Ashfield),
Chairman of the meeting.

No. 22.
W. Henson, Esq., M.P., to The Secretary for Public Works.

Dear Sir, Ashfield, 6 February, 1882.

Will you kindly say if you will, and when, receive a deputation, appointed at a public meeting, in regard to the Alt-street railway crossing.

An underway in lieu of a way over the line is deemed most desirable.

Yours, &c.,
WILLIAM HENSON.

The

The Under Secretary of Public Works to W. Henson, Esq., M.P.

Sir, Department of Public Works, 10 February, 1882.

I am directed to inform you that the Secretary for Public Works will receive the deputation mentioned in your letter of the 6th instant respecting Alt-street railway crossing, Ashfield, on Thursday next, the 16th instant, at 11 o'clock a.m. I have, &c.,

JOHN RAE.

Mr. Cowdery, B.C., 11/2/82.—G.B.

Alt-street is not at all suitable for a subway, there not being sufficient headway, and the approach on the Liverpool Road side would be very steep. Land would also be required on both sides of the approaches. The best site, as I have before stated, is at Bland-street, there being more headway, and it is close to the station, which would be of far more advantage to the public.—G.C., 15/2/82.

Commissioner.

The underway will be made at Alt-street. The residents, in public meeting, have asked this, and it is not the intention to buy land at an exorbitant price to make the underway at Bland-street. The Crown Solicitor had better be asked if Mr. Pope would have any claim for damage against the Department.—J.L., 16/2/82.

No. 23.

Extract from *Sydney Morning Herald*, dated 17th February, 1882.

"Deputation.—Ashfield Railway Crossing.

"YESTERDAY a deputation consisting of Mr. W. H. Pigott, M.L.A., Mr. Henson, M.L.A., the Mayor of Ashfield, Dr. Haylock, and some other gentlemen, waited on the Hon. Minister for Works for the purpose of urging upon him the great inconvenience to the people of the Borough of Ashfield through the want of a crossing over the railway in that locality. They pointed out that the matter had been brought under the notice of the Department on several occasions, and that they had been appointed by a public meet as a deputation to wait upon the Minister with a view to call his attention to the inconvenience that they suffered under. They further stated that the Borough Council had not the means to contribute towards the purchase of private lands in order to make a subway at Bland-street, and that the residents were almost unanimously of opinion that the underway should be constructed at Alt-street. They also produced a plan of the locality, showing that a subway could be constructed at the spot they indicated without any difficulty.

"Mr. Lackey, in reply, informed them that the matter had been delayed in the hope that the residents of the Municipality would have raised sufficient money amongst themselves for the purpose of purchasing a suitable piece of land at Bland-street, so that the Government could make an underway opposite that street. This not having been done, he supposed the next best plan would be to construct an underway at Alt-street, as at first proposed. He would give instructions to the Engineer for Existing Lines to report upon the practicability of making an underway at this place, and if there were no difficulties other than those which now suggested themselves the work should be carried out."

Mr. Cowdery will please submit plan and section showing the way Mr. Pope's land would be affected, and will state the quantity of land which will be required to make the underway. Only land will be required for this purpose.—CHAS. A.G., 16/2/82. Mr. Hyndman for plan and section.—G.C. (*pro* G.L.) Tracing herewith.—R.A.H. Engineer for Existing Lines.

Plan and section herewith, showing how Mr. Pope's land will be affected. Area of land required to be taken from Mr. Pope, 18½ perches. Land will be required to form approaches to subway.—G.C., 24/3/12. Commissioner.

Assuming that Mr. Pope would have no claim for compensation for the way in which his property would be affected by the lowering of Alt-street to form the underway, what would be a fair valuation of the 18½ perches of land which it would be necessary to take from him? The Land Valuer might be asked to make estimate of this. And Mr. Cowdery might say what the cost of the underway would be at Alt-street as compared with Bland-street, assuming that Mr. Pope would have no claim beyond the value of the land actually taken from him.—CHAS. A.G., 27/3/82. Land Valuer first, 27/3/82, B.C.

I value the land proposed to be taken from Mr. Pope, in Alt-street, at ...	£342	3	9
For destruction of twenty pine trees of many years growth	100	0	0
	£442	3	9

Mr. Cowdery.—25/4/82. J.B., 24/4/82.

Mr. Hyndman for estimated cost of underway at Alt-street as compared with Bland-street, assuming that Mr. Pope would have no claim beyond the value of the land actually taken from him.—G.C. (*pro* G.L.), 18/5/82. Mr. Hyndman.

Apart from the value of land required in either case, the cost of erecting an under-bridge 50 feet wide would be, for Alt-street, £6,850; for Bland-street, £6,529.—R.A.H., 6/7/82. Engineer for Existing Lines.

Estimated cost of constructing underway bridge at Alt-street, exclusive of land, £6,850. Estimated cost at Bland-street, £6,529.—G.C. (*pro* G.L.), 26/7/82. Commissioner.

No. 24.

Minute of Commissioner.

Railway Under-bridge at Ashfield.

IT is proposed to make a bridge under the railway at Ashfield, to give access to both sides of the township.

If made at Alt-street, the present level-crossing, the bridge will cost £6,850, land to be taken from Mr. Pope £442 = £7,292; but in making this underway, Alt-street, which divides Mr. Pope's property, will be required to be lowered very much, and as some land must be taken from Mr. Pope to make underway the question arises whether he would be able to claim compensation for the damage he may sustain by the lowering of the street. He estimated this damage some years ago at £6,000, but says he would have to claim more now.

The alternative proposal is, to make the bridge at a point on the line which leads to Bland-street, but an approach road would have to be provided. Bridge

Bridge would cost £6,529, road £1,600 = £8,129.

It will be seen that if Mr. Pope would not be entitled to compensation for damage to his property, the underway by Alt-street would be the cheaper work, but if anything like £6,000 is to be paid for damage (and our land valuer thinks that such a claim would not be excessive), then of course, the underway by Bland-street would be the cheaper scheme.

In the event of the Government giving an approach and underway by Bland-street, could they resume Alt-street, the one being substituted for the other from Liverpool Road to railway? Mr. Pope is the owner of the land on both sides, and would pay for the approach to Bland-street and the road to connect Bland-street with Alt-street (shown in blue), if allowed to have the road which devides his property. Attached is a rough sketch.

Will Crown Solicitor please advise in questions raised.

CHAS. A. G., 29/7/82.

Make copy of this and rough sketch for Crown Solicitor. Copy sent to Crown Solicitor.

No. 25.

Crown Solicitor's opinion.

Sir, Crown Solicitor's Office, Sydney, 10 August, 1882.

I have the honor to return herewith your minute paper relating to the proposed railway under-bridge at Ashfield, and to state it is established by decisions in the English Courts that if, in the construction of railway works by lowering or raising a highway the access to private property is impeded, the owner of the land is entitled to compensation, on the ground that it has been "injuriously affected." Mr. Pope will, therefore, if the level of Alt-street is altered in the way suggested be entitled to receive compensation from you, but whether a Jury would find that he was entitled to the very large amount stated, I of course cannot advise.

Under the Railway Act you may close roads and substitute others, if the alteration is required in the construction of the line or for railway purpose, or you may take any land required; but the suggested mode of dealing with the portion of Alt-street extending from the Liverpool Road to the railway line by transferring same to Mr. Pope in exchange for another road would not be a taking it for railway purposes within the meaning of the Act. The land so dealt with would not be in any way used in connection with the railway, or as a portion of the railway land, but as compensation or payment for other land which would be used for that purpose; instead of being taken for the railway the portion of the road referred to would in effect be taken for the purpose of being sold to Mr. Pope.

As you do not appear to be under any legal liability to construct this under-bridge, which does not appear to be required for the better working of the railway but for the convenience of the inhabitants of Ashfield, possibly the Municipal Council will consent to be at the expense of making this bridge or to contribute liberally to the cost of its construction, which will remove the difficulty as to forming the approach from the Liverpool Road to Bland-street. I have, &c.,

JOHN WILLIAMS,
Crown Solicitor.

No. 26.

The Council Clerk, Ashfield, to The Secretary for Mines.

Sir, Municipal Council Chambers, Ashfield, 28 December, 1882.

I have the honor, by direction of the Mayor of this Borough, to draw your attention to a promise made to this Council some time since, that the work of making an underground crossing at Alt-street, in this Borough, would be commenced as soon as the works in connection with the crossing at Stanmore were completed. This work having been finished, I am directed to urge the immediate necessity of at once proceeding with the crossing at Alt-street, as its present condition renders it very unsafe for traffic, and further, it is the only place of crossing for some distance on either sides, thereby necessitating its being used at the risk of accident. I have, &c.,

THOMAS GLASSOP,
Council Clerk.

Acknowledge and forwarded to the Works Department.—W.H., 4/1/83. The Under Secretary Public Works.—5/1/83. Railways.—J.R., 9/1/83. The Commissioner, for instructions.—D.V., 1/2/83.

Look through the papers, and let me know if there be anything in the correspondence to justify the statement that a promise was made to make the underway at Alt-street. In the face of the large compensation claimed by Mr. Pope, I could not recommend the underway at this place.—CHAS. A.G., 3/2/83.

I attach report (*Sydney Morning Herald*) of deputation which waited upon the Minister in this matter in February 1882. On the date the deputation waited upon Mr. Lackey, he wrote on the papers.

"The underway will be made at Alt-street, the residents in public meeting have asked this; and it is not the intention to buy land at an exorbitant price to make the underway at Bland-street. The Crown Solicitor had better be asked if Mr. Pope would have any claim for damage against the Department."

The Crown Solicitor was asked accordingly, and advised that Mr. Pope would legally have a claim against the Department.

The above seem to be the only circumstances that justify the statement referred to.—H. M'L., 6/2/83.

The promise or expression of intention to make the underway at Alt-street seems to have been conditional upon its being found that Mr. Pope, the owner of the adjoining land, would not be entitled to compensation. The Crown Solicitor has advised that he would be entitled to compensation, and, as the amount would make the cost of underway at Alt-street an indefensible outlay of public money, the project must be abandoned.—CHAS. A.G., 6/2/83.

No. 27.

The Council Clerk, Ashfield, to The Commissioner for Railways.

Sir, Municipal Council Chambers, Ashfield, 4 April, 1882.

I am directed by the Mayor of this Borough, to draw you attention to the state of the foot-paths in Hercules-street, and to suggest the advisability of at once kerbing the same.

I have, &c,
E. T. SAYERS,
Council Clerk.

Mr. Cowdery, B.C., 6/4/82.—G.B. Mr. Hyndman for report.—G.C., (*pro* G.L)., 11/4/82. Mr. Purton.—R.A.H., 27/3/83.

The foot-paths herein referred to require attention, and to make a proper job would be to kerb and gutter them. Estimated cost of the above work, including excavation and constructing gully shafts, &c., complete, £240.—J. V. Purton, 31/3/83. District Engineer.

The cost of this work if approved, will be about £240, chargeable to Schedule G.—G.C. (*pro* G.L.), 6/4/83. Commissioner.

See Mr. Mills' letter of 12/12/81, upon which Mr. Hyndman was requested to report on 26/12/81. No report received. The letter was sent to Mr. Hyndman for report on 11/4/82, and within a few days of *one year* Mr. Hyndman replies.—Chas. A.G., 10/4/83.

Please forward a report on Mr. Mills' letter.—G.C. (*pro* G.L.), 14/4/83. Mr. Hyndman. I have seen Mr. Mills about this, he strongly advocates the subway in Alt-street, of which we have all particulars.—R.A.H., 3/5/83. Engineer for Existing Lines. Mr. Mills strongly advocates to construction of a subway in Alt-street. All papers referring to Alt-street subway are with Commissioner.—G.C. (*pro* G.L.), 9/5/83. Commissioner.

Mr. J. Mills to The Secretary for Public Works.

Sir, Sydney, 12 December, 1881.

In bringing under your notice the necessity for a subway for vehicles at the Ashfield Railway Station, I do myself the honor to state, for your information, that I believe I have discovered a plan by which a subway more satisfactory for working the station, and convenient for all general purposes, can be effected at a trifling cost for the approaches.

I do not desire to say more at present, but should you consider this communication worthy of your notice I shall be pleased to explain my views to any officer you might direct to call on me, who would then be enabled to report to you whether my plan could be carried out or not.

The land for the approaches cannot possibly cost much, and I believe can easily be obtained at its fair value.

I have, &c.,
JOHN MILLS.

Mr. Cowdery, 16/1/81.—G.B. Mr. Hyndman to meet Mr. Mills, and report.—G.C. (*pro* G.L.), 26/12/81.

No. 28.

Mr. J. Mills to The Secretary for Public Works.

Subway under the Railway, at Alt-street, Ashfield.

Sir, John-street, Ashfield, 30 January, 1883.

In bringing under your notice the above, I do myself the honor to ask the favour of an interview, and shall feel obliged by your informing me when it will be convenient for you to receive a deputation in connection therewith, as the work was promised to be commenced early last year.

I have, &c.,
JOHN MILLS.

Railways.—J.R., 6/2/83.

See papers herewith—There is no doubt that the people of Ashfield have been deprived of a valuable crossing, and there is equally no doubt that the level-crossing at Alt-street is inconvenient and dangerous. If a compromise could be effected it would be advantageous to all concerned—a bridge (underway) at Bland-street would effect this, provided an approach from the Liverpool Road to underway could be secured and Alt-street be closed.—Chas. A.G., 12/2/83. Under Secretary, Public Works.

No. 29.

Extract.

Extract from *Sydney Morning Herald*, 24/2/83.

Railway Crossing at Ashfield.—A deputation consisting of the Mayor of Ashfield (Mr. Mark J. Hammond), and a number of leading residents, waited yesterday morning upon the Hon. The Minister for Works for the purpose of bringing under his notice the necessity for the construction of a subway under the railway, at Alt-street, Ashfield. It was pointed out that in the construction of the line an embankment 12 or 14 feet high had been thrown across the road at this point, and the crossing was consequently very dangerous for vehicular traffic. The gates were also closed at 6 o'clock, and anyone wishing to cross the line would have to go in that direction as far as Burwood. Several members of the deputation stated that on a former occasion Mr. Lackey had said that he saw no difficulty in the way of carrying out the work, and promised to give instructions that it should be gone on with forthwith. Subsequently he told them it would be proceeded with as soon as the one between Newtown and Stanmore was finished. As this had now been completed they thought the present the most favourable time to bring it under the notice of Minister.

Mr.

Mr. Copeland said he saw that amongst the papers there was a report from Mr. Cowdery, in which it was stated that Alt-street was not at all suitable for a subway, as the approach from Liverpool Road side was very steep, and that the best place was at Bland-street, as there would then be more headway, and it was closer to the station. He might say he was thoroughly aware of the necessity of having these subways; he believed in them in preference to level-crossings, and therefore, he did not need any convincing of the necessity for work of that kind. But it seemed it was almost impossibe to have the crossing at Alt-street as it would be necessary to pay a large sum for land on both sides of the road, whereas he understood there would be little difficulty at Bland-street. So far as he could judge from the papers, the latter place was best in the public interest, and he thought that was the place to construct a crossing. He was informed that the road at Alt-street would have to be cut down 12 feet to provide sufficient headway, which would entail very considerable expense.

It was pointed out by the deputation that all the cutting away necessary would be to bring the road down to the level of the adjoining ground.

Mr. Copeland said he would have a report made, and if it were as they said, he saw no difficulty in constructing the crossing.

The deputation thanked the Minister, and withdrew.

The deputation promised to furnish me with a plan of survey showing 16 feet of clear headway at Alt-street, and I promised on receipt of such plan to have a further report as I was in favour of subways in preference to level-crossings or bridges.—H.C., 23/2/83. Railways.—1/3/83., J.R.

No. 30.

Mr. J. Mills to The Secretary for Public Works.

Subway under the Railway, at Alt-street.

Sir, 7 March, 1883.

In again bringing under your notice the above subject, I do myself the honor to state that the plans referred to by the deputation on the 23rd ultimo, are now in their possession, and I shall be glad to learn when it will be convenient for you to receive them, so that they can present the same for your inspection.

I have, &c.,
JOHN MILLS.

Having personally inspected the ground since the deputation, I don't particularly require to see the plans at present.—H.C., 7/3/83. Inform.—J.R., 8/3/83.

The Under Secretary for Public Works to Mr. J. Mills.

Sir, 13 March, 1883.

Referring to your letter dated the 7th instant, I am to inform you that the Secretary for Public Works having personally inspected the ground, does not now consider it necessary that he should see the plans of the proposed subway at Alt-street, Ashfield.

Thanking you for your courteous offer,

I have, &c.,
JOHN RAE.

No. 31.

Mr. W. W. Rodd to The Secretary for Public Works.

Sir, Barnstaple Manor, Five Dock, 13 March, 1883.

Referring to the printed paper headed "Railway Crossing at Ashfield," and assuming the report to be correct, I do, as ratepayer, crave leave to make the following remarks :— See No. 29.

1. In my opinion, Alt-street is the natural and proper line to have a crossing. It commences on south side of Parramatta Road and continues in a straight line over the railway to the Liverpool Road. It is nearly on the old line of road, forty-five years since. There is little or no difficulty on the Liverpool Road approach; no land would have to be resumed; perhaps Mr. Pope may claim compensation, but I really do not see what material harm it would do him.
2. Bland-street would be more expensive. Land of Mr. Brinstead, surveyor, would have to be resumed, and to go by the back part of Mr. Alderman Hudson's premises, and on the other side it would go right through a timber-yard, and the land also would have to be resumed.
3. I think a cutting of 2 or 3 feet in Alt-street would give sufficient headway—perhaps a sharp dip from Liverpool Road.
4. I claim to have some knowledge of amateur roadmaking, &c., for the last forty years; for eighteen years I was manager of the Parramatta Trust (or Sydney). I believe I am not personally known to you, so add that I am the senior attorney of the Supreme Court, sixty-two years in the Colony, and only seventy-three years old.

When the railway was being constructed, I pointed out to Captain Martindale that the road should go under the line, the northern approach being so dangerous (many accidents having happened), and when I applied to the Railway Office to fence the side I was told the Commissioner of Roads was the person to apply to.

Now, sir, if you could spare one hour after the present Session is over, and personally inspect the locality, you would at once see that Mr. Cowdery's report is not the right thing—in fact, is incorrect.

I remain, &c.,
W. W. RODD.

Mr.

Mr. W. W. Rodd to The Secretary for Public Works.

Dear Sir, Barnstaple Manor, Five Dock, 7 May, 1883.

Now the session being over, I hope you will have breathing-time to look into a letter I sent just before Mr. Copeland resigned, in reference to the bridge over the line (railway) so much wanted at Ashfield, passing near Pope's property.

Since I wrote I took a surveyor with me, and he approves of all I stated.

I remain, &c.,
W. W. RODD.

It would seem that, by making underway at Alt-street, we shall incur an expenditure altogether in excess of the merits of the case. If the Municipal Council of Ashfield would consent to the crossing being opposite Bland-street, I think all interests will be served. If Mr. Pope obtained the present approach to Alt-street crossing in consideration of his giving land for approaches to Bland-street, what would be the cost to the Department for underway, and the saving effected (capitalized) for the closing of the level-crossing.—CH.A.G., 12/5/83.

Mr. Cowdery. Mr. Hyndman, for cost as required by Commissioner.—G.C. (*pro* G.L.), 15/5/83. Very urgent. A section of Bland-street is now shown on plan; also section for drainage; an estimate is given on Mr. Cowdery's M.P., 26/7/82. The capitalized value of gatekeeping expenses is £500 at 5 per cent.—R.A.H., 13/7/83. Forward plan showing section of Bland-street, and section for drainage.—G.C. (*pro* G.L.), 17/7/83. Mr. Hyndman. Herewith.—R.A.H., 24/7/83. Engineer for Existing Lines. The cost of subway at Bland-street will be £6,529, and the saving effected, capitalized by the closing of the level-crossing, would be £500 at 5 per cent.—G.C. (*pro* G.L.) 25/7/83.—Commissioner. I think there must be some mistake about this. What is the total amount paid for wages, &c.—CHAS. A. G., 2/8/83. Traffic Manager, 2/8/83.—L.P.T. There is only one gatekeeper at Ashfield, whose wages is 30s. per week, or equal to £78 per year. Capitalized, that would be £1,560.—W. V. READ (*per* D.K.), 3/8/83. Commissioner.

No. 32.
Mr. W. Marshall to The Secretary for Public Works.

Sir, Liverpool Road, Ashfield, 30 June, 1883.

I have to address you upon a matter that I am sure you will give your earnest and prompt attention, so as to relieve the responsibility of the Department. At Ashfield Railway Station the public are permitted to pass from the down train platform on to Alt-street and intermediate homes, causing a danger which is perfectly unnecessary, and entailing a possible liability should accident occur.

This morning my little boy, four years old, wandered on to the line, when he was just saved from destruction as the up funeral train passed. At no other suburban station is a similar risk permitted.

Children are continually on the line at the place indicated, and I have brought the matter under the notice of the Station-master, as well as others, several times.

Trusting the remedy will be practical and prompt at your hands,

I have, &c.,
W. MARSHALL.

Will Commissioner for Railways reply to this, and do what he thinks the case requires?—F.A.W., 4/7/83. The end of the platform should be built up as suggested. Will Mr. Cowdery see to this?—CH.A.G., 6/8/83. Mr. Hyndman,—to have end of platform built up as suggested, and charge to working expenses.—G.C. (*per* G.L.) Mr. Purton.—R.H. (*per* H.J.M.) Noted.—J. PURTON, 11/8/83.

Mr. W. Marshall to The Commissioner for Railways.

Dear Sir, Liverpool Road, Ashfield, 3 July, 1883.

On the 30th ultimo I addressed an official letter to the Minister *re* danger to the travelling public and others and responsibility to the Department by allowing indiscriminate traffic from the down platform, Ashfield Station, to Alt-street, and I feel sure that you will agree with me that a serious risk does exist, and wants prompt attention when pointed out.

I know that the vexed question of a subway at this place has received your careful attention, and if that were decided upon the risk spoken of would, I expect, be avoided, but in the meantime the public would be placed in a safer state by putting the Ashfield platform similar to Newtown, and no one inconvenienced.

I have heard it expressed by residents that if ever an accident occurred or life lost, that a Jury should assess heavy damages, especially when the matter has been brought under your notice as an existing danger.

I expect before long it will be necessary to loop the trains at Ashfield, to carry the enormous traffic that is springing up on the line.

Hoping to have your sympathy in carrying out the necessary alterations at the platform,

I remain, &c.,
W. MARSHALL.

Acknowledge receipt with thanks. The passengers must not be allowed to travel along the line from the station to Alt-street. Traffic Manager will please see to this.—CH.A.G., 4/7/83.

The Commissioner for Railways to Mr. W. Marshall.

Sir, Department of Public Works, Railway Branch, 4 July, 1886.

I have the honor to acknowledge the receipt of your letter of the 3rd instant, bringing under notice the danger incurred by allowing indiscriminate traffic from the down platform, at Ashfield Station, to Alt-street, and, while thanking you for drawing attention to the matter, have to inform you that it shall receive immediate attention.

I have, &c.,
CHAS. A. GOODCHAP (*per* G.B.),
Commissioner for Railways.

Inspector

Inspector Richardson and Station-master, Ashfield, to see and carry out.—W.V. READ (*pro* D.K.), 9/7/83.

I spoke to Mr. Read about the place only a few days ago, and am very glad to see it closed, at same time I am sure there will be great complaints from a certain number of residents who have been using this track for very many years, and if records are searched I think it will be found that the right-a-way was given to these people, as the platform was not only made so as to give a way down to the end of it, but a lamp was also put up to show the way down. Mr. John Pope is the principal person affected by this track being closed, as it will make him and others, living in same direction, to walk double the distance now.—H. RICHARDSON, 9/7/83.

I beg to suggest that the end of the platform be built up at once and a railing put on it, as at present it is only a trap for people, as it has been made purposely for the public to get off the platform on to the track to Alt-street.—H. RICHARDSON, 7/9/83.

I recommend that the end of the platform be built up and fenced off.—W. V. READ (*pro* D.K.), 12/7/83. Commissioner. I concur.—D.V.

No. 33.

The Mayor of Ashfield to The Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 25 July, 1883.

I have the honor to acquaint you that, at a special meeting of the Council, held on the 24th instant, for the purpose of considering the important question of railway crossings in this Borough, at which the whole of the Council were present, the following resolution was submitted, and after full discussion, agreed to, viz.: "That the Hon. the Minister for Works be respectfully requested to allow the Engineer for Existing Lines or other officer to meet this Council with plans, &c., &c., *re* under-crossing at Ashfield, with the object of viewing and considering together the best positions, and that he will be pleased to make an appointment at his earliest convenience."

I have therefore to ask that you will kindly name a day and hour on which such an interview could be held.

The cause of this, perhaps unusual request, has been brought about through the great necessity for additional crossings and the continual applications to the Government during the last seven or eight years for one at Alt-street, the necessity for which has not been disputed by them on any occasion; but the expediency as to locality combined with conflicting interests appears to have been the reason of the long delay on their part.

The Council, therefore, whilst apologising for taking this step, consider that it is the only practical way in which this matter might be brought to a successful issue.

I have, &c.,
MARK J. HAMMOND,
Mayor.

Underway, Bland-street, Ashfield.

Cost of underway, £6,529; saving effected by closing Alt-street level-crossing, capitalized at 5 per cent., £1,560, at 4 per cent., £1,950; at the lowest computation, the bridge would cost £4,579.

Alt-street level-crossing is dangerous, and the people of Ashfield have been deprived of level-crossing at station. They are entitled to consideration.

No doubt they would like an underway at Alt-street, but that could only be given at great cost, as Mr. Pope, whose property Alt-street intersects, would have a claim to compensation if Alt-street were lowered. CH.A.G., 6/8/83.

No. 34.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 15 August, 1883.

I have the honor, by direction of the Mayor of this Borough, to draw your attention to my letter of 25th ultimo, *re* under-crossing at Ashfield, to which no reply has yet been received.

I have, &c.,
THOMAS GLASSOP,
Council Clerk.

The Council requests that the Engineer for Existing Lines may be directed to meet them to consider question of under-bridge, producing plans, &c. I see no objection to this.—CH.A.G., 31/8/83. I concur.—F.A.W., 3/9/83. What day and hour will be convenient for Mr. Cowdery to meet the Council, and where?—G.B., B.C., 4/9/83. Monday next at 9 a.m., at Ashfield Station.—G.L., 7/9/83. Commissioner.—Inform., G.B.

The Commissioner for Railways to The Council Clerk, Ashfield.

Sir, Department Public Works, Railway Branch, Sydney, 7 September, 1883.

With reference to your letter of the 25th ultimo, addressed to the Hon. the Minister for Public Works, asking that the Engineer for Existing Lines may be directed to meet your Council to consider the question of railway crossings within your Borough, I have the honor to inform you that Mr. Cowdery will meet the Aldermen of Ashfield at the railway station there, at 9 a.m., on Monday next.

I have, &c.,
C. A. GOODCHAP,
Commissioner for Railways.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Municipal Council Chamber, Ashfield, 30 August, 1883.

I have the honor, by direction of this Council, to again draw your attention to my letter of 25th July last, and also that of 15th August, on the subject of an underground crossing in the Borough, to which no reply has yet been received.

A requisition having been forwarded to the Mayor, since the date of the last communication, to convene a public meeting of the ratepayers to consider the matter, is the cause of this further correspondence.

Your early attention to the matter will oblige.

I have, &c.,
THOS. GLASSOP,
Council Clerk.

The Council Clerk, Ashfield, to The Commissioner for Railways.

Sir, Municipal Council Chambers, Ashfield, 11 September, 1883.

I have the honor to acknowledge receipt of your letter of 7th instant, also telegram of 8th, notifying that Mr. Cowdery will meet the members of this Council on Wednesday next, at the railway station, at 9 o'clock, a.m., and to inform you that arrangements have been made for the Council to be present.

I have, &c.,
THOS. GLASSOP,
Council Clerk.

Mr. Cowdery, B.C., 12/9/83.—G.B. I met the Mayor and Aldermen and inspected both Alt and Bond Streets, but up to the time I left they had not arrived at any decision as to which was the best site for a subway.—G.C. (*pro* G.L.), 17/9/83. Commissioner.

No. 35.

The Mayor of Ashfield to The Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 13 September, 1883.

I have the honor to inform you that at a public meeting of the ratepayers held in the School of Arts, Ashfield, on Wednesday evening last for the purpose of determining what steps should be taken to urge upon the Government the necessity for commencing to construct a subway under the railway at Alt-street, it was resolved,—

1st. That this meeting is of opinion that the Government should not resume Alt-street.

2nd. That this meeting is of opinion that the Government should be requested to construct a subway under Alt-street. (Unanimously.)

3rd. That a deputation wait on the Honorable the Minister for Works to represent this matter, and to urge him to personally inspect the locality.

I have, &c.,
MARK J. HAMMOND,
Mayor, Chairman of Meeting.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 13 September, 1883.

I have the honor to inform you that at a public meeting of the ratepayers of this Borough held last evening for the purpose of determining what steps should be taken to urge upon the Government the necessity of commencing to construct a subway under the railway, at Alt-street, a deputation consisting of the Hons. R. White and S. H. Terry, M's.P., A. H. Jacob, M.P., his Worship the Mayor, M. J. Hammond, Aldermen Holborow, Watkin, Ireland, and Mortley, and Messrs. William Henson, John Mills, and Thomas F. Jackson was appointed to wait on the Honorable the Minister for Works to request him to personally inspect the locality.

I have, therefore, to request that you will kindly name a time when it will be convenient to receive such deputation.

I have, &c.,
THOS. GLASSOP,
Council Clerk.

Will Mr. Cowdery report on this matter. Where are the papers,—CH.A.G., 18/9/83. Urgent.

An under-bridge at Alt-street will be very costly on account of the approaches, Bland-street would be a more suitable site for the general public, and before long another under-bridge will be required south of Alt-street, where there is a good site and plenty of headway, but I would not recommend either of these last sites unless the level-crossing at Alt-street be closed.—G.C., 20/9/83.

Will the Minister, in compliance with the request contained in this letter, personally inspect the locality ?—CH.A.G., 22/9/83. Is there a deputation arranged for this matter.—F.A.W., 25/9/83. No, but there is only one for Friday next.—J.R., 26/9/83. Arrange for Friday next, and fix the hour.—F.A.W., 26/9/83. Railways, for the requisite information.—W.F. (*pro* U.S.), 26/9/83.

The Under Secretary for Public Works to The Mayor of Ashfield.

Sir, Department of Public Works, Railway Branch, Sydney, 20 September, 1883.

Referring to your letter of the 13th instant, I am directed to inform you that the Secretary for Public Works will receive the deputation on the subject of construction of subway under the railway line, at Alt-street, Ashfield, on Friday next, the 28th instant, at 11·30 o'clock, a.m.

I have, &c.,
J. RAE,
Under Secretary for Public Works.

No. 36.

No. 36.

Minute of Minister.

Re Subway at Alt-street, Ashfield.

A DEPUTATION from Ashfied waited upon me to-day to ask that a subway might be made under the railway, at Alt-street. They stated that Mr. Lackey had promised the work should be carried out, and it was now urgently required as the present level-crossing was unsafe. They further stated the work could be done without unduly interfering with Mr. Pope's property. The subway at Bland-street would not be suitable, and they considered, in fact, it could not be given.

I informed the deputation that the great objection to the work was the excessive cost it would entail.

When the papers were submitted to me it was recommended the subway should be made at Bland-street, and Alt-street closed, but I thought the better plan would be to make public the proposal to see whether it would be acceptable to the people of Ashfield, and a paragraph was then put in the *Herald* (attached).

In other places over or under bridges were not given. In America, for instance, where the traffic was very great, the traffic crossed the line on the level.

There was no record in the office of a promise having been made by Mr. Lackey to construct the subway at Alt-street. I promised on an early date to visit the place in company with Mr. Goodchap and Mr. Cowdery to inspect the locality.—F.A.W., 28/9/83.

EXTRACT from *Sydney Morning Herald*, 16 August, 1883.

WE understand that it has been determined to form an underway for vehicles, &c., at Bland-street, Ashfield, and when the work has been completed Alt-street will be closed as a level-crossing, and the roadway between the railway and Liverpool Road will be resumed.

No. 37.

Mr. W. Marshall to The Secretary for Public Works.

Re Underground Crossing, Ashfield Station.

Sir, Commercial Store, Liverpool Road, near railway station, Ashfield, 28 November, 1883.

I desire respectfully to bring under your notice that at a meeting of the Municipal Council of this Borough, held on 6th instant, it was agreed to petition Parliament that a subway underneath the railway should be made in Alt-street, Ashfield. I submit that that street would not be a suitable place for the following reasons, viz:—

1. It is only 50 feet wide, and it is proposed to give the owner of property (south side of line) 10 feet on both sides for private entrance, thus reducing the width to 30 feet opening, which I submit is too narrow.
2. The distance from station is objectionable, and is not where the general traffic would centre.
3. That the depriving of public of crossing at Hercules-street binds the Minister to make the subway as near to the station as possible, giving the greatest convenience to the largest body of inhabitants, and to owners of property their vested rights, as near as practicable.
4. That in view of the large traffic at Petersham, the Commissioner must ere long make Ashfield a terminal suburban station, and as land is available now on south side of line, a plan could be made to embody the crossing close to the station.
5. That the Council in advocating Alt-street is represented by a minority, and have not the general interest at heart.
6. That the difference in cost of Alt-street and a place adjacent to the station to be selected by the Minister would be such as to deprive Alt-street from being selected other than a foot-passenger subway.

Trusting these views may meet with your favourable consideration,

I have, &c.,
WILLIAM MARSHALL.

Proposed Subway at Ashfield.

WILL Commissioner of Railways obtain for me the following information. 1st. The distance from overbridge at Liverpool Road to Ashfield Station. 2, 3, and 4, the distance from same station to Bland-street, and the same to Alt-street. F.A.W., 6/12/83.

P.S.—The distance from Frederick-street to crossing at Croydon.—F.A.W. Mr. Cowdery.

1st. From Liverpool Road to Ashfield Station, 28 chains.
2nd. From Ashfield Station to Bland-street, 8 chains.
3rd. From Ashfield Station to Alt-street, 17 chains.
4th. From Ashfield Station to Frederick-street, 32 chains.
5th. From Frederick-street to Croydon crossing, 17 chains.
Diagram herewith. G.C. (*pro* G.L.), 10/12/83.
Commissioner. Obtain.—CHAS. A.G., 13/12/83.

Proposed Subway at Ashfield.

WILL Commissioner for Railways inform me why information asked for some time since upon this question has not yet been furnished. I should have thought the information I wanted could have been supplied in half an hour.—F.A.W., 17/12/83. It could not have been supplied in the time stated by Minister, as the exact distance had to be obtained. No time was lost in getting the information, and the Minister, I believe, has the papers on the subject.—CHAS. A.G., 17/12/83. Let plans be prepared and submitted to me for a subway at Alt-street, no land to be taken.—F.A.W., 17/12/83. Mr. Cowdery. Mr. Thompson for plan of subway at Alt-street, without taking any land.—G.C. (*pro* G.L.), 19/12/83.

No. 38.

No. 38.

Mr. J. Mills to The Secretary for Public Works.

Subway under the Railway at Alt-street.

Sir, John-street, Ashfield, 29 January, 1884.

Referring to the above, I do myself the honor to ask you to cause to be forwarded to me your decision, as it will allay the anxiety existing in the minds of the 560 inhabitants signing the petition.

I have, &c.,
JOHN MILLS.

Inform the Mayor of Ashfield this subway will be constructed at Alt-street.—F.A.W., 30/1/84.
Inform and let me have previous papers without delay.—CHAS. A. GOODCHAP, 30/1/84.

The Mayor of Ashfield to The Secretary for Public Works.

Sir, Ashfield, 31 January, 1884.

I am directed, by order of the Council, to respectfully ask whether any decision has yet been arrived at by you with reference to an under-crossing at Ashfield, the object of your visit on 12th September last.

I have, &c.,
MARK HAMMOND,
Mayor.

Inform that subway is to be made at Alt-street.—F.A.W., 1/2/84.

The Commissioner for Railways to Mr. J. Mills.

Sir, Department of Public Works, Railway Branch, 1 February, 1884.

With reference to your letter of the 29th ultimo, addressed to the Honorable the Minister for Public Works, inquiring what the decision has been in respect of the memorial signed by yourself and other residents of Ashfield, asking that a subway may be constructed under the railway, at Alt-street, I have the honor, by direction of Mr. Secretary Wright, to inform you that it has been decided to carry out this work.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways
(*pro* D.V.)

The Commissioner for Railways to The Mayor of Ashfield.

Sir, Department of Works, Railway Branch, 1 February, 1884.

Referring to the memorial signed by the residents of Ashfield, asking that a subway may be constructed under the railway, at Alt-street, I have the honor, by direction of Mr. Secretary Wright, to inform you that it has been decided to carry out this work.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways
(*pro* D.V.)

Mr. Cowdery, B.C., 12/2/84.—G.B. Mr. Cowdery to submit plans, &c.—CH.A.G., 28/2/84. Mr. Thompson for plans, &c.—G.C., 1/3/84. Plans are in hand, and half finished; will be ready for tenders to be invited in six weeks.—M.T., 21/4/84. Engineer for Existing Lines.

No. 39.

Question asked by Mr. Abigail, M.P.

Legislative Assembly, No. 87, Tuesday, 22nd April, 1884.

9. Railway Subway, at Alt-street, Ashfield.—Mr. Vaughn, for Mr. Abigail, asked the Secretary for Public Works:—When will the subway under the railway, at Alt-street, Ashfield, as promised by the Commissioner in a letter addressed to John Mills, Esq., Ashfield, dated 1st February, 1884, be constructed?

Mr. Wright answered,—Tenders will be invited in about six weeks from this date.

Mr. Cowdery, B.C., 6/6/84.—G.B. Are plans and specifications now ready.—G.L. (*per* G.C.), 9/6/84. Mr. Thompson. Plans and specifications (two of each) herewith. Estimated total cost, £5,650. The specifications were delayed in the Printing Office.—M.T., 30/6/84.

The Engineer for Existing Lines.—Draft advertisements (2) herewith, also plans (2) for Commissioner's approval.

No. 40.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 14 July, 1884.

I am directed by His Worship the Mayor to ask when it is likely that the proposed subway at Alt-street will be commenced.

I have, &c.,
THOS. GLASSOP,
Council Clerk.

Railways, B.C., 16/7/84.—J.R. Mr. Cowdery, B.C., 17/7/84.—G.B.

Minute

Minute Paper.

To Commissioner for Railways.

I BEG to inform the Commissioner that in August last I brought under the notice of the Engineer for Existing Lines the desirability of some repairs being effected to the gatehouse at level-crossing, Ashfield, but the matter has been standing over since then pending the decision as to whether a subway should be constructed in lieu of the crossing which would render the services of a gatekeeper unnecessary.

Will the Commissioner please inform me whether anything has yet been decided upon; if not, I think the repairs to the gatehouse should be carried out without delay.—W. V. READ, Traffic Manager, (*pro* W.H.C)., 30/7/84. Mr. Cowdery for report.—R.J.S., B.C., 1/8/84.

Plans are now ready and will be submitted to Commissioner in a few days.—G.C., (*pro* G.L)., 5/8/84.

No. 41.

Mr. J. Mills to The Secretary for Public Works.

Subway under the Railway, at Alt-street, Ashfield.

Sir, 30 July, 1884.

Referring to the above, I do myself the honor to state, for your information, that on April 22nd, in answer to a question put by Mr. Abigail,—"When will tenders for the subway under the railway, at Alt-street, Ashfield, be called for?" The Honorable the Minister for Works said: "In about a month or six weeks."

Believing, as many of the memoralists do, that the severe indisposition of the Honorable the Minister for Works has caused the delay in calling for tenders, on their behalf I shall feel obliged by being informed when tenders for the above work will be called for.

I have, &c.,
JOHN MILLS.

Railways, B.C., 1/8/84.—J.R. Mr. Cowdery for report.—R.J.S., B.C., 22/8/84. I have seen the Commissioner, and he informed me that this matter could stand over for next year.—G.C., 26/8/84. Are the plans ready; if not, when will they be?—CH.A.G. Mr. Cowdery. The plans are ready.—G.C., (*pro* G.L)., 2/9/84. Commissioner.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 26 August, 1884,

I am directed by His Worship the Mayor, to urge upon you the necessity for immediately commencing the proposed works in connection with the subway in Alt-street.

This street, between the railway line and Elizabeth-street, is in a very bad state of repair, and accidents are exceedingly liable to arise therefrom; but, in view of the works being commenced, any further expenditure on the street by the Council now would be absolutely thrown away.

I am also directed to point out that my letter on the subject of the subway at Alt-street, under date 14th ultimo, has not yet been replied to.

I have, &c.,
THOS. GLASSOP,
Council Clerk.

Railways, B.C., 27/8/84.—J.R.

No. 42.

Question asked by Mr. Hammond, M.P.

Legislative Assembly, No. 159, Friday, 19 September, 1884.

3. Subway under Railway, at Alt-street, Ashfield:—Mr. Hammond asked the Secretary for Public Works, "When is it the intention of the Government to proceed with the construction of a subway under the railway line, at Alt-street, Ashfield.

Mr. Trickett answered,—The plans are ready and tenders will be invited at an early date.

Mr. Cowdery.—R.J.S., B.C., 30/9/84. Draft advertisements (2) herewith inviting tenders.—G.C., 3/10/84. Commissioner. Prior to these advertisements going in, I wish to know whether any compensation will have to be made to Mr. Pope. Plans should be submitted.—CH.A.G., 6/10/84. Mr. Cowdery. I think the Land Valuer should be asked to see Mr. Pope and ascertain if he requires any compensation.—G.C., 8/10/84. Commissioner. Land Valuer.—R.J.S., B.C., 10/10/84. Land Valuer saw Mr. Pope on this subject and finds that compensation will be required. A plan and tracing should be prepared, showing what is required.—J.B., 20/10/84. Commissioner. Mr. Cowdery.—R.J.S., B.C., 21/10/84. No land is required to be taken from Mr. Pope, but the excavated approach to bridge will destroy the frontages of his property.—G.C., 23/10/84. Commissioner. Land Valuer, B.C., 25/10/84.—G.B. Engineer for Existing Lines for Plan.—J.B., 27/10/84. Plan showing how Mr. Pope's property is affected herewith.—J.A., 14/11/84. Mr. Cowdery.

F. Abigail, Esq., M.P., to Mr. G. Berner.

Dear Sir, Parliament, N. S. Wales, 11 October, 1884.

I have not yet received a reply that the tenders for the subway, Alt-street, Ashfield, have been accepted. I shall feel obliged if you will let me know, as I do not wish to bring it before Parliament again, if I can help it.

Awaiting reply.

I am, &c.,
F. ABIGAIL.

Memo.

Memo. for District Engineer, Sydney.

Railway Department, Office of Engineer for Existing Lines, Sydney, 7 November, 1884.

PLEASE show on accompanying tracing gateway to Mr. Pope's property, on west side of the line, roughly marked in pencil.

FRED. M. AVERN.

Position of gate shown on tracing.—M.T., 12/11/84. Assistant Engineer. Mr. Abigail is pressing in his inquiries on this matter; please expedite.—D.V., 7/11/84. Mr. Cowdery. Mr. Avern.—G.C., 13/11/84. Plan herewith for Land Valuer. Section for Corporation to-morrow.—F.M.A., 17/11/84. Section for Corporation herewith.—F.M.A., 19/11/84. Mr. Byrnes, with tracing asked for.—G.C. (*pro* H A)., 20/11/84.

Forward tracing to Municipal Council, Ashfield, and say that when they have proclaimed the street to the levels shown on such tracing, the work of constructing the underway will be proceeded with.—CHAS. A. G , 27/11/84.

Council Clerk, Ashfield, informed. 28/11/84.

The Commissioner for Railways to The Council Clerk, Ashfield.

Sir, Department of Railways, Sydney, 28 November, 1884.

Adverting to the correspondence that has passed, respecting the necessity of immediately proceeding with the construction of a subway under the railway line, at Alt-street, Ashfield, I have the honor to enclose herein tracing showing the levels of foot-path and roadway under the proposed bridge, and to inform you that when your council has proclaimed the street to the levels shown on such tracing, the work of constructing the underway will be proceeded with. I have, &c.,

CHAS. A. GOODCHAP,
Commissioner for Railways.

No. 43.

F. Abigail, Esq., M.P., to The Secretary for Public Works.

Sir, Parliament of New South Wales, 22 November, 1884.

I have the honor to bring under your notice that no tenders have been called for the subway at Alt-street, Ashfield, and the residents express surprise at this—seeing you gave them a promise some time ago that this necessary work should be done. Since I had my last conversation with you upon this question I have seen the Commissioner, and he appears to think there are insurmountable difficulties in the way of proceeding with this work. I cannot see them, nor can those you gave the promise to, and they have asked me to again request that you will have the work proceeded with at once; and if any person have or think they have a claim for compensation let them make good their claim in a Court of law, which will prevent the possibility of a suspicion that unfair influence was moved in the matter. Hoping to hear that the work will be carried on at once.

I am, &c.,
F. ABIGAIL.

The Commissioner for Railway to F. Abigail, Esq., M.P.

Sir, Department of Public Works, Railway Branch, 5 December, 1884.

Referring to your letter of the 22nd ultimo, addressed to the Secretary for Public Work, asking that the construction of subway at Alt-street, Ashfield, may be proceeded with, I have the honor to inform you that when the Municipal Council have proclaimed the street to the levels shown in a tracing with which they have been furnished, the work of constructing the underway will be proceeded with.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways
(*pro* D.V.)

No. 44.

M'Culloch & Pope to The Commissioner for Railway.

Re Subway, Alt-street.

Sir, 121 Pitt-street, Sydney, 24 December, 1884.

We are instructed by Mr. John Pope to give you notice, that the sum of £6,000 will be required as compensation for damage by severance or otherwise to his land, on both sides of the street, caused by the cutting down of same.

We have, &c.,
McCULLOCH & POPE.

Inform that this representation should be made to the Municipal Council of Ashfield, who have, I understood, given notice of alteration of levels.—CHAS. A. GOODCHAP, 30/12/84.

The Commissioner for Railways to M'Culloch & Pope.

Department of Public Works, Railway Branch, 31 December, 1884.

Gentlemen,

I have the honor to acknowledge your letter of the 24th instant, intimating on behalf of Mr. John Pope that £6,000 will be required as compensation for damage by severance or otherwise to his land, on both sides of Alt-street, Ashfield, by the cutting down the same.

In reply, I have to inform you that this representation should be made to the Municipal Council of Ashfield, who have, I understand, given notice of alteration of levels.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways.

No. 45.

The Mayor of Ashfield to The Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 30 December, 1884.

With reference to the plans showing the proposed alteration in the levels of Alt-street, Ashfield, which have been forwarded by the Government to the Council preparatory to the Government undertaking to restore the street to its former passable condition. This work is of course rendered necessary through an obstruction caused by the construction of the railway. As Mayor of this Borough, I therefore desire, before placing these levels before the Council for their adoption, to be informed whether in the event of compensation being claimed from the Council, it is the intention of the Government to undertake all responsibility in connection therewith.

It will be understood that the adoption of these levels is not made necessary under the Act.

I have, &c.,
J. W. WATKIN,
Mayor.

If the claims are submitted in a reasonable shape before the levels are finally adopted, the question of contribution of costs will be considered, but I am not prepared to admit there is any claim against the Government.—F.A.W., 9/1/85.

Subway at Alt-street, Ashfield.

THE question of a subway in this locality was long ago mooted. Memorials from the residents, records of deputations, and numerous letters from Mr. Abigail, Mr. John Mills, and others are on the file.

For some time it was an undecided point whether Alt-street or Bland-street was the more suitable site for such subway.

Ultimately the Minister decided in favour of Alt-street, and by his instructions the Mayor of Ashfield and Mr. John Mills were informed (by letters of 30/1/84 and 2/2/84) that the subway would be put in at that point. The work was afterwards postponed for a time.

In September, 1884, Mr. Cowdery submitted for Commissioner's approval draft advertisement calling for tenders for the work, but as the plans involved some interference with the property of a Mr. Pope, Commissioner minuted that before inviting tenders it must be ascertained if Mr. Pope would look for compensation.

The matter was referred to the Land Valuer, who reported that Mr. Pope would require compensation.

Commissioner thereupon forwarded to the Ashfield Council a tracing of the street showing Mr. Pope's land, and intimated that when they had proclaimed the street by the levels shown, the subway would be proceeded with. This by letter of 28/11/84.

Under date of 24/12/84, M'Culloch & Pope gave Commissioner notice that Mr. Pope would require £6,000 compensation for damage, by severance or otherwise, to his land on both sides of Alt-street.

Commissioner replied that this representation should be made to the Council who, it was understood, had given notice of alteration of levels.

On the 30/12/84, the Mayor of Ashfield wrote to the Minister referring to the plans forwarded by the Government "preparatory to undertaking to restore Alt-street to its former passable condition," desiring to know if, in the event of compensation being demanded, it was the intention of Government to undertake all responsibility, and stating that the adoption of the levels was not compulsory under the Act.

Hereon Minister minuted that if the claims were submitted in a reasonable shape, before the final adoption of the levels, the question of contribution of costs would be considered, but he was not prepared to admit that there was any claim against the Government.

It is not clear if the Mayor's letter above quoted is intended to be a reply to Commissioner's of 28/11/84, but if so it is indirect and inconclusive.

If, on the other hand, it is *not* a reply, Commissioner's letter has not been answered. I am informed that the street has not been proclaimed.

C.A.B., 26/1/85.

Has the Minister's minute of 9/1/85, been acted upon—if not, write to Council in terms thereof.—CHAS. A. GOODCHAP, 28/1/85.

The Commissioner for Railways to The Mayor of Ashfield.

Sir, Department of Public Works, Railway Branch, 4 February, 1885.

I have the honor to acknowledge your letter of the 30th December last, referring to the proposed alterations and improvements in Alt-street, and asking whether, in the event of compensation being claimed from the Council, it is the intention of the Government to undertake all responsibility.

I am authorized by Mr. Secretary Wright to inform you that, if the claims are put forward in a reasonable shape before the levels are finally adopted, he will consider the question of contribution of cost, but that he is not prepared to admit that there is any claim against the Government.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways.

No. 46.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Sir, Municipal Council Chambers, Ashfield, 6 February, 1885.

I have the honor to forward herewith a copy of letter received by this Council from John Pope, Esq., on the subject of the subway under Alt-street, in this Borough.

I have, &c.,
THOS. GLASSOP,
Council Clerk.

Mr.

Mr. J. Pope to The Mayor of Ashfield.

Sir, Ashfield, 29 December, 1884.

Referring to advertisements of proposed cutting down Alt-street, in this Borough, for the purpose of opening a road under the railway, I hereby tender my objection to the same as being of the greatest detriment to my property and destroying my present approaches, which I have enjoyed upwards of eighteen years. The injury is one of too serious a nature to me to be treated by anything short of a protest, and as a crossing or crossings can be made without injury to anyones property, I submit that the matter deserves more consideration than it has yet had, and that the roads on both sides of the railway should be raised in Alt-street rather than lowered.

I am, &c.,
JOHN POPE.

Commissioner for Railways.—F.A.W., 13/2/85. Mr. Cowdery for report.—D.V., (*pro* D.C.M'L.), 16/2/85. Urgent. This is a question to be decided by the Municipal Council. The Commissioner has decided that nothing can be done until the levels of the street are approved.—G.C., 19/2/85. Commisioner.

See letter sent to Council on 4/2/85; it is probable that this letter and our letter crossed. I do not see what the Department can do except to refer the Council of Ashfield to our letter of 4th instant. —Chas. A.G., 26/2/85. Inform.—F.A.W., 27/2/85.

The Commissioner for Railways to The Council Clerk, Ashfield.

Sir, Department of Railways, 21 March, 1885.

I have the honor to acknowledge the receipt of your letter of the 6th ult., with further reference to the proposed alterations and improvements in Alt-street, Ashfield, and enclosing copy of letter received from Mr. John Pope, in which he protests against the adoption of any plan which will have the effect of lowering the existing levels of Alt-street.

In reply, I have to refer you to my letter of the 4th ultimo, which apparently crossed yours in transit, in which I communicated to you Mr. Secretary Wright's decision respecting the willingness of the Department to entertain a reasonable claim without, however, admitting its liability to do so.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways.

No. 47.
Question.

Legislative Assembly, Tuesday, 24 March, 1885.
Railway Subway, Alt-street, Ashfield.

Mr. Hammond asked the Secretary for Public Works,—When is it the intention of the Government to proceed with the construction of a subway under the railway at Alt-street, Ashfield, as previously promised?

Mr. Wright answered,—Directly the Municipal Council will furnish the Department with the authorized levels of Alt-street.

Anything further been done?—G.B., B.C., 13/4/85. No. The Municipal Council have not yet furnished the Department with authorized levels of Alt-street.—G.C. (*pro* G.L.), 23/4/85. Commissioner. Any further tidings?—G.B., B.C., 2/5/85. Mr. Cowdery. No communication has been received from the Municipal Council. G.C. (*pro* G.L.), 4/5/85. Commissioner.

No. 48.
The Council Clerk, Ashfield, to The Commissioner for Railways.

Sir, Municipal Council Chambers, Ashfield, 17 June, 1885.

I have the honor to inform you that this Council has had under its consideration your letter of 28th November last, No. 84–5,956, accompanying a tracing showing the levels of foot-path and roadway at the proposed subway at Alt street, in this Borough, and asking the Council to proclaim the street to those levels, and also your letter of 4th February last, No. 85–400 on the same subject.

I am now directed to state that this Council is prepared to adopt the levels referred to on the distinct understanding only that the Government accept all responsibility in the matter of compensation to any person or persons who may make claim on account of same.

I have, &c.,
THOS. GLASSOP,
Council Clerk.

Mr. Cowdery, B.C., 20/6/85.—G.B. I think this should be referred to the Land Valuer for an estimate of compensation likely to be required.—G.C., 22/6/85. Commissioner. Land Valuer, B.C., 27/6/85.—G.B.

22 September, 1885.

12. Mr. Henson to ask the Secretary for Public Works.—When will the subway under the railway line at Alt-street, Ashfield, be commenced, and what is the cause of this work being delayed?

Nothing further has been done pending a report from the Land Valuer as to the amount of compensation likely to be required.—G.C., 18/9/85. Commissioner. Will Land Valuer please say how this matter stands?—D.C.M'L., 21/9/85. Land Valuer will report on this matter to Commissioner next week.—J.B., 21/9/85. Commissioner. Question answered—Please return papers to Land Valuer.—D.C.M'L., 22/9/85.

No. 49.
Question.

Legislative Assembly, Tuesday, 22 September, 1885.
Subway, Alt-street, Ashfield.

Mr. Henson asked the Secretary for Public Works,—When will the subway under the railway line at Alt-street, Ashfield, be commenced, and what is the cause of this work being delayed?

Mr. Wright answered,—It is delayed owing to the action of the Municipal Council of Ashfield in declining to give the levels, unless they are relieved of all responsibility as regards compensation to those affected by such levels.

Has

Has any report been received from Land Valuer *re* compensation.—D.C.M'L., 2/10/85. Not yet.—J.T.W., 3/10/85. Land Valuer.—D.C.M'L., 3/10/85.

Proposed alterations of Alt-street, Ashfield, in connection with subway.

LAND Valuer having on several occasions looked into this case, finds it by no means an easy matter to satisfy himself as to the amount of compensation that would be fair to allow the owner of property damaged on each side of Alt-street, but after a full consideration of the subject, suggests that a larger sum than £2,000 ought not to be paid as compensation for any damage accruing from altering the levels in Alt-street. JAMES BURNS, 14/10/85.

The question whether this expense (or a larger one if the case be taken into Court), is to be paid by Government or the Municipal Council. I can see no reason why the Railway Department should be at the cost.—CH.A.G., 20/10/85.

No. 50.

Mr. J. Mills to The Secretary for Public Works.

Subway under the Railway, at Alt-street, Ashfield.

Sir, 16 November, 1885.

In bringing under your notice the above, I do myself the honor to ask that you may be pleased to appoint a day when you will receive a deputation with the view to facilitate the construction of the above oft-promised, and much needed subway. I have, &c.,

JOHN MILLS.

The deputation, Messrs. Hammond, Henson, Judd, M.'sP., Mills, Halloran, and Carter waited upon me to-day with reference to the vexed question of the subway at Alt-street, Ashfield. They recapitulated the position of affairs in this matter, and urged that early action should be taken by the Government to proceed with this work. They were of opinion, that as the line had been made to suit the great majority of the people, any disability which it imposed upon Ashfield should be removed; and they urged, therefore, that all responsibility in connection with the work should be undertaken by the Government. In regard to compensation, they were aware that Mr. Pope, whose property would be interfered with by the subway, has made a claim for £6,000. This they considered extravagant, as an adjoining property thought to be more valuable—and assessed as more valuable—was in the market for £6,500, so that Mr. Pope was claiming more for depreciation than the whole property was worth. I informed them that there was no objection to make the subway, and for the Department to bear the expense of the work, but the whole cause of the delay was as to the settlement of the claim for compensation, which the Department did not feel it should recognize.

If the Municipal Council would undertake the responsibility of arranging this matter, the whole thing would be settled, and the work proceeded with; but the Department could not consent to accept any responsibility for a service that, as in this case, seemed outside its province. With regard to the compensation, I mentioned that the Land Valuer of the Department had estimated the depreciation of Mr. Pope's property by the making of the subway at £2,000.

I promised to further consider the matter, but stated that it seemed to me the Municipal Council would have to accept the responsibility of arranging for the settlement of Mr. Pope's claim.—W.J.L., 20/11/85.

Inform Municipal Council.—W.J.L., 21/11/85.

The Commissioner for Railways to The Council Clerk, Ashfield.

Sir, Department of Public Works, Railway Branch, 23 November, 1885.

Referring to the deputation which waited upon the Secretary for Public Works respecting the proposed subway under Alt-street, Ashfield, I have the honor to inform you that the matter has received careful consideration by Mr. Secretary Lyne, and while he is agreeable that the actual work connected with the subway should be undertaken by the Department, he is unable to approve of the Department accepting any responsibility for claims which may arise out of the necessary levelling of Alt-street. If your Council will give an undertaking that they will bear the responsibility of arranging this matter, the work will be proceeded with. I have &c.,

CHAS. A. GOODCHAP,
Commissioner for Railways.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Subway, Alt-street, Ashfield.

Sir, Council Chambers, Ashfield, 16 December, 1885.

I have the honor, by direction of His Worship the Mayor of this Borough, to acknowledge the receipt of your letter of 23rd ultimo, No. 6,145, on the subject of the subway at Alt-street, in this Borough, and to inform you that the same was duly laid before the Council, but no order was made thereon. I have, &c.,

THOS. GLASSOP,
Council Clerk.

No. 51.

The Council Clerk, Ashfield, to The Secretary for Public Works.

Deputation *re* Crossing under Railway Line, Ashfield.

Sir, Council Chambers, Ashfield.

Referring to the subject of a crossing under the railway line, at Ashfield, I have the honor by direction of His Worship the Mayor, to request that you will kindly name an early day on which you would be prepared to receive a deputation from this Council, who are desirous of submitting a scheme by which it is believed the much desired project may be carried out without the obstacles that have presented themselves in other plans submitted. The proposal, which I might state, meets with the unanimous approval of the Council and a large number of the ratepayers, is by continuing Bland-street from Elizabeth-street, under the railway embankment, and then by a turn at right angles, to come out into Hercules-street, close to the Railway Station. Awaiting the favour of an early reply, I have, &c.,

THOS. GLASSOP,
Council Clerk.

For

For consideration of my successor.—W.J.L., 18/12/85.

There has been no report obtained as to the practicability of the proposed scheme, the cost, nor whether there is sufficient headway for underway at this portion of the line. It should, however, be born in mind that it has always been a condition, that if an underway is given at any other place than Alt-street, the crossing at that street is to be closed.—CH.A.G., 8/1/86.

Subway under Railway, at Ashfield.

A DEPUTATION from the Ashfield Council, accompanied by Messrs. Henson and Hammond waited upon me to-day with reference to the proposed subway at Ashfield. The Department, it will be remembered, is prepared to make the subway at Alt-street provided the Council will arrange any claims for compensation which might be submitted by residents and others, whose property might be affected, but the Council will not accept the condition.

Mr. Pope (Mayor) now makes an alternative proposal. He suggests that the crossing should be made by continuing Bland-street from Elizabeth-street under the railway, and then continuing it on to Hercules-street. The continuation from Elizabeth-street to the railway would pass through Mr. Pope's land, but he is prepared to give the land free if the subway is undertaken, although the land he considers is worth £1,500 to him, but he will do this in order to have the matter settled and to avoid the annoyance to him that a subway at Alt-street would entail; at the same time, he states that he will be leaving for England in seven days, and the matter must be settled before that time, otherwise he will withdraw offer. The continuation of Bland-street, from the railway to Hercules-street (south-side) would pass through Government land. Other members of the Council stated that they were comparatively indifferent to the location of subway, either at Bland or Alt Streets, but they would accept no responsibility of any kind in the matter. Probably if a subway were given at Bland-street, a foot-crossing would be all that was required at Alt-street.

I informed the deputation that I had not had much time to peruse the mass of papers in this matter, but so far as I could gather, the Department was willing to provide a subway at Alt-street, but the Council declined to take the responsibility of arranging any matters outside which might arise through the construction of subway. I regretted that Mr. Pope could only allow such a limited time for the settlement of this question, but I promised to call for an immediate report, and ascertain what could be done in the matter. If possible, I would visit the locality. The Engineer for Existing Lines, will please furnish me at once with rough plan and estimate of proposed subway at Bland-street, and if time will allow, I will visit the locality.—J. GARRARD, 8/1/86. Mr. Thompson for report.—G.C. (*pro* G.L.), 11/1/86.

Tracing herewith showing roughly the proposed extension of Bland-street into Hercules-street, also proposed extension into Liverpool Road. It will be seen that land will have to be resumed on the south of the line in both cases, as the street could not be taken through railway land, as stated by Mr. Pope. The cost of a subway at Bland-street (50 feet wide) will be about £5,200, roughly estimated.—M.T., 11/1/86. Eng. Ex. Lines.

The estimate does not include cost of land or making street.—G.C. (*pro* G.L.), 11/1/86. Commissioner. For Minister's information.—CH.A.G., 12/1/86. I will visit the place sometime on Thursday next. Mr. Cowdery to attend.—J.G., 12/1/86.

Department of Public Works, Sydney, 13 January, 1886.

WILL Mr. Goodchap please wire Mr. Pope, Mayor of Ashfield, of my intention to visit site of proposed subway by 2.30 p.m. train 14th instant. J. GARRARD.

Send down to Mr. Pope at once.—CH.A.G., 14/1/86. Seen.—J.G., 14/1/86.

I saw Mr. Pope in this matter, but he states he would rather the Minister would determine the matter uninfluenced in any way by him, and that he would prefer the Minister to view the place without him. At the same time he wishes to acknowledge the Minister's courtesy in consulting him and to thank the Minister for his invitation.—H. M'L., 14/1/86.

Subway at Ashfield.

PLEASE note that Mr. Secretary Garrard purposes visiting this place to-morrow, and wishes Mr. Cowdery to be present.—D.C.M'L., 13/1/86. Mr. Cowdery. (Urgent.) I presume I will be informed at what time the Minister will leave Sydney for Ashfield.—G.C. Commissioner, 13/1/86. Papers herewith. The Minister will leave by the 2.30 p.m. train.—D.C.M'L., 13/1/86. Mr. Cowdery. Seen. I visited this place with the Minister yesterday.—G.C., 15/1/86. Commissioner. For Minister's decision.—CH.A.G., 18/1/86.

I visited this place yesterday, and while the direct access to the station from the northern side of the line is a recommendation to Mr. Pope's proposal, yet the expense of resuming the land at the back of the Liverpool Road lots, and the difficulty of providing for the drainage after passing through the proposed subway, are so serious as to prevent my accepting the offer. Let Mr. Pope be informed.—J.G., 19/1/86.

No. 52.

The Commissioner for Railways to J. Pope, Esq.

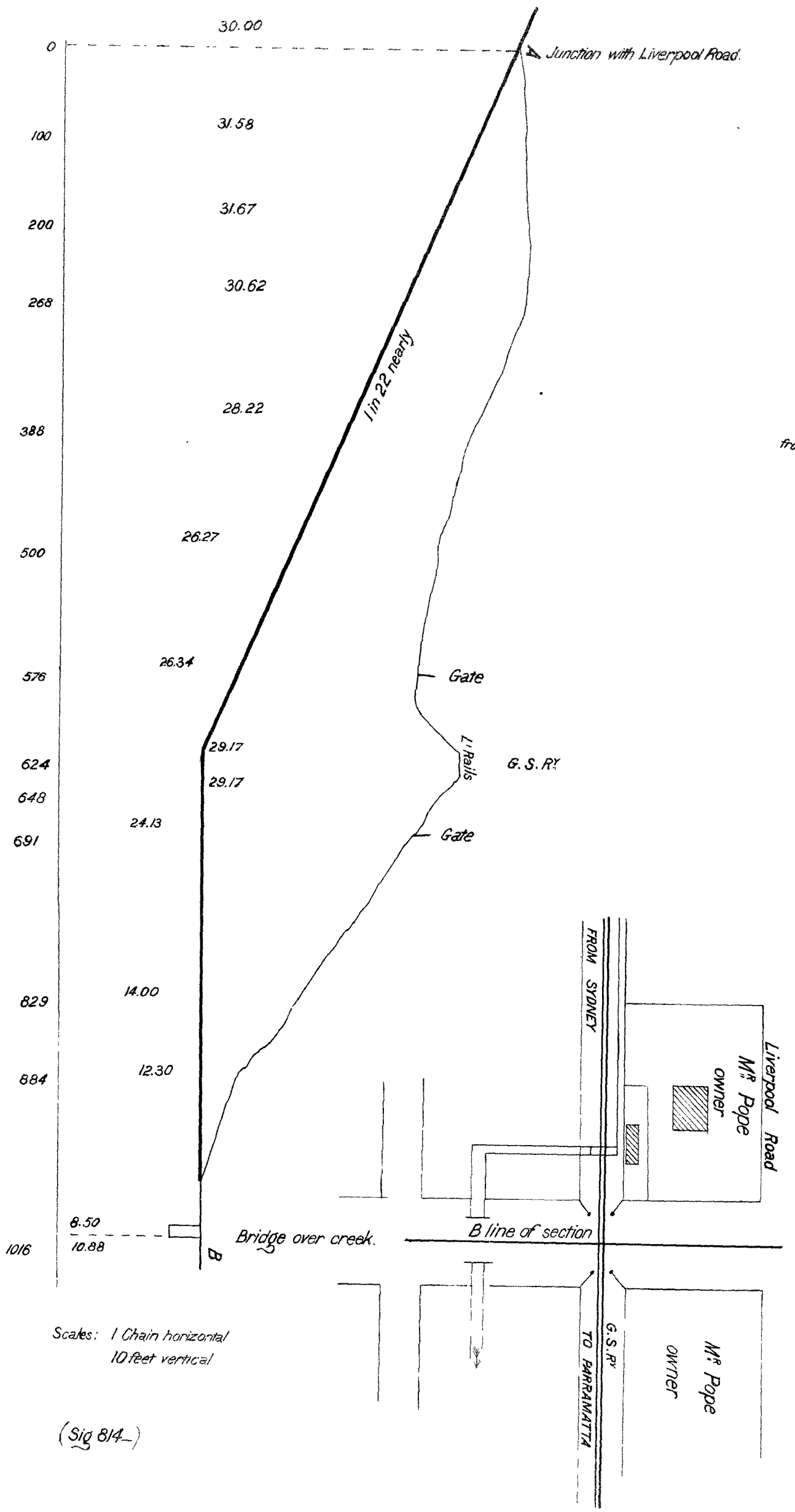
Sir, Department of Railways, Sydney, 21 January, 1886.

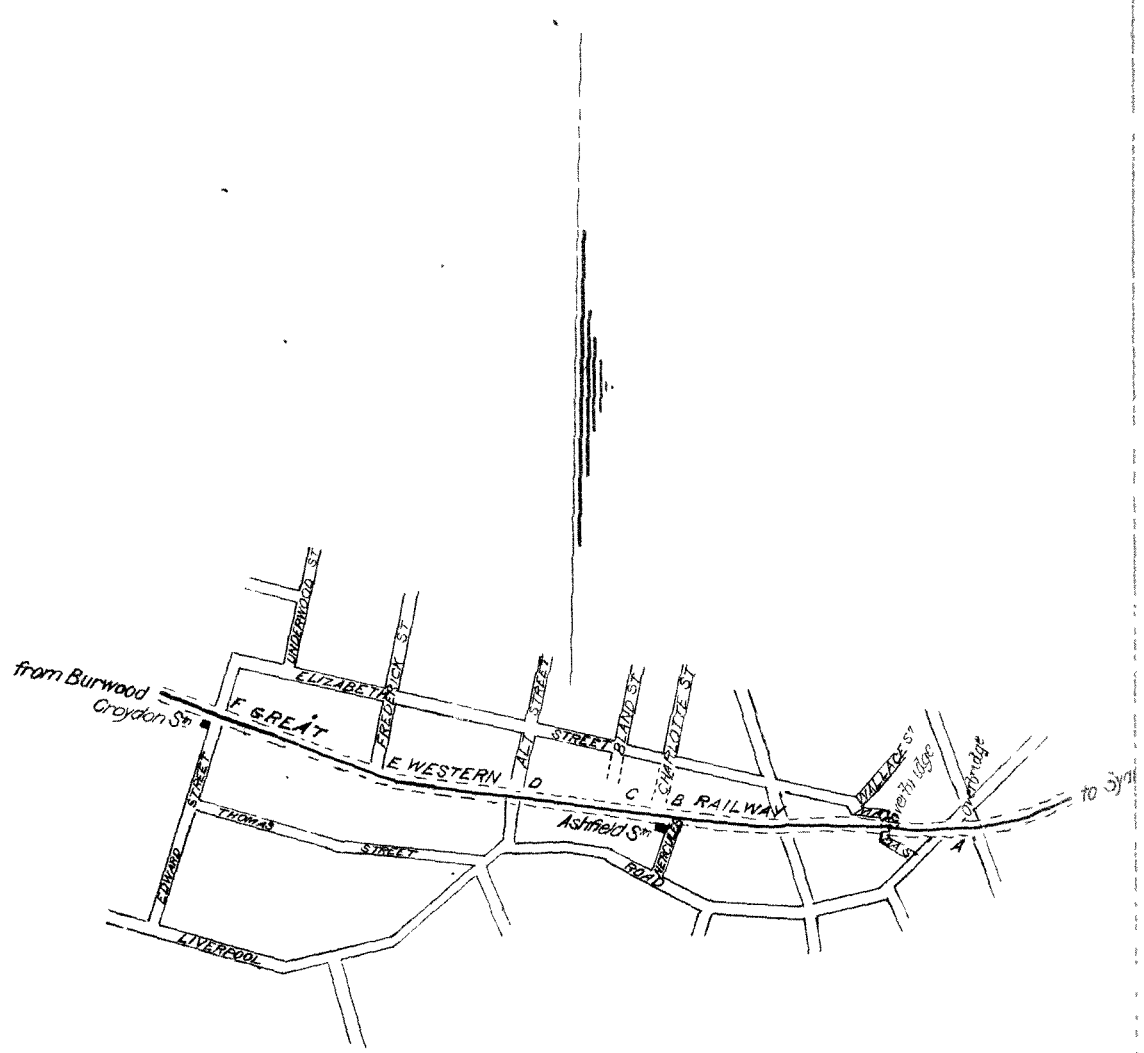
Referring to the deputation which waited upon Mr. Secretary Garrard on the 1st instant, whereat you promised to convey certain land near Ashfield Station to the Government, provided the railway crossing was made at Bland-street instead of Alt-street, as proposed, I have the honor to inform you that the matter has had Mr. Secretary Garrard's careful consideration, but he regrets he is unable to accept your offer as considerable expense would have to be incurred in resuming land to make the connection with street leading into the Liverpool end, and there would be great difficulty in providing for the drainage of the subway and vicinity. I have, &c,

C. A. GOODCHAP
(*Pro* G.B.),
Commissioner for Railways.

[Plans.]

Sydney: Thomas Richards, Government Printer.—1886.

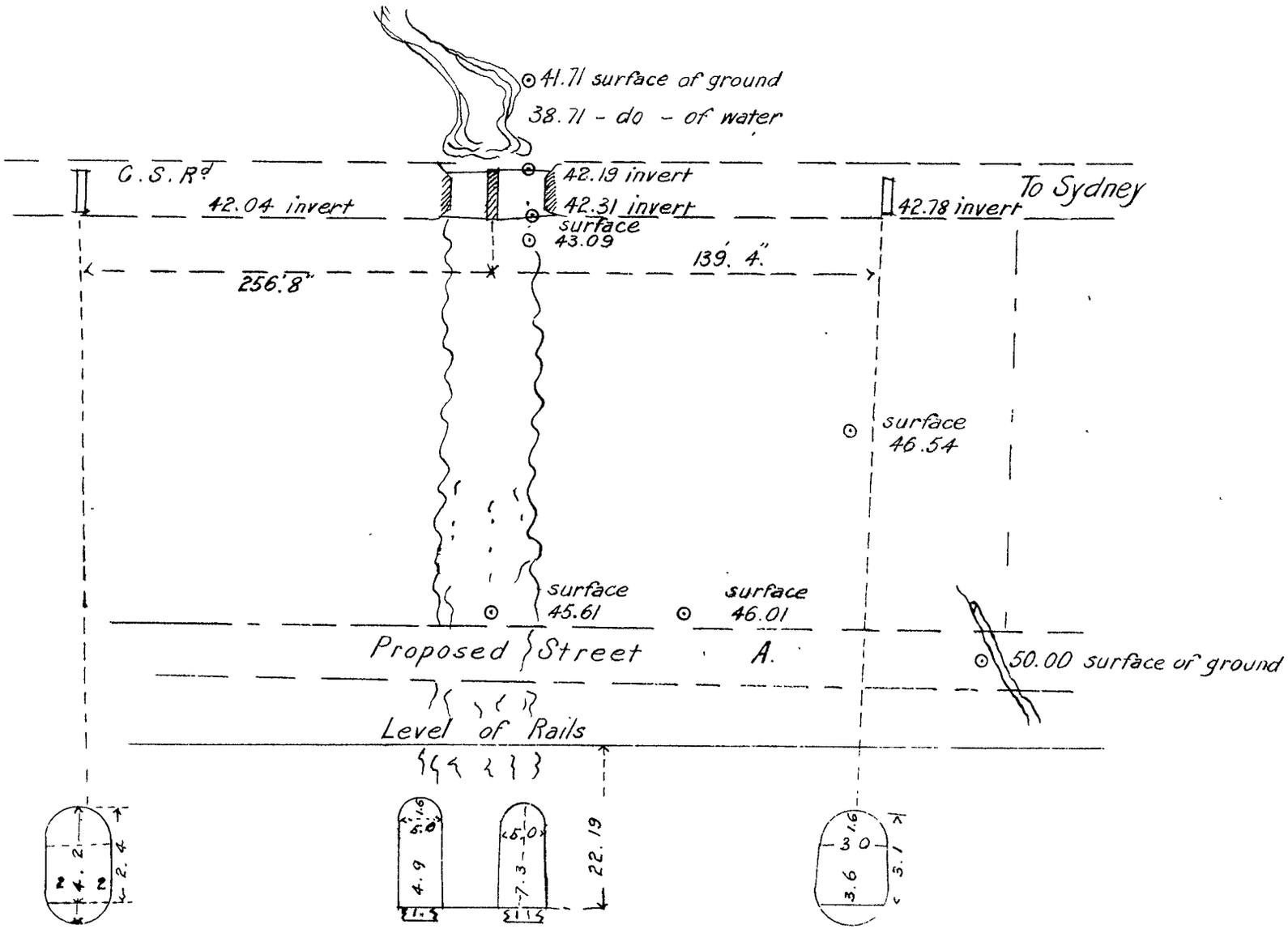




Scale:- 20 Chains to 1 inch.

A to B	28	Chains	A to B	28	Chains
B to C	8	"	B to C	8	"
C to D	9	"	B to D	17	"
D to E	15	"	B to E	32	"
E to F	17	"	B to F	49	"

(Sig 814_)


41.71 surface of ground
38.71 - do - of water
G.S.Rd
42.04 invert
42.19 invert
42.31 invert
surface
43.09
42.78 invert
To Sydney
256.8"
139.4"
surface
46.54
surface
45.61
surface
46.01
Proposed Street
A.
50.00 surface of ground
Level of Rails
22.19
2.4
2.4
2.4
5.0
1.6
4.9
1.5
5.0
7.3
1.5
1.6
3.0
3.6
5.1

(Sig. 814.)

[3d.]

912—

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(RETURN RESPECTING EMPTY WAGGONS ON GREAT NORTHERN AND NORTH-WESTERN RAILWAYS.)

Ordered by the Legislative Assembly to be printed, 20 *September,* 1886.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 1 *on Votes and Proceedings of* 23*rd June,* 1886.]

1. How many empty waggons were despatched from Glen Innes and Narrabri, on the Great Northern and North-Western Railways, respectively; and how many from and through each of the following Stations, namely:—Armidale, Tamworth, Gunnedah, Murrurundi, Singleton, and West Maitland, by up trains, during each of the first five months of the present year?
2. What was the cost to the Railway Department attendant upon running such empties?

Month.	Glen Innes.	Armidale.		Tamworth.		Narrabri.	Gunnedah.		Murrurundi.		Singleton.		West Maitland.		Cost.
	No. trucks from.	No. trucks through.	No. trucks from.	No. trucks through.	No. trucks from.	No. trucks from.	No. trucks through.	No. trucks from.	No. trucks through.	No. trucks from.	No. trucks through.	No. trucks from.	No. trucks through.	No. trucks from.	
January	253	219	48	67	113	164	166	70	412	142	557	247	557	.....	In cases in which special trains with empties are run the cost is about 2d. per truck per mile, but as a rule the empties are worked from one station to another, where required, by the ordinary goods trains, as traffic and convenience allow, and then the cost is trifling only.
February	149	107	105	149	471	208	120	67	411	109	616	188	539	.....	
March	267	99	143	138	709	307	145	67	521	110	405	399	565	.....	
April	183	55	198	101	622	281	115	92	289	123	257	550	564	.....	
May	150	46	171	89	472	277	180	45	349	90	344	466	558	.....	
	1,002	526	665	544	2,387	1,237	726	341	1,982	574	2,179	1,850	2,783	.....	

This statement embraces empty waggons of every description, sheep, cattle, and powder vans, general goods trucks, &c., and also "return empties," which were run on the down journey with the material for the extensions in course of construction, which will not in the future be required in such large quantities. The empties shown on the above return did not journey to Newcastle empty, but were intercepted *en route* by stations to meet their requirements. Thus the number shown as passing through Singleton went to feed the wants of all stations between that place and Newcastle, and only an average of seven empties a day, including sheep, cattle, powder-vans, &c., reached Newcastle. It will be seen, therefore, that if the empties were loaded at the distant stations it would be necessary to send out empties from Newcastle for the traffic at intermediate stations.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(CITY EXTENSION—REPORTS, PLANS, &c.)

Ordered by the Legislative Assembly to be printed, 29 *September*, 1886.

RETURN to an *Address* of the Honorable the Legislative Assembly of New South Wales, adopted on 24th September, 1885, That there be laid upon the Table of this House,—

"(1.) Copies of all Reports, Plans, and Specifications, together with "Ministerial and Cabinet Minutes thereon, upon, in connection with, and "of the proposed extension of the Railway from Redfern to the waters of "Port Jackson.

"(2.) Estimates of the cost of and revenue to be derived from the same.

"(3.) A Return describing the areas and estimated value of all public and "private land required to be taken or resumed for carrying out the pro-"posed line.

"(4.) The like particulars as to the contemplated extension of the above-"mentioned line."

(*Mr. Garrett.*)

1. The Plan and Section were laid upon the Table of the Legislative Assembly on the 9th September, 1885.

SCHEDULE.

No.	Date.	Subject, &c.	Page.
1	18 Oct., 1883...	Extract from Report by Engineer-in-Charge of Trial Surveys	2
2	5 Feb., 1884...	Report by Engineer-in-Chief on Mr. O. Schulze's City Railway Extension proposals	2
3	27 Feb., 1884...	Extract from Report by Engineer-in-Charge of Trial Surveys	3
4	22 Sept., 1884...	Report of Engineer-in-Chief on extension to the Circular Quay, *for passenger traffic only*	3
5	21 Oct., 1884...	Report of Engineer-in-Chief on the line proposed by Minister for Works	4
6	14 Nov., 1884...	Engineer-in-Chief to Minister for Works, forwarding list of borings required	4
7	11 June, 1885...	Engineer-in-Chief to Minister, forwarding voucher for diamond drill borings	4
8	10 Aug., 1885...	Mr. W. H. Quodling to the Hon. Secretary of the Benevolent Asylum (Mr. I. J. Josephson), *re* damage done to fencing in survey operations	5
9	9 Sept., 1885...	Engineer-in-Chief to Minister, forwarding Parliamentary plan, section, &c.	5
10	.....	Cabinet Minute—Approval of plan	5
11	30 Sept., 1885...	Engineer-in-Chief's descriptive report of the extension	6

2. Estimate of cost of line, exclusive of land, £470,000.

3 and 4. Information relative to "the areas and estimated value of all public and private land required to be taken," &c., cannot be furnished at this stage.

[867 copies—Approximate Cost of Printing (labour and material), £5 19s. 3d.]

CITY EXTENSION RAILWAYS.

No. 1.

Extract from Report by Engineer-in-charge of Trial Surveys, dated 18 October, 1883.

34. City Extension.—Four surveyors are now occupied in making the necessary surveys to enable me to prepare accurate plans and sections of a proposal for an extension, for passenger traffic from Redfern *via* Belmore and Hyde Parks to the Supreme Court, thence between Elizabeth and Phillip streets to Bent-street; thence by reverse curves to the western side of the Circular Quay, terminating at the site of the Sailors' Home; also for a passenger and goods extension, leaving the Darling Harbour branch railway at Ultimo-street; thence in a northerly direction, west of Sussex-street, to Erskine-street; thence between Sussex and Kent streets to a point opposite to the Observatory; thence crossing in an easterly direction to Pottinger-street; thence under Lower Fort-street and Lower George-street, and, in a southerly direction, terminating at the Queen's Wharf at the Circular Quay. Additional levels will also be taken for proposed branches from this line from a point opposite the Observatory, and from Pottinger-street to Miller's Point, also from the Queen's Wharf round the Circular Quay to Port Macquarie.

No. 2.

The Engineer-in-Chief to The Secretary for Public Works.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 5 February, 1884.

Subject: Report on Mr. Oscar Schulze's City Railway Extension proposals.

As requested by the Minister I submit the following brief report on Mr. Schulze's City Railway Extension proposals.

The plans and sections furnished in connection therewith are (perhaps almost necessarily under the circumstances of the case) of a very crude and meagre character; and they afford very little data whereby to determine the practicability and cost of the various works included in the design.

The deficiency of such usual and necessary information is certainly not compensated for by the extensive and attractive model exhibited at the Exchange, which simply seems to convey a good general idea of the rashness of the scheme proposed, but completely fails to indicate either the extent of the existing accommodation in the way of wharfage, &c., or the very costly nature of the improvements contemplated by the design. On these two points, however, a pretty good clue is afforded by the three large scale drawings, showing the existing frontages effected by this scheme and over which tracings are placed, indicating the outlines of the boundaries of the proposed new wharfage, streets, goods warehouses, &c., and the extent of the proposed reclamation.

In examining these plans, &c., I have endeavoured to confine my attention, as far as possible, to that portion of the scheme bearing strictly upon the "City Railway Extension;" but it so happens that this is intimately, in fact completely, dependent upon the adoption and execution of the Darling Harbour reclamation and wharfage improvements, the proposed lines of railway extension, as well as the central passenger station at the foot of Erskine and King streets, and the Circular Quay station, &c., being all designed to occupy ground proposed to be reclaimed from the harbour. As the boundaries of such proposed reclamations extend into the deep waters of the harbour and are outside of and include all the existing numerous wharves and landing places on the eastern shore of Darling Harbour, it is evident that a very long time must elapse —probably many years—before the railway is constructed in the position designed for it.

I have marked upon the accompanying plan of this part of the city the approximate position of these reclamation boundaries, and by which it can be seen that the whole of the railway extension scheme, from the head of Darling Harbour right round to and including the Circular Quay Station, is dependent upon the reclamation being first effected.

Supposing, however, that such reclamation were an accomplished fact, and the proposed railway extension a possibility, it seems to me that there are several serious objections, not only to the route selected for it but in other important respects.

The proposal to take the whole of the passenger traffic for the city down to and along the eastern boundary of Darling Harbour is in itself a most inconvenient, and, I think, a most indefensible, proposition.

The bulk of the traffic would in this way be either discharged at the foot of the various intersecting streets (such as Goulburn, Liverpool, Bathurst, Market, King, and Erskine streets), and have to make its way up the steep gradients of those thoroughfares to reach the level of centre of the city itself, or else have to be carried on to the underground Church Hill Station, a station convenient enough for a certain portion of the traffic, but that is all.

Leaving the present Darling Harbour Railway at the point proposed by Mr. Schulze, his six lines of rails would intersect the present lines of railway and sidings, sheds, &c., at the head of Darling Harbour, near Dixon-street, and seriously obstruct if not completely destroy them.

A more important defect in the proposal is the position selected for the so-called "central passenger station," at the verge of Darling Harbour, between King and Erskine streets. This unnecessarily large station, some 900 feet by 230 feet, is not only in no sense of the word "centrally" situated as regards the city or its railway passenger traffic, but it is designed to be erected entirely upon made ground, and its foundations would have to be carried down to an unascertained but certainly great depth, to assure the stability of the buildings.

And I may add that this objection applies also to a large proportion of the other extensive railway goods-sheds, warehouses, &c., which would occupy reclaimed ground.

The site proposed for the Circular Quay station is open to the same grave objection, as it would be entirely upon reclaimed and made ground, and in its combination character of an elevated railway and tram station on one floor, and wharfage and office accommodation, &c., on its lower or basement floor, it is quite certain that this matter of foundations would be very serious indeed, and a very costly one.

Again,

Again, the navigable and useful area of the Circular Quay water-way would be very considerably curtailed by the reclamations proposed (*vide* plan), a remark which is applicable also to the "inner basin," as Mr. Schulze terms it, of Darling Harbour, and which would be so reduced in area by his reclamations as to make it extremely doubtful whether it would be at all worth while going to the enormous expense of that two-decked "swivel opening" bridge included in his scheme in line of King-street, and which bridge he proposes to substitute for the Pyrmont Bridge in the line of Market-street.

This item challenges considerable criticism of course, and opens up the important question of vested rights of thoroughfare by way of the existing bridge, &c. The railway extension part of the consideration is however confined to Mr. Schulze's original proposition, to connect the Darling Harbour eastern railway lines with a line to Pyrmont by way of this new bridge, a proposal which appears to be omitted in his later memorandum, and which would, I may add, have been impracticable as at first proposed.

The matter of curves and gradients I do not propose to refer to here, as the design is in too incomplete a state to convey much information thereupon; but I notice that Mr. Schulze proposes to employ special shunting engines for working the numerous sharp curves on the goods lines, an inconvenient expedient in so important and comprehensive a railway scheme, to say the least of it.

Mr. Schulze also proposes to make a very extensive provision for goods-sheds in connection with his railway scheme, some 10 acres of ground being shown to be thus utilized. The large semicircular structure shown on the plans as "goods-sheds" at Dawes' Point, would in itself suffice for the storage of the combined cargoes of several of the largest steamers afloat.

This matter of the storage of goods for transmission by rail, or by shipping from the new wharves, &c., seems to me to be greatly over-estimated; for I imagine that by far the greater part of the goods by rail, and cargoes by ships or steamers, will be sent on board or into trucks (as the case may be) and require but comparatively little storage room, except in the shipper's and agent's own premises.

The thought has suggested itself to me while examining this scheme, what is to become of the present Darling Harbour wharfage trade during the reclamation, and all else that pertains thereto, in these important proposals. Either the trade must find quarters elsewhere, or be suspended, if not even permanently destroyed.

But probably this has been taken into account by the designer, and provision made for compensation, or otherwise, in his estimates of cost. At any rate it is an important consideration.

I do not attempt to challenge or investigate any of the very rough estimates of cost with which Mr. Schulze's railway extension proposals are accompanied; any criticisms thereof would be useless in the absence of all detailed data as to the extent and character of the various extremely large works and constructions embraced by his designs.

I have to thank Mr. Schulze for placing at my disposal all the papers and plans in his possession referring to this subject, and for his kind offer to give me every information in his power with reference to his designs.

I trust it is obvious, from the tenor of the few remarks I have furnished, that they are put forward in no spirit of hostility to the design; but that I have been actuated solely by the desire to record as clearly and impartially as possible what to my judgment appears to be the defects of this proposal so far as the railway extension part is concerned.

JOHN WHITTON.

No. 3.

Extract from Report of Engineer-in-Charge of Trial Surveys, dated 27/2/84.

City Extension Railway.

PLANS and sections have been prepared for a passenger line from Redfern to the Circular Quay, and for a goods line from the Darling Harbour branch line to the Circular Quay, both of which routes have already been described.

With reference to those lines for which surveys have not yet been completed, and the sections of which I have consequently not received, I am not in a position to give any definite information further than what was contained in my former report, in which, from my general knowledge of the country, I made comparison as to their probable cost, with the cost of construction of other lines of railway in similar country.

No. 4.

The Engineer-in-Chief to The Secretary for Public Works.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, 23 September, 1884.

Subject: Extension to the Circular Quay (for passenger traffic only).

ESTIMATED cost, £450,000, exclusive of land and compensation.

Description of the route proposed by the Engineer-in-Chief; shown by a red line on map, for extending the railway into the City of Sydney for passenger traffic only.

From Redfern terminus, near Devonshire-street, through the Benevolent Asylum and Carter's Barracks, over Belmore Road; thence across Belmore Park, on brick arched viaduct, crossing over Elizabeth-street at junction of Hay and Blackburn streets, over Campbell-street, Exeter-place, and Wexford-street, crossing Goulburn-street on the level; thence to Liverpool-street, entering tunnel at the south side of Liverpool-street; thence under Hyde Park and St. James' Road to King-street; thence to Bent-street by tunnel, and emerging at the proposed station at Bridge-street; thence upon brick arched viaducts and iron girder bridges over Loftus, Arbitration, and Pitt streets, and road to Queen's Wharf; thence to proposed terminus at Circular Quay, upon the site of the Royal Naval Depôt, between Queen's Wharf and Argyle-street.

It is proposed to erect stations at the following places, viz., Liverpool-street, Park-street, King-street, Bridge-street, and a terminal station at Circular Quay.

The whole of these stations will be what are called "Daylight Stations," no artificial lighting being required.

JOHN WHITTON.

No. 5.

The Engineer-in-Chief to The Secretary for Public Works.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 21 October, 1884.

Subject: City extension proposed by the Minister for Works from Redfern to Port Macquarie.

In compliance with the Minister's verbal request of the 18th inst., I have had an approximate estimate made of the proposed line from Redfern to Port Macquarie, which amounts to £470,000, exclusive of the cost of land and compensation.

The description of this route was handed to the Colonial Treasurer by Mr. Palmer on the 15th inst.

JOHN WHITTON.

No. 6.

The Engineer-in-Chief to The Secretary for Public Works.

Department of Public Works, Railway Branch,
Engineer in-Chief's Office, Sydney, 14 November, 1884.

Subject: The railway extension—List of borings.

In forwarding the annexed list of borings required on the centre line of the proposed extension of the railway from Redfern to Port Macquarie (as shown and numbered on the section), I have the honor to submit that the Mines Department be requested to allow the work to be undertaken by their Drill Branch.

JOHN WHITTON.

List of Borings required on Centre Line—Redfern to Fort Macquarie Railway.

Belmore Park	No. 1	To be sunk to rock.	
	,, 2	do	
Belmore Gardens	,, 3	do	
	,, 4	do	
	,, 5	do	
Between—			
Elizabeth	No. 6	do	
Blackburn	,, 7	do	
Campbell	,, 8	do	
Wexford	,, 9	do	
Goulburn, and	,, 10	do	
Liverpool Streets	,, 11	Depth of bore,	23 feet.
In Hyde Park	No. 12	Depth of bore,	31 feet.
	,, 13	do	37 ,,
	,, 14	do	40 ,,
	,, 15	do	42 ,,
	,, 16	do	38 ,,
	,, 17	do	35 ,,
	,, 18	do	31 ,,
	,, 19	do	31 ,,
	,, 20	do	34 ,,
	,, 21	do	37 ,,
Mint and Infirmary Grounds	No. 22	Depth of bore,	54 ,,
	,, 23	do	57 ,,
	,, 24	do	54 ,,
In Domain	No. 25	Depth of bore,	56 ,,
	,, 26	do	57 ,,
Garden Palace Grounds ...	No. 27	do	60 ,,
	,, 28	do	66 ,,
	,, 29	do	64 ,,
Government House Grounds	No. 30	do	51 ,,
	,, 31	do	40 ,,
	,, 32	do	23 ,,
	,, 33	do	20 ,,
	,, 34	do	28 ,,
	,, 35	do	43 ,,
	,, 36	do	38 ,,

Engineer-in-Chief for Railways Office, Sydney, 4 November, 1884.

No. 7.

The Engineer-in-Chief to The Secretary for Public Works.

Subject: City extension railway borings—Voucher, Mines Department, for use of diamond drill—£336 7s. 10d.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 11 June, 1885.

I have the honor to report that a voucher in favour of the Mines Department, amounting to £356 7s. 10d., for the use of the diamond drill in borings for city extension railway, has been passed for payment—less by reduction of £20, being amount charged for iron carriage and shafts for removing drill from site to site, such

such carriage, &c., being of no use to this Department. If the same are not required by the Mines Department, it is suggested that they should be sold, and any deficiency on the cost charged to the Railway Department.

JOHN WHITTON,
per W.H.Q.

	£	s.	d.
Vouchers as rendered	356	7	10
Less—Carriage, &c....	20	0	0
Voucher passed	£336	7	10

No. 8.

Mr. W. H. Quodling to The Honorary Secretary, Benevolent Asylum.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 10 August, 1885.

Sir,

In reference to your letter of the 28th ultimo, drawing attention to the damage done to the galvanized iron fencing of the Benevolent Asylum, through the city extension railway survey operations, I am desired to say that the Engineer-in-Chief regrets that the damage was done, and that the Department will pay the cost of the necessary repairs to the fence.

I have, &c.,
W. H. QUODLING.

No. 9.

The Engineer-in-Chief to The Secretary for Public Works.

Subject: City extension, forwarding "Parliamentary" plan, section, and book of reference.

Department of Public Works, Railway Branch,
Engineer-in-Chief's Office, Sydney, 9 September, 1885.

I HAVE the honor to forward herewith the "Parliamentary" plan, section, and book of reference of the proposed city extension railway line for the consideration of Parliament.

JOHN WHITTON.

No. 10.

Cabinet Minute—Approval of Plan.

I HAVE not as yet seen Mr. Whitton's proposal for the City Extension, but I understand his line will cross the Cemetery and Belmore Park, intersecting Elizabeth-street somewhere in the vicinity of Hay-street. It then crosses that street and runs along the eastern side of Elizabeth-street for some distance till it crosses Goulburn-street; thence it runs, I believe, under Liverpool-street and Hyde Park to a point at the back of St. James's Church. Mr. Whitton's idea is then to carry the line along and under Phillip-street to the Circular Quay. I am not, I may say, quite positive about this route, but from conversations I have had with Mr. Whitton, I think that this is the line he would recommend.

My idea is that, after the line crosses Elizabeth-street at Hay-street, the whole of the houses on the western side of Market-lane to Goulburn-street should be resumed, and the line taken at the back of Elizabeth-street, because the resumption of the land will not be nearly as expensive as that in Elizabeth-street. I would then follow the same course through the Park, crossing under Liverpool-street at or near the site of the Unitarian Church. Then under Hyde Park to the open space in front of Hyde Park Barracks; thence across Macquarie-street, still under ground, into the Domain; through the site occupied by the Mint buildings, and continue along near the western side of the Outer Domain, under the site of the late Garden Palace, through the Inner Domain, coming out near Fort Macquarie, where sufficient land could be obtained for a shunting-yard and depôt by adding to the land already there a few acres of land, which could be resumed without detriment to the Harbour.

The line could then be brought around Circular Quay, and continued, if necessary, underneath the hill to the wharves on the Darling Harbour side, and so around by the fore-shores to the Darling Harbour Railway. This would practically make two lines—one of which would be for goods, joining the main line at Redfern by the present Darling Harbour Branch, and the other for passenger traffic, as I have already described.

I consider that, by following the route I have indicated, the line could be cheaply constructed comparatively, as the cost of resumption would be but small; whereas, if we pass the entire length of Phillip-street, as proposed by Mr. Whitton, the whole of the land will have to be resumed, which will cost an immense sum.

This is a matter, however, where the local knowledge of my honorable colleagues will enable them to form quite as good an opinion as I can; but I feel positive the line I have sketched out is at once equal to any that can be devised, and at the same time can be constructed at a much lower cost than by any other proposed route.

F.A.W.,
31/7/84.

The Cabinet approves of the City Extension plan as sketched out in this minute, from Redfern Station to Fort Macquarie, and would like to obtain from the Engineer-in-Chief a trial survey and estimate.—A.S., 16/9/84.

No. 11.

The Engineer-in-Chief's Report.

City Extension Railway—Descriptive Report.

30 September, 1885.

THIS Railway is 2 miles 12 chains in length, and is designed for a double line of rails throughout. The line commences at the Quay wall, at the point on the eastern side of Sydney Cove, passes near the centre of Port Macquarie, and enters the Government House grounds at the eastern end of the Tarpeian Way. It passes 33 feet to the east of the guard-house at the entrance to Government House, and then sweeping round through the upper Gardens, and under the site lately occupied by the Garden Palace, it crosses a corner of the Outer Domain; thence under the Infirmary grounds and the Mint till Hyde Park is reached, at a point near the Albert Statue; after following a curve for a few chains, the centre line traverses the park in a direction parallel to Elizabeth-street, passing under Park-street and Liverpool-street. The line is then continued in a direction to reach Belmore Park; Goulburn-street, Wexford-street, Exeter-place, John-street, Campbell-place, and Elizabeth-street being crossed on the way. The line enters Belmore Park at its north-east corner, and after traversing the park and crossing Belmore-street, it passes through the Police Barracks and Benevolent Asylum grounds, cutting off a corner of the cemetery, crossing Devonshire-street, and enters the present Railway Station at Redfern.

The following is a general description of the works proposed:—

At Fort Macquarie the fort will be removed, and the ground levelled for the terminal station.

Platforms 400 feet in length are provided for, and two additional roads for purposes of shunting, &c.

The present road traffic to the North Shore Ferry will not be interfered with.

Between Fort Macquarie Station and the Tarpeian Way a level crossing will be provided for the traffic to the waterman's steps and Botanical Gardens.

The centre line cuts the steps leading from the Tarpeian Way towards the Botanical Gardens. The steps will be removed and a light bridge for passengers over the line, and new steps fixed.

The railway then enters a tunnel 216 yards in length, after which follows an open cutting, with retaining walls 210 yards long.

Opposite Albert-street a station is provided with platforms 400 feet long, this being the best position to serve the northern part of the city, and the most economical in cost.

After leaving this Station, the line enters a tunnel 1,000 yards long, and after passing under the Infirmary and the Mint at a depth of 40 feet below the surface of the ground, emerges again on reaching Hyde Park, where a third station, with platforms 450 feet long, is provided.

From this point the line passes again into tunnel for a length of 688 yards, the whole length of the Park being traversed, and Park-street and Liverpool-street being crossed without their levels being interfered with.

Immediately after passing under Liverpool-street, the line again emerges, and here a Station occupying most of the distance between Liverpool-street and Goulburn-street is provided.

The platforms are 450 feet in length.

Goulburn-street is crossed at a few feet above its present level. To allow of a level crossing the street will have to be raised for a distance on each side of the line.

After this the line is carried on a viaduct, consisting chiefly of brick arches, the principal street crossings however being spanned by wrought-iron girders. It is proposed to divert Wexford-street, in order to gain more headway and avoid a very oblique crossing, and provide a bridge for the diverson at 1 m. 53 ch. with a clear width of 44 feet. Exeter-place and Campbell-street will be crossed by bridges of 20 feet and 45 feet clear span respectively. Over John-street it is proposed to throw a brick arch 33 feet wide. Elizabeth-street and Belmore Road will be crossed by lattice-girder bridges for the full extent of the roadway in both places.

A short distance (35 yards) beyond the crossing of Belmore Road the viaduct terminates, and the line, which in level approaches the surface of the ground, is carried on bank and in cutting as far as Devonshire-street.

It is proposed to cross Devonshire-street by a girder bridge, and, in order to get sufficient headway for the traffic underneath it, to lower the level of the street to the extent of 11 feet, the approaches being made with an incline of 1 in 20. This alteration of the levels of the street will involve the removal and reconstruction of the present sewer, which runs under this street. There is no way of avoiding interference with the levels of Devonshire-street, except by diverting the traffic altogether, and resuming sufficient land to the east of the line between Belmore Road and Devonshire-street to form a new roadway.

The whole length of the line is, as before stated, 2 miles 12 chains, or 3,784 yards. Of this length, 568 chains are taken up by the platforms; 1,898 yards are in tunnel; 210 yards open, with retaining walls; 638 yards on viaduct, leaving 470 yards in length of earthwork only. For the ventilation of the tunnels, which occupy about half the length of the line, vertical shafts are provided at short intervals, which communicate with the open air. There are two kinds of these, the smaller being circular and 10 feet in diameter, and used only when passing under the Infirmary and the Mint; while the larger ones, which occur in Government House grounds, the Gardens, and the Park, are rectangular, 26 feet by 20 feet.

JOHN WHITTON.

Estimate of probable Revenue to be derived from the Railway—Redfern into Sydney.

If this line can be constructed, including compensation for land, &c., for the sum of £600,000, the interest will amount to £24,000 per annum.

The following charges are proposed :—

	£
Upon every season ticket an extra charge of 2s. per week 1st class, 1s. 6d. per week 2nd class. There are 1,761 1st class season tickets, and 1,048 2nd class, and the increased revenue will be	13,244
Upon daily tickets to and from suburban stations it is proposed to add 3d. 1st class, 2d. 2nd class. There are 1,149,120 1st class tickets issued, and 2,180,424 2nd class, the increased charge upon which will amount to	32,534
Upon tickets outside the suburban circle the increased charge is proposed to be 6d. 1st class and 4d. 2nd class. There are of these tickets—1st class, 226,320 ; 2nd class, 454,500 ; the increased charge upon which will amount to	13,233
Total for passenger traffic	£59,011

The heaviest portion of the goods traffic will be taken to Darling Harbour, but there will be a tonnage available from and to the terminus in Sydney, as under :—

	£
Outwards, 84,065 tons ; inwards, 40,829 tons. Total, 124,894 tons, which at 1s. per ton, will realize	6,244

This estimate of passenger and goods traffic is based upon existing transactions :—

	£
Before the extension into Sydney is completed both will have increased to a very considerable degree, but the total revenue at present figures amounts to in round numbers	65,000
The working expenses of this extension will amount to a large sum, but calculating that there will be 150 trains inwards daily, and 150 outwards daily, the train running may be put down (including shunting) at 200,000 miles per annum, which at 4s. per mile will amount to ...	40,000
Leaving the sum of	£25,000

nett, which will pay over 4 per cent. on the capital expended, provided it does not exceed £600,000.

Ch. A. G., 29/9/85.

Sydney : Thomas Richards, Government Printer.—1886.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY FROM FORBES TO WILCANNIA.

(CORRESPONDENCE RESPECTING ORDERING OF SLEEPERS AND PERMANENT WAY MATERIALS.)

Ordered by the Legislative Assembly to be printed, 21 *September,* 1886.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works in answer to Question No.* 2 *in Votes and Proceedings No.* 98, *of the* 23*rd July,* 1886.]

SCHEDULE.

NO.		PAGE.
1.	Mr. E. Quinn, M.P., to the Secretary for Works, *re* Darling River navigable, &c. 31 May, 1886	1
2.	The Engineer-in-Chief to the Secretary for Works, forwarding notice inviting Tenders for sleepers. 8 July, 1886	2
3.	Same to same, forwarding indent for permanent way materials. 12 July, 1886	2
4.	Mayor of Wilcannia to the Secretary for Works, forwarding copy of resolutions passed at a public meeting, in favour of proceeding with line at Wilcannia end. 1 July, 1886	3
5.	The Under Secretary for Works to Mr. E. Quinn, M.P. Rails and fastenings and sleepers ordered by the Minister. 8 July, 1886	3
6.	The Commissioner for Railways to the Minister of Works, minute *re* providing sleepers and rails for the Railway from Wilcannia. 11 September, 1886	3

No. 1.

E. Quinn, Esq., M.P., to The Secretary for Public Works.

Sir, Reform Club, Sydney, 31 May, 1886.

I respectfully beg to call your attention to the fact that the River Darling is likely to be navigable, and that such would be highly favourable to the Government getting rails and sleepers landed at Wilcannia at a nominal rate. It would be wise to have a large quantity of such material at the Wilcannia end, and no matter where the connection may be made with. I sincerely trust that you will give the matter your favourable and prompt attention, as at no time of the occupation of the western country has a greater necessity for railway communication existed. If tenders were called in the *Argus* (Melbourne), Echuca papers, Adelaide papers, also those of Milang and Goolwa, S.A., for (say) sleepers in lots of 10,000, I feel sure you would have offers of a most favourable character.

Iron rails *are* very cheap, so the time is most favourable.

I have, &c.,
EDWARD QUINN.

Submitted for report; but I presume nothing can be done until plans are approved of, &c.—W.J.L., 8/6/86. Engineer-in-Chief, B.C. It was always my intention to get both rails and sleepers via Wilcannia, but nothing can be done until the plans have been approved by Parliament.—J.W., 14/6/86. Under Secretary, B.C. There is a splendid opportunity *now* with a good river to get both rails and sleepers to Wilcannia, and it should on no account be lost. About 11,000 tons of rails, with the proper complement of fastenings, should be at once ordered to Victor Harbour; and about 176,000 sleepers (equal to about 15,000 tons) ordered as soon as possible. If the plans and books of reference, &c., are not approved when payment is to be made, the money might be taken from the store advance account vote in advance, or else for general votes to be recouped.—W.J.L., 19/6/86. Engineer-in-Chief.

No. 2.

Minute from Engineer-in-Chief to Under Secretary for Public Works.

Subject:—Inviting Tenders for Railway Sleepers—Forbes to Wilcannia Railway.

Department of Public Works, Railway Branch, Engineer-in-Chief's Office, Sydney, 8 July, 1886.

In compliance with the instructions of the Honorable the Minister for Works, I forward herewith a draft advertisement, inviting tenders for supplying and delivering 176,000 sleepers for the Railway from Forbes to Wilcannia.

JOHN WHITTON.

[*Enclosure.*]

Department of Public Works, Railway Branch, Sydney, 8 July, 1886.

To Timber-getters, Contractors, &c.

Tenders will be received at this office until 11 o'clock on Tuesday, the 14th September next, from persons willing to contract for the supply and delivery of 176,000 Railway sleepers for the proposed Railway from Forbes to Wilcannia.

Plan, specification, and form of tender may be seen, and further particulars obtained, on and after Monday, 26th July, at the Engineer-in-Chief's office, Sydney, and at the following police offices, viz.:—Bourke, Wilcannia, Pooncarie, Wentworth, Euston, Balranald, Deniliquin, Hay, Albury, and Narrandera, and at the Police office, Echuca, Victoria.

Tenders to be endorsed "Tender for Railway sleepers."

The Commissioner does not bind himself to accept the lowest or any tender.

No. 3.

Minute from Engineer-in-Chief to Under Secretary for Public Works.

Subject:—Forbes to Wilcannia Railway.

Indent for permanent-way materials, for (say) 117 miles, to be delivered at Victor Harbour, South Australia.

Department of Public Works, Railway Branch, Engineer-in-Chief's Office, Sydney, 12 July, 1886.

Pursuant to the Minister's instructions of the 19th ultimo, I forward an indent on London for 11,000 tons of rails (light line pattern) and fastenings—say 117 miles of permanent-way materials,—to be delivered at Victor Harbour, South Australia, for the proposed extension, Forbes to Wilcannia. The total estimated cost of the material, delivered f.o.b. England, is £73,300.

JOHN WHITTON.

Proposed Line Forbes to Wilcannia.

Indent on England for (say) 11,000 tons of steel rails (60lb. per yard) and fastenings for a light line of railway (say 117 miles), to be delivered at Victor Harbour, South Australia.

Quantity.	Material.	Estimated Cost. £	s.	d.
*411,840 lin. yards	Steel rails, single-headed, about 60lb. per yard	60,000	0	0
110,000	Steel fish-plates	4,000	0	0
220,000	Wrought iron bolts and nuts	2,000	0	0
600,000	Do Screws	5,300	0	0
380,000	Do Spikes	2,000	0	0
	Total ... ...£	73,300	0	0

Delivered f.o.b. England.

* Rails to be supplied in the following proportionate lengths, viz.:—75% of 24′ and 25% of 21′

Engineer-in-Chief's Office, Sydney, 12 July, 1886.

JOHN WHITTON.

Write fully to Agent-General in forwarding him the indent, and state why this departure from the usual course of shipping is determined upon. Ask him to let us know some time previous to the shipments when they may be expected, as we shall have to make arrangements for transporting them by river to Wilcannia.—Chas. A.G., 24/7/86.

The Secretary for Public Works to The Agent-General.

Sir,

Department of Railways, Sydney, 28 July, 1886.

I have the honor to forward herein an indent for permanent-way materials for the extension Forbes to Wilcannia, to be delivered at Victor Harbour, South Australia.

This departure from the usual practice in regard to the port of delivery is made in consequence of the position of the proposed terminus, Wilcannia being situated on the river Darling. In ordinary seasons the river navigation is easy, and it will be both convenient and economical to the Department to have the rails delivered at Wilcannia by river. I shall be glad if you will let me know some time previous to the shipment of the materials when they may be expected, as the Department will have to make arrangements for transhipping them by river to Wilcannia.

I have, &c.,

W. J. LYNE,

Secretary for Public Works.

No. 4.

The Mayor of Wilcannia to The Secretary for Public Works.

Sir, Municipal District Council, Wilcannia, 1 July, 1886.

I have the honor herewith to transmit copy of resolutions passed at a public meeting held here on the 23rd ultimo, respecting the Forbes and Wilcannia Railway.

I cannot do more than to commend the request to your favourable and early consideration, as the need of some communication with this district and the seaboard is and must be apparent to you.

I have, &c.,
W. F. STANBURY,
Mayor.

[*Enclosure.*]

No. 1. Mr. Hartier moved,—"That the Government be urgently requested to lay the plans of the Forbes-Wilcannia Railway before Parliament for approval at as early a date as possible, in order that advantage may be taken of the favourable opportunity afforded by the re-opening of navigation in the river Darling to transport the necessary material to Wilcannia, to enable operations to be commenced from this end of the line." Seconded by Mr. Barnes, and carried.

No. 2. Mr. Carney moved,—"That in the interest of the Colony at large, and of the trade of the Port of Sydney, it is imperative that the Government of New South Wales take prompt action in this matter, in consequence of the approaching completion by the South Australian Government of their railway to the border, whereby the trade of the western and south-western portions of this district must gravitate to Adelaide." Mr. Booth seconded, and carried.

No. 5.

Memorandum by The Secretary for Public Works.

Sleepers for Forbes-Wilcannia Line.

Department of Public Works, Sydney, 8 July, 1886.

PLEASE have an official letter sent to Mr. Quinn, M.P., relative to his representation in favor of at once obtaining sleepers for the Forbes-Wilcannia Line by river, and my minute of the 19th ultimo in reference thereto. W.J.L., 8/7/86.

Done, 8/7/86. I have already directed that Mr. Quinn should be informed of the steps taken to have the material carried to Wilcannia.—W.J.L., 12/7/86.

No. 6.

The Under Secretary for Public Works to E. Quinn, Esq., M.P.

Sir, Department of Public Works, Sydney, 8 July, 1886.

Referring to your letter of the 31st May last, in regard to the advisability of sending railway material to Wilcannia, I am directed to inform you that the Secretary for Public Works has decided that a large supply of rails, with fastenings, be at once forwarded to Victor Harbour, and also that about 15,000 tons of sleepers be ordered as soon as possible.

I have, &c.,
JOHN RAE.

Sydney: Thomas Richards, Government Printer.—1886.

[3*d*.]

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(CURVES AND GRADES ON LINE URALLA TO INVERELL, *via* BUNDARRA AND *via* THE GREAT NORTHERN LINE.)

Ordered by the Legislative Assembly to be printed, 20 *September,* 1886.

[*Laid upon the Table of the House, in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 1 *on Votes and Proceedings No.* 114, *of the* 20*th August,* 1886.]

A RETURN showing the Grades and Curves, Uralla to Inverell, *via* the Trial Survey Line by way of Bundarra; the same information *via* the Great Northern Railway, and from Glen Innes.

TABLE OF GRADIENTS.

URALLA TO INVERELL BY BUNDARRA. (Trial Survey.) Length—76 miles 63 chains.

Grade.	Miles.	Chains.
1 in 33	3	28
1 „ 40	12	39
1 „ 41	...	...
1 „ 44	2	65
1 „ 48	...	...
1 „ 50	5	47
1 „ 51 to 1 in 55	1	53
1 „ 60	5	70
1 „ 66	5	27
1 „ 75	5	19
1 „ 80	...	...
1 „ 88	4	45
1 „ 89 to 1 in 100	3	61
1 „ 101 „ 1 „ 120	...	35
1 „ 121 „ 1 „ 132	...	76
1 „ 133 „ 1 „ 150	1	...
1 „ 151 „ 1 „ 165	1	50
1 „ 166 „ 1 „ 200	1	...
1 „ 201 „ 1 „ 300	4	9
1 „ 301 „ 1 „ 400	3	5
1 „ 401 „ 1 „ level	13	74
Total length	76	63

URALLA TO INVERELL BY NORTHERN RAILWAY AND GLEN INNES. Length—123 miles 15 chains.

Grade.	Miles.	Chains.
1 in 33	...	...
1 „ 40	17	8
1 „ 41	...	14
1 „ 44	1	33
1 „ 48	2	...
1 „ 50	13	58
1 „ 51 to 1 in 55	6	23
1 „ 60	7	22
1 „ 66	6	32
1 „ 75	4	59
1 „ 80	3	32
1 „ 88	4	39
1 „ 89 to 1 in 100	7	64
1 „ 101 „ 1 „ 120	8	14
1 „ 121 „ 1 „ 132	4	30
1 „ 133 „ 1 „ 150	1	63
1 „ 151 „ 1 „ 165	5	3
1 „ 166 „ 1 „ 200	4	65
1 „ 201 „ 1 „ 300	4	73
1 „ 301 „ 1 „ 400	4	12
1 „ 401 „ 1 „ level	15	11
Total length	123	15

NOTE.—It is intended to improve the gradients of 1 in 33 to 1 in 40 if the line from Uralla to Inverell be permanently surveyed.

TABLE OF CURVES.

URALLA TO INVERELL, *via* BUNDARRA.
(A Trial Survey only.)
Curves of the line should be permanently staked, liable to considerable alteration.

Radius.	Length. Miles.	Length. Chains.
12 chains	1	16
13 „	...	16
14 „	...	63
15 „	1	50
18 „	1	6
20 „	6	6
24 „	1	10
25 „	...	13
28 „	...	42
30 „	...	69
32 „	...	26
36 „	...	8
40 „	...	73
48 „	...	47
50 „	...	51
55 „	...	65
80 „	...	30
90 „	...	14
100 „	...	21
120 „	...	47
Straight	58	30
Total	76	63

URALLA TO INVERELL, *via* G.N.R. AND GLEN INNES.

Radius.	Length. Miles.	Length. Chains.
12 chains	2	29
13 „	...	25
15 „	2	18
16 „	...	78
18 „	...	31
20 „	4	58
24 „	3	48
25 „	...	18
28 „	...	79
30 „	1	66
32 „	1	74
36 „	1	7
38 „	...	66
40 „	5	23
46 „	1	...
48 „	1	51
54 „	1	2
59 „	1	18
60 „	3	79
64 „	...	68
72 „	1	5
75 „	...	59
80 „	2	72
100 „	2	38
120 „	1	26
160 „	2	73
240 „	...	33
400 „	...	30
Straight	74	41
Total	123	15

Sydney: Thomas Richards, Government Printer.—1886.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CIVIL SERVICE ACT.

(MEMORANDUM OF CIVIL SERVICE BOARD AS TO EFFECT OF CERTAIN CLAUSES.)

Ordered by the Legislative Assembly to be printed, 5 *February*, 1886.

Memorandum from the Civil Service Board, in reply to Question No. 10, asked by Mr. Davies, relating thereto.

10. MR. DAVIES *to ask* THE COLONIAL SECRETARY,—

(1.) When will the Superannuation Fund Accounts, which, in accordance with Civil Service Act, should be laid before Parliament at end of June and December in each year, be laid upon the Table?

(2.) Will he ask the opinion of the Crown Law Officers as to whether clause 40 of the Civil Service Act (relating to leave after certain period) includes those Civil Servants in section 7 and Educational Divisions of list issued by Civil Service Board?

(3.) Will he ask the opinion of the Crown Law Officers whether Servants in Educational Division and section 7 Civil Service Bill, are compelled to contribute 4 per cent. per annum to Civil Service Superannuation Fund?

(4.) Will he be good enough to lay such opinion when obtained upon the Table of the House?

The Honorable Member's questions have been referred to the Civil Service Board, from whom the following replies have been received:—

(1.) The Superannuation Fund Account, in terms of the 62nd Clause, is directed to be laid before Parliament annually, and not half-yearly as the Honorable Member supposes, and it will be laid upon the Table within the 31st March next.

(2.) The opinion of the Crown Law Officers does not appear to be necessary, as clause 40 refers to "Officers" only, and Civil Servants in section 7 and the Educational Division are not "Officers" within the meaning of the Act.

(3.) It does not appear to be necessary to take the opinion of the Crown Law Officers in relation to section 7 of the Act, as all persons coming under Rules and Regulations are, by the section referred to, specially brought within the provisions of Parts V and VI of the Act.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(PARTICULARS OF RUNNING OF FARMERS' TRAINS.)

Ordered by the Legislative Assembly to be printed, 29 *June*, 1886.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works, in answer to question No.* 7 *in Votes and Proceedings, No.* 23, *of the* 9*th February*, 1886.]

1. What has been the total cost, including charges of every kind, for running each of the Special Farmers' Trains?
2. What have been the total earnings, giving in each case the net profits per mile?
3. The total mileage run, and the net revenue derived from these trains?

(1.)—WHAT has been the total cost, including charges of every kind, for running each of the Special Farmers' Trains?

Date Train ran.	Line.	Total cost.		
		£	s.	d.
9 December, 1885	Southern	266	1	6
21 January, 1886	do	216	7	4
25 February, „	do	159	5	5
„ March, „	do	155	13	0
10 June, „	do	144	15	5
9 December, 1885	Western	165	11	8
28 January, 1886	do	184	17	4
4 March, „	do	167	0	3
1 April, „	do	125	18	3
17 June, „	do	127	10	11
9 December, 1885	Northern	189	9	0
19 January, 1886	do	203	9	0
25 February, „	do	189	9	0
1 April, „	do	191	13	0
8 June, „	do	190	2	4

(2.)—WHAT have been the total earnings, giving in each case the net profits per mile?

Date Train ran.	Line.	Total earnings.			Net profits per mile.			Loss per mile.		
		£	s.	d.	£	s.	d.			
9 December, 1885	Southern	486	8	10	0	3	2	.....		
21 January, 1886	do	374	10	4	0	2	4	.....		
25 February „	do	512	5	4	0	7	4	.....		
25 March, „	do	359	4	2	0	4	3	.....		
10 June, „	do	549	1	0	0	8	0	.....		
9 December, 1885	Western	378	8	4	0	4	7	.....		
28 January, 1886	do	265	13	4	0	1	5	.....		
4 March, „	do	542	4	4	0	7	3	.....		
1 April, „	do	375	14	10	0	7	1	.....		
17 June, „	do	356	18	7	0	6	1	.....		
9 December, 1885	Northern	86	13	9	.....			0	2	5
19 January, 1886	do	139	1	0	.....			0	1	6
25 February, „	do	334	13	6	0	3	6	.....		
1 April, „	do	374	8	8	0	4	5	.....		
8 June, „	do	357	14	1	0	3	11	.....		

(3.)—THE total mileage run, and the net revenue derived from these Trains.

Total mileage run.	Net Revenue derived from running the Trains.
	£ s. d.
14,480 miles	2,813 16 8

NOTE—Nothing is allowed in this statement for the cost of the return journey, as the passengers returned by detachments with the ordinary Trains. Under the present arrangements the outgoing Train, termed a Tourist's Train, also brings in a revenue, as it takes the carriages into the country necessary to bring back the persons travelling by the Farmers' Trains to Sydney.

The Commissioner,—Can you let me have a return of the result of the first trip of the cheap Trains, south and west?—W.J.L., 16/12/85. Department of Public Works.

I will obtain fuller particulars than the subjoined, but the figures given will afford some information. The Western Train carried 380 passengers and the revenue amounted to £280, equal to 14s. 9d. per head, showing that the passengers travelled an average distance of 177 miles. The earnings were 11s. a mile, and the expenses 5s., but the Department has to take the people back by the ordinary Train, and this may be put down at 2s. 6d. a mile, leaving a net profit of 3s. 6d. a mile,—£87 10s. The Southern Train carried 500 passengers and the revenue derived was £350, equal to 14s. per head, showing the passengers travelled an average distance of 168 miles. The earnings were 18s. 1d. a mile, calculating Albury to Sydney, but the passengers from Hay and Jerilderie were brought by Ordinary Trains, and some reduction in the earnings per mile must be made for this (say) £30; leaving the earnings at 16s. 6½d., the return journey will have a net profit of £149.

Seen.—W.J.L., 16/12/85.

This statement was prepared upon wrong information obtained through telephone from Traffic Manager. The earnings for the West were said to have been £280; it seems they were £378 8s. 6d. and the train mileage given was wrong. So with the South the earnings were said to have been £350 and they really were £486 8s. 10d. The figures have been published as correct, but I said, in reply to Minister's inquiry, an answer to which he wanted at once, that I would obtain fuller particulars, and that only some idea could be formed by the hurried figures, which however I find were not even approximately correct owing to the blunder in stating gross receipts.—CH.A.G., 19/12/85.

SUMMARY of earnings and expenditure in connection with Farmers' Trains, run on the Southern and Western systems of Railway, on the 9th December, 1885.

Line.	No. of Passengers.	No. of Train miles.	Gross earnings.	Working expenses.	Net earnings.	Gross receipts per mile.	Working expenses per mile.	Net earnings per mile.	Earnings per passenger.	Average distance per passenger.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Southern	518	510	478 5 7	191 5 0	287 0 7	0 18 9	0 7 6	0 11 3	0 18 9	225
Western	438	278	312 12 4	104 5 0	208 7 4	1 2 6	0 7 6	0 15 0	0 17 3	207

NOTES—(A) The earnings of the Special Trains alone have been taken into account in this statement.
(B) The proper proportions of the fares of passengers who travelled by Ordinary Trains has been deducted.

Sydney: Thomas Richards, Government Printer.—1886.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(TARIFF OF PRICES AT REFRESHMENT-ROOMS ON GREAT NORTHERN AND NORTH-WESTERN LINES.)

Ordered by the Legislative Assembly to be printed, 3 *August*, 1886.

[*Laid upon the Table of the House, in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 4 *on Votes and Proceedings No.* 101, *of the 3rd August*, 1886.]

ARE the Lessees of Refreshment-rooms on the Northern Lines subject to any tariff of prices; if so, will he cause copies of tariffs to be laid upon the Table of the House?

SCALE of charges, Railway Refreshment-rooms, on the Great Northern and North-western Railways.

The following is the scale of charges authorized to be made at these refreshment-rooms :—

	s.	d.
Meals at Table d'Hote	2	6 each.
Meat and vegetables	1	0
Soup	0	6
Pudding or pastry	0	6
Cup of tea or coffee	0	6
Roll or sandwich	0	6

The contractor is bound by the terms of his contract to supply articles of the best description only; and passengers who consider they have reason to complain should do so to the Station-master.

Department of Public Works, Railway Branch,
Sydney, 21st August, 1882.

CHAS. A. GOODCHAP,
Commissioner for Railways.

GOVERNMENT Railways Refreshment-rooms.

The following are the charges authorized to be made at this refreshment-room :—

	Prices per reputed pint.	Prices per reputed quart.
Champagne	6s. to 7s.	10s. 6d. to 13s. 6d.
Clarets and other foreign wines	3s. to 6s.	6s. to 10s. 6d.
Australian wines	1s. 6d. to 2s. 6d.	3s. to 4s.
Cordials	.....	2s. 6d.
Brandy	Flasks, ½-pints, 2s. to 3s. ...	6s. 6d. and 7s. 6d.
Whiskey	„ „ 2s. ... „ ¾-pints, 3s. 6d.	5s. to 6s.
Rum	.....	5s. 6d.
Gin (square)	.....	6s.
Gin (Old Tom)	.....	5s.
Schnapps...	2s. 6d. and 3s.	5s. to 6s.
Ale	1s. 3d.	2s.
Porter	1s. 3d.	2s.
Colonial Ale (draught)	6d.	1s.
English Ale (draught)	1s.	2s.
Spirits	6d. per glass.	
Clarets and foreign wines	6d. „	
Australian wine	3d. „	
Aerated waters	6d. per bottle.	

The lessee is bound by the terms of his contract to supply liquors of the best quality only; and passengers who consider they have reason to complain should do so to the Station-master.

Department of Public Works, Railway Branch,
Sydney, April, 1884.

CHAS. A. GOODCHAP,
Commissioner for Railways.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(PARTICULARS OF FREE PASSES TO RAILWAY OFFICIALS.

Ordered by the Legislative Assembly to be printed, 20 *September*, 1886.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Publ Works, in answer to Question No.* 3 *on Votes and Proceedings No.* 35, *of the* 25*th March*, 1886.]

Question :—How many Railway Officers are entitled to travel at half rates?

Answer :—320 Tickets have been issued at half rates to Railway Officers.

Question :—How many Railway Employés are entitled to travel free?

Answer :—355 Passes have been issued to Employés whose duties are confined to the running of trains.

Question :—What is the annual value of such half and full fares respectively?

Answer :—The value of the Tickets issued at half rates is £1,055 8s. 9d. If full rates were charged the amount would be £2,110 17s. 6d.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

FREE RAILWAY PASSES TO SCHOOL CHILDREN.

(PETITION AGAINST—ELECTORS OF THE NEPEAN.)

Received by the Legislative Assembly, 30 *March*, 1886.

To the Honorable Speaker and Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned electors of the Nepean Electorate,—

HUMBLY SHOWETH :—

1. That the Public Schools of the Colony are the nationally approved ones.

2. That all encouragement should be given by the Government to enable the children throughout the land to avail themselves of their splendid advantages.

3. That no State aid or public encouragement should be rendered by the State to Schools carried on in opposition to the National Schools; and that while not wishing to prevent people from sending their children to Private or Denominational Schools, we think they should be held responsible for all the charges incurred thereby.

4. Believing in the above, your Petitioners humbly pray your Honorable House not to pass any resolution for conveying children free on our Railways to Schools other than those constituted by the State, such being held by your Petitioners to be going back to State aid to Schools of a Denominational character.

And your Petitioners, as in duty bound, will ever pray.

[*Here follow* 400 *signatures.*]

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(CORRESPONDENCE RESPECTING THE EVANS COMBINATION TRUCK.)

Ordered by the Legislative Assembly to be printed, 14 *October*, 1886.

SCHEDULE.

NO.		PAGE.
1.	*Precis*	2
2.	Extract from General Conditions of Contract for Rolling Stock.	4
3.	Extract from Report of the Board *re* carriage of live stock by Railways.	5
4.	Extract of Commissioner's recommendation on report of Live Stock Board	5
5.	Letter from Hudson Bros. to Commissioner for Railways. 25 June, 1884.	5
6.	Minute of Commissioner *re* Minister's approval of his recommendation, &c. 3 July, 1884.	6
7.	Letter from Commissioner to Hudson Bros. 9 July, 1884.	6
8.	Minute of Commissioner to Locomotive Engineer with reply thereto. 14 November, 1884.	6
9.	Letter from Hudson Bros. to Locomotive Engineer *re* progress made in executing order for trucks, &c. 26 November, 1884.	6
10.	Letter from Hudson Bros. to Commissioner inclosing account for fourteen combination trucks, &c. 9 April, 1885.	6
11.	Minute by Mr. Bourne to Locomotive Engineer *re* price asked by Hudson Bros. for construction of an Evans combination truck, with minutes *re* same by Commissioner and Loco.-Engineer 10 May, 1885.	7
12.	Minute by Minister asking for a report on combination cars. 3 November, 1885.	7
13.	Traffic Manager's report with minutes. 9 November, 1885	7
14.	Letter from Mr. Halloran enclosing memo. showing result of trials made in the working of combination trucks. 20 January, 1886.	8
15.	Letter from Mr. Halloran to Commissioner *re* errors in memo. sent in previous letter. 1 February, 1886	10
16.	Minute by Commissioner to Traffic Manager asking for report on Mr. Halloran's result of trials. 27 January, 1886	10
17.	Traffic Manager's report *ré* above, with minutes by Commissioner, &c. 18 February, 1886.	10
18.	Letter from Mr. Speight to Commissioner asking information of his experience *re* Evans combination trucks, cost, &c., with minutes. 9 February, 1886.	11
19.	Statement by Mr. Braid to Loco.-Engineer of probable cost of converting ordinary cattle-trucks into Evans combination cars, with Commissioner's minute thereon. 15 February, 1886	12
20.	Letter of Commissioner to Mr. Speight in reply to his letter of 9th February. 23 February, 1886	12
21.	Letter of Commissioner to Mr. Halloran *re* sum patentee would ask for use of design. 8 March, 1886	13
22.	Letter from Mr. Halloran in reply to above. 17 March, 1886.	13
23.	Further letter from Mr. Halloran asking loan of a live stock truck for converting into combination car, with Commissioner's minute and Minister's approval. 24 March, 1886	13
24.	Letter from Mr. Halloran to Commissioner *re* sum asked by patentee for use of patent, and minutes thereon. 9 April, 1886.	13
25.	Letter from Mr. Halloran enclosing account for alteration of truck, with minutes and reports thereon. 14 July, 1886.	14
26.	Letter from Commissioner to Mr. Halloran *re* claim for alteration of truck. 17 August, 1886.	16
27.	Letter from Mr. Forseyth to Minister accepting offer to inspect original papers in connection with Messrs. Hudson Bros. contract for construction of combination cars. 30 August, 1886.	16
28.	Letter from Mr. Halloran to Commissioner *re* purchase of patent for design of Evans combination cars. 5 October, 1886	17
29.	Letter from Mr. Forsyth to the Minister enclosing a list of the papers given to him for perusal, and asking that they be printed and laid upon the table of the House. 5 October, 1886	17
30.	Explanation from Mr. Braid. 8 October, 1886.	18

No. 1.

RAILWAYS.

No. 1.

Precis.

Combination Truck.

THE Evans combination truck was brought prominently under the notice of the Commissioner (who was already aware of the invention), by the report of the Board on the carriage of Live Stock.

The Board considered the design of sufficient promise to warrant a trial of its merits, and they recommended that four or five of the trucks should be obtained for the purpose of experiment.

The Commissioner, who had already formed a favourable opinion of the truck, went beyond the suggestion of the Board and recommended (with a view to make the trial a perfect one) that a full train load (fourteen trucks) should be ordered. This recommendation was approved by Mr. Secretary Wright.

Hudson Brothers, learning from the Report of the Live Stock Board that a trial of the truck had been recommended and approved, addressed the Commissioner by letter of 25th June, 1884, stating that they were in a position to undertake the building of the trucks and to give proper supervision to the work, that as the assignees of the patentee they were prepared to leave the question of royalty in abeyance until the vehicles had been built and tested, and that the price to be paid for the trucks would be the present price of cattle trucks plus such extra expense for labor and material as they might incur.

And here it should be explained that under the conditions of the five years' contract held by Hudson Brothers they were entitled to claim to construct any vehicle which exhibited any departure in detail or dimensions from the type of vehicle named in the contract, the price to be regulated in the manner set forth in Hudson Brothers letter above quoted, *i.e.*, the price of the vehicle in the contract schedule to be taken as the basis of the price and any extra labor and material to be paid for—the value of such extra labor and material to be ascertained in case of dispute by arbitration.

Commissioner minuted that he did not know any better mode of settling the question of cost than that suggested by Hudson Brothers, which moreover, as shown, was in accordance with the conditions of contract.

Hudson Brothers were instructed by letter of the 9th July, 1884, to proceed with the building of the fourteen trucks, the duty of inspection being assigned to Mr. Bourne.

Commissioner minuted on the 14th November, 1884, that one truck had been completed by Hudson Brothers, that it seemed to be highly satisfactory, and promised to fulfil all that was expected of it. No time should be lost in completing the remaining trucks, and it would be well to postpone the construction of the cattle waggons and covered goods under order, until it was known whether they could be made to the combined pattern.

Mr. Scott reported that twenty-seven cattle waggons and twenty sheep-vans were under order, but half were ready for delivery, and the ironwork was ready for the others. The order, therefore, could not be cancelled or postponed. There were no covered vans on order.

In April, 1885, Hudson Brothers sent in their claim for the fourteen trucks, charging £295 per truck.

Mr. Bourne reported that the price charged was excessive, and that £260 would be a fair price.

Commissioner minuted that he was not prepared to pay the price demanded, that the price was to be the price of the cattle trucks plus the cost of extra work, as provided in the contract. Locomotive Engineer should be able to say what the proper amount should be.

Locomotive Engineer confirmed the correctness of Mr. Bourne's estimate of price.

Hudson Brothers were therefore paid at the rate of £260.

In November, 1885, Mr. Secretary Lyne called for a report upon the cars.

Traffic Manager reported that the centre partitions with which the trucks were filled was a decided advantage in checking the rush of sheep with the attendant risk of some being smothered, while in the case of bullocks it prevented them from surging at a jerk of the truck. At the same time the partition was a disadvantage in retarding the loading of stock, and for this reason was not viewed favourably by some. The Live Stock Board recommended a partition, but the Minister did not sanction it. This was the only objection to the truck, an objection which Mr. Evans himself admitted, and was endeavouring to obviate in future trucks. Traffic Manager further stated that whether the truck would continue to act as well as a combination truck he was not prepared to say at present. The trucks had been but little used as yet for cattle, and it was that which would test the working parts of the upper deck. If after a sufficient trial these were found to act well, the truck would be a boon to the Department, but the loss of time in loading (owing to the partition) would always be felt, while without the partition the truck would not carry cattle more safely than an ordinary truck.

Mr. Secretary Lyne directed that the trucks should be tested as much as possible with a view to arriving at a decision.

In letter of 20th June, 1886, Mr. Halloran forwarded a statement of the result of the trial of the trucks, showing the work done, weight carried, money earned, &c., by trucks. This statement dealt with official figures which had not at the time been furnished, even to Commissioner, indicating that the writer had had access to official documents, or had received the information from an official source.

Commissioner called upon Traffic Manager to explain why the results had been made known to Mr. Halloran, before they had been reported to him (the Commissioner).

Traffic Manager stated that although he had given instructions for statistics to be recorded, they had not been reported to him.

On inquiry it turned out that the result of the trials had been furnished to Mr. Halloran by Mr. Evans, by whom the statistics were in the course of his duty recorded, the former thus becoming possessed of the official figures before they were known either to the Commissioner or the Traffic Manager.

Commissioner minuted that there could be only one opinion—that it was very reprehensible conduct on Mr. Evans' part.

Subsequently, after receiving an explanation from Mr. Evans, which however did not alter the facts of the case, Commissioner minuted further that although there had undoubtedly been a breach of the rule that official information shall not be divulged outside the Department, he was not disposed to view Mr. Evans' action harshly.

Per letter of 9th February, 1886, Mr. Speight wrote, stating that Mr. Evans had shown him a model of the combination truck, and that he would be glad if Commissioner would state his opinion as

to

to their usefulness, and what the cost of them would be compared with the cost of ordinary trucks, and what it would cost to convert ordinary trucks to the Evans type. He would be glad also to know when one of the trucks would be at Albury.

Commissioner referred to Mr. Scott on the following points:—(1) Cost of truck (not the cost of experimental ones, which was excessive); (2) cost of converting present vans into Evans vans; (3) the manner in which the mechanical fittings of the fourteen trucks had stood the test of wear and tear.

Mr. Braid reported:—(1) That the cost of a new truck would be £300; (2) that it would be cheaper to make new trucks than to convert existing stock; (3) that the mechanical fittings stood the test very well.

Commissioner called for more definite reply to question No. 2, and Mr. Braid reported further that the framing and the iron-work of our vans was quite different from that of the combination van, and that very little of either could be utilized. The cost of converting sheep and cattle trucks to the Evans type would be £240 each. The prices of our existing stock were—cattle-trucks, complete, £169 8s. each; sheep-trucks, complete, £174 8s.

Commissioner minuted that it had been reported that a contract would be taken to build vans of the Evans type for £150 which, with springs, wheels, &c., at a cost of £55, would make £205 without Royalty.

Commissioner informed Mr. Speight, 23rd February, 1886, that it depended very much upon the framing of existing stock whether it would be economical to convert the vehicles, and that our Locomotive Engineer was of opinion that, for the reason stated, it would not pay to alter our trucks. It was calculated, Commissioner said, that the Evans trucks would cost 50 per cent. more than the ordinary trucks; that, if the down traffic is to places from which the live stock traffic is coming, the Evans van will do all that is claimed for it, but its usefulness must be governed by the tide of traffic; and that the mechanical parts had been found to work well, and were not liable to get out of order.

On the 8th March, 1886, Commissioner wrote to Mr. Halloran that, admitting that the Evans vans could be made serviceable, and be used with economy, it was not of such advantage as was claimed for it by Mr. Halloran. The Commissioner would however be glad to know on what terms the patentee would grant to the Department the right to use the patent.

Mr. Halloran replied 17th March, 1886, that he was authorised to offer the entire patent, including the use of future improvements, either in design or construction of new vans, or in altering or converting the present stock, for the sum of £17,000. This was equal to about £16 per truck on the number of live stock and covered vans in use at the end of 1884, or one-fifth of the amount which would be saved in one year by the use of the combination truck. The patentees were anxious to ascertain what would be the cost of altering the present stock into the combination type, and for this purpose they would like to have a sheep or cattle truck placed at their disposal for alteration.

Commissioner referred the request for a truck to alter to the combination form to Mr. Secretary Lyne, who said he had no objection to the applicants having a truck for the purpose, and Mr. Evans was allowed to select the truck which best suited his purpose.

On the 9th April, 1886, Mr. Halloran wrote, urging the offer to dispose of the patent for £17,000.

The truck as altered was delivered on the 21st June, 1886.

In letter of 14th July, 1886, Mr. Halloran forwarded his account for £95 10s. for the alteration of the truck, and the matter was referred to the Locomotive Branch for report.

Mr. Braid reported that Mr. Evans asked him to look out a van in which he wished to make some alterations; that he (Braid) did as he was asked, but Mr. Evans did not explain the nature of the alterations; that having seen no drawings of the Evans van, he was unable to say if the work done to the altered van had been done properly, but it had not the same work in it that the original combination van had. The former had three doors instead of six, loose battens in centre in lieu of a solid partition, no screw break, and no continuous and strong draw-gear, besides numerous minor differences. As Mr. Evans supervised the work and reported the truck as ready for use, he presumed the alterations had been made by him.

Subsequently Mr. Braid minuted further that the price charged was fair and reasonable for the work done.

Commissioner minuted to let him know if the van was now a good one which could be used with advantage, as many doubts were expressed, or rather insinuated—capable, no doubt, of after expansion if the truck should fail—so much desire to shirk responsibility that he (Commissioner) lost confidence. If this van was not a good one let it be stated plainly. Mr. Braid need not be afraid that any consequence would follow from what appeared to be an excessive estimate for converting a sheep-van into an Evans van. If Mr. Braid had made a mistake he was not the first person who had done so, and he would probably be more careful in future. What he (Commissioner) wanted to know was whether he could accept the car as a serviceable one?

Mr. Scott forwarded a further report from Mr. Braid to the effect that in his (Braid's) opinion the van was not a good one, and would not prove a serviceable one in the long run for the following reasons:—(1) It would have to be kept exceptionally clean and free from dung, and the iron-work from rust*; (2) The rough usage our live stock vans suffered would tell upon this van; the flaps would get out of order and after a few years the cost of repairs would be very heavy; (3) The weather sheeting would be expensive to keep in good order as without great care in winding it would be destroyed when closing the doors. As long as the combination vans were few and well nursed they would be successful, but if a great number were run and they were sent to outlying stations and neglected, the cost of repairs would be very heavy.

Mr. Scott, in forwarding Mr. Braid's report, minuted that he with Mr. Braid, had inspected the converted van and that in his opinion the work was of a very inferior description† while that in Hudson's vans was very good. He agreed with Mr. Braid that the cost of keeping this car in repair would be considerable and that so long as these cars were few in number they could be nursed and cared for, but if they were much increased this could not be done.‡ He did not think the car a good one and thought it inadvisable to obtain any more until those we had had been in use for some years.§

Commissioner

* Commissioner asked in the margin if this was not common to all trucks. Did it apply in a larger degree to the altered van than to the ordinary design of trucks?

† Commissioner asked in margin was the work so inferior as to warrant the rejection of the van?

‡ Commissioner asked in margin, Would the cost be greater than the cost of keeping in repair this design of car generally, and if so how much?

§ Commissioner asked in margin, Was Mr. Scott alluding to the design generally or to this particlar car?

Commissioner minuted that his reference had been misunderstood, that he did not ask for a report upon the Evans car, but whether the altered van had been finished in a satisfactory manner. Mr. Braid had stated the cost of altering our sheep and cattle trucks to the Evans type at £240; and with a view to show that this estimate was excessive, those interested had asked to be allowed to alter a sheep van into an Evans van. This had been done and they asked £95 10s. for doing it. The question now was not whether the work done was worth the money charged for it, but had a serviceable van to correspond with the general design of Evans' van been constructed and how much more would have had to be expended on the van to make it equal in all respects to those made by Hudsons?

Mr. Braid in reporting stated that he had not been influenced by any desire to shirk responsibility for the estimate given by him for converting the old stock into combination vans. In his estimate of £240, which was based on the prices paid under the five years' contract, allowance was made for a considerable amount of renewals which would be necessary if that conversion were effected. We had fifty-nine cattle vans, and 271 sheep vans 1 foot narrower and 1 foot 2 inches less in height than the combination vans. Those 330 vehicles, if converted, would require new headstocks, and nearly all the framing. There would in fact be very little of the old material used. Still, had he thought* there would be competition for the alterations, he would not have estimated so high, but he was under the impression the work would come under the five years' contract. Van 209, which was altered, was the nearest approach to the combination van of any of our stock, both being of the same width; so that neither headstocks nor under-framing had to be renewed. If the van was intended to be similar to the combination vans, he would not accept it either for design or workmanship. In addition to defects already mentioned, it had no support for the longitudinal that takes the bearing of the flaps; and when loaded, the gear would get out of order. It was not fitted with Turton's buffers, chain, brake, steps to get to brake, or screw-couplings. Safety-chains were not so strong. It had only had one coat of paint instead of two, and the roof two coats instead of three. To make this van equal in all respects to those built by Hudson Brothers would involve a further expenditure of £90. The Traffic Branch would be able to say if this van was as suitable for loading as the combination van built by Hudsons.

* See Mr. Braid's explanation, with the papers.

Commissioner, by letter of 17th August, 1886, informed Mr. Halloran of the substance of Mr. Braid's report; and Traffic Manager, in reply to Commissioner, stated that the van in his opinion could be used like the Evans vans, and recommended that it should be taken into use. The Minister approved, and directed that the altered van should be placed alongside one of the other vans in order that he might see where the difference lay.

The account for £95 10s. was thereupon paid.

Per letter of 30th August, 1886, Mr. Forsyth, M.L.A., wrote to the Minister requesting that he might have an opportunity of inspecting certain specified papers in connection with this matter, and the papers were placed at his disposal.

On the 5th October, 1886, Mr. Halloran wrote that the patentees were open to receive an offer for the patent, and pointed out that a great saving would accrue from the use of the van, and that the proved reasonable cost at which the existing stock could be converted to the Evans type rendered the purchase of the patent a desirable measure.

On the same day Mr. Forsyth sent to the Minister a list of papers selected from the foregoing correspondence, which he (Mr. Forsyth) wished to have laid on the table of the House.

Commissioner minuted that he must ask Minister to lay *all* the papers on the table, not the extracts asked for by Mr. Forsyth If required at once, he would ask that the originals might be laid on the table as exhibits until they could be printed. C.A.B., 9/10/86.

No. 2.

Extract from General Conditions of Contract for Rolling Stock.

If at any time during the progress of the contract it shall be considered expedient by the Commissioner for Railways to increase or diminish either the length, breadth or height of the body (inside) or the carrying capacity of any of the vehicles specified by more than 5 per cent., the contractor, at the request of the Locomotive Engineer for the time being, shall execute such increase, diminution, or alteration, and no such increase, diminution or alteration shall in any way annul or set aside the contract. Such increase or alteration shall be allowed and paid for to the contractor, or such diminution credited to the Commissioner for Railways, as the case may require, according to a price to be agreed upon between the contractor and the said Engineer. But if the contractor and the Engineer cannot agree as to the price to be given or allowed for in the altered vehicles, the question in dispute shall be referred to arbitration, and shall be settled by the award, order, or determination of a disinterested Civil Engineer or disinterested Civil Engineers to be appointed to arbitrate thereon as hereinafter. That is to say, if the Commissioner for Railways and the contractor concur in the appointment of a single arbitrator, then the matters and questions aforesaid shall be referred to and decided by such single arbitrator; but if the Commissioner for Railways and the contractor cannot concur in the appointment of a single arbitrator, each party, on the request in writing of the other party, shall by writing under his hand, nominate and appoint an arbitrator to whom such questions and matters mentioned in this proviso shall be referred. Every such appointment shall be delivered to the arbitrator and be deemed a submission to arbitration on the part of the party by whom the same shall have been made; and neither party shall have power to revoke the same without the consent in writing of the other; nor shall the death of either party operate as a revocation. And if for twenty-one days after the notice in writing by the contractor, or by the Locomotive Engineer, that the contractor and the Locomotive Engineer cannot agree shall have been served, and for seven days after a request in writing to appoint an arbitrator shall have been served by the one party on the other party, such last-mentioned party fail to appoint such arbitrator, then upon such failure the party making the request, and having himself appointed an arbitrator, may appoint such arbitrator to act on behalf of both parties; and the arbitrator may proceed to hear and determine the matter or question covered by this proviso between the contractor and the Engineer aforesaid; and in such case the award or determination of such single arbitrator shall be final.

* * * * * * * * *

The

The arbitrator or arbitrators or their umpire may call for the production of any documents in the possession or power of either party, which he or they may think necessary for determining the questions or matters in dispute and so referred, and may examine the parties and their witnesses, and may inspect the works and view the place out of, from, or in respect of which any of the matters referred to shall have arisen.

The award of the arbitrator or arbitrators or umpire shall be in writing ready to be delivered to either party within three weeks from the appointment of such arbitrator or the last of such arbitrators. This submission may be made a rule of the Supreme Court. The amount of cost, and by whom payable, shall be decided by the arbitrators, arbitrator, or umpire.

* * * * * * * * * * *

No. 3.

Extract from Report of the Board *re* carriage of live stock by Railway.

77. The Board had submitted to it a model with description of a combined cattle truck, sheep van, and goods truck, designed by Mr. Evans, the Goods Superintendent of the N.S.W. Railways. In this truck the boxing-in of the sides is made as flaps hinged half-way up the sides, and capable of being raised into a horizontal position so as to form an upper deck for sheep. The flaps in this position are supported in the centre by a beam the length of the truck, which is lowered by means of a handle at the top of the truck, working a worm-wheel and screw.

78. The Board believes that the invention of a good and simple convertible sheep van and cattle truck is of the greatest importance, and worthy of every encouragement by the Department as being likely to materially economize the quantity of rolling stock, and as offering greater facilities for the conduct of the stock traffic.

79. The Board considers Mr. Evans to be deserving of great credit for having gone far towards realizing the idea, and for the display of considerable ingenuity in his proposed truck.

The Board recommends the construction by the Department of four (4) or five (5) of Mr. Evans' trucks; but the following matters in which the truck is wanting should receive his attention:—

1. Some more effective arrangement for raising the flaps forming the upper deck.
2. Some means of giving efficient foothold to sheep on the upper deck, without such means, rubbing or otherwise injuring cattle, when the flaps are down and the truck in use as a cattle waggon.
3. Some means of ventilating and getting rid of droppings and urine from the upper deck.
4. Divisions in the upper and lower decks.
5. An alteration in the heavy bottom door in the centre; such a door having been found too heavy and inconvenient in the old cattle trucks.
6. That the truck complete have the full inside dimensions of the box cattle trucks, and shall not exceed 6 tons 14 cwt. in weight.

No. 4.

Extract from the Report of the Commissioner for Railways.

The Board has recommended the construction of four of Mr. Evans' combination trucks, with certain improvements which they point out, and I endorse the recommendation with the addition that a sufficient number of these trucks be built to form a train load—say fourteen. In this way a more effectual trial can be given to them.

It seldom happens that there is a large cattle and sheep traffic at the same time, and a suitable combination truck would therefore effect an immense saving to the Department; indeed, some years ago so satisfied was I on this point that I obtained the Minister's approval for the construction of a combination car, designed by an officer of the Engineer for Existing Lines Branch, but it failed owing to the imperfection of some of the working parts. Mr. Evans in his design seems to have overcome this difficulty.

No. 5.

Messrs. Hudson Bros. (Limited) to The Commissioner for Railways.

Sir, Sydney, 25 June, 1884.

We see that the Australian combination truck has been brought under notice by the report of the Live Stock Board, and that a suggestion to construct a train load, as an experiment, has been approved by you.

As the assignees of the patentee, we desire to draw your attention to the fact that the present is a very favourable opportunity to give effect to the recommendation, as we are in an exceptionally good position to turn the trucks out speedily, and to give that supervision to the work that is so essential to the success of new principles.

We are content to allow our royalty rights to remain in abeyance until the vehicles have been subjected to a fair trial, and are prepared to construct a train load of the Australian combination trucks on the following terms:—

The present contract price for cattle waggons with the addition of such extra expense for the labour and material as may be incurred in forming them into Australian combination trucks.

The amount of royalty to be paid us to be mutually fixed after delivery and trial of the vehicles; and such payment, with the further charges above mentioned, to constitute the entire cost of the trucks to you.

Trusting you will favor us with a reply as soon as convenient.

We have, &c.,
HENRY HUDSON,
For Self and Colleagues.

Put copy of report with this.—CH.A.G., 1/7/84. Herewith, 3/7/84.

No. 6.

No. 6.

Minute of Commissioner.

THE Minister has approved of my recommendation that fourteen trucks be made. They must contain the improvements suggested by the Board.

I do not know a better mode of settlement of cost than that suggested by Hudson Brothers, and this course may be taken.

Inform Hudson Brothers, and refer them to Locomotive Engineer for further particulars before proceeding; then send to Locomotive Engineer.

CHAS. A. G., B.C., 3/7/84.

Mr. Bourne should be instructed to inspect the work as it progresses.—W. SCOTT, per D.C.M'L., 13/8/84. Loco. Overseer,—Mr. Bourne to inspect.—T.M., 14/8/84. Noted.—E. BOURNE, 15/8/84. Loco. Overseer.—T.M., 16/8/84. Noted.—G.A.S., 21/11/84.

No. 7.

The Commissioner for Railways to Hudson Brothers.

Sir, Department of Railways, Sydney, 9 July, 1884.

With reference to your letter of the 25th ultimo, stating that, under certain conditions named therein, your Company are prepared to construct a train-load of the Australian combination trucks, I have the honor to inform you that the Acting Secretary for Public Works has approved of fourteen such trucks being made by you, but before putting the work in hand I shall be glad if you will be good enough to confer with the Locomotive Engineer as to particulars regarding the construction of the trucks. Your terms are agreed to.

I have, &c.,
CHAS. A. GOODCHAP,
Commissioner for Railways.

No. 8.

Minute of Commissioner.

The Combined Live Stock and Merchandise Truck.

HUDSON BROTHERS have an order for fourteen of these trucks. As the first one built seems to be highly satisfactory, and promises to carry out all the provisions which were claimed for it, no time should be lost in proceeding with the fourteen, so that a perfect trial can be made.

What number of cattle waggons and covered goods vans are being made or under order? It would be well to postpone, if possible, the construction of these cars till it be known whether they can be made as per combined pattern.

CHAS. A. G.,
14/11/84.

Locomotive Engineer, B.C. Urgent.

There are 27 cattle vans and 20 sheep vans under order, and not yet delivered, but the construction of these vehicles cannot well be postponed or cancelled, as the contractors have one half the number ready for delivery, and the ironwork made for the others. There are no covered vans now under order.—W. SCOTT, 3/12/84. Commissioner.

Minute of Commissioner.

Seen. End of March to see what progress has been made with Evans's vans.—C.A.G., 15/12/84.

No. 9.

Hudson Bros. to The Locomotive Engineer.

Sir, Redfern Works, Sydney, 26 November, 1884.

Replying to your letter No. 84-2,331, of 18th instant, in which you request me to expedite the completion of fourteen combined live stock and merchandise trucks we are now constructing, I beg to say that we are pushing on with these as fast as possible, and shall be ready for the wheels and axles for one half of them in about fourteen days.

As regards the construction of the cattle and sheep vans now under order, I beg to say that the whole of the ironwork is completed for this year's order, and one half of the vehicles are waiting for wheels and axles to deliver.

I have, &c.,
HENRY HUDSON,
Managing Director for Hudson Bros.

No. 10.

Hudson Brothers to The Commissioner for Railways.

Sir, Redfern Works, Sydney, April, 1885.

Herewith I forward account for the 14 Australian combination wagons ordered by you in July last. The amount charged is in accordance with our letter of June 25th, and I shall feel obl ged if you will be good enough to let us have a cheque at your earliest convenience.

I have, &c.,
HENRY HUDSON.

Please ask Mr. Bourne to report.—R.J.S., 27/4/85. Report herewith.

Account.

Account.

Redfern, April 24/85.

The Commissioner for Railways,—

Dr. to Hudson Brothers (Limited),
Steam Saw-mills and Joinery Works.

1885.		£	s.	d.
Ap. 17.—To 14 Combination Waggons ... ... at £295—		4,130	0	0

No. 11.
Memorandum to Locomotive Engineer.

Sir, Locomotive Engineer's Office, Redfern Station, 4 May, 1885.

The sum asked by Messrs. Hudson Brothers, viz., £295, for the construction of an Evans combined Australian van is, I consider, excessive. There is, no doubt, a considerable amount of extra work in these vans compared with our own live-stock vans, and the alterations that have been made from time to time, at the suggestion of Mr. Evans, have also involved a great deal of extra work, and should be taken into consideration.

Under these circumstances, I am of opinion that the sum of £260 is a fair average price per van.

E. V. BOURNE.

It would appear from Messrs. Hudson Brothers' letter that the price has already been determined. I consider the price asked very high. Mr. Bourne's valuation is, I think, a fair one.—W. SCOTT, 7/5/85.

Minute of Commissioner.

Where is Hudson Brothers' letter of 25th June, 1884, in accordance with which they state the charge is made.—CH.A.G., 16/5/85.

I am not prepared to pay the amount demanded. The price to be paid is the price for cattle trucks with such additional sum as will represent the extra cost incurred, presumably, at the schedule of prices for cattle trucks. These are the terms upon which departures from standard rolling stock contracted for are to be paid. The Locomotive Engineer should be able to say what the proper amount is.—CHAS. A. G., 18/5/85.

Mr. Bourne's valuation has been made on the lines laid down above, and I consider £260 is a fair price for them.—W. SCOTT.

Minute of Commissioner.

It seems to me that £260 for these cars is a very full price. £290 was claimed. If any more be required, I think tenders should be invited.—CHAS.A.G., 12/6/85. Approved.—F.A.W., 12/6/85. Loco. Engineer. Noted.

Minute to the Loco. Overseer.

Please note attached papers and return.—W.S., *pro* C.A.N., 16/6/85. Seen.—T.M., 17/6/85. Voucher herewith.—R.J.S., 25/6/85. The Examiner. Voucher forwarded for payment: £3,640.—J.P.F., 27/6/85. Secretary.

No. 12.
Minute by Secretary for Public Works.

Combination Cars.

Department of Public Works, Sydney, 3 November, 1885.

WILL you obtain a report upon these cars already in existence? Let me have it as soon as possible.

WILLIAM JOHN LYNE.

The Commissioner for Railways. Traffic Manager, B.C., 4/11/85.

No. 13.
Traffic Manager's Report.

THESE cars are, as is well known, provided with a centre partition, which is beneficial to the stock when it is loaded, inasmuch as it prevents sheep from rushing from one end of the van to the other when they become frightened, and so causing the risk of some of them being smothered; while, in the case of cattle, it prevents the weight of eight or nine bullocks from "surging"—when a coupling is jerked, or the engine-brake is suddenly applied when descending a hill—against the animal which happens to be at the end of the truck, upon which the weight of the other animals falls.

In that way the partition is beneficial, but because of the extra expense and time involved in loading this partition is not favourably regarded by some, at least of the trucking agents. It will be remembered that when the Board, which was appointed in the beginning of last year to inquire into the live stock traffic, reported in deference to the expressed opinion of a majority of the witnesses who were examined, in favour of a centre partition, which, however, the Minister declined to approve of.

I have all along contended that, while the partition would be beneficial, it would be objected to for the reasons stated above, and my opinion has proved correct.

The partition means, of course, that every truck loaded with cattle must be moved twice against the race, and with sheep four times, because the top doors are directly over the lower ones, and do not, therefore, suit the races; while if the latter were altered they would not suit any of our other vans. Moreover, if one race were placed over the other sheep would never be got to run up the lower race, which would virtually be a tunnel.

Mr. Evans has seen the disadvantages himself, and purposes having a movable partition in any future orders he may get (if it is desirable to have one at all), so that loaders can use it or dispense with it at will, and, if it is dispensed with, there will be no more trouble in loading the trucks with cattle than any of our own, although it will still necessitate an additional movement, and consequent loss of time when loading sheep.

This is really the only objection that can be offered to the truck.

Whether it will continue to act well as a combination cattle and sheep truck, I would rather not express an opinion until it has had a much longer test than it has had. The

The trucks were not used in the conveyance of cattle until within the last two months, and it is scarcely necessary to say the "surging" of eight or ten heavy bullocks is much more severe upon a truck than 100 or 120 sheep, and it is that which will test the working parts of the upper deck.

If after a good trial these are found to work satisfactorily I shall regard the truck as a decided boon to the Department, all but the loss of time that will still be felt in loading sheep. So far they have worked very well. At the same time I must say that the trucks without the partition will not convey animals more safely than the cattle waggons or sheep vans that would be built in future, if the alterations recommended by the Live Stock Board are adopted, as it was decided they are to be, and instructions issued to that effect. W.V.R., 9/11/85.

Submitted for Minister's information.—CH.A.G., 11/11/85. The combination truck should be tested as much as possible that a decision may be arrived at without delay as to its suitability.—W.J.L., 17/11/85. Seen, and will be attended to.—W. V. READ, *per* D.K., 20/11/85. Commissioner. Any further report?—G.B., B.C., 4/12/85. Traffic Manager.

I have nothing further to report as yet. As I said in my minute of 9/11/85, the trucks that have been built have answered very well, except for the additional movements that are necessary when loading them with sheep.—W.V.R., 24/12/85.

No. 14.

Mr. H. Halloran to The Commissioner for Railways.

Sir, 54, Wentworth Court, 20 January, 1886.

I have the honor to forward to you herewith a memorandum showing the result of the trials made in the working of Evans' Combination Trucks, and the desirability of their adoption on the railway lines throughout this Colony, and to request that this document may be submitted to the Government for verification and consideration, and that an offer may be made to me, on behalf of the patentees, for the use of this patent on the railway lines of this Colony at your early convenience.

I have, &c.,
HENRY HALLORAN,
(For the Patentees).

[*Enclosure.*]

Memorandum in the matter of Evans' Combination Truck.

SOME fifteen months since the Commissioner for Railways gave an order to have fourteen of the above trucks built, for the purpose of testing the merits of the patent.

The owners of the patent were so convinced of the great value of these trucks that they offered to place them in the hands of the Government for actual trial, leaving the question of price or royalty open until after trial. The fourteen trucks were completed in May last, and commenced running in the month of June, and continued to the end of the year. During this period they have fulfilled all that was claimed for or expected from them. They have carried sheep, cattle, and merchandise, and are equally capable of and adapted for carrying wool, and are now in as good order, and as perfect in the working parts of the patent, as they were when first started. They have met with the approval of the stock agents and owners, who are all desirous to forward their stock by them, and to have a full supply put on the lines of railways as early as possible.

They started on the 2nd June, 1885, and have left Sydney with 231 loads of merchandise for various stations, carrying 1,000 tons 14 cwt., the freight of which amounted to £5,877 (say five thousand eight hundred and seventy-seven pounds), or an average of £25 8s. 8d. (say twenty-five pounds eight shillings and eightpence), and 4 tons 6½ cwt. per truck load. On their return journey they brought to Homebush cattle and sheep, the freight on which amounted to £1,382 (say thirteen hundred and eighty-two pounds), or, together, £7,259 (say seven thousand two hundred and fifty-nine pounds). In carrying this they travelled 10,970 miles, which, at the rate of 4s. per train mile, amounts to £2,194 (say two thousand one hundred and ninety-four pounds), leaving a nett earning during the period of £5,065 (say five thousand and sixty-five pounds). If the same amount of merchandise and live stock had been carried by the ordinary trucks and vans the haulage would have amounted to £2,925 (say two thousand nine hundred and twenty-five pounds), as against £2,194 (say two thousand one hundred and ninety-four pounds), showing a difference in favour of the combination truck of £731 (say seven hundred and thirty-one pounds), as shown hereafter:—

	£	£
231 loads goods, 16½ trains, at £25 8s. 8d.	.....	5,877
231 loads sheep " " "	.....	1,382
Haulage of above, 10,970 miles at 3s. 3d.	1,782	.....
Allowance for removals to reload	148	.....
Difference in favour of combination truck	594	.....
Nett earnings, £5,329	£2,524	£7,259

ORDINARY TRUCK.

	£	£
231 sheep trucks empty, 21 trucks to train, 11 trains, 3,656 miles, at 3s. 3d.	594	.....
231 trucks live stock (return)	.....	1,382
Train mileage, 16½ trains, 5,485 miles, at 3s. 3d.	891	.....
231 trucks goods	.....	5,877
Train mileage, 16½ trains	891	.....
Removals to reload...	148	.....
	£2,524	£7,259

As 7,259 : 1,070,094 :: 594 :—£87,563 per annum.

The

The greater portion of the above goods and live stock were carried long distances, where the rates are lower than for shorter distances. This is shown by the annexed calculation, which embraces long and short journeys. This calculation shows £95,144 in favour of the combination truck for twelve months; according to the traffic for 1884, the mean of the two amounts is £91,553. When it is taken into consideration that in the former of these calculations the ordinary trucks going up the country with goods are held to come back loaded to the same extent as the combination trucks, which cannot be the case, as the latter will carry sheep and cattle, as well as other kinds of goods carried by the ordinary trucks. The live stock vans and covered trucks in 1884 amounted to 1,096 in number. The use of the combination trucks would enable a reduction to be made to the extent of at least 30 per cent., and the decreased number of empty trains would ease the traffic, thereby increasing the capabilities of the lines to carry increased traffic when it is required, besides the advantages above enumerated. The combination affords more room for the same number of cattle, and they have been carrying 20 per cent. more sheep during the time they have been working; but this is not credited to them in the above calculations. They will carry railway bars, merchandise, wool, live stock, and every description of goods, with the exception of long timber, girders, boilers, and heavy machinery.

The extra cost of the fourteen combination trucks now running, above the ordinary trucks, must not be taken into account, as they were made under exceptional circumstances, which increased their cost about £120 each over and above the price at which they have been offered to be made; and even of the decreased price it must be borne in mind that at least one-half of the extra cost above the ordinary ones is caused by the superior construction and stability to resist tear and wear as compared with the ordinary sheep and cattle vans.

In the calculation of average rate the train mile is calculated at the running mile rate; the exact mile rate is 39·58. As the calculation is only for comparison the decimal is struck out and 39 used. The train mileage on live stock amounts to 396,413, and as the whole or nearly so of the trucks for live stock have to travel the single journey empty and have to bear the cost, it would be incorrect to charge this at the train mile rate instead of at running mile rate, as it would increase the charge above the actual cost.

AVERAGE RATES OF FREIGHT.

Miles.	Station.	Sheep.	Cattle.	Goods.	Miles.	Station.	Sheep.	Cattle.	Goods.
		£ s. d.	£ s. d.	£ s. d.			£ s. d.	£ s. d.	£ s. d.
454	Hay	8 10 6	10 5 4	7 1 4	503	Bourke	9 7 2	11 4 4	7 13 4
287	Junee	6 1 4	7 11 0	4 19 7	307	Nyngan.....	7 8 1	3 19 9	5 4 7
134	Goulburn	3 13 1	4 4 0	2 15 2	145	Bathurst	3 17 3	4 11 4	2 19 4
80	Bowral	2 8 0	2 8 0	1 14 6	105	Wallerawang..	3 1 11	3 4 8	2 4 4
955	.....	20 13 0	24 8 4	16 10 7	1,060	.....	23 14 4	28 0 0	18 1 7
239	.....	5 3 3	6 2 1	4 2 8	265	.....	5 18 7	7 0 0	4 8 4
265	.....	5 18 7	7 0 0	4 8 4					
504	.....	11 1 10	13 2 1	8 11 0					
252	.....	5 11 0	6 11 0	4 5 6	Mean for sheep, cattle, goods, and miles.				

CALCULATION for three trains sheep—fourteen carriages; two trains cattle—fourteen carriages; and five trains goods—fourteen carriages; empty trucks—twenty-one to the train.

COMBINATION TRUCKS.

	£	£
42 trucks goods, 5 tons each, 210 tons, at £4 5s. 6d. ... ... } 28 trucks goods, 5 tons each, 140 tons, at £4 5s. 6d. ... ... }	.....	1,496
5 trains haulage, 1,260 miles, at 3s. 3d....	205	.....
42 trains sheep, 1,260 miles, at £5 11s.	.....	233
28 trains cattle, 1,260 miles, at £6 11s.	.....	183
5 trains haulage 1,260 miles, at 3s. 3d.	205	.....
Allowance for removal to reload	34	.....
Difference in favour of combination truck	170	.....
	£614	£1,912

ORDINARY TRUCKS.

	£	£
70 empty sheep and cattle trucks, 3⅓ trains, 840 miles, at 3s. 3d.	136	.....
42 trucks sheep, at £5 11s.	.....	233
28 trucks cattle, at £6 11s.	.....	183
5 trains haulage, 1,260 miles, at 3s. 3d....	205	.....
70 trucks goods, 5 tons each, 350 tons, at £4 5s. 6d.	.....	1,496
5 trains haulage, 1,260 miles, at 3s. 3d.	205	.....
Say 25 per cent. goods trucks back empty	34	.....
Shifting to re-load	34	.....
	£614	£1,912

As 1,912 . 1,070,094 . 95,144.

HENRY HALLORAN,
For the Patentee.

Sydney, 20 January, 1886.

No. 15.

Mr. H. Halloran to The Commissioner for Railways.

Sir, 54 Wentworth Court, 1 February, 1886.

I have the honor to inform you that we have discovered two errors in the report forwarded to you in my letter of the 20th ultimo, of the combination trucks.

At the foot of the first, or the top of the second page, it is stated that the haulage would have amounted to £2,929 as against £2,194, showing difference of £731, whereas it should have given the difference as "£594, as shown hereafter."

On the last sheet, showing average rates, the difference in favor of the combination trucks is shown to be £170; but in the proportional statement at the foot of the page, this term of £170 has been omitted, and the answer put in its place. It should have stood thus—

As 1,912 = 1,070,094 = 170 - 95,144.

I should wish to amend the report in these particulars.

I may add that the second term 1,070,094 is the freight of the goods which the combination trucks are adapted to carry.

I have, &c.,
HENRY HALLORAN,
For the Patentees.

No. 16.

Minute of Commissioner.

WILL Traffic Manager please report upon enclosed statement if it be correct, and the result should be known to the Traffic Manager sooner than it should be to the patentee's agent. I am surprised Mr. Read has not reported upon it before. CH. A.G., 27/1/86.

No. 17.

Traffic Manager's Report.

IN reply to the Commissioner's minute of the 27th ultimo I have to state that I was not in a position to give him the information contained in the enclosed statement, because, although I had given directions for statistics to be kept to enable me to frame a report, they had not reached me when I received the enclosed papers. It is hardly necessary for me to remind the Commissioner that Mr. Evans, the inventor and patentee, is in a position which peculiarly enables him, more readily than any other officers, to get at the information contained in Mr. Halloran's statement; whether he was fairly justified in his official capacity in furnishing any one unconnected with the Department with that information without getting permission to do so is a question about which there can scarcely be two opinions.

As regards the suitability of the vehicles that have been built, I can add little or nothing to my minute of 9/11/85 on the Commissioner's M.P. 85-418 D. If the Loco. Engineer is satisfied that the working parts will continue to work satisfactorily the only drawback the vehicles will have, apart from the cost, are:—

First.—The extra labour involved in loading, consequent upon the necessity of moving each van after filling one deck with sheep before the other can be filled. And,

Second.—The absence of means for getting rid of sheep droppings and urine from the upper deck, as recommended in report of the Live Stock Board, a copy of which is attached. (*See* pages 7 and 11.)

These drawbacks have already been felt by the public, and pointed out.

The next point to consider is the cost of the vehicle. I notice that, for the first fourteen that they built, Messrs. Hudson Brothers claimed £295 each, but that was considered excessive and a settlement was made for £260, exclusive, of course, of wheels, axles, and springs, which were supplied by the Department. Mr. Halloran's informant seems to say that future supplies can be built for about £120 less, but Mr. Braid, of the Locomotive Department, estimates the cost at about £300 complete, but that does not include any royalty; our cattle waggons cost £169 8s., and sheep vans £174 8s. each.

I see it is stated that since they commenced running, the trucks have carried sheep, cattle, and merchandize, and are equally capable of and adapted for carrying wool. That is admitted, but nearly all the live stock traffic, and the whole of the wool traffic, are conveyed on the up journey, and it would be a great waste of power to use such heavy vehicles for wool traffic. When vehicles get loading in both directions the saving to the Department must necessarily be great, but it would never pay to use such heavy ones as combination and cattle trucks with general goods on the down journey, and any other traffic other than live stock on the up journey, because an open truck would serve the purpose equally well, while the former is 50 per cent. heavier than the latter. (The weights of the combination trucks range from 7 tons 4 cwt. to 7 tons 10 cwt., average 7 tons 7 cwt. 1 qr.—while the D truck is only 4 tons 17 cwt. 2 qrs.)

As regards the earnings of the combination trucks, I have to say that the statement which was prepared and submitted to me a few days ago, shows that from the time they began to run, in June last, up to the end of December, they earned in respect of merchandize conveyed from Sydney to country stations £5,864 5s. 6d. The amount named by Mr. Halloran is £5,877, but the difference is so trifling as scarcely to be worth while inquiring into.

On the up journey for the conveyance of live stock to Homebush they earned £1,375 9s. 6d., the amount named by Mr. Halloran being £1,382, or a difference of between £6 and £7 only.

Long before the combination trucks came into use I urged upon the Goods Superintendent and his staff the importance of loading cattle trucks with goods to those stations on the most distant parts of the line where they were required to load stock, instead of sending open wagons with goods and hauling them back empty, while at the same time the cattle trucks were being sent empty to bring back cattle; yet, although there are only fourteen combination trucks, they earned for this traffic in about six months, £5,864 (or £5,877), while for the same period our 300 cattle wagons only earned £4,224 for a similar service.

As

As a matter of fact, while the combination trucks have been running to the distant western stations with goods to bring back stock, we were for a considerable period running empty waggons westward at the same time to return with wool.

I cannot make out how 10,970 train miles are made up. According to the statements furnished to me it appears that during the period in question the fourteen combination trucks travelled 163,370 miles altogether, and that number divided by 14 gives 11,670 train miles; notwithstanding the discrepancy I cannot make out in what other way Mr. Halloran's figures have been arrived at.

Taking 11,670 miles as the correct distance, and calculating the working expenses at 4s. per train mile, as quoted by Mr. Halloran, we find it amounts to £2,334, while the aggregate earnings were £7,240, leaving a net earning during the six months (nearly) of £4,906, as against £5,065 named by Mr. Halloran.

I do not know whether it is necessary that I should follow all the calculations shown on pages 2 and 4 of the statement and deal with them *seriatim*.

The 10,970 train miles must either have been calculated incorrectly, as I have already explained, or the figures have been obtained on some different basis than that adopted by me; and the amount of £148 shown as allowance for removals I cannot explain, as I do not know what it means or how it has been got at.

The estimated saving by the general adoption of the combination trucks is greatly overstated, because, while I am quite prepared to admit that our sheep vans (of which we have 272) are only useful when conveying sheep, there is absolutely no reason why, if combination trucks are used for the conveyance of general goods, the ordinary cattle trucks should not be equally suitable, and of these we have, as I have already stated, 300.

I observe, too, that the fourteen combination trucks loaded are calculated as one train, while in the case of empty sheep trucks twenty-one are allowed; and I wish to point out that fourteen combination trucks loaded to the extent of 4 tons 6 cwt. 2 qrs., as they have been, give an aggregate of 163 tons 12 cwt. 2 qrs., and that is equal to twenty-four empty sheep vans, so that the cost of running the latter would have to be considerably reduced.

Then I notice that the cost of hauling 231 ordinary trucks of goods is calculated at the same load per train as combination trucks (the weight in each truck being the same), although it takes seventeen and three-quarters ordinary trucks to weigh as much as the fourteen combination trucks; and while it is true that nothing has been shown as the cost of working the ordinary trucks on the up journey it must also be noted that nothing is credited to them in the shape of earnings, and I think it goes without question that throughout the year the latter are very much greater than the former.

The 1,070,094, shown on pages 2 and 4, is said, in Mr. Halloran's letter of the 1st instant, to represent the freight of goods which the combination trucks are adapted to carry. It is a pity particulars are not given, because without them it is not in my power to express an opinion on the subject.

For the information of the Commissioner, that the following are the tares of the respective vehicles, viz.:—

	Tons	cwt.	qrs.
Combination truck ...	7	7	1
Sheep van ...	6	17	0
Cattle truck...	6	3	1
D truck ...	4	17	2

These have been obtained from the Locomotive Engineer.

W.V.R., 18/2/86.

I have but one opinion, viz., that it was reprehensible conduct on the part of Mr. Evans, and he should be called upon for an explanation.—C.A.G., 23/2/86. Seen, and Mr. Evans informed.—W.V.R., 24/2/86. What reply is to be made to Mr. Halloran?—D.V., 1/3/86. Commissioner. There can be no question that these trucks can be made very serviceable, and be used with much economy; but not to the extent claimed for them. I must suggest that the patentees be asked to say for what sum they will confer upon the Department the right to use the design.—C.A.G., 3/3/86. Approved.—W.J.L., 4/3/86.

No. 18.

Mr. R. Speight to The Commissioner for Railways.

Dear Sir, Victorian Railways, Melbourne, 9 February, 1886.

Mr. Evans, when over in Melbourne, showed the Commissioners a model of his combination truck, and stated that you had a number of them in actual use which answered the purpose for which they were designed very satisfactorily. Would you kindly inform me of your experince in regard to these trucks, and what is the difference in their cost as compared with the cost of ordinary trucks, together with the cost of converting the present trucks to his plan. If it is possible to place one of the trucks at our disposal for inspection, we would not detain it more than a day or two after hearing it was at Albury, and would appreciate the advantage of seeing one of the trucks which had been in use for several months.

Yours, &c.,
R. SPEIGHT.

Will Traffic Manager see me to-morrow about this—Chas.A.G., 11/2/86. Telephoned, 12/2/86.

Will Mr. Scott let me have a reply to-morrow on the following points:—1st. Probable cost of truck. It will not do to take the cost of experimental vans, as it was excessive, owing to various causes. 2nd. The cost of converting present vans into "Evans'" vans. The manner in which the mechanical fittings of the fourteen trucks supplied have stood the test of wear and tear.—Chas.A.G., 12/2/86.

Reply attached.—W. Scott, 12/2/86. For full report on this matter be good enough to refer to my minute of this date on your M.P. 86-456 D. I have given directions for one of the combination trucks to be loaded and sent to Albury. It will leave Sydney by Monday, and will be in Albury ready for inspection by any of the Victorian Railway officers by Thursday next, the 25th instant.—W.V.R., 18/2/86.

To

To Mr. Braid,—Please let me have on this paper a reply to the Commissioner's questions *re* Evans' combined trucks as quickly as possible.—W.S., *per* C.A.N., 12/2/86.

This is hardly a reply to the Commissioner's inquiry; he asks for the cost, and requires the figures.

In reply to the Commissioner's questions, I beg to state, firstly, that the probable cost of a new truck would be £300; secondly, that it would be cheaper to make new trucks than convert the present vans into "Evans'" vans; thirdly, that the mechanical fittings of the fourteen "Evans'" trucks now running have up to the present stood the test of wear and tear very well.

Loco. Engineer,—The £300 mentioned above would include the fittings, such as wheels, springs, &c., supplied by the Government to the contractors.—T. Braid, 12/2/86.

Loco. Engineer,—The Commissioner wishes a more definite reply to his second question. Please furnish on Monday morning.—D.C.M'L., 13/2/86.

Mr. Braid.—W. Scott, 13/2/86. Further explanation herewith.—T. Braid, 15/2/86. Loco. Engineer. The Commissioner,—Urgent.—W. Scott, 15/2/86.

It has been represented to me that a contract would be taken for constructing vans to Evans' design for £150 plus the price of wheels and springs—fifty-five, £205; but without royalty. Will Mr. Read report, now that he has the statement from the Loco. Engineer as to the working of the mechanical parts, how the trucks answer in other respects. Please send one of the trucks to Albury for Mr. Speight's inspection, and let me know when it will be there.—Chas. A.G., 18/2/86.

No. 19.

Memorandum to Loco. Engineer.

Sir, Locomotive Engineer's Branch, 15 February, 1886.

Our cattle and sheep vans are so constructed that the expense of taking them down and converting them into "Evans" vans would cost more than making new ones, as the framing is quite different from that of the combination vans, and the timber could not be utilized, as also very little of the ironwork.

The cost of converting our present cattle and sheep vans into "Evans" vans would be about the sum of £240 per van.

The present price for our ordinary cattle waggon is	£107	0	0
Extra for buffers	5	8	0
Extra for draw gear	2	0	0
Material supplied by the Department, such as wheels, springs, &c.	55	0	0
	£169	8	0

The present contract price for our ordinary sheep van is	£112	0	0
Extra for buffers	5	8	0
Extra for draw gear	2	0	0
Material supplied by the Department, such as wheels, springs, &c.	55	0	0
	£174	8	0

These prices are based on present contract prices. T. BRAID, 15/2/86.

Inform Mr. Speight that the truck will be at Albury on Thursday next. That it depends very much upon the framing of existing live-stock trucks whether it would be economical to convert them into vans of Evans' design. The Locomotive Engineer here states that it would not be economical to convert our vans into combination vans, for the reason given, viz., difference in framing. That Evans' combined vans are, it is calculated, 50 per cent more costly to construct than the ordinary vans. That, if the down traffic is to places where the up live-stock traffic is coming from, the vans will do all that is claimed for them, but their usefulness in this respect must necessarily be governed by the tide of traffic. That the mechanical parts have been found to be quite workable, and do not get out of order.—Chas. A.G., 22/2/86. R. Speight, Esq., 23/2/86. Traffic Manager, 24/2/86.

No. 20.

The Commissioner for Railways to Mr. Speight.

Sir, Department of Railways, Sydney, 23 February, 1886.

Referring to your letter of the 9th instant, respecting the model of truck shown to the Victorian Railway Commissioners by Mr. Evans, our Goods Superintendent, and asking the cost, and our experience of them, and, further, that one of these trucks might be placed at your disposal for inspection, I have the honor to inform you that, agreeably to your request, a truck of this pattern will be at Albury on Thursday next, when it may be seen by your officers.

It depends very much upon the framing of the existing live-stock trucks whether it would be economical to convert them into one of Evans' design.

The Locomotive Engineer here states that it would not be economical to convert our vans into combination vans, for the reason given, that the difference in framing Evans' combined vans is, it is estimated, 50 per cent. more costly to construct than the ordinary vans.

If the down traffic is to places where the up live-stock traffic is coming from, the vans will do all that is claimed for them, but their usefulness in this respect must necessarily be governed by the tide of traffic.

The mechanical parts of the van have been found to be quite workable, and do not get out of order.

I have, &c.,
CHARLES A. GOODCHAP,
Commissioner for Railways.

No. 21.

The Commissioner for Railways to Mr. H. Halloran.

Sir, Railway Branch, 8 March, 1886.

With reference to correspondence which has passed respecting the trials made of the Evans combination truck, and the desirability of its adoption on the lines of this Colony, I have the honor to inform you that inquiry has been made, and while admitting that the trucks can be made very serviceable and be used with much economy, they are not of such advantage as is claimed for them in your letters. I shall be glad, however, if you will say for what sum the patentees would confer upon this Department the right to use the design.

I have, &c.,
C. A. GOODCHAP,
Commissioner for Railways.

No. 22.

Mr. H. Halloran to The Commissioner for Railways.

Sir, 54, Wentworth Court, 17 March, 1886.

I have the honor to acknowledge the receipt of your letter of the 8th instant (986), wherein you reply to my letter of the 1st ultimo, and request that I will say for what sum the Patentees of Evans combination trucks would confer upon your Department the right to use the design.

I beg to state in reply that I am authorised to offer the entire patent of such trucks for the Colony of New South Wales for the sum of seventeen thousand pounds (£17,000), to include the use of any future improvements either in design or construction of entirely new vans, or in altering or converting the present live stock vans into combination vans.

The sum named is equal to about £16 per truck on the number of live stock and covered vans in use at the end of 1884; and I may here point out that the number of combination trucks would enable the Department to make a large reduction in the number of waggons now in use. Looked at from another point of view, the consideration named amounts to about one-fifth part only of the money which the use of such vans would save to the Railway Department for a period of twelve months, when fully brought into use, and the entire saving for ever after the first year.

The Patentees are anxious to ascertain the cost of altering the present live-stock vans into the combination type; and to effect this they are desirous of being put in possession of a sheep or cattle van to be converted into a combination van, so that the estimate of cost may be tested by actual construction.

I therefore beg, on their behalf, to apply for an order that one van may be delivered to the Patentees for that purpose.

I have, &c.,
HENRY HALLORAN.

No. 23.

Mr. H. Halloran to The Commissioner for Railways.

Sir, Wentworth Court, 24 March, 1886.

I have the honor to request with reference to the last paragraph of my letter of the 17th instant in the matter of the Evans combination trucks, that should you have approved of the transfer to the patentees of one of the trucks in use, for the conversion thereof into a combination truck and proof of actual cost of such conversion, I may receive at once the order for such transfer.

I have, &c.,
HENRY HALLORAN.

Minute of the Commissioner.

Does the Minister approve of a van being delivered to the patentees for the purpose stated? Mr. Braid reports that the cost of altering sheep vans and cattle trucks into Evans trucks would cost more than constructing new ones to Mr. Evans' design; but there seems to be some inconsistency in this statement, as in the same paper he gives the cost of a new van at £300 and the cost of a converted van at £240, unless the cost of conversion is minus the first cost of sheep or cattle trucks—in which case I take leave to doubt the estimate that the cost would be £240.—C.A.G., 26/3/86.

I see no objection to the applicants having a truck as desired.—W.J.L., 31/3/86.

To the Traffic Manager, Redfern,—I have to inform you that an application has been received from Mr. Halloran, on behalf of the patentees of the Evans combination truck, for the loan of a live-stock truck, in order that the cost of converting it into a combination truck can be ascertained; I shall be glad if you will make arrangements for having the same set apart for him.—G.B., *pro* Commissioner, B.C., 6/4/86.

Mr. Evans can appropriate any truck he likes.—W.V.R, 13/4/86. Noted, and will arrange.—G.T. Evans, 14/4/86. T. Manager.

No. 24.

Mr. H. Halloran to The Commissioner for Railways.

Sir, Wentworth Court, Sydney, 9 April, 1886.

In returning to you the thanks of the patentees of Evans combination truck for your having kindly allowed the transfer to them of one of the ordinary cattle trucks for its conversion into an Evans combination truck that the cost of such conversion may be practically determined, I am, in their interest, to ask your early consideration of their offer, contained in my letter of the 17th ultimo, of transfer to the Government of the right to patent, and of all improvements devised by the inventor hereafter, for the sum of £17,000, and awaiting your reply,

I have, &c.,
HENRY HALLORAN.

What has been done in reference to the truck that was allowed to be altered?—W.J.L., 11/5/86. Mr. Bourn will please see No. 209 cattle van, which I believe is standing at the works of Mr. J. Wearne, Glebe, undergoing alterations, and report as to what is being done to it.—T. Braid, 18/5/86.

I have seen this truck at Mr. Wearne's works, and have to inform you that the top frame of old body has been taken down, and new framing necessary for the alteration is now being fitted. The truck, I was informed, will be completed in a fortnight from date.—E. J. Bourn, 19/5/86. Mr. Braid.

For Minister's information.—C.A.G., 27/5/86. Mr. Wearne says that the van will be finished on Saturday next, and delivered on the following Monday, the 14th instant. Report as to alterations will follow.—T. Braid, 9/6/86. Loco. Engineer. Please report when completed.—C.A.G., 12/6/86.

No. 209 cattle van, fitted up as a combination truck, was delivered on the line at goods shed, Sydney, on the 21st instant, and is now having weather-sheets fixed to it. I think it would be advisable to ask Mr. Supt. Evans when it will be ready for traffic as he has charge of the alterations.—T. Braid, 22/6/86. Loco. Engineer.

Goods Superintendent. Cattle van No. 209, fitted up as a Combination.

The Locomotive Engineer informs me that cattle van, No. 209, fitted up as a combination truck, was delivered on the line at goods shed, Sydney yard, on the 21st instant, and is now having weather-sheets fixed to it. Will Mr. Evans please examine this truck, and report when it will be ready for traffic.—W. V. Read, *per* W.A., 26/6/86.

This truck is now ready to be taken into traffic.—G. T. Evans, 10/7/86. T. Manager.

I am having the brake gear altered, as it does not work effectively. I am also having the boxes properly oiled, and the truck will be ready for traffic by 10 a.m. to-morrow, 20th instant.—T. Braid, 19/7/86. Locomotive Engineer.

No. 25.

Mr. H. Halloran to The Commissioner for Railways.

Sir, 54, Wentworth Court, 14 July, 1886.

In reference to previous correspondence, and especially to your letter informing me that you had given instructions for an ordinary railway waggon to be handed over, that it might be altered or converted into a combination truck according to Evans' patent, I have now the honor to inform you that the work of conversion or alteration has been completed, at an actual cost of £95 10s., and that the waggon so altered has been delivered at the Redfern Station.

I enclose the account for the work of alteration, which represents the actual cost of alteration only, and not the royalty which the proprietors of the patent will allow to remain for settlement with that of the fourteen others now on trial.

I have, &c.,

HENRY HALLORAN,

Agent for the Proprietor of Evans' patent.

Let me have this back early with papers.—Chas. A.G., 14/7/86. Papers herewith.

Dear Mr. Goodchap, 14 July, 1886.

As pertinacious tradesmen say, "a cheque will oblige." Yours faithfully,

HENRY HALLORAN.

54, Wentworth Court, 13 July, 1886.

The Commissioner of Railways to the Proprietor of Evans' Combination Truck.

To alteration of cattle waggon No. 209 to Evans combination truck ...	£93	0s.
Tarpaulins	2	10s.
	£95	10s.

Dear Mr. Goodchap, 20 July, 1886.

I am looking after cheque for conversion of the waggon or truck; is it ready, or when may I have it?

HENRY HALLORAN.

Has the work been properly carried out and is there any reason why amount should not be paid.—D.C.M'L., 23/7/86. Locomotive Engineer, urgent. Received 24/7/86. Mr. Braid, for report. 26/7/86. Report herewith.—T. Braid, 29/7/86. Locomotive Engineer.

Memorandum to the Locomotive Engineer.

Sir, Locomotive Engineer's Office, Sydney, 29 July, 1886.

Re No. 209 cattle van converted into an Evans combination van.

I am unable to say that the work has been properly carried out as to design, as I have not seen any drawings or received any instructions as to what was to be done.

Some time ago Mr. Evans asked me to look out a suitable cattle van for certain alterations he required to have made, and I did so; but he did not explain what the alterations were to be.

On 12th February last, I was asked by you to give cost of converting our present vans into Evans vans, and as the papers are with these I infer that the alterations made to the cattle van bear on the subject.

No. 209 cattle van, the van altered, has not the work in it as the original combination van, the principal difference being that it has only three doors each side instead of six, loose battens in centre of van in lieu of partition, no screw brake, and has neither the continuous and strong draw gear, besides other minor alterations that should have been made have been omitted.

As Mr. Evans has supervised the work and reported to the Traffic Branch when the truck was ready for use, I presume the alterations were effected by his directions; if so, I see no reason why the amount claimed should not be paid.

T. BRAID.

Received, 29/7/86.

Please value the work, and say if you consider £95 10s. is a fair price for it.—W. Scott, 29/7/86. Mr. Braid. I have examined the van, and considered the sum quoted for carrying out the alterations to be fair and reasonable.—T. Braid, 31/7/86. Locomotive Engineer. Received, 31/7/86. The Commissioner, 3/8/86.

Minute

Minute of Commissioner.

Let me know to-day if the van is now a good van for the purpose, and can be used with advantage. There are so many doubts expressed, or rather insinuated—capable no doubt of after expansion if the van should fail—so much apparent desire to shirk responsibility, that I lose confidence. I want the officers to speak their minds boldly; if the van is not a good van let it be stated plainly, and I shall know what to do. Mr. Braid need not be afraid that any consequences will follow from what appears to be an excessive estimate he made when the question was put to him as to what the cost would be of converting a sheep van into an Evans' car. If, as seems to be the case, he made a mistake, he is not the first person who has done so, and he will probably be more careful in future, but what I want to know now is whether I can accept the car as a serviceable one.—CHAS. A. G., 3/8/86. Mr. Scott. Report herewith.

Evans' Combination Truck.

I have, in company with Mr. Braid, inspected the Combination Truck, converted (under Mr. Evans' supervision) from a cattle van, and am of opinion that the work is of an inferior* description, whilst the work in the vans made by Messrs. Hudson Brothers is really very good.

Like Mr. Braid, I think the cost† of keeping in proper repair the van altered by Mr. Evans will be considerable.

I also agree with Mr. Braid that so long as there are only a few of this class of vehicle on hand they can be nursed and cared for, but if the number should be considerably increased this could not be done.

In my opinion the van is not a good one,‡ and I do not think it would be advisable to further increase the number until those we have on hand have been in use for several years.

Report from Mr. Braid enclosed.

The Commissioner. W. SCOTT, 5/8/86.

Notes by the Commissioner.

* Now, the question is, is the work of such an inferior description as to warrant the rejection of the van?
† Will the cost be greater than the cost of keeping in repair this design of car generally; and if so, how much greater?
‡ Is Mr. Scott alluding to the design generally, and not to this particular car?

CH.A.G.

Sir, Locomotive Engineer's Office, Sydney, 5 August, 1886.

In my opinion the van is not a good van, nor yet do I think it will prove a serviceable one, in the long run, for what it is intended for, for the following reasons:—

* In the first place it will have to be kept exceptionally clean and free from dung, and the ironwork —that is the screws and joints—free from rust. Secondly, that the rough usage our waggon stock receives will prove a great detriment, more especially when the van is loaded with cattle, as the flaps will get out of order, and when the vans have been in use a few years the cost for repairs will be heavy. Thirdly, that the weather sheeting will be expensive to keep in good order, as, if care is not used in winding the sheets up, they will be destroyed with closing the doors.

There is no doubt that so long as the combination vans are limited in numbers and well nursed they will answer the purpose; but my belief is that if in future a great number run, and there will be, if approved, and they are sent to the outlying stations and neglected, the repairs will be heavy.

T. BRAID.

Note by the Commissioner.

* But this is common to all the trucks, not specially to the altered one. Is this with reference to altered van, or to a larger degree than it applies to the present design of van. CH.A.G.

MY reference on the last occasion has apparently been misunderstood. I did not ask for a report upon the design of the Evans car, but whether the sheep van altered to that design was finished in a satisfactory manner. Mr. Braid, when the question of altering sheep-vans to Mr. Evans' design of car was referred to him, said the cost would be £240 for each van. It was then asked, by those interested, that a sheep-van might be entrusted to them for alteration, and they would show that £240 was altogether an excessive estimate. This was allowed, and they return the van as altered, and ask £95 10s. 0d., for altering it. The question now is, can the van be utilized? It is not sufficient to say that the work done is worth £95 10s. 0d., but has a serviceable van been constructed, and so as to correspond with the general design of Evans' vans? How much more would have had to have been expended to make the van in all respects equal to those built by Hudson Brothers.—CH.A.G., 6/8/86. Mr. Scott, B.C.

Memo. to The Locomotive Engineer *re* Evans' Combination Trucks.

Sir, Locomotive Engineer's Office, Regent-street, Redfern, Sydney, 14 August, 1886.

I very much regret that I misunderstood the purport of the information required by the Commissioner, and in doing so take the liberty of saying that I was not influenced by any desire to shirk responsibility for the estimate previously given by me for the cost of converting old stock into combination vans. In my estimate of £240, which I may state was based on the prices paid under the existing five years' contract, new rolling-stock, there was an allowance made for a considerable amount of renewals that would be necessary to a large portion of the old stock before the alterations could be made with advantage, as there are now running 59 cattle vans and 271 sheep vans 1 foot less in width and 1′ 2″ less in height than the combination van, and to alter the whole of the aforesaid 330 vans into Evans' vans, having a due regard to width and height of the latter, would necessitate not only new headstocks being supplied, but also nearly all new framing, in fact, as I before stated, very little of the old material could be used, but there is no doubt that had I have thought that there would have been any competition for the alterations I should not have estimated so highly. I was under the impression that the work would come under the five years' contract. See Mr. Braid's explanation.

The van No. 209 which has been altered is one of the latest design, and the nearest approach of any of our existing stock to the combination van, both being the same width, so that neither the under-framing or headstocks had to be altered or renewed.

If the van, as altered, was intended to be similar to the combination truck I would not accept it, either as regards workmanship or design. It can be utilized, but it is not so serviceable as the combination

nation van built by Hudson Bros., as, in addition to the defects mentioned in my memo. to you, dated 29th ultimo, there is no support for the longitudinal that takes the bearing of the flaps, and when loaded with sheep it will be found that the gear will get out of order; neither has it been fitted with Turton's buffers, chain brake, steps to get to brake, or screw coupling. The safety-chains are not so strong. The knees for supporting pillars are separate instead of being formed with the angle iron, and there is only one edge plate in centre of roof instead of two; in addition to which it has only received one coat of paint inside instead of two, and two coats instead of three on roof.

I must beg to say that it was a cattle and not a sheep van that was altered, and that the price claimed is £95 10s., not £90.

As to the question of how much it would cost to make the altered van equal in every respect to those built by Hudson Bros., I do not think it could be done under about £90 more.

I would refer you to the Traffic Department for them to say if it is as suitable for loading as the combination van built by Messrs. Hudson Brothers.

T. BRAID.

Minute of Commissioner.

Inform Mr. Halloran that it has been reported that the van has not been completed in the way that Hudson Brothers' vans were completed Point out what constitutes the difference. Say that inquiry is being made of Traffic Manager as to the effective value of the alterations to the Department.—CH. A. G., 15/8/86. Then to Traffic Manager.

I should not like to be obliged to reject the van. Mr Braid's report shows the matter in a very clear light. It is not a question *now* whether the Evans' van is of a good design, but whether the alteration made to the cattle van will admit of its being used in the same way as Evans' vans are used, or are capable of being used—the work is not so good it seems, and there are several omissions, but still it may be an useful van well worth the amount spent in altering it.—CH.A.G., 15/8/86.

Mr. Halloran informed, 17/8/86. Traffic Manager, D.C.McL., 17/8/86. The van can, I am of opinion, be used as Evans' vans are, and I recommend that it be taken over and put into use.—W.V.R., 28/8/86. Commissioner. For Minister's approval.—CH.A.G., 11/9/86. Approved. Place the altered and one of the other vans side by side for my inspection. The difference in estimated and actual cost is so very great I should like to see wherein the saving lies.—W.J.L., 16/9/86. Locomotive Engineer to see and forward voucher. Urgent.—D.C.McL., 16/9/86. Mr. Braid.—R.J.S., 22/9/86, Traffic Manager informed. See memo. Certificate herewith. S. Braid, 24/9/86. Locomotive Engineer.

No. 26.

The Commissioner for Railways to Mr. H. Halloran.

Sir, Railway Branch, Sydney, 17 August, 1886.

Referring to correspondence that has passed relative to the conversion of No 209 cattle-van into a combination truck according to Evans' patent, I have the honor to inform you it has been reported that the van has not been completed in the same way that Messrs. Hudson Brothers' vans were completed, the principal differences being that it has only three doors on each side instead of six. It has loose battens in the centre in lieu of partition, and has neither screw brake nor the continuous and strong draw-gear. Besides these defects there is no support for the longitudinal that takes the bearing of the flaps, and when loaded with sheep it will be found, the Locomotive Officer states, that the gear will get out of order; neither has it been fitted with Turton's buffers, chain brake or steps to get to brake, or screw coupling. The safety chains are not so strong, the knees for supporting pillars are separate instead of being formed with the angle iron, and there is only one edge plate in centre of roof instead of two; in addition to which it has only received one coat of paint inside instead of two, and two coats on the roof instead of three.

I may add, however, that inquiry is being made of Traffic Manager as to the effective value of the alteration to the Department. I have, &c.,

CHAS. A. GOODCHAP,
Commissioner for Railways,
(*Per* D. V.)

Conversion of a Cattle-waggon into an Evans' Combination Truck.

The attached vouchers in favour of Mr. Halloran, for work in connection with the above, which has not been supervised by any officer of this Branch, show £93, with extras amounting to £2 10s., as the cost of such conversion, instead of £90, as quoted in your minute of the 6th ultimo. I have certified to it, on the report of Mr. Braid, that the work done is worth the money claimed.—W. SCOTT, 25/9/86.

Pay.—CH.A.G., 27/9/86. Examiner. Voucher forwarded for payment.—T.C., *pro* Examiner, 28/9/86. Secretary. B.C., Loco. Enginer.—*Pro* Chief Clerk, J.T.W. Seen.—W. SCOTT, 30/9/86.—The Commissioner.

No. 27.

Mr. A. Forsyth to The Secretary for Public Works.

Sir, Sydney, 30 August, 1886.

In response to your offer to let me inspect the original documents relating to certain works carried out for the Department of Railways by Messrs. Hudson Bros., Limited, I beg to ask you to be allowed to inspect the papers relating to the following works:—

The existing contracts for rolling stock.
Construction of 2 State carriages and their subsequent alteration.
Construction of 14 combination trucks. Proposed

Proposed alteration of ordinary live stock trucks into combination trucks.
Alteration of one ordinary live stock truck into a combination truck.
Construction of portable coal boxes to fit into railway trucks.

I have, &c.,
A. FORSYTH.

P.S.—To give time to look up the papers I will call on Thursday.—A.F.

Urgent.—The Minister promised to have these papers ready to-morrow (Wednesday).—H.M'L., 31/8/86.

No. 28.

Mr. H. Halloran to The Commissioner for Railways.

Sir, Wentworth Court, Sydney, 5 October, 1886.

I have the honor to invite your attention to my letters of the 17th March and 9th April last in the matter of the purchase by the Government of the right of patent in this Colony of "Evans' Combination Truck," and to request that I may be favoured with a reply to those communications.

I am open to receive for my principals any offer which the Government may be pleased to make in the place of the amount which I had been authorized to ask.

The great public saving which must accrue from the use of the "combination truck," whether improvements may hereafter be possible or not, and the proven comparatively reasonable cost of converting the common vans into combination trucks being before the world, an arrangement for the purchase of the right to use the latter appears very desirable.

I have, &c.,
HENRY HALLORAN.
(For the Patentees.)

Acknowledge receipt.—CH.A.G., 5/10/86. Done, 6/10/86.

No. 29.

Mr. A. Forsyth to The Secretary for Public Works.

Dear Sir, Sydney, 5 October, 1886.

The following list are the papers of which copies were given to me, and which you are to lay on the table of the House and to have printed; and I would beg to suggest that, to make them complete, you should print the Locomotive Overseer's and Engineer's, the Minister for Works, and the Commissioner's memos. *re* Mr. Braid's valuation of the combination truck made by Messrs. Hudson Brothers, and such other as you think desirable. I hope you will have them printed as early as possible.

I have, &c.,
A. FORSYTH.

Mr. H. Hudson to Commissioner, *re* making fourteen combination trucks, dated 25th June, 1884.
Commissioner to Locomotive Engineer, giving instructions *re* making, 3rd July, 1884.
Commissioner to Hudson Brothers, notifying acceptance of offer, 9th July, 1884.
Mr. Braid to Locomotive Overseer, *re* value of new combination trucks, 4th May, 1885.
Mr. Scott to Mr. Braid, to report on Commissioner's memo., and Mr. Braid's report, 12th February, 1886.
Mr. Braid to Locomotive Engineer, as to cost of new and converting old trucks, 15th February, 1886.
Commissioner to Mr. Read, to inquire as to working of combination truck, 16 February, 1886.
Mr. Halloran to Commissioner, *re* payment for converting cattle van into combination truck, 20th July, 1886.
Mr. Braid to Mr. Scott, reporting on converted truck, Mr. Scott directing him to value and report on valuation, 29th July, 1886.
Commissioner to Locomotive Engineer, asking for full report, 3rd August, 1886.
Mr. Braid to Mr. Scott, *re* converted truck; Mr. Scott to Commissioner, *re* converted truck, both dated 5th August, 1886.
Commissioner to Mr. Scott, *re* his reports on converted truck, 6th August, 1886.
Mr. Braid to Locomotive Engineer, *re* his estimate of cost of conversion, 14th August, 1886.
Commissioner to Traffic Manager, *re* combination truck, and Mr. Read's report, 15th August, 1886.
Commissioner to Mr. Halloran, *re* combination truck, defects in conversion, 17th August, 1886.
Mr. H. Hudson to Mr. Scott, *re* coal boxes, 5th June, 1886.
Mr. Scott to Commissioner, recommending acceptance of Messrs. Hudson Brothers' offer, 6th August, 1886.
Commissioner's memo., 9th August, 1886.
Mr. Read's report on coal boxes, 12th August, 1886.

The Minister wants all these papers at once to have them copied.—H.M'L., 5/10/86.

Minute of Commissioner.

I must ask the Minister to lay *all* the papers upon the Table—not the extracts which Mr. Forsyth asks for. If they are wanted *at once* I would ask that the originals be laid on the Table as exhibits till they can be printed.—CH.A.G., 5/10/86.

No. 30.

Minute from Commissioner.

Explanation from Mr. Braid.

In Mr. Braid's report, dated 14/8/86, he states that if he had known there would have been competition for the alterations (of vans) he would not have estimated so highly, but that he was under the impression the work would come under the five years' contract. I shall be glad to know exactly what Mr. Braid intended to convey by this remark.

Ch.A.G., B.C., 7/10/86.

Locomotive Engineer.

My estimate was based upon the contract prices for live stock vehicles, as I assumed that if the alterations were to be carried out they would be done by the Contractors who had tendered for vehicles for which these would be substituted, and my reason for saying "had I known there would have been competition I should not have estimated so highly," was at that time, as now, trade was very dull, and I am sure that if tenders had been called for there would have been a keen competition for the work, as Contractors, to keep their works and men going, would have taken the work at cost price, or very little over.—T. Braid, 8/10/86. Locomotive Engineer.

NO. **SCHEDULE.** PAGE.

1. Minute by Traffic Manager to Mr. Evans, Goods Superintendent, *re* information afforded to Mr. Halloran. 24 February, 1886. 18
2. Minute of Mr. Evans to Traffic Manager in reply to above. 10 March, 1886. 18
3. Minute by Traffic Manager to Commissioner *re* Mr. Evans' minute. 16 March, 1886. 18
4. Minute by Commissioner *re* Mr. Evans' action in furnishing information to Mr. Halloran. 22 March, 1886. 18

No. 1.

Traffic Manager to Goods Superintendent Evans.

The Commissioner recently forwarded to me a letter written by Mr. Henry Halloran, on behalf of the patentees of the combination trucks, enclosed with which were certain statements respecting the mileage and earnings of these trucks since the 2nd June last.

In sending the papers to me the Commissioner wrote as follows:—"Will Traffic Manager please report upon enclosed statement. If it be correct, and the result should be known to the Traffic Manager sooner than it should be to the patentees' agent, I am surprised Mr. Read has not reported on it before."

In replying to the above minute I stated that I was not in a position to give the Commissioner the information contained in the statement because, although I had given directions for statistics to be kept to enable me to frame a report, they had not reached me when I received the letter, and I further minuted as follows:—"It is hardly necessary for me to remind the Commissioner that Mr. Evans, the inventor and patentee, is in a position which peculiarly enables him more readily than any other officer to get at the information contained in Mr. Halloran's statement. Whether he was fairly justified in his official capacity in furnishing anyone unconnected with the Department with that information without getting permission to do so, is a question about which there can scarcely be two opinions."

The Commissioner has replied as follows:—"I have but one opinion, viz., that it was most reprehensible conduct on the part of Mr. Evans, and he should be called upon for an explanation."

W.V.R., 24/2/86.

No. 2.

Minute from Goods Superintendent Evans to Traffic Manager.

Not having seen Mr. Halloran's letter, I cannot say what information he has submitted the only figures furnished by me to the proprietors of the combination truck were the gross earnings during the time they have been running. This information was also furnished to the Traffic Manager, and as the Minister expressed a wish to have it, I adopted this means of furnishing it by having it forwarded to the Commissioner, and in doing so I certainly did not think I committed any breach of confidence or discipline.

G. T. EVANS, 10/3/86.

No. 3.

Minute from Traffic Manager to Commissioner.

In forwarding the attached paper to the Commissioner, I have only to say that, as stated in the Traffic Manager's first report, the information alluded to by Mr. Evans was not supplied to this office, when Mr. Halloran's letter reached it, through the Commissioner. D.K., 16/3/86.

No. 4.

Minute by Commissioner.

Seen.—I am not disposed to look harshly upon Mr. Evans' action; he has designed what promises to be a serviceable truck, but there has been a breach of the rules that information respecting the transactions of the Department are not to be made use of outside the Department without permission.

CHAS. A. G., 22/3/86.

SCHEDULE.

NO. PAGE.
1. Minute of Commissioner *re* method of washing out combination cars, &c. 16 January, 1885. 19
Minutes from Traffic Manager, and Report of Engineer for Existing Lines on Commissioner's minute. 19
2. Letter from Commissioner to Town Clerk, Sydney, *re* Supply of Water at Homebush for above purpose. 4 March, 1885. 19
Further minutes by Commissioner *re* above, and replies from Engineer for Existing Lines, &c. 19
3. Letter from Pitt, Son, and Badgery to Minister for Works *re* construction of siding at sale yards, Homebush, for cleaning cars, with minute by Minister thereon. 24 March, 1885. 20
4. Letter from Town Clerk, Sydney, in reply to Commissioner's letter of 4th March, with minutes thereon. 24 March, 1885. 20

No. 1.

Minute of Commissioner.

I WROTE some time since about water for washing out the new combination car to be provided at Homebush. I think I suggested steam jets. I should like to know what has been done.—C.A.G., 16/1/85. Urgent.

Does Traffic Manager know anything of this matter? If so, please report.—D.V., *per* D.C.M'L. 17/1/85. Urgent.

Nothing. There is no water at Homebush, and it will be for the Engineer for Existing Lines or the Loco. Engineer (if steam is used) to report upon the best method of carrying out the Commissioner's wishes.—D.K., 19/1/85. Commissioner.

I must have an immediate report upon this matter. I am quite certain I have written before on the subject. The Engineer for Existing Lines or the Loco. Engineer should be prepared with a scheme for a good supply of water, with a good fall, at Homebush, for washing out live-stock trucks. The success of the Evans truck will depend mainly upon the facilities afforded for keeping them clean, &c.—C.A.G., 20/1/85. Engineer for Existing Lines.

The Commissioner wishes to be furnished with a report upon this matter as early as possible.—D.V., *per* D.C.M'L., 21/1/85/. Urgent. Mr. Thompson, for report on best means of getting water supply at Homebush.—F.M.A., 26/1/85. District Engineer, Sydney.

I would propose to draw the water from the Corporation water-supply, and pump it into a tank about 40 feet above rail level, from which a pipe would be laid along the cattle platform, with hydrants at about every chain, from which the trucks would be washed out by means of hoses, as shown in green on attached tracing. The tank, being fixed 40 feet high, will ensure a good pressure of water and the effectual cleaning of the trucks. The capacity of the tank, I estimate, should be about 5,000 gallons, and the capacity of the pumping engine, about 5,000 gallons per hour, in order that the work of cleaning may be speedily done. The cost of this arrangement will be about £1,175.—M.T., 5/2/85. Engineer for Existing Lines.

I presume the sanction of the Corporation must be asked. Mr. Thompson's estimate of cost is very high, it seems to me.—F.M.A., 16/2/85. Engineer for Existing Lines. Will Commissioner approve? I think this is absolutely necessary. The Corporation's sanction will be required.—G.C., 19/2/85. For Minister's approval.—C.A.G., 24/2/85. Approved.—F.A.W., 25/2/85.

No. 2.

The Commissioner for Railways to The Town Clerk.

Sir, Railway Branch, 4 March, 1885.

I have the honor to inform you that in order to facilitate the proper cleansing of our new combination cars at Homebush, it is proposed to draw a supply of water from the Corporation dam, and pump it into a tank built at sufficient elevation to afford the required pressure. I have therefore to ask that you will be good enough to obtain the acquiescence of your Council to the adoption of this course. I enclose herein tracing, showing how we propose to utilise the water, and shall be glad if the matter can receive early attention.

I have, &c.,
C. A. GOODCHAP,
Commissioner for Railways.

Water at Cattle Yard for Trucks.

Let me have papers. I wrote the other day a minute on the subject, and have not had a reply.—C.A.G., 6/3/85. We are awaiting reply to our communication sent to Municipal Council on the 4th inst.—D.C.M'L., 7/3/85.

The Corporation will, of course, give consent—it can be obtained on a summer's morning by application. Let this work be no longer delayed. I shall expect it to be finished by end of this month.—C.A.G., 9/3/85. Mr. Cowdery.

Mr. Thomson to carry out as quickly as possible.—G.C., *per* A.M.A. Please say how this work is to be charged. Please return tracing.—M.T., 11/3/85. Engineer for Existing Lines. Will Commissioner please state charge.—G.C., per F.M.A., 12/3/85. Schedule G. I hope it has not been delayed while this inquiry was being made.—C.A.G., 14/3/85. Mr. Cowdery. Mr. Thomson to note charge.—G.C., *per* F.M.A., 17/3/85. Mr. Purton to note charge. You have instructions already for the work.—M.T., 17/3/85. Noted.—J. PURTON, 19/3/85. District Engineer. Noted. The work was taken in hand 11/3/85, and will be completed without delay.—M.T., 20/3/85. Engineer for Existing Lines. Please authorize purchase of pump for this work, on my memo. 85-211, 16th instant. If not, obtain at once, or the work will be delayed, as it has to be fixed before the pipes can be laid complete.—M.T., 20/3/85. Engineer for Existing Lines. Will Commissioner please say if purchase of pump has been approved. The papers, my 85-1,628, were forwarded to Commissioner 18/3/85.—G.C., *per* G.L., 23/3/85. Commissioner. Papers with Superintendent of Stores.—G.B., 25/3/85. Engineer for Existing Lines. Mr. Thomson to see.—G.C., *per* G.L., 26/3/85. Seen. Pump is being fixed now.—M.T., 27/3/85. Engineer for Existing Lines. Noted.—G.C., *per* G.L., 28/3/85. Examiner. Seen.—J.F., 2/4/85. Secretary.

No. 3.

Pitt, Son, and Badgery to The Secretary for Public Works.

Sir, Sydney, 24 March, 1885.

We have the honor to call your attenion to works now being proceeded with at the northern end of the new siding at the sale yards, Homebush, and to state that as we understand these works are in progress for the purpose of making conveniences to wash out the stock trucks, that there will be great danger of destroying the only available water for stock at the yards, viz., the Corporation water-reserve and our large tank, if this course is pursued, and that we shall suffer very seriously in our business by reason of having the water, so necessary for stock on arrival, rendered unfit for use.

We would respectfully suggest that instead of washing the trucks when so much damage will be done, and when want of space would interterfere with the already unsatisfactory working at the sidings, that you should make arrangements to wash out at Menangle, or some such place where water would be abundant and where the washings would be valuable.

We have, &c.,
PITT, SON, & BADGERY.

This matter must be looked into at once, as nothing must be done that will pollute the limited water-supply at Homebush.—F.A.W., 25/3/85.

No. 4.

The Town Clerk to The Commissioner for Railways.

Sir, Town Clerk's Office, Sydney, 24 March, 1885.

With reference to your letter of the 4th instant, requesting permission to draw water from the Corporation dam at the Homebush sale yards for the proper cleansing of the new combination cars, I have the honor, by direction of the Right Worshipful the Mayor, to state that there appears to be a grave objection to granting this request from the fact that (unless some arrangement is devised for draining from the siding) all the refuse and foul waters from the cars will be returned to the source whence it is pumped, and then find its way into the reservoir for the supply of drinking-water for stock. If this difficulty be overcome, there does not seem to be any objection to your obtaining water, so long as the supply in the dam is more than sufficient for the requirements of the cattle-yards, but it must be understood that this permission will be withdrawn if found necessary.

I have, &c.,
CHAS. A. WOOLCOTT,
Town Clerk.

There are previous papers on this subject which I should like to see before replying to these.—W. V. Read, *per* D.K., 27/3/85.

As you will perceive, some of the papers are with Mr. Cowdery, and the remainder with Mr. Richardson (Stores.) Will you please obtain them, and furnish an early report to the Commissioner.—*Pro* Chief Clerk, R.W., B.C., 31/3/85. Traffic Manager.

The other papers are now with Mr. Cowdery, who is, by the Commissioner's instruction, to see Mr. Badgery, M.P.—W.V.R., 10/4/85. Mr. Cowdery.—D.C.M'L., 13/4/85. Previous papers were returned to the Commissioner.—15/4/85., G.C., *per* G.L. Commissioner. They were returned to you yesterday.—*Pro* Chief Clerk, R.W., 16/4/85. Mr. G. Landers.

I wish to see, to-morrow, Thursday, at 11 a.m., the Traffic Manager and Mr. Cowdery respecting the water-supply for truck washing at Homebush, the source of supply and drainage, and space available. —C.A.G., 8/4/85. Mr. Badgery says he wrote a fortnight ago on the subject. How is it that I have not seen the paper?

Noted.—G.C. *per* G.L., 8/4/85. Commissioner. Traffic Manager. The letter referred to from Mr. Badgery was sent to you on the 31st ultimo.—D.C.M'L., 8/4/85. Very urgent. Will Mr. Cowdery see Mr. Badgery, and submit to him the plans by which it is intended to divert the drainage into tanks.—C.A.G., 9/4/85. Mr. Badgery has not yet called at this office.—G.C. *per* G.L., 12/5/85. Commissioner.

Sydney: Thomas Richards, Government Printer.—1886.

[1*s.* 3*d.*]

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY COAL-BOXES, DARLING HARBOUR.

(MINUTES, CORRESPONDENCE, &c.)

Ordered by the Legislative Assembly to be printed, 22 October, 1886.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works to Mr. Forsyth, M.P.*]

SCHEDULE.

NO.		PAGE.
1.	Minute by Mr. Secretary Lyne, *re* his interview with, and promises made to, a deputation interested in the shipment of coal at Darling Harbour. 27 November, 1885	1
2.	Minute from Engineer-in-Chief for Harbours and Rivers to Under Secretary for Public Works, *re* appliances at Darling Harbour for shipment of coal. 26 November, 1885	2
3.	Minute by Commissioner, requesting joint report of Traffic Manager and Locomotive Engineer on above subject. 28 November, 1885	2
4.	Joint report of Traffic Manager and Locomotive Engineer asked by Commissioner. 12 December, 1885	2
5.	Minute by Commissioner directing that Coal Companies be addressed, giving particulars of appliances for shipping coal at Darling Harbour. 19 December, 1885	2
6.	Letter from Commissioner to Hon. E. Webb, M.L.C., with reference to temporary facilities at Darling Harbour for shipment of coal. 23 December, 1885	3
7.	Minutes by Commissioner, Traffic Manager, and others, *re* proposed appliances for expediting shipment of coal at Darling Harbour	3
8.	Letter from Commissioner to Mr. Henry Hudson, with reference to a promise by him to submit plan of a receiver. 15 April, 1886	3
9.	Minutes by Commissioner and Locomotive Engineer, and scheme proposed by Mr. Henry Hudson	4
10.	Minutes by Locomotive Engineer and Traffic Manager, with reference to proposed coal-boxes	4
11.	Minutes by Commissioner and Locomotive Engineer, with further reference to proposed coal-boxes	5
12.	Letter from Mr. H. Hudson to Locomotive Engineer, quoting price for boxes. 25 May, 1886	5
13.	Memo. from draftsman giving particulars of weight, cost, &c., of coal-trucks and coal-boxes, and minute by Mr. Scott. 27 May, 1886	5
14.	Letter from Mr. H. Hudson to Locomotive Engineer, quoting amended price for boxes. 5 June, 1886	5
15.	Minutes by Commissioner, Locomotive Engineer, and Traffic Manager	5
16.	Letter to Mr. J. B. North from the Commissioner, explaining nature of proposed arrangement, and intimating charge which would have to be levied. 21 June, 1886	6
17.	Letter of reminder and minutes	6
18.	Minute by Mr. Secretary Lyne and reply	6

No. 1.

Minute by The Secretary for Public Works.

THE deputation, Messrs. Targett, Henson, Abigail, Ms.P., North, Hall, Street, Hutchinson, and others interested in the coal trade, waited upon me to-day with reference to the shipment of coal at Darling Harbour. They stated that the output from the southern and western mines adjoining the railway was becoming greater every year, and they were extending their trade, but the mines in connection with the shipment of coal were greatly handicapped by the want of proper appliances at Darling Harbour. At the present time, coal or shale, if brought down for shipment, had to be taken out of the trucks in small quantities, and wheeled in small barrowfuls to the lighter ready to receive it, thus making the shipment an expensive matter. They asked that, pending the scheme which was to be carried out, of providing ample facilities for the shipment of all minerals, &c., at Darling Harbour, that some temporary arrangement might be made so as to enable the coal and shale to be shipped at Darling Harbour without inconvenience or undue expense.

I informed them that the question of the shipment of coal and produce was a very comprehensive one, and required grave attention before being settled finally, even though at the present time the shipments outwards were considerable. Before long the Illawarra Railway would be opened to the extensive coal mines at Coal Cliff, Wollongong, Bulli, &c., and the connection between Newcastle and Hombush

 would

would be made; and these lines would no doubt bring a much larger coal traffic into Darling Harbour, which would require that ample facilities should be given. I had had a scheme to meet this probable traffic before me, but the completion of the scheme would require time, and be expensive in carrying out.

Until the railway was completed beyond the Pyrmont Bridge, and the scheme I referred to put in hand, I could not see that much could be done at Darling Harbour; but I promised to have inquiry made, to see if something temporary could not be done to remedy the grievances that at present were alleged to exist, and inquired whether the mine-owners would be prepared to supply their own trucks.

W.J.L., 27/11/15.

Railways, to see and return.—J.R., B.C., 2/12/85.

No. 2.

Minute from Engineer-in-Chief for Harbours and Rivers to Under Secretary for Public Works.

Deputation about Shipping Appliances, Darling Harbour.

Harbour and Rivers Branch, Sydney, 26 November, 1885.

THERE are at present at Darling Harbour two sets of appliances designed for the shipment of coal, but they have never been used, in consequence of no coal having been sent for shipment by them.

It is only for the Companies interested to provide suitable trucks, such as are in use at Newcastle, to obtain the facilities they need at once.

E. O. MORIARTY.

No. 3.

Minute by Commissioner.

Coaling at Darling Harbour.—Shipment of Coal.

WHEN the appliances at Darling Harbour intended for shipping coal were first received, there was sent out a plan of truck—on the hopper principle—with two divisions, I think, to each truck, which would admit of each division being lifted by the crane and the coal shipped without trouble.

As there is some intention of shipping coal at Darling Harbour at once, this plan of truck should be looked up, with a view to immediate action being taken.

In the meantime, inquiry should be made in regard to the fifty trucks with coal-boxes intended to be used for locomotive coal at Goulburn; if these are ready, coal-shipping at Darling Harbour could be commenced without any delay.

I wish to have at once the joint report of Locomotive Engineer and Traffic Manager in this matter.

CH.A.G., 28/11/85.

No. 4.

Joint Report of Traffic Manager and Locomotive Engineer.

THE appliances for shipment of coal from railway trucks at Darling Harbour consist of two over-head travelling cranes, which will lift the bodies of trucks containing about 6 tons of coal and convey them from the rails over the wharf to the shoot at the water's edge, where the coal can be discharged into vessels. It appears to us, however, that this will be a tedious matter, as we estimate that at the most not more than ten lifts per hour can be made, and to do this special hopper waggons will also be required. Our ordinary trucks could not be unloaded in this way. There is a large iron box capable of holding about 4 tons of coal belonging to this crane. The coal loaded in ordinary trucks would have to be shovelled into this box and then lifted and discharged over the shoot. To use the trucks fitted with coal-boxes would be a most unprofitable proceeding. Each box weighs 3 cwt. 0 qr. 22 lb. A "D" waggon will hold eight of them, and a "G" waggon sixteen; so that in a "D" truck there is an extra dead weight of 1 ton 5 cwt. 3 qr. 8 lb., and in a "G" truck 2 tons 11 cwt. 0 qr. 16 lb. The boxes hold half a ton each, and a "D" waggon will therefore only carry 4 tons in place of 7 tons, and a "G" waggon 8 tons instead of 15 tons. On the up-journey 3 tons less of coal would be carried in the "D" waggons, the freight on which from Esk Bank would amount to £1 4s.; and in the "G" waggons 7 tons less would be carried, and the trainage for the same distance would be £2 16s. Then there would be the difficulty in getting the boxes filled at the mines; and on the down journey there would be the extra dead weight, and the trucks could not be used for carrying goods while the empty boxes were in them. It would be much more economical to load the coal in our ordinary trucks and shovel it out at Darling Harbour—it could be done for under 1s. per ton.

W. V. READ, 5/12/85.
W. SCOTT, 9/12/85.

The Commissioner.

No. 5.

Minute by Commissioner.

WRITE to the Coal Companies, Western Line, and say that, if they be desirous of shipping coal at Darling Harbour at once, we can make temporary provision. There is a large iron receiver attached to the coal shoots at Darling Harbour which will hold 4 tons, and the estimated cost of filling this from the truck, and then lifting it into the vessel, is 1s. a ton. The Department will be prepared to divide the cost with the Companies, and will ship the coal in this way at a charge of 6d. a ton.

There are two of these appliances at Darling Harbour, each capable of shipping 40 tons per hour, or (say) 800 tons a day; so that, if the requirements of the Companies do not exceed this quantity, shipping appliances are already supplied.

Add

Add that, no doubt, while the Pyrmont Bridge spans the Harbour, it will be difficult to get suitable vessels to come to the wharf to take coal, and therefore the scheme of shipping referred to must be considered a tentative one only. A general scheme for the establishment of a coal-shipping depôt is under consideration, and as the requirements for shipping of the Coal Companies expand, the Department will be prepared with appliances to respond to them.

CH.A.G., 19/12/85.

Then inform Traffic Manager, so that he may be prepared to meet the Companies' requirements, and re-submit these papers for the purpose that the general scheme may be matured.—CH.A.G., 19/12/85.

No. 6.

The Commissioner for Railways to The Hon. E. Webb, M.L.C.

Sir, Railway Branch, Sydney, 23 December, 1885.

Referring to the deputation which waited upon Mr. Secretary Lyne on the 27th ultimo, respect- the shipment of coal at Darling Harbour, and urging that facilities might be given so as to enable the western coal to be unloaded from the railway trucks and vessels at the Darling Harbour Branch Wharf, I have the honor to inform you that, if the Coal Companies are desirous of shipping coal at once, temporary provision can be made for the service. There are two large iron receivers, capable of holding 4 tons each, attached to the shoots at Darling Harbour, and they will together ship 80 tons per hour, or (say) 800 tons per day; so that, if the requirements of the Companies do not exceed this quantity, the necessary appliances are already provided.

The expense of filling these receivers and then lifting them into the vessels is estimated at 1s. per ton. The Department will be prepared to divide the cost with the Companies, and will ship the coal in this way at a cost of 6d. per ton.

No doubt, while the Pyrmont Bridge spans the harbour, it will be difficult to get suitable vessels to come to the wharf to take coal, and therefore the scheme of shipping referred to must be considered a tentative one only. A general scheme for the establishment of a coal-shipping depôt is under consideration, and as the requirements for shipping of the Coal Companies expand, the Department will be prepared with appliances to respond to them. I have, &c.,

CHAS. A. GOODCHAP,
(*Per* D. C. M'L.)
Commissioner for Railways.

No. 7.

Minutes by the Commissioner for Railways, Traffic Manager, and others.

IT is expected that the first consignment of coal from Katoomba for shipment at Darling Harbour will arrive there to be shipped on Monday next. The men now employed by the Locomotive Engineer getting the coal cranes ready do not seem to thoroughly understand them; and I think it is desirable, in order that no hitch will occur, especially in the first trial, that an Engineer from the Harbours and Rivers Department be sent to put the cranes in good working order at once, or rather to superintend the work.—W. V. READ (*per* W. C.), 5/2/86. Commissioner.

Commissioner's 85/16,746 and 85/17,018 have a reference to these cranes, I think. Mr. Barling. B.C., 8/2/86.—G.B. B.C. Mr. Holy, please attend to this.—E.O.M., J.W., 11/2/86. Attended to.—J.H., 16/2/86. How did the trial go off?—E.O.M., B.C., 17/2/86. Mr. Holy.

The coal is first shovelled into a square box with a level bottom, and then lifted up to the shoot. The box discharges very badly, as there is no arrangement for tipping it. There is too much handling of the coal. If the ordinary form of coal-waggons with bodies which lift off were used, the arrangement would be successful.—J.H., 19/2/86.

The apparatus has been designed to load coal from the ordinary and usual form of truck used for the purpose, and cannot be made without difficulty to ship from an unusual and unsuitable truck.—E.O.M., B.C., 23/2/86. Commissioner for Railways.

Ask Mr. Henry Hudson to see me *re* the construction of some suitable receptacle for coal to be used in present trucks that will admit of coal being shipped with facility. In the mean time, try and find the hopper-boxes plans which were sent out with the cranes.—C.A.G., 13/3/86.

Please see plan with papers herewith.—D.C.M'L., 15/3/86. Please see me.—C.A.G., 17/3/86. I have searched the Records each year to 1886, and can find no other papers except papers already attached.—L.P.J., 25/3/86. Has inquiry been made at Harbours and Rivers Department? The plan of Hopper came out with plans for shoots.—C.A.G., 26/3/86. Inquiry now made; and after search made in that office no trace of papers or plan can be found.—L.P.J., 9/4/86. Mr. Hudson was to have submitted to me a design of a receiver for coal in the truck. Remind.—C.A.G., 12/4/86.

No. 8.

The Commissioner for Railways to Mr. Henry Hudson.

Sir, Department of Public Works, Railway Branch, 15 April, 1886.

Referring to your personal interview, respecting the construction of some suitable receptacle for coal for use in our present trucks, whereat you promised to submit to me a design for a receiver, I shall be glad to learn whether you have completed such design yet. I have, &c.,

C. A. GOODCHAP,
(*Per* G.B.)
Commissioner for Railways.

No. 9.

Minutes by The Commissioner for Railways and Locomotive Engineer.

Shipping of Coal at Darling Harbour.

I ASKED Mr. Hudson if he could design me coal boxes for D waggons, to carry three tons each, and so formed as to be readily shipped by the cranes provided at Darling Harbour.

He has provided me with the enclosed. If Mr. Scott approves of them, the Traffic Manager will estimate the number that will be required for the export trade, and order accordingly from Messrs. Hudson Brothers.—C.A.G., 16/4/86. Loco. Engineer.—D.C.McL., 16/4/86.

Mr. Hudson has called upon me with the plan of the proposed coal-boxes and trucks for shipping coal at Darling Harbour. After fully discussing the several points, I now fully concur with the proposed arrangements.—W. SCOTT, 19/4/86. The Commissioner.

Traffic Manager should see them, and submit an estimate of the number he will require.—C.A.G. 20/4/86.

Memorandum *re* the Coal Shipping Staiths at Darling Harbour.

Under the arrangement now existing a wrought-iron box, about 6 ft. 6 in. × 6 ft. 6 in. × 4 ft. high, is filled from the trucks by shovels. This box is then hoisted by two wire ropes from a travelling crane, and travelled across the wharf until it is over the shoot; it is then lowered to rest on the shoot bottom, and a catch at each side is loosened, when the hinged front opens and lets the coal out on the shoot, and thence into the vessel's hold. The box is then rehoisted, traversed back to the railway, and lowered to be refilled, the hinged front being first locked.

If the shoot is at a very steep angle, the box with the coal will slip down it; if it is too horizontal the coal will not run out. The man in charge of the hoist has no control of the tipping, and the whole operation takes up a long time, and is uncertain in its operation. The crossheads from the hoist-ropes do not suit the rings on the coal-box, and new slings have been introduced which do not give the advantage of allowing the box to tip with parallel slings. Owing to the box having to be filled from the trucks, there is an immense amount of manual labour required, and extra breaking of the coal is entailed, and it is hardly possible that the work can be done much cheaper than by ordinary coal carriers.

Proposal for Alterations.

The travelling cranes as constructed have no appliances to enable the man in charge to tip the coal when over the shoot; it is therefore proposed to add to the plant an apparatus to enable this to be done, and to fit a number of trucks with two boxes, to be filled at the mines and tipped at Darling Harbour, in accordance with plans submitted herewith.

Drawing No. 1 shows a general side view of the coal staiths at Darling Harbour with wharf, truck on rails, and shoots to vessels; it also shows the hoisting and travelling machinery with a coal-box suspended in two positions. The black line shows the present hoist-ropes, the blue line shows the tipping rope, and the dotted part the tipping gear, proposed to be added. This tipping gearing consists of a winding barrel for the rope, fitted with a foot-brake, a hand-wheel for turning or starting it, and an arrangement for counterbalancing the weight of the rope, and running it up as the box is hoisted. This is to save the attendant from having to do the work of winding up the rope by hand, as he already has two engines to attend to—the hoisting and the travelling—and has really only to put his foot on the pedal of the brake when he lowers the box to cause it to tip. When the box is lowered to the truck, it draws down the tip rope, which is then unhooked and attached to another box. The details of this arrangement are shown on plan 2.

Plan 3 shows a truck as proposed to be fitted with guards to save it from damage when loading and carrying the boxes, and also the boxes themselves.

The boxes are a little smaller than the present one, to give more room to get them into the trucks, with the guard-irons and the hinged door as shown, so that the two fastenings can be opened and closed by one lever.

No. 10.

Minutes by Locomotive Engineer and Traffic Manager.

Boxes for Unloading Coal at Darling Harbour.

WITH reference to your 86/1,984 on this subject, will you please inform me what will be the weight of one of these boxes, and how many can be placed on a "D" truck.—W. V. READ, *per* W.H.C., 24/4/86. Loco. Engineer. I think they will weigh about 1 ton each; and I understand Mr. Hudson intended only to put two on each waggon.—W. SCOTT, Traffic Manager, 30/4/86.

I do not like the idea of having two boxes on one waggon frame, because it means that the trucks would be practically useless except for coal and such like traffic. I should think there would be no difficulty in arranging to have only one box on each frame, the box to be perfectly flat on the bottom, and to be discharged either from the sides or the ends. Such waggons could be used for any kind of traffic, and 100 of them might be provided in lieu of an equal number of "D" trucks that were estimated for under the five years' contract. It is not necessary at present to increase the rolling stock in excess of our estimate, particularly as I do not think coal will come from the Lithgow mines to be shipped at Sydney on a very extensive scale.—W.V.R., 5/5/86. Commissioner.

Since writing the above, Mr. North and Mr. Ewing, of the Katoomba mine, have called to say that they should like the matter to receive early attention, as they have some orders for coal for shipment.—W.V.R., 5/5/86. Mr. Scott, for immediate report on Traffic Manager's suggestions.—G.B., B.C., 6/5/86. Report herewith.—W.S. (*per* C.A.N.), 7/5/86. Commissioner.

No. 11.

Minutes by Commissioner and Locomotive Engineer.

Boxes for Unloading Coal at Darling Harbour.

If it be decided to place only one box in each truck, the iron used for making the box will have to be much thicker than would be required if two boxes are used. Not only would the dead weight be thus very considerably increased without any corresponding advantage in the shape of increased load, but the cost would also be greater. It would also be much more difficult to manipulate one box than two. If the doors of the trucks are made to fall down in a similar manner to the doors on the "D" trucks at present in use, and the boxes so placed on the trucks that their doors will open towards the side of the truck, there will be no difficulty in using them for any kind of traffic. I therefore strongly recommend that two boxes be placed in each truck.—W. Scott, 6/5/86.

The boxes are to be used in ordinary "D" trucks. No special trucks are to be made. It would seem from the Traffic Manager's report that 200 boxes will be required. That is sufficient for 100 "D" trucks. As to other loading there should be no difficulty. The boxes will hold the goods if there are any offering; but as shipping coal will not for the present be a continuous business, the boxes can be taken on or left off the trucks as required. Mr. Scott should place himself in communication with Hudson Bros. and ascertain at what price they will make the boxes, care being taken that they are easily put in and taken out of the truck.—Ch.A.G., 7/5/86.

No. 12.

Mr. Henry Hudson to the Locomotive Engineer.

Sir, Redfern Works, Sydney, 25 May, 1886.

I have the honor to inform you that I have made an estimate of the cost of coal-boxes, for carrying coal in "D" waggons on the Western line, and find the cost, if made out of $\frac{1}{4}$-inch plate, will be £40 each, and if made out of $\frac{3}{16}$-inch plate, will be £38 each.

I have, &c.,
HENRY HUDSON.

No. 13.

Memorandum from Draftsman to Locomotive Engineer.

Re particulars of proposed combined open Goods-waggon and Coal-trucks, &c.

Locomotive Engineer's Office, Regent-street, Redfern, Sydney, 27 May, 1886.

Approximate weight of iron coal-waggon	$5\frac{1}{4}$ tons.
Capacity of body loaded level with coal	$6\frac{1}{3}$ "
Capacity of body heaped with coal	7 "
Approximate weight of iron coal-waggon body	$1\frac{3}{4}$ "

Dimensions of body, 15 ft. long, 7 ft. 6 in. broad, 2 ft. 3 in. deep.
Material of construction entirely of iron or steel.
Approximate cost of iron coal-waggons, exclusive of wheels, axles, and springs (say) £120.
A "D" waggon weighs 4 tons 19 cwt.; two 3-ton coal-boxes weigh (say) 1 ton 15 cwt.
Cost of "D" waggon, exclusive of wheels, axles, and springs, £63.
Estimated cost of two coal-boxes, £64.

JOHN GOFF.

Write to Messrs. Hudson, offering £32 each for 100 boxes, which I consider a fair price for them ($\frac{1}{4}$-inch plate). Hudson Brothers' letter, 86/1,501.—P.F.F., 28/5/86.

I have seen Mr. Hudson, and ascertained that he declines to reduce price; however, I have since learned that his tender is for two 4-ton boxes, whereas we only require 3-ton boxes. I will now send him a blue print, showing exactly what is required, and request him to submit a price accordingly.—W.S., 3/6/86. Letter, 86/1,559, to Hudson Brothers, 3/6/86.

No. 14.

Mr. Henry Hudson to the Locomotive Engineer.

Sir, Redfern Works, Sydney, 5 June, 1886.

I have the honor to acknowledge receipt of your letter, dated the 3rd instant, No. 86/1,559, together with drawing, showing exactly what you require, for coal-boxes for loading coal at Darling Harbour.

In submitting this amended offer, I beg to point out that the cost of the labour in making this box is precisely the same as that tendered for by me on the 25th ultimo. There is certainly a little less iron; and we now offer to make 100 boxes, as shown on your drawing, for the sum of £36 each.

I am, &c.,
HENRY HUDSON,
Managing Director.

No. 15.

Minutes by The Commissioner, Locomotive Engineer, and Traffic Manager.

I have seen Mr. Hudson, with the view of getting him to reconsider his tender of £38, when I learned that the price was for 4-ton boxes instead of 3-ton as required. He has now reduced his price to £36 each box, which, in view of the urgency of the matter, I recommend for acceptance.—W. Scott, 8/6/86.

The Commissioner.

100 boxes will fit 50 trucks. The cost will be £3,600, which at 5 per cent. represents £160 a-year. Will that amount be saved by the adoption of this plan of shipping as contrasted with the present ineffective system? Traffic Manager, for early report. Please report by the 12th instant.—CH.A.G. 9/6/86.

The question asked by the Commissioner is rather a difficult one to answer. If a large quantity of coal is shipped, no doubt much valuable time will be saved by tipping it direct from the waggons into the vessels' holds; added to which, the breakage, which is inseparable from excessive handling, will to a great extent be avoided.

I cannot see how any saving is to be effected by the Department by using the boxes. On the contrary, as they are to weigh 35 cwt., every waggon in which they are to be placed must necessarily have its load curtailed by that weight—thus, a waggon capable of carrying 7 tons will only carry 5 tons 5 cwt. of coal, which from North's siding to Darling Harbour means 9s. 11d. each trip.

And on the down journey the waggons will be practically useless, because it will not be possible to load them with general goods. Still, as the cranes at Darling Harbour are only capable of lifting 5 tons, I do not well see how any different system can be adopted than the box system, if any improvement is to be effected at all.

It will be a serious thing, however, if after boxes are provided they are not much made use of.—W.V.R., 12/6/86.

Write to Coal Companies, to say what the outlay will be, and my unwillingness to incur it unless some assurance can be given of constant freight for export. Add that, in consideration of the extra facilities given, and the reduced weight of load which box-trucks will necessitate, a charge of 9d. a ton will have to be paid for shipping.—CH.A.G., 12/6/86.

Letter to be sent to Companies herewith. Will Traffic Manager please furnish at once a list of the Companies' to which the letter should be addressed.—D.C.M'L., 18/6/86. Very urgent.

No. 16.

The Commissioner for Railways to J. B. North, Esq.

Sir, Department of Railways, Sydney, 21 June, 1886.

With reference to the question of the shipment of coal at Darling Harbour, and to the representations made as to the necessity for some arrangement being made, so that better facilities might be given for unloading the coal into the ships at Darling Harbour Wharf, I have the honor to inform you that the matter has had attention, and a box for holding coal has been devised, which it is anticipated will meet all requirements in respect to unloading. Each box will hold 3 tons, and will be so made that two of them will fit on a "D" truck; the crane at Darling Harbour will be able to lift each from the truck, and shoot the coal into the ship that may be in waiting.

The matter, however, will be attended with considerable expense, as each box will cost £36—for one hundred (100), the number proposed to be ordered; the cost will therefore be £3,600, and I am unwilling to incur this expense unless some assurance is given that constant freight will be given for export.

Further, while the use of the boxes will give extra facilities for the shipment of the coal, it will at the same time increase the dead weight to be carried, and consequently the load hauled.

In consideration of these facts a charge of 9d. per ton will have to be paid for shipping.

I have, &c.,
C. A. GOODCHAP,
Commissioner for Railways,
Per D.V.

I shall be glad to receive an early reply.

(Similar letters to the above were sent to Messrs. John Ward, J. Mulholland, and Thomas Wilton, 21/6/86.)

Send reminders.—D.C.M'L., 7/7/86.

No. 17.

The Commissioner for Railways to The Manager, Katoomba Coal Company.

Sir, Department of Railways, Sydney, July 10, 1886.

Referring to my letter of the 21st ultimo, relative to the shipment of coal at Darling Harbour, I shall be glad if you will reply to same as early as possible.

I have, &c.,
CH. A. GOODCHAP,
Commissioner for Railways,
(*Per* D.C.M'L.)

(Similar reminders were sent to Messrs. John Ward, J. Mulholland, and Thomas Wilton, 10/7/86.)

Commissioner to see. We are unable to get any reply from the Coal Companies.—D.C.M'L., 27/7/86. What has been done in regard to ordering these boxes?—CH.A.G., 29/7/86. Locomotive Engineer. Nothing that I am aware of.—W. SCOTT, 3/8/86. The Commissioner.

No. 18.

Minute by Mr. Secretary Lyne.

HAS any order been given for making these boxes?—W.J.L., 13/9/86. Locomotive Engineer. None have been ordered from this office.—W. SCOTT, 28/9/86. The Commissioner. No order has been given.—D.C.M'L., 29/9/86. For Minister's information.—C.A.G., 30/9/86.

Sydney: Thomas Richards, Government Printer.—1886.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CLAIM OF NEW LAMBTON COLLIERY COMPANY.

(CORRESPONDENCE.)

Ordered by the Legislative Assembly to be printed, 6 *April*, 1886.

RETURN (in part) to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated the 25th March, 1886, That there be laid upon the Table of this House,—

"Copies of all minutes, documents, and correspondence having reference "to the claims of the proprietors of the New Lambton Colliery Company "against the Crown for the sum of £28,000, and the offer of the Government "of £500 in respect of the resumption of certain land near Newcastle."

(*Mr. Shepherd.*)

The Crown Solicitor to The Commissioner for Railways.

Sir, Crown Solicitor's Office, Sydney, 5 April, 1886.

I have the honor, in reply to your letter of date 1st April instant (received this morning), to forward herewith the papers relating to the claim of the New Lambton Colliery Company.

As the arbitration is still proceeding, I shall be obliged by your returning the papers at your earliest convenience.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

The Crown Solicitor to The Commissioner for Railways.

Re New Lambton arbitration.

Sir, Crown Solicitor's Office, Sydney, 23 March, 1886.

I have the honor to inform you that I am in receipt of a letter from Mr. Croudace, herein, of which I now forward you a copy. I await your instructions in the matter.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

Minute of Commissioner.

Land-valuer, B.C., 25/3/85.—CH. A. G. Urgent.

Mr.

337—A

[805 copies—Approximate Cost of Printing (labour and material), £8 4s. 9d.]

Mr. T. Croudace to The Crown Solicitor.

Arbitration case—New Lambton Company *v.* the Commissioner.

Dear Sir, 22 March, 1886.

The probable amount required, not later than Thursday next the 25th, to pay wages at the shafts, will be £70 or £75, exclusive of the £10 I have in hand. Will you kindly see that this comes forward.

The drill has just gone through the small seam, about 80 feet below the upper or main seam, proving all I have stated. I do not think it the least use going any further than (say) 10 feet below it.

Please ask the Department for instructions.

I am, &c.,
THOS. CROUDACE.

Minute of Land-valuer.

It is submitted that the amount asked for should be paid. The depth bored might be left to the discretion of Mr. Croudace.—J.B.T., 27/3/86. Comm.

Minute of Commissioner.

It would be well perhaps to adhere to Mr. Croudace's suggestion in this matter.—CH.A.G., 29/3/86. Crown Solicitor, B.C., 30/3/86.—*Pro* Comm., G.B.

The Crown Solicitor to The Commissioner for Railways.

Copy of Commissioner's, 86/949, being a letter from Crown Solicitor of 12th February, 1886.

Sir,

I have the honor to forward herewith a letter I have received from Mr. Croudace respecting the arbitration with the New Lambton Coal Company. I am not sure that Mr. Croudace's recommendation can be carried out, as I think the shafts he proposes to sink would be on the Company's land, and I do not think they would give their consent, in view of the great probability of its being found that there is no coal.

As I am afraid, if the matter should be referred to the umpire, the award will be for a sum that will render it necessary to go to a Jury, I would suggest that one or two shafts be sunk upon the land taken for railway purposes, so that it may be seen whether the suggestion made by some of the witnesses, that in this and the adjoining land there is a fault in the coal seam, may be ascertained with certainty.

Although Mr. Mills is reported to have said that he will take no evidence for the diamond drill, it is probable that the evidence of a bore would be taken into account by a Jury; and as the diamond drill is now on the spot, it may be as well to have a bore or two put down on the Government land, even though it should be necessary hereafter to sink shafts. Will you please consider this as an urgent matter.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

Mr. T. Croudace to The Crown Solicitor.

Sir, Lambton, 10 February, 1886.

Case of Dibbs and Brown *v.* Commissioner for Railways proceeding; the former, as also Mr. Mills, most positively refused to take any evidence from diamond drill.

I strongly recommend a couple of small shafts to be sunk; one near furnace shaft, so that we can hole into drive from that shaft into the New Lambton workings; the other to be sunk further westward, and close to the diamond drill, so that one can check the other. The first will be about 120 feet deep, the second 180 feet or little more; they will each cost from 20s. to 30s. per foot—they might be done for less. If this is not done I fear the case will go against the Government. The expense might be made a cost in the case.

I can recommend some good men, and it should be pushed on day and night; size of shaft (say) 5 feet by 3 feet 6.

They seem terribly embittered against me; I cannot say why.

I am, &c.,
THOMAS CROUDACE.

Minute of Minister.

Have this shaft sunk as speedily as possible.—J.G., 13/2/86.

Minute of Chief Clerk.

Land-valuer to see at once. Inform Crown Solicitor.—G.B., B.C., 13/2/86.

Seen.—J.B.T., *per* A.B., 15/2/86. Commissioner. Crown Solicitor.—*Pro* Commissioner, G.B., B.C., 15/2/86.

Minute of Crown Solicitor.

Will the Commissioner please inform me if the Land-valuer is attending to this matter. If he is not, it may be as well that I should request Mr. Croudace to have it attended to.—J.W., 15/2/86, B.C. Commissioner for Railways.

Minute of Commissioner.

The matter is left in the hands of the Crown Solicitor. It is desirable that the shafts should be sunk as early as possible.—C.A.G., 17/2/86.

Notice

Notice to produce papers, &c.

In the matter for the arbitration, Brown and others *v.* The Commissioner for Railways.

TAKE notice that you are hereby required to produce on the hearing of this arbitration, at Newcastle, in the Colony of New South Wales, on Monday, the 8th instant, at the hour of ten in the forenoon, and thence from day to day, at the same hour of each day until the said arbitration be determined, all deeds, instruments, books, papers, maps, plans, specifications, writings, letters, vouchers, receipts, instruments, and memoranda, and all drafts and copies thereof in your possession or power, relating to or in anywise concerning the matters in dispute, or which can or may afford any evidence or information respecting the said matters, and all letters, papers, maps, plans, books, correspondence, and vouchers in connection with or in anywise relating to claims made by the proprietors of the Old Lambton Colliery and Waratah Colliery, at or near Newcastle, in respect of lands resumed for railway purposes, and particularly a certain letter dated 23rd May, 1884, addressed to you by Messrs. Robertson, Fisher, and Ralfe, Solicitors of the Old Lambton Colliery. Dated at Sydney, this fourth day of February, A.D. 1886.

GEORGE CHARLES WALDRON,
Solicitor for the Applicants,
100, Castlereagh-street, Sydney.

Land-valuer first.—G.B., B.C., 5/2/86.

Minute of Land-valuer.

Noted. All papers in possession of Land-valuer will be produced.—J.B.T., 5/2/86. Comm.

The papers referring more particularly to the New Lambton Colliery Company's claim are with the Crown Solicitor.—M.O'B., 6/2/86. Crown Solicitor, D.C.M'L., *pro* Comm., B.C., 6/2/86.

[Very urgent.] *Minute of Crown Solicitor.*

Some of the papers required, as will be seen by perusal of this notice, are papers relating to the "Old Lambton Colliery and Waratah," which are not with me.—J. WILLIAMS. The Commissioner for Railways.

Minute of Chief Clerk.

The papers referring to the Old Lambton Colliery and Waratah Colliery Company's claim were handed to the Land-valuer, by whom they will be produced.—*Pro* Comm., G.B. Crown Solicitor, B.C., 8/2/86.

The Crown Solicitor to The Commissioner for Railways.

Brown and others *v.* You.

Sir, Crown Solicitor's Office, Sydney, 5 January, 1886.

I have the honor to state that this matter will be proceeded with at Newcastle on Monday.

As it is probable that the case will ultimately be sent to the Supreme Court, it is desirable that full notes of the evidence should be taken; and I shall therefore be obliged by your directing the shorthand writer who took notes of evidence in the Illawarra case to proceed with the Land-valuer to Newcastle to report this case.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

Mr. A. Brown to The Commissioner for Railways.

Sir, New Lambton Colliery Office, Newcastle, New South Wales, 27 June, 1885.

I have the honor to acknowledge receipt of your letter of 26th instant, in which you intimate that the claim for compensation and damages made by the proprietors of the New Lambton Estate of £25,899 3s. has been subjected to assessment by competent valuators, and offering in settlement of such claim the sum of £492 18s. In reply, I have the honor to inform you that, on behalf of the owners of the New Lambton Colliery, such offer is respectfully declined, and to request that, in terms of the Act, you will appoint an Arbitrator to whom the case may be submitted without delay.

I have appointed Mr. J. Y. Mills to represent the owners of the New Lambton Colliery.

I have, &c.,
ALEXANDER BROWN.

Appoint Mr. Mackenzie.—C.A.G., 1/7/85.

Minute of Commissioner.

Ask Land-valuer if he sees any objection, or knows of any one better able to act for the Commissioner in this matter.—C.A.G., 1/7/85. Urgent.

Minute of Land-valuer.

Land-valuer rather approves in this case.—J.B., 3/7/85. Commissioner.

Minute of Commissioner.

Letter to be written to-day without fail.—C.A.G., 6/7/85.

Letters to Mr. Mackenzie and Alex. Brown.—6/7/85. Land-valuer.—D.C.M'L., 7/7/85. Noted.—J.B., 8/7/85. Commissioner.—J.B., B.C., 8/7/85. Crown Solicitor.—GEO. B., B.C., 9/7/85. As shown on blank notice herewith, underlined in red ink.—J.B.T., 26/5/85. Commissioner. See Minister's decision on Old Lambton claim (Scottish Australian Coal Company). In both cases the omission to make claim within prescribed time to be waived.—CH.A.G., 4/6/85. Please make offer in usual way. Land-valuer, B.C. Scheduled.—J.B.T., 15/6/85. Ex. Min. 87/17, 30/6/85. Offer made, 26/6/85. Land-valuer, B.C., 16/5/85.—G.B.

Minute of Assistant Land-valuer.

The notice of resumption was served at the offices of the Company in Newcastle on the 26th September, 1883, and the claim was made on the 9th December, 1884, and therewith an acknowledgment of the receipt of the notice referred to.—J.B.T., 18/5/85. The

The Commissioner for Railways then minuted as under:—Where is this acknowledgment—is it inferred from the fact that claim was made? I do not see any special acknowledgment of notice.—CH.A.G., 23/5/85. Urgent.—Land-valuer, B.C. Land-valuer to see.—D.C.M'L., 8/5/85. Seen.—J.B.T., 11/5/85. In a fortnight.—12/5/85.

A. Brown, Esq., to The Commissioner for Railways.

Sir, New Lambton Colliery Office, Newcastle, 14 May, 1885.

I do myself the honor to acknowledge receipt of yours of the 8th inst., advising me that, in consequence of my not having sent in claim for compensation therein referred to within a prescribed time, you are precluded now from entertaining the application. In reply, I have the honor to state that I have no knowledge of ever having been served with the notices, as required by the Railway Act.

The title to the ownership of this property has been the subject of litigation extending over a period of twelve years; and while the Messrs. Dibbs and myself are in reality the owners of the property in question, the fee simple remains, pending the litigation, vested in the names of "James and Alexander Brown" (the latter deceased), and it is more than probable that the notices have been in this, as I have known in other important matters in connection with the New Lambton Estate, served on the owners in law in fee simple. But, under any circumstances, I do not suppose the Crown desires to avail of any oversight (supposing any oversight to have been committed) to avoid its liability for the value of any land taken.

I shall esteem it a favour if you obtain the Minister's approval to a waiver of your strict legal rights.

I am, &c.,
ALEXANDER BROWN.

The Commissioner for Railways to A. Brown, Esq.

Sir, 8 May, 1885.

Referring to your letter of the 9th February last, submitting, on behalf of the owners of the New Lambton Colliery, an amended claim of £25,899 3s. for land resumed for the Homebush-Waratah extension, I have the honor to inform you that the claim was not sent in within the prescribed period of twelve months from the date of service of notice, and I am precluded by the terms of the Railway Act from entertaining it.

I have, &c.,
CH. A. GOODCHAP,
Commissioner for Railways.

Report by Railway Land-valuers.

Land Claims Branch.

Southern and Northern Junction Railway.—Extension from Gosford to Waratah.

Particulars of Claim.

Claimant and owner, New Lambton Colliery Company. Reference number, 501, 502. Area taken, 7 acres 0 roods 23 perches. Amount of claims, £8,686 13s. and £25,899 3s.

Report.

The land taken from this Company is of little intrinsic surface value. Being stony and poor soil, very scrubby, and distant from any important public road, it has nothing to give it special value except coal seams exist, which are stated to underlie the railway and adjacent lands, the property of this Company. The seams referred to are now being worked at the C and D new pits, and are of the thickness shown in the particulars of claim furnished by Alex. Brown. These pits are situated in a south-easterly direction, and distant about 53 chains from the land resumed for the railway through this property. The old pits, from which this Company formerly worked, lie east of north, and distant about 50 chains from the land resumed, and towards which land the workings were extended until, at about 20 chains from the railway line, they were discontinued, owing to the coal being bad, as shown by a plan in the office of the Examiner of Coal-fields, Newcastle. Between the abandoned or discontinued workings just mentioned and the new pits now being worked, and close to the railway, two shafts have been sunk—one on the claimant's land, used as a ventilating shaft, in which no payable coal was found, and one on the Waratah Company's adjoining land, in which no seam of any value exists. The deterioration in the character of the coal lying a short distance north of the railway, as shown by the workings of the Company, and the absence of payable coal in the shaft sunk in the immediate vicinity of the land resumed, in the judgment of the Land-valuers, furnish such evidence of the absence of payable coal seams under and north of the land resumed that, without actual proof of its presence, they feel themselves bound to reject that part of the claim which is for coal taken and coal severed on the north of the railway. A tracing is annexed, showing the land owned by the Company, the railway line severing that land, and the positions (approximately) of the pits and shafts referred to in this report.

The attention of the Commissioner is requested to the fact that the notice of resumption was served upon the Company, at their offices in Newcastle, on the 26th September, 1883, and that no claim was made until the 9th December, 1884, or nearly three months over the period allowed for making it, under the provisions of the Railway Act, 1858, when one was sent in for £8,686 13s.; and on the 9th February, 1885, a second was sent to the Commissioner, in the form of an account, for £25,899 3s.

Valuation.

	£	s.	d.
7 acres 0 roods 23 perches, at £50 per acre	357	3	9
Damage by severance	100	0	0
Forced sale, at 10 per cent.	35	14	3
	£492	18	0

Claims:—£8,686 13s.; £25,899 3s.

Valuation:—492 18s.

J.B.T., 7/5/85.

JAMES BYRNES,
J. B. THOMPSON,
Ry. Land-valuers.
7/5/85.

Inform

Inform Company to-day that, as their claim was not sent in within the prescribed twelve months, I am precluded by the terms of the Railway Act from entertaining it.—C.A.G., 8/5/85.

The New Lambton Colliery Company's claim has not yet been reported on by the Land-valuer, as he was awaiting the report of the Examiner of Coal-fields upon the bores put down on the A.A. Company's land. The report was only received on the 25th instant, and forwarded to Land-valuer on same day, but as Mr. Thompson left town on the 24th instant to serve notices, &c., on Young to Blayney line, the matter has remained in abeyance till his return, which will be about Monday next.—M.O'B., 28/2/85.

For Commissioner's information.—G.B., 28/2/85. I shall be glad to have the matter expedited, as Mr. Brown is pressing for settlement.—CH.A.G., 28/2/85. Land-valuer, B.C., 28/2/85.

The Crown Solicitor to The Commissioner for Railways.

New Lambton Coal Company's arbitration.

Sir, Crown Solicitor's Office, Sydney, 9 March, 1886.

I have the honor to request that the further sum of £300 may be placed to the credit of my public account, the previous advance of £250 made to me on the 29th January last having been found to be insufficient to meet the expenses connected with the above case.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

Make out voucher. Voucher herewith. Examiner.—L.P.I. (for Secretary), 12/3/86. Pay £300.—D.V. (*pro* Commissioner). Voucher forwarded for payment.—A.W.T. (*pro* Examiner), 17/3/86. Accountant. Entered voucher, 2,385, £300, 18/3/86.—H.H. V. at Treasury.—F.J.W. Secretary, B.C., 21/3/86. Land-valuer, B.C., 23/3/86.—G.B. Entered, Commissioner, B.C., 24/3/86.—J.B.T. (*per* A.B.)

The Crown Solicitor to The Commissioner for Railways.

The New Lambton Co.'s claim.

Sir, Crown Solicitor's Office, Sydney, 4 March, 1886.

I have the honor to inform you that the work of sinking the shafts, in order to determine the fact of whether there is coal in the land taken for the railway, is being rapidly proceeded with. On 26th February last I received a letter from Mr. Croudace, in reply to one I sent, asking to be informed of the probable cost of sinking the shafts, in which the amount is stated at £350; and on 2nd March instant I received a letter from Mr. Croudace reporting progress. I forward both letters for your perusal.

Mr. Croudace has telegraphed to me to-day, asking to be placed in funds to pay for sinking the shafts (telegram herewith). I shall therefore feel obliged by your placing money to my credit to meet this expenditure, or arrange that money may be forwarded to Newcastle for that purpose.

Will you please let this matter have your earliest attention.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

Place the money to Crown Solicitor's credit.—CH.A.G., B.C., 5/3/86. Voucher herewith.—Examiner.—L.P.I., *pro* Secretary, 8/3/86. Voucher forwarded for payment.—T.S., *pro* Examiner. Accountant. Entered voucher, £350.—H.H., 8/3/86. Voucher at Treasury.—F.J.W., 10/3/86. Secretary, B.C. Inform.—10/3/86. Crown Solicitor, 11/3/86. Land-valuer, 11/3/86. Entered.—J.B.T. (*per* A.B.), B.C., 16/3/86.

Mr. T. Croudace to The Crown Solicitor.

Dear Sir, Lambton, 1 March, 1886.

To-day I sent you a telegram touching the North Illawarra arbitration case, and stating the arbitrators were anxious to fix the 9th instant to proceed with same.

I received your telegram thereon, but too late to reply to. I have now the honor to state that, owing to Gill's case being in abeyance, and it being uncertain as to when Mr. T. Cook, the Umpire, may be able to meet us, I really think you should proceed with the North Illawarra case on the day fixed by the Arbitrators, viz., the 9th. *Unless I hear by telegram to-morrow to the contrary I will sign the document finally fixing the 9th.* I presume all the cases will be gone on with and the case settled.

New Lambton v. Commissioner for Railways.

I am glad to report good work at both shafts; that nearest the furnace shaft is down about 30 feet from surface, and when I was out this morning had just struck the out-crop of the 20th seam, which overlies the bore-hole seam about 70 feet.

The more westerly shaft was down about 38 feet from the surface and was getting a little water, which I hope won't be much. I consider this very good work, for besides the actual sinking, each shaft was to timber for a considerable distance from the surface. I have told the men to push on all they can, and they have promised me to do so. I may have to incur a little additional expense in the shape of erecting a whip at the westerly or deeper shaft to expedite work there.

I did not see Archibald, who is in charge of the diamond drill, but left word for him to commence boring again, and be very careful. I will probably see him to-morrow.

I am, &c.,
THOS. CROUDACE.

Mr.

6

Mr. T. Croudace to The Crown Solicitor.

Dear Sir, Lambton, 25 February, 1886.

I am in receipt of yours of 24th (No. 86B-425). The probable money required each fortnight to pay the men who are sinking the shafts will be about £100. I think one shaft will be about 130 feet deep, the other about 150 feet; the total cost should not much exceed £350.

I am confident it will not be necessary to sink 240 feet before reaching the borehole seam. As soon as ever I reach the seam with the shaft near the New Lambton furnace shaft, I purpose putting a drive from the bottom into the drive which we know exists between the New Lambton workings and their shaft; this will give us proof beyond doubt. I am glad to hear the Arbitrators have postponed their decision; the shafts will be down before that.

I think I should place a man to watch them (the shafts) on the Sundays—what say you?

I am, &c.,
THOS. CROUDACE.

Memo. from Mr. T. Croudace to Crown Solicitor.

Sydney, 4 March, 1886.—12·10.

PLEASE arrange money matters for men sinking shafts.

THOS. CROUDACE,
Lambton.

The Crown Solicitor to The Commissioner for Railways.

Sir, Crown Solicitor's Office, Sydney, 25 January, 1886.

I have the honor to forward herewith a letter I have received from the Arbitrator appointed by you in the New Lambton Coal Company's claim for compensation, in which he suggests that the arbitration should be held on Friday next.

In this case you will recollect that it was suggested that the diamond drill should be used to ascertain the value of the seams of coal underlying the land taken. I am not aware however that this has been done.

It was also understood that Mr. Croudace was preparing a plan of this and the adjacent coalfields. I have not however received same.

I do not think it would be practicable to hold the meeting on Friday next, but propose that a day next week be appointed for that purpose. Will you inform me if this would suit you.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

Land-valuer, 27/1/86.—L.P.I., *pro* Secretary.

Mr. Thompson is at Gundagai. The Crown Solicitor proposes that a day next week should be appointed for holding the meeting. This, I think, would suit all parties.—Commissioner, B.C., 28/1/86. J.B., *per* A.B.

Appoint a day next week.—CH.A.G., 28/1/86.

Crown Solicitor, 28/1/86, with letter from Mr. Mackenzie.

Land-valuer to see and inform Mr. Mackenzie.—G.B., B.C., 28/1/86.

Seen. Mr. Mackenzie informed verbally. Commissioner, B.C., 28/1/86.—J.B. *per* A.B.

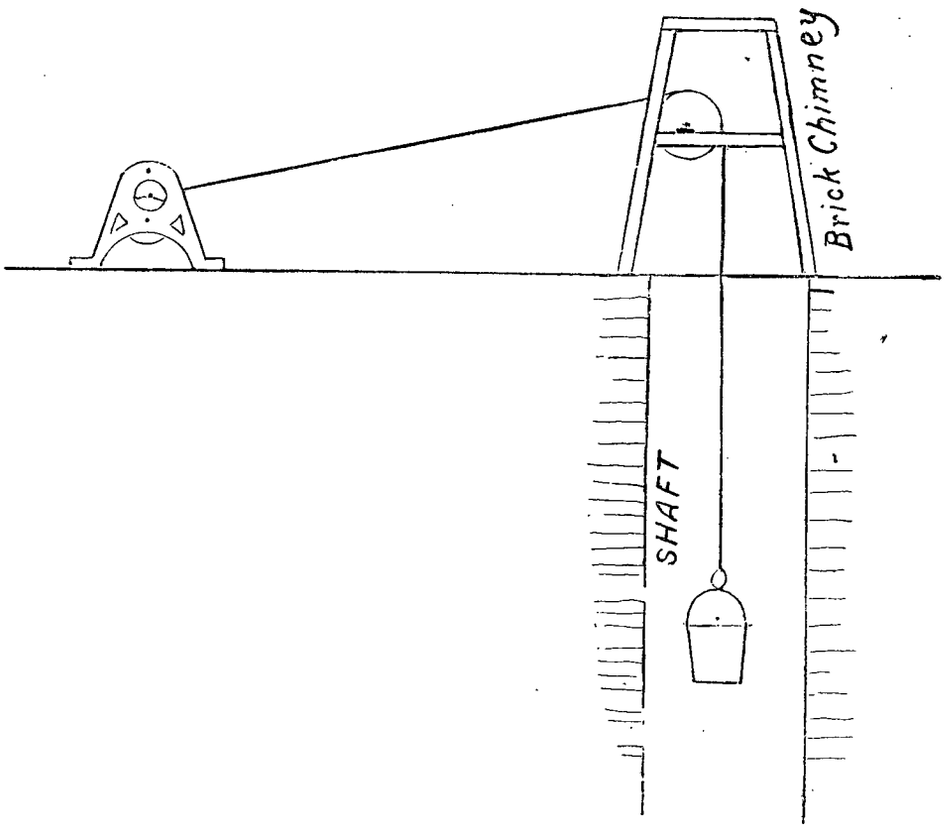
Mr. T. Croudace to Mr. T. Thompson.

Dear Sir, Lambton Colliery, Lambton, 8 January, 1886.

I think a sufficiently accurate inspection could be made of the New Lambton furnace shaft by the erection of a small pulley-wheel upon a couple of logs placed across the shaft so as to allow a rope to pass from a winch over it, the said rope to be strong enough to carry an ordinary iron kibble or cradle if necessary. I think nearly the whole of the material could be borrowed or hired in the district, excepting the rope. I subjoin a sketch showing what I think sufficient.

I am, &c.,
THOS. CROUDACE.

The Engineer for Existing Lines might be requested to provide the materials suggested by Mr. Croudace when required for making an inspection of the shaft referred to.—J.B.T., 19/1/86. Commissioner. Mr. Cowdery, B.C., 20/1/86.—G.B.



Memo. from Mr. F. Croudace to Mr. G. Bewick.

Dear Sir, 28 January, 1886.

I wrote my father, relative to yours of Monday last, and in reply he requested me to write to you saying he was in Sydney just now, but would arrange matters upon his return home.

Yours, &c.,
FRANK CROUDACE.

The Under Secretary for Mines to The Commissioner for Railways.

Sir, Department of Mines, 31 December, 1885.

I have the honor, by direction of the Secretary for Mines, to request that you will be good enough to arrange with Messrs. Amos Brothers for the removal of the diamond drill No. 12, from Newcastle to the site where the bore is to be put down on the New Lambton property, which is about 2 miles from Adamstown, on the railway under construction from Waratah to Sydney.

I have, &c.,
GERARD E. HERRING,
(For the Under Secretary).

Land-valuer, 6/1/86.—L.P.I. *pro* Secretary. This might be referred to the Traffic Manager, at Newcastle, for the action required—J.B.T., 14/1/86. Mr. Higgs, 16/1/86.—L.P.I., *pro* Sec.

Can you arrange the matter with Messrs. A. & R. Amos or their representative?—R.N., 20/1/86. Mr. Herald. Urgent.

Messrs. Amos Brothers will deliver the drill on arrival.—E.S.P., 28/1/86. Traffic Manager. To Commissioner.—J.H., 28/1/86. Inform, 29/1/86. Under Secretary for Mines, 29/1/86.

The Crown Solicitor to The Commissioner for Railways.

Sir, Crown Solicitor's Office, Sydney, 16 December, 1885.

I have the honor to request that you will be so good as to cause the sum of £250 to be placed to the credit of my public account in the Commercial Bank, Sydney, to enable me to pay counsel's fees, witnesses' and other expenses connected with the above arbitration.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

Make out voucher.—G.B., 18/12/85. Voucher herewith.—J.R., 18/12/85. Examiner, 19/12/85.—L.P.I., *pro* Sec. Pay £250.—D.V., *pro* Commissioner. Voucher forwarded for payment, —T.S., *pro* Examiner, 29/12/85. Accountant entered voucher, 11,971, £250, 31/12/85.—W.H. And at Treasury.—J.M., 5/1/86. Land-valuer, 6/1/86.—L.P.I., *pro* Sec. Entered, Commissioner.—B.C., 11/1/86.—J.B., *per* A.B.

Mr.

Mr. A. Brown to The Hon. J. Byrnes.

Dear Sir, New Lambton Colliery Office, Newcastle, N.S.W., 12 December, 1885.

Referring to your communication of the 7th instant, addressed to Mr. J. C. Dibbs, proposing to put down a bore on the New Lambton Estate to test the coal under the land taken for the Homebush Waratah Railway, I beg to inform you that I consider this as a most unreliable and unsatisfactory method of testing either the quality or thickness of the seam. I certainly will not consent to or pay any part of the expenses for such a process.

I have asked for arbitration, which has been agreed to by both parties, and am now prepared to proceed at once on the evidence and proof at my disposal. If the award is unsatisfactory to either party, each has a remedy in the Supreme Court.

As the matter has been a long time on hand, I shall be glad if you will forward the arbitration with as little delay as possible.

I am, &c.,
ALEXANDER BROWN.

The Hon. J. Byrnes to J. Dibbs, Esq.

Dear Sir, Land Valuer's Branch, Railway Department, Sydney, 7 December, 1885.

In accordance with my suggestion to you this afternoon and your request that I should drop you a line on the subject, I now propose that the diamond drill should be employed in putting one or more bores down on the line of railway running through the New Lambton mining property, in order first to ascertain whether there is coal underlying the railway, and secondly, whether such coal has any mercantile value, and the expense of such test shall be borne by the losing party at the close of the arbitration.

I am, &c.,
JAMES BYRNES.

Minute Paper.

Subject: Collecting evidence at Newcastle *re* New Lambton Coal Company's arbitration.

Railway Department, Land Valuator's Office, Sydney, 30 November, 1885.

THE Land-valuer being about to proceed to Newcastle for the purpose of reporting on some urgent matters there, begs to suggest that the Crown Solicitor might be requested to allow one of his officers to visit Newcastle at the same time, in order to collect evidence and information on behalf of the Commissioner in the New Lambton Coal Company's claim for compensation, which is to be submitted to arbitration immediately.

The Land-valuer purposes leaving for Newcastle to-morrow, Tuesday, 1/12/85, and would be glad to know whether the Crown Solicitor approves of the proposed arrangement, in order that he may provide himself with all the papers, plans, &c., connected with the case referred to.

J. B. THOMPSON,
Railway Land-valuer.

The Commissioner for Railways, Sydney.

Will the Crown Solicitor say if he can detach one of his officers for this purpose.—CH.A.G., 30/11/85.

The business of this office does not enable me to send a clerk with the Land-valuer to Newcastle upon so short a notice, but Mr. Stafford can proceed to Newcastle by the Thursday night's steamer. I understood from the previous correspondence in the matter that the Land-valuer had, prior to making his valuation, ascertained the opinion of local residents as to the value of the land taken, who could be called upon to give evidence, in the event of litigation arising, in support of this valuation. From the above minute I fear this is not the case, as the Valuer now proposes to collect evidence on behalf of the Commissioner—that is, I suppose, to now seek for evidence in support of the Land-valuer's valuation. This is another of the cases in which it is difficult to understand in what way the valuation, which is £492 18s., can be supported, as the claim is for £25,899 3s. Making every allowance for the claim being enormously in excess of any sum the claimants can expect to recover, I fear it will be difficult to uphold the valuation made on behalf of the Commissioner.—JOHN WILLIAMS.

B.C., the Commissioner for Railways, 1/12/85. Land-valuer, B.C., 1/12/85.—CH.A.G.

Before reporting on this claim, I collected sufficient evidence and information to fully justify me, as I believed, in rejecting that part of the claim which is for coal taken and coal severed by the railway. The valuation therefore is for the surface only, the item of coal (which is the bulk of the claim) being rejected. All this is clearly set forth in the Land-valuer's report, even a cursory perusal of which would remove any difficulty in understanding the cause of the enormous discrepancy between the claim and the valuation.

The Crown Solicitor was furnished with a list of witnesses on the 12th October last, and there are others to be had if required; but although aware of the nature of the evidence these are prepared to give, I could not undertake to formulate and arrange that evidence in the shape of a brief for counsel; I therefore made the request for assistance, and also, in accordance with the Crown Solicitor's own suggestion, in the sixth paragraph of his letter of the 6th October last, made in the following words—"I propose (if Mr. Thompson can afford the time) to send Mr. Stafford of this office with him to Newcastle *to collect evidence.*"—J. B. THOMPSON, Ry. Land-valuer, 2/12/85. Commissioner.

Land-valuer will no doubt be able to proceed to Newcastle with Mr. Stafford to-morrow (Thursday) evening; please communicate this to the Crown Solicitor.—CH.A.G., 2/12/85.

I have arranged with Mr. Stafford, of the Crown Solicitor's Office, who is going with me to Newcastle to-night.—J.B.T., 3/12/85. Commissioner. Land-valuer, B.C., 4/12/85. Noted.—J.B.T., 14/12/85. Commissioner.

The

The Crown Solicitor to The Commissioner for Railways.

Sir, Crown Solicitor's Office, Sydney, 26 October, 1885.

I have the honor to acknowledge the receipt of your letter of date 20th instant, respecting the arbitration of the New Lambton Colliery Company's claim, and forwarding for my perusal a copy of a report of the Land-valuer in the matter.

With reference to that report, I have to state that I do not clearly understand what is intended by that portion of it in which the Valuer says that I refer to his report as though it "differed in some essential particulars from the practice in all previous cases." I think a perusal of my letter will show that it hardly bears that construction, and I admit that the instructions sent to me are in the usual form.

Referring to the fourth paragraph of my letter, in which I speak of the singular difference between the valuation and the claim, the Valuer states: "But this difference is not the only singular circumstance connected with the case, as for instance the substitution of a claim for £25,899 3s. in February, in lieu of a claim for £8,686, which was all the compensation asked for in the preceding month, January." The only meaning that can fairly be given to this paragraph, used in the way it is, is, that I made or assented to this change in the valuation, which is absolutely untrue, as the Valuer must have known at the time he wrote the paragraph referred to; I knew nothing of either claims or of the valuations until the papers were forwarded to me in relation to the arbitration.

As to the remaining portion of the paragraph, by which I am glad to find that the valuations are based to some extent upon the opinion of persons having local knowledge, I was afraid such was not the case; and although the Valuer's great experience probably renders such reference unnecessary when the land taken is ordinary farming or bush land, or village allotments, there are cases in which, from position, the land is supposed to have an exceptional value, owing to special circumstances; and in these cases local opinion to a great extent creates the additional value, and cannot be dispensed with in dealing with the question of compensation. I think the present case is such an exceptional case.

In explaining why a list of witnesses was not sent, the Valuer suggests—"Nor could they be required unless it were necessary to anticipate litigation." The Valuer is correct in stating that a list of witnesses is not usually sent as a portion of the report to the Commissioner, nor is it required; but when the papers are forwarded to me, it is as well that I should be informed of the manner in which "one of the most ordinary and obvious means of determining the value" has been carried out, in order that I may make the information which had guided the Valuer available in support of his valuation when it has to be upheld before arbitration.

In this case it is hard to believe that the Valuer did not anticipate litigation; Messrs. Dibbs and Brown are both men of business. The mine is not a probable mine, but one in full work, and an estimation can therefore, I should suppose, be made of what the loss or damage occasioned by the Railway taking really is. The claim is for £25,899 3s., and the valuation £492 18s. The Valuer must surely be one of the most sanguine of men if he supposed that the claimants would abandon their claim and accept his valuation.

I have not said that Mr. Cowlishaw's valuations were more successful than the present Valuer's. I had not considered the matter in that way at all, and had not the information, even if I had thought it to be desirable to institute a comparison in figures. I am glad (and surprised) to find, from the elaborate calculations supplied by the Valuer, that results of the arbitrations upon his valuation have proved to be thirteen and a fraction per cent. more favourable to the Commissioner than those of the late Mr. Cowlishaw.

I also have noticed that the recent arbitrations have been, as suggested by the Valuer, chiefly remarkable for their want of success; and upon referring to the officer of this Department who has attended them, have been informed that this arises from the difficulty in obtaining evidence to support the Valuer's views,—a class of evidence which can only be obtained by inquiry being made at the time of the inspection of the land for valuation, as, after a dispute as to value has arisen, it is difficult to get information from local residents tending to depreciate their neighbours' claims. I know that Mr. Cowlishaw was in all cases able to afford information as to the local residents who could be called on the Government behalf; and as this information did not appear, so far as I was informed, to be obtainable in the same degree in recent cases, I was afraid that the Valuer depended upon evidence as to value being obtained after the dispute had arisen, rather than the necessary information being obtained at the time he was making his valuation.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

Land-valuer.—G.B., B.C., 29/10/85. Noted.—J.B.T., 2/11/85. Commissioner.—2/11/85.

Railway Land-valuer Thompson to The Commissioner for Railways.

Railway Department, Land Valuator's Office, Sydney, 12 October, 1885.

Subject: New Lambton Colliery Company arbitration.

THE Crown Solicitor's letter of the 6th instant, in reference to the above arbitration, which has been referred to me, proposes that I should accompany Mr. Stafford to Newcastle to collect evidence, which, with the sanction of the Commissioner, I am prepared to do at any time required. As it also appears to reflect upon the manner in which this case has been submitted, and upon my practice in connection therewith, I beg to be allowed to make a few remarks thereon.

The Crown Solicitor throughout his letter refers to this case, as it has been presented to him, as though it differed in some essential particulars from the practice in all previous cases. I find, however, after careful inspection of the records, that the procedure herein differs in no respect whatever from that followed in all previous cases for the last thirty years.

In the fourth paragraph of his letter the Crown Solicitor speaks of the *singular* difference between the valuation and the claims; but this difference is not the only singular circumstance connected with this case, as, for instance, the substitution of a claim for £25,899 3s. in February, in lieu of a claim for £8,686 13s., which was all the compensation asked for in the preceding month of January; and the fact that

that the Scottish Australian Mining Company adjoining on one side, and the Waratah Coal Company adjoining on the other side of the land now in question, have unhesitatingly accepted offers of compensation consistent in every detail with that which is now submitted to arbitration. In this paragraph the Crown Solicitor complains that my "report does not show that it is based upon information obtained from persons acquainted with the value of coal land generally or of this land in particular," and also that I "do not suggest the names of persons who can be called to support my valuation." As to the omission from my report of the statement quoted, I submit that its insertion could only be required, were it necessary to show that I had employed one of the most ordinary and obvious means of determining the value; and the absence therefrom of the names of proposed witnesses has never before in any similar case been objected to, nor—I respectfully submit—could they be required, unless it were necessary to anticipate litigation in every case, and even then the supplying a list of witnesses with the valuation would be of doubtful expediency.

In the concluding paragraph the Crown Solicitor expresses his ignorance of what my practice is, and then relates that of the late Mr. Cowlishaw as having met with his approval. I cannot find that there has been any change in the practice since Mr. Cowlishaw's time; but in order to ascertain how far the contrary opinion is borne out by the facts, I have made a careful search of the records of arbitration cases during Mr. Cowlishaw's tenure of office, and of those upon my valuations during the last five years, for the purpose of comparison, and the result is given below in tabulated form. The indisputable figures given clearly show that Mr. Cowlishaw's arbitrations were not more successful than have been those of his successors. If the results can be taken to indicate the character of the action of the Land-valuer, which I do not assert or believe, they show that, however superior Mr. Cowlishaw's practice may have been, his arbitrations, like those of more recent date, have been chiefly remarkable for the uniform want of success which attended them.

J. B. THOMPSON,
Railway Land-valuer.

COMPARATIVE Statement of Arbitrations above referred to.

Valuer.	Period.	No. of Cases.	Claims.			Offers.			Awards.			Increase in Awards, per cent.	Ratio of Awards to Claims, per cent.
			£	s.	d.	£	s.	d.	£	s.	d.		
T. Cowlishaw	1858 to 1874...	43	68,952	3	0	22,460	1	4	37,253	4	9	65·86	53·89
J. B. Thompson	1881 to 1885...	12	25,702	0	0	5,183	4	3	7,736	7	1	49·25	30·

Witnesses suggested:—Joseph Creer, Newcastle; H. Harper, M.E., Newcastle; John Ripon, Newcastle; John M'Kenzie, Newcastle; Thomas Lewis, Wollongong; and to consult Thomas Croudace, Esq., Newcastle, and Messrs. J. & A. Brown, Newcastle.

The Crown Solicitor to The Commissioner for Railways.

Sir, Crown Solicitor's Office, Sydney, 6 October, 1885.

I have the honor to inform you that I have this day received a letter from Mr. Mackenzie, informing me that he and Mr Mills have appointed Mr. J. R. M. Robertson as Umpire in the matter of the arbitration of the New Lambton Colliery compensation claim, and asking when an appointment to proceed can be given.

The only information at present forwarded to me is the claim made by the Company and the valuation by Mr. Thompson. The claims are for £8,686 13s. and £25,899 5s., and Mr. Thompson's valuation, which has been offered to the Company, is £492 18s.

I notice in Mr. Thompson's report he calls attention to the fact that both of the claims made by the Company are out of time, and this is noted by the Commissioner; but I suppose the objection was ultimately waived, as an Arbitrator has been appointed on behalf of the Commissioner; anyway I think that appointment would operate as a waiver.

The singular difference between Mr. Thompson's valuation and the claims is so great, that it is absolutely necessary that the valuation should be supported by a large amount of evidence of unquestionable value; but Mr. Thompson's report—the only information sent me—does not show that it is based upon information obtained from persons acquainted with the value of coal land generally or of this land in particular, nor does he suggest the names of persons who can be called to support his valuation.

I suppose, in coming to an opinion as to the amount to be offered in settlement of the claim, Mr. Thompson has not relied solely upon his own views of the matter, but has consulted persons having a special knowledge of the subject, and is prepared to give the names of persons who can be called as witnesses on your behalf; no information of this sort is, however, with the papers.

I propose, if Mr. Thompson can afford the time, to send Mr. Stafford, of this office, with him to Newcastle to collect evidence, as it clearly will not be safe to rely upon Mr. Thompson's unsupported evidence.

I do not know what Mr. Thompson's practice is; but it was customary with the late Mr. Cowlishaw, in making a valuation, to ascertain, at the time he was viewing the land, the names of persons who could give evidence in support of the valuation; there was, therefore, then no difficulty in obtaining evidence if the matter subsequently came to arbitration. I have, &c.,

JOHN WILLIAMS,
Crown Solicitor.

Land-valuer, B.C., 8/10/85. Report herewith.—J.B., 12/10/85.

Sydney: Thomas Richards, Government Printer.—1886.

[9d.]

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PRIVATE PROPERTY RENTED BY RAILWAY DEPARTMENT.

(FOR OFFICES WITHIN THE CITY OF SYDNEY.)

Ordered by the Legislative Assembly to be printed, 17 *June*, 1886.

RETURN respecting Private Property rented by Railway Department for Offices within the City of Sydney.

Where situated.	Owner.	Rent per annum.
		£
Pitt-street	Mutual Provident Society (upper rooms)	600
Phillip-street	W. Andrews	250
Do	E. Jones	250
Do	W. Long	250
Bridge-street	J. Brown's Estate	260
Do	do	260
Do	do (part of house)	50

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY WORKSHOPS, EVELEIGH.

(RETURN RESPECTING COST OF, &c.)

Ordered by the Legislative Assembly to be printed, 14 *October,* 1886.

[*Laid upon the Table of the House in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 3, *on Votes and Proceedings No.* 109, *of the* 12*th August,* 1886.]

Questions.

(1.) What is the total amount paid to date for machinery, of whatever kind, for the Eveleigh Workshops?

(2.) What is the total amount paid for labour, of whatever kind, in connection with the machinery?

(3.) What is the amount of all other charges in connection therewith?

(4.) What Officer recommended the purchase and erection of the machinery?

Answers.

(1.) Total amount paid for machinery, £51,555.

(2.) Total amount paid for labour, £3,133.

(3.) Amount of all other charges:—Machinery, £2,579; foundations for do., £5,982.

(4.) The Locomotive Engineer.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY EXTENSION, GLEN INNES TO INVERELL.

(PETITION FROM RESIDENTS OF NEW ENGLAND IN FAVOUR OF, *via* URALLA.)

Received by the Legislative Assembly, 24 *February*, 1886.

The Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The humble petition of the undersigned residents in the New England district,—

RESPECTFULLY SHOWETH:—

That the contemplated extension of the Great Northern Railway from Glen Innes to Inverell if adopted would be injurious to the commerce of the Northern portion of the Colony, and detrimental to its best interests, in proof whereof we would respectfully submit the following:—

1. That the line from Newcastle to Inverell by Glen Innes would be 50 miles longer than by Uralla.
2. By following the line to Glen Innes an elevation of 1,200 feet has to be ascended and descended, and thence to Inverell the incline is nearly double what it would be from Uralla to Inverell.
3. The character of the country between Glen Innes and Inverell is pastoral, and a large portion freehold, whilst the shorter line from Uralla to Inverell passes through a populated district, embracing Yarrowyck, Bundarra, Tingha, Stanborough, and Stannifer, being a mineral country throughout, over 30 miles of the line passing through gold and tin mineral reserves.
4. The surveyed line from Uralla to Inverell is not only direct but also has an easy and gradual decline the whole way, and passes through the centre of Cope's Creek tin-fields, whilst the projected line from Glen Innes to Inverell would afford little or no benefit for the conveyance of the produce of these mines to a port of shipment.
5. Your Petitioners are strongly of opinion that in the construction of railway lines at present preference should always be given to those which are in most direct communication with the metropolis, and that the proposal to connect Inverell with the Great Northern Railway Line at Glen Innes would indicate a desire to benefit the ports of Queensland, rather than those of New South Wales.
6. That in view of the 50 miles extra haulage and great ascent and descent of the line over Ben Lomond and Waterloo Ranges, your Petitioners consider that a permanent and unnecessary loss both to the public and Government would result.

Your Petitioners therefore pray that your Honorable House will take the above premises into favourable consideration, and adopt the short and direct route from Newcastle to Inverell *via* Uralla.

And your Petitioners, as in duty bound, will ever pray, &c.

[*Here follow* 347 *signatures.*]

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

GREAT NORTHERN RAILWAY LINE THROUGH URALLA.

(PETITION FROM RESIDENTS IN URALLA AND DISTRICT.)

Received by the Legislative Assembly, 23 *September*, 1886.

The Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned, residents in Uralla and District,—

RESPECTFULLY SHOWETH:—

That your Petitioners have been and still are put to much inconvenience by the whole of the eastern boundary of the Municipality of Uralla being fenced in by the Great Northern Railway.

That there is but one way of ingress or egress on that side, and this is a crossing at the extreme south end of Municipality.

That your Petitioners, who live on the south-east side of town and outside of Railway, have to make a detour when coming to the town on business, or to attend service in either the Presbyterian or Roman Catholic Churches, and those who live in the town have no means of communication for procuring firewood, &c., on the south-east side of Municipality, except by going round by the way at extreme south end.

When the Railway was in course of construction the residents in the town and district, foreseeing the great inconvenience to which they would be put by the projected fence, protested strongly against what they considered an injustice, but no attention was paid to the protest.

Subsequently the Municipal Council wrote to the Commissioner of Railways. That gentleman hearkened to their protest and made an inquiry into the matter, and then informed the Council that their request could not be granted.

Your Petitioners would most respectfully point out that a high level bridge could be made at a point on the Railway near the intersection of King-street, and thus the danger and expense attendant on a level crossing would not be known.

Your Petitioners therefore pray that your Honorable House would take the above premises into your favorable consideration and grant to us an opening from the town across the Railway.

And your Petitioners, as in duty bound, will ever pray, &c.

[*Here follow* 136 *signatures.*]

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY FROM LAWRENCE TO TENTERFIELD.

(PETITION FROM J. H. JAGGERS, CHAIRMAN OF PUBLIC MEETING HELD AT LAWRENCE.)

Received by the Legislative Assembly, 18 *February*, 1886.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned, Chairman at a Public Meeting, held at Lawrence, on the 19th December last, *re* Railway from Lawrence to Tenterfield,—

HUMBLY SHOWETH,—

1st. That Lawrence is one of the best sites for a large population on the river, being high and level land, which is principally in the hands of the Crown, the sale of which would return a large sum.

2nd. A further advantage to be gained is the shortness of the line asked for, viz., 10 miles to the Cross Roads; thence to utilize the coast line for a distance of 32 miles to Deep Creek (such coast line being looked upon as a certainty). Thence up the valley of that creek to the Richmond Range; thence crossing that range down the Tabulam Waters to Tabulam, a distance of 28 miles; thence to Tenterfield, a distance of 37 miles; making a total length of 75 miles.

3rd. That the sale of land in Lawrence, and between there and Tenterfield, we believe would realize sufficient money to pay for the construction of the proposed line. These facts, coupled with the probable cost of deepening the river from Lawrence to Grafton, a distance of 22 miles, is, in the humble opinion of your Petitioners, a sufficient reason why the route from Lawrence should be adopted.

Your Petitioners earnestly pray that your Honorable House will take these foregoing facts into favourable consideration.

And your Petitioners, as in duty bound, will ever pray.

J. H. JAGGERS,
Chairman of Meeting.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MICALAGO RAILWAY STATION.

(PETITION FROM SQUATTERS, FARMERS, GRAZIERS, &c.)

Received by the Legislative Assembly, 13 *July*, 1886.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned, Squatters, Farmers, Selectors, Graziers, Traders, Artizans, and others,—

HUMBLY SHOWETH :—

1. That the site at present adopted for the Micalago Railway Station, situated as it is in the midst of a very large area of private property without means of either ingress or egress, is so unsuitable as to cause great inconvenience to the residents of Micalago and surrounding neighbourhood, as well as to the travelling public.

2. That as the business of our Post and Telegraph Offices will no doubt eventually be performed at the Railway Station, it is expedient that the said station should be so situated as to be convenient to the majority of residents of this neighbourhood.

3. That in view of the extensive farming operations that will be created in this district by the opening of the railway to Micalago, it is desirable that the local Railway Station should be situated as near as possible to a point opposite the Public School, thus taking advantage of the only road available to the majority of the farming population by which they can gain admission to the station-yard.

4. That the erection of the station within easy access of the Public School will afford many children resident in this district who are suffering from the want of education an easy mode of conveyance to the said school.

Your Petitioners therefore pray that your Honorable House will take the foregoing premises into favourable consideration and grant that the site at present adopted for our Railway Station at Micalago may be substituted by a more suitable one.

And your Petitioners, as in duty bound, will every pray.

[*Here follow* 114 *signatures.*]

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAY TO BURROWA.

(PETITION—RESIDENTS OF YASS AND TANGMANGAROO.)

Received by the Legislative Assembly, 27th November, 1885.

To the Honorable the Speaker and Honorable Members of the Legislative Assembly, in Parliament assembled.

The Petition of the undersigned,—

HUMBLY SHOWETH :—

That it is contemplated to construct a line of railway from the Great Southern Railway to the Town of Burrowa.

That the line of railway as proposed, namely, from the Great Southern Railway, at the Galong Siding, will be a much inferior line than one which would connect Burrowa with the Bowning Railway Station, *via* Tangmangaroo, for the following reasons :—

1st. That a commodious Railway Station, goods shed, and all other necessary buildings, with a staff of officers to meet the requirements of a large trade, are already erected and stationed at Bowning, while a large outlay would be entailed in the erection of the necessary station buildings at Galong Siding, and a continuous drain upon the Treasury in maintaining an extra staff of officers if the proposed scheme be adhered to.

2nd. That a line of railway from Bowning to Burrowa would pass through comparatively level country, while the Galong to Burrowa route passes through comparatively broken, uneven country, unless a considerable deviation be made from a direct line.

3rd. That the distance along the railway line from Bowning to Galong is exactly twenty-two miles (the distance from Galong to Burrowa eighteen miles), while the distance direct from Bowning to Burrowa, *via* Tangmangaroo, is only twenty-two miles in all. Therefore, if a line is constructed from Galong to Burrowa, as contemplated, it will necessitate eighteen miles of extra haulage for all time, which is a serious item of expenditure, especially to all persons who would use the line, as they would have the extra mileage to pay for in goods and passengers, besides the cost of maintenance of eighteen extra miles of railway.

4th. That if a line of railway were constructed between Bowning and Burrowa, the line would pass, the greater part of the route, through a thickly populated agricultural district; and, by having one or two sidings between the starting-point and terminus, the products of graziers and agriculturalists alike, in the localities of Tangmangaroo, Wargeila, Pudman, Rye Park, Throsby's Creek, Lang's Creek, and a number of settlers on the Burrowa River, would be readily conveyed to market, while the Galong to Burrowa route would pass through the holdings of only two or three individuals (if not the whole) on most of the route.

5th. That the district around Burrowa is rich in mineral deposits, there being a large and increasing output of copper at the Frogmoor Mines; and, as a consequence, the greater necessity exists for the constructing of railways along routes which not only give the greatest amount of benefit to the greatest number of persons, but minimise the distance as regards haulage and wear and tear in maintenance of the line and rolling stock.

Your Petitioners, therefore, pray that your Honorable House will not proceed with the construction of the line from Galong to Burrowa before a trial survey of the route suggested by your Petitioners, *i.e.*, from Bowning to Burrowa, *via* Tangmangaroo, has been made, but will take such steps as, under the circumstances, your Honorable House in its wisdom shall deem meet.

And your Petitioners, as in duty bound, will ever pray.

[*Here follow* 283 *signatures.*]

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MRS. CATHERINE BUTTERLY.

(PETITION OF.)

Received by the Legislative Assembly, 12 *August*, 1886.

To Parliament assembled.

The humble Petition of Catherine Butterly, of Sydney, in the Colony of New South Wales, widow,—

HUMBLY SHOWETH:—

1. That your Petitioner's late son, Stephen Butterly, deceased, was an employé in the New South Wales Government Railways in the year 1882, and was employed at Blayney, on the Great Western Line, in the capacity of Railway platform porter.

2. That your Petitioner's said deceased son, by his earnings as such employé, was the only support of your Petitioner and her daughter.

3. That in the exercise of his duties as such employé the said deceased had occasionally to assist at shunting and other Railway work.

4. That on the morning of Monday, the 20th November, 1882, upon the arrival at Blayney aforesaid of the daily morning trains from Bathurst, the deceased with several other men at the Blayney Station were required to detach some waggons or trucks from the said train.

5. That during shunting and whilst being engaged in coupling one of the waggons the said deceased in trying to get out of the way of some approaching trucks got jammed between the buffers of the waggons he had been endeavouring to couple, and was so seriously injured that he died almost immediately.

6. That your Petitioner's said deceased son was a young man of steady habits and quiet disposition, and respected by all his fellow employés. Zealous in his work and anxious to acquire the knowledge requisite to enable him to rise in his vocation the better to enable him to support his mother, your Petitioner, and the lamentable accident, which caused his untimely death, and left your Petitioner in almost destitute circumstances, could not in the remotest way be attributed to any want of care, diligence, or forethought on his part.

Your Petitioner therefore humbly prays that the Honorable House will kindly take the foregoing statement into favorable consideration and will grant such relief to your Petitioner as will recompense in some measure the irreparable loss sustained by her through the death of her only son, whilst in the execution of his duty, who was her only support.

And your Petitioner, as in duty bound, will ever pray.

her
CATHERINE × BUTTERLY,
mark
503, Cleveland-street, Darlington.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

GOVERNMENT RAILWAY BILL.

(MESSAGE No. 56.)

Ordered by the Legislative Assembly to be printed, 5 *August,* 1886.

CARRINGTON,
Governor.

Message No. 56.

In accordance with the provisions contained in the 54th section of the Constitution Act, the Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with a Bill to constitute the office of Minister for Railways, to make better provision for the construction, maintenance, and management of Government Railways and Tramways, and for the regulation of persons employed in the Railway and Tramway Services, and for other purposes.

Government House,

Sydney, 5th August, 1886.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

TRAMWAYS.

(PROGRESS REPORT UPON TRANSACTIONS FOR 1885.)

Ordered by the Legislative Assembly to be printed, 28 *April*, 1886.

The Commissioner for Railways to The Secretary for Public Works.

Railway Department, 24 April, 1886.

Sir,

I have the honor to submit a Progress Report upon the transactions of the Tramways for the year 1885. A summary only is here appended; the detailed account will follow, and will be published in the usual Annual Report upon the Railways and Tramways of the Colony to be issued in July next.

The Report of the Tramways for the year 1884 disclosed that out of the gross revenue—£219,942—the expenditure absorbed £215,167, leaving only the sum of £4,775 net, which returned 0·76 per cent. upon the capital invested, viz., £643,111.

At the close of 1885 the capital expenditure had been increased to £708,109, and the gross revenue to £223,340. The expenditure fell from £215,167 to £207,995, leaving the sum of £15,345 available for interest upon capital—a return equal to 2·17 per cent. upon the gross amount expended on lines in operation.

This comparatively favourable result has been achieved—(1st) by economy in working; and (2ndly) by a reduction in the train mileage, which latter fell from 1,242,491 miles run in 1884 to 1,220,500 miles run in 1885.

The detailed Report to follow will show the particulars of the transactions which have contributed to this result, and will demonstrate that to a further reduction in the train mileage—that is, to the curtailment of what has been proved to be the unprofitable running of trams in certain parts of the day—must we look, chiefly, for better returns.

I have, &c.,
CHAS. A. GOODCHAP.

SUMMARY.

COMPARATIVE RETURN of the Tramway transactions for 1884 and 1885.

Year.	Gross Revenue.	Working Expenditure.	Net Revenue.	Capital Expended.	Return of Net Revenue to Capital Expended.
	£	£	£	£	
1884	219,942	215,167	4,775	643,111	0·76
1885	223,340	207,995	15,345	708,109	2·17
Increase ...	3,398	.....	10,570	64,998	1·41
Decrease ...	.....	7,172	.....	.....	.....

[3*d*.] 410—
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1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

TRAMWAYS.

(TOTAL COST OF, INCLUDING ROLLING STOCK, BUILDINGS, AND LAND.)

Ordered by the Legislative Assembly to be printed, 4 *May,* 1886.

[*Laid upon the Table of the House, in accordance with promise made by the Honorable the Secretary for Public Works, in answer to Question No.* 3 *on Votes and Proceedings No.* 40, *of the* 6*th April,* 1886.]

(1.) Return of the total expenditure on the permanent ways of the Tramways, including that which is in course of expenditure.

(2.) The same for all rolling stock, buildings, machinery, &c., &c., paid out of capital.

(3.) The total amount paid for land, and where situated.

(4.) Total miles opened, and average cost per mile.

1. What has been the total expenditure on the permanent ways of the Tramways, including that which is in course of expenditure?

Answer:—£461,614 18s. 7d.

2. The same for all rolling stock, buildings, machinery, &c., &c., paid out of capital?

	£	s.	d.
Answer:—Rolling Stock	204,986	16	6
Buildings	53,969	9	11
Machinery	4,847	15	2
Sundries	14,553	3	4
	£278,357	4	11

3. The total amount paid for land, and where situated?

Answer:—Redfern to Circular Quay	17,286	0	1
Liverpool-street to Randwick and Coogee	14,381	4	6
Darlinghurst to Woollahra and Waverley	2,110	12	10
Newtown (Glebe Junction) to Marrickville	136	19	4
Glebe Junction to Forest Lodge	1,690	19	6
Railway Station Junction to Botany	160	17	2
Campbelltown to Camden	3,438	6	9
North Shore Cable Tram	12,309	7	7
Circular Quay to Kent-street	99,236	19	7
	£150,751	7	4

4. Total miles opened, and average cost per mile?

Answer:—Total miles opened, 35.

Average cost per mile opened, including all charges, £21,386.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

TRAMWAYS.

(DISMISSAL OF ENGINEER HOSKINGS.)

Ordered by the Legislative Assembly to be printed, 24 *November*, 1885.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 24th September, 1885, That there be laid upon the Table of this House,—

" Copy of a letter from one of the Members for Redfern, Mr. Sutherland, " to the Commissioner for Railways, having reference to the dismissal of " Engineer Hoskings from the Tramway Works."

(Mr. Abigail.)

The Commissioner for Railways to J. Sutherland, Esq., M.P.

Sir, Department of Public Works, Railway Branch, Sydney, 4 July, 1884.

Adverting to your personal interview respecting the dismissal of William Hoskings, a fitter, lately employed in the Tramway Branch, I have the honor to enclose herein copy of report by the Superintendent of Tramway Rolling Stock. In my opinion Hoskings is unable to rebut the statements made therein, and I think the action taken was called for by the circumstances of the case.

I have, &c.,
CH. A. GOODCHAP,
Commissioner for Railways,
Per G.B.

[*Enclosure.*]

REPORT by Superintendent of Tramway Rolling Stock.

WHEN W. Hoskings, fitter, was reinstated by Commissioner's order, he asked me to allow him to work at Pitt-street yard instead of Randwick, as he thought, under the circumstances of his reinstatement, there would be a feeling against him at the latter place. To prevent the possibility of this I acceded to his request.

The occasion which led to my dismissing him was:—Some of the night fitters had been absent through sickness, and the night repairs increasing, the foreman applied for extra assistance for two nights. Hoskings and Allerdice were instructed to come on the Saturday and Bruce on the Sunday night. Hoskings did not complain of overwork, but distinctly told his foreman he would not come for any one. It was pointed out to him that the department required his assistance for one night only, but he still refused. The other men came and worked as instructed.

For a week previous to this request Hoskings had not been employed extra time; and as he left work at noon on the Saturday, and was not required until 11 p.m. that night, he had eleven hours rest; then he would have from 6 a.m. on Sunday to 7·45 a.m. on Monday for further rest. The Commissioner will see the statement of overwork made to cover his refusal is without the slightest foundation.

I felt a workman, whom the exigencies of the department demanded should work another seven hours, under the circumstances refusing to do so, deserves no consideration. If I had allowed Hoskings to do as he pleased with impunity, other men, when called upon to work, would be encouraged to refuse if it did not please them, and as a consequence the department and public would be subject to serious inconvenience. I am sure the Commissioner will say the proper course has been pursued towards Hoskings, especially if discipline is to be maintained.

Commissioner. GEORGE DOWNE, 1/7/84.

Send copy of this report to Mr. Sutherland, and express my opinion that if Mr. Hoskings is unable to rebut the statements made he was rightly served in being dismissed.—CH. A.G., 2/7/84.

J. Sutherland, Esq., M.P., to The Commissioner for Railways.

Sir, 76, Abercrombie-street, Sydney, July 10, 1884.

I am in receipt of yours of the 4th instant, *re* Hosking's case. I must thank you for the courtesy extended by your reply, and the trouble I may have given you in this case.

You will remember that I called on you and only asked you to see Mr. Hoskings, and let him state his own case; you afterwards did so, as I informed you I knew very little of Mr. Hoskings, except what I knew from his previous employers, and that was very commendable of his character, for honor and ability as a tradesman and a good citizen. I believe he deserves and still retains the same good name. You say that in your opinion Mr. Hoskings is unable to rebut the statements made in the report, that he had refused to come to work on Saturday night. Mr. Hoskings has never to me denied that statement, but always said he refused, and gave me his reasons for so doing. What I know personally of this case is as follows:—

When coming from the country on Monday, by train, and not far from the Sydney station, I met Mr. Hoskings, with his head bandaged, one side of his face swollen, and the mark of a blister on one side of his head; he said he had contracted a severe cold while working in the draughts. I said he should be in bed; he then informed me he was unable to do anything, but had to go to the works, and we parted. Some days after he called at my residence, and informed me that he was dismissed for refusing to work on Saturday and Sunday nights. He said—"From the severe cold and excruciating pain I had for the previous few days it would have been death to me if I had gone into the pits to work at night time, and when asked by the foreman, when passing out from work on Saturday, to come back to work at 11 o'clock on that and Sunday night, I said I had worked very hard for fifty hours that week, and that was two hours more than the Minister for Works said publicly that any man in the Government service was required to work, and with the severe cold I then had I could not come to work on Saturday or Sunday nights; he said nothing, but passed on; this was about mid-day on Saturday. I went home, and by advice blistered one side of my head and applied other remedies necessary to relieve me of the excruciating pain I was then suffering. Early on Monday morning I sent my boy to the foreman on the works, with a note stating I was unable to come to work."

I have said nothing here with the view of inducing the Commissioner to reconsider the opinions he has formed on this apparently small, but I think very important, case, and, from the evidence before the Commissioner I am free to admit he could come to no other conclusion than he has come to. I only desire to place on record my opinion on this case, as it is forced upon me, and is a fair sample of the many cases brought under my observation as having been decided on insufficient evidence, and subversive of the pure principles of justice or fair play.

Mr. Downe very properly, and in this case very successfully, refers the Commissioner to the necessity for the maintenance of proper discipline in his Department. There is no one admits the necessity for that more than I do; but experience has proved to me that profitable discipline can only be carried out by doing justice to all, by careful inquiry, and discriminating between the good, bad, and indifferent. Has this case been treated on these lines? I unhesitatingly say, no.

I am aware there is in some places a system of discipline carried out exactly the reverse of this, and that system will always prove itself to be unreasonably costly in its maintenance, and unsatisfactory and irritating to all concerned.

Hoskings as an individual is nothing to me, but Hoskings as one of the working bees of this country's hive is of some importance to all, as his case has been decided on the same lines as most others that has been brought under my observation, and he has been dismissed the service, not for being a drunken, inferior workman, not for being an unprofitable workman, but for not obeying the order of his foreman, whereas if he had obeyed that order in his then state of health he would have endangered his life, and having a wife and eight helpless children depending on him for protection and support, I think he was perfectly justified in not complying with the request to go to work at night. No inconvenience could arise to the Department, there being five hours before any one was required, and plenty willing to do the work; and he said under other circumstances he would have complied with the order, even if he believed it was given unnecessarily, to injure and annoy him. I regret very much the necessity for me thus having to comment on the Commissioner's letter, registered No. 84-2,801.

I have, &c.,
JOHN SUTHERLAND.

Let me have papers.—CH.A.G., 11/7/84. Papers herewith.—J.S., 14/7/84.

If this man was suffering in the way described, and Mr. Sutherland's evidence can of course be relied upon and is unimpeachable, then I think he was treated harshly—no doubt, unconsciously, because the state of health he was in was not known.—CH.A.G., 15/7/84. Mr. Downe.

The statements made by Hoskings are untrue, and as these have led the Hon. J. Sutherland to record his opinion so strongly, being under the impression full inquiry was not made before Hoskings was dealt with, I shall be glad if the Commissioner will personally examine Hoskings with Mr. Howe and Mr. Davy in reference to his (Hoskings') conduct for which his services were dispensed with, as I feel confident the Commissioner will see and be able to assure the Hon. J. Sutherland that discrimination was exercised and justice done to Hoskings, consistent with the maintenance of discipline in the Department. —GEO. DOWNE, 17/7/84. Commissioner.

I will make the inquiry suggested. Let all concerned know. Make the day Monday, at half-past 11.—CH.A.G., 24/7/84. Mr. Downe. Urgent. B.C.

Mr. Howe and Mr. Davy will be at Commissioner's office at time stated. Hoskings has also been communicated with and requested to be present at same time.—GEO. DOWNE, 26/7/84. Commissioner.

The Commissioner for Railways to J. Sutherland, Esq., M.P.

Sir, Department of Public Works, Railway Branch, Sydney, July 25, 1884.

Referring to your letter of the 10th instant, respecting the dismissal of William Hoskings from the Tramway workshops, I have the honor to inform you that, in order to see that justice is done in this case, I have decided on holding an inquiry, and the same will be held at this office on Monday next, at half-past 11 o'clock.

I have, &c.,
CH. A. GOODCHAP,
Commissioner for Railways.
Per G.B.

I have seen Hoskings in the presence of Howe and Davy. I can do nothing for him. He said he did not think he ought to be called upon to work extra time, and had a right to refuse.—CH.A.G., 28/7/84.

Hoskings who was employed in Tramway Branch as a fitter has lost his employment for refusing to work overtime; he is a good workman, I believe, and is sorry for his disobedience. I cannot reinstate him in Tramway Branch, but as the man has a large family, and is out of employment, I shall be glad if Mr. Scott can make room for him.—CH. A.G., 29/8/84.

Please let me know; I am anxious to find work for Hoskings.—CH. A.G. An additional fitter can profitably be employed in this Branch. Please arrange for Hoskings being taken on.—W. SCOTT (*pro* D.C.M'L.), 30/8/84. Locomotive Overseer. William Hoskings commenced work on the 8th instant. Proposed rate of pay, 10s. per day.—T. MIDELTON (*per* D.L.N.), 15/9/84. Locomotive Engineer. Approved.—W. SCOTT, 15/9/84. Hoskings has been found employment.—W.S. (*per* D.C.M'L.), 18/9/84. Commissioner. Inform Mr. Sutherland.—CH.A.G., 23/9/84.

The Commissioner for Railways to J. Sutherland, Esq., M.P.

Sir, Department of Public Works, Railway Branch, Sydney, 25 September, 1884.

Referring to the correspondence that has passed respecting the case of William Hoskings, formerly employed in the Tramway Department, and who was dismissed for refusing to work overtime, I have the honor to inform you that the matter has been reconsidered, and I have approved of his being employed in the Locomotive Engineer's Branch, and I am informed that he commenced duty on the 8th instant at 10s. per diem.

I have, &c.,
CH. A. GOODCHAP,
Commissioner for Railways.
Per G.B.

Sydney: Thomas Richards, Government Printer.—1885.

[3*d*.]

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

TRAMWAY BETWEEN WAVERLEY AND RANDWICK.

(PETITION FROM ELECTORS IN THE BOROUGHS OF RANDWICK, COOGEE, AND WAVERLEY.)

Received by the Legislative Assembly, 7 September, 1886.

To the Honorable Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned owners of property and electors in the Boroughs of Randwick, Coogee, and Waverley,—

SHOWETH:—

That your Petitioners, being owners of property and electors in the Boroughs of Randwick, Coogee, and Waverley, having heard that it is in contemplation by the Government of this Colony to connect, by a loop-line, the tram terminus at Waverley with the engine-sheds at Randwick, beg to call your attention to the numerous advantages offered by an alternative connection, *viâ* Coogee.

We beg respectfully to request that the Government will cause a survey to be made of the route mentioned below, before any further steps are taken in the matter, viz.:—From the present terminus in Leichhardt-street, along Albion-street, Fern-street, Susan-street, Brook-street, Division-street, Arden-street, and Allison-street, to the crossing of Beach-street; thence through the reserve to a point near the cliff at the back of the "Baden Baden Hotel"; thence southerly along the reserve between the hotel fence and the sea for about 20 chains; thence westerly through the reserve to Beach-street, opposite the Ice Gardens; thence to the present Coogee tram terminus, being a total distance of about 1 mile and 60 chains.

We have reason to believe that a grade could be obtained on this route not exceeding one in thirty-five, being much easier than the present one between Coogee and Randwick.

In the event of this line being constructed it is certain that there would be a very large traffic over it, as it would give the inhabitants of Waverley, Paddington, Woollahra, and Bondi, easy access to Coogee, and it would prove a most attractive route for the people of Sydney and visitors from other places, who would be enabled to see the whole coast-line from Bondi to Coogee in the course of a Saturday afternoon or on Sundays and holidays.

The route, as herein proposed, would only necessitate some twenty chains more formation than the proposed connection *viâ* Frenchman's Road, with the Randwick engine-sheds, and as nearly the whole of the line would pass over either public streets or public reserves the expenditure on the purchase of land for the purposes of the tram-line would be reduced to a minimum.

For these and other weighty reasons your Petitioners humbly pray your Honorable House to take the foregoing premises into your favorable consideration.

And your Petitioners, as in duty bound, will ever pray, &c.

[*Here follow* 50 *signatures.*]

1885–6.

NEW SOUTH WALES.

ROAD TRUST ACCOUNTS.

(FOR THE HALF-YEARS ENDING 30 JUNE AND 31 DECEMBER, 1883 AND 1884.)

Presented to Parliament in accordance with the provisions of the several Acts.

SCHEDULE.

				PAGE.
South Head Roads	11 Vict., No. 49, clause 6			2, 3
Parramatta Road	13 „	41,	19	4, 5
Maitland Road	17 „	16,	23	6
Windsor Road	18 „	16		7, 8
Richmond Road	18 „	16		8, 9, 10

ROAD TRUST ACCOUNTS.

THE COMMISSIONERS OF THE SOUTH HEAD ROADS TRUST.

Account of Receipts and Disbursements for the half-year ending 31st December, 1884.

Receipts.		£	s.	d.	Disbursements.		£	s.	d.	£	s.	d.
1884.					1884.	By Salaries—						
30 June..	To balance from Cash account.....	412	8	4	31 Dec...	Secretary and Surveyor (6 months).....	.....			62	10	0
14 Aug...	„ Portion of Parliamentary Vote in lieu of Tolls	2,000	0	0		Miscellaneous—						
8 Dec...	„ Balance „ „	3,000	0	0	„	Tools and sundries	.....			6	17	5
19 „ ...	„ Rent of Old Toll-house, New Road	18	8	0		Old South Head Road—						
					„	Blue metal	790	13	3			
					„	Wages, ballast, &c.....	628	2	5			
						New South Head Road—				1,418	15	8
					„	Blue metal	333	18	2			
					„	Wages, ballast, &c.....	279	15	5			
						Glenmore Road—				613	13	7
					„	Blue metal	48	0	0			
					„	Wages, ballast, &c.....	43	16	0			
						Point Piper Old Road—				91	16	0
					„	Blue metal	10	6	0			
					„	Wages, &c.....	2	6	6			
						Watson's Bay Road—				12	12	6
					„	Wages, &c.....	.....			1	10	0
						Balance Bank of New South Wales				3,223	1	2
	£	5,430	16	4					£	5,430	16	4

For the Commissioners, South Head Roads Trust,—

GERARD PHILLIPS, Secretary.

9 February, 1885. THOS. BUCKLAND, Hon. Treasurer.

THE COMMISSIONERS OF THE SOUTH HEAD ROADS TRUST.

Account of Receipts and Disbursements for the Half-year ending 30th June, 1884.

Receipts.		£	s.	d.	Disbursements.		£	s.	d.	£	s.	d.
1884.					1884.							
1 Jan...	To Balance from last account	2,555	9	5	30 June..	By Secretary and Surveyor (6 months.....	.....			50	0	0
30 June..	„ Rent of Old Toll-house, New Road	6	2	0		Miscellaneous—						
					„	Tools and sundries.....	.....			3	1	5
						Old South Head Road—						
					„	Blue metal.....	31	10	0			
					„	Wages, ballast, &c.	528	15	0			
						New South Head Road—				560	5	0
					„	Blue metal.....	583	15	7			
					„	Wages, ballast, &c.....	451	13	10			
						Point Piper Road—				1,035	9	5
					„	Wages, ballast, &c.....	.....			157	7	3
						Glenmore Road—						
					„	Blue metal.....	259	6	3			
					„	Wages, ballast, &c.....	42	16	3			
						Watson's Bay Road—				302	2	6
					„	Wages, ballast, &c.....	.....			40	17	6
					„	Balance in Bank of New South Wales.....				412	8	4
	£	2,561	11	5					£	2,561	11	5

For the Commissioners, South Head Roads Trust,—

GERARD PHILLIPS, Secretary.

Sydney, 30 July, 1885. THOS. BUCKLAND, Hon. Treasurer.

THE

THE COMMISSIONERS OF THE SOUTH HEAD ROADS TRUST.

Account of Receipts and Disbursements for Half-year ending 31st December, 1883.

Receipts.					Disbursements.				
1883.		£ s. d.	£ s. d.		1883.			£ s. d.	
30 June..	To balance brought forward		288 6 2		31 Dec..	By Secretary and Surveyors salary, 6 months		50 0 0	
23 Aug...	„ Government Grant	4,947 18 0				Miscellaneous—			
	„ Balance of previous vote...	0 8 5				By tools, repairs, water-cart and roller, and sundries		11 15 10	
			4,948 6 5			Old South Head Road—	£ s. d.		
31 Dec....	„ Rent of Old Toll-house, New Road		11 4 0			By Blue-metal	920 19 3		
						„ Wages, Ballast, &c.	241 4 3		
								1,162 3 6	
						New South Head Road—			
						By Blue-metal	680 13 3		
						„ Wages, ballast, &c.	237 15 6		
								918 8 9	
						Point Piper Road—			
						By Blue-metal	57 0 0		
						„ Wages, ballast, &c.	260 18 7		
								317 18 7	
						Glenmore Road—			
						By Blue-metal	170 7 6		
						„ Wages, ballast, &c.	61 13 0		
								232 0 6	
						By Balance at Bank of New South Wales...		2,555 9 5	
		£	5,247 16 7				£	5,247 16 7	

For the Commissioners of the South Head Roads Trust,—

GERARD PHILLIPS, Secretary.
THOS. BUCKLAND, Hon. Treasurer.

Sydney, 16 January, 1884.

THE COMMISSIONERS OF THE SOUTH HEAD ROADS TRUST.

Account of Receipts and Disbursements for Half-year, ending 30th June, 1883.

Receipts.					Disbursements.				
1883.			£ s. d.		1883.			£ s. d.	
	To balance from last Half-year		662 9 9		30 June	By Salaries, Secretary and Surveyor, 6 months		50 0 0	
10 Jan..	From Treasury portion of Parliamentary Vote	2,315 0 0				„ Miscellaneous expenditure		1 9 2	
25 „	To Twenty-five weeks rent of Old Toll-house, New Road, 1st Jan. to date, at 8s. per week	10 0 0				Old South Head Road—	£ s. d.		
						By Blue-metal	579 12 3		
						„ Wages, ballast, &c.	294 5 3		
								873 17 6	
			2,325 0 0			New South Head Road—			
						By Blue-metal	1,122 17 11		
						„ Wages, ballast, &c.	627 9 10		
								1,750 7 9	
						Point Piper Road—			
						By Repairs		2 18 6	
						Watson's Bay Road—			
						By Repairs		20 10 8	
						By Balance Cr., Bank of New South Wales		288 6 2	
			£ 2,987 9 9				£	2,987 9 9	

For the Commissioners of the South Head Roads Trust,—

GERARD PHILLIPS, Secretary.
THOS. BUCKLAND, Hon. Treasurer.

PARRAMATTA ROAD TRUST.

ABSTRACT of the Receipts and Expenditure of the Commissioners of the Parramatta Road Trust, for the half-year ending 30th June, 1883.

RECEIPTS.							EXPENDITURE.						
1883.		£	s.	d.	£	s. d.	1883.		£	s.	d.	£	s. d.
30 June	To six months' rental of Toll-gate at Broken-back Range	285	8	4			30 June	Salaries—					
	„ Rent of old Toll-house	9	0	0				Clerk and Treasurer	25	0	0		
	„ Interest on fixed deposit at Commercial Bank	8	0	0	302	8 4		Working Overseer	78	0	0	103	0 0
	„ Fixed deposit at Commercial Bank	200	0	0				Miscellaneous—					
	„ Cash credit at Commercial Bank	75	9	1	275	9 1		Wages for labour	175	3	0		
								Rent	6	8	0		
								Repairs to tools	0	13	10		
								Advertisements	0	7	0	182	11 10
								By fixed deposit at Commercial Bank	200	0	0		
								„ Cash credit at Commercial Bank	92	5	7	292	5 7
				£	577	17 5					£	577	17 5

JAMES BYRNES,
W. GOODIN,
AND. PAYTEN, } Commissioners.

PARRAMATTA ROAD TRUST.

ABSTRACT of the Receipts and Expenditure of the Commissioners of the Parramatta Road Trust, for the half-year ending 31st December, 1883.

RECEIPTS.							EXPENDITURE.						
1883.		£	s.	d.	£	s. d.	1883.		£	s.	d.	£	s. d.
31 Dec...	To six months' rental of Toll-gate at Broken-back Bridge	354	2	6			31 Dec...	Salaries—					
	„ Rent of old Toll-house	1	0	0	355	2 6		Clerk and Treasurer	25	0	0		
	„ Fixed deposit at Commercial Bank	200	0	0				Working Overseer	27	0	0	52	0 0
	„ Cash at Commercial Bank to the 30th June, 1883	92	5	7	292	5 7		Miscellaneous—					
								Wages for labour	93	4	0		
								Rent	2	0	0		
								Repairs to tools	0	14	6		
								New tools	1	1	0		
								Repairs to old Toll-house	4	4	6		
								Fuse and powder	1	14	4		
								Compensation to W. Goodin for loss of tolls	10	0	0		
								Stationery and stamps	0	18	0		
								By fixed deposit at Commercial Bank	200	0	0		
								„ Cash credit at Commercial Bank	281	11	9	481	11 9
				£	647	8 1					£	647	8 1

JAMES BYRNES,
W. GOODIN,
NEIL STEWART, } Commissioners.

PARRAMATTA

PARRAMATTA ROAD TRUST.

ABSTRACT of the Revenue and Expenditure of the Commissioners of the Parramatta Road Trust, for the half-year ending 30th June, 1884.

RECEIPTS.						EXPENDITURE.					
1884.		£	s.	d.	£ s. d.	1884.		£	s.	d.	£ s. d.
30 June	To rental of Toll-gate at Broken-back Bridge	225	0	0		30 June	Salaries—				
	„ Rent of old Toll-house	8	18	0			Clerk and Treasurer	25	0	0	
	„ Interest upon fixed deposit at Commercial Bank—£200, twelve months	12	0	0			Working Overseer	66	0	0	
					245 18 0						91 0 0
	„ Fixed deposit at Commercial Bank	200	0	0			Miscellaneous—				
	„ Cash credit at Commercial Bank to 31st December, 1883	281	11	9			Wages for labour	176	15	0	
					481 11 9		Rent of offices	10	8	0	
	„ Cheque not presented	11	8	0			Tools and repairs	2	3	9	
					11 8 0		Stationery and stamps	0	10	0	
							Legal expense, sale of Toll-gate	2	2	0	
							Advertising	1	4	1	
							Sale of toll-gate	1	1	0	
											194 3 10
							By fixed deposit at Commercial Bank	200	0	0	
							„ Cash credit at Commercial Bank	253	13	11	
											453 13 11
				£	738 17 9					£	738 17 9

JAMES BYRNES,
W. GOODIN,
AND. PAYTEN,
NEIL STEWART,
} Commissioners.

PARRAMATTA ROAD TRUST.

ABSTRACTS of the Receipts and Expenditure of the Parramatta Road Trust, for the half-year ending 31st December, 1884.

RECEIPTS.						EXPENDITURE.					
1884.		£	s.	d.	£ s. d.	1884.		£	s.	d.	£ s. d.
31 Dec.	To rental of Toll-gate at Broken-back Bridge	314	15	0		1 July	By cheque of the 17th May, 1884, not presented	11	8	0	
	„ Rent of old Toll-house	6	0	0							11 8 0
	„ Cash sale of building material	8	4	0		31 Dec.	Salaries—				
					328 19 0		Clerk and Treasurer	25	0	0	
	„ Cash refund from the Woodville Road Account	9	11	0			Working Overseer	45	0	0	
					9 11 0						70 0 0
	„ Fixed deposit at Commercial Bank	200	0	0			Miscellaneous—				
	„ Balance credit at Commercial Bank to 30th June, 1884	253	13	11			Wages for labour	141	11	0	
					453 13 11		Repairs to tools	0	19	8	
	„ Cheque of the 17th May, 1884, not presented	11	8	0			Advertisements	0	18	6	
					11 8 0		Stone for ballast	13	0	0	
											156 9 2
							Cheque in error should have been drawn from the Woodville Road Account	9	11	0	
											9 11 0
							By fixed deposit at Commercial Bank	200	0	0	
							„ Balance credit at Commercial Bank	356	3	9	
											556 3 9
				£	803 11 11					£	803 11 11

ANDREW PAYTEN,
W. GOODIN,
JAMES BYRNES,
} Commissioners.

ABSTRACT

ABSTRACT of Receipts and Expenditure of the Maitland District Council, from 1st January to 30th June, 1883.

Dr. Cr.

		£ s. d.			£ s. d.	£ s. d.
1883.			1883.			
19 Feb...	To advances from Road Grants	14 18 7	1 Jan...	By repaid overdraft, Bank Australasia	.....	8 18 7
30 June..	„ advance from Bank of Australasia.....	18 9 0	30 June..	„ Secretary's salary, six months	24 0 0	
				„ Stamps	0 9 0	
						24 9 0
	£	33 7 7			£	33 7 7

JOHN BOWDEN, Warden.
WALTER CRACKNELL, Secretary.

We have examined the books and vouchers of the above accounts and find same correct,—
J. W. DAWSON, A. F. RICHARDSON, } Auditors.

ABSTRACT of Receipts and Expenditure of the Maitland District Council, from 1st July to 31st December, 1883.

Dr. Cr.

		£ s. d.			£ s. d.	£ s. d.
1883.			1883.			
22 Oct....	To advance from Road Grants	46 6 0	1 July..	By Bank Australasia, refund of Overdraft	.....	18 9 0
			22 Oct...	„ Incidental account, viz., Ed. Clapper & Son's account...	0 11 0	
			31 Dec...	„ Secretary's salary, six months	24 0 0	
						24 11 0
				„ Balance forward cash in Bank	.....	3 6 0
	£	46 6 0			£	46 6 0
1884.						
Jan.....	To balance brought down (cash in Bank) ...	3 6 0				

JOHN BOWDEN, Warden,
WALTER CRACKNELL, Secretary.

We have examined the books and vouchers for the above accounts and find same correct,—
WILLIAM KEATING, GEO. H. STEPHENS, } Auditors.

ABSTRACT of Receipts and Expenditure of the Maitland District Council, from 1st January to 30th June, 1884.

Dr. Cr.

		£ s. d.			£ s. d.
1884.			1884.		
1 Jan...	To balance in Bank	3 6 0	31 Mar.	By Secretary's salary (3 months).....	12 0 0
14 May...	„ advance from Road Grant	8 14 0	31 do .	„ stationery, &c.....	0 5 0
26 „ ...	„ „ „	7 14 0	30 June	„ balance in Bank	6 19 0
	£	19 4 0		£	19 4 0
1 July...	„ balance in Bank ..... £	6 19 0			

JOHN BOWDEN, Warden.
WALTER CRACKNELL, Secretary.

We have examined the books and vouchers for the above accounts and find same correct,—
WILLIAM KEATING, GEO. H. STEPHENS, } Auditors.

ABSTRACT of Receipts and Expenditure of the Maitland District Council, from 1st July to 31st December, 1884.

Dr. Cr.

		£ s. d.			£ s. d.
1884.			1884.		
1 July...	To balance in Bank	6 19 0	31 Dec..	By Secretary's salary (9 months).....	36 0 0
	„ advance from Road Grant	50 4 0	31 „ ..	„ stationery, &c.	0 12 6
			31 „ ..	„ balance in Bank	20 10 6
	£	57 3 0		£	57 3 0
1885.					
1 Jan...	„ balance in Bank ..... £	20 10 6			

JOHN BOWDEN, Warden.
WALTER CRACKNELL, Secretary.

We have examined the books and vouchers for the above accounts and find same correct,—
WILLIAM KEATING, GEO. H. STEPHENS, } Auditors.

Accounts of Receipts and Expenditure of the Commissioners of the Windsor Road Trust, for the half-year ended 30th June, 1883.

Dr.

1883.		£	s.	d.
1 Jan...	To Balance in hand, 31st December	316	8	9
31 „	„ Rent of Fitzroy Bridge tolls for January	27	8	4
1 Mar...	„ „ February	27	8	4
2 April.	„ „ March ...	27	8	4
23 „	„ „ April ...	27	8	4
15 May...	„ „ May	27	8	4
18 June..	„ „ June.....	27	8	4
	£	480	18	9

Cr.

1883.		£	s.	d.
5 Jan..	By paid R. Drew, repairs to Windsor Road	0	10	0
	„ Fuller & Co., advertising	0	15	0
	„ M. Neilson, „	1	1	0
5 Mar.	„ R. Drew, repairs, Windsor Road...	1	5	0
	„ G. Pye, „ Road, Windsor to Richmond	3	2	6
31 „	„ Secretary, quarter's salary, &c.....	6	12	6
4 June	„ R. Drew, repairs, M'Grath's Hill	1	0	0
	„ R. Coady, repairs, George-street...	5	17	0
	„ J. Maskey, „ Windsor to Richmond Road.....	0	5	0
	„ E. Wood, repairs to George-street..	14	5	0
	„ C. Tilly, „ ...	1	8	6
	„ W. Walker, „ ...	21	10	0
	„ M. Connell, „ ...	1	8	6
	„ M. Keogh, „ ...	5	4	0
	„ Pickup & Cummings, culvert, George-street	18	14	0
	„ F. Simon, sharpening tools, &c.....	0	18	6
	„ J. Hough, repairs, Windsor Road..	3	8	0
30 „	„ V. Bloomfield, expenses, surveying Road	4	7	6
	„ Secretary, quarter's salary, &c.....	6	10	0
	Balance on hand	382	16	9
	£	480	18	9

RICH. RIDGE,
W. LINSLEY,
THOMAS PRIMROSE, } Commissioners.

Wm. Walker, Secretary.

Account of Receipts and Disbursements of the Commissioners of the Windsor Road Trust, for the half-year ended 31st December, 1883.

Dr.

1883.		£	s.	d.
1 July..	To Balance on account, 30th June.....	382	16	9
16 „	„ Rent of Fitzroy Bridge, Tolls for July...	27	8	4
15 Aug...	„ „ August	27	8	4
29 Sept...	„ „ September...	27	8	4
15 Oct...	„ „ October.....	27	8	4
19 Nov...	„ „ November...	27	8	4
21 Dec...	„ „ December...	27	8	4
	£	547	6	9

Cr.

1883.		£	s.	d.
16 July	By paid George Pye, repairs to Bridge-st., Windsor	18	0	0
6 Aug.	„ W. Beard, tools	0	14	6
	„ R. Coady, repairs, George-street...	0	6	0
	„ J. Beadall, repairs, Road, Windsor to Richmond	8	15	0
	„ G. Pye, gravel, Bridge-street, Windsor	10	15	0
	„ J. Beadall, wages, &c.....	11	7	9
3 Sept.	„ J. Teale, repairs, Windsor Road ...	6	16	6
24 „	„ M. Keough „ George-street.....	16	11	6
	„ C. Pitt „ to tools	0	15	3
30 „	„ M. Keough „ George-street.....	3	9	0
	„ Secretary, quarter's salary, &c.....	6	12	6
8 „	„ Fuller & Co., printing	0	7	6
	„ A. W. Hobbs, posting notices	0	2	6
	„ M. Keough, gravelling, George-st...	2	6	0
	„ George Pye, gravelling to Richmond Road	26	5	6
3 Dec..	„ A. W. Hobbs, posting bills	0	7	6
	„ C. Johnson, watering road	0	7	0
	„ G. Pye, gravelling, George-street...	17	1	8
	„ W. Eather, water for road	1	3	6
	„ J. Hough, repairs, Windsor Road...	3	15	9
	„ J. Teale, „ „ ...	20	8	3
	„ G. Pye „ „ ...	15	0	0
	„ J. T. Rowthorne, commission on sale of tolls	3	0	0
	„ Secretary, quarter's salary, &c.....	6	10	0
	Balance on hand	366	8	7
	£	547	6	9

RICH. RIDGE,
THOMAS PRIMROSE,
W. LINSLEY, } Commissioners.

Account

ACCOUNT of Receipts and Expenditure of the Commissioners of the Windsor Road Trust, for the half-year ended 30th June, 1884.

Dr. | Cr.

1884.		£	s.	d.	1884.		£	s.	d.
1 Jan...	To Balance in hand, 31st December, 1883 ...	366	8	7	7 Jan.	By paid M. Neilson, advertising	1	8	6
4 Feb...	„ Rent of Fitz Roy Bridge Tolls for January	17	1	8	4 Feb.	„ G. Pye, repairs, Windsor Road.....	31	3	4
3 Mar...	„ „ „ February	17	1	8		„ J. Hough, „ „	4	15	4
24 „ ...	„ „ „ March...	17	1	8		„ Fuller & Co., advertising.....	2	5	0
21 April	„ „ „ April ...	17	1	8	3 Mar.	„ J. Beadall, repairs, George-street...	1	3	9
19 May ..	„ „ „ May.....	17	1	8	24 „	„ „ „ „ ...	2	18	0
24 June..	„ „ „ June ...	17	1	8	31 „	„ M. Neilson, advertising	1	3	0
						„ Fuller & Co., „	1	0	0
						„ Secretary, quarter's salary, &c.	6	10	0
					10 May	„ Chas. Eather, repairs, George-street	3	4	0
					2 June	„ J. Beadall, „ „ ...	10	2	0
					16 „	„ A. Turnbull, metalling George-street	261	8	9
						„ J. Beadall, repairs, „ ...	8	8	0
					30 „	„ Fuller & Co., printing.....	0	7	6
						„ J. R. Byram, advertising	0	11	0
						„ D. Robertson, sharpening tools	0	2	3
						„ Secretary, quarter's salary, &c.	6	12	6
						Balance on hand.....	125	15	8
	£	468	18	7		£	468	18	7

RICH. RIDGE,
THOMAS PRIMROSE,
WILLIAM LINSLEY,
WILLIAM GOSPER, } Commissioners.

ACCOUNT of the Receipts and Expenditure of the Commissioners of the Windsor Road Trust, for the half-year ended 31st December, 1884.

Dr. | Cr.

1884.		£	s.	d.	1884.		£	s.	d.
1 July ..	To Balance on hand, 30th June	125	15	8	1 Sept.	By paid A. Turnbull, metalling George-street	171	16	10
21 „ ..	„ Rent of Fitz Roy Bridge Tolls for July ...	17	1	8		„ F. F. Simon, wheelbarrows.....	3	15	0
20 Aug...	„ „ „ August ...	17	1	8	30 „	„ Secretary, quarter's salary	6	15	0
22 Sept..	„ „ „ September	17	1	8	3 Nov.	„ J. Hough, repairs, Windsor-street...	1	4	6
24 Oct...	„ „ „ October ...	17	1	4	31 Dec.	„ J. Beadall, „	4	1	9
24 Nov...	„ „ „ November	17	1	4		„ J. T. Rowthorne, commission on sale of tolls	6	0	6
17 Dec...	„ „ „ December	17	1	4		„ Secretary, quarter's salary, &c.	6	12	6
						Balance on hand.....	27	18	7
	£	228	4	8		£	228	4	8

RICH. RIDGE,
W. LINSLEY,
WILLIAM GOSPER,
THOMAS PRIMROSE, } Commissioners.

ACCOUNT of the Receipts and Expenditure of the Commissioners of the Richmond Road Trust, for the half-year ended 31st December, 1884.

Dr. | Cr.

1884.		£	s.	d.	1884.		£	s.	d.
1 July ...	To Balance on hand, 30th June	111	12	5	30 Sept.	By paid Secretary, quarter's salary, &c.	7	17	6
6 Aug....	„ Rent of Blacktown Road tolls for July ...	12	10	0	1 Oct..	„ John Cashell, repairs road Richmond to Bridge.....	8	6	7
3 Sept....	„ „ „ August ...	12	10	0					
1 Oct. ...	„ „ „ September	12	10	0	31 Dec..	„ Maurice Power, repairs road Richmond to Bridge	1	0	0
5 Nov....	„ „ „ October ...	12	10	0		„ George Davies, advertising.....	1	4	0
3 Dec. ...	„ „ „ November	12	10	0		„ Fuller & Co., „	0	14	0
						„ Secretary, quarter's salary, &c.	8	5	9
						Balance on hand.....	146	14	7
	£	174	2	5		£	174	2	5

EDW. POWELL,
JOSEPH ONUS,
W. T. PRICE, } Commissioners.

ACCOUNT

Account of Receipts and Expenditure by the Commissioners of the Richmond Road Trust, for the half-year ended 30th June, 1884.

Dr.

1884.		£	s.	d.
1 Jan. ...	To Balance on hand, 31st December, 1883...	112	14	5
6 Feb. ...	„ Rent of Blacktown Road tolls for January	12	10	0
5 Mar....	„ „ „ February	12	10	0
2 April...	„ „ „ March ...	12	10	0
9 May ...	„ „ „ April ...	12	10	0
4 June...	„ „ „ May	12	10	0
	£	175	4	5

Cr.

1884.			£	s.	d.
6 Feb.	By paid Fuller & Co., advertising	1	0	17	6
	„ M. Neilson, „	2	1	2	0
	„ A. Turnbull, repairs, Windsor-street	3	25	0	0
5 Mar.	„ S. Buckton, „ „ ...	4	4	15	0
	„ E. Dover, „ „ ...	5	4	10	0
30 „	„ Bank of N.S.W. Richmond cheque-book, &c.	6	0	5	2
31 „	„ Secretary, quarter's salary, &c. ...	7	7	19	6
2 April	„ Maurice Power, repairs Windsor and Richmond Road	8	8	15	0
9 May.	„ Same, repairs Blacktown Road...	9	1	16	5
30 June	„ John Thomas, repairs Richmond to Bridge	10	0	11	8
	„ Secretary, quarter's salary, &c....	11	7	19	9
	Balance on hand.....		111	12	5
	£		175	4	5

EDW. POWELL,
R. H. DUCKER,
W. T. PRICE,
JOSEPH ONUS, } Commissioners.

Account of Receipts and Expenditure of the Commissioners of the Richmond Road Trust, for the half-year ending 30th June, 1883.

Dr.

1883.		£	s.	d.
1 Jan....	To Balance, 31st December, 1882	161	18	5
10 „ ...	„ Rent of Blacktown Road tolls for January	10	8	4
13 Feb...	„ „ „ February	10	8	4
14 Mar...	„ „ „ March ...	10	8	4
11 April	„ „ „ April ...	10	8	4
9 May...	„ „ „ May.....	10	8	4
13 June..	„ „ „ June	10	8	4
	£	224	8	5

Cr.

1883.			£	s.	d.
7 Feb...	By paid M. Power, repairs, Windsor-street, Richmond		2	17	6
7 „ ...	„ J. W. Douglass, „ „ ...		12	10	0
7 „ ...	„ M. Neilson, „ „ ...		2	11	0
7 Mar...	„ J. Douglass, „ „ ...		7	0	0
7 „ ...	„ J. W. Douglass, „ „ ...		2	5	0
7 „ ...	„ Fuller & Co., advertising		0	9	0
7 „ ...	„ G. Davis, „		1	18	0
31 „ ...	„ Secretary, quarter's salary		7	15	0
6 June..	„ H. Leavers, repairs road, Richmond to Windsor		10	0	0
6 „ ...	„ J. Douglass, repairs, Windsor-street to Blacktown Road		2	0	0
30 „ ...	„ M. Power, repairs road, Richmond to Bridge		0	15	0
	„ H. Leavers, repairs, Windsor-street		2	10	0
	„ H. D. Travis, „ „ ...		0	10	0
	„ S. Elliott, „ „ ...		25	0	0
	„ Secretary, quarter's salary		7	17	6
	Balance on hand.....		138	10	5
	£		224	8	5

EDW. POWELL,
JOSEPH ONUS,
R. H. DUCKER, } Commissioners.

ACCOUNT of Receipts and Expenditure of the Commissioners of the Richmond Road Trust for the half-year ended 31st December, 1883.

Dr.

1883.		£	s.	d.
1 July...	To Balance on hand, 30th June	138	10	5
5 „ ...	„ Rent of Blacktown Road tolls for July ...	10	8	4
8 Aug...	„ „ „ August ...	10	8	4
12 Sept...	„ „ „ September	10	8	4
13 Oct...	„ „ „ October...	10	8	4
12 Nov...	„ „ „ November	10	8	4
Dec....	„ „ „ December	10	8	4
	£	201	0	5

Cr.

1883.		£	s.	d.
1 Aug...	By paid M. Power, repairs to road, Windsor to Richmond.....	9	0	0
5 Sept...	„ M. Power, „ „ ...	4	17	6
	„ S. Elliott, culvert, Windsor-street...	25	0	0
	„ Secretary, quarter's salary, &c.....	7	15	0
5 Dec...	„ M. Power, repairs to road, Windsor to Richmond.....	19	7	6
31 „ ...	„ C. S. Guest, commission on sale of tolls	3	15	0
	„ M. Power, repairs, Windsor-street	9	7	6
	„ G. Davies, advertising.....	1	4	0
	„ Secretary, quarter's salary, &c.	7	19	6
	Balance on hand.....	112	14	5
		201	0	5

EDW. POWELL,
W. T. PRICE,
JOSEPH ONUS,
} Commissioners.

[9d.]

Sydney: Thomas Richards, Government Printer.—1885.

1885–6.

NEW SOUTH WALES.

ROAD TRUST ACCOUNTS.

(FOR THE HALF-YEARS ENDING 30 JUNE AND 31 DECEMBER, 1885.)

Presented to Parliament in accordance with the provisions of the several Acts.

SCHEDULE.

		PAGE.
South Head Roads	11 Vict., No. 49, clause 6	2
Parramatta Road	13 „ 41, 19	3
Maitland Road	17 „ 16, 23	4
Windsor Road	18 „ 16	4, 5
Richmond Road	18 „ 16	5

ROAD TRUST ACCOUNTS.

THE COMMISSIONERS OF THE SOUTH HEAD ROADS TRUST.

ACCOUNT of Receipts and Disbursements for the half-year ending 30th June, 1885.

RECEIPTS.		£ s. d.	DISBURSEMENTS.		£ s. d.	£ s. d.
1885.			1885.			
1 Jan...	To balance brought forward from previous account	3,223 1 2	30 June	By Salaries— Secretary and Surveyor (6 months)		75 0 0
5 ,,	,, A. Gaslight Co, contribution, repairs	12 8 0		Miscellaneous— Tools and sundries		14 18 0
30 June..	,, Rent of Toll-house, 28 weeks at 10s..	14 0 0	,,	Old South Head Road Blue metal	602 6 6	
			,,	Wages, ballast, &c	470 19 6	
			,,	New South Head Road— Blue metal	448 3 6	1,073 6 0
			,,	Wages, ballast, &c	372 13 8	
			,,	Glenmore Road— Blue metal	72 19 6	820 17 2
			,,	Wages, ballast, &c	20 0 3	
			,,	Point Piper Road— Blue metal	231 13 5	92 19 9
			,,	Wages, ballast, &c	295 19 4	
			,,	Watson's Bay Road—		527 12 9
			,,	Wages, ballast, &c		65 8 3
			,,	Balance at Bank of New South Wales		579 7 3
	£	3,249 9 2			£	3,249 9 2

For the Commissioners, South Head Roads Trust,—

GERARD PHILLIPS, Secretary.
THOS. BUCKLAND, Hon. Treasurer.

Sydney, 22 July, 1885.

THE COMMISSIONERS OF THE SOUTH HEAD ROADS TRUST.

ACCOUNT of Receipts and Disbursements for the half-year ending 31st December, 1885.

RECEIPTS.		£ s. d.	DISBURSEMENTS.		£ s. d.	£ s. d.
1885.			1885.			
1 July..	To Balance from previous accounts	579 7 3	31 Dec	By Salaries— Secretary and Surveyor (6 months)		75 0 0
14 Aug..	,, Moiety of Parliamentary Grants for 1885 passed by Treasury	2,500 0 0	,,	Miscellaneous— Repairs, water cart	13 10 0	
31 Dec...	,, Rent of Toll-house, New South Head Road, 26 weeks, to 28 December, 1885	13 12 0	,,	Horse and equipment for overseer	14 12 6	
			,,	Tools and sundries	22 5 7	50 8 1
			,,	Old South Head Road— Blue metal	504 0 11	
			,,	Wages, ballast, &c	529 16 6	1,033 17 5
			,,	New South Head Road— Blue metal	470 13 10	
			,,	Wages, ballast, &c	326 13 6	797 7 4
			,,	Point Piper Road— Blue metal	319 16 11	
			,,	Wages, ballast, &c	340 11 6	660 8 5
			,,	Glenmore Road— Blue metal	94 15 2	
			,,	Wages, ballast, &c	47 18 9	142 13 11
			,,	Watson's Bay Road— Wages, ballast, &c		108 6 0
				Balance in Australian Joint Stock Bank		224 18 1
	£	3,092 19 3			£	3,092 19 3

For the Commissioners, South Head Roads Trust,—

GERARD PHILLIPS, Secretary.
THOS. BUCKLAND, Hon. Treasurer.

Sydney, 15 February, 1886.

PARRAMATTA ROAD TRUST.

ABSTRACT of the Receipts and Expenditure of the Commissioners of the Parramatta Road Trust, for the half-year ending 31st December, 1885.

Dr. **Cr.**

RECEIPTS.							EXPENDITURE.						
1885.		£	s.	d.	£	s. d.	1885.		£	s.	d.	£	s. d.
31 Dec...	To rental of Toll-gate at Broken-back Bridge	268	10	0	268	10 0	31 Dec..	By cheque not presented	11	8	0	11	8 0
	„ Fixed deposit at Commercial Bank	212	0	0				Salaries—					
	„ Balance credit at Commercial Bank	289	3	0	501	3 0		Clerk and Treasurer	25	0	0		
	„ Outstanding cheque	11	8	0	11	8 0		Working Overseer	38	0	0	63	0 0
								Miscellaneous—					
								Wages for labour	77	1	0		
								Blue metal	143	13	9		
								Repairs to Toll-house	25	0	0		
								Six month's rent of office	10	8	0		
								Paint and brushes	2	19	8		
								Powder, fuse, tools, &c.	1	19	6		
								Sale of Toll-gate	1	1	0		
								Advertisements	0	9	0	262	11 11
								By fixed deposit at Commercial Bank	212	0	0		
								„ Balance credit at Commercial Bank	232	1	1	444	1 1
				£	781	1 0					£	781	1 0

JAMES BYRNES,
ANDREW PAYTEN,
W. GOODIN, } Commissioners.

PARRAMATTA ROAD TRUST.

ABSTRACT of the Receipts and Expenditure of the Commissioners of the Parramatta Road Trust, for the half-year ending 30th June, 1885.

Dr. **Cr.**

RECEIPTS.							EXPENDITURE.						
1885.		£	s.	d.	£	s. d.	1885.		£	s.	d.	£	s. d.
30 June..	To rental of Toll-gate at Broken back Bridge	223	15	0			1 Jan.	By cheque not presented	11	8	0	11	8 0
	„ Cash interest on fixed deposit	12	0	0	235	15 0	30 June	Salaries—					
	„ Fixed deposit at Commercial Bank	200	0	0				Clerk and Treasurer	25	0	0		
	„ Balance credit at Commercial Bank to 31st December, 1884.	356	3	9	556	3 9		Working Overseer	60	0	0	85	0 0
	Outstanding cheque	11	8	0	11	8 0		Miscellaneous—					
								Wages for labour	171	12	0		
								Advertisements	2	3	1		
								Powder, fuse, tools, &c.	4	19	4		
								Sale of Toll-gate	1	1	0		
								Twelve months' rent of office	20	16	0		
								Repairs to tools	1	1	4		
								Tents and fly	4	3	0	205	15 9
								By fixed deposit at Commercial Bank	212	0	0		
								„ Balance credit at Commercial Bank	289	3	0	501	3 0
				£	803	6 9					£	803	6 9

JAMES BYRNES,
ANDREW PAYTEN,
NEIL STEWART,
W. GOODIN, } Commissioners.

MAITLAND

MAITLAND DISTRICT COUNCIL.

RECEIPTS AND EXPENDITURE of the Maitland District Council, from 1st July, 1885, to 31st December, 1885.

1885.		£ s. d.	1885.		£ s. d
1 July ...	To balance	12 7 0	31 Oct..	By Secretary's salary.....	32 0 0
22 Sept...	„ Advances from Roads	49 14 10	31 „ ..	„ Stationery, &c	0 12 6
			31 Dec..	„ Balance	29 9 4
	£	62 1 10		£	62 1 10
	„ Balance .....£	29 9 4			

JOHN BOWDEN, Warden.
WALTER CRACKNELL, Secretary.

We have examined the books and vouchers of above accounts, and find same correct,—

WILLIAM KEATING, GEO. H. STEPHENS, } Auditors.

MAITLAND DISTRICT COUNCIL.

Receipts and Expenditure of the Maitland District Council, from 1st January 1885, to 30th June, 1885.

1885.		£ s. d.	1885.		£ s. d.
1 Jan ...	To balance.....	20 10 6	28 Feb..	By Secretary's salary	8 0 0
			28 „ ...	„ Stationery.....	0 3 6
				„ Balance	12 7 0
	£	20 10 6		£	20 10 6
	To balance .....£	12 7 0			

JOHN BOWDEN, Warden.
WALTER CRACKNELL, Secretary.

We have examined the books and vouchers of the above accounts, and find same correct,—

WILLIAM KEATING, GEO. H. STEPHENS, } Auditors.

WINDSOR ROAD TRUST.

Account of Receipts and Expenditure of the Commissioners of the Windsor Road Trust, for the half-year ending 31st December, 1885.

Dr. Cr.

1885.		£ s. d.	1885.		£ s. d.
1 July ..	To Balance on hand	152 2 1	3 Aug.	By paid Pickup & Commons, repair to Toll-house 1	6 13 0
7 Aug ..	„ Rent of Fitzroy Bridge Tolls for July ...	32 1 8		„ M. Keogh, repairs, Windsor Road 2	1 6 0
31 „ ..	„ „ „ August ...	32 1 8	30 Sept.	„ M. Keogh, repairs, Road to Richmond..... 3	0 10 0
30 Sept..	„ „ „ September.	32 1 8		„ A. W. Hobbs, posting bills..... 4	0 5 0
2 Nov ..	„ „ „ October ...	32 1 8		„ Secretary, quarter's salary, &c..... 5	6 12 6
1 Dec...	„ „ „ November..	32 1 8	7 Dec..	„ W. Keogh, repairs, Geo.-street & Richmond Road..... 6	2 1 6
24 „ ...	„ „ „ December..	32 1 8	31 „ ..	„ J. J. Hawthorn, commission, sale of tolls..... 7	5 13 6
				Secretary, quarter's salary, &c.... 8	6 15 0
				Balance on hand	314 15 7
	£	344 12 1		£	344 12 1

W. WALKER, Secretary.

RICH. RIDGE, W. LINSLEY, WILLIAM GOSPER, } Commissioners.

WINDSOR

WINDSOR ROAD TRUST.

Account of Receipts and Expenditure of the Commissioners of the Windsor Road Trust, for the half-year ending 30th June, 1885.

Dr.

1885.		£	s.	d.
1 Jan....	To Balance on hand 31st December	27	18	7
5 Feb...	„ Rent of Fitzroy Bridge Tolls, for January	32	1	8
6 Mar...	„ „ „ February...	32	1	8
7 April.	„ „ „ March.....	32	1	8
7 May ..	„ „ „ April	32	1	8
4 June..	„ „ „ May	32	1	8
30 „ ..	„ „ „ June	32	1	8
	£	220	8	7

Cr.

1885.			£	s.	d.
1 Jan..	By paid J. Teale, repairs, Windsor Road..	1	10	0	0
2 Feb..	„ Fuller & Co., advertising.....	2	1	5	0
	„ M. Neilson, „	3	1	0	0
	„ J. Beedall, repairs, George-street and Windsor Road	4	2	1	6
	„ L. Pickup, repairs, Toll House...	5	8	2	6
9 Mar.	„ J. Beedal, repairs, M'Grath's Hill	6	1	4	0
	„ J. Teale, repairs, Windsor Road..	7	1	19	0
31 „ ...	„ J. Hough, repairs, „ ..	8	4	11	6
	„ Secretary, quarter's salary, &c....	9	6	12	6
11 May.	„ Pickup & Commons, repairs, Toll-house	10	24	3	0
30 June	„ M. Keogh, repairs, George-street	11	0	17	6
	„ Secretary, quarter's salary, &c	12	6	10	0
	Balance on hand.....		152	2	1
	£		220	8	7

RICH. RIDGE,
THOMAS PRIMROSE,
W. LINSLEY, } Commissioners.

RICHMOND ROAD TRUST.

Account of Receipts and Expenditure of the Commissioners of the Richmond Road Trust, for the half-year ending 31st December, 1885.

Dr.

1885.		£	s.	d.
1 July..	To Balace on hand, 30th June	95	3	5
5 Aug...	„ Rent of Blacktown Road Tolls for July...	8	6	8
2 Sept..	„ „ „ August.....	8	6	8
1 Oct...	„ „ „ September	8	6	8
29 „ ...	„ „ „ October ...	8	6	8
2 Dec...	„ „ „ November	8	6	8
31 „ ...	„ „ „ December	8	6	8
	£	145	3	5

Cr.

1885.			£	s.	d.
2 Sept...	By paid J. Buckton, repairs, Main-street, Richmond.....	1	0	10	0
	T. Douglass. „ „ ...	2	0	5	0
30 „ ...	„ Fuller & Co., printing	3	0	7	6
31 Dec...	„ Secretary, quarter's salary, &c....	4	8	1	6
	„ R. A. Pye, advertising sale of tolls	5	0	11	0
	„ G. Davis, „ „ ...	6	1	10	0
	„ Fuller & Co „ „ ...	7	0	17	6
	„ Secretary	8	7	17	6
	Balance on hand.....		125	3	5
	£		145	3	5

EDW. POWELL.
JOSEPH ONUS.
W. T. PRICE.

RICHMOND ROAD TRUST.

Account of the Receipts and Expenditure of the Commissioners of the Richmond Road Trust, for the half-year ending 30th June, 1885.

Dr.

1885.		£	s.	d.
1 Jan ...	To Balance on hand, 31st December, 1884...	146	14	7
4 Feb...	„ Rent of Blacktown Road Tolls for January	8	6	8
4 Mar...	„ „ „ February..	8	6	8
1 April.	„ „ „ March.....	8	6	8
7 May ..	„ „ „ April.....	8	6	8
3 June .	„ „ „ May.....	8	6	8
30 „ ...	„ „ „ June.....	8	6	8
	£	196	14	7

Cr.

1885.			£	s.	d.
4 Feb...	By paid M. Power, repairs to Blacktown Road.....	1	11	0	0
4 Mar...	„ M. Power, „ „ ...	2	10	1	0
	„ H. Navis „ „ ...	3	2	10	0
	„ C. S. Guest, commission on sale of tolls.....	4	2	10	0
	„ M. Power, repairs, Blacktown Road.....	5	32	15	0
31 „ ...	„ W. Heard, portland cement	6	2	0	0
	„ Goodlet & Smith, pipes	7	18	0	0
	„ Secretary, quarter's salary, &c....	8	8	7	8
7 May ..	„ T. Douglass, repairs, Main-street, Richmond	9	6	12	6
30 June..	„ Secretary, quarter's salary, &c ...	10	7	15	0
	Balance on hand.....		95	3	5
	£		196	14	7

JOSEPH ONUS.
W. T. PRICE.
R. H. DUCKER.

Sydney: Thomas Richards, Government Printer.—1886.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

SUBORDINATE ROADS UNDER TRUSTEES.

(SHOWING PROPOSED DISTRIBUTION OF VOTE ON ESTIMATES.)

Ordered by the Legislative Assembly to be printed, 3 *June,* 1886.

CLASSIFICATION AND PROPOSED DISTRIBUTION FOR 1886.

No.	Class. 1884.	Class. 1885.	Class. 1886.	Length in Miles.		Proposed Expenditure.
					Northern Roads.	£
1	4	4	4	20	Road from Wollombi to Broke	200
2	4	4	4	18	„ Broke to Warkworth	180
3	3	2	2	7	„ Stockton and Raymond Terrace Road to Saltash...	175
4	5	5	5	6	„ Raymond Terrace and Stroud Road to Raymond Terrace and Clarencetown Road (Caswell's Road)	42
5	5	5	5	12	„ Raymond Terrace and Stroud Road, *viâ* the Duck-hole Swamp, to the Parading Ground	84
6	3	3	3	11	„ Seaham, by east side of Williams River, to Clarencetown	165
7	...	2	2	9	„ Clarencetown, *viâ* Glen William, to Brookfield ...	225
8	...	3	3	10	„ Clarencetown towards Thalaba	150
9	2	2	2	4	„ Raymond Terrace to Mount Kanwary	100
10	2	2	2	4	„ Mount Kanwary to Hinton	100
11	3	3	3	4	„ Raymond Terrace and Hinton Road to Seaham ...	60
12	2	2	2	1	„ Tomago Crossing-place to Railway Station at Hexham	25
13	4	4	2	5	„ Alnwick to Hexham	125
14	3	3	2	5	„ Junction of Morpeth Road with Raymond Terrace and Maitland Road to East Maitland	125
15	2	2	1	4	„ Pitnacree Bridge to Dunmore Bridge	200
16	2	2	2	16	„ Paterson Punt to Gresford	400
17	4	4	4	5	„ Vacy Bridge to Summer Hill	50
18	2	2	2	17	„ Gresford to Eccleston	425
19	2	2	2	12	„ Gresford to Lostock	300
20	4	4	4	13	„ Lostock to Carraboler	130
21	2	2	2	4	„ Penshurst to Alleyn River	100
22	4	4	4	8	„ Eccleston to Upper Alleyn River	80
23	2	2	2	6	„ Largs to Tocal	150
24	2	2	2	2	„ Tocal to Paterson	50
25	2	2	2	3	„ Union Inn, at Rutherford, to Melville Ford ...	75
26	4	4	3	10	„ Rutherford to Scotch Corner	150
	...	3	2	...	„ Rutherford and Scotch Corner Road, *viâ* Hillsborough, to the Luskintyre Road	30
27	4	3	3	3	„ West Maitland, *viâ* Glenarvon, to Dunmore and Paterson Road	45
28	2	2	2	12	„ West Maitland to Blackwater Hole	300
29	2	2	2	8	„ Blackwater Hole, *viâ* Cessnock, to Dividing Range	200
30	1	1	1	5	„ West Maitland up the right bank of Hunter River (Oakhampton Road)	250
31	2	2	2	5	„ Morpeth to Four-mile Creek	125
32	3	3	3	3	„ Morpeth to Largs	45
				254	Carried forward ... £	4,861

No.	Class. 1884.	Class. 1885.	Class. 1886.	Length in Miles.		Proposed Expenditure.
					Northern Roads—continued.	£
				254	Brought forward	4,861
33	4	4	4	4	Road from Morpeth and Largs Road, through Phœnix Park and Abbotsford, to M'Clymont's Swamp ...	40
34	2	2	2	4	„ Morpeth Punt, through Phœnix Park, to Largs ...	100
35	2	2	2	4	„ Morpeth, *viâ* Hinton Punt, to Dunmore and Seaham Road	100
36	4	4	4	4	„ Dunmore and Seaham Road, *viâ* Butterwick, to Dunn's Creek	40
37	1	1	1	3	West Maitland, *viâ* Louth Park, to East Maitland and Brisbane Water Road	150
38	5	5	5	15	„ West Maitland to Mulbring Creek	105
39	3	3	3	17	„ Maitland and Paterson Road, within L. Harris's 1,114 acres, to Luskintyre	255
40	5	3	3	10	„ Lochinvar, *viâ* Windermere, to Pritchett's, and loop-line to same place, *viâ* Kaloudah	150
41	...	...	4	4	„ Branxton to Dalwood Ford...	40
42	3	3	3	5	„ Branxton, *viâ* Dalwood Ford, to Irishtown ...	75
43	3	3	3	2	„ Branxton and Irishtown Road to Greta	30
44	3	3	3	12	„ Branxton, *viâ* Elderslie Bridge and Glendon Brook, to junction with Paterson and Gresford Road...	180
45	4	4	4	4	„ Anvil Creek and Glendon Brook Road to Stanhope	40
46	4	3	3	14	„ Main Northern Road, near Black Creek, to Cessnock, on Wollombi Road	210
47	3	3	3	13	„ Pokolbin Hills to Cessnock Road	195
48	4	4	4	6	„ Cessnock to M'Donald's, at Pokolbin (Marrowbone Road)	60
49	...	...	1	8	„ Cessnock to south boundary of Josephson's 2,000 acres	400
50	3	3	3	11	„ Main North Road, near Black Creek, *viâ* Glendon, to Main North Road, near Singleton	165
51	4	4	4	20	„ Singleton to Boyce's, at Glendon Brook	200
52	4	4	4	17	„ Boyce's to Gresford...	170
53	4	4	4	9	„ Cooper's Flat Road to Karakoora Creek and up that creek...	90
54	4	4	4	10	„ Camberwell to Goorangoola Road...	100
55	4	4	4	15	„ Goorangoola Road to Carrow Brook	150
56	...	5	5	7	„ Goorangoola Road to Bowman's Creek	49
57	4	4	4	17	„ Singleton, *viâ* Redbournebury, to Dyrring... ...	170
58	4	3	3	12	„ Singleton, *viâ* Abbey Green, to Bulga	180
59	3	3	3	15	„ Singleton, *viâ* Wittingham Reserve, to Broke ...	225
60	4	4	3	10	„ Singleton to Brandy Creek...	150
61	4	4	3	15	„ Brandy Creek, *viâ* Goorangoola, to Dry Creek ...	225
62	4	4	4	10	„ Broke, *viâ* Nine-mile Creek, to the Munnimba and Warkworth Road	100
63	3	3	3	20	„ Singleton to Jerry's Plains...	300
64	4	3	3	6	„ Singleton and Jerry's Plains Road to Warkworth..	90
65	4	5	4	8	„ Broke Road, *viâ* Warkworth Road, to the Jerry's Plains Road	80
66	6	6	4	16	„ Scone, *viâ* Dartbrook and Kayugah, to Muswellbrook	160
67	5	5	5	25	„ Merriwa to top of Main Range	175
68	4	4	4	15	„ Blandford, *viâ* Box-tree, to Timor	150
69	...	6	6	4	„ Kangaroo Flat to Quirindi...	20
70	4	4	4	7	„ Quirindi to Warrah Ridge	70
71	3	3	3	10	„ Underbank to Upper Chichester	150
72	4	4	3	9	„ Underbank to Upper Williams	135
73	...	...	3	3	„ Dungog and Gloucester Road to western boundary of L. Myles' grant	45
74	...	6	4	21	„ Wingham and Nowendoc Road to Upper Manning	210
75	3	3	3	3	„ Tinonee and Bohnock Road to south channel of the Manning River (Redbank Road)	45
76	4	4	2	9	„ Innis, *viâ* Morton's Creek, to Papenborough Creek and J. Gurney's...	225
77	4	3	3	24	„ Grafton, *viâ* Copmanhurst, to Apple-tree Flat ...	360
78	...	4	3	5	„ Copmanhurst to Stockyard Creek...	75
79	5	5	3	35	„ Smith's Flat Road to the Solferino Road	525
80	...	...	3	3	„ Copmanhurst to Smith's Creek	45
81	4	4	4	10	„ Brush Grove to Rocky Mouth	100
				784	Total miles. Total ... £	11,965

No.	Class. 1884.	1885.	1886.	Length in Miles.		Proposed Expenditure.
					Western Roads.	£
82	2	2	2	3	Road from Main Western Road to Canterbury	75
83	2	2	2	2	„ Main Western Road to Rookwood Railway Station	50
84	3	3	3	6	„ Main Western Road, near Parramatta, to Main Southern Road (Woodville Road)	90
85	2	2	2	2	„ Main Western Road, *viâ* Newington, to the Parramatta River	50
86	3	3	3	2	„ Pennant Hills Road to Shepherd's 60 acres ...	30
87	2	2	2	4	„ Broken-back Bridge to Pennant Hills (Governor's Arms Road)	100
88	2	2	2	1	„ Pennant Hills, at Duggan's Corner, to Parramatta and Ryde Road	25
89	3	3	3	6	„ Mobbs' Hill to Rogan's Hill	90
90	1	1	1	1	„ Parramatta and Ryde Road to Pennant Hills Wharf	50
91	2	2	2	3	„ Ryde to junction of Parramatta and Pennant Hills Road	75
92	2	2	2	4	„ Parramatta and Pennant Hills Road to Dural ...	100
93	4	4	4	2	„ Main North Road at Castle Hill to Government Reserve (Old Castle Hill Road)	20
94	5	5	5	2	„ Old Castle Hill Road to Government Reserve ...	14
95	2	2	2	1	„ Castle Hill to the Old Parramatta Road	25
96	2	2	2	5	„ Parramatta and Windsor Road to Pearse's, at Seven Hills	125
97	...	3	3	2	„ Seven Hills Road to Vardy's Grant	30
98	2	2	2	4	„ Seven Hills Railway Station to Windsor Road ...	100
99	2	2	2	4	„ Rooty Hill Railway Station to Blacktown Road ...	100
100	6	6	6	4	„ Main Western Road, near Fox-under-the-Hill, to the Seven Hills Road (Toongabbee Road) ...	20
101	4	4	4	5	„ Toongabbee Creek to Windsor Road	50
102	3	3	3	8	„ Main Western Road to Breakfast Creek (Blacktown Road)	120
103	3	3	3	11	„ Breakfast Creek to Richmond (Blacktown Road)...	165
104	4	4	3	3	„ Main Western Road, *viâ* Bungarribee, to Blacktown Railway Station (Flushcombe Road)	45
105	3	3	3	8	„ Penrith to Dr. Clarke's Bridge	120
106	3	3	3	18	„ Main Western Road, near Penrith, to Bringelly Cross Roads	270
107	4	4	4	11	„ Parramatta to Rouse Hill	110
108	3	3	3	5	„ Penrith to Clemson's	75
109	3	3	3	5	„ Clemson's to Richmond	75
110	...	4	4	10	„ Blaxland's Crossing to Werombi Post Office ...	100
111	2	2	2	6	„ Emu Plains to Wascoe's	150
112	2	2	2	11	„ Parramatta and Windsor Road, at Baulkham Hills, to G. Acre's at Dural (Great North Road) ...	275
113	6	6	6	15	„ G. Acre's at Dural to its junction with Pitt Town and Wiseman's Ferry Road (Great North Road)	75
114	3	2	2	5	„ Dr. Clarke's Bridge to Richmond	125
115	...	4	4	5	„ Rouse Hill and Du al Road to Little Dural ...	50
116	6	5	5	9	„ Round corner at Dural to Rouse Hill	63
117	4	4	4	9	„ Rouse Hill to Clarendon	90
118	4	4	4	6	„ Clarendon to Richmond Bridge	60
119	4	...	4	3	„ Wiseman's Ferry Road into parish of North Colah	30
120	4	4	4	3	„ Colah to Dural (North Colah Road)	30
121	3	3	3	2	„ Nelson to Rouse Hill	30
122	2	4	4	2	„ Wilberforce to Pitt Town Punt	20
123	2	2	2	3	„ Windsor Road to Huxley's	75
124	2	2	2	3	„ Huxley's to Pitt Town Punt	75
125	2	2	2	1	„ Windsor Road to Mulgrave Railway Station ...	25
126	2	2	2	5	„ Pitt Town Common, at E. M'Guire's, through Pitt Town Bottoms	125
127	4	4	4	12	„ Pitt Town to Maroota	120
128	3	3	3	3	„ Windsor to Blacktown Road	45
129	1	2	2	7	„ Windsor, *viâ* Cornwallis, to Richmond	175
130	2	2	2	2	„ Richmond to Cornwallis Road (Benson's Lane) ...	50
131	5	3	3	4	„ Blacktown Road, *viâ* Dight's Hill, towards Richmond Bridge	28
				258	Carried forward ... £	4,015

No.	Class.			Length in Miles.		Proposed Expenditure.
					Western Roads—continued.	£
	1884.	1885.	1886.	258	Brought forward	4,015
132	5	5	5	9	Road from Enfield and Wood's Falls Road, opposite Belmont, *viâ* Box Hill, to Bell's Line, North Kurrajong..	90
133	2	1	1	4	„ Windsor Bridge to top of Gorrick's Hill	200
134	...	2	2	2	„ Nicholl's Corner, *via* Hibbert's Lane, to Enfield Road	50
135	5	5	5	6	„ Sackville Road, near Ebenezer, *viâ* Page's Ferry, to Maroota	42
136	5	5	5	4	„ Churchill's Wharf, *viâ* Sackville Post Office, to Page's Ferry Road	28
137	6	6	6	14	„ Bulga Road to West Portland (Wheelbarrow Road)	70
138	2	2	2	5	„ Queen's Road, Mt. Wilson	125
139	4	4	4	25	„ Mudgee Road to Glen Alice	250
140	3	3	3	3	„ Gulgong to Martin's Crossing	45
141	...	...	4	5	„ Gulgong to Jackson's Crossing	50
142	6	6	6	12	„ Rylstone to Narengo	60
143	6	6	6	30	„ Rylstone, *viâ* Bogie, to Capertee	150
144	4	4	4	16	„ Cudgegong to Merrendee	160
145	4	4	4	30	„ Grattai, *viâ* Windeyer and Pyramul, to Sally's Flat	300
146	...	5	6	12	„ Sally's Flat to Dougherty's	60
147	4	4	4	4	„ Peel to Junction of Kelso and Sofala Road ...	40
148	3	3	3	12	„ Sofala to Palmer's Oakey Creek	180
149	3	3	3	9	„ Kelso and Sofala Road, at Cheshire Creek, to Upper Turon	135
150	3	3	3	5	„ Bathurst Road, at Kirkconnell, to Mitchell's Creek Quartz Reefs	75
				465	Total miles. Total ... £	6,125
					Southern Roads.	
151	2	2	2	4	Road from Sydney to Banks Meadow (Botany Road) ...	100
152	4	1	1	2	„ Half-way House, Botany Road, *viâ* Ricketty-street, towards Botany Bay	100
154	1	1	1	3	„ Banks Meadow, *viâ* Lord's and Handcock's, to the Botany Road, near the Tannery	150
155	2	2	2	4	„ Banks Meadow to Botany Road (Whisker's Road)	100
156	2	2	2	3	„ Undercliff Bridge to George's River Road ...	75
157	3	3	3	2	„ Newtown Road, near the Church, to the Botany Road	30
158	4	4	4	5	„ Main Southern Road, near Burwood, over Cook's River, into Parish of St. George	50
159	2	2	1	3	„ Bankstown to Rookwood Railway Station ...	150
160	3	3	3	5	„ Auburn and Bankstown Road, *viâ* Auburn Park, to Main South Road	75
161	2	2	2	15	„ Rocky Point Road, at Kogarah, *viâ* George's River Punt, to Bottle Forest	375
162	2	2	2	5	„ Canterbury, to Saltpan Creek Bridge	125
163	2	2	2	5	„ Saltpan Creek Bridge to George's River	125
164	3	3	3	3	„ Bankstown to George's River (Old Road)... ...	45
165	3	3	2	3	„ Druitt Town, to Punchbowl Road (Rolland-street)	75
166	2	2	2	2	„ Main Southern Road to Punchbowl Creek ...	50
167	2	2	2	4	„ Punchbowl Creek to Saltpan Creek	100
168	1	1	1	1	„ Woodville Road to Guildford Railway Platform ...	50
169	2	2	2	2	„ Woodville Road to Fairfield Railway Station ...	50
170	2	2	2	4	„ Fairfield Railway Station, *viâ* Smithfield, to Prospect Creek Municipality	100
171	2	2	2	2	„ Kenyon's Bridge, towards Cabramatta, to Liverpool	50
				77	Carried forward ... £	1,975

No.	Class. 1884.	Class. 1885.	Class. 1886.	Length in Miles.	Southern Roads—continued.	Proposed Expenditure £
				77	Brought forward	1,975
172	3	3	3	10	Road from Liverpool to Penrith and Bringelly Road (part of Orphan School Road)	150
173	3	3	3	8	„ Liverpool, *viâ* Holdsworthy, to Illawarra Road ...	120
174	4	4	4	5	„ Liverpool to Old Cowpasture Road (Bernera Road)	50
175	5	3	3	2	„ Liverpool to Fairfield Railway Station	30
176	3	3	3	6	„ Carne's Hill to Junction of Bringelly Road ...	90
177	4	4	4	18	„ Main Southern Road, at Carne's Hill, *viâ* Greendale, towards Penrith	180
178	2	2	2	4	„ Menangle to Main South Road, at foot of Razorback	100
179	5	5	5	7	„ Menangle to Stoney Creek	49
180	5	5	5	7	„ Stoney Creek to Picton	49
181	4	4	4	4	„ Main Southern Road, at Camden, to Road from Menangle to Main Southern Road	40
182	3	3	3	3	„ Main South Road, near Camden Bridge, to Glenlee	45
183	5	5	5	3	„ Main Southern Road to Campbelltown Road, near Denham Court	21
184	3	3	3	2	„ Great Southern Road, near Raby, to the Campbelltown Road at Minto	30
185	3	3	3	10	„ Main Southern Road to Cobbitty	150
186	3	3	3	2	„ Main Southern Road at Narellan, through Orielton, to Liverpool and Cobbitty Road	30
187	4	4	4	3	„ Narellan to Elderslie ("German's Road") ...	30
188	5	5	5	8	„ Cobbitty to Matavai, Westwood, and Vermont ...	56
189	2	2	2	7	„ Main South Road, near Camden, to Mulgoa Forest and Vanderville	175
190	5	5	5	3	„ Main South Road, at Cawdors, to Westbrook Bridge	21
191	2	2	2	10	„ the Camden and Vanderville Road, at Lefevre's Corner, *viâ* the new Bridge across Mount Hunter Creek, to Mulgoa Forest	250
192	4	4	4	8	„ Oaks, *viâ* Mulgoa Forest, towards Penrith ...	80
193	4	4	4	2	„ Camden and Mulgoa Road to Glendarual and Brownlow Hill	20
194	4	4	4	9	„ Broughton's Pass, *viâ* Wilton and Stonequarry Creek, to the Railway	90
195	2	2	2	9	„ Appin and Mount Keira Road, *viâ* Douglas Park Railway Station, to Soapy Flat Creek... ...	225
196	2	2	2	4	„ Appin to Broughton's Pass	100
197	4	4	4	17	„ Wollongong and Kiama Road to Mount Keira, towards Appin	170
198	6	6	6	10	„ West Bargo, *via* the Pot-holes, to Main Southern Road	50
199	2	2	2	4	„ Old South Road, near P. H. Throsby's, *viâ* Pigott's, to Bowrall	100
200	5	5	5	7	„ Wells' Creek to Paddy's River	49
201	5	5	5	15	„ Berrima, *viâ* Soapy Flat, towards Bulli	105
202	3	3	3	3	„ Throsby Park and Kiama Road, at M'Cullum's, to the Mittagong and Illawarra Road, at Simpson's 200 acres	45
203	2	2	2	5	„ Kiama Road, at Bunter's, to Cedar Mountain Road	125
204	4	4	4	5	„ Throsby Park and Robertson Road, at Cotton Company's Reserve, to Lake's and Wakeford's farms	50
205	3	3	3	8	„ Kangaroo River Bridge, along north side of river, to Wallanderry	120
206	5	5	4	8	„ Nowra Bridge to Illaroo	80
207	5	5	5	9	„ Nowra to Burriar	63
208	3	3	3	2	„ Nowra, through Terrara, to Greenwell Point Road	30
209	4	4	4	30	„ Kippielaw, *viâ* Gurrunda and Bialla, to Dalton on the Fish River	300
210	3	3	3	10	„ Kippielaw Ford, *viâ* Parkesburne, to Bredalbane Railway Station	150
211	3	3	3	15	„ Collector and Gundaroo Road, *viâ* marked tree line, to Main Road Gunning to Queanbeyan ...	225
212	4	5	5	10	„ Foxlow to Molonglo...	70
213	5	5	5	10	„ Araluen and Moruya Road, *viâ* Kiora, to Moruya...	70
214	4	4	5	10	„ Araluen, *viâ* Bettowynd, to Back Creek	70
215	3	3	3	6	„ Moruya to the Heads	90
216	5	5	5	8	„ Wagonga to Eurobodalla	56
				423	Carried forward ... £	6,174

No.	Class. 1884.	1885.	1886.	Length in Miles.		Proposed Expenditure.
					Southern Roads—continued.	£
				423	Brought forward	6,174
217	5	5	5	8	Road from Eurobodalla to Nerrigundah	56
218	2	2	2	4	„ Panbula to Merimbula	100
219	...	3	3	10	„ Corrowong to Delegate	150
220	4	4	4	13	„ Bombala, *viâ* Maharatta, to Mila	130
221	4	4	4	15	„ Ginindera to Gundaroo	150
222	5	5	5	21	„ Queanbeyan, *viâ* Lanyon Ford, to Naas	147
				494	Total miles. Total ... £	6,907

SUMMARY OF PROPOSED DISTRIBUTION:—

			£
Northern Roads	784	miles	11,965
Western Roads	465	„	6,125
Southern Roads...	494	„	6,907
Total	1,743	„ Total	24,997

NOTE.—The amount per mile proposed to be expended on each class of Roads is as under:—

1st Class	£50 per mile	4th Class	£10 per mile
2nd Class	25 „	5th Class	7 „
3rd Class	15 „	6th Class	5 „

Note.—All votes for roads within Municipal limits have been excluded from this Schedule. No sum herein contained is, therefore, to be expended within the boundaries of any Municipality.

WILLIAM JOHN LYNE.

Sydney: Thomas Richards, Government Printer.—1886.

[6*d*.]

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

SUBORDINATE ROADS.

(UNDER OFFICERS OF ROADS DEPARTMENT—SHOWING PROPOSED DISTRIBUTION OF VOTE ON ESTIMATES.)

Ordered by the Legislative Assembly to be printed, 2 *June*, 1886.

CLASSIFICATION AND PROPOSED DISTRIBUTION FOR 1886.

No.	Class. 1884.	Class. 1885.	Class. 1886.	Length in Miles.		Proposed Expenditure.
					Northern Roads.	£
1	1	1	1	3	Road from St. Leonards, *viâ* Balgowlah, to Manly	150
2	1	1	1	7	„ Military Road, St. Leonards	350
3	1	1	1	15	„ Manly Cove to Pittwater	750
4	3	3	2	3	„ Manly and Pittwater Road to M'Garr's Creek ...	75
5	1	1	1	4	„ Pittwater to Barrenjuey	200
6	3	2	2	3	„ Balgowlah to Pittwater Road	75
7	2	2	2	14	„ Lane Cove *via* Stony Creek to Pittwater	350
8	3	3	2	2	„ Lane Cove to Cowan Creek, at Bobbin Head ...	50
9	2	2	1	5	„ Pearce's Corner to Pennant Hills...	250
10	...	2	2	17	„ Pearce's Corner to Peat's Ferry	425
11	4	4	4	6	„ Peat's Ferry Road to Berowra Creek	60
12	4	4	4	7	„ Pemberton's to mouth of Popran Creek	70
13	2	2	3	7	„ Kincumber to Lloyd's Wharf	105
14	1	1	1	18	„ Wallsend to Gosford Road, at Cooranbong ...	900
15	1	1	1	8	„ Wallsend to Lake Macquarie	400
16	2	1	1	15	„ Mulbring to Millfield (Quarrybylong Road) ...	750
17	2	2	2	8	„ Gosford to Kincumber	200
18	3	3	3	5	„ Gosford and Maitland Road to Government Reserve at head of Ourimbah Creek	75
19	4	4	4	20	„ Gosford to the Blood Tree	200
20	2	2	2	15	„ Erina Creek to Tuggerah Beach Lake	375
21	2	3	2	9	„ Bumble Hill to Upper Wyong Creek	225
22	2	2	2	11	„ Wollombi Road to Congewai	275
23	1	1	1	4	„ Wollombi Road to Ellalong	200
24	2	2	2	29	„ Laguna to Railway at Morrisset	725
25	2	2	2	8	„ Mandolong to Cooranbong Wharf	200
26	2	2	2	27	„ The Broken-back Gap to Wyong Creek	675
27	1	1	1	13	„ Wyong Creek to Gosford	650
28	3	3	3	8	„ Murray's to North Road at 10-mile post ...	120
29	4	4	4	6	„ Blue-Gum Flat to Chittaway	60
30	3	3	3	26	„ Wyong to Mangrove Creek, at Pemberton's ...	390
31	4	4	4	25	„ Bullock Wharf to upper part of Mangrove Creek...	250
33	...	...	3	8	„ Bullock Wharf, down western side of Mangrove Creek	120
32	5	5	5	43	„ Warkworth Road to Putty	301
				399	Carried forward ... £	10,001

No.	Class.			Length in Miles.		Proposed Expenditure.
					Northern Roads—continued.	£
	1884.	1885.	1886.	399	Brought forward	10,001
34	4	4	3	10	Road from Wollombi to Yango	150
35	2	2	3	50	„ Wollombi to Wiseman's Ferry	700
36	4	4	4	3	„ Wollombi up Narone Creek	30
37	2	2	2	15	„ Millfield to Wollombi	375
38	3	3	2	12	„ Wiseman's Ferry to St. Albans	300
39	2	2	2	22	„ St. Albans to Mount Manning	550
40	4	4	3	15	„ St. Albans, up the M'Donald River, and Melon Creek	225
41	1	1	1	3	„ Plattsburg to Minmi	150
42	3	3	1	13	„ Waratah to Maitland	650
43	2	2	1	13	„ Adamstown to Lake Macquarie Heads	650
44	...	...	1	2	„ Glebe to Adamstown	100
45	3	2	1	5	„ Lambton to Charlestown	250
46	2	2	1	4	„ Wallsend to Sandgate (Cemetery)...	200
47	2	2	2	8	„ Minmi to Woodford...	200
48	3	2	2	2	„ Lochinvar to Railway Station	50
49	2	1	1	6	„ Raymond Terrace to Hexham	300
50	3	2	2	8	„ Hexham to Fullerton Cove...	200
51	1	1	1	18	„ East Maitland to Broken-back Gap	900
52	...	...	3	4	„ Maitland and Dagworth Road to Wallis Creek ...	60
53	2	2	1	17	„ Raymond Terrace to Stockton	850
54	1	1	1	31	„ Raymond Terrace to Stroud	1,550
55	2	2	2	10	„ Raymond Terrace, by east side of Williams River, to Seaham	250
56	5	5	5	3	„ Raymond Terrace and Stroud Road to Raymond Terrace and Seaham Road (Misskell's Road)...	21
57	3	3	1	10	„ Raymond Terrace to Morpeth	500
58	2	1	1	2	„ Alnwick to Martin's Wharf	100
59	2	2	2	6	„ West Maitland to Dunmore	150
60	2	2	2	16	„ Dunmore to Clarencetown	400
61	2	2	2	6	„ Dunmore to Paterson Punt	150
62	1	1	1	16	„ Clarencetown to Dungog	800
63	1	1	1	15	„ Gostwycke to Newpark (Wallarobba Road) ...	750
64	3	2	2	10	„ Clarencetown to Limeburner's Creek	250
65	3	2	1	2	„ Harper's Hill to Allandale Railway Station ...	100
66	4	4	4	7	„ Deep Creek to Allandale Railway Station... ...	70
67	4	3	3	31	„ Singleton, *via* Newbridge, to Coopers Flat ...	465
68	3	3	3	16	„ North Road near Munnimba, *viâ* Warkworth, to Jerry's Plains Road	240
69	5	4	4	12	„ Doyle's Creek to Jerry's Plains	120
70	3	3	3	12	„ Jerry's Plains to Denman	180
71	2	2	2	10	„ Denman to junction of Muswellbrook and Mudgee Road	250
72	1	2	2	25	„ Muswellbrook and Mudgee Road to Merriwa ...	625
73	1	2	3	28	„ Merriwa to Cassilis	420
74	1	2	2	22	„ Muswellbrook Iron Bridge to Denman and Cassilis Road	550
75	...	4	3	12	„ Main North Road to Lincoln's Creek (Muscle Creek Road)	180
76	3	3	3	94	„ Denman and Cassilis Road to Mudgee	1,410
77	...	...	6	10	„ Edinglassie to Bowman's	50
78	4	4	4	21	„ Aberdeen up Rouchel Brook to Scrumlow ...	210
79	2	2	2	15	„ Muswellbrook to Denman	375
80	4	4	4	34	„ Scone to Denison Diggings, at Moonan	340
81	4	5	5	39	„ Scone to Merriwa	273
82	5	5	5	10	„ Scone and Merriwa Road at Kingdon Ponds to Middle Creek	70
83	4	4	4	17	„ Blandford to Isis River	170
84	5	5	5	6	„ Quirindi up Jacob and Joseph Creek	42
85	6	6	6	65	„ Willow-tree to Gunnedah	325
86	2	2	2	10	„ Wallabadah to Quirindi	250
87	5	5	5	33	„ Wallabadah to Nundle and Swamp Creek... ...	231
88	5	...	5	45	„ Nundle towards Scone	315
89	...	...	5	63	„ Quirindi *via* Colly Blue to Tambar Springs ...	441
90	6	6	6	22	„ Currabubula to Tamworth	110
91	6	6	6	5	„ Werris Creek Gap to Railway Station	25
92	2	2	3	38	„ Tamworth to Bowling Alley Point and Nundle	570
				1,458	Carried forward ... £	30,219

No.	Class.			Length in Miles.		Proposed Expenditure.
					Northern Roads—continued.	£
	1884.	1885.	1886.	1,458	Brought forward	30,219
93	2	2	2	4	Road from Bowling Alley Point, *viâ* Cadell's Gap, to Dungowan	100
94	4	4	4	16	„ Dungowan, *viâ* Cadell's, to head of Ogumbil Creek	160
95	5	5	5	5	„ Dungowan Creek, on North Bank, to Cadell's Station	35
96	6	6	6	7	„ Tamworth to the Forest	35
97	6	6	6	12	„ Tamworth, *viâ* Moore Creek, to Attunga	60
98	2	2	3	48	„ Tamworth to Gunnedah	720
99	1	1	1	26	„ Tamworth to Manilla	1,300
100	1	1	1	70	„ Manilla, *viâ* Barraba, to Bingera	3,500
101	...	...	5	30	„ Barraba to Bundarra	210
102	6	6	4	47	„ Nowendoc to Walcha	470
103	...	...	5	30	„ Denison Town, *viâ* Uarby to Cassilis	210
104	2	3	4	42	„ Coonabarabran to Malally	420
105	3	3	3	77	„ Gunnedah to Black Stump	1,155
106	4	3	3	75	„ Spring Creek to Birriwa	1,125
107	...	...	4	13	„ Holder's to Baradine	130
108	4	3	3	35	„ Coonabarabran to Wingidgeon	525
109	4	3	3	8	„ Coonabarabran to Ulimambri	120
110	3	3	3	43	„ Coonabarabran to Meregoen	645
111	2	2	2	25	„ Gunnedah towards Barraba	625
112	2	3	5	61	„ Gunnedah to Narrabri	427
113	3	3	4	240	„ Narrabri *viâ* Walgett to Brenda	2,400
114	3	2	2	70	„ Narrabri to Bingera...	1,750
115	3	4	4	150	„ Narrabri, *viâ* Moree, to Mungindi	1,500
116	5	5	5	50	„ Rocky Creek to Moree	350
117	3	3	5	15	„ Old Gunnedah and Narrabri Road to Eulali Creek	115
118	3	4	4	30	„ Cobbedah to Rocky Creek	300
119	4	4	5	71	„ Walgett, *viâ* Nugil to Coonamble	497
120	4	4	4	45	„ Bingera to Moree	450
121	4	4	4	51	„ Warialda to Moree	510
122	...	4	4	18	„ Paramellowa, *viâ* Bulleroo, to Moree	180
123	4	4	4	57	„ Warialda to Yetman	570
124	...	...	6	20	„ Warialda *viâ* Gragin, to Reedy Creek	100
125	5	5	5	50	„ Bingera to Bundarra, *viâ* Keera	350
126	2	2	2	28	„ Bingera to Warialda	700
127	3	3	3	32	„ Bingera to Inverell	480
128	5	4	4	30	„ Warialda to Gunyerwarialda	300
129	2	2	2	38	„ Warialda to Inverell...	950
130	...	...	6	20	„ Warialda to Ezzies	100
131	2	3	2	85	„ North Road, at Uralla, *viâ* Bundarra, to Inverell	2,125
132	...	5	5	10	„ Main Northern Road at Cregan's, *viâ* Rose Hill, to Uralla and Bundarra	70
133	5	5	5	25	„ Main North Road at Uralla to Walcha	175
134	5	5	4	18	„ Uralla to Ballala	180
135	1	1	1	15	„ Walcha to Great Northern Railway	750
136	2	2	2	134	„ Armidale to Grafton	3,350
137	...	...	5	10	„ Armidale and Inverell Road, up Dumaresq Creek, to Duval	70
138	...	...	5	12	„ Pint Pot Creek to Chandler River	84
139	3	4	4	20	„ Armidale to Yarrowick	200
140	5	5	5	40	„ Armidale to Kangaroo Hills	280
141	...	...	5	10	„ Rockvale Road, up Baker's Creek	70
142	6	6	6	45	„ Armidale *viâ* Mihi Creek to Walcha	225
143	...	...	5	34	„ Armidale to Eastern Plains...	238
144	6	6	4	15	„ Armidale to Gostwyck	150
145	...	...	4	10	„ Armidale to Castle Doyle	100
146	2	2	1	58	„ Guyra Railway Station, *viâ* Eastern Plains and Wandsworth, to Tingha and Inverell	2,900
147	...	...	5	15	„ Mihi Creek, *viâ* Gostwycke, to Uralla	105
148	...	...	5	10	„ Armidale to Long Swamp	70
149	4	4	4	17	„ Walcha to Glen Morrison	170
150	3	3	3	120	„ Walcha to Port Macquarie	1,800
151	...	...	5	12	„ Walcha to Mulerindie	84
152	2	2	2	14	„ Glen Innes to Wellingrove	350
153	2	2	2	16	„ Glen Innes to Vegetable Creek	500
154	2	2	2	11	„ Glen Innes to Red Range and Kingsgate... ...	300
155	2	2	2	11	„ Yarrowford to Ranger's Valley	275
156	6	6	6	20	„ Inverell to Reedy Creek	100
				3,934	Carried forward ... £	68,514

No.	Class. 1884.	1885.	1886.	Length in Miles.	Northern Roads—continued.	Proposed Expenditure.
						£
				3,934	Brought forward	68,514
157	...	2	2	25	Road from Inverell to Vegetable Creek	625
158	...	3	3	24	„ Inverell, *viâ* Newstead and Paradise, to Kangaroo Camp	360
159	...	4	4	19	„ Inverell, *viâ* Dinton Vale to Bukkulla	190
160	...	4	4	26	„ Inverell to King's Plains	260
161	4	4	4	116	„ Inverell to Gramen, Yetman, and Goondiwindi ...	1,160
162	...	...	5	10	„ Coolatai to Wallangra	50
163	4	4	4	60	„ Inverell to Queensland Border, *viâ* Ashford ...	600
164	6	6	6	24	„ Barney Downs to Poverty Point	120
165	1	1	1	120	„ Lawrence to Tenterfield	6,000
166	1	2	2	30	„ Newton Boyd Road to Vegetable Creek	750
167	...	2	2	14	„ Tent Hill to Deepwater	350
168	3	3	3	7	„ Tenterfield and Grafton Road to Boorook ...	105
169	5	2	2	15	„ Tenterfield, *viâ* Glen Lyon, to Queensland Border	325
170	6	4	4	78	„ Tenterfield to Bonshaw	780
171	2	2	2	15	„ Vegetable Creek to Table-land	375
172	...	...	3	10	„ Emmaville to Webb's Silver Lode...	150
173	1	1	1	73	„ Stroud, *viâ* Gloucester, to Tinonee...	3,650
174	...	...	4	60	„ Wilson's Downfall to Queensland Border, *viâ* Herding Yards	600
175	5	2	2	17	„ Tinonee and Gloucester Road to Clarkin's Crossing, Wollomba River	425
176	4	3	3	9	„ Burril Creek to Wingham and Black Flat Road ...	135
177	3	3	3	12	„ Bullock Wharf, Wollumba River, to Larry's Flat	180
178	2	2	2	12	„ Gloucester to Copeland	300
179	6	6	4	20	„ Gloucester to Cobark	200
180	6	6	6	50	„ Gloucester to Nowendoc	250
181	1	1	1	18	„ Dungog to Stroud and Gloucester Road, at Weismantel's (Monkerai Road)	900
182	2	1	1	17	„ Dungog to Underbank	850
183	2	2	2	3	„ Dungog and Underbank Road to Chichester River	75
184	3	3	3	7	„ Bandon Grove to Little River	105
185	2	4	4	9	„ Borham's to the Little River	90
186	2	2	2	6	„ Dungog and Gloucester Road to Fosterton ...	150
187	3	3	3	16	„ Dungog and Monkerai Road to Stroud	240
188	2	2	2	18	„ Bulladelah to the Stroud and Raymond Terrace Road	450
189	3	3	4	45	„ Bulladelah, *viâ* Bungwall, to Forster	450
190	2	2	2	15	„ Upper Myall to Bulladelah...	375
191	4	4	4	25	„ Upper Myall to Larry's Flat	250
192	3	3	3	10	„ Flyer's Creek to Dorney's, Upper Myall	150
193	4	4	3	7	„ Old Bulladelah Inn to Raymond Terrace Road ...	105
194	4	4	3	20	„ Ennis Punt to Glen Esk Upper Plains	300
195	5	5	4	4	„ Rolland's Plains to Ballingara Wharf	40
196	...	...	4	10	„ Neville's Gate, *viâ* Ballingarry to Rolland's Plains	100
197	4	4	4	16	„ Wilson River, *viâ* Bar Scrub, to Walcha Road ...	160
198	5	4	4	18	„ Upper Camden Haven to Laurieton	180
199	...	...	4	10	„ Coopernook, *viâ* Cattai Creek, to Harrington ...	100
200	3	3	3	16	„ Cundle, *viâ* Lansdowne, to Jones's Island Road ...	240
201	...	...	4	4	„ Coopernook to Upper Lansdowne	40
202	1	1	1	58	„ Tinonee to Port Macquarie	2,900
203	...	...	3	5	„ Port Macquarie to Tacking Point	75
204	5	5	5	14	„ Tinonee to Farquhar's Inlet	98
205	3	3	3	6	„ Tinonee to Wingham Ferry	90
206	2	2	2	8	„ Tinonee and Cundle Road to Wingham	200
207	...	...	4	4	„ Cedar Party Creek to Diamond's	40
208	5	5	3	10	„ Wingham up Cedar Party Creek (Cedar Party Creek Road)	150
209	4	4	4	14	„ Wingham, *viâ* Dingo Creek, to Kelven Grove ...	140
210	...	...	3	7	„ Wingham, *viâ* Bungay, to Bo Bo Creek	105
211	...	...	4	11	„ Wingham and Wherrol Flat Road, up Dingo Creek, to Bobbin Flat	110
212	...	...	4	10	„ Wingham, *viâ* Brimbin, to Lansdowne	100
213	3	2	2	57	„ Wingham on left bank of Manning River *viâ* Black Flat to Nowendoc	1,425
214	...	...	3	5	„ Chalk Hill to Apple-tree Flat	75
215	3	3	3	3	„ Wingham and Nowendoc Road to Karaak Flat ...	45
216	4	2	3	9	Road through Oxley Island	135
217	5	3	3	5	„ Dumaresq Island	75
218	...	...	4	10	Road from Morton's Creek to New England Road	100
				5,310	Carried forward ... £	97,667

No.	Class. 1884.	1885.	1886.	Length in Miles.	Northern Roads—continued.	Proposed Expenditure.
						£
				5,310	Brought forward	97,667
219	2	2	2	35	Road from Port Macquarie to Kempsey	875
220	...	...	3	20	„ Taree to North Forster	300
221	1	1	2	85	„ Kempsey to Armidale and Grafton Road	2,125
222	...	...	3	4	„ Blackman's Point to Ennis Ferry	60
223	2	2	2	76	„ Kempsey to Fernmount	1,900
224	...	...	3	5	„ Wingham, &c., near Killawarra, to Tinonee and Gloucester	75
225	2	2	2	30	„ Kempsey to Trial Bay	750
226	4	4	4	20	„ East Kempsey Ferry to Boggy Creek	200
227	4	4	4	20	„ East Kempsey, *viâ* Dungay Bridge, to Sherwood ...	200
228	4	4	4	20	„ Green Hills to Nelson's, Warneton	200
229	...	...	4	10	„ New England Road to Head of Hickey's Creek ...	100
230	4	4	4	20	„ Rolland's Plains to Yarrowell Falls, Macleay River	200
231	...	...	2	2	„ New England to Turner's Flat	50
232	2	2	2	20	„ Oakes Plains, *viâ* Klybucca, to Macleay River Heads	500
233	...	...	6	12	„ Nambuccra to M'Leay Heads	60
234	2	2	3	10	„ Ferry to McGuire's, along east bank, Belmore River	150
235	4	3	2	7	„ Kinchela Creek to Spencer's Creek	175
236	2	2	2	45	„ Fernmount to Armidale Road	1,125
237	...	...	1	12	„ Boat Harbour to Raleigh Mill	600
238	2	2	2	23	„ Boat Harbour, *viâ* Spickett's Creek, to Nambucca River	575
239	...	...	4	5	„ Nambuccra to Upper Warrel Creek	50
240	4	5	5	20	„ Bowra to Broker's	140
241	1	2	2	10	„ Bowra to Congarini	250
242	3	3	3	18	„ Bowra to Lumby	270
243	2	2	2	22	„ Missibotti to Nambuccra Heads	550
244	...	4	4	6	„ Newton Boyd Road to Ramornie	60
245	...	...	3	13	„ Myers' C.P. to Never Never Plains	195
246	3	3	3	9	„ Newton Boyd Road to Nymboida	135
247	4	4	4	30	„ Coutt's Crossing, *viâ* Kangaroo Creek, to Nymboida	300
248	2	2	2	80	„ Fernmount to Grafton	2,000
249	...	...	2	18	„ Moonee Creek, *viâ* Woolgoolga to Corindi ...	450
250	...	...	2	9	„ South Bellinger School to Upper South Arm ...	225
251	...	4	4	30	„ South Grafton to Corindi	300
252	...	...	2	34	„ South Grafton to Yamba	850
253	3	3	4	55	„ Grafton to Solferino...	550
254	4	4	4	24	„ Grafton to Cross Roads towards Casino	240
255	2	2	2	22	„ North Grafton to Broadwater	550
256	3	...	1	7	„ Harwood to North Arm Ferry	350
257	3	3	3	8	„ Bluff Point to South Arm Ferry, Clarence River	120
258	...	...	3	5	„ Bluff Point to Tyndale	75
259	1	1	1	25	„ Ballina to Cape Byron	1,250
260	2	2	2	20	„ Bexhill to Tintenbar	500
261	1	1	1	12	„ Bexhill to Williams's	600
262	1	1	1	78	„ Cross Roads to Ballina, *via* Casino and Lismore ...	3,900
263	5	4	4	50	„ Casino to Mount Lindsay	500
264	...	...	3	36	„ Cowalong, *viâ* Pearce's Creek and Tintenbar, to Byron Bay	540
265	2	2	2	12	„ Cowalong to Staine's Mill	300
266	...	...	2	6	„ Goonillabah to Chilcott's Wharf Road	150
267	3	3	2	38	„ Casino, *viâ* Wyrallah, to Lismore and Ballina Road, at Chilcott's Wharf	950
268	...	...	3	18	„ Casnio to Coraki	270
269	4	3	3	40	„ Casino to Tabulam...	600
270	3	2	2	27	„ Casino to Woodburn, on right bank	675
271	...	...	3	16	„ Casino to Gunderimba	240
272	2	2	2	3	„ East Wardell to the Beach...	75
273	...	...	3	12	„ Lismore to Hanging Rock	180
274	1	1	1	60	„ Lismore to Queensland Border	3,000
275	1	1	2	24	„ Lismore to Nimbin	600
276	2	2	2	12	„ Lismore to Numulgi	300
277	1	1	1	33	„ Lismore to Brunswick	1,650
278	1	1	1	20	„ Lismore to Woodburn	1,000
279	...	...	2	10	„ South Lismore to Wyrallah	250
280	3	3	3	12	„ Lismore and Ballina Road to Ballina and Cape Byron Road	180
281	...	...	1	4	„ Tintinbar to Toohey's Mill	200
282	2	2	1	15	„ Tintenbar, *viâ* Teven, to Alston Ville	750
283	2	1	1	23	„ Woodburn to Selman's	1,150
				6,817	Carried forward ... £	135,907

No.	Class.			Length in Miles.		Proposed Expenditure.
					Northern Roads—continued.	
	1884.	1885.	1886.	6,817	Brought forward	£ 135,907
284	1	1	1	14	Road from Wardell, *viâ* Tuckombil, to the Lismore and Ballina Road	700
285	...	...	1	6	„ Wardell to Ballina Road	300
286	2	1	1	14	„ Woodburn to Wardell	700
287	1	1	1	22	„ Byangum, *viâ* Tweed Junction, to Border ...	1,100
288	3	3	1	26	„ Tweed River to Brunswick River	1,300
289	2	2	2	10	„ Cudgen, *viâ* Guilfoyle's C.P. and M'Leod's Ck., to Tweed Junction	250
290	2	2	2	6	„ Murwillumbah to Tumbulgum	150
291	...	...	2	7	„ Tumbulgum, *viâ* Chindera Village, to Terranora Creek	175
292	2	2	2	9	„ Bilambil *viâ* Sebastopol, to Tweed River Heads...	225
				6,931	Total ... £	140,807
					Western Roads.	
293	2	2	2	4	Road from Parramatta to Pennant Hills	100
294	2	2	2	3	„ Blacktown Road to Seven Hills Railway Station...	75
295	2	2	2	8	„ Western Road, St. Mary's, to Orphan School Road	200
296	2	2	2	8	„ Western Road, St. Mary's, to Blacktown Road ...	200
297	...	1	1	3	„ Rouse Hill to Schofield's Platform...	150
298	2	2	2	36	„ Richmond Bridge, to King's Road...	900
299	1	1	1	6	„ Blacktown Road, *viâ* Riverstone, to Box Hill ...	300
300	...	...	2	2	„ Clarendon to Cornwallis	50
301	4	4	4	16	„ Windsor to Penrith	160
302	4	4	4	14	„ Yarramundi, *viâ* Aston's Falls and Enfield, to Wilberforce	140
303	1	1	1	30	„ Windsor, *viâ* Sackville Ferry, to Wiseman's Ferry	1,500
304	4	4	4	8	„ Sackville to East Portland	80
305	4	4	4	10	„ Churchill's Wharf to West Portland	100
306	5	5	5	14	„ West Portland Road, *viâ* Moran's Rock, to Bulga Road, Upper Colo	98
307	5	5	5	50	„ Hennessy's to Putty (Bulga Road)	350
308	1	1	1	5	„ Bell's Line to Hennessy's (Comleroy Road) ...	250
309	3	3	3	9	„ Springwood to The Hawkesbury	135
310	3	3	3	14	„ Bowenfels to King's Road	210
311	3	3	3	10	„ Little Hartley to Gambenang	150
312	1	1	1	6	„ Hartley to Lithgow	300
313	4	5	5	30	„ Hartley to Oberon	210
314	4	3	3	18	„ Oberon to Jenolan	270
315	2	1	1	6	„ Mount Victoria to Mount Wilson Platform ...	300
316	5	4	4	2	„ Blackheath to Govett's Leap	20
317	2	2	2	10	„ Bowenfels to Marsden's Swamp	250
318	2	1	1	6	„ Little Hartley to Hartley Vale Platform	300
319	4	3	3	16	„ Four-mile Tree to Rockley	240
320	1	2	2	13	„ Mutton's Falls Public School to Oberon	325
321	...	...	5	10	„ Tarana to O'Connell...	70
322	1	2	3	17	„ O'Connell to Oberon	255
323	4	3	3	24	„ O'Connell to Swatchfield Road	360
324	3	3	5	20	„ Oberon to Swatchfield	140
325	3	4	4	12	„ Bowenfels to Wallerawang...	120
326	3	3	3	14	„ Middle River, to Meadow Flat	210
327	3	3	3	9	„ Lidsdale to Wolgan	135
328	2	3	4	36	„ Sofala to Rylstone	360
329	1	1	2	38	„ Cudgegong to Hill End	900
330	2	2	2	52	„ Cudgegong to Cassilis	1,300
331	2	3	1	2	„ Cudgegong, *viâ* Menah, to Gulgong	100
332	...	...	3	14	„ Cudgegong Village to Rylstone	210
333	4	5	4	26	„ Cudgegong to Rylstone	260
334	...	...	4	31	„ Rylstone to Bylong	310
335	4	4	3	8	„ Cudgegong to Home Rule	120
336	1	1	1	8	„ Cudgegong, *viâ* Cullenbone, to Gulgong	400
337	4	4	4	14	„ Windeyer, *via* Campbell's Creek, to Raynor's ...	140
338	3	3	3	10	„ Walls' Junction to Botobalar	150
339	2	2	2	23	„ Gulgong to Birriwa	575
340	1	2	2	19	„ Monkey Hill to Hill End	475
341	3	4	4	44	„ Guntawang to Wellington	440
				788	Carried forward ... £	14,393

No.	Class. 1884.	1885.	1886.	Length in Miles.	Western Roads—continued.	Proposed Expenditure.
				788	Brought forward	£ 14,393
342	4	4	5	29	Road from Tabrabucca, *via* Crudine, to Monkey Hill... ...	203
343	1	1	1	11	„ Bathurst to O'Connell's Plains	550
344	1	1	1	2	„ Bathurst and O'Connell's Plains Road, at Cox's Hill, to Cooper's Bridge...	100
345	5	5	5	4	„ Kelso to Kelloshiel	28
346	2	2	2	5	„ Kelso to White Rock	125
347	3	3	3	22	„ Kelloshiel, *viâ* White's Crossing, to Little Forest...	330
348	2	2	2	15	„ Limekilns Road to Palmer's Oakey Road and Upper Turon	375
349	2	2	2	28	„ Kelso, *viâ* the Limekilns, to Sofala Road	700
350	3	3	3	15	„ Mitchell's Creek Reefs towards Palmer's Oakey...	225
351	3	1	1	5	„ Mitchell's Creek to Western Road at Meadow Flat	250
352	...	...	2	8	„ Mitchell's Creek to Piper's Flat Railway Station...	200
353	...	...	2	7	„ Meadow Flat to Tarana Station	175
354	6	6	6	5	„ Macquarie Plains to Bloom Hill	25
355	...	...	3	8	„ O'Connell's Plains, *viâ* Spicer's, to Campbell's Lagoon	120
356	3	3	3	11	„ O'Connell's Plains Road, *viâ* Dirty Swamp, to Road from Mutton's Falls to O'Connell's Plains ...	165
357	1	1	1	30	„ Bathurst, *viâ* Kelloshiel, to near Monkey Hill ...	1,500
358	3	3	3	34	„ Bathurst to Ophir	510
359	1	1	1	29	„ Bathurst to Sofala, *viâ* Peel and Wyagdon ...	1,450
360	2	2	2	6	„ Peel to Duramana	150
361	1	1	1	12	„ Sofala, Cockatoo Hill, at Monkey Hill	600
362	3	3	3	16	„ Rockley to Caloola and Tuena Road	240
363	2	1	1	18	„ Mount Lawson, *viâ* Judge's Creek, to Burraga Copper Mines	900
364	2	2	2	5	„ Evans Plains, *viâ* the Bald Hill, to Trunkey Road	125
365	2	2	2	9	„ Rockley, *viâ* Campbell's River, to the Dog Rocks	225
366	...	...	1	5	„ Rockley to Charlton	250
367	4	4	4	20	„ Rockley to the Isabella River	200
368	1	1	1	16	„ Bathurst and Caloola Road to Rockley	800
369	4	4	4	3	„ Rockley Road to Camping Reserve, Vale Creek ...	30
370	4	4	4	13	„ Bathurst and Caloola Road to Tea-pot Swamp ...	130
371	4	4	4	30	„ Bathurst, *viâ* Gorman's Hill, to Campbell's River	300
372	2	2	2	5	„ Bathurst, Campbell's River Road, Perth	125
373	2	1	1	6	„ Caloola Road, *viâ* Limekilns, to Rockley Road ...	300
374	1	2	3	38	„ Bathurst to Caloola and Trunkey Gold-field ...	570
375	1	1	1	5	„ Newbridge Station to Caloola	250
376	2	2	2	12	„ Arthur Town to Tuena	300
377	1	1	1	17	„ Newbridge, *viâ* Hobbey's, to Arthur Town ...	850
378	...	...	2	5	„ Newbridge towards Evans' Swamp	125
379	2	2	4	36	„ Hill End, *viâ* Bragg's, to Main Western Road ...	360
380	4	4	4	10	„ Mallow Grove towards Trunkey	100
381	1	1	1	12	„ Tea-pot Swamp, *viâ* Five Islands, to No. 1 Swamp	600
382	1	1	1	14	„ Blayney to Shaw and No. 1 Swamp	700
383	2	2	2	14	„ Blayney, *viâ* Graham's Town, to Millthorpe ...	350
384	1	2	2	8	„ Blayney, *viâ* Hood's, to Tea-pot Swamp	200
385	4	4	4	13	„ Tea-pot Swamp, *viâ* Mallow Grove, to Carcoar ...	130
386	2	1	1	25	„ Orange to Carcoar	1,250
387	3	3	3	14	„ Cargo to Canowindra	210
388	5	5	5	12	„ Cargo Road, *viâ* Paling Yard Creek, to Cudal ...	84
389	1	1	2	50	„ Orange, *viâ* Cargo, to Nanima	1,250
390	6	4	4	12	„ Lewis Ponds to Orange	120
391	4	4	4	10	„ Orange to Mullion	100
392	...	...	2	10	„ Mullion Railway Station to Ophir...	250
393	2	2	2	12	„ Orange to Conoblas	300
394	3	3	3	8	„ Orange to the Pinnacle at Renshaw's	120
395	2	2	2	5	„ Spring Terrace to Long Swamp	125
396	2	2	2	5	„ Blayney, *viâ* Parker's, to Five Islands	175
397	3	3	3	5	„ Marten's to Spring Hill Railway Station	75
398	3	2	2	12	„ Cargo to Cudal	300
399	2	2	2	16	„ Orange to Cadia	400
400	3	4	4	16	„ Orange to Ophir	160
401	...	...	3	4	„ Cheeseman's Creek to Oakey Creek at Water Reserve	60
402	2	2	2	5	„ Spring Terrace to Forest Reefs	125
403	4	4	4	15	„ Orange and Cadia Road to Four-mile Creek ...	150
404	1	2	2	11	„ Forest Reefs to Blayney	275
				1,651	Carried forward ... £	35,863

No.	Class.			Length in Miles.	Western Roads—continued.	Proposed Expenditure.
						£
	1884.	1885.	1886.	1,651	Brought forward	35,863
405	1	1	1	4	Road from Matthews' to Brown's Creek Mine...	200
406	2	2	2	10	„ Blayney to Guyong	250
407	2	2	2	10	„ Spring Grove, *viâ* Guyong, to Byng	250
408	3	2	2	6	„ Western Road, at Faviell's, to Byng	150
409	3	3	3	14	„ Icely to Spring Grove Railway Station	210
410	4	2	2	12	„ Orange to Icely	300
411	1	1	1	12	„ Spring Grove Railway Station to Cadia	600
412	2	2	2	6	„ Spring Hill Station to Hennessy's, on Cadia Road	150
413	2	2	2	10	„ Lucknow, *viâ* Spring Hill, to the Carcoar Road ...	250
414	...	...	4	12	„ Molong to Boree	120
415	2	3	3	28	„ Molong, *viâ* Toohey's Inn, to Toogong	420
416	2	2	2	40	„ Molong to Obley	1,000
417	3	3	3	22	„ Molong to Warne Railway Station	330
418	6	6	6	20	„ Burrawong Cross Roads to Bolderogery	100
419	3	4	4	16	„ Stony Creek to Burrendong	160
420	2	1	1	4	„ Springs Railway Station to Newrea Bridge ...	200
421	2	2	2	25	„ Wellington, *viâ* Curra Creek, to Buckinbah ...	625
422	3	3	3	22	„ Wellington to Burrendong	330
423	4	4	4	18	„ Wellington to Arthurville	180
424	1	1	1	5	„ Carcoar to Village of Shaw	250
425	3	3	3	30	„ Boga Bogalong to Marsden...	450
426	4	4	4	30	„ Grenfell to Goolagong	300
427	4	4	4	50	„ Grenfell to Morangarell	500
428	...	...	3	8	„ Grenfell to Eualdrie...	120
429	5	5	5	16	„ Cowra to Hovell's Creek	112
430	6	6	6	47	„ Cowra to Young	235
431	3	3	5	20	„ Cowra to Canowindra	140
432	...	...	3	17	„ Cowra, *viâ* Binni Creek, to Walli	255
433	5	5	5	56	„ Cowra to Forbes, south bank of Lachlan	392
434	5	5	5	20	„ Cowra to Milburn Creek	140
435	4	4	4	30	„ Cowra, *viâ* Morongola and Neilar, towards Frogmore	300
436	...	...	4	12	„ Cowra, *viâ* Neilar and Gudgebong, towards Burrowa	120
437	2	2	4	8	„ Carcoar to Flyer's Creek	80
438	...	3	3	12	„ Cowra to Walli	180
439	2	2	2	30	„ Mandurama to Canowindra...	750
440	2	2	2	10	„ Mandurama to Galley Swamp	250
441	...	...	3	6	„ Walli to Sheet of Bark or Burley Jacks	90
442	2	2	2	12	„ Sheet of Bark, *viâ* Wood's Flat, to Mount McDonald	300
443	4	4	4	30	„ Biggar to Mount McDonald	300
444	3	3	3	30	„ Lyndhurst, *viâ* Cobb's, to the Abercrombie ...	450
445	3	3	4	22	„ Canowindra to Eugowra	220
446	1	1	2	48	„ Boree to Parkes	1,200
447	3	2	2	19	„ Forbes to Parkes	475
448	3	3	3	57	„ Forbes to Condobolin	855
449	4	3	3	28	„ Forbes to Bogan	420
450	3	3	3	68	„ Parkes to Condobolin	1,020
451	...	...	4	32	„ Parkes to The Bogan	320
452	4	3	4	42	„ Grenfell to Forbes	420
453	6	4	4	62	„ Forbes to South Condobolin	620
454	...	...	4	52	„ The Lachlan at Murran to Mount Hope	520
455	4	5	5	50	„ Wellington to Cobborah	350
456	3	3	3	70	„ Faulkner's, *viâ* Cobborah, to Gilgandra	1,050
457	4	3	3	70	„ Cullenbone to Dubbo	1,050
458	2	2	3	104	„ Dubbo to Coonamble	1,560
459	4	4	4	40	„ Obley to Dubbo	400
460	...	...	2	6	„ Cobar towards Hillston	150
461	...	4	5	80	„ Cobar to Nyngan	560
462	...	...	4	135	„ Cobar to Wilcannia	1,350
463	...	6	6	60	„ Nymagee to Nyngan	300
464	...	...	2	5	„ Mount Hope Tank to Euabalong Road	125
465	...	6	6	150	„ Bourke to Ford's Bridge and Hungerford ...	750
466	...	6	6	125	„ Bourke to Wanaaring	625
467	...	3	3	90	„ Bourke to Barringun	1,350
468	...	6	6	180	„ Wilcannia to Thackaringa	900
469	...	6	6	100	„ Wilcannia towards Tibboburra	500
470	6	6	6	100	„ Wilcannia towards Wentworth	500
				4,216	Total ... £	64,992

No.	Class. 1884.	Class. 1885.	Class. 1886.	Length in Miles.	Southern Roads.	Proposed Expenditure. £
471	1	1	1	8	Road from Randwick Toll-gate to La Perouse...	400
472	1	1	1	1	„ La Perouse Road to Little Bay (Sanatorium Road)	50
473	1	1	1	3	„ Half-way House to Rocky Point (Rocky Point Road)	150
474	1	1	1	1	„ Banks Meadow to Whisker's Road	50
475	1	1	1	7	„ Tom Ugly's Point, *viâ* West's Forest Road and Kingsgrove and Croydon Park, to Main Southern Road, near Croydon	350
476	1	1	1	10	„ Rocky Point Road to George's River (Forest Road)	500
477	3	3	3	5	„ Illawarra Road to Bond's Road (Broad-arrow and Stony Creek Road)	75
478	4	4	4	6	„ Bringelly Cross Roads to the Cobbitty Road ...	60
479	1	2	2	4	„ Campbelltown to Narellan	100
480	1	1	1	23	„ Picton, *viâ* Vanderville, to foot of Burragorang Mountain	1,150
481	3	3	3	4	„ Appin to Brooke's Point	60
482	3	3	3	8	„ Foot of Burragorang Mountain to Cox's River ...	120
483	3	3	3	8	„ Foot of Burragorong Mountain, up the Wollondilly	120
484	4	3	2	18	„ Bottle Forest to Main South Coast Road, at Westmacott's Pass	450
485	1	1	1	12	„ Bulli, *via* Coal Cliff, to Blue-gum Forest	600
486	6	6	6	7	„ Bulli Pass to Cataract River	35
487	1	1	1	38	„ Moss Vale, *viâ* Kangaroo Valley, to Nowra ...	1,900
488	1	1	1	30	„ Moss Vale and Nowra Road, *viâ* Robertson, to foot of Jamberoo Mountain...	1,500
489	1	1	1	22	„ Old South Road, from Cross Roads, *viâ* Moss Vale, to Little Forest	1,100
490	1	1	1	18	„ Bowral, *viâ* Alcorn's Hill, to Village of Robertson	900
491	1	1	1	3	„ Fitz Roy Iron Mines to Bowral	150
492	3	3	3	2	„ Old South Road, Mittagong, to Southern Road, near Fitz Roy Inn	30
493	1	1	1	5	„ Main Southern Road near Berrima to Bowral ...	250
494	1	1	1	2	„ Bowral to Lower Mittagong (Merrigang Road) ...	100
495	1	1	1	1	„ Bowral Road to Burradoo Platform	50
496	1	1	1	5	„ Berrima to Railway Station at Moss Vale... ...	250
497	1	1	1	3	„ Kangaroo Ground Road at Byrnes', *viâ* C. Throsby's, to Old South Road at Moss Vale...	150
498	3	2	2	18	„ Moss Vale and Shoalhaven Road, *via* Meryla Creek, to Wallanderry Road	450
499	2	2	2	3	„ Sutton Forest to Main South Road, near Cowley's	75
500	4	2	2	7	„ Sutton Forest to Bundanoon	175
501	5	4	4	10	„ Cross Roads towards Taralga	100
502	3	3	3	12	„ The Kangaloon Road, at Robertson Park, to near Mount Murray	180
503	3	3	3	6	„ Near Wallaby Creek, *viâ* Macquarie Pass, to Central Illawarra...	90
504	1	1	1	1	„ Alcorn's Store to the Macquarie Pass Road ...	50
505	2	2	3	9	„ Kiama Road, at Blenkinsop's, *viâ* Wild's Meadows, to Barrangarry Road	135
506	2	1	1	2	„ Burrawang to Robertson Road	100
507	2	2	2	4	„ Wild's Meadows to Robertson Road	100
508	4	4	4	7	„ Main South Coast Road to Jervis Bay	70
509	5	5	5	75	„ Nowra, *viâ* Narriga, to Braidwood...	525
510	3	3	3	20	„ Nowra to Yalwal	300
511	1	1	1	43	„ Nowra, *viâ* Tomerong, to Milton	2,150
512	2	2	2	12	„ Kangaroo Valley to Broughton's Creek	90
513	3	3	3	9	„ Kangaroo Mountain, *viâ* Brogher's Creek, to Kangaroo Valley	135
514	2	2	2	12	„ Marulan to Greenwich Park	300
515	3	3	3	14	„ Greenwich Park to Towrang	210
516	4	4	6	18	„ South Road, at Towrang, *viâ* Lockyersleigh, to Paddy River	90
517	1	1	1	6	„ Marulan to the Limekilns	300
518	1	1	2	25	„ Marulan, *viâ* Bungonia and Jacqua, to Windellama	625
519	2	2	2	3	„ Bungonia to Inverary Park	75
				570	Carried forward ... £	16,975

No.	Class. 1884.	1885.	1886.	Length in Miles.	Southern Roads—continued.	Proposed. Expenditure
				570	Brought forward	£ 16,975
520	2	2	2	17	Road from Goulburn to Bungonia	425
521	1	4	3	22	„ Goulburn to Windellama	330
522	1	1	1	38	„ Goulburn, *viâ* Taralga, to Curraweela	1,900
523	...	...	5	15	„ Richlands to the Wombeyan Caves	105
524	2	2	2	23	„ Goulburn to Upper Tarlo and Roslyn	575
525	4	4	4	9	„ Campbell's Lane, Middle Arm Road, to Rhyanna	90
526	4	3	3	5	„ Goulburn and Tuena Road, *viâ* Limekilns, to Goulburn and Tarlo Road	75
527	1	1	1	42	„ Goulburn, *viâ* Crookwell, to Binda...	2,100
528	1	1	1	39	„ Goulburn, *viâ* Gullen, to Wheeo	1,950
529	2	2	2	15	„ Goulburn, *viâ* Mummell, to Pomeroy	375
530	2	2	2	10	„ Collector to Main Southern Road, at Bredalbane	250
531	3	3	3	17	„ Collector to Gunning	255
532	3	2	3	15	„ Collector towards Goulburn	225
533	2	2	3	24	„ Collector, *viâ* Currawang, to Tiranna	360
534	3	3	3	12	„ Wheeo to Binda	180
535	2	2	2	10	„ Wheeo towards Crookwell	250
536	5	5	5	26	„ Crookwell, *viâ* Grabben Gullen, to Gunning ...	182
537	4	4	4	24	„ Binda to Bigga	240
538	...	...	2	2	„ Goulburn and Crookwell Road, near Marsden's, *viâ* Ravensworth, to Goulburn and Tarlo Road, near Confoy's	50
539	2	2	2	57	„ Goulburn and Binda Road, at Mount Wayo, *viâ* Tuena, to the Abercrombie River	1,425
540	5	5	5	5	„ Goulburn and Wheeo Road, at Hawthorn's Tree, to the Wheeo and Crookwell Road	35
541	5	5	5	15	„ Bigga to the Abercrombie	105
542	3	3	3	12	„ Goulburn and Tuena Road, *viâ* Fullerton, to Sherwood	180
543	3	3	3	18	„ Taralga to Laggan	270
544	5	3	3	6	„ Taralga to Stonequarry	90
545	5	5	5	10	„ Stonequarry to Leighwood	70
546	5	4	4	12	„ Taralga, *viâ* Bannaby, towards Swallowtail ...	120
547	5	5	5	12	„ Laggan, *viâ* Golspie, to Leighwood	84
548	3	3	3	8	„ Golspie to Taralga and Rockwell Road	120
549	3	3	3	36	„ Wheeo to Burrowa	540
550	...	3	3	22	„ Mumby to Junction of Burrowa and Wheeo Road	330
551	2	2	2	15	„ Gullen, *viâ* Crookwell, to Laggan	375
552	5	4	4	6	„ Crookwell, *viâ* Red Ground, to Laggan and Binda Road	60
553	3	3	3	13	„ Laggan to Binda	195
554	5	5	5	16	„ Binda to Peelwood	112
555	3	3	3	7	„ Cotta Walla to road Mount Wayo to Peelwood ...	105
556	2	2	2	15	„ Bungendore to Doughboy Hill	375
557	3	3	2	20	„ Bungendore, *viâ* Molonglo, to Queanbeyan and Bungendore Road	500
558	6	6	5	10	„ Bungendore and Molonglo Road to Black Range	70
559	1	1	1	32	„ Braidwood to Nelligen—Clyde Road	1,600
560	5	3	3	6	„ Nelligen to Bateman's Bay...	90
561	5	3	3	9	„ Nelligen to Bateman's Bay and Milton Road at M'Millan's	135
562	2	2	1	75	„ Milton, *viâ* Bateman's Bay and Moruya, to Bodalla	3,750
563	4	4	4	36	„ Milton and Bateman's Road, near Woodburn, *viâ* Brooman's Ford, to Nelligan	360
564	1	1	1	16	„ Braidwood, *viâ* Dirty Butter Creek, to Araluen ...	800
565	4	4	4	27	„ Braidwood to Molonglo (Cole's Line)	270
566	...	3	3	12	„ Trunkatabella Bridge to Reedy Creek Cutting ...	180
567	2	2	1	36	„ Araluen to Moruya	1,800
568	2	2	2	10	„ Braidwood to Elrington	250
569	2	2	2	9	„ Braidwood to Sergeant's Point (Little River) ...	225
570	6	6	6	8	„ Sergeant's Point (Little River) to Clyde River ...	40
571	6	6	6	15	„ Braidwood and Tarago Road, *viâ* Larbert, to Lower Boro	75
572	3	3	3	7	„ Elrington to Ballalaba	105
573	3	3	3	12	„ Braidwood, *viâ* Reidsdale, to Bell's Creek... ...	180
574	4	5	5	5	„ Reidsdale to Warnumbucca (Tudor Valley Road)...	35
575	3	3	3	8	„ Elrington to Araluen	120
576	2	2	2	12	„ Monga to Major's Creek, "Elrington"	300
577	3	3	3	22	„ Major's Creek to Fairfield	330
				1,607	Carried forward ... £	42,698

No.	Class.			Length in Miles.		Proposed Expenditure.
					Southern Roads—continued.	£
	1884.	1885.	1886.	1,607	Brought forward	42,698
578	1	1	1	7	Road from Cathcart to Bibenluke Junction	350
579	2	2	2	18	„ Candelo to Mogila and Brown Mountain Road ...	450
580	3	3	3	18	„ Candelo, *viâ* Wyndham, to Burrowgate	270
581	3	3	3	24	„ Brown Mountain, *viâ* Kameruka, to Finger-post ...	360
582	2	2	2	2	„ Candelo to Kameruka	50
583	3	3	3	8	„ Burrogate to Honeysuckle	120
584	3	3	3	12	„ Towamba to New Buildings	180
585	5	5	2	15	„ Towamba to Bondi	375
586	2	2	2	38	„ Cathcart Junction, *viâ* Wyndham, to Panbula ...	950
587	2	2	2	6	„ Panbula to Wolumla...	150
588	3	3	2	13	„ Wolumla Junction to Cross Roads...	325
589	4	4	4	10	„ Wolumla, *viâ* Lithgow Flat, to Candelo and Wyndham Road...	100
590	4	4	4	12	„ Merimbula to Jellatt Jellatt	120
591	4	4	4	6	„ Briandairy to Bega	60
592	1	1	1	9	„ Bega, *viâ* Jellatt Jellatt, to Tathra...	450
593	1	1	1	10	„ Bega to Wolumla	500
594	2	2	2	55	„ Bega to Bodalla	1,375
595	...	...	6	7	„ Wallaga Lake to Bermagui...	35
596	3	3	2	16	„ Cobargo to Bermagui	400
597	4	4	4	23	„ Cobargo, *viâ* Wandellow and Yaurie, to Wadbilliga	345
598	2	2	2	16	„ Bega to Numbugga and Bembooka	400
599	2	2	2	32	„ Bega *viâ* Wapangue to the Murrah River... ...	800
600	3	3	3	27	„ Bodalla to Dignam's Creek, *viâ* Cowderoy's and Hawdon's...	405
601	3	3	3	18	„ Pitman's Bridge, *viâ* Wagonga Heads, to Bodalla...	270
602	3	2	2	23	„ Eden to Sturt	575
603	1	1	1	12	„ Eden to Panbula	600
604	3	3	3	38	„ Cooma to Jindabyne...	570
605	4	4	4	12	„ Cooma and Jindabyne Road near Coolringdon to Middlingbank	120
606	3	3	3	20	„ Cooma and Jindabyne Road to Buckley's Crossing	300
607	2	2	2	52	„ Cooma and Jindabyne Road to Kiandra	1,300
608	1	1	1	52	„ Cooma to Bombala	2,600
609	...	...	5	20	„ Cooma, *viâ* Myalla, to Bobundarah and Nimitybelle Road	140
610	4	4	4	26	„ Cooma to Count-a-guinea, *viâ* the Big Badger ...	260
611	3	3	4	80	„ Cooma to Braidwood	800
612	3	3	3	20	„ Cooma to Bobundarah	300
613	...	...	5	12	„ 13-mile Post on Bombala and Delegate Road, *viâ* Craigie, to Border	84
614	3	3	4	16	„ Buckley's Crossing *viâ* Boloco towards Jindabyne	160
615	4	4	4	38	„ Bibenluke to Bobundarah	380
616	...	...	5	7	„ Delegate to the Border	49
617	5	5	5	45	„ Bobundarah to Seymour	315
618	2	2	2	18	„ Holt's Flat to Railway Bridge	450
619	2	2	2	22	„ Bombala to Delegate	550
620	3	3	3	14	„ Bombala to Gunningrah N., *viâ* Bukalong ..	210
621	4	4	4	8	„ Old Burra Road	80
622	1	2	3	41	„ Queanbeyan, *viâ* Gundaroo, to Gunning	615
623	2	2	3	44	„ Yass to Bungendore	660
624	2	2	2	31	„ Queanbeyan to Murrumbateman	775
625	3	3	3	24	„ Yass, *viâ* Mundoonen, to Fairfield Bridge... ...	360
626	1	1	1	7	„ Gunning to Dalton	350
627	3	3	3	43	„ Dalton to Burrowa	645
628	3	3	3	17	„ Bowning to Binalong	255
629	3	3	3	28	„ Sharpening Stone Creek to Burrowa and Binalong Road near Burrowa	420
630	3	2	2	13	„ Yass to Woolgarlo	325
631	3	3	3	25	„ Dalton to Nawawa	375
632	3	3	3	15	„ Dalton, *viâ* Jerrawa Platform, to Yass Municipality	225
633	3	3	3	9	„ Gunning and Burrowa Road to Yass	135
634	5	5	5	18	„ Dalton and Narrawa Road, near Roche's, to junction of Pudman Road	126
635	2	2	2	2	„ Sharpening Stone Creek and Burrowa Road, near Walls, to Bowning	50
636	4	4	4	5	„ Ginindera to Weetangra	50
				2,866	Carried forward ... £	66,747

No.	Class.			Length in Miles.		Proposed Expenditure.
					Southern Roads—continued.	£
	1884.	1885.	1886.	2866	Brought forward	66,747
637	4	4	4	22	Road from Queanbeyan to Uryarra Post Office, *viâ* Yarrolumna	220
638	4	4	4	15	„ Bloomfield Road at Warro Creek, *viâ* Boambalo Ford, to Mullion	150
639	4	4	4	15	„ Bloomfield Crossing; Murrumbidgee to Cooradigbee Valley, near Ryrie's	150
640	...	...	4	55	„ Bloomfield, *viâ* Weajasper to Tumut	550
641	4	4	4	15	„ South Road, near Bookham, to the Cooradigbee Junction	150
642	4	4	4	14	„ Ginindera and Gundaroo Road, *viâ* Mac's Reef, to Bungendore Road	140
643	4	4	4	8	„ Bookham to Bowning and Binalong Road at Illalong	80
644	...	...	4	12	„ Bookham to Chidowla	120
645	3	2	2	11	„ Yass to Bloomfield	275
646	4	4	4	8	„ Canberra to Molonglo and Murrumbidgee Rivers	80
647	4	4	4	3	„ Yass to Black Range	30
648	3	3	3	7	„ Frogmore to Wheeo and Burrowa Road... ...	105
649	...	...	3	22	„ Mumby to junction of Burrowa and Wheeo Road	330
650	5	5	5	12	„ Wallanbeen to Murrumburrah	84
651	2	2	2	28	„ Burrowa to Young	700
652	...	...	4	22	„ Burrowa to Kenya	220
653	3	3	3	60	„ Young to Temora	900
654	3	3	2	30	„ Morangarell to junction with road Young to Temora	750
655	6	4	4	20	„ Young and Cowra Road, near Young, to Jerry Bang	200
656	5	5	5	14	„ Young, *viâ* Irish Jack's Creek and Black Ranges, to Moppity	98
657	1	1	1	20	„ Binalong to Burrowa	1,000
658	1	1	2	18	„ Murrumburrah, *viâ* Wombat to Young	450
659	1	1	2	31	„ Young to Grenfell	775
660	4	3	3	7	„ Cullinga to Wallendbeen	105
661	...	...	3	25	„ Jugiong to Murrumburrah	375
662	5	5	4	10	„ Murrumburrah to Harden	100
663	1	1	1	20	„ Gundagai to Tumut	1,000
664	2	2	2	14	„ Gundagai to Brungle	350
665	2	2	3	48	„ Gundagai to Wagga Wagga, "north side of River"	720
666	3	3	3	16	„ Gundagai to Bongongolong...	240
667	3	2	2	11	„ Tumut to Brungle	275
668	...	...	3	12	„ Brungle Bridge to Wagra	180
669	3	3	3	10	„ Tumut to Lacmalac	150
670	5	5	5	60	„ Tumut to Kiandria	420
671	1	1	1	14	„ Tumut to Adelong	700
672	...	...	3	22	„ Temora to Barmedman	330
673	2	2	2	7	„ Gilmore Creek to Reily's Crossing, Adelong Creek	175
674	3	3	3	8	„ Reily's Crossing to Reedy Flat	120
675	4	3	2	30	„ Middle Adelong to Tumberumba	900
676	3	3	3	20	„ Adelong to Main South Road, at Hillas Creek ...	300
677	1	1	1	24	„ Main Southern Road to Middle Adelong	1,200
678	3	3	3	23	„ Coolac to Cootamundra, *viâ* M'Leod's	345
679	2	2	2	33	„ Cootamundra to Temora	825
680	...	3	3	12	„ Cootamundra to Stockinbingal Bridge	180
681	2	2	2	7	„ Upper Tumberumba to Tumberumba	175
682	1	1	1	30	„ Tumberumba, *via* Munderoo, to Jingellic... ...	1,500
683	2	2	2	30	„ Welaregang to Tumberumba Road	750
684	2	2	2	100	„ Bowna Station to Welaregang	2,500
685	...	...	3	30	„ Welaregang, *viâ* Greg Greg, to Kancoban ...	450
686	2	2	1	40	„ South Road, at Little Billabong, to Tumberumba	2,000
687	...	...	3	10	„ Manus to Rosewood...	150
688	1	1	1	10	„ Carabost to Kiamba...	500
689	5	5	5	77	„ Wagga Wagga to Murrumburrah and Grenfell Road	539
690	2	2	2	33	„ Main Southern Road, at Kiamba, to Wagga Wagga	825
691	5	5	5	60	„ Wagga Wagga to Narrandera	420
692	4	3	3	5	„ Wagga Wagga to Lake Albert	75
693	3	3	3	28	„ Wagga Wagga to Bullenbong	420
694	2	2	2	15	„ Main Southern Road, at Tarcutta, to Alfred Town	375
695	6	6	6	100	„ Conargo to Narrandera, *viâ* Cuddel	500
696	6	6	6	40	„ Wagga Wagga to Cowabee...	200
697	2	2	4	60	„ Rock Railway Station to Urana	600
698	1	1	1	20	„ Culcairn Railway Station, *viâ* Morven, to Germanton	1,000
				4,449	Carried forward ... £	96,273

No.	Class. 1884.	1885.	1886.	Length in Miles.	Southern Roads—continued.	Proposed Expenditure.
						£
				4,449	Brought forward	96,273
699	4	4	3	18	Road from Germanton to Cookindina	270
700	3	3	3	81	„ Albury to Wagga Wagga	1,215
701	2	2	2	100	„ Albury to Turner's Inn, south of Tocumwall ...	2,500
702	3	3	3	80	„ Albury to Urana	1,200
703	2	2	2	50	„ Albury and Corowa Road to Urana	1,250
704	6	6	6	80	„ Corowa, *viâ* Sandy Ridges and Bull's Plains, to Jerilderie...	400
705	...	3	3	34	„ Corowa to Piney Range	510
706	3	3	2	22	„ Howlong to Walbundrie	550
707	3	3	3	20	„ Walbundry to Culcairn Railway Station	300
708	3	3	3	20	„ Gerogery Railway Station, *viâ* Jindera, to Bungowannah	300
709	1	1	2	27	„ Gerogery Railway Station, *viâ* Bethel, Burrumbuttock, to Howlong	675
710	5	5	5	20	„ Walla Walla to Gerogery Railway Station ...	140
711	...	4	4	40	„ Jerilderie to Tocumwall	400
712	...	1	1	10	„ Coonong Railway Station towards Urana	500
713	...	4	4	20	„ Coonong Railway Station towards Goolgumbla ...	200
714	4	4	4	112	„ Deniliquin to Balranald	1,120
715	3	3	3	86	„ Deniliquin to Urana	1,290
716	4	4	4	30	„ Tocumwall to Deniliquin	300
717	3	4	4	72	„ Deniliquin to Hay	720
718	6	6	6	21	„ Deniliquin to Mathoura Old Road...	105
719	...	...	2	18	„ Deniliquin to Tarrama	450
720	5	4	4	24	„ Mathoura to Moama, west side of Railway ...	240
721	...	...	4	40	„ Murray Hut to Tuppal Road	400
722	5	5	5	70	„ Moama to Moulamein	490
723	...	...	3	20	„ Deniliquin to Moama Swamp	300
724	2	2	2	22	„ Moama to Caloola, Mars, and Womboota... ...	550
725	5	5	5	60	„ Till Till to Oxley Bridge	420
726	...	...	6	60	„ Wentworth to South Australian Border	300
727	5	6	6	116	„ Balranald towards Hay	812
728	...	...	6	100	„ Balranald to Wentworth	500
729	4	4	4	100	„ Carathoul, *viâ* Gunbar, to Hillston	1,000
730	5	5	5	130	„ Hulong Station, to the Lachlan, at Lake Cudgellico Crossing	910
731	...	...	3	40	„ Euabalong to Mount Hope...	600
732	3	3	4	50	„ Hay to Gunbar	500
733	3	3	5	40	„ Lachlan at Whealbah to Gunbar	200
734	6	6	6	120	„ Hay to Narrandera	600
735	2	2	3	49	„ Hay to Booligal	735
736	6	6	6	50	„ Booligal to Hillston	250
737	6	6	6	210	„ Booligal to Wilcannia	1,050
				6,711	Total miles. Total ... £	120,525

NOTE.—The amount per mile proposed to be expended on each class of Roads is as follows:—1st class, £50; 2nd class, £25; 3rd class, £15; 4th class, £10; 5th class, £7; 6th class, £5.

		£
Northern Roads ...	... 6,931	140,807
Western Roads ...	... 4,216	64,992
Southern Roads ...	... 6,711	120,525
Total	... 17,858	326,324

N.B.—All votes for roads within Municipal limits have been excluded from this Schedule. No sum herein contained is, therefore, to be expended within the boundaries of any Municipality.

N.N.B.—The whole of the roads contained in this Schedule are subject to a reduction of 5 per cent, in order to bring the amount within the reduced Estimate.

WILLIAM JOHN LYNE.

Sydney: Thomas Richards, Government Printer.—1886.

[1s.]

* 534—C

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ROAD FROM FELLTIMBER CREEK TO CARCOAR.

(CORRESPONDENCE.)

Ordered by the Legislative Assembly to be printed, 4 *February*, 1886.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 24th September, 1885, That there be laid upon the Table of this House,—

"Copies of all Surveyors' reports, and reports of other Public Officers, and "of all petitions, documents, declarations, and other papers, in reference "to a request made by the people of Carcoar for a Road from Felltimber "Creek to Carcoar."

(*Mr. Garrett for Mr. Baker.*)

VOTES No. 11.—Motion, Thursday, 24 September.

I FORWARD papers herewith. We really have not assistance to make the copies required; the cost of same would almost make the road; perhaps the original papers would suffice.

Mr. G. Campbell to The Under Secretary for Public Works.

Sir, Union Club, Sydney, 23 January, 1885.

I have the honor, at the desire of Mr. T. A. M'Killop, of Carcoar, to forward herewith, to lay before the Minister for Works, certain Statutory Declarations relating to objections which have been lodged against the "proposed road from Felltimber Creek to Carcoar."

I have, &c.,
GEORGE CAMPBELL.

Mr. Hiles,—See me. I think the papers refer to roads to Blayney, not to Carcoar; are there not other papers on road with the name on Mr. Campbell's letter, Felltimber Creek to Carcoar,—W.C.B., 6/2/85.

Mr. Flynn, urgent. By Mr. Scarr's report appended, it will be seen that the officers of both this and the Survey Department concur in a directly contrary opinion, though without Statutory declarations I see no reason to alter decision.—W.C.B., 9/2/85. Under Sec. B.C.

[806 copies—Approximate Cost of Printing (labour and material), £17 2s. 3d.]

OUR

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OUR ROADS.

To the Editor of the Blayney Argus.

Sir,—I am glad you are stirring us up to do something with our terrible roads. Bad roads mean commercial loss, as well as personal danger and discomfort to travellers. When the first stage of the new railway is opened, Blayney will lose all the trade from the Lachlan district, or nearly all, at any rate, and will then have to compete with Carcoar, Newbridge, and Milthorpe, for a due share of the local business. The only way to secure this is to provide ourselves with safe and convenient roads. Distance has less to do with the market than the facilities of getting there. *The farmers of Number One prefer to come here for business rather than to go to Carcoar, although Carcoar is 5 miles nearer, simply because the road to Carcoar is over "The Mount," and is traversed with difficulty by teams.* There is less time lost and less difficulty experienced in getting to Blayney than to Carcoar. The road over "The Mount," however, is being improved, and although never likely to be a good one, will attract some of the traffic that now comes to Blayney. The only way for us to hold our own with regard to the Number One business is to afford still further advantages by constructing the whole of the highways from the Shaw, Five Islands, and Osborne districts to Blayney. Our "ways" need "mending" all round the town. We were better off in the old days, when the land was undivided into farms, and when lanes and fences were rare. As it is now there is no choice for teamsters in bad weather; the hole that one man sinks in must be passed through by his neighbour. Perhaps it is very easy to find fault, but it seems to me that the roads get mended where they do not require it, *and lots of money is spent on dry level patches, while bogs and hills are left untouched.* Some months ago the road to Moorilda was "cleared" for a distance of 2 or 3 miles, in the lane between the railway crossing and Glasson Brothers' woolshed—that is to say, the trees were cut down, *the leaves and small branches burnt, and the timber left across the old track almost as it fell.* This made things worse than ever. It is possible to twist and turn a light vehicle amongst the trunks and logs, but no loaded team can use the road. Time goes by, and still the timber lies there, blocking up the thoroughfare and impeding the traveller.

How this unsatisfactory state of things is to be remedied I cannot tell. We have no citizens of wealth and enterprise to do the work for us; we have no Pastor Oberlin to set us to work ourselves; and unless we carry out your idea of a Progress Committee I think we must only growl and be patient.

Yours, &c.,

27/12/84. B. McADAM.

Statutory Declaration.

I, WILLIAM TUCKER, now of Wood's Flat, farmer, but for many years resident in Carcoar, do solemnly and sincerely declare as follows, in answer to the undermentioned questions relative to objections lodged against the proposed road from Felltimber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic, should you say that the proposed road "is not required?"	I say it is required.
Is the statement correct, that the proposed road "would be useless for any kind of traffic other than by people on horseback?"	Of course not.
Is the statement correct, that the said road is very rarely used, except by butchers?	It is not correct.
Is the statement correct, that, if opened, the said road would be used by only twelve families?	No.
In regard to the present road from Felltimber to Carcoar, *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years), do you consider it a good, a fair, or a bad road?	I consider it a very bad road.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250?	A seven-wire fence, sheep and cattle proof, for the 4 miles 5 chains, would cost about £170.
If the fencing would cost £250, do you consider the probable traffic would justify such expenditure?	I do.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No, it is not.
Would the bridging of gullies on said road cost £500, or any sum approaching it?	No; I do not believe it would cost anything approaching it.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	I believe it would be a great convenience to them.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various Departments of the Government of New South Wales, and to substitute Declarations in lieu thereof, and for the suppression of extra-judicial Oaths and voluntary Affidavits."

Subscribed and declared at Carcoar, this 3rd day of October, 1884, before me,— WM. TUCKER.

J. LITHGOW COBB, J.P.

I may add that I leased Mr. Charles Icely's paddock from him for the space of five years.—WM. T.

Statutory

Statutory Declaration.

I, WILLIAM CROUCHER, of Galley Swamp, miner, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions relative to objections lodged against the proposed road from Felltimber Creek to Carcoar :—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required?"	I think it is required.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback?"	No, it is not correct.
Is the statement correct that the said road is very rarely used except by butchers?	No.
Is the statement correct that if opened the said road would be used by only twelve families?	I think it would be used by a good many people.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years), do you consider it a good, a fair, or a bad road?	I do not know it.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250?	I cannot say.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure?	I should think it would.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No; I know of only two of any importance.
Would the bridging of gullies on said road cost £500, or any sum approaching it?	No.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	I believe it would be a great convenience to most of them. I have lived for nearly ten years in the vicinity of Trunkey and Tuena, and know the country well.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various departments of the Government of New South Wales, and to substitute Declarations in lieu thereof, and for the suppression of extra-judicial Oaths and Voluntary Affidavits."

Subscribed and declared at Carcoar, this 18th day of October, 1884, before me,— } WILLIAM CROUCHER.

J. O'DODD, J.P.

Statutory Declaration.

I, THOMAS LANE, of Galley Swamp, near Carcoar, miner, do solemnly and sincerely declare as follows, in answer to the undermentioned questions relative to objections lodged against the proposed road from Felltimber Creek to Carcoar :—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required?"	I would not. I consider it is very much required.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback?"	No; I have myself seen drays and waggons loaded with produce and drawn by six and eight horses travel by it.
Is the statement correct that the said road is very rarely used except by butchers?	No.
Is the statement correct that if opened the said road would be used only by twelve families?	No.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years), do you consider it a good, a fair, or a bad road?	Most undoubtedly it is a bad road.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250?	No, I do not believe it would.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure?	Yes.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No.
Would the bridging of gullies on said road cost £500, or any sum approaching it?	No. I know of only one gully where a culvert would be required. I would do it for £40.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	To most, if not all of them.

And

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various Departments of the Government of New South Wales, and to substitute Declarations in lieu thereof, and for the suppression of extra-judicial Oaths and Voluntary Affidavits."

Subscribed and declared at Carcoar, this 21st day of October, 1884, before me,— THOMAS LANE.

J. HOWARD LANCHE, J.P.

Statutory Declaration.

I, GEO. SPALDING, of Abercrombie River, Pine Bluff, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions, relative to objections lodged against the proposed road from Felltimber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required?"	I say it is required.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback?"	Of course not.
Is the statement correct that the said road is very rarely used except by butchers?	It is not correct.
Is the statement correct that if opened the said road would be used by only twelve families?	No.
In regard to the present road from Fell-timber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years) do you consider it a good, a fair, or a bad road?	I consider it a very bad road.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already eighty-five chains of fencing on one side—cost £250?	I cannot say.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure?	I do.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No, it is not.
Would the bridging of gullies on said road cost £500, or any sum approaching it?	No, I do not believe it would cost anything approaching it.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	I believe it would be a great convenience to the people.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the reign of Her present Majesty, intituled, "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various Departments of the Government of New South Wales, and to substitute Declarations in lieu thereof, and for the suppression of extra-judicial Oaths and Voluntary Affidavits."

Subscribed and declared at Bigga, this 10th day of October, 1884, before me,— GEORGE SPALDING.

GEO. M'GUINESS, J.P.

Statutory Declaration.

I JAMES HORNER, of Galley Swamp, miner, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions, relative to objections lodged against the proposed road from Felltimber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required?"	I say it is required. An old track near it has been used for twenty-seven years, or more.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback?"	No, it is not. I have frequently brought a spring cart by the same road, and have also brought loads of wool and wheat by it.
Is the statement correct that the said road is very rarely used except by butchers?	It is used by all sorts of people.
Is the statement correct that if opened the said road would be used by only twelve families?	It is not.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years), do you consider it a good, a fair, or a bad road?	I consider it a bad road, and 5 miles of a round.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already eighty-five chains of fencing on one side—cost £250?	To get the stuff and put up a wire fence would cost about £40 a mile, or a little over £160, in my opinion.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure?	Yes.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No, it is not.

Would

Would the bridging of gullies on said road cost £500, or any sum approaching it?	No. I could do it myself for £20.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	I consider it would be a great convenience to most of them.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the reign of Her present Majesty, intituled, "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of extra-judicial Oaths and voluntary Affidavits."

Subscribed and declared at Carcoar, this 16th day of December, 1884, before me,— JAMES HORNER.

J. Howard Lanche, J.P.

Statutory Declaration.

I, Geo. Ridley, of Greenmantle, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions relative to objections lodged against the proposed road from Felltimber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required?"	I say it is required.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback?"	Of course not.
Is the statement correct that the said road is very rarely used except by butchers?	It is not correct.
Is the statement correct that if opened the said road would be used by only twelve families?"	No.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed 30 years) do you consider it a good, a fair, or a bad road?	I consider it a very bad road.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250?	I cannot say.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure?	I do.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No; it is not.
Would the bridging of gullies on said road cost £500, or any sum approaching it?	No; I do not believe it would cost anything approaching it.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	I believe it would be a great convenience to the people.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the Reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of extra-judicial Oaths and voluntary Affidavits."

Subscribed and declared at Greenmantle, this 18th day of October, 1884, before me,— GEORGE RIDLEY.

Geo. M'Guiness, J.P.

Statutory Declaration.

I, James Patrick O'Brien, of Mount Macquarie, farmer, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions relative to objections lodged against the proposed road from Felltimber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required?"	It is required.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback?"	No. I generally use it with my dray and have to-day driven in on my buggy by it.
Is the statement correct that the said road is very rarely used except by butchers?"	No.
Is the statement correct that if opened the said road would be used by only twelve families?	No.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed 30 years) do you consider it a good, a fair, or a bad road?	I consider it a bad road at the best, and being so steep thousands of pounds would not improve it much.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250?	I cannot say.

If

If the fencing would cost £250 do you consider the probable traffic would justify such expenditure?	Yes.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No; there are only two gullies on it.
Would the bridging of gullies on said road cost £500, or any sum approaching it?	No; not more than £20 or £30 each.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	I consider it would to most, if not all, of them.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the Reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of extra-judicial Oaths and voluntary Affidavits."

Subscribed and declared at Carcoar, this 18th day of October, 1884, before me,— JAMES P. O'BRIEN.

J. O'DODD, J.P.

Statutory Declaration.

I, HENRY S. PEISLEY, of Rocky Bridge, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions relative to objections lodged against the proposed road from Felltimber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required?"	I say it is required.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback?"	Of course not.
Is the statement correct that the said road is very rarely used except by butchers?	It is not correct.
Is the statement correct that if opened the said road would be used by only twelve families?	No.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years) do you consider it a good, a fair, or a bad road?	I consider it is a bad road.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250?	I cannot say.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure?	I do.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No, it is not.
Would the bridging of gullies on said road cost £500, or any sum approaching it?	No, I do not think it would cost anything approaching it.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	I believe it would be a great convenience to the people.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the Reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of extra-judicial Oaths and voluntary Affidavits."

Subscribed and declared at Greenmantle, this 18th day of October, 1884, before me,— HENRY S. PEISLEY.

GEO. M'GUINESS, J.P.

Statutory Declaration.

I, CHARLES HENRY GREEN, of Felltimber, near Carcoar, farmer, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions relative to objections lodged against the proposed road from Felltimber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required?"	I should not say so; I consider it is much required.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback?"	No.
Is the statement correct that the said road is very rarely used except by butchers?	No, it is not.
Is the statement correct that if opened the said road would be used by only twelve families?	No.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years), do you consider it a good, a fair, or a bad road?	It is a bad road any way you take it.

Would

Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250 ?	No, it would cost about £170 for a seven-wire fence.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure ?	Yes.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies ?	No.
Would the bridging of gullies on said road cost £500, or any sum approaching it ?	No.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not ?	To most if not all of them.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the Reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of extra-judicial Oaths and voluntary Affidavits."

Subscribed and declared at Carcoar, this 21st day of October, 1884, before me,— CHARLES HENRY GREEN.

J. Howard Lanche, J.P.

Statutory Declaration.

I, Michael O'Brien, of Felltimber, near Carcoar, farmer, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions relative to objections lodged against the proposed road from Fell-timber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required" ?	No ; I say it is required.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback" ?	No, it is not; I have used it frequently —four times within a month— the past winter in bringing loads of produce to Carcoar.
Is the statement correct that the road is very rarely used except by butchers ?	No.
Is the statement correct that if opened the said road would be used by only twelve families ?	No.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years) do you consider it a good, a fair, or a bad road ?	I consider it a bad road, and for loading it means two days travelling to me, instead of one by the proposed road.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250 ?	My 7-wire fencing cost me about £40 per mile. At this rate the fence would cost between £160 and £170.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure ?	Yes.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies ?	No. I consider if a little money were spent on it, it would be the best road into Carcoar.
Would the bridging of gullies on said road cost £500, or any sum approaching it ?	No. I would undertake to make them passable for £50.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek or not ?	It would to some, if not to all.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the Reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of extra-judicial Oaths and voluntary Affidavits."

Subscribed and declared at Carcoar, this 15th day of October, 1884, before me,— MICHAEL O'BRIEN.

N. Connolly, P.M.

Statutory Declaration.

I, Nicholas Reilly, of Felltimber Creek, in the district of Carcoar, farmer, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions relative to objections lodged against the proposed road from Felltimber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required" ?	I should not say so ; it is urgently required.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback" ?	No ; I have used it myself in carrying in wheat and oats on my waggon.

Is

Is the statement correct that the said road is very rarely used except by butchers?	No.
Is the statement correct that if opened the said road would be used by only twelve families?	No.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years) do you consider it a good, a fair, or a bad road?	It is a bad road to Felltimber.
Would the fencing off the said proposed road through Messrs. Chas. Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250?	A seven-wire fence similar to that used by Cobb and Co. would cost about £40 a mile; this for 4 miles 5 chains would be about £160.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure?	Yes.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No.
Would the bridging of gullies on said road cost £500, or any sum approaching it?	No, not more than £50 would be required to make the gullies passable.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	Yes.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the Reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of extra-judicial Oaths and voluntary Affidavits."

Subscribed and declared at Carcoar, this 3rd day of October, 1884, before me (the before declaration having been first read over and explained to him)—

his
NICHOLAS x REILLY.
mark.

J. O'Dodd, J.P.

Statutory Declaration.

I, John Horner, of Felltimber, near Carcoar, farmer, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions, relative to objections lodged against the proposed road from Felltimber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required"?	I say the road is required.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback"?	No, it is not. I have drawn 30 cwt. on it myself with two horses.
Is the statement correct that the said road is very rarely used except by butchers?	No; that is wrong.
Is the statement correct that if opened the said road would be used by only twelve families?	That is wrong also.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years) do you consider it a good, a fair, or a bad road?	I consider it a bad road myself.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250?	I cannot say.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure?	Yes, I do.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No; it is not.
Would the bridging of gullies on said road cost £500, or any sum approaching it?	No; it would not.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	I do. I believe it would benefit everybody in that quarter.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various Departments of the Government of New South Wales, and to substitute declarations in lieu thereof, and for the suppression of extra-judicial Oaths and voluntary Affidavits."

Subscribed and declared at Carcoar, this 18th day of November, 1884, before me, and I certify that the above was first read over to the said John Horner,—

his
JOHN x HORNER.
mark.

J. B. Combes, J.P.

Statutory

Statutory Declaration.

I, RICHARD O'BRIEN, of Rose Hill, near Felltimber, farmer, do hereby solemnly and sincerely declare as follows, in answer to the undermentioned questions relative to objections lodged against the proposed road from Felltimber Creek to Carcoar:—

From your own knowledge of the present and prospective traffic should you say that the proposed road "is not required"?	No. I consider it is urgently required. It would save me nearly 4 miles travelling, and many others the same.
Is the statement correct that the proposed road "would be useless for any kind of traffic other than by people on horseback"?	No. I have myself brought loading to Carcoar on my dray by it.
Is the statement correct that the said road is very rarely used except by butchers?	No. The farming class would principally use it.
Is the statement correct that if opened the said road would be used by only twelve families?	No.
In regard to the present road from Felltimber to Carcoar *via* Mount Macquarie (referred to by one of the objectors as a good road proclaimed thirty years) do you consider it a good, a fair, or a bad road?	I consider it a bad road.
Would the fencing off the said proposed road through Messrs. Charles Icely's and Cobb and Co.'s freeholds for a distance of 2 miles and 45 chains—there being already 85 chains of fencing on one side—cost £250?	No. I consider it would cost about £170.
If the fencing would cost £250 do you consider the probable traffic would justify such expenditure?	It would in my opinion.
Is the proposed road through said freeholds rendered very rough and broken by numerous gullies?	No. There is only one gully I consider bad.
Would the bridging of gullies on said road cost £500, or any sum approaching it?	No.
Do you consider the proposed road would be a great convenience to residents of Peelwood, Tuena, Trunkey, Binda, Bigga, Greenmantle, Rocky Bridge, Number One, Galley Swamp, and Felltimber Creek, or not?	I consider it would.

And I make this solemn declaration, conscientiously believing the same to be true, and by virtue of the provisions of an Act made and passed in the ninth year of the reign of Her present Majesty, intituled "An Act for the more effectual abolition of Oaths and Affirmations taken and made in various Departments of the Government of New South Wales, and to substitute Declarations in lieu thereof, and for the suppression of extra-judical Oaths and Voluntary Affidavits."

Subscribed and declared at Carcoar, this 10th day of October, 1884, before me,— RICHARD O'BRIEN.

THOMAS HILLIAR, J.P.

Mr. Road-Superintendent Scarr to The Commissioner for Roads.

Road, Felltimber Creek to Carcoar.

Roads Office, Orange, 24 October, 1884.

AFTER perusing the reports already made by the Surveyor-General's officers, and applying my own knowledge of the requirements, I quite concur in the opinions expressed that this road is not required in the public interest. It is only another instance of the efforts made by this Carcoar Progress Committee to force business to Carcoar in opposition to the natural tendency of the traffic.

If the road was opened now there would be little traffic on it, and when the railway is opened to Mandurama, still less.

There are no grounds for making the large expenditure necessary to open this road, and make it passable.

The statement that the road from Carcoar to No. 1 Swamp is impracticable is quite incorrect, as has already been shown in previous discussions respecting that road.

PERCY SCARR.
Road Superintendent.

I forward Mr. Scarr's report. I would add that there is much correspondence of similar intensity from the same quarter in this office, and I find the vehemence of the arguments generally in the inverse ratio of the merits of the case.—W.C.B., 25/10/84. Under Secretary, B.C. Inform road not required in the public interest.—J.M.P., 31/10/84.

The statement of Mr. M'Killop that the road from Carcoar to No. 1 is impracticable is denied by the Commissioner and Engineer for Roads, whose report, in consequence of that statement, was specially obtained (to which attention is invited).—A. J. STOPPS (for Surveyor-General), 19/11/84.

Inform that on the reports received from the officers of the Government it does not appear that there is any necessity for the road in question; that therefore I shall not approve of it being opened.—J. P. ABBOTT, 21/11/84.

Mr.

Mr. Warden Connolly to The Under Secretary for Mines.

Sir, Carcoar, 16 January, 1885.

I have the honor to state, for the information of the Honorable the Minister for Mines, that yesterday, at the conclusion of my inspection of the proposed site for a common at the Galley Swamp Gold-field, the miners assembled made special request that I would bring under the notice of the Department the fact that there is no direct road from Galley Swamp to Carcoar, with which town the principal business of the miners is transacted, in consequence of its being the capital town of the district, where the Government offices and banks are located.

At present the miners are compelled to make a detour of at least 4 miles, *via* Mandurama, making a total of between 12 and 13 miles, whereas by the opening of a branch from the proposed Felltimber to Carcoar Road the distance from Gally Swamp Gold-field to Carcoar would not be more than about 8½ miles, and that so great a saving in distance would be of considerable importance to the miners is evident.

Having ridden over the proposed road and its intended connection with the Gally Swamp Gold-field, I have no hesitation in saying that it is perfectly practicable, and, with a moderate expenditure, could be made equal to any of the country roads of the district.

I have, &c.,
N. CONNOLLY,
Warden.

Will the Minister be good enough to let me have copies of the reports asked for in the accompanying paper.—E. A. Baker, Reform Club, 22 December, 1884. Inform Mr. Baker that the reports in question cannot be supplied for the purpose of being furnished to the gentlemen at Carcoar, but that he may see them himself.—J. P. Abbott, 30/12/84.

The Under Secretary for Mines to G. Campbell, Esq., M.P.

Sir, Department of Mines, Sydney, 21 November, 1884.

With reference to the application of the Carcoar Progress Committee for the opening of the part of the road from Felltimber Creek to Carcoar, viz., from the east boundary of Collins' (now Cobb & Co.) 2,000 acres to the road from Carcoar to Cowra, I am directed by the Secretary for Mines to inform you that on the reports received from the officers of the Government it does not appear that there is any necessity for the road in question, therefore he will not approve of it being opened.

I have, &c.,
GERARD E. HERRING,
For the Under Secretary.

The Hon. Secretary, Carcoar Progress Committee, to E. A. Baker, Esq., M.P.

Proposed Road, Felltimber to Carcoar.

Dear Sir, Carcoar, 17 December, 1884.

You will recollect my having brought this matter pointedly under your notice while here recently. I now enclose, for perusal and return, a letter from the Department of Mines, dated 21st ultimo, informing me for the third time that the Minister cannot approve of this road being opened; on this occasion because the reports received the officers of the Government go to show there is no necessity for the road. I have no fewer than sixteen statutory declarations to a directly contrary effect; but I wish, before going any further, for a copy of one or all of the officers' reports, as I am desirous of meeting all objections fully. Can you procure some for me? Yours, &c.,

J. A. M'KILLOP,
Hon. Sec., Carcoar Progress Committee.

Scarr, P., report on road, Blayney to Shaw; sent Works, 8/10/84:—The work required to make road passable would cost £360, and this, though an approach to an important railway station, is within municipality; and I think next year no work should be done by the Departmental funds within such limits in order to make a beginning for real local government in the municipalities already existing, and also to avoid law.

This has no reference to the road, Felltimber Creek to Carcoar whatever, but refers to a matter inside Blayney municipality.—Percy Scarr, 14/10/84. The Commissioner for Roads, B.C.

Mr. George Campbell and Mr. A. Lynch, M'sP., wish a copy of Mr. Iceley's objections to road, Felltimber Creek to Carcoar, to be forwarded to Mr. M'Killop, Commercial Bank, Carcoar.

There was a report not many days since on this; let me have it.—W.C.B., 10/10/84.

Telegram from Commissioner for Roads to Mr. Road-Superintendent Scarr.

Please return soon as possible with your report paper, 8,719, road Carcoar to Number One Swamp, sent you 20th instant.

The papers are now returned, but I would point out that it is not the Carcoar to Number One Swamp Road but Carcoar to Felltimber Creek.—Percy Scarr, 24/10/84.

Extract

Extract from *Sydney Morning Herald*, 8 September, 1884.

Carcoar, Saturday.

MUCH inconvenience has been caused to residents in the vicinity of Felltimber Creek, Gally Swamp, and the neighbourhood, by the delay in opening a direct road to Carcoar, the same having been applied for by several petitions to the Department, the road having been surveyed nearly two years ago. In many cases farmers and other residents are compelled to travel a distance of 12 miles instead of 5 miles to reach the town. It is to be hoped that the authorities will move in the matter.

What does this mean? Report at once.—J. P. ABBOTT, 10/9/84.

This newspaper paragraph is mainly the subject of a letter of Mr. M'Killop's, Manager of the Commercial Bank at Carcoar, writing as Secretary of the Carcoar Progress Committee (see within papers.) The road has been refused, its importance being thought insufficient to warrant cost of fencing, amounting to £250 (see roads 81–1,289/21, S.G.O.) A perusal of the papers might almost lead to an inference that the advocacy for the establishment of the road was made more with the object of attracting business to Carcoar than as a necessity in the interests of the public, which is very limited. With respect to the complaint in Mr. M'Killop's last letter, that a road more recently surveyed than the one in question has been lately established, viz., that from Number One (or Macquarie) to the village of Somers, it might be said that it appears to be of much greater importance than the one sought by Mr. M'Killop, and is reported to be required generally by the settlers of Mount Macquarie, Number One, Gally Swamp, for taking their produce to and returning with stores from Cowra, Grenfell, Forbes, and the Lachlan. There appear to be no reasons in Mr. M'Killop's last letter to cause a departure from previous decision, or any new facts, except that it be the statement that the road from Carcoar to Number One is almost impracticable, on which statement a report can be obtained if desired. Should the road be granted, cost of fencing would probably not be all the cost involved, as the road is described as being fit for horse and light vehicle traffic only.—A. J. STOPPS (for Surveyor-General), 12 Sept., 1884.

Approved.—J. P. ABBOTT, 18/9/84. A. Lynch, M.P., informed, 20 Sept., 1884.

As the road Carcoar to Number One, which is by Mr. M'Killop stated to be simply impracticable, is understood to be in charge of the Works Department, probably the report as to its condition should be obtained through the Commissioner and Engineer of Roads, to whom it is recommended these papers be now sent.—A. J. STOPPS (for Surveyor-General), 25 Sept., 1884.

Approved.—J. P. ABBOTT, 7/10/84.

The Hon. Secretary, Carcoar Progress Committee, to Messrs. Campbell & Lynch, M'sP.

Proposed Road, Felltimber to Carcoar.

Dear Sirs, Carcoar, 5 August, 1884.

I enclose herewith Mines Department letter to Mr. Lynch of 30th ultimo, notifying that the confirmation of this road cannot be granted, and a portion of the district map, marked by me to indicate plainly to you the importance of the road, both to the residents of Felltimber, Gally Swamp, and Number One, and to the tradespeople of this town.

In requesting you, gentlemen, on behalf of the Carcoar Progress Committee, to lose no time in seeing the Minister for Mines, with a view to his reconsidering his decision in this matter, I beg to assure you that I know of no matter (excepting, of course, the railway) placed in your charge by repeated correspondence in which the Minister's adverse decision has caused so strong a feeling of exasperation here, whether the subject of consideration be the very protracted delay on the part of the Minister, the untruthful information on which his decision is based, or the apparent apathy and want of knowledge of the subject on the part of our representatives, evidenced by Mr. Lynch's being unable to show the untenableness of the objections to the road.

To put the matter plainly—the decision is regarded, coupled with the recent proclamation of a portion of the road from Number One to Mandurama, surveyed ten months later than the road now refused to us, as a direct subordination of the interests of the inhabitants of Carcoar to those of the people of Mandurama, and as the plan will make plain to you, a most unfair one. Further, there appears no reasonable ground for doubt that the objections have been lodged principally by Messrs. Cobb & Co., the owners of (say) nine-tenths of the private township of Mandurama.

Taking the objections quoted in the Minister's letter:—

1. I shall be prepared, if necessary, to make a statutory declaration that the importance of the road will justify the expenditure of £250 or more, as if once opened it would, in preference to present roads (?) in use by them, be adopted by the residents of Gally Swamp, Felltimber, and Number One. The road in question is that indicated by the line B to C, that marked D, B, E, being the portion of the road Number One to Mandurama recently proclaimed.
2. An exaggeration of the grossest kind. £50 expended would render this road quite passable, and infinitely preferable to the present road to Number One and Felltimber, especially as regards gradients.
3. That the road would be of use only to twelve families is absolutely false. The whole of the residents of Gally Swamp, Felltimber, and Number One, who do not do their banking business in Blayney, deal with the banks in Carcoar. The road applied for would shorten the distance from Gally Swamp to Carcoar by nearly 4 miles, from Felltimber (A) by about the same, and from Number One by nearly 1 mile. As regards the last, the present road, say from G to F, is simply impracticable, and it has already, in forcing heavy traffic to Blayney, done Carcoar very serious injury in trade matters.

4. It being 5¼ miles from B to Carcoar, and 5½ from the same point to the private town of Mandurama, the "probability," supposing justice be done in this matter to Carcoar, seems to be just the reverse of that indicated by (I presume) Mr. Whitney.

Trusting this very important matter will have your very earliest attention.

I am, &c.,
J. A. M'KILLOP,
Hon. Secretary, Carcoar Progress Committee.

Mr. Andrew Lynch, M.P., wishes to be informed what action is being taken *re* Felltimber Creek road—Cowra to Carcoar. The Surveyor-General, B.C., 25/6/84.—H.W., for U.S.

This road would cost £250 to fence, a sum out of all proportion with the non-importance of the road. The alienated land that would be traversed by it for about 2½ miles at least is grazing land of a rough and broken character, and public gates would meet all requirements; but in face of the objections lodged, and in view of the facts that the road is not of general public utility, and would be a convenience to but twelve families, and that when the Blayney and Murrumburrah Railway is opened the traffic will probably tend to Mundurama, the forcing of the acceptance on landowners of public gates does not appear to be desirable. Confirmation is therefore not recommended.—A. J. Stopps (for Sur.-Genl.), 28 July, 1884.

Inform Mr. Lynch.—J. P. Abbott, 30/7/84. A. Lynch, M.P., informed, 30 July, 1884.

The Clerk of the Executive Council to The Under Secretary for Mines.

Part of road from Felltimber Creek to Carcoar, viz., from the S. to the N. boundary of James Grant's 6½ ac., por. No. 37, parish of Somers, county Bathurst.

Sir, Executive Council Office, 23 January, 1884.

Referring to your letter of the 15th December, I do myself the honor to inform you, that no objection has been lodged with me to the formation of the proposed parish road noted above.

I have, &c.,
ALEX. C. BUDGE,
Clerk of Council.

The Surveyor-General, B.C., 4/2/84.—H.W., U.S.

The Hon. Sec., Carcoar Progress Committee, to The Minister for Mines.

Sir, Carcoar, 30 January, 1884.

The plans and books of reference of the proposed parish road from the Carcoar-Cowra main road to the Felltimber Creek having now been exhibited for considerably more than thirty days in the local Court-house, I am to convey to you the respectful request of the Carcoar Progress Committee that said proposed road be proclaimed *with as little delay as practicable* open for the use of the public. Complaints on the score of the delay in this matter have been repeatedly made by the farmers of Felltimber and vicinity.

I have, &c.,
J. A. M'KILLOP,
Hon. Sec., Carcoar Progress Committee.

Inform the Clerk of the Executive Council will be asked if there are any objections.—H.W., U.S., 31/1/84. J. A. M'Killop informed objection received and now being considered.—4 Feb., 1884.

N. Connolly, Esq., P.M., to The Under Secretary for Mines.

Court-house, Carcoar, 30 July, 1884.

The plan and book of reference, as per number in margin and description, have been duly exhibited for thirty days, as required by law.

Description of Road.

Part of the road from Felltimber Creek to Carcoar, viz., from the south to the north boundary of James Grant's 62½ acres, portion No. 37, parish of Somers, county Bathurst.

N. CONNOLLY, P.M.,
(For the Bench).

Minute for Executive Council.

Preliminary Notification of Road.

Department of Mines, Sydney, 17 November, 1883.

The authority of His Excellency the Governor and the Executive Council is sought for the opening of the undermentioned line of road, as shown by the accompanying plan and book of reference, in accordance with the provisions of the Act 4th William IV No. 11, viz.:—Part of road from Felltimber Creek to Carcoar, viz., from the south to the north boundary of James Grant's 62½ acres, portion No. 37, parish of Somers, county of Bathurst.

J. P. ABBOTT.

The Executive Council advise that the course herein recommended be approved.—Alex. C. Budge, Clerk of the Council.

Min., 83-48, 20/11/83. Confirmed, 27/11/83.

Department

Department of Mines, Sydney, 14th December, 1883.

PRELIMINARY NOTIFICATION OF PARISH ROADS.

HIS Excellency the Governor, with the advice of the Executive Council, having deemed it expedient to open and make the several Parish Roads mentioned in the schedule appended hereto, to be maintained at the expense of the parishes through which they pass: Notice is hereby given that in accordance with the provisions of the Act 4th William IV, No. 11, plans and books of reference, showing the intended lines of the roads in question, are now deposited at the Office of the Surveyor-General in Sydney, and at the Police Offices mentioned.

It is requested that any well-grounded objections that may exist to the formation of the roads in question may be transmitted in writing to the Clerk of the Executive Council, within one month from this date.

By His Excellency's Command,
JOSEPH P. ABBOTT.

Schedule referred to.

Roads No.	Description of Roads.	Names of reputed owners or occupiers through whose properties the Roads pass.	Police Offices at which the plans and books of reference have been lodged.
83-4892 81-1239-11 S.G. R. 2567.	Part of road from Felltimber Creek to Carcoar, viz. :—From the south to the north boundary of James Grant's 62½ acres, portion No. 37, parish of Somers, county of Bathurst.	James Grant	Carcoar.

BOOK of Reference of part of road from Felltimber Creek to Carcoar, viz., from the south to the north boundary of James Grant's 62½ acres, portion No. 37, parish of Somers, county of Bathurst—proposed to be opened as a parish road, under the Act of Council, 4 William IV., No. 11.

No.	Portion of road.	Reputed owner.	Occupier.	Character of Land.	Bearings.	Length in chains.	Enclosures.	Character and State of Preservation of Fencing.	Breadth of Road.	Area.
..	From the south to the north boundary of Jas. Grant's 62½ acres, portion No. 37.	James Grant ..	James Grant ..	Partially cleared land, worth £3 per acre.	South-easterly.	30·73	One	Good 5-wire and rail, worth £60 per mile.	1·00 chain	a. r. p. 3 0 12

The Clerk of the Executive Council to The Under Secretary for Mines.

Executive Council Office, 23 January, 1884.

Sir,

Referring to your letter of the 15th December, I do myself the honor to forward the objection that has been lodged with me to the formation of the proposed Parish Road noted in the margin.

I have, &c.,
ALEX. C. BUDGE,
Clerk of the Council.

PART of road from Felltimber Creek to Carcoar, viz. :—From the east boundary of T. Collins' (now Cobb & Cos.) 2,000 acres, to the road from Carcoar to Cowra, within T. Icely's (now C. Icely's) 1,396 acres, parishes of Shaw and Somers, county of Bathurst.

The Surveyor-General, B.C., 4/2/84.—H.W., U.S.

Mr. W. T. Whitney to The Clerk of the Executive Council.

Coombing Park, 14 January, 1884.

Sir,

With reference to the notice of 14 December, 1883, in the Government Gazette, of intention to open road from Felltimber Creek to Carcoar, parishes of Shaw and Somers, county of Bathurst, part of which passes through my property, I have the honor to urge the following objections against the opening of the road:—

1. That it will injuriously sever my property, cutting off the bulk of it from water frontage and render the small portion between the road and the creek valueless.
2. That the number of persons likely to use the road, and the convenience (if any) it may afford the public, are insufficient to justify the large expenditure that will be necessary to fence the road.
3. That the present road to Mandurama affords all requisite accommodation for the public.
4. That already the property is intersected by roads and will be still further injured by the Railway from Blayney to Murrumburrah, which will pass through it.
5. That the nature of the country passed over renders the road unfit for vehicular traffic, and could not without great expense be made even tolerably passable.
6. That when the Railway is constructed the traffic will tend towards Mandurama, the road to which place is infinitely superior to that proposed to be taken through my property, the country passed through presenting facilities for a good road.
7. In conclusion I would urge the injustice of opening a road which without conferring any corresponding benefit on the public would inflict serious injury on the properties severed, separating me from the only source of permanent water supply, viz., Coombing Creek, and necessitating the expenditure of large sums of money for fencing and construction.

I would urge that public wants are met by the existing roads and the accommodation provided by the Mount Macquarie Road, about ½ a mile distant, is sufficient to carry the traffic for the next century.

I have, &c.,
WM. T. WHITNEY.

Court-house,

Roads—Mines No. 83-4895.

Court-house, Carcoar, 30 January, 1884.

THE plan and book of reference, as per number in margin and description, have been duly exhibited for thirty days, as required by law.

Description of road:—Part of road from Felltimber Creek to Carcoar, viz.:—From the east boundary of Thomas Collins' (now Cobb & Co's.) 2,000 acres to the road from Carcoar to Cowra, within Thomas Icely's (now Charles Icely's) 1,396 acres, parishes of Shaw and Somers, county of Bathurst.

N. CONNOLLY, P.M.,
For the Bench.

The Under Secretary for Mines.

Minute for Executive Council.

Preliminary notification of Road.

Department of Mines, Sydney, 17 November, 1883.

THE authority of His Excellency the Governor and the Executive Council is sought for the opening of the undermentioned line of road, as shown by the accompanying plan and book of reference, in accordance with the provisions of the Act 4th Wm. 4 No. 11, viz., part of road from Felltimber Creek to Carcoar, viz., from the east boundary of Thomas Collins' (now Cobb & Co.'s) 2,000 acres, to the road from Carcoar to Cowra, within Thomas Icely's (now Charles Icely's) 1,396 acres, parishes of Shaw and Somers, County of Bathurst.

J. P. ABBOTT.

The Executive Council advise that the course herein recommended be approved.—ALEX. C. BUDGE, Clerk of the Council. Minute, 83/48, 20/11/83. Confirmed, 27/11/83. Approved.—A.L., 20/11/83.

Department of Mines, Sydney, 14th December, 1883.

PRELIMINARY NOTIFICATION OF PARISH ROADS.

HIS Excellency the Governor, with the advice of the Executive Council, having deemed it expedient to open and make the several parish roads mentioned in the schedule appended hereto, to be maintained at the expense of the parishes through which they pass: Notice is hereby given that in accordance with the provisions of the Act 4th William IV, No. 11, plans and books of reference, showing the intended lines of the roads in question, are now deposited at the office of the Surveyor-General in Sydney, and at the Police Offices mentioned.

It is requested that any well-grounded objections that may exist to the formation of the roads in question may be transmitted in writing to the Clerk of the Executive Council, within one month from this date.

By His Excellency's Command,
JOSEPH P. ABBOTT.

Schedule referred to.

Roads No.	Description of Roads.	Names of reputed owners or occupiers through whose properties the Roads pass.	Police Offices at which the plans and books of reference have been lodged.
* *	* * * * * * *	* * * *	*
83-4895 81-1289-10 S.G. R. 2568	Part of road from Felltimber Creek to Carcoar, viz.:—From the east boundary of Thomas Collins' (now Cobb & Co.'s) 2,000 acres, to the road from Carcoar to Cowra, within Thomas Icely's (now Charles Icely's) 1,396 acres, parishes of Shaw and Somers, county of Bathurst.	Cobb & Co., F. Whitney, Coombing Creek, Charles Icely, James O. Dodd.	Carcoar.

The Hon. Secretary, Carcoar Progress Committee, to The Minister for Mines.

Re survey of road, Felltimber to Carcoar.

Sir,

Carcoar, 20 November, 1883.

On behalf of the Carcoar Progress Committee I have the honor to request that the proclamation of the road above referred to may be expedited as much as possible. The survey was completed twelve months ago by Mr. Licensed-Surveyor Glasson, and almost daily complaints are made of the unreasonable delay in the opening of the road.

I have, &c.,
J. A. M'KILLOP,
Hon. Secretary.

What is the cause of delay?—J. P. ABBOTT, 22/11/83. Minutes of preliminary notification, part of road Felltimber Creek to Carcoar, Collins (now Cobb), to road from Carcoar to Cowra, within T. (now C.) Icely's, part of road, ditto ditto, from S. to N., boundary J. Grant's, are with the Executive Council.—H.W., U.S.

The Surveyor-General to The Under Secretary for Mines.

[Plan and tracing (flat) enclosed.]

THE accompanying plan and book of reference of part of road from Felltimber Creek to Carcoar, viz.,—from the south to the north boundary of James Grant's 62½ acres, portion No. 37, parish of Somers, county of Bathurst, are forwarded with the view to the opening of the line as a parish road under the Act of Council, 4 William IV, No. 11.

A. J. STOPPS,
For Surveyor-General, B.C., 13 November, 1883.

Approved.—J. P. ABBOTT, 16/11/83.

A portion of the Road from Felltimber Creek to Carcoar.

MEMORANDUM, showing the names of the owners or reputed owners of the enclosed lands through which the above-mentioned road passes, the length of new fencing required to be erected within each enclosure, and the cost thereof. Also, the length of the existing fences which will require removal, and the cost of their re-erection.

Name of Owner or Reputed Owner.	Name of Occupier.	Length of Fencing required.		Cost per Rod.	Total Cost.
		New.	Old (to be renewed and re-erected.)		
		chains.	chains.	£ s. d.	£ s. d.
James Grant	James Grant	62	1	0 4 0	49 12 0

Transmitted with my plan and letter of the 20th January, No. 83-5.—R. G. GLASSON.

The

The Surveyor-General to The Under Secretary for Mines.

THE accompanying plan and book of reference of part of road from Felltimber Creek to Carcoar, viz., from the east boundary of Thos. Collins' (now Cobb & Co.'s) 2,000 acres, to the road from Carcoar to Cowra, within Thos. Icely's (now Charles Icely's) 1,396 acres, parishes of Shaw and Somers, county of Bathurst, are forwarded with the view to the opening of the line as a parish road under the Act of Council, 4 William IV, No. 11.

A. J. STOPPS,
For Surveyor-General, B.C., 13 November, 1883.

Approved.—J. P. ABBOTT, 16/11/83.

Mr. Licensed-Surveyor Glasson to The Surveyor-General.

Sir, Carcoar, January 20, 1883.

I have the honor to transmit herewith the plan of a portion of the road from Carcoar to Felltimber Creek, parish of Somers, county of Bathurst, measured in accordance with instructions dated the 29th July, 1883, No. 82-273; to Mr. Surveyor Crouch. This road traverses level country and is suitable for traffic. The crossing at Thumby's Creek, however, is a bad one, but a culvert would meet all requirements.

The improvements on this road consist of partially cleared land, £3; and 1 chain of rail and wire fencing, worth £60 per mile. The huts shown on plan were unoccupied at the time of survey. The road was measured in close proximity to these as the only other available route would be through the cultivation paddock; and as this route would necessitate a bridge being erected over Thumby's Creek, and would considerably damage the property, I considered the former route preferable.

As considerable loss of time was incurred inspecting this locality, I would most respectfully submit that I be allowed special rates for this survey.

I have, &c.,
R. G. GLASSON.

Submitted.—Unless the part of the road shown on plan with Mr. Glasson's letter of the same date, No. 83-4, is adopted, the confirmation of this portion would be of no value. I am of opinion that the importance of the road through this portion is insufficient to warrant cost of fencing.—H. A. CROUCH, A.D.S., 19 March, /83.

BOOK of Reference of part of road from Felltimber Creek to Carcoar, viz., from the east boundary of Thos. Collins (now Cobb & Co.'s) 2,000 acres to the road from Carcoar to Cowra, within Thos. Icely's (now Charles Icely's) 1,396 acres, parishes of Shaw and Somers, county of Bathurst, proposed to be opened as a parish road, under the Act of Council, 4 William IV, No. 11.

No.	Portion of Road.	Reputed Owner.	Occupier.	Character of Land.	Bearings.	Length in chains.	Enclosures.	Character and State of Preservation of Fencing.	Breadth of Road.	Area. a. r. p.
1	From the eastern boundary of Collins' (now Cobb & Co.'s) 2,000 acres, to the left bank of Coombing Creek.	Cobb & Co.	F. Whitney	Open bush land.	S. 15 E.	12,849 min.	6 chains fencing.	7-wire fencing, worth £55 per mile.	From 60 to 100 links.	13 0 20
2	From the left to the right bank of Coombing Creek.	.....	.....	.....	South-westerly.	465	.....	.....	90 links.	0 1 28
3	From the right bank of Coombing Creek to the Road from Cowra to Carcoar.	Charles Icely	Jas. Oliver Dodd	Open bush land.	North-westerly.	7,500	1 chain fencing at Carcoar and Cowra Rd.	2-rail, very old, worth £20 per mile.	From 50 to 100 links.	7 1 35

Mr. Licensed-Surveyor Glasson to The Surveyor-General.

Sir, Carcoar, 20 January, 1883.

I have the honor to transmit herewith the plan of a portion of the road from Carcoar to Felltimber Creek, parishes of Shaw and Somers, county of Bathurst, measured in accordance with instructions, dated the 29th July, No. 82-273, to Mr. Surveyor Crouch.

The country traversed by this road is very rough and suitable for horse and light vehicle traffic only. The best available route, however, was selected by me after making a careful inspection of the surrounding country.

The only improvements upon the road consist of about 7 chains of wire and 2-rail fencing, worth £40 per mile.

Two enclosures are severed, viz., a portion of Messrs. Cobb's property on the south of Coombing Creek, and Mr. Charles Icely's property on the north. Both of these properties are used for grazing purposes, and considerable damage is done to them by this road, as the area severed from the main properties are too small to be of much value for grazing purposes, and, in the case of Messrs. Cobb's property, the country is too rough for purposes other than grazing. Near the Carcoar-Cowra Road a deep gully is crossed, over which it will be necessary to erect a bridge, at a cost of about £50, before the road is available for traffic.

The old track is not at present used by the public, but the road, if opened, would prove a great convenience to about a dozen families residing in the parish of Somers and in the locality of Felltimber Creek.

I have, &c.,
R. G. GLASSON.

The objections made by Mr. Icely, Rds. 81–1289–7, are substantially the same as reported by my letter, No. 82–75. I am of opinion that the importance of the road is not sufficient to warrant the cost of fencing, and unless "public gates" can be erected I cannot recommend the formal opening.—H. A. CROUCH, A.D.S., 19th March, /83.

C. Icely, Esq., to The Minister for Mines.

Sir, 86, Victoria-street, Sydney, 13 December, 1882.

I have the honor to inform you that a road has been lately measured by Mr. Surveyor Glasson, of Carcoar, through my land, known as the Triangle Paddock, about half a mile from Carcoar, in the parishes of Shaw and Somers, which renders my paddock almost useless for grazing purposes, as it is surveyed through my paddock, leaving one part too small to be of any use, and the other portion unless fenced, not safe to run stock in. The proposed road too is useless for any kind of traffic, other than by people on horseback, as it is over a very rough country, very much broken by large water-washed gullies, which would have to be bridged at the expense of not less than £500. I maintain that the road is not required, as there is a good proclaimed road of 30 years' standing, which leaves the Cowra Road about half a mile from Carcoar, and another very good road to the same spot (Felltimber Creek), *via* Mandurama, which is infinitely better to travel, and much faster for wheels than the other. This being the case, I think you will agree with me that the creation of another road is unnecessary. The Government are very often led astray by petitions numerously signed, without knowledge or regard as to who signs those documents; for instance, a man wants a short cut to his farm, and gets up a petition, and invites all persons by to sign it, no matter whether they live in the locality or not, and by this way he musters up a good many signatures, and the Minister naturally thinks that the terminus of this road must be of some importance, and grants a road.

I oppose this proposed road upon the ground that it is not required. I know myself, and others can prove my statement, that the road to Felltimber Creek is very rarely used, except by butchers taking stock to and from Carcoar; and again, under the Travelling Stock Act you will see the amount of land (unless fenced by a sheep proof fence, 5 wires) that would be trodden down and made useless. If a road was necessary I would not oppose it "but it is not." I have addressed my applications to you thus early in order that you may have the opportunity of ascertaining the truth of my statement, before you decide to open the road to the public. I trust that you will give this letter your immediate consideration, and if I have not fully explained my case, shall be most happy to wait upon you with a plan of the road, so that I may convince you that the road is not required. In addition to this road I have the railway line through my paddock, which is another serious loss to me.

I have, &c.,
CHARLES ICELY.

Now with Mr. L.-S. Crouch to lay out, objection will be duly considered, 15/12/82.

It is recommended that Mr. Icely be informed that the road in question will be preliminarily notified in *Government Gazette*, with the view to obtaining all the objections that might exist to the contemplated establishment of the road, and that all the objections lodged will be fully considered before determine upon establishing it by confirmation under the Parish Roads Act.—A. J. Stopps (for Sur.-General), 13 Nov., 1883.

The Hon. Sec., Carcoar Progress Committee, to The Deputy Surveyor-General.

Road, Felltimber to Carcoar.

Sir, Carcoar, 21 July, 1882.

Adverting to my letter to you of 17th May last on the above subject (in regard of which I have not been favoured with even the cheap courtesy of an acknowledgment), I again beg to inquire if the District Surveyor's report on same has yet been received. If it has, I am further to again request that a copy of the report be kindly forwarded to me.

I have, &c.,
J. A. M'KILLOP,
Hon. Sec., Carcoar Progress Committee.

The report referred to has been received, and instructions for the survey of the road have issued to the District Surveyor.—A. J. Stopps (for Sur.-Genl.), 29th July, 1882.

Mr. District-Surveyor Crouch to The Surveyor-General.

Sir, District Survey Office, Orange, 12 July, 1882.

In connection with your instructions of the 25th October, No. 81–796, to Mr. District-Surveyor Fisher, transferred to me on the 3rd November, relative to a petition for parish roads from the Felltimber Creek and Gully Swamp Gold-fields, towards Carcoar, parishes of Somers and Shaw, county of Bathurst, I do myself the honor to report:—

1. That the track from Felltimber Creek towards Carcoar, as shown by red band on tracing herewith, has been reserved in all contiguous measurements, except where it passes through James Grant's 62½ acres, and T. Collin's 2,000 acres, and T. Icely's 1,396 acres; but of late the traffic has been almost entirely diverted, owing to the fencing in of the latter properties.

2. The only alternative road is that *via* Mandurama, which is the one now used, and is about 5 miles longer.

3. There are about twelve families between Felltimber Creek and Carcoar to whom the road would be a convenience.

4. The road could not materially injure any of the properties intersected, neither would it be of advantage to either.

5. The enclosures severed are T. Collins (now Cobb and Co.'s) 2,000 acres, and T. Icely's (now Charles Icely's) 1,396, the probable cost of fencing which would be about £250.

6. The traffic, which is local, would be confined on the southern end to the families named.

7. But little Crown land of inferior quality is available for alienation.

8.

8. With respect to this road I have the honor to report that the broken nature of the country, the probable modifications of traffic which may be expected to result from the construction of the authorized line of railway from Blayney to Murrumburrah, and the cost of fencing renders this matter somewhat difficult to deal with. It appears probable that, consequent on the construction of the line, the general traffic from the Felltimber Creek will go to Mandurama, the intervening country being much more easily traversed; but as a fairly direct road to Carcoar, the local seat of Justice, Land Office, and most important commercial centre, the road sought must be considered as required for the convenience of persons travelling on horseback or in light vehicles. From the nature of the traffic I consider that the provisions of the Public Gates Act would be well applied, but I do not think the owners of the properties intersected would make application.

9. As the actual length of survey required is but short, I think it is desirable that instructions should be issued for such.

10. Referring to the branch road to Gully Swamp gold-field, the population of which numbers about thirty, I am of opinion that, owing to the less difficult nature of the ground traversed, the general traffic therefrom will always by preference pass *via* Mandurama, but if the road from Felltimber Creek is adopted provision will be made in the future subdivision of the Gully Swamp gold-field for the branch road required.

I have, &c.,
HENRY A. CROUCH, A.D.S.

Mr. Surveyor Crouch for survey of the road recommended by him.—A. J. Stopps (for Surveyor-General), 29 July, 1882. Transferred to Mr. Licensed-Surveyor Glasson for survey of the portions shown approximately by red firm lines. If Mr. Glasson will give me a day or two's notice before he effects survey I will endeavour to meet him on the ground.—H. A. Crouch, A.D.S., 3 August, 1882. Transmitted with my plans and letters of the 20th Jan., No. 83–4 and 83–5.—R. G. Glasson.

Part of road from Carcoar to Felltimber Creek, viz., from the east boundary of Thomas Collins' (now Cobb and Co.'s) 2,000 acres to the road from Carcoar to Cowra, within Thomas Icely's (now Charles Icely's) 1,396 acres, parishes of Shaw and Somers, county of Bathurst.

Memorandum showing the names of the owners or reputed owners of the enclosed lands through which the above-mentioned road passes, the length of new fencing required to be erected within each enclosure, and the cost thereof. Also the length of the existing fences which will require removal, and the cost of their re-erection.

Name of Owner or Reputed Owner.	Name of Occupier.	Length of Fencing required.		Cost per Rod.	Total Cost.
		New.	Old (to be renewed and re-erected.)		
		chains.	chains.	£ s. d.	£ s. d.
Charles Icely	James Oliver Dodd	148	.....	0 4 0	118 8 0
Cobb and Co.	James Oliver Dodd	164	6 @ 1/3 ⅌ rod..	0 4 0	132 10 0

The Hon. Secretary, Carcoar Progress Committee, to The Deputy Surveyor-General.

Sir,

Carcoar, 17 May, 1882.

In accordance with a resolution passed at a recent meeting of the Carcoar Progress Committee, I beg to inquire if Mr. District-Surveyor Fisher's report has yet been received on the road Carcoar to Felltimber Creek and Galley Swamp, petitioned for by residents of those localities in September last. If the report is received, I am further to request a copy of same.

In connection with the petition referred to I beg to draw your attention to the circumstance that what is sought is, as a matter of fact, merely the re-opening of an old road in use thirty years ago, but obstructed at present by fencing erected in defiance of the right of user. I may add that Mr. Surveyor Glasson is now actually at work on the spot where the obstruction occurs, and, if you will pardon the suggestion, if so instructed could readily report to you on the matter, and hasten the removal of a grave inconvenience.

The whole difficulty lies between the northern boundaries of portions 70 and 37, parish of Somers, the road having been actually surveyed and plainly marked on each side of the interval indicated.

I have, &c.,
J. A. M'KILLOP,
Hon. Secretary, Carcoar Progress Committee.

The Hon. Secretary, Carcoar Progress Committee, to The Minister for Mines.

Sir,

Commercial Bank, Carcoar, 14 March, 1882.

Referring to my letter to you of 17th October last, enclosing, by request of Andrew Lynch, Esq., M.L.A., a district map with sketch indicative of road Felltimber Creek to Carcoar, petitioned for by residents of same, I have the honor to request that you will cause an intimation to be sent to the Department for Roads on the subject of the reception by your Department of the petition and sketch referred to. Diligent search has, I understand, been made on two occasions for these documents in the office presided over by Mr. Commissioner Bennett, but of course without success. The inference has been that the petition was never forwarded by Mr. Lynch until I looked up my private letter-book. The want of the road prayed for is a grave inconvenience to the public here.

I have, &c.,
J. A. M'KILLOP.

Inform map was duly received, and papers are with Mr. D.-S. Fisher for a report—H.W., U.S., 15/3/82.

The

The Hon. Secretary, Carcoar Progress Committee, to The Under Secretary for Mines.

Sir, Commercial Bank, Carcoar, 17 October, 1881.

Referring to your letter (81–2,841 Roads) of 26th ultimo, addressed to Andrew Lynch, Esq., M.P., I have the honor, by request of that gentleman, to hand you under separate cover a district map, on which are sketched the roads prayed for in the Petition acknowledged in your letter.

I have, &c.,
J. A. M'KILLOP.

Forwarded to Mr. District-Surveyor Fisher for report, in terms of paragraph No. 75 of Surveyor's instructions.—A. J. Stopps (for Surveyor-General), 25th October, 1881. Reported upon by my letter of the 12th July, No. 82–75.—H. A. Crouch, A.D.S.

[Presented and recommended by Andrew Lynch, M.P., to the favorable consideration of the Minister.—21/9/81.]

To the Honorable the Minister for Mines, Sydney.

The humble Petition of certain inhabitants of the Town and District of Carcoar,—

Respectfully Showeth:—

1. That a large population have settled in the vicinity of Felltimber Creek, parish of Somers, district of Carcoar, and a large area of land has been bought under cultivation.

2. That the residents of that place, in order to carry their produce to market at Carcoar, are compelled to travel by a road via Mandurama, as shown on plan annexed hereto and marked with blue, which road is 5 miles longer than by a direct road.

3. That a direct road, which would also be a good one, can be surveyed from Felltimber Creek to Carcoar along the back of the Coombing Estate and through land belonging to Mr. Charles Icely, and join the main road from Carcoar to Cowra, about 1 mile from Carcoar, as shown on plan and marked red.

4. That such road would not in the slightest degree depreciate the value of the land through which it would pass.

5. That your Petitioners would be greatly convenienced if such road were surveyed and opened to the public.

Your Petitioners therefore humbly pray that the required road be surveyed and proclaimed to be a public road with as little delay as possible.

And your Petitioners, as in duty bound, will ever pray.

Dated this day of , in the year of our Lord one thousand eight hundred and eighty-one.

Signature and Address.	Signature and Address.
Nicholas Reilly, Felltimber Creek	John W. Fox, Carcoar
Michael O'Reilly, jun., Felltimber Creek	Joseph W. West, Carcoar
Michael O'Brien, Felltimber Creek	E. S. W. North, Carcoar
James Horner, Felltimber Creek	E. Poole, Carcoar
Mrs. Burke, Felltimber Creek	T. Newsmith, Carcoar
William Willard, Combing Creek	W. B. Warner, J.P., Carcoar
William Stanton, Coombing Creek	Geo. Wood, Carcoar
John Hort, Davey Park	F. W. Russell, Carcoar
George Willson, Felltimber	Edw. H. North, Carcoar
John Johnsion, Dairy Park	E. W. Hosking, Carcoar
Henry Molloy, Dairy Park	John Tusken, Carcoar
Richard Rowe, Gally Swamp	J. M. Callen, Carcoar
Thomas Lane, Gally Swamp	J. A. M'Killop, Carcoar
John Digby, Gally Swamp	John N. Corry, Carcoar
Reuben Digby, Gally Swamp	T. W. Ward, Mandurama Ponds
William Simons, his x mark Gally Swamp	Wm. Cook, Carcoar
Charles Barlow, Gally Swamp	William Anderson, Carcoar
Thomas Roberts, Gally Swamp	Navartey, Carcoar
James Rowe, Gally Swamp	F. Kirke, Carcoar
George Digby, Gally Swamp	Robert Kirkpatrick, Carcoar
Alfred Tucker, Gally Swamp	William Eastley, Carcoar
John Wade, Gally Swamp	William Purcell, Carcoar
William Mullallay, Gally Swamp	Daniel Ryan, Carcoar
Richard O'Brien, Rose Hill	Harry Day
George Willard, Felltimber Creek	W. K. Nesbitt, Carcoar
Thomas Chesher, Rocky Bridge	John Links, Carcoar
Joseph Balis, Forest Creek	John Joseph Smith, Carcoar
Ann Bell, Betsy Flat	John Randole, Carcoar
John Tracy, Felltimber Creek	William H. White, Carcoar
James O'Brine, Rose Hill	J. Amoss, Carcoar
Henry Bell, Rocky Bridge	P. Stanley, Carcoar
	W. H. Healegan, Carcoar
	E. Tolhurst, Carcoar.

[Two Maps.]

Sydney: Thomas Richards, Government Printer.—1886.

PLAN

shewing Roads petitioned for

from Fell Timber Creek & Gully Swamp Gold Field towards Carcoar

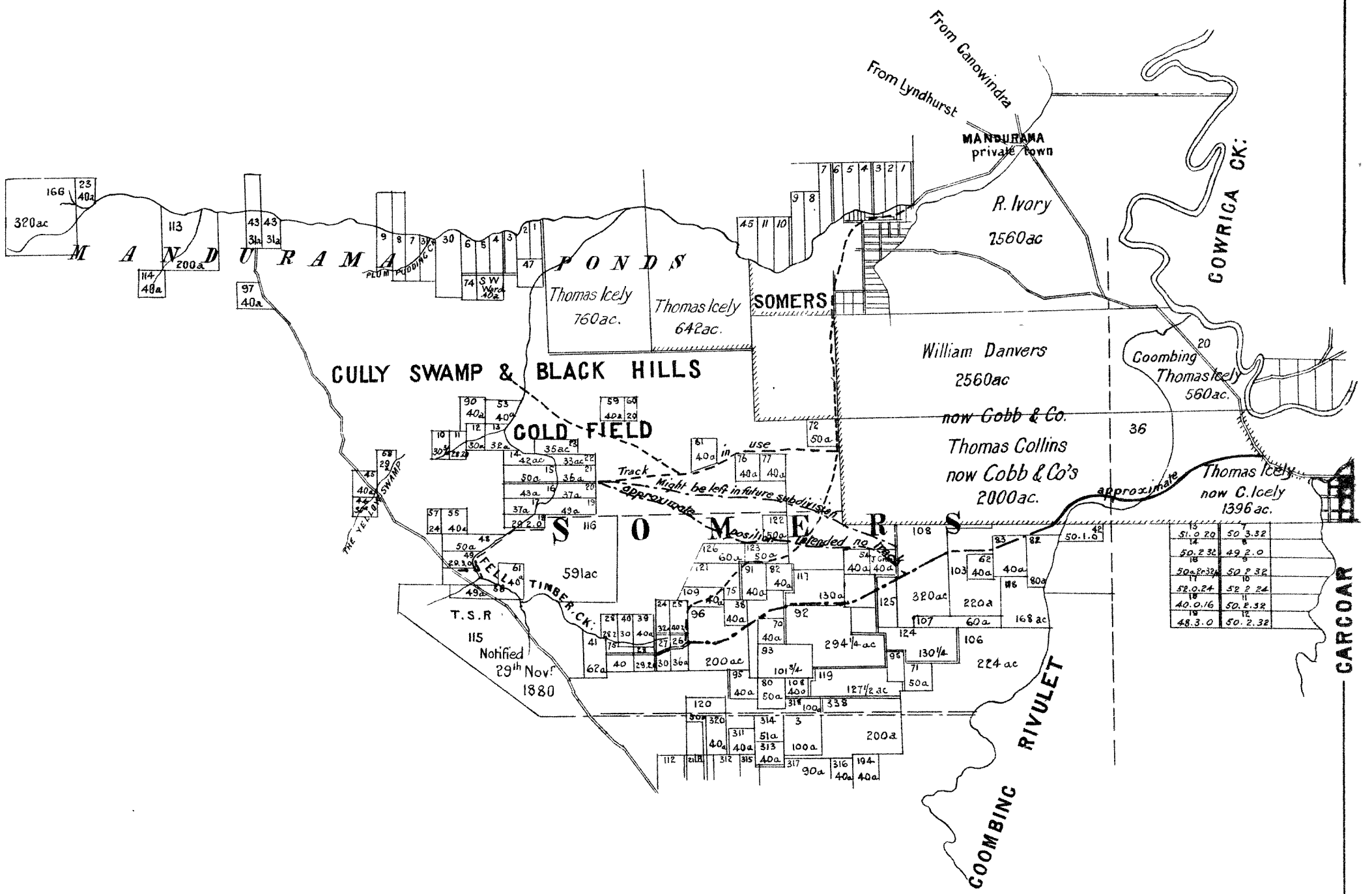
Parish of Somers County of Bathurst

Roads petitioned for shewn thus —·—·—

Portions proposed to be measured thus ———

Scale of Chains

0 80 160 240 320



Transmitted to the Surveyor General with my letter of the 12th July 1882. No 82.75.

Henry A Crouch
A.D.S.

Sig. 188.

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

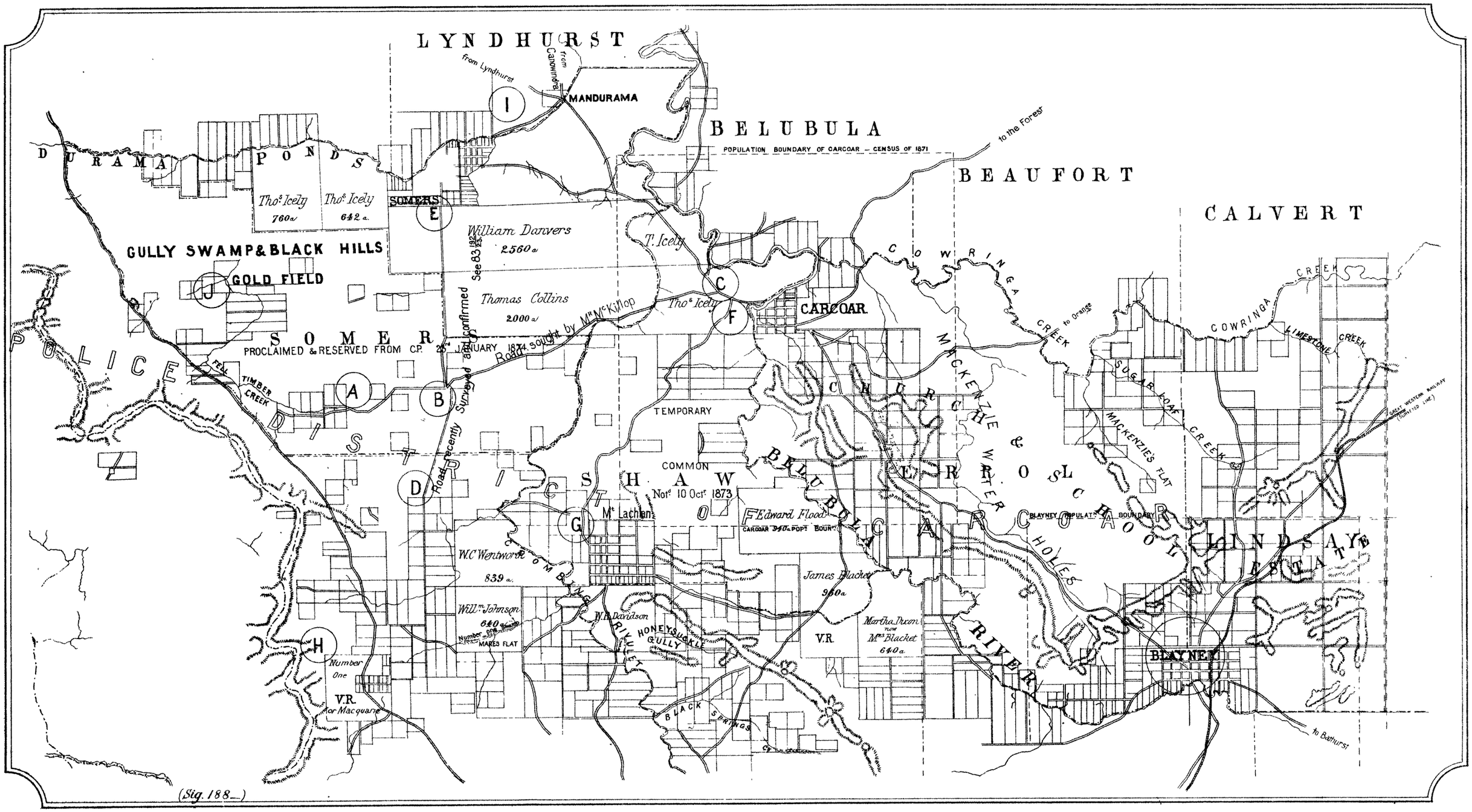


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY NEW SOUTH WALES.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ROAD FROM FELLTIMBER CREEK TO CARCOAR.

(FURTHER PAPERS.)

Ordered by the Legislative Assembly to be printed, 2 *April,* 1886.

FURTHER RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 24th September, 1885, That there be laid upon the Table of this House,—

"Copies of all Surveyors' Reports, and Reports of other Public Officers, "and of all petitions, documents, declarations, and other papers, in refer- "ence to a request made by the people of Carcoar for a road from "Felltimber Creek to Carcoar."

(Mr. Garrett, for Mr. Baker.)

Mr. Road Superintendent Scarr to The Commissioner for Roads.

Copy of Mr. Road Superintendent Scarr's reply to Mr. M'Adams's letter *re* Roads in the Blayney District (Felltimber Creek to Carcoar).

Roads Office, Orange, 2 March, 1886.

Re letter *Blayney Argus*, signed M'Adam.

THIS is another example of the numerous effusions with which the lower class of provincial papers teem, written in most cases in lamentable ignorance, generally with reckless disregard to truth, and in many instances by persons having no real stake or interest in either the districts referred to or the matters treated of.

I have prepared a skeleton tracing showing the subsidized roads converging at Blayney, and also those within a radius of (say) 15 miles of that town, and have written thereon the amount per mile and total expended on each road annually. A glance at this will show pretty conclusively the entire absence of truth in the inference that this town has been neglected in this respect.

There are three first-class and five second-class roads actually leading into Blayney, the total expenditure on which, within a radius of 15 miles, will be for 1886 close upon £4,000, including a bridge at Five Islands, which will especially tend to facilitate traffic to the town. In fact, there is scarcely a road leading into Blayney which is not annually subsidized, or has had special grants.

On the roads referred to as actually converging at Blayney there exist not less than 30 miles of metalled road.

There is no creek which is not bridged, and no road that is not cleared throughout, with the exception of that from Blayney to Millthorpe, and 1 mile on the Blayney and Teapot Swamps Road, both of which will be done in 1886.

As to the allegation "that the roads get mended where they do not want it, and money is expended on dry level patches while bogs and hills are left untouched."

An experience in studying the distribution of funds of nearly twenty years under the Department, and an intimate knowledge of this district for the last eight years, together with the guidance obtained by consultation with the more intelligent residents, should, I think, be quite sufficient to make me quite as good a judge of where or in what manner the Road Votes should be laid out as any one casually using the roads, and having perhaps interested motives in particular localities. On the whole the residents are well satisfied.

The statement that timber was left for months lying on the road is incorrect.

From the work having been let to a bad contractor (a contingency the Superintendents have no power to prevent under existing regulations) some delay was caused in getting the trunks of the trees drawn off, and other persons had to be employed to complete the work.

This was finished fifteen months since, about the date of the letter in question.

As to the remedy for the asserted unsatisfactory state of things, the only remedy will be a comprehensive system of local government, whereby people can have the privilege of both raising and expending their own road funds; and there are few districts so well adapted for the introduction of such a system as the area surrounding Blayney.

PERCY SCARR,
Road Superintendent.

[3*d*.] 328—

[805 copies—Approximate Cost of Printing (labour and material), £1 4s. 9d.]

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ROAD—THE ISLANDS TO COWRA THROUGH BINNIE ESTATE.

(CORRESPONDENCE, &c.)

Ordered by the Legislative Assembly to be printed, 28 *April,* 1886.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 1st April, 1886, That there be laid upon the Table of this House,—

"Copies of all papers and correspondence, and other documents, relating "to the application of the people of Cowra, respecting the opening of the "Road, 'The Islands to Cowra through the Binnie Estate.'"

(Mr. Baker.)

SCHEDULE.

NO.		PAGE.
1.	Ryall, J. C., Hon. Sec., Cowra Progress Committee, for clearing, &c.	2
2.	Report of Mr. Bartlett, Road Superintendent	2
3.	Garland, C. L., M.P., Baker, E. A., M.P., for classification of Road	3
4.	Garland, C. L., M.P., for survey of Road	3
5.	Report of Mr. Bartlett, Road Superintendent	3
6.	Tracing showing route of proposed Road	3

[805 copies—Approximate Cost of Printing (labour and material), £4 5s. 9d.]

ROAD—THE ISLANDS TO COWRA THROUGH BINNIE ESTATE.

No. 1.

The Hon. Sec. Cowra Progress Committee to The Secretary for Public Works.

[Presented by Mr. Baker, M.P.]

Sir,

I have been instructed by my Committee to urge upon you the necessity that exists for clearing and forming the road—Cowra to Walli, *via* Binnie Creek. In view of the railway line to Cowra being open for traffic in a very short space of time it is hoped that all the avenues leading to that town will be placed in a thorough state of repair. The population in and around Walli is considerable, and considerable inconvenience is experienced by teamsters journeying between that locality and Cowra in consequence of the almost impassable condition of the thoroughfare.

Trusting that you may be pleased to give the subject your prompt attention,

I have, &c.,
J. C. RYALL,
Hon. Sec.

Acknowledged, 2/11/85. Roads, B.C.—J.R., 3/11/85.

Commissioner's Minute.

Mr. Bartlett for report. He will show all these new roads asked for. Many of them are merely municipal works; and because the country has gone to the expense of railways is no reason why a further increased outlay should be made on roads, but rather the contrary.—W.C.B., 3/11/85.

Mr. Bartlett, B.C. Report and litho. herewith.—J. V. Bartlett, 9/11/85.

No. 2.

Mr. Road-Superintendent Bartlett to The Commissioner for Roads.

Sir, Roads Office, Cowra, 9 November, 1885.

In conformity with your minute of 3/11/85, I beg to submit the following report upon the attached letter from the Cowra Progress Committee.

In the first place I must point out that until the road through Mr. Alford's paddock—21, parish of Cowra—is opened, I consider any expenditure useless. The opening of this portion of the road has been the subject of petitions and correspondence during the past three years, but the matter has not been before me officially.*

Secondly.—The work proposed in Brisbane-street is the commencement of this road.

Thirdly.—When this road is classified the vote on the Cowra to Canowindra Road can be reduced.

I find these Committees are ever ready to make demands, but I never knew of any reduction being suggested.

I have, &c.,
J. V. BARTLETT,
Road Superintendent.

Commissioner's Minute.

* Nor do I think it has been before me, but I fail to see why a short deviation at so remote a point should in any way affect the question of road into Cowra. The work in Brisbane-street is arranged for, as far as funds admit. When 1886 money is available I can then authorize contractor to continue and complete work. Mr. Bartlett makes no recommendation.—W.C.B., 10/11/85. Mr. Bartlett, B.C.

Mr. Bartlett's Minute.

I beg to recommend that where the old track has been fenced across it be opened—(On the north side of 21 is a very steep hill, the natural gradient is, in the worst place, about 1 in 6, and as it is a long hill it will be very costly to improve it, and in any case it will not be equal to the old track. The petitions and correspondence I referred to have been addressed to the Departments of Lands and Mines)—that where the fencing of another portion of the track, about 3 miles south of 21, causes a detour, it be removed, and that this road be scheduled third-class, as it leads to and passes through the most thickly populated farming community in the Cowra District.—J. V. Bartlett, 16/11/85. The Commissioner.

Commissioner's Minute.

Mr. Airey,—Note this road to be classified. Cowra to Canowindra to be reduced. Colonel Wells, have inquiry made at Surveyor-General's Office as to action about opening road through Alford's 21.—W.C.B., 17/11/85.

Mr. Airey's Minute.

Mr. Bartlett does not state what distance this road is, nor to what class "Cowra to Canowindra" should be reduced. This latter road has already been reduced from £15 to £10 a mile on next year's schedule.—C.B.A., 17/11/85. Mr. Bartlett.—W.C.B., 24/11/85.

Mr. Bartlett's Minute.

From Cowra to Walli, *via* Binni Creek, 17 miles, third-class, £255. This sum will not be required annually after the first year; class four would suffice. £10 per mile is ample for the Cowra to Canowindra Road; for 1887 £7 is sufficient.—J. V. Bartlett, 27/11/85.

The Commissioner. Mr. Airey,—W.C.B., 30/11/85. Road Cowra to Walli noted on schedule, and "Cowra to Canowindra" noted for reduction to fifth-class.—C.B.A., 30/11/85. Seen.—J. V. Bartlett, 1/12/85.

No. 3.

C. L. Garland and E. A. Baker, Esq's., M.P's., to The Secretary for Public Works.

Sir,

In view of the heavy traffic between Cowra and Walli, *viâ* Binni Creek and the "Islands," we beg that you will cause the road to be classified, and a sum of money expended on it.

We have, &c.,
CHAS. L. GARLAND.
E. A. BAKER.

Acknowledged, 28/1/86. Roads.—J.G., 22/1/86. B.C.—J.R., 27/1/86. Mr. Bartlett for report and tracing.—W.C.B., 28/1/86. Mr. Bartlett, 28/1/86. Report and tracing attached.—J. V. BARTLETT, 20/2/86.

No. 4.

C. L. Garland, Esq., M.P., to The Secretary for Public Works.

Sir,

The Progress Committee of Cowra have requested me to ask that you will cause a survey of a road to be made between Cowra, Binni Creek, and, if necessary, portions of freehold resumed. There is a large farming population at Binni Creek, and as several of the freeholders *en route* threaten to fence the road now in use, very great annoyance and inconvenience may result. This matter, I am assured, is most important.

I have, &c.,
CHAS. L. GARLAND.

Acknowledged, 3/2/86. Roads for report.—J.G., 3/2/86. B.C.—J.R., 4/2/86. Previous papers.—W.C.B., 5/2/86. 85-10,300 herewith, 6/2/86.

Commissioner's Minute.

I think this relates to 86-899 herewith. Mr. Bartlett to report.—W.C.B., 8/2/86. Mr. Bartlett, B.C., 9/2/86. 86-981 attached.—J. V. BARTLETT, 20/2/86.

No. 5.

Mr. Road-Superintendent Bartlett to The Commissioner for Roads.

Sir,

Herewith I forward tracing showing the proposed road. With exception of the necessary angles to avoid the stoney barriers on the Temporary Common and the connection between allotment 82 and water reserve 117, the country being hilly with tracks in various directions, the red dotted line should be adhered to. This line represents the course of the old track, slightly modified to avoid sharp turns, and if departed from will lead to complications.

The classification of this road was dealt with on paper 85-10,300, viz. :—17 miles at £15 = £255. The second paragraph of this paper refers to the portion of road fenced across which forces the traffic over a very steep hill, viz., allotment 21, parish of Cowra (see tracing), and if the fencing off of this track is sanctioned the survey and vote should stop at No. 103. On two occasions I have recommended the opening of this road. About two years ago a petition was sent to the Department of Mines, and subsequently to the Lands Department, but not until recently has it been referred to in my reports to you.

Yours, &c.,
J. V. BARTLETT.

Commissioner's Minute.

Ascertain at Surveyor-General's Office if any steps have been taken to open road through allotment 21, Mount Alford, parish of Cowra; if so, what date, &c.—W.C.B., 22/2/86.

Mr. Flynn's Minute.

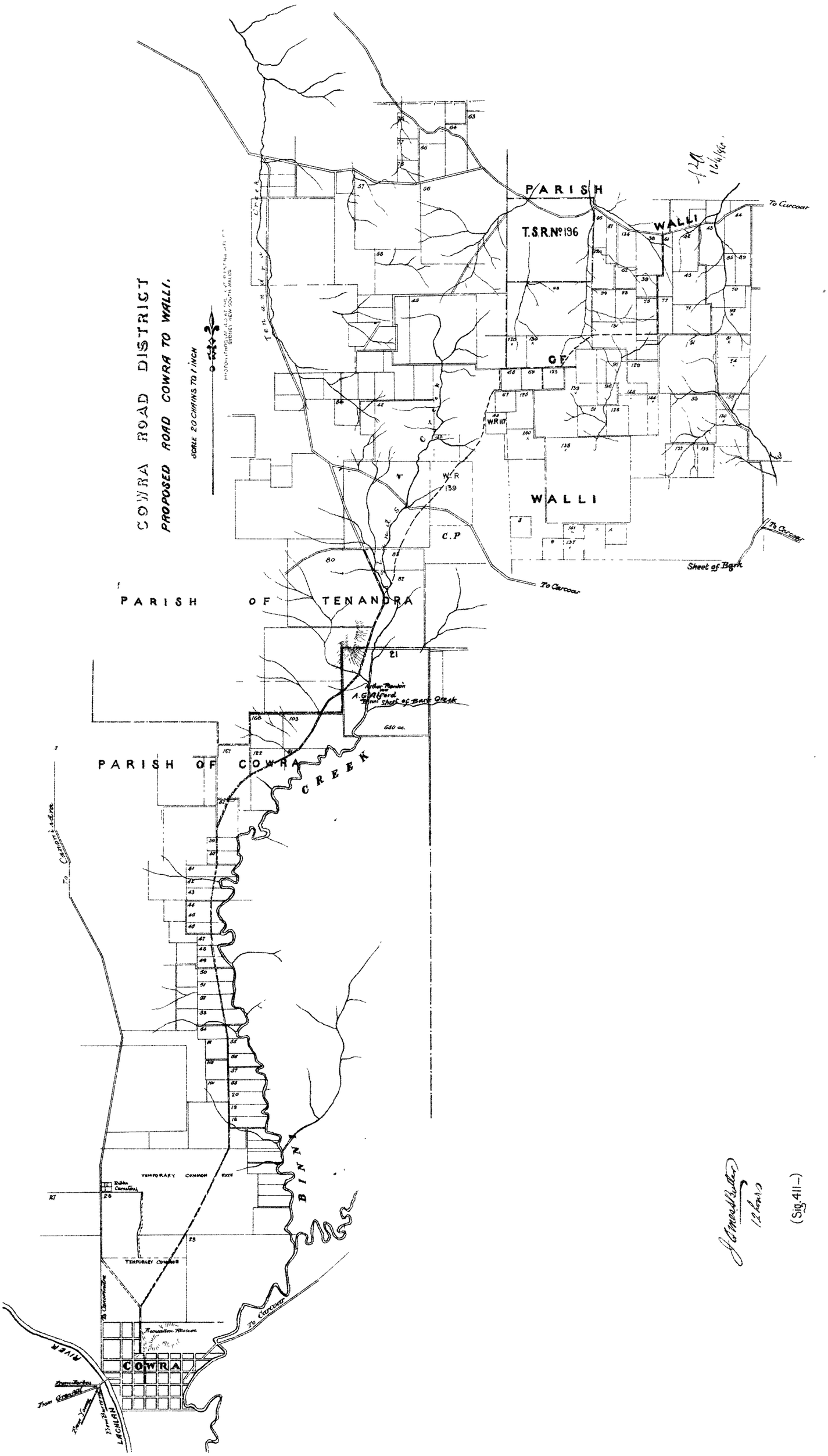
No steps have been taken, and Mr. Stops states that it has been decided not to open the road.—P.H.F., 24/2/86.

Mr. Bartlett.—W.C.B., 25/2/86. Noted.—J. V. BARTLETT, 27/2/86. File.—W.C.B., 1/3/86.

[Plan.]

Sydney: Thomas Richards, Government Printer.—1886.

[6*d*.]


COWRA ROAD DISTRICT
PROPOSED ROAD COWRA TO WALLI.
SCALE 20 CHAINS TO 1 INCH
PARISH OF WALLI
T.S.R.No 196
WALLI
PARISH OF TENANDRA
PARISH OF COWRA
BINNI CREEK
COWRA
LACHLAN RIVER
To Cowra
Sheet of Bank
Sheet of Bank Creek
TEMPORARY COMMON
640 ac.

(Sig. 411–)

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ROAD, BOWAN PARK TO CUDAL.

(MONEY EXPENDED ON DURING LAST TWO YEARS.)

Ordered by the Legislative Assembly to be printed, 6 *October*, 1886.

QUESTION.

(4.) Road, Bowan Park to Cudal:—Dr. Ross asked the Secretary for Public Works,—

(1.) Has any money been expended in repairing the road between Bowan Park and Cudal during the last two years; if so, will he state the amount so expended, and the nature of the work performed?

(2.) Is he aware that the road at present is in a bad state?

Mr. LYNE answered,—Information not yet received from local Officer.

ANSWER.

1. If question refers to Road Cargo to Cudal the sum of £180 was expended in 1884, entirely upon the erection of Oakey Creek Bridge, at Roberts'. The 1885 vote, £300, was expended near Cargo in clearing, forming, metal, &c., and it is proposed to expend the vote for 1886, £285, which is still untouched, in metalling near Coach's. If the road referred to is that from Cargo Road via Paling Yard Creek to Cudal, the vote for 1884, viz., £126, was expended by Trustees. The 1885 vote of £84 is being expended by local Officer in clearing and forming now in progress, and tenders will be called at an early date for works to amount of 1886 vote, £84.

2. Neither road has been reported as bad.

1885–6.

NEW SOUTH WALES.

LANDS FOR PUBLIC PURPOSES ACQUISITION ACT.

(NOTIFICATION OF RESUMPTION OF LAND FOR APPROACHES TO BRIDGE OVER MANDURAMA CREEK.)

Presented to Parliament, pursuant to Act 44 Vic. No. 16, sec. 6.

NOTIFICATION OF RESUMPTION OF LAND UNDER 44 VICTORIA No. 16.

NEW SOUTH WALES, to wit. } By His Excellency The Right Honourable CHARLES ROBERT, BARON CARRINGTON, a Member of Her Majesty's Most Honourable Privy Council, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

(L.S.) CARRINGTON, *Governor.*

WHEREAS I, the Governor aforesaid, with the advice of the Executive Council of the said Colony, have duly sanctioned the carrying out of certain works, viz., the erection of a Bridge over the Mandurama Creek, on the Road from Mandurama to Galley Swamp, in the said Colony, for and towards the completion of which said works public funds are available under the provisions of the "Appropriation Act of 1885;" and whereas the lands hereinafter described are required for approaches to the said bridge: Now I, the Governor of the said Colony, with the advice of the Executive Council of the said Colony, in pursuance of the powers in this behalf given to or vested in me by the "Lands for Public Purposes Acquisition Act," do by this notification, published in the Gazette and in certain newspapers, that is to say, the "Sydney Morning Herald" and the "Carcoar Chronicle," circulated in the Police District wherein the said lands are situated, declare that the lands hereinafter described have been resumed for the public purposes hereinafter mentioned, that is to say, for and in connection with the approaches to the Bridge over the Mandurama Creek aforesaid, to the intent that, upon the publication of this notification in the Gazette, the legal estate in the said lands shall forthwith be vested in the Minister for Public Works and his successors on behalf of Her Majesty for the purpose of the said last-mentioned Act, for an estate of inheritance in fee simple in possession, freed and discharged from all trusts, obligations, estate, interests, contracts, charges, rates, rights-of-way, or other easements whatsoever; and to the intent, further, that the legal estate therein, together with all powers incident thereto or conferred by the said Act, shall be vested in the said Minister as a trustee with the powers stated in the said last-mentioned Act. And I declare that th following is the description of the lands hereinbefore referred to, that is to say:—

All that piece or parcel of land situate in the parish of Somers, county of Bathurst, Colony of New South Wales, being part of S. W. Ward's portion No. 6, required for access to a bridge over Mandurama Ponds Creek, containing by admeasurement 1 rood 4¼ perches more or less. Commencing at the south-west corner of S. W. Ward's portion No. 6 of 28 acres 3 roods aforementioned; and bounded on the south by a road 1 chain wide bearing east 1 chain 94½ links; thence on the south-east by a road 1 chain wide bearing north 59 degrees 1 minute east 1 chain 31 links; thence by the last-mentioned road north 19 degrees 59 minutes east 1 chain 59 links; and thence by a line bearing south 59 degrees 1 minute west 4 chains 21 links, to the point of commencement.

Also, all that piece or parcel of land situate in the parish of Lucan, county of Bathurst, Colony of New South Wales, being part of S. W. Ward's portion No. 165, required for access to bridge over Mandurama Ponds Creek, containing by admeasurement 1 rood 26½ perches more or less. Commencing at the north-east corner of S. W. Ward's portion No. 165, of 53 acres aforementioned; and bounded on the south-east by a road 1 chain wide bearing south 59 degrees 1 minute west 6 chains 35 links; thence by a line bearing north 38 degrees 55 minutes east 2 chains 91 links; thence by a line bearing north 59 degrees 1 minute east 1 chain 95 links to a road 1 chain wide; thence by the south side of that road east, to the point of commencement.

Given under my Hand and Seal, at Government House Sydney, this sixteenth day of July, in the year of our Lord one thousand eight hundred and eighty-six, and in the fiftieth year of Her Majesty's Reign.

By His Excellency's Command,

WILLIAM JOHN LYNE.

GOD SAVE THE QUEEN!

1885-6.

NEW SOUTH WALES.

LANDS FOR PUBLIC PURPOSES ACQUISITION ACT.

(RESUMPTION OF LAND FOR APPROACH TO "SPIT" FERRY, MIDDLE HARBOUR.)

Presented to Parliament, pursuant to Act 44 Vic. No. 16, sec. 6.

NOTIFICATION OF RESUMPTION OF LAND UNDER 44 VICTORIA No. 16.

NEW SOUTH WALES, to wit } By His Excellency The Right Honourable CHARLES ROBERT, BARON CARRINGTON, a Member of Her Majesty's Most Honourable Privy Council, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

(L.S.) CARRINGTON, *Governor.*

WHEREAS I, the Governor aforesaid, with the advice of the Executive Council of the said Colony, have duly sanctioned the carrying out of certain works for and in connection with the construction of an approach to the Ferry at the Spit, Middle Harbour, in the said Colony, for and towards the completion of which said works public funds are available under the provisions of the Acts to apply sums out of the Consolidated Revenue Fund of New South Wales towards services of 1885 and 1886, and for services to be hereinafter provided for by loan; and whereas the lands hereinafter described are required for the construction of the said works: Now, I, the Governor of the said Colony, with the advice of the Executive Council of the said Colony, in pursuance of the powers in this behalf given to or vested in me by the "Lands for Public Purposes Acquisition Act," do by this notification, published in the Gazette and in a newspaper, that is to say, in the "Sydney Morning Herald," circulated in the Police District wherein the said lands are situated, declare that the lands hereinafter described have been resumed for the public purposes hereinafter mentioned that is to say, for and in connection with an approach to the Ferry at the Spit, Middle Harbour to the intent that, upon the publication of this notification in the Gazette, the legal estate in the said lands shall forthwith be vested in the Minister for Public Works and his successors, on behalf of Her Majesty, for the purpose of the said last-mentioned Act, for an estate of inheritance in fee simple in possession freed and discharged from all trusts, obligations, estate, interests, contracts, charges, rates, rights-of-way, or other easements whatsoever; and to the intent, further, that the legal estate therein, together with all powers incident thereto or conferred by the said Act, shall be vested in the said Minister as a trustee, with the powers stated in the said last-mentioned Act. And I declare that the following are the descriptions of the lands hereinbefore referred to, that is to say:—

All that piece or parcel of land situate in the parish of Manly Cove, county of Cumberland and Colony of New South Wales: Commencing at a point on the boundary line of the lots presently owned and occupied by Peter Ellery and Mrs. Smith, marked by a broad arrow cut in the rock, said point being the point of junction of said boundary line with the existing road line to Manly; thence bounded by the eastern side of said road line bearing north-west 160 degrees 38 minutes for a distance of 277·24 links; thence further by said road line bearing north-west 165 degrees 44 minutes for 221·37 links; thence running north-east by a line bearing 49 degrees 56 minutes 30 seconds for 308·68 links; thence north-east by a line bearing 71 degrees 27 minutes for 509·23 links; thence north-east by a line bearing 43 degrees 51 minutes for 240·57 links; thence north-east by a line bearing 13 degrees 13 minutes 30 seconds for 9·06 links; thence north-west by a line bearing 103 degrees 13 minutes 30 seconds for 565·24 links; thence south-west by a line bearing 81 degrees 33 minutes 30 seconds for 196·69 links to another portion of the road line to Manly; thence north-east along the eastern boundary of said road line bearing 194 degrees 48 minutes 30 seconds for 108·8 links; thence north-east by a line bearing 81 degrees 33 minutes 30 seconds for 172·91 links; thence south-east by a line bearing 103 degrees 13 minutes 30 seconds for 606·3 links; thence south-east by a line bearing 90 degrees 45 minutes for 196·46 links; thence south-east by a line bearing 102 degrees 12 minutes for 278·38 links; thence south-east by a line bearing 147 degrees 57 minutes 30 seconds for 67·08 links; thence south-east by a line bearing 102 degrees 57 minutes 30 seconds for 135 links; thence south-west by a line bearing 192 degrees 57 minutes 30 seconds for 100 links; thence north-west by a line bearing 102 degrees 57 minutes 30 seconds for 135 links; thence south-west by a line bearing 57 degrees 57 minutes 30 seconds for 67 08 links; thence north-west by a line bearing 103 degrees 43 minutes for 220·73 links; thence south-west by a line bearing 89 degrees 31 minutes for 213·72 links; thence south-west by a line bearing 43 degrees 51 minutes for 223·03 links; thence south-west by a line bearing 71 degrees 27 minutes for 514·79 links; thence south-west by a line bearing 49 degrees 56 minutes 30 seconds for 217·04 links; thence south-east by a line bearing 171 degrees 57 minutes for 334·38 links; and thence south-west by a line bearing 190 degrees for 116·96 links to the point of commencement, containing 3 acres 1 rood 00·7 perches, and now or recently the property of Peter Ellery and Mrs. Smith.

Also, all that piece or parcel of land situate in the parish of Manly Cove, county of Cumberland and Colony of New South Wales: Commencing at a point on the western boundary of the road line to Manly, bearing south-west 81 degrees 33 minutes 30 seconds from the westernmost extremity of the parcel of land before described, and distant therefrom 108·8 links; thence bounded by the western side of that road line by a line bearing north-east 194 degrees 48 minutes 30 seconds for 289 6 links; thence running south-west by a line bearing 52 degrees 48 minutes 30 seconds for 330 links; thence south-east by a line bearing 153 degrees 30 minutes for 112·9 links; and thence north-east by a line bearing 81 degrees 33 minutes 30 seconds for 140 links, to the point of commencement, containing 1 rood 19·1 perches, and now or recently the property of Peter Ellery.

In witness whereof, I have hereunto set my Hand, and caused the Great Seal of the Colony to be hereto affixed, at Government House, Sydney, this seventeenth day of August, in the year of our Lord one thousand eight hundred and eighty-six, and in the fiftieth year of Her Majesty's Reign.

By His Excellency's Command,
WILLIAM JOHN LYNE.

GOD SAVE THE QUEEN!

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ACCIDENT TO JOHN LIVINGSTONE M^cCALLUM.

(CORRESPONDENCE, MINUTES, &c.)

Ordered by the Legislative Assembly to be printed, 29 *June*, 1886.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 4th June, 1886, That there be laid upon the Table of this House,—

"Copies of all documents, reports, minutes, and correspondence, in connection with the accident which happened to John Livingstone McCallum on the 11th June, 1884, during the execution of Hayes and M'Fadyen's contract; including letters from his Solicitors, and the letter addressed by him to the Honorable W. J. Lyne, Minister for Works, on 31st ultimo."

(*Mr. Abigail.*)

SCHEDULE.

NO.		PAGE.
1.	Tenders 23, learing in Nymagee-street, Nyngan	2
2.	Agreement for ,, ,, ,,	4
3.	Barker E. to Minister for Works, *re* accident	4
4.	Under Secretary for Works, reply to Mr. Barker's letter	4
5.	Fraser R. A. telegram, *re* accident	4
6.	McCallum J. L. to Minister for Works, *re* accident	4
7.	Fraser R. A., report on accident	5
8.	Commissioner for Roads, minute *re* accident	6
9.	McDermott T. & A., repayment of money due T. Hayes	7
10.	Crown Solicitor as to McCallum's claim	8
11.	M'Callum J. L., for compensation	8
12.	Under Secretary for Works, reply	9
13.	Commissioner for Roads to Mr. McCallum	9
14.	,, ,, memorandum *re* money due Hayes and M'Fadyen	9
15.	Messrs. Shorter, Fitzgerald, & Asher, to Commissioner for Roads, *re* M'Fadyen	9
16.	McCallum J. L. to Minister for Works, *re* his claim	9

631—A

[805 copies—Approximate Cost of Printing (labour and material), £8 3s. 0d.]

ACCIDENT TO JOHN LIVINGSTONE McCALLUM.

No. 1.

Tender.

Main Western Road—Nymagee-street.

SCHEDULE of Tenders opened this day at the Court-house by R. A. Fraser, Road Superintendent, in the presence of L. M'Guinn, junr., C.P.S.

Name, number, and description of Contract.	Name of Tenderer.	Amount of Tender.	Amount of Estimate.	Remarks.
		£ s. d.	£ s. d.	
Task 23 N. Clearing in Nymagee-street 50 chains long.	1. S. Gregson	67 10 0	44 0 0	
	2. Hayes & M'Fadyen	33 10 0	.....	F.G.L.
	3. D. McCallum	25 0 0	.....	
	4. G. Oliver	28 0 0	.....	Sec. 1 only. Informal.
	5. A. Carey	53 11 0	.....	
	6. Young & Quilky	55 0 0	.....	
	7. J. Scoul	80 0 0	.....	

We certify the above to be correct, and that we have initialled all the tenders—

L. M'GUINN, Jun., C.P.S.
R. A. FRASER, Road Superintendent.

Dubbo, 20th day of May, 1884.

No. 3 is much too low. It is incorrect also. I recommend acceptance of Hayes and M'Fadyen's tender.—R.A.F., 20/5/84. The Com., B.C. I recommend acceptance of Hayes and M'Fadyen's tender.—W.C.B., 22/5/84. Under Secretary, B.C. Submitted, 24/6/84. Approved.—G.R.D., 26/6/84.

TASK 23 N.

Department of Public Works—Road Branch.

General Conditions of Road Contracts and Taskwork.

1. The works to which these conditions refer include the supply of all tools, materials, and labour and everything else requisite to complete the works specified, to the entire satisfaction of the Commissioner and Road Superintendent.

2. The contractor is on no account to commence any contract without an order in writing, signed by the Road Superintendent; and no claim for any work executed without an order will be admitted. No extra work will be paid for without the production of an order in writing for the same, signed by the Commissioner and countersigned by the Superintendent; the price for any work not in the Schedule to be determined on previous to its execution, and set forth in the said order.

3. In every case the Commissioner reserves the right of executing any greater or less quantity of the work than that mentioned in the specifications, such increase or decrease to be valued at the Schedule rates, and added to or deducted from amount of contract, as the case may be. Schedule rates must be in accordance with bulk sum; if not, the Commissioner shall have power to fix rates in accordance therewith, and use them for such valuation.

4. During continuance of this contract the contractor is to maintain in fair order the portion of road comprised therein (except where contract is for supply of metal only), and also to afford every facility for the passing of the traffic during the execution of the work, and, if necessary, to provide new or keep the existing out-turns in repair, and also to provide proper guards for the drains and water-tables, and to stop all adjacent tracts by which the traffic can avoid the new metal, by felling the trees, drawing logs, or such other means as the Superintendent may direct. The contractor to take all due precaution to prevent accident to the public from leaving culverts open or placing heaps of stones in dangerous positions, and will be responsible for all damage arising from his neglect of these precautions.

5. The Road Superintendent will have the power of immediately dismissing any agent or workman employed by the contractor, and the contractor is not to sublet or assign any contract or portion of contract without the approval of the Road Superintendent.

6. All gravel, stone, ballast, metal, timber, iron, or other materials, placed on the road, or within 1 chain of centre thereof, for purposes of this contract, to become the property of the Commissioner when so placed.

7. To secure the proper quantity of metal or gravel it will be measured in a continuous heap of the requisite cross section before being spread; but it shall be competent for the Road Superintendent to re-measure such metal on the road when spread, should he consider it necessary.

8. When a certain gauge is specified, it is intended that every stone shall pass in every way through a ring of the diameter of specified gauge, the metal to be clean cuboidal and of sharp fracture; no laminated or jointy stone will be admitted.

9. All water-tables and side drains to have a proper fall to outlets and culverts, and new outlet drains made where directed by the Superintendent.

10. The sides of all cuttings, side drains, water-tables, &c., to have a slope of 1 to 1, except when in rock or otherwise specified; the sides of embankments to have a slope of 1½ to 1.

11. The contractor to be liable to all risk from floods or other accidents during the execution of the works. Should the state of the country from drought cause a liability to bush fire spreading, contractors must not use fire in clearing, but will give written notice to the Road Officer accordingly, when a proportionate

proportionate time will be allowed for completion of contract; and in the event of a fire of the kind referred to occurring from contractor's neglect of this precaution, he and his sureties will be held liable for damage to grass, fencing, or other property.

12. The Road Superintendent will have power to employ men, horses, and carts, and purchase materials, to do all necessary and urgent work, or to remove rejected materials on this contract, and deduct cost of same from contract price, provided the contractor shall have neglected to do such work after due notice. Should there be no funds belonging to contractor in the hands of the Commissioner for removal of rejected materials, all such materials, if not removed by contractor within one month from date of rejection, to become the property of the Commissioner, and be used in any manner he may direct.

13. Should the Road Superintendent be dissatisfied with the rate of progress or mode of carrying on the work, or with the character of the work done by the contractor, the Commissioner will have power to annul the contract, and the contractor shall forfeit all claim to payment for work done or material delivered; and the Commissioner shall be at liberty to deduct amount of penalty from any sum or sums due to contractor on this or any other contract under him.

14. The contractor shall not sublet this contract, or any material part of it, without notice to the Superintendent, and the permission of the Commissioner being granted if for the whole contract.

15. If the contractor shall become insolvent, have his estate placed under sequestration, or shall make an assignment of his estate for the benefit of his creditors, it shall be lawful for the Commissioner, without previous notice to the contractor, or to the Official or other Assignee or Assignees of his insolvent estate, or to the trustee or trustees under the assignment, to take the works out of the hands of the contractor, and of the assignees or trustees of his estate, and to re-contract with any other person or persons to proceed with and complete the same, upon such terms, stipulations, and conditions as shall be deemed expedient, using all the then remaining materials, implements, and plant, that may be required to complete the work.

16. Payments to be made at the rate of 80 per cent., the remainder to be paid after the Road Superintendent and overseer shall have certified that the whole of the works have been completed to their entire satisfaction; and the obtaining of such a certificate shall be a condition precedent to the Contractor having any claim or cause of action in respect of any work done or materials provided, to the payments from time to time to be made hereunder, or to the final payment upon completion of the contract.

17. All moneys due on account of contract will be paid to the contractor himself, or to his credit at such Bank as he may request, and the contractor shall not assign over any of the moneys payable under this contract to any other persons by deed of assignment, letter, or order, to the Commissioner or Superintendent. The contractor for each and every breach of this condition shall pay to the Commissioner for Roads the sum of £5, to be deducted on face of pay-sheet from amount due to contractor.

18. The contractor to attend constantly on the work, or employ a properly authorized agent to represent him, any order to whom will be considered as given to the contractor himself.

19. In case of any defective description or ambiguity in the specification, or in memoranda of contracts, the explanation given by the Commissioner shall be final and binding on the Contractor; the measurements to be made according to the actual dimensions, notwithstanding any general or local custom to the contrary.

20. The cuttings and culverts to be completed, and the ballast or metal ready for spreading in the time specified for each contract.

21. If, after the completion of this contract and approval of the work by the Road Superintendent, it shall be discovered that officer has been wilfully deceived, and his approval obtained by fraudulent or improper means, or by the concealment of inferior work or material, and that the work has not been faithfully done according to specification and general conditions, the Road Superintendent shall have power to employ men, horses, and carts, and purchase materials necessary to complete the work in accordance with the specification, and the Commissioner shall be at liberty to deduct the cost of the same from any sum or sums due to the contractor on this or any other contract under him.

THESE are the general conditions referred to in our bond to Her Majesty, dated the 27th May, 1884.

A. M'FADYEN.
Witness—R. A. FRASER. THOMAS HAYES.

Main Western Road, Dubbo District, Task 23 N, Nyngan-street, Nyngan.

THIS contract commences at the trucking yards, and extends along Nymagee-street to the Bogan River, comprising the clearing on the following sections:— Contract.

Section 1. From the trucking yards to railway-station gate, clearing road 1½ chain wide—15 lineal chains.

Section 2. From edge of plain to Bogan River, clearing road 2½ chains wide—35 lineal chains,—making a total of 50 chains clearing.

The clearing to be full width of the street; all trees, stumps, roots, rocks, or boulders within the street shall be thoroughly grubbed out to a depth of 12 inches below the natural surface; all the holes to be left open for inspection by the Road Superintendent, after which they shall be filled in with ballast, or approved clean gravel, well rammed. All trees, brushwood, stumps, or roots to be completely consumed by fire. Any trees or large boughs that overhang the clearing, or whose fall would cause obstruction on the road, are to be cut down and removed. Any fences injured during the execution of the work to be immediately repaired at the contractor's cost. Clearing.

All the works specified to be completed within one month from date of signing the bond under a penalty provided for in the "General Conditions for Road Contracts," hereto attached, irrespective of bad weather, or any other cause of delay, except a written order be given by the Road Superintendent not to proceed with the work, or to increase the same, when a proportionate extension of time must be allowed. Time.

Tenders to state a bulk sum for the execution of all the works specified, also a schedule of prices at which any deductions or additions shall be valued. Such additions or deductions, no matter to what extent ordered, shall not vitiate or set aside the contract. Tenders.

In all matters relating to this contract not herein specified, the contractor to be bound by the printed general conditions hereto attached. General Conditions.

These are the general conditions referred to in our Task Agreement to Her Majesty, dated 27th May, 1884.

A. McFADYEN.
Witness—R. A. FRASER. THOMAS HAYES.

No. 2.

No. 2.

Agreement for Clearing in Nymagee-street, Nyngan.

27 May, 1884.

Nyngan to Cobar, Road, Dubbo District.

I, THOS. HAYES AND ANGUS MCFADYEN, hereby undertake to execute the following work for the Government of New South Wales, to the perfect satisfaction of Mr. R. A. Fraser, the Road Superintendent, viz., all the work mentioned in specification for task 23 N. clearing in Nymagee-street for the sum of £33 10s., and in accordance with the printed general conditions signed by me, which I declare shall be read and considered as part of this contract; and I agree and declare that the obtaining certificates from time to time as the work proceeds, that same so far as it has been executed has been done, and upon its completion that the work has been completed in all things to the satisfaction of Mr. R. A. Fraser shall be a condition precedent to my having any claim or right of action in respect of the said works.

A. McFADYEN.
THOMAS HAYES.

Witness—R. A. FRASER.

No. 3.

Mr. E. Barker to The Secretary for Public Works.

Nyngan, 16 June, 1884.

Sir,

I have the honor to inform you that a fortnight ago I was passing along the road on which the railway bridge abuts, on the east side of Nyngan, in company with Mr. J. L. McCallum, when he suddenly perceived a tree falling over us, which had been set fire to at the foot by the contractors for clearing the road. The tree suddenly commenced to fall, myself having the good fortune to escape from being crushed to death, but McCallum fared very much worse, having received a bad fracture of the thigh by the fall of the tree. Mr. McCallum is now, and has been, confined to his bed for the last fortnight, and, although progressing favourably, it is impossible to say when he will be able to attend business, or if he will have the full use of his limbs again. Mr. McCallum naturally looks to some one to indemnify him for his loss and injuries. There was no one to warn any passer-by of the danger, and evidently the contractors must be held responsible. I should feel obliged if you would inform me of the names of the contractors for the clearing of the road in Nyngan, and also if there is not a clause in the contract compelling them to take measures to prevent injury to public or loss of life, and generally say what you deem advisable to do according to the circumstances. The nominal contractor here appears to be a man without means, but surely Government would see that adequate protection is afforded to the public.

I have, &c.,
EDWARD BARKER.

Roads, B.C.—J.R., 24/6/84. Telegram sent Mr. Fraser—resubmit with his report.—W.C.B., 25/6/84. Should be informed his claim is against contractor, who is bound to provide for the safety of the public.—W.C.B., 4/7/84. Under Secretary, B.C., P.W.O., 5/7/84. Submitted, 5/7/84.—J.R. Approved.—G.R.D., 8/7/84. Mr. E. Barker informed, 10/7/84. Roads, B.C.—J.R., 10/7/84.

No. 4.

The Under Secretary for Public Works to Mr. E. Barker.

Department of Public Works, Sydney, 10 July, 1884.

Sir,

In reply to your letter of 16th ultimo, respecting injuries received by Mr. J. L. McCallum by alleged negligence on the part of the contractors for clearing street, Nyngan, I am directed to inform you that Mr. McCallum should prefer his claim for compensation against the contractors, Messrs. Hayes and McFadyen, who according to the terms of their contract are bound to provide for the safety of the public.

I have, &c.,
JOHN RAE.

No. 5.

Telegram from Mr. Road-Superintendent Fraser to The Commissioner for Roads.

Nyngan Station, 26 May, 1884.

HAYES AND MCFADYEN in clearing streets set fire to a small tree. The tree fell when McCallum was walking past, and broke his leg. I warned them against allowing anything dangerous in the streets, and made them fill the holes as trees were grubbed.

Have these men been paid? Let me see vouchers in full.—W.C.B., 27/6/84. We do not appear to have received any vouchers yet for Hayes and McFadyen.—O.C., 27/6/84. Resubmit letter claiming compensation.—W.C.B., 28/6/84. Records, 30/6/84. 84–5173 herewith. In terms of general conditions (clause 4) contractors are liable for accidents occasioned by leaving culverts open, or placing heaps of stones in dangerous positions. Contractor is bound to provide for the safety of the public.—P.H.F., 4/7/84.

No. 6.

Mr. J. L. McCallum to The Secretary for Public Works.

Nyngan, 17 July, 1884.

Sir,

I have the honor to acknowledge receipt of your letter of 10th instant, addressed to Mr. E. Barker, relative to the injury (fracture of the thigh) sustained by me from the fall of a burning tree in the main thoroughfare of Nyngan, and caused by the criminal neglect of Messrs Hayes and McFadyen, the contractors for clearing the road or street. You state in your letter that I should prefer my claim for compensation

compensation against the contractors, from which information I presume you have taken adequate guarantee from the contractors and their sureties against any claim such as mine, which may be made against them. I have also to advise that I had a call from Mr. Fraser, from your department, on the subject of my injury. He found me in bed, and I shewed him my leg, encased in plaster of Paris. I succinctly told Mr. Fraser the cause and nature of the accident. I told him further that I happened to know something about Hayes, the contractor. About a week before the accident occurred a labourer called William Barber came to me in a state of destitution, and stated that he had been discharged by Hayes from the bridge contract and was unable to obtain the wages due to him from Hayes. I got the man employment from my own employers. This fact bears either on Hayes' honesty, or his impecunious state. Half an hour after Mr. Fraser left, Hayes called on me, having seen Mr. Fraser in the interim. He pretended to me that he had only heard, when he was laid up with fever, that someone had met with injury, but did not know who the person was, or where he lived, and only found out my address that day. He thus asserted a tissue of falsehoods. Everybody in Nyngan knew that my thigh was fractured, and it was fully detailed in the local paper. Hayes' employé, who set fire to the tree, slept in the same room with me, saw me the night of the accident, and was daily in contact with Hayes, who was not ill as he asserted; and my employer's address and my own were well known in Nyngan. So much for Hayes' humanity. He pretended poverty, and offered me successively one, two, five, and then £10, which of course I refused. At this stage of the conversation my medical attendant happened to call. I told him who Hayes was, when he at once told the latter that he (the doctor) had passed underneath the burning tree in his buggy about 10 minutes before the accident happened to me. Hayes then saw the doctor examine my leg and finally made me an offer of £20, which I at once rejected, and if I did not take that I would get nothing but impudence. My actual pecuniary loss will not be less than £50—from loss of salary (I am bookkeeper to Messrs. Croaker and Co.), doctors' fees, medicines, &c. To show the reckless disregard of human life by Hayes, I may mention that the day previous to my accident a waterman with his cart passed between two burning trees, which suddenly and unexpectedly fell, and about half-an-hour before my accident a lorry with two horses, and several men on it, passed underneath the same tree that fell on me. I am informed that the contractors were bound to cut down the trees and not burn them. All the foregoing facts can be proved by independent witnesses, and it would appear strange and unjust if you can permit operations to be carried on in such a manner, in the most frequented part of this town, in the daring, reckless, and criminal manner in which they were effected, with the most contemptuous disregard of human life and not be held responsible for damages. I have not yet consulted a solicitor, but will do so when I receive a reply to this. In the meanwhile I respectfully request you to guard my interests in the suit I may have to institute against the contractors, by retaining as much money as you can, belonging to them, pending a settlement of my claim, as from my knowledge of Hayes I am fully persuaded that as soon as he gets all his moneys from your department he will decamp. I would therefore like to know who are the sureties for Hayes and McFadyen, and if they are responsible for damages, such as I claim. I am 45 years of age, and once held a first-class position, and might do so again, were it not for this accident. If I obtain compensation at the same rate as the young man who recently got £900 from a Sydney jury for a tram accident I shall be content. I would calmly leave the matter in your hands, being confident that you have more regard for the public safety than the public property, were it not that you referred me to Hayes and McFadyen for compensation, since when Hayes has informed me that he is almost penniless, and if that is the case whom can I obtain adequate compensation from. Confiding in your justice, and feeling sure you will do your utmost to assist me in obtaining a settlement of a just and righteous claim, and awaiting the favour of your early reply,

I have, &c.,
JOHN LIVINGSTONE McCALLUM.

P.S.—So that you can identify me I may add that I have been personally known to you for years. Address, c/o Croaker and Co., Nyngan.

Roads, B.C., 21/7/84. A voucher for £41 is now in office which we will detain.—O.C. Mr. Fraser for further report. This is a very serious case.—W.C.B., 22/7/84. Report herewith.—R.A.F., 26/7/84.

No. 7.

Mr. Road-Superintendent Fraser to The Commissioner for Roads.

Sir, Roads Office, Dubbo, 26 July, 1884.

Respecting the clearing in question, the tender of Hayes and M'Fadyen was accepted. I showed them what to do, and gave them to understand (verbally) that they must provide for the safety of the public, and that they would be held responsible for any damage done, adding that they must fill in any dangerous holes, and I would have them opened for inspection if necessary.

They began on section 1, and on it carried out my instructions. They did not here burn any of the trees down; but on section 2 they used fire in the felling of the trees, with the unfortunate result that one of them fell on and fractured the thigh of McCallum. The contractors aver that they had cleared one side of the street—here 2½ chains wide—and filled the holes for the traffic; that the tree McCallum got his hurt from was away altogether from the said cleared track, and he must have been picking his way through the fallen timber, &c., at the time of the accident.

They also assert that McCallum was not sober at the time, and that he had been on the spree for a fortnight previous thereto; but this McCallum of course denies.

Hayes says also that he made the men cut down any dangerous trees before knocking off work at night, or set men to watch them; but the tree in question was not set fire to by any of his men or by his orders, the truth of all which he is prepared to prove.

I called on McCallum, and afterwards induced Hayes to visit him, with a view of settling the affair. Eventually Hayes offered £20, but it seems McCallum wants £50. Thus the matter stands, without any likelihood of a peaceable solution. Hayes told me he would not give McCallum anything without he accepted the £20, and there is no doubt that if the contractors were fully paid up McCallum could "whistle for his money."

With

With respect to the treatment of the men working for them, no complaint has been made to me, other than what McCallum said, and I do not think they treat their employés more harshly than the generality of contractors. For the clearing a voucher, £41, has been forwarded to head office, where it now is, besides which the contractors have in hand a "Road Construction Contract," at Dubbo (£584), of which £80 or £100 worth has been done, and no payments made on account thereof.

McCallum, I hear, is again at his work in Croaker & Co.'s office.

I have, &c.,
R. A. FRASER,
Road Superintendent.

No. 8.

Minute of Commissioner for Roads.

J. L. McCallum's claim for compensation.

28 July, 1884.

J. L. McCallum writes on the 16th June, stating that a fortnight previously, when passing at night, a clearing being made in Nymagee-street, Nyngan, by Hayes and M'Fadyen, contractors under this Department, a tree which was being felled by burning, fell on him, and broke his thigh, putting him to great expense for medical advice, much suffering, and long detention from employment, and claimed compensation for all this from the Department. He was informed by letter, dated the 10th instant, that contractor, not department, was liable; but he objects that the contractor if paid will not pay him, and will not be worth following, and that he will look to the Government.

The contractor, on the other hand, states that he cleared one side of the street for the traffic, and that McCallum had no business to be on the side he was when accident occurred; that McCallum was not sober at the time, but that in order to prevent law he offered him £20. McCallum refused to take less than £50, and writes again to the Department, holding the Government liable. Hayes also states that the tree in question was not set fire to by his orders.

The report of Road Superintendent herewith sets forth Hayes' defence clearly.

I have to request that papers be sent to Crown Solicitor to know if the Department should hold over money due to Hayes and M'Fadyen, the contractors, to the amount of £50, to prevent loss to the Government, or if liability to them (Hayes and M'Fadyen) for breach of contract, will be incurred thereby.

I should point out that by the general conditions of contract attached contractors are held liable for safety of public.

WILLIAM C. BENNETT.

Department of Public Works—Road Branch.

General conditions of Road Contracts and Taskwork.

1. The works to which these conditions refer include the supply of all tools, materials, and labour, and everything else requisite to complete the works specified, to the entire satisfaction of the Commissioner and Road Superintendent.

2. The Contractor is on no account to commence any contract without an order in writing, signed by the Road Superintendent; and no claim for any work executed without an order will be admitted. No extra work will be paid for without the production of an order in writing for the same, signed by the Commissioner and countersigned by the Superintendent; the price for any work not in the Schedule to be determined on previous to its execution, and set forth in the said order.

3. In every case the Commissioner reserves the right of executing any greater or less quantity of the work than that mentioned in the specifications, such increase or decrease to be valued at the Schedule rates, and added to or deducted from amount of contract, as the case may be. Schedule rates must be in accordance with bulk sum; if not the Commissioner shall have power to fix rates in accordance therewith, and use them for such valuation.

4. During continuance of this contract the contractor is to maintain in fair order the portion of road comprised therein (except where contract is for supply of metal only), *and also to afford every facility for the passing of the traffic during the execution of the work*, and, if necessary, to provide new or keep the existing out-turns in repair, and also to provide proper guards for the drains and water-tables, and to stop all adjacent tracks by which the traffic can avoid the new metal, by felling the trees, drawing logs, or such other means as the Superintendent may direct. *The contractor to take all due precaution to prevent accidents to the public* from leaving culverts open or placing heaps of stone in dangerous positions, *and will be responsible for all damage arising from his neglect of these precautions.*

5. The Road Superintendent will have the power of immediately dismissing any agent or workman employed by the contractor, and the contractor is not to sublet or assign any contract or portion of contract, without the approval of the Road Superintendent.

6. All gravel, stone, ballast, metal, timber, iron, or other materials, placed on the road, or within 1 chain of centre thereof, for purposes of this contract, to become the property of the Commissioner when so placed.

7. To secure the proper quantity of metal or gravel it will be measured in a continuous heap of the requisite cross section before being spread; but it shall be competent for the Road Superintendent to remeasure such metal on the road, when spread, should he consider it necessary.

8. When a certain gauge is specified it is intended that every stone shall pass in every way through a ring of the diameter of specified gauge, the metal to be clean cuboidal and of sharp fracture; no laminated or jointy stone will be admitted.

9. All water-tables and side drains to have a proper fall to outlets and culverts, and new outlet drains made where directed by the Superintendent.

10. The sides of all cuttings, side drains, water-tables, &c., to have a slope of 1 to 1, except when in rock or otherwise specified; the sides of embankments to have a slope of 1½ to 1.

11. The contractor to be liable to all risk from floods or other accidents during the execution of the works. Should the state of the country from drought cause a liability to bush fire spreading, contractors must not use fire in clearing, but will give written notice to the Road Officer accordingly, when

when a proportionate time will be allowed for completion of contract; and in the event of a fire of the kind referred to occurring from contractor's neglect of this precaution, he and his sureties will be held liable for damage to grass, fencing, or other property.

12. The Road Superintendent will have power to employ men, horses, and carts, and purchase materials, to do all necessary and urgent work, or to remove rejected materials on this contract, and deduct cost of same from contract price, provided the contractor shall have neglected to do such work after due notice. Should there be no funds belonging to contractor in the hands of the Commissioner, for removal of rejected materials, all such materials, if not removed by contractor within one month from date of rejection, to become the property of the Commissioner, and be used in any manner he may direct.

13. Should the Road Superintendent be dissatisfied with the rate of progress or mode of carrying on the work, or with the character of the work done by the contractor, the Commissioner will have power to annul the contract, and the contractor shall forfeit all claim to payment for work done or material delivered; and the Commissioner shall be at liberty to deduct amount of penalty from any sum or sums due to contractor on this or any other contract under him.

14. The contractor shall not sublet this contract, or any material part of it, without notice to the Superintendent, and the permission of the Commissioner being granted if for the whole contract.

15. If the contractor shall become insolvent, have his estate placed under sequestration, or shall make an assignment of his estate for the benefit of his creditors, it shall be lawful for the Commissioner, without previous notice to the contractor, or to the Official or other Assignee or Assignees of his insolvent estate, or to the trustee or trustees under the assignment, to take the works out of the hands of the contractor, and of the assignees or trustees of his estate, and to recontract with any other person or persons to proceed with and complete the same, upon such terms, stipulations, and conditions as shall be deemed expedient, using all the then remaining materials, implements, and plant that may be required to complete the work.

16. Payments to be made at least once a month, at the rate of per cent., the remainder to be paid after the Road Superintendent and overseer shall have certified that the whole of the works have been completed to their entire satisfaction; and the obtaining of such a certificate shall be a condition precedent to the contractor having any claim or cause of action in respect of any work done or materials provided, to the payments from time to time to be made hereunder, or to the final payment upon completion of the contract.

17. All moneys due on account of contract will be paid to the contractor himself, or to his credit at such bank as he may request, and in no other way; and the contractor shall not assign over any of the moneys payable under this contract to any other persons by deed of assignment, letter, or order, to the Commissioner or Superintendent. The contractor for each and every breach of this condition shall pay to the Commissioner for Roads the sum of five pounds, to be deducted on face of pay-sheet from amount due to contractor.

18. The contractor to attend constantly on the work, or employ a properly authorized agent to represent him, any order to whom will be considered as given to the contractor himself.

19. In case of any defective description or ambiguity in the specification, or in memoranda of contracts, the explanation given by the Commissioner shall be final and binding on the contractor; the measurements to be made according to the actual dimensions, notwithstanding any general or local custom to the contrary.

20. The cuttings and culverts to be completed, and the ballast or metal ready for spreading in the time specified for each contract.

21. If, after the completion of this contract and approval of the work by the Road Superintendent, it shall be discovered that officer has been wilfully deceived, and his approval obtained by fraudulent or improper means, or by the concealment of inferior work or material, and that the work has not been faithfully done according to specification and general conditions, the Road Superintendent shall have power to employ men, horses, and carts, and purchase materials necessary to complete the work in accordance with the specification, and the Commissioner shall be at liberty to deduct the cost of the same from any sum or sums due to the contractor on this or any other contract under him.

No. 9.

Mr. T. & A. M'Dermott to Mr. Road-Superintendent Fraser.

Dear Sir,

Orange, July 30, 1884.

We should feel obliged if you would kindly inform us if the money due to Mr. T. Hayes is being withheld by the Department in consequence of the accident to McCallum; if so we cannot see the justice of it, as we have supplied Hayes with cash and goods to enable him to carry out the work, and we would thank you to kindly urge upon the Department to order the amount due to Hayes to be paid forthwith.

We are, &c.,

T. & A. M'DERMOTT.

The above refers to task 23 N, clearing in Nymagee-street, Hayes & M'Fadyen, contractors. The work has been finished, and a voucher (81) forwarded for £41 on account, which has not yet been paid. McCallum had his leg fractured during the progress of the work through a tree having fallen on him—papers 84-6299. Hayes & M'Fadyen made out an order for the payment of all moneys to the credit of T. & A. M'Dermott, which was forwarded a few days since to head office.—R. A. Fraser, 1/8/84.

The Commissioner, B.C. Inform we must withhold money pending decision.—W.C.B., 2/8/84. Mr. Fraser, B.C., 2/8/84. If McCallum intends taking action he should do so at once and settle the question, that moneys might be paid the contractor, who will not be able to pay his men if it is not soon paid.—R.A.F., 9/8/84. The Commissioner, B.C. Mr. Flynn. We must pay.—W.C.B., 11/8/84. Mr. Carroll, 11/8/84.—P.H.F. I shall pay the cheque to-morrow.—O.C., 12/8/84. Paid Mr. Fraser's credit this morning. Mr. Fraser, B.C. 13/8/84. Advice received.—R.A.F., 18/8/84. Paid.—R.A.F., 29/8/84.

No. 10.

No. 10.

The Crown Solicitor *re* J. L. McCallum's claim for compensation.

Crown Solicitor's Office, Sydney, 1 August, 1884.

I HAVE the honor to return herewith the minute of date 28th July last, of the Commissioner for Main Roads, respecting a claim made by J. L. McCallum, and to state that the Department has no legal right to hold over money due to Hayes & M'Fadyen, the contractors, to the amount of £50, to prevent loss to the Government, and that a liability to them, Hayes & M'Fadyen, to the extent of the money so retained, will be incurred thereby.

As suggested by the Commissioner, by the general conditions of contract, contractors are held liable for safety of the public in case they neglect to take certain precautions against damage specified in the 4th general condition, but the accident in this case does not appear to have arisen from the neglect of any of the precautions mentioned in that condition.

I am inclined to think that the setting fire to the tree was not an act that can fairly be said to have been contemplated by the terms of the contract (unless there is a provision for burning off trees in the specification of which I am not informed), and that therefore the act of the contractors complained of is not one for which the Government is liable, but whether this be so or not there can be no doubt but that the Government have no right to retain money payable to the contractors, as an indemnity against the claim now made.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

Roads, B.C., 5/8/84.—J.R. Re-submit with specification.—W.C.B., 5/8/84. Specification for this task retained by Mr. Fraser.—P.H.F., 6/8/84. Telegraph for it.—W.C.B. Telegram sent, re-submit, 7/8/84. Specification herewith, 14/8/84. Attach copy of clearing clause* for reference when another application is made pay contractor in accord with Commissioner's opinion.—W.C.B., 14/8/84.

* The clearing to be full width of the street; all trees, stumps, roots, rocks, or boulders within the street shall be thoroughly grubbed out to a depth of 12 inches below the natural surface; all the holes to be left open for inspection by the Road Superintendent, after which they shall be filled in with ballast, or approved clean gravel, well rammed. All trees, brushwood, stumps, or roots to be completely consumed by fire. Any trees or large boughs that overhang the clearing, or whose fall would cause obstruction on the road, are to be cut down and removed. Any fences injured during the execution of the work to be immediately repaired at the contractor's cost.

£41 for Hayes & M'Fadyen was paid to Mr. Fraser's credit on 13th inst.—O.C., 18/8. Submitted to Commissioner, 18/8/84.

No. 11.

Mr. J. L. McCallum to The Secretary for Public Works.

Dear Sir, Hospital, Dubbo, 21 October, 1884.

It is now nearly five months since I got my thigh fractured at Nyngan by a burning tree falling on me in the main street, which will render me more or less of a cripple for life, and I will not be fit for work this side of Christmas. Full details of the case were transmitted to you officially by myself and also by my solicitors, Messrs. Shorter, Fitzgerald, & Asher, but the matter has never yet been attended to by your Department, and as I will be shortly leaving the Hospital and am anxious to pay the latter before doing so, and also other expenses, I take the liberty of writing you to solicit your influence in getting a settlement expedited. I only ask for justice from you tempered by a humane leaning towards the weaker side which is mine. I was perfectly sober when the accident happened, and tried to avoid the tree, but was caught by a limb. It seems monstrous that a person can be injured by a falling tree in the Government township of Nyngan, and not obtain compensation. The Government may evade liability by some legal quibble, but they can never escape moral liability. To facilitate a settlement I would take, to avoid litigation, a very moderate sum, and in fact were you properly informed on all points I would leave the matter of compensation entirely in your own hands, as I stated in my letter of 16th July, addressed to you officially. I would be content with £250 made up as follows:—

Medical fees, medicines, nursing, and outlay	£45
Loss of salary	80
Compensation for permanent injury	125
	£250

And I feel sure you will agree with me that the amount is as moderate as any claim ever made on your Department.

My view of the matter is that Hayes and McFadyen, the contractors, were only working contractors, whom the Chief Justice decided two or three months ago, were only servants and consequently they were only Government servants, for whom you are officially liable, but you have a claim on them for negligence, and I of course look to you for compensation.

Very moderate compensation would be more acceptable to me now than much larger compensation some months hence.

I would feel deeply obliged if you would cause your officers to take up my case at once and thus enable you to decide the matter, and I sincerely hope your decision will be favorable to me, as if not there will be a miscarriage of justice. It is upwards of four months now since the case was first placed before you officially, long enough, I respectfully submit, to admit of a settlement, but I presume your long illness, from which I hope you have fully recovered, would account for the delay. I am able to go about on crutches and it will be a considerable time before I can dispense with them.

Trusting you will cause a communication to be sent to Messrs. Shorter, Fitzgerald, and Asher solicitors, Dubbo, as early as convenient,

I have, &c.
JOHN L. McCALLUM.

P.S.—Unless I get compensation at once I will be compelled to go to work prematurely, and still further permanently weaken my leg. Whereas I wish to go to Sydney to consult a first-class surgeon, to see if my leg can be improved, though it can never be cured, but I cannot move for want of means.—J. L. McC.

Acknowledge,

Acknowledge, and let me have any information there is in this office.—F.A.W., 24/10/84. Acknowledged, 24/10/84. Roads, B.C., 25/20/84.—J.R. Previous papers,—W.C.B., 27/10/84.

This is doubtless a hard case, but the Crown Solicitor's letter will show that the liability is the contractor's. They have gone from the locality, and given an order for some one to receive they money. Dealing with this case must be done with care as it would form a very inconvenient precedent.—W.C.B., 28/10/84. Under Secretary, B.C.

P.W.O., 29/10/84. Submitted, 29/10/84.—J.R. What does Mr. Bennett recommend? As the contractors appear to be liable are we to refer McCallum to them for redress?—J.R. B.C., 4/11/84. I think so.—W.C.B., 4/11/84. Under Secretary, B.C. Inform accordingly.—F.A.W., 6/11/84. Roads B.C., 7/11/84.—J.R.

No. 12.

The Under Secretary for Public Works to Mr. J. L. McCallum.

Sir, 6 November, 1884.

In reply to your letter of the 21st ultimo, claiming compensation for injuries alleged to have been received through the falling of a tree in the township of Nyngan, I am directed to inform you that the Government cannot recognise your claim, but I am to refer you to Messrs. Hayes and McFadyen, who were the contractors for the work which is said to have occasioned the injury referred to.

I have, &c.
JOHN RAE.

No. 13.

The Commissioner for Roads to Mr. J. L. McCallum.

Sir, Department of Roads and Bridges, Sydney, 17 December, 1884.

Referring to the claim made by you for compensation for injuries received by the falling of a burning tree at Nyngan, I have to inform you that the Crown Solicitor has reported that the contractor, and not the Crown, is liable in the matter; and as the final payment to the contractor is about to be made you are so informed in order that you may take any legal steps you think necessary, intimation of which should be sent to this office at once, as the money when payable cannot legally be detained.

I am, &c,
WILLIAM C. BENNETT,
Commissioner and Engineer for Roads.

No. 14.

Memo. by Commissioner for Roads.

Department of Roads and Bridges, Sydney, 5 January, 1885.

HAS M'Fadyen & Co.'s money been paid *re* Nyngan accident?

Yes, the money has been paid.—O.C., 5/1/85. Mr. Carroll,—Note that McC.'s solicitor called this day; also date of letter to McCallum advising (17/12/84), and date of payment (29/8/84). Noted.—O.C., 5/1/85.

No. 15.

Messrs. Shorter, Fitzgerald, & Asher to The Commissioner for Roads.

Sir, Gladstone Chambers, 90, Pitt-street, Sydney, 13 January, 1885.

We have the honor to request that all moneys, to the extent of £200 at least, which may be due, or accruing due, by your Department to Messrs. Hayes & M'Fadyen, contractors, of Nyngan, be detained, pending the obtaining of the necessary attachment order, in the matter of a claim against them by one John L. McCallum, who was injured through their negligence, during the performance by them of a contract for clearing a road under your Department at Nyngan.

We have, &c.,
SHORTER, FITZGERALD, & ASHER.

Mr. Carroll,—We cannot withhold on this only.—W.C.B., 14/1/85.

No. 16.

Mr. J. L. McCallum to The Secretary for Public Works.

Sir, 51, Market-street, Sydney, 31 May, 1886.

I have the honor to lay before you certain information relative to my claim for compensation for injuries sustained by me through the falling of a tree, set fire to by Hayes & M'Fadyen, while clearing ground in Nymagee-street, Nyngan, in June, 1884. On the motion of Mr. Abigail, M.L.A., you laid, on the 4th of this month, on the table of the Assembly copy of contract, report by Fraser, the Road Inspector, a minute by Mr. Commissioner Bennett, and the copy of the letter of an eye-witness, Mr. Ed. Barker.

I thought that these would have been sufficient to have enabled a Select Committee to deal with my claim, and they would have been had it not been for the gross deception used towards me by Fraser. (I write of him as he wrote of me.)

On the day when Fraser made his inquiry into the cause of my accident he, uninvited, called on me. I was then lying helpless in bed, with my fractured thigh encased in plaster of Paris, and my condition might well inspire humane feelings in the breast of a savage. Fraser expressed the deepest

sympathy

sympathy with me, and he said also that he hoped I would get heavy damages from the contractor, Hayes (McFadyen had retired from the contract before its execution), when I at once told him that I did not recognize the contractor at all in the matter, but looked to Government for compensation. I also asked him if he did not think I had a claim on Government, when he replied, "I cannot say." I also told him, as a matter of fact, that Hayes was penniless, and it was absurd to ask me to look to him for compensation. I also told him that I was then employed as bookkeeper to Croaker & Co., and had previously honourably filled higher situations, and had a salary at one time equivalent to £1,000 per annum, and that I considered my life and limbs as valuable as those of any man in the Colony. I further asked him to go to Croaker & Co.'s store, and he would there see Mr. E. Barker, the eye-witness, who would give him all particulars, and he would also find a man called Wm. Barber (an ex-railway employé), who had been working for two months at the Nyngan Bridge contract, then recently completed by Hayes and McFadyen, and that the said Wm. Barber would tell him that he had been in vain trying for several weeks to get his wages from Hayes, and when in great distress he came to me, and about a fortnight before my accident I got him employment in the store of my own employers. Now, after Fraser's expressions of sympathy with me, and after I had given him the foregoing information, who could have thought that he would have written the report he forwarded to the head of his Department? It is only valuable as proving that the trees were set fire to by Hayes—all the rest is merely a repetition of his friend and protege, Hayes', slanders, who not very long afterwards was arrested, publicly tried, and heavily fined for being drunk and disorderly in the streets of Nyngan. Fraser states that I was willing to accept £50 from the contractor as compensation, which is a downright invention of Hayes. Fraser was also brutal enough to report that he had heard on the date of his report that I was then at work, but he must have known that that averment was a physical impossibility.

I have thus shown you the cruel and heartless action of Fraser, who misrepresented my case, and succeeded in poisoning the mind of his superior officer against me. I subsequently wrote at great length to the Hon. the Minister for Works, but could get no other reply than a reference to the contractor for compensation. I then entrusted my case to Messrs. Shorter and Fitzgerald, solicitors, of Dubbo and Sydney. They found out that Hayes was not only penniless but in debt to the extent of £900. In consequence of my solicitors' representations the engineer who supervised Fraser, who resides, I believe, at Bathurst, made an inquiry into the merits of my claim, and promised personally to Mr. Fitzgerald to report favorably on my behalf to the Hon. the Minister for Works, as advised in a letter I received from Mr. Fitzgerald, dated 19th January, 1885. The Hon. F. A. Wright must then have dealt with my case, the result being that my claim was rejected. Now I am in a position to prove that the then Minister of Works, the Hon. F. A. Wright, could not deal with my case impartially, for the reasons fully set forth in my letter, marked No. 2,* of this date and herewith enclosed.

* Not received.

Believing you to be a lover of justice, I have the honor to ask you to do an unfortunate man a favour, by moving to-morrow that all the papers, reports, minutes, and correspondence connected in any way with my claim be laid on the table of the Assembly and afterwards printed. It is a very important matter to the public, whether a man of forty-five, and in perfect health, can be struck down in the main street of a Government township, through the gross neglect of a Government Roads Inspector, in allowing fire to be applied to the trees, and in letting a contract to Hayes and McFadyen, whom he knew perfectly well were unable to pay any damages, if incurred, and he (the sufferer) get no compensation.

During the course of my career I have had the honor of conducting correspondence with several Government departments in different countries and in several languages, but I never experienced the insolence and the extreme discourtesy of the Under Secretary of Works. I would be sorry to compare myself, in point of the accomplishments or the manners of a gentleman, with him. I noticed also that Mr. Comr. Bennett, in his minute, travels beyond his province, and endeavours to prejudice the Crown solicitors against my claim. As I happen to know a good deal about the knavery of the Roads Department I am not surprised at his action, but I believe the public will soon know something of what a Roads Inspector can do with the approbation of his superior; I can prove what I say.

I should like this letter printed along with my other letters. It will act as a counterpoise to the letters of Messrs. Rae, Bennett, and Frazer.

I have, &c.,
JOHN LIVINGSTONE McCALLUM.

P.S.—I need hardly say I have only criticized the gentlemen named in your Department in their official capacity. I scorn to condescend to the meanness of Fraser, and criticize their private habits.—J. L. McC.

P.S.—As I am a total stranger to you I may add that I am an accountant by profession, and have been in the employ of several of the first firms in N. S.W. in that capacity, and am at present bookkeeper to a most respectable firm in town, and all of whom can, and if necessary would, testify to my integrity, veracity, and industry.—J. L. McC.

The original of this paper only received in Roads Office this day. Copies sent to Messrs. Narden and Frazer. Reply will be sent on to attach to these papers.—W.C.B., 22/6/86.

Sydney: Thomas Richards, Government Printer.—1886.

[9*d*.]

1885-6.

NEW SOUTH WALES.

THIRTY-FIRST ANNUAL REPORT

OF THE

POSTMASTER-GENERAL,

ON THE DEPARTMENTS UNDER HIS MINISTERIAL CONTROL,

BEING THAT FOR THE YEAR

1885.

Presented to Parliament by Command.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1886.

[4s.] 471—A.

[1,258 copies—Approximate Cost of Printing (labour and material), £286 17s. 9d.

THE POSTMASTER-GENERAL TO HIS EXCELLENCY THE GOVERNOR.

ANNUAL REPORT FOR THE YEAR 1885, ON THE POST OFFICE, MONEY ORDER, GOVERNMENT SAVINGS' BANK, AND ELECTRIC TELEGRAPH DEPARTMENTS.

My Lord,

I have the honor to transmit to your Excellency the Thirty-first Annual Report on the Departments under my Ministerial control.

Combined Revenue and Expenditure.

Revenue.	1884.	1885.
Post Office	£289,192 3 11	£316,171 12 11
Electric Telegraph Department	146,386 8 2	155,073 10 3
Money Order and Government Savings' Bank Department—		
Commission on Money Orders	12,794 0 0	14,243 5 6
Interest on Investments	47,495 15 10	53,630 9 8
Total	£495,868 7 11	£539,118 18 4

Expenditure.	1884.	1885.
Post Office	£351,253 11 9	£375,964 17 6
Electric Telegraph Department	171,433 14 8	181,448 5 2 *
Money Order and Government Savings Bank Department—		
Salaries and Contingencies...	15,440 6 6	16,203 2 9 *
Interest added to Depositors' Accounts	43,198 2 6	49,193 6 8
Total	£581,325 15 5	£622,809 12 1

The above are the particulars of expenditure out of the votes of Parliament directly at my disposal, except in the case of the Government Savings' Bank item of "Interest added to Depositors' Accounts," which is specially provided for out of the interest accruing from investment of funds on the same account.

The following are the items of expenditure paid from votes under the control of other Ministers :—

	1884.	1885.
Stores and stationery	£7,536 5 0	£8,776 18 5
Repairs and additions to Buildings...	10,873 17 8	11,761 0 2
Furniture (including carriage)	1,292 11 5	1,485 17 1
Printing, bookbinding, Gazette advertisements, Gazettes, &c.	8,660 7 4	9,437 14 4
Printing postage stamps	4,089 5 4	4,837 17 11
Municipal rates	986 16 0	870 6 10
Postage	943 1 8	1,720 5 10
Advertising in newspapers	967 15 10	706 3 1
Total	£35,350 0 3	£39,596 3 8

The interest on the cost of construction of Electric Telegraph lines is estimated at £25,666, and the interest on the cost of buildings owned by the Government, and used as Post and Telegraph Offices in various parts of the Colony, is estimated at £13,342, which will make the total expenditure of the Departments under my control £701,413 15s. 9d.

Universal

* These items do not include the proportions chargeable against the Electric Telegraph and Money Order and Government Savings Bank Departments, of the salaries of officials in charge of combined Post and Telegraph Offices, the full amount of which salaries are included above in the expenditure of the Post Office Department. Apportioning the cost of salaries, the Electric Telegraph expenditure would be £187,382 11s. 4d., the Money Order and Government Savings Bank expenditure, £17,619 9s. 11d. (exclusive of interest added to depositors' accounts); and the expenditure of the Post Office Department, £368,614 4s. 2d.

UNIVERSAL POSTAL UNION.

IN the last Annual Report it was stated that it had been arranged that Buxton Forman, Esq., one of the leading officials of the London Post Office, who had been selected to represent other interests at the Postal Congress intended to be held at Lisbon, should also act for the Colony of New South Wales.

In continuation of this subject, I now give the following despatch from the Agent-General, London, dated 26th June, 1885, with enclosures, indicating the result of Mr. Forman's mission :—

The Agent-General to The Colonial Secretary.

Sir, 5, Westminster Chambers, Westminster, S.W., 26 June, 1885.

Referring to former correspondence on the subject of the "Postal Union Congress, Lisbon," I have the honor to forward for your information copy of a communication addressed to me by the Colonial Office, with certain documents therein having reference to Mr. Buxton Forman's visit to Lisbon as representative of the Colony of New South Wales at the beforementioned Congress.

You will observe that Lord Derby proposes that the Agents-General should meet Mr. Buxton Forman in conference for the purpose of considering the question of the entry of the Australian Colonies into the Universal Postal Union.

Arrangements are now being made for the meeting, as suggested by Lord Derby. So soon as we have deliberated I will report to you. I shall, however, refrain from taking any definite action, pending the receipt of such instructions in regard to the matter as you may desire to give.

I have, &c.,
SAUL SAMUEL.

[*Enclosure.*]

The Colonial Office, London, to The Agent-General for New South Wales.

Sir, Colonial Office, Downing-street, 22 June, 1885.

I am directed by the Earl of Derby to inform you that the Postmaster-General proposes that the Agents-General for the Australian Colonies should meet Mr. Buxton Forman, who represented New South Wales, South Australia, and Western Australia at the recent Postal Union Congress at Lisbon, for the purpose of considering the question of the entry of the Australian Colonies into the Universal Postal Union.

2. You will observe from the letter from the General Post Office of the 23rd of May (copy enclosed), that the most favourable time for their entry is considered to be between the present date and the 1st of February next.

3. I am therefore to inquire whether you will be prepared to attend such a Conference.

4. I am further to enclose for your information printed copies of Mr. Forman's report in the capacity of representative of New South Wales, South Australia, and Western Australia, and of Lord Derby's telegram, referred to in the Post Office letter.

I am, &c.,
EDWARD WINGFIELD.

The General Post Office, London, to the Colonial Office.

Sir, General Post Office, London, 23 May, 1885.

With reference to the letter from this Department, of the 18th of February last, enclosing, by direction of the Postmaster-General, a copy of Mr. Blackwood's memorandum from Lisbon on the subject of the terms upon which the Australian Colonies might be admitted to the Universal Postal Union, Mr. Shaw-Lefevre now instructs me to acquaint you, for the information of the Earl of Derby, that the Congress of Lisbon decided to confirm the recommendations of the Committee as detailed in the memorandum referred to.

I am to enclose a copy of the report addressed to the Postmaster-General by the delegates appointed to attend the Congress on behalf of Great Britain ; and I am to request that you will be so good as to direct Lord Derby's attention to the 23rd and 24th paragraphs of this Report as bearing upon the present question, pointing out, moreover, that the additional Acts signed at Lisbon (copies annexed) import no change of principle whatever into the Union pact.

At the same time I am to forward for his Lordship's information a copy of a separate report which the Postmaster-General has received from Mr. Buxton Forman, whom, at Lord Derby's request, Mr. Shaw-Lefvre instructed to act as the representative of New South Wales, South Australia, and Western Australia at the Congress in question.

On receipt of the information telegraphed from the Colonial Office to the Post Office on the 19th of February, the British delegates informed the Congress that Lord Derby had undertaken to recommend the Governments of the several Australian Colonies to accept the terms offered to them by the Congress.

It was ascertained beyond a doubt that a single vote for the group of colonies in question was the utmost that would be conceded ; but, acting upon Lord Derby's suggestion, the delegates obtained from the Congress the concession that the vote should still be awarded in the event of only a portion of these Colonies (not less than three) deciding to join the Union.

The final Protocol to the Additional Act, signed at Lisbon on the 21st of March last, fixes the 1st of February, 1886, as the date upon which the option of adhering to that Act shall expire. It is scarcely to be doubted that, even after that date, the entry of the Australian Colonies would be admitted upon the understanding come to at the Congress of Lisbon, namely, that the Colonies should be guaranteed against any change in the transit rates payable and the surtaxes leviable under the Convention of Paris until after the Congress to be held at Vienna in 1891, and that the Australian Colonies should be entitled to an independent vote in the affairs of the Union.

Mr. Shaw-Lefevre is nevertheless of opinion that any time during the interval between the present date and the 1st of February next will be a highly favourable time for the adherence of the Colonies in question to the Union, seeing that the very considerable difficulties which stood in the way of a separate vote being accorded to them have for the present been surmounted, and that, up to that date, the adherence can certainly be effected without any further discussion whatever ; whereas, after that date, it is possible that, upon technical grounds, the application might have to be submitted afresh to the various Administrations of the Postal Union, and new obstacles might arise.

Having regard to the length of time necessarily occupied in any exchange of views with the Governments of Australia, Mr. Shaw-Lefevre wishes to suggest for Lord Derby's consideration the question whether it would not be desirable for the London Agents-General of the several Colonies concerned to confer at once upon the subject. If this suggestion be adopted, the Agents-General will doubtless wish Mr. Forman to take part in their discussions ; and, on learning that such is the desire of Lord Derby, the Postmaster-General will instruct Mr. Forman accordingly.

I am, &c.,
C. H. B. PATEY.

Copy of Telegram sent from the Colonial Office, London, to the General Post Office on the 19th of February, 1885.

LORD DERBY thinks that it rests with the Colonies to decide, and there is no time to consult them ; but if the Congress accepts the views of the Committee his Lordship will recommend them to the Colonies. Lord Derby suggests for consideration that British Delegates should not press the question of separate votes further than to ascertain clearly that the sense of the Congress is opposed to it, but they should endeavour to obtain that the single vote will be given to such Colonies as join the Union, provided they are two at least, although all should not join.

Report

Report of the Representative of New South Wales, South Australia, and Western Australia, at the Lisbon Congress of the Universal Postal Union.

Sir, London, 19 May, 1885.

In pursuance of instructions which I received from you before proceeding to Lisbon as one of the British Delegates to the recent Postal Union Congress, I acted as representative of the Colonies of New South Wales, South Australia, and Western Australia. Victoria and Tasmania were represented by Mr. Cameron Corbett, and Queensland by Mr. Garrick and Mr. Hemmant, New Zealand being unrepresented. These gentlemen and myself arranged to act in concert; and we availed ourselves of an opportunity which Mr. Blackwood, as President of the First Committee (dealing with the main Convention of the Union), obtained for us to get an early hearing, in order that the representatives of Victoria and Queensland might not be unnecessarily detained at Lisbon. The proceedings of the Committee are detailed in the accompanying Report, printed at Lisbon.

At the request of my colleagues I included Victoria, Queensland, and Tasmania in a statement which I made to the First Committee on the 5th of February in support of the demand made by the Colonies in applying for admission to the Union.

That demand, as you are aware, was :—

(1) That the rates of payment for sea transit and the surtaxes fixed by the Convention of Paris should not be reduced at all events until after the next quinquennial Congress to that of Lisbon; and

(2) That each Colony should have a separate voice in the affairs of the Union.

The first of these conditions met with no great opposition, but the second was received with energetic protests from several Delegates; and the Committee, unable to come at once to a decision, appointed a sub-committee to endeavour to come to an understanding with the Colonial representatives. The delegations named to form the sub-committee were those of Germany, Austria-Hungary, France, Great Britain, Italy, the United States of America, and Russia.

Neither the representatives of Victoria, Queensland, and Tasmania, nor myself had any authority to arrange a compromise, and I was consequently obliged to adopt a very unyielding attitude towards the sub-committee. Eventually they voted unanimously in favour of the maintenance of the *status quo*, as regards transit rates and surtaxes, negatived by six votes to one (that of Great Britain), the proposal to give to each Australian Colony a separate voice, and decided by six votes to one to award to all Australia one collective voice on entry into the Union. It was with evident and genuine reluctance that this one voice was conceded, notwithstanding the anxiety of the Union generally that the Australian Colonies should join; and when the recommendations of the sub-committee were laid before Committee No. 1, on the 7th February, the same feeling was to be discerned. Nevertheless, there was a frank and generous recognition of the peculiar position occupied by the Australian Colonies among modern communities, and also of the fact that a concession was necessary and proper, the only question being as to the amount of the concession; and the Committee decided to adopt the recommendations of the sub-committee.

The understanding thus arrived at was that, subject to the approval of the Congress, the Australian Colonies should be offered a single voice and a guarantee that the transit rates and the sur-taxes should remain unchanged until after the next quinquennial Congress; and this understanding was eventually confirmed by the Congress, although, as far as the rates and surtaxes are concerned, the confirmation was scarcely necessary, inasmuch as the Congress decided, in view of the strong opposition of Great Britain, not to make any changes in the transit rates and surtaxes beyond the suppression of a practically disused surtax for letters subject to the sea transit rate of 5 francs per kilogramme. But before the question of the Australian Colonies came under review at the Congress an attempt was made, (on the 21st February,) to treat as one question the entry of Australia, that of the Cape Colony, and Natal, and the demand of Great Britain for a revision of votes in favour of those British Colonies which are already in the Postal Union. The conjunction of the three questions I opposed successfully, but the Committee insisted on making the award of an additional vote for the British Colonies generally, contingent upon the entry of the Cape and Natal into the Union, and in refusing the demand of the Cape for separate representation.

I mention these facts in order to show the great importance which the administrations of the Union attach to a single voice in its affairs; and here it is right to recall that British India, like the Mother country, has to content itself with one vote, notwithstanding the vastness of its area, population, and commerce, and the complexity and variety of its institutions; while for the Dominion of Canada a single vote was obtained in 1878 only by the Mother country relinquishing the vote which had been attributed to her for the British Colonies generally, and now that circumstances have changed, the most that Great Britain can hope to obtain for all her Colonies, exclusive of Canada and Australasia, is a single vote. This being the case, there is no longer any ground for hoping that a separate vote for each Australian Colony will ever be conceded; and so far as making conditions is concerned, there is no longer any object for those Colonies to attain by postponing their entry, It can scarcely be doubted that, sooner, or later, the Union will be completed by the adhesion of these important Colonies, and the present opportunity seems to me to be as favourable as any that is likely ever to present itself.

I have, &c.,

To the Right Hon. G. J. Shaw-Lefevre, M.P., H.M. Postmaster-General. H. BUXTON FORMAN.

As regards Sir Saul Samuel's allusion to the meeting that was proposed to be held between the Agents-General for the Colonies and Mr. Buxton Forman, for the purpose of considering the question of the Australian Colonies entering the Postal Union, I have to state that no communication has yet reached this Department intimating the result of the deliberations on the subject, and I am therefore unable to say whether there is any immediate prospect of the Australian Colonies joining the Universal Postal Union.

A copy of the Universal Postal Union Convention of Paris, as modified by the additional Act of Lisbon, together with the detailed regulations for the execution of the Convention similarly modified, will be found in the Appendix. Appendix A.

New Postal Act.

For some years the desirableness of introducing a new Postal Act has been felt, and a draft Bill has been prepared, which will be submitted to Parliament at an early date.

Parcel Post.

Some consideration has been given to the subject of the establishment of a parcel post. So far as the organization of a regular parcel post within the Colony of New South Wales is concerned, it is questionable if this can be effected until there has been legislation upon the subject. The present postal law, however, does permit of the Postmaster-General entering into arrangements with Foreign countries in respect to matters affecting the Post Office, and I have therefore been able, through the Agent-General in England, to make an arrangement for the establishment of a parcels post between London and Sydney, the advantages to be extended to all places on the railway lines of this Colony. The parcels will be conveyed by the steamers of the Peninsular and Oriental and the Orient lines. It is proposed to charge the public at the rate of 1s. per pound—the minimum charge to be 2s. The postage rate of 1s. will be divided as follows :—4d. per lb. to the steam companies for carriage, 3d. per lb. to the Imperial Post Office, and 5d. per lb. to this Colony. The service is to commence at an early date. As this arrangement has only just been concluded, I am unable to make any further allusion to the subject in this Report.

SPECIAL SERVICE REGULATIONS FOR POSTAL AND TELEGRAPHIC OFFICIALS.

In consequence of the Civil Service Act of 1884 excluding a large number of officials employed in the Postal and Telegraphic Departments from classification under the General Division provided for in section 3, it became necessary to frame special rules and regulations, setting forth, in conformity with the provisions of the 7th section of the Act, the conditions of employment in the departments controlled by the Postmaster-General. Accordingly His Excellency the Governor, with the advice of the Executive Council, on the 3rd July, 1885, issued a code of rules and regulations which were applicable to telegraph messengers, mail-boys, switchboard attendants, letter-carriers, stampers and sorters, letter-sorters, mail-guards, line repairers, postal assistants, operators, telegraph masters, and official postmasters. These regulations provide for the mode of admission, examination, promotion, classification, and salaries under which persons employed in the postal and telegraphic services are engaged and agree to serve.

The Departmental Board that was appointed to frame these special regulations, in submitting them for the approval of the Postmaster-General, stated :—" In our investigation into the status and remuneration of such officers as official postmasters, we find that the salaries attached to these offices in some cases appear to be much higher than was originally the intention in apportioning the remuneration. This has resulted from the fact that in settling the fixed remuneration of these officials it was not contemplated that the commission allowed them on the Money Order and Savings' Bank transactions would amount to anything like the sum that experience has shown to be the result ; and it is obvious that if these commissions be continued, as the business of the Departments increases, so will the emolument to the postmasters continue to increase, while it is also evident in some cases that the increase of work does not fall solely on the postmaster, but on the staff of the office generally, who should in all justice—under the present system—participate in the increase of remuneration as well as the postmaster. This, however, is not the case. In one instance we find that a postmaster gets as much as £518 a year, in addition to quarters and other allowances, with every prospect of increasing in a few years to a very much larger sum.

" We are of opinion that the time has arrived when the salaries of all these officials should be definitely fixed, and in order to bring this about we have to suggest a very radical change in two respects : 1st. The abolition of commission on money order and savings' bank transactions, and postage stamp sales, at all official post-offices ; and to make a classification of offices apportioning the salary for each officer with some regard to what the work of the office is really worth. 2nd. We think that a large saving of time can be effected by one Department—say the Post Office—paying the whole of the salaries, being recouped by the other Departments in certain proportions, by an annual or other payment. We would suggest that, in the case of combined offices, the Post Office Department should pay four-ninths, the Telegraph Department four-ninths, and the Money Order Office and Government Savings' Bank Department one-ninth. In the case of non-amalgamated offices the proportions to be: Post Office Department should pay eight-ninths, and Money Order Office and Government Savings' Bank Department, one-ninth.

" The Postmaster-General's votes for salaries will of course be larger than heretofore, but there will be a large sum saved in the shape of commissions.

" We submit the following schedule for the classification of official postmasters, telegraph station-masters, assistants to postmasters, and telegraph operators :—

4th class,	minimum	salary	£100	per annum
,, ,,	maximum	,, ...	170	,,
3rd ,,	minimum	,, ...	180	,,
,, ,,	maximum	,, ...	240	,,
2nd ,,	minimum	,, ...	250	,,
,, ,,	maximum	,, ...	310	,,
1st ,,	minimum	,, ...	320	,,
,, ,,	maximum	,, ...	400	,,

with a £10 increase per annum in each case up to the maximum of the class, subject, of course, to good conduct, &c.

" All appointments under £100 a year should be considered as temporary appointments, subject to classification only when the officers reach £100, the minimum of the lowest class.

" All offices throughout the Colony will be classed under one of the provisions of the above schedule, and the remuneration of the postmaster, telegraph master, or assistant, as the case may be, shall not rise above the maximum of that class. When a vacancy occurs in any of the classes, the officer promoted from another class to it shall enter at the minimum salary, and rise by £10 annual increases to the maximum of his

his grade, where he will remain until a suitable vacancy may occur in some other class, or until the classification of his own office may be raised. We have provided for an annual increase of £10 a year to all of these officers throughout the classes. This, we think, will afford a reasonable encouragement to the officers employed, and do away with a large amount of work, which the head office at present has, in dealing with applications for increase of salaries.

"As regards the officers of lower grade, we have endeavoured to fix a scale of remuneration in such a way as to give reasonable encouragement to the officials employed, as well as to protect the public interest, in regard to the value of the work which these officials perform.

"It is a matter of regret to us that we have not had more time at our disposal, so as to enable us to frame a more complete code of regulations than that which we herewith submit for approval; but as it has been intimated to us that the Civil Service Board desire that these regulations shall anticipate the classification of the Civil Service proper which they are about to issue, we desired to avoid any delay.

"We would suggest, however, that, in view of the importance of having a complete code of regulations, the present Board shall have the opportunity some few months hence of submitting a revised code, which would embrace regulations for leave of absence, &c., and this plan would, moreover, in the meantime, afford a chance of seeing how the proposed code affects individual and other interests."

I. POST OFFICE DEPARTMENT.

Inland Service.

The new postal routes opened during the year 1885, as shown in the annexed return, amounted to 944 miles, viz. :—

Postal Line.	No of times per week.
In the Western Country.	
From Bourke Railway Station to Post Office	six
„ Byrock to Brewarrina, *via* Tarcoon	one
„ Cobar to Necarbo	one
„ Mandurama to Galley Swamp . .	one
„ Molong Railway Station to Post Office ..	six
„ Mountain Well Hotel to Yathong	one
„ Nymagee to Cobar, *via* Priory and Shearlegs	one
„ Nyngan to Nymagee, by surveyed road ...	three
„ Tarcoon to Gongolgon	one
„ Warne to Boomey	three
In the Southern Country.	
From Bethungra to Ironbong	one
„ Braidwood to Farringdon	one
„ Bredbo to Ballalaba	one
„ Broughton's Creek to Woodhill	three
„ Clifton to Otford	six
„ Junee Junction to The Reefs	two
„ Marengo to Douglas Gap	one
„ Numba to Comerong	three
„ Rye Park to Five-mile Creek	one
„ Sebastopol to Temora	one
In the Southern Country—continued.	
From Silverton to Purnamoota	two
„ Whitton to Mount Elliott	two
„ Young Railway Station to Post Office.....	six
In the Northern Country.	
From Aberdeen to Brushy Hill	two
„ Cooranbong to Doree	two
„ Grafton to Fernmount, *via* Corinda	two
„ Manilla to Bendemeer	one
„ Newport to Barrenjoey	two
„ Seaham to Eagleton	three
„ Shanahan's (on the Narrabri and Cryan Mail line) to Pian Creek)	one
„ Tooloom to Acacia Creek	one
„ Ulmarra to Upper Coldstream	two
„ Wallsend to Winding Creek.....	three
„ Woy Woy to Mullet Creek	three
In the Suburbs of the Metropolis.	
From Hurstville to Peakhurst	six
„ Kogarah to Sandringham (re-established)	six
„ Ryde to North Ryde	six

The postal routes abolished, amounting to 691 miles, are shown in the following return:—

Postal Line	No of times per week
Western Roads	
Between Byrock and Gongolgon	two
„ Byrock and Bourke	four
„ Cobar and Sandy Creek	two
„ Cundumbul and Baker's Swamp	two
„ Girilambone Railway Station and Post Office ..	twelve
„ Gongolgon and Brewarrina... .	two
„ Hermitage Plains and Nymagee ...	three
„ Ironbarks and Boomey	three
„ Lowther and Off Flat . .	two
„ Mountain Well Hotel and Gilgunnia	one
„ St. Alban's and Laguna . .	one
„ Wellington and Neurea . .	two
Southern Roads.	
Between Ariah and Broken Dam	one
„ Liverpool and Hinchinbrook	six
Southern Roads—continued.	
Between Merimbula and Candelo ..	one
„ Murrumburrah and Young, *via* Ridge Road	three
„ Murrumburrah and Young, *via* Wombat	seven
„ Old Junee and The Reefs ...	two
„ Wagga Wagga and Coolaman.....	one
„ Young and Wombat	six
Northern Roads.	
Between Bingera and Upper Bingera	one
„ Nana Creek and Fernmount	two
„ Newport and Gosford	two
„ Pilliga and Yarraldool	one
„ Seaham and Stewartfield . .	three
„ Walcha and Glen Morrison	one
„ Walcha and Orundumbi	one
„ Wee Wee and Pian Creek .	one

Increased accommodation on existing lines was afforded as follows:—

Postal Line.	No. of times per week. From	No. of times per week. To
Western Roads.		
Between Byrock and Brewarrina	one	three
„ Mulgoa and Penrith	six	nine
„ Rydal and Mitchell	three	six
Southern Roads.		
Between Balranald and Wentworth	two	three
„ Bega and Candelo	four	six
„ Boro and Mayfield	one	two
„ Coonong Railway Station and Urana	two	three
„ Darlington Railway Station and Darlington Point	six	seven
„ Hoskin's Town and Foxlow	two	three
„ Jerecelderie Railway Station and Post Office	three	six
„ North Berry Jerry and Mimosa West	one	two
Southern Roads—continued.		
Between Rankin's Springs and Wallandry	one	two
„ Upper Gundaroo and Gunning	six	seven
„ Urana and Boree Creek	one	two
Northern Roads.		
Between Attunga and Attunga Springs	one	two
„ Blandford and Timor	one	two
„ Bowraville and Argent's Hill	one	two
„ Gosford and Kincumber	one	three
„ Limeburners' Creek and Hawke's Nest	one	two
„ Millie and Mogil Mogil	one	two
„ Narrabri and Moree	four	six
Suburban Roads.		
Between Bexley and Rockdale	six	twelve

The communication existing on the following lines was decreased:—

Postal Line.	No. of times per week. From	No. of times per week. To
Western Roads.		
Between Hillston and Mount Hope	two	one
„ Nyngan and Hermitage Plains	four	three
Southern Roads.		
Between Marulan and Bungonia	seven	six
Northern Roads.		
Between Bulahdelah and Hawke's Nest	two	one
„ Taree and Tinonee	seven	six
„ Taree and Wingham	seven	six

The extent of postal route traversed in the Colony on the 31st December, 1885, was 26,683 miles, as compared with 26,430 miles traversed in 1884:—

	1884.	1885.
On horseback	13,444 miles.	13,150 miles.
By coach	11,302 „	11,736 „
By railway	1,662 „	1,775 „
By tramway	22 „	22 „

The extension of mail route by railway during 1885 was as follows:—

Tarago to Bungendore	20 miles.
Harden to Young	21 „
Byrock to Bourke	48 „
Orange to Molong	24 „
	113 miles.

The number of miles travelled in the year 1885 was 6,621,996, being an increase of 112,550 on the mileage of the previous year.

The number of Post Offices established was 43, viz.:—

Aliceton	Doughboy Hollow	North Tumbulgum
Baan Baa	Douglas Gap	Peakhurst
Bald Nob	Eagleton	Punkalla
Berrigan	Eureka	Purnamoota
Botany Road	Fairfield	Rosewood
Bourbah	Gocup	St. Ives (Rosedale)
Brushy Hill	Gore Hill	Stonehenge
Bulgo	Graman	Tuggranong
Bumble	Lawson	Upper Coldstream
Canley Vale	Leighwood	Winding Creek
Colinton	Merrylands	Wingello
Comerong	Minto	Woodhill
Coolabah	Mitchell (Sunny Corner)	Yarra
Day Dream	Mullet Creek	
Demondrille	North Ryde	

The number of Post Offices re-established was 2, viz. :—

Moorwatha	Wandandian

The number of Post Offices discontinued was 15, viz. :—

Annandale	Hinchinbook	Off Flat
Barney Springs	Kelly's Plains	Redhead
Concord	Meroe	Thackaringa Mines
Graham	Mutton's Falls	Tooleybuc
Havilah	Nyrang	Upper Bingera

It was found desirable to change the designations of the following Post Offices, viz. :—

Beaconsfield to Concord	Inverella to Eversleigh
Bulgo to Oxford	Mitchell's Creek to West Mitchell
Clarence River Heads to Yamba	Rocky Mouth to Maclean
Dight's Forest to Jindera	

In the Appendix will be found a list of the 1,115 Post Offices in the Colony on the 31st December, 1885. Appendix D.

171 changes of Postmasters occurred during the year.

In the Appendix is given a return of buildings for the transaction of the Postal, Money Order, Savings Bank, and Telegraph business possessed by the Government, as well as of the places where premises are rented or otherwise provided for the purpose. Government buildings at the following places were completed and occupied during 1885, viz. :— Appendix B.

Byrock	Marulan	Paterson
Cargo	Muswellbrook	Uralla
Cobar	Nimitybelle	William-street
Emmaville	Paddington	

At Edgecliff a building purchased by the Government was fitted up for Postal and Telegraphic purposes.

Receiving offices were established at the following places, viz. :—

Ben Bullen	Gol Gol	Newport
Ben Lomond Railway Station	Ironbong	Porter's Retreat
Blackman's Point	Kerr's Creek	Sandringham
Borambil	Lallarook	Stony Crossing
Demondrille	Monica Vale	Tichborne
Farringdon	Mount Druitt	Wanstead
Five-mile Creek	Mumbil	Warrumbungul
Galley Swamp	Munmurra	
Gingerra Station	Myalla	

The names of the Receiving Offices at Newport and Tombong were changed to Doree and Wright's respectively.

The Receiving Offices at the undermentioned places were discontinued, viz. :—

Mangopla	The Albert	Wangoola
Sandy Creek	The Bluff	Yarragundry
Severn	Waddai	Y. Water

The Receiving Offices at the following places were converted into Post Offices :—

Aliceton	Doughboy Hollow	Punkalla
Bald Nob	Eureka	Rosewood
Berrigan	Gore Hill	Tuggranong
Botany Road	Graman	Wandandian
Bumble	Lawson	Wingello
Coolabah	Leighwood	Yarra
Demondrille	Minto	

In the Appendix will be found a list of the Receiving Offices in existence at the close of the year, showing the number to be 202. Appendix C.

During the year 1885 ten iron pillar letter-receivers were erected in different parts of the Colony, and two were removed to other places. Forty-eight small iron letter-receivers were placed, eight were removed, and five withdrawn. One iron newspaper-receiver was removed to another locality, and one wooden letter-box was withdrawn.

On the 31st December the number of iron letter-receivers erected in the Colony (both large and small) was 435; the number of other kinds of receiving boxes, 20; and the number of newspaper-receivers, 15.

At

At Bathurst, Deniliquin, Eskbank, Glen Innes, Grafton, Hexham, Lithgow, Marrickville, Newtown, Orange, Parramatta, Petersham, Redfern, Richmond Road, and St. Leonard's, the letter-receivers are cleared by special messengers, who are respectively paid an annual sum for the performance of this work. At other places this duty is fulfilled by persons regularly attached to the staff of the Department.

The number of licenses for the sale of postage stamps issued in 1885 to persons other than post masters or receiving-office-keepers was 147. In the Appendix is given a list of the persons holding these licenses throughout the Colony.

A ndix

On the 31st December the number of locked private letter-boxes let at the General Post Office was 934, besides 57 allotted to Public Departments, for which no fees are paid. The system is now in operation at the following offices, namely :—

Adelong	Glen Innes	Silverton
Albury	Goulburn	Singleton
Armidale	Grafton	Temora
Balranald	Gunnedah	Tenterfield
Bathurst	Hay	Uralla
Bega	Haymarket	Wagga Wagga
Bourke	Jereelderie	Walgett
Braidwood	King-street	Wentworth
Casino	Mudgee	West Maitland
Cobar	Muswellbrook	Wilcannia
Coonamble	Narrabri	Young
Cootamundra	Newcastle	
Dubbo	Parramatta	

It is gratifying to find that the system of letting private boxes, on payment of a moderate fee, is being more largely availed of by the public in Sydney, and that it is also being rapidly extended to the country townships. So far as the city is concerned, one of the chief advantages of this system over the system of delivering by letter-carrier is, that merchants and other business men can, by sending to the Post Office, obtain their letters immediately they are sorted, instead of waiting till the letter-carrier on whose beat they are located completes all the ramifications of his walk. Persons who happen to be near the end of a carrier's beat can thus, by sending to either the General Post Office, or one of the Branch Offices, save at the least one hour of valuable time. There is, moreover, an important increase to the revenue from this system, and I anticipate that when the extension of the General Post Office premises is completed, and the Department is able to provide a much larger amount of accommodation in connection with these private boxes, an important addition to the revenue will be derived.

Six additional letter-carriers were appointed during the year 1885, and twenty were transferred from the temporary to the permanent staff. There were, at the end of the year, 172 letter-carriers, distributed throughout the Colony as follows :—

Sydney and Suburbs	119	Liverpool	1
Albury	3	Morpeth	1
Armidale	1	Narrabri	1
Bathurst	3	Newcastle	3
Bourke	1	Orange	1
Campbelltown	1	Parramatta	3
Corowa	1	Parramatta Suburbs	1
Deniliquin	1	Singleton	1
Dubbo	1	Tamworth	2
East Maitland	1	Wagga Wagga	2
Forbes	1	Wallsend	2
Glen Innes	1	Waratah	1
Goulburn	4	West Maitland	3
Grafton	2	Wickham	1
Hamilton	1	Wilcannia	1
Hay	1	Windsor	1
Hill End	1	Wollongong	1
Inverell	1	Young	1
Lambton	1		

Under

Under special arrangements a house-to-house delivery of correspondence is also afforded in the following localities, viz. :—

Anvil Creek	Granville	North Ryde
Bega	Grenfell	Onebygamba
Blayney	Homebush	Penrith
Botany	Hunter's Hill	Queanbeyan
Braidwood	Kiama	Raymond Terrace
Burwood	Lismore	Richmond
Camden	Lithgow	Silverton
Casino	Macdonaldtown	South Grafton
Concord	Minmi	Springwood
Cooma	Moama	Tenterfield
Cootamundra	Molong	The Junction
Cowra	Mudgee	Watson's Bay
Croydon	Muswellbrook	Wellington
Dungog	Narrandera	West Tamworth
Gladesville	New Lambton	Yass.

The number of persons employed in connection with the Postal Department for the year 1885 was as follows :—

Postmaster-General	1	Stampers and sorters	38
Secretary	1	Letter-carriers	172
Chief Clerk of the Post Office	1	Mail-boys	28
Superintendent, Mail Branch	1	Messengers, porters, &c.	33
Accountant	1	Detective	1
Cashier	1	Postmasters	1,115
Postal Inspector for Missing Letter and Irregularity Branch	1	Relieving officer	1
Postal Inspectors	4	Postal assistants	271
Assistant Superintendent, Mail Branch ...	1	Clearing receivers, delivering letters, &c.	118
Senior clerks	3	Receiving office keepers	202
Clerks	85		2,155
Temporary clerks	14	Mail contractors	564
Probationary clerks	11		
Letter-sorters	16	Total	2,719
Mail-guards	35		

Since the Honorable James Norton, M.L.C., retired from the position of Postmaster-General, on the 6th October, 1885, the Department has been administered as follows :—

From 7th October to 21st December, 1885, by the Honorable John See, M.L.A.

From 22nd December, 1885, to 25th February, 1886, by the Honorable Daniel O'Connor, M.L.A.

From the 26th February, 1886, by myself.

On the 20th August Mrs. Catherine Chape retired from the office of postmistress at Balmain under the provisions of the Civil Service Act of 1884. The following retirements also took place during the year, a gratuity equal to one month's pay for each year of service being allowed in each case :—

H. L. Alexander, postal assistant at Singleton.

D. Lynch, stamper and sorter.

A. Matchett and R. Armstrong, letter carriers.

W. Cummings and P. M'Kenna, messengers.

Eight deaths occurred, viz. :—A. Moran, post and telegraph master at Minmi; J. Richards and J. O'Dwyer, mail-guards; T. S. L. R. Vogan, stamper and sorter; T. Cambridge, W. Curtis, and S. Child, letter-carriers, and T. C. Trotter, gatekeeper. Mail-guard O'Dwyer, an excellent officer, was killed in the railway accident at Cootamundra in January, 1885, and another mail-guard (W. Stone) is reported to be so seriously injured that he is still unfit for duty.

Forty-four resignations of officers on the regular staff took place during the year; the services of two officials being no longer required were dispensed with, and one officer was transferred to another Department.

The

The removals from the Service numbered thirty. One of these, a postal assistant, received a sentence of two years and ten months imprisonment for embezzlement; another, one of two years for stealing money from a letter; and two letter-carriers each a like term for stealing letters. The remainder were dismissed for the following offences :—

Four postmasters and a postal assistant for irregularities in their accounts.

Five letter-carriers and a window-cleaner for intemperance.

A postmaster, four letter carriers, and a mail-boy for absence without leave.

Two mail-boys for furious riding

A Letter-carrier for tampering with a letter, and another for irregular delivery and detention of letters

A mail-boy for theft, and another for neglecting to clear letter receivers

A letter-carrier and two mail-boys for other misconduct.

The postal inspectors travelled over and inspected 18,792 miles of mail route, and visited 264 post-offices.

FOREIGN SERVICE.

The performance by the Pacific Mail Steamship Company of the Mail service between Sydney and San Francisco, during the year 1885, is shown in the following returns —

Received.

Name of Steamer	Due at Sydney	Arrived at Sydney	Number of days from San Francisco	No of days occupied in the transit of mails between London and Sydney
	1885.	1885.		
Zealandia .	15 January	19 January	25	46
City of Sydney	12 February	13 February	26	43
Australia	12 March	12 March	24	42
Zealandia	9 April	9 April	24	42
City of Sydney	7 May	10 May	28	45
Australia	4 June	6 June	26	44
Zealandia .	2 July	3 July	26	43
City of Sydney	30 ,,	1 August	27	44
Australia	27 August	26 ,,	24	41
Zealandia	24 September	25 September	26	43
City of Sydney	22 October	23 October	27	43
Australia .	19 November	18 November	24	41

Despatched.

Name of Steamer	Date of despatch from Sydney	Due at San Francisco	Arrived at San Francisco	No of days to San Francisco	No of days occupied in the transit of mails between Sydney and London
	1885.	1885.	1885.		
Australia	1 January	27 January	25 January	24	44
Zealandia*	30 ,,	24 February	22 February	23	39
City of Sydney	26 February	24 March	24 March	26	42
Australia	26 March	21 April	20 April	25	42
Zealandia†	25 April	19 May	21 May	25	44
City of Sydney	21 May	16 June	15 June	25	43
Australia	18 June	14 July	12 July	24	40
Zealandia	16 July	11 August	10 August	25	43
City of Sydney	13 August	8 September	7 September	25	42
Australia	10 September	6 October	5 October	25	42
Zealandia	8 October	3 November	1 November	24	42
City of Sydney	5 November	1 December	1 December	26	42

* Departure postponed from 29th to 30th January, owing to late arrival of Victorian Mails, caused by Railway accident near Cootamundra
† Departure postponed from 23rd to 25th April, owing to Seamen's strike

Average time occupied in the conveyance of mails to and from Sydney and London, *via* San Francisco :—

London to Sydney ... . $43\frac{1}{12}$ days.
Sydney to London ... ... $42\frac{1}{12}$,,

In the last Annual Report it was pointed out under what circumstances the Colony of New South Wales withdrew from the contract with the Pacific Mail Steamship Company for the service between Sydney and San Francisco, and it was explained how New Zealand undertook to continue the contract up to November, 1885, and to convey the mails of this Colony for a subsidy at the rate of £7,000 a year—New South Wales retaining postages, and the steamers still coming on to Sydney

In view of the termination of the contract between New Zealand and the Pacific Mail Steamship Company, the Postmaster General of New Zealand opened negotiations with the Postmaster General of New South Wales, which resulted in a joint arrangement being entered into between New Zealand, New South Wales, and the Union Steamship Company, under which—subject to the approval of Parliament—a three years'

years' service from the 21st November, 1885, between Sydney, Auckland, and Honolulu was to be performed by the Union Company, and between Honolulu and San Francisco by steamers of the Oceanic Company, which were to wait at Honolulu, if necessary, twenty-four hours without demurrage; the time of voyage was not to exceed twenty-five days between Sydney and San Francisco; New South Wales was to pay £10,000 per annum out of the total contract subsidy of £30,000 per annum and one-third of the bonuses for extra speed; and to receive half the contributions from other Australasian Colonies, one-third of the penalties for late arrivals chargeable to contractors, and one-third of any subsidy which might be obtained from the United States.

The only public exception taken at the time to this service was the proposed transhipment of mails and passengers at Honolulu, and to meet this objection the contractors determined, as a temporary measure, to run their boats right through without a break at Honolulu.

Up to the time I took office the approval of Parliament to this contract had not been obtained, nor has the pressure of other business yet enabled this to be done, although the service was and is still being carried on by the contractors. Since I have been in office a modification has been arranged, also subject to Parliamentary sanction, under which the contractors, for an extra payment of £7,000 a year—making their total subsidy £37,000—agree to permanently do the service right through from Sydney to San Francisco without a break at Honolulu. Of the extra subsidy the Colony of New South Wales is to contribute one-third. As the papers giving full particulars of the negotiations concerning this contract, and also in regard to the withdrawal of New South Wales from the Pacific Mail Company's contract, have been laid before Parliament and printed, it is not necessary for me in this report to allude further to the subject except to mention that the first mail under the new contract left London on the 5th November and arrived at Sydney on the 17th December, being brought on from San Francisco by the "Alameda." The first mail from Sydney was despatched on the 4th December *per* the "Mararoa," and was delivered in London on the 15th January, 1886.

THE following are the Returns of the Mail Service performed by the Orient Steam Navigation Company during the year 1885.

Received.

Name of Steamer	Date of Departure from England	Date of arrival at Sydney of Mail overland from Melbourne	No of days occupied in transit of Mails between London and Sydney	Name of Steamer	Date of Departure from England	Date of arrival at Sydney of Mail overland from Melbourne	No of days occupied in transit of Mails between London and Sydney
	1884.	1885.			1884.	1885.	
Cuzco	5 December	10 January	36	Iberia	5 June	10 July	35
Liguria . .	19 ,, .	24 ,,	36	Potosi .	19 ,,	27 ,, .	38
	1885.			Orient .	3 July	10 August	38
Iberia . .	2 January	9 February	38	Garonne .	17 ,,	25 ,,	39
Chimborazo	16 ,,	24 ,,	39	Sorata	31 ,,	5 September.	36
Potosi	30 ,,	7 March .	36	John Elder*	14 August .	30 ,, .	47
Orient .	13 February..	23 ,,	38	Austral	28 ,,	3 October	36
Garonne ..	27 ,,	7 April	39	Cuzco .	11 September.	19 ,,	38
Lusitania	13 March	20 ,,	38	Liguria	25 ,,	2 November..	38
John Elder	27 ,,	5 May	39	Iberia	9 October	19 ,, ..	41
Sorata .	10 April	19 ,,	39	Chimborazo	23 ,,	3 December..	41
Austral . .	24 ,,	27 ,,	33	Potosi . . .	6 November.	12 ,, .	36
Cuzco . .	8 May	15 June . .	38	Orient .	20 ,,	26 ,, ...	36
Liguria .. .	22 ,,	29 ,,	38				

* Delayed one week at Port Said through accident to machinery.

Despatched.

Name of Steamer	Date of closing of overland Mail shipped at Melbourne	Date of arrival in England	No of days occupied in transit of Mails between Sydney and London	Name of Steamer	Date of closing of overland Mail shipped at Melbourne.	Date of arrival in England	No of days occupied in transit of Mails between Sydney and London
	1885.	1885.			1885.	1885.	
Sorata . ..	8 January	15 February	38	Iberia†	23 July ..	29 August	37
Austral†	22 ,,	27 ,,	36	Chimborazo†	6 August .	19 September	44
Cuzco† .	5 February	16 March . .	39	Potosi*	20 ,,	26 ,,	37
Liguria† .	19 ,,	29 ,, .	38	Orient†	3 September	10 October	37
Iberia*	3 March	14 April	42	Garonne†	17 ,, .	25 ,,	38
Chimborazo*	19 ,,	28 ,,	40	Sorata†	1 October	7 November..	37
Potosi†	2 April	11 May	39	John Elder*	15 ,,	23 ,,	39
Orient†	16 ,, .	23 ,,	37	Austral†	29 ,, .	4 December..	36
Garonne†	30 ,,	8 June ..	39	Cuzco* .	12 November.	22 ,, .	40
John Elder†	14 May	22 ,,	39			1886.	
Sorata†	28 ,,	5 July	38	Liguria†	26 ,,	3 January .	38
Austral†	11 June .	18 ,,	37	Iberia†	10 December.	17 ,, ..	38
Cuzco*	25 ,,	3 August	39	Chimborazo*	24 ,, .	2 February .	40
Liguria† .	9 July .	15 ,,	37				

* *Via* Brindisi. † *Via* Naples.

Average time occupied in the conveyance of mails to and from London and Sydney by these vessels :—

London to Sydney ... ... $37\frac{12}{13}$ days.
Sydney to London ... ... $38\frac{11}{28}$ „

In view of the termination, in February, 1888, of the Peninsular and Oriental Company's contract with the Victorian Government, and considering the satisfactory performance of the alternate fortnightly service to this Colony by the Orient Steam Navigation Company, it was deemed wise, subject to the approval of Parliament, to extend the contract with the Orient Company, so as to make it run out concurrently with the contract for the Peninsular and Oriental service. The following correspondence will show the nature of the arrangement made :—

The Manager, Orient Company, to The Secretary, General Post Office, Sydney.

Sir, Orient Line of Steamers, Sydney, 13 June, 1885.

I now beg to put in the form of a letter the substance of what I said to you at our recent interview.

The existing Postal Contract between your Government and my Company will expire on 30th November, 1886.

That contract was regarded at the time it was arranged as of a tentative character, and its duration was accordingly fixed for a shorter period than is usual in such cases.

I venture to think that the experiment has proved successful, but the records of your Department will show particularly how far the service has been appreciated by the public.

The period of eighteen months which the contract has still to run is short enough for maturing measures for the satisfactory development of the service thereafter, and before entering upon such measures it is important that my Company should have an understanding with your Government.

In view of the foregoing, I would respectfully submit that the time is now opportune for making arrangements for the future of a permanent character; and I beg to inquire, accordingly, whether the Honorable the Postmaster-General will be prepared to explain, at an early date, the views of the Government as to a renewal of the contract with my Company for a lengthened period.

I have, &c.,
G. SKELTON YUILL,
Manager in Australia.

The Secretary, General Post Office, Sydney, to The Manager, Orient Company.

Sir, General Post Office, Sydney, 20 June, 1885.

Referring to your letter of the 13th instant, and interviews with the Postmaster-General, on the subject of the renewal of your contract for the conveyance of mails, I am directed to inform you that the whole question of future ocean mail services is now engaging the careful attention of the Government.

In the meantime, and with a view to clear the way for future negotiations, the Government propose submitting to Parliament a resolution that the present contract with your Company be extended to the period when the Peninsular and Oriental Company's contract with the Government of Victoria will expire, about February, 1888. If continued beyond that time to be terminable on six months' notice.

I have, &c.,
S. H. LAMBTON,
Secretary.

The Manager, Orient Company, to The Secretary, General Post Office, Sydney.

Sir, Orient Line of Steamers, Sydney, 22 June, 1885.

I have the honor to acknowledge receipt of your letter of 20th instant, informing me that the whole question of the future ocean mail service is now engaging the attention of the Government, but that in the meantime, and with a view to clear the way to future negotiations, the Government propose to submit to Parliament a resolution that the present contract with the Orient Company be extended to at least February, 1888, when the P. and O. Company's contract with the Government of Victoria will expire, and if continued beyond that period to be terminable by six months' notice.

It is not directly stated in your letter, but I infer from its tenor that the intention is that the contract should not expire in February, 1888, except on six months' previous notice. I should be glad to have your confirmation of this.

I beg to tender my thanks to the Honorable the Postmaster-General for the above information, and would ask the further favour of his giving me whatever indication he can, when the opportune time arrives, of the intentions of the Government bearing upon the more permanent settlement of the question.

I have, &c.,
G. SKELTON YUILL,
Manager in Australia.

The Secretary, General Post Office, Sydney, to The Manager, Orient Company, Sydney.

Sir, General Post Office, Sydney, 30 June, 1885.

In reply to your letter dated the 22nd instant, inquiring, in connection with the proposal to submit a resolution to Parliament for the extension of the Orient Mail Contract till February, 1888, and if continued beyond that period to be terminable by six months' notice, whether it is intended that the contract shall *not* expire in February, 1888, except on six months' previous notice, I am directed to inform you that the Postmaster-General sees no objection to give the notice asked for whether the Government decide to terminate the contract in February, 1888, or at any subsequent date.

I have, &c.,
S. H. LAMBTON,
Secretary.

The

The Manager, Orient Company, to The Secretary, General Post Office, Sydney.

Sir, Orient Line of Steamers, Sydney, 1 July, 1885.

I have the honor to acknowledge receipt of your letter, 85/B. 7,051 of 30th ultimo, regarding the notice to be given of the termination of the Mail Contract between my Company and your Government, and to thank you for the information therein contained.

I have, &c.,
(For G. Skelton Yuill,
Manager in Australia),
THOS. W. PUGH.

The Mail Service performed by the Peninsular and Oriental Company during the year 1885 was as follows :—

Received.				Despatched.			
Name of Steamer.	Date of departure from England *via* Brindisi.	Date of Arrival of Mail overland from Melbourne.	No. of days occupied in transit of Mails between London and Sydney.	Name of Steamer.	Date of closing Overland Mail shipped at Melbourne.	Date of Arrival in England *via* Brindisi.	No. of days occupied in transit of Mails between Sydney and London.
	1884.	1885.			1885.	1885.	
Ballaarat	28 November..	6 January ...	39	Clyde	14 January ..	23 February...	40
Indus	12 December..	20 ,, ...	39	Ballaarat	27 ,, ...	9 March	41
Rome	26 ,, ...	3 February...	39	Indus	11 February...	24 ,, ...	41
	1885.			Rome	25 ,, ...	7 April	41
Shannon	9 January ...	17 ,, ...	39	Shannon	11 March	20 ,, ...	40
Parramatta ...	23 ,, ...	4 March	40	Parramatta ...	25 ,, ...	5 May.....	41
Pekin	6 February...	17 ,, ...	39	Pekin	8 April	19 ,, ...	41
Khedive	20 ,, ...	1 April	40	Khedive	20 ,, ...	2 June.....	43
Massilia	6 March	14 ,, ...	39	Thames	5 May.....	16 ,, ...	42
Thames.....	20 ,, ...	28 ,, ...	39	Thabet	18 ,, ...	30 ,, ...	43
Clyde	3 April	12 May.....	39	Clyde	1 June.....	13 July.....	42
Ballaarat	17 ,, ...	26 ,, ...	39	Ballaarat	15 ,, ...	27 ,, ...	42
Indus	1 May.....	9 June.....	39	Indus	29 ,, ...	10 August.....	42
Rome	15 ,, ...	23 ,, ...	39	Rome	13 July.....	24 ,, ...	42
Carthage	29 ,, ...	7 July.....	39	Carthage	27 ,, ...	6 September.	41
Parramatta ...	12 June.....	23 ,, ...	41	Parramatta ...	10 August ...	20 ,, ...	41
Pekin	26 ,, ...	4 August ...	39	Pekin	24 ,, ...	4 October ...	41
Valetta.....	10 July.....	18 ,, ...	39	Valetta.....	7 September.	20 ,, ...	43
Tasmania	24 ,, ...	1 September.	39	Tasmania	21 ,, ...	3 November.	43
Peshawur.....	7 August.....	15 ,, ...	39	Peshawur.....	7 October ...	16 ,, ...	40
Clyde	21 ,, ...	29 ,, ...	39	Clyde	21 ,, ...	30 ,, ...	40
Shannon	4 September.	13 October ...	39	Shannon	4 November.	13 December..	39
Ballaarat	18 ,,	27 ,, ...	39	Ballaarat	18 ,, ...	28 ,, ...	40
Chusan.....	2 October ...	12 November.	41			1886.	
Kaisar-i-Hind	16 ,, ...	25 ,, ...	40	Chusan	2 December..	11 January ...	40
Carthage	30 ,, ...	8 December..	39	Kaiser-i-Hind	16 ,, ...	25 ,, ...	40
Massilia	13 November.	22 ,, ..	39	Carthage	30 ,, ...	8 February...	40

Average time occupied in the conveyance of mails to and from Sydney and London, *via* Galle and Melbourne :—

London to Sydney ... ... $39\frac{7}{26}$ days.
Sydney to London ... ... $41\frac{3}{26}$,,

The average time occupied in the conveyance of mails to and from Sydney and London by the Pacific Mail Steamship, the Orient, and the Peninsular and Oriental Steam Navigation Companies, during 1885, was as follows:—

London to Sydney... ... ... $39\frac{1}{2}$ days.
Sydney to London... ... ... $40\frac{1}{5}$,,

During the past year the subject of a future Ocean Mail Service between the Mother Country and Australia, *via* Suez, came under consideration, and the visit of the Honorable R. C. Baker (of South Australia) to Victoria and this Colony led to the following joint agreement, dated 21 August, 1885, being arrived at between the Colonies of New South Wales, Victoria, and South Australia :—

Memorandum of agreement made between the Colonies of New South Wales, Victoria, South Australia, Tasmania, Queensland, Western Australia, and New Zealand.

It is agreed as follows :—

1. This agreement is primarily entered into by the three Colonies first-named ; and unless all three of such Colonies sign or agree to the same it shall not be considered binding on any one or more of such Colonies who have signed or agreed hereto.

2. As soon as the three first-named Colonies shall have assented hereto the other Colonies beforementioned shall be invited to become parties hereto.

3. The Colony of New South Wales shall invite the Colonies of Queensland and New Zealand to become parties hereto ; the Colony of Victoria shall invite the Colony of Tasmania to become a party hereto ; and the Colony of South Australia shall invite the Colony of Western Australia to become a party hereto.

4.

4. This agreement is entered into as a preliminary to a joint answer being sent by the Colonies to the telegram of Lord Derby, of the 4th February, 1885, to the Governors of the various Colonies *re* postal matters, and in order to secure joint and concerted action on the part of the Colonies in reference to the postal matters referred to in such telegram.

5. As soon as the first three Colonies named have assented hereto a telegram shall be sent to the British Government, in answer to the said telegram of the 4th February, suggesting the following arrangements between Great Britain and the Colonies on the termination of the present agreement between Great Britain and the Peninsular and Oriental Steamship Company :—

First—Great Britain to invite tenders on behalf of herself and the contracting Colonies for a mail service or mail services to be performed by British ships.

Second—Tenders to be called—
(*a*) For a weekly service.
(*b*) For a fortnightly service, to alternate with another fortnightly service, so as to secure a weekly service.

Third—Such service or services to be from Brindisi, Naples, or some other port in Europe, to be named by the tenderers, and approved of by the other contracting parties, to Sydney, *via* King George's Sound, Adelaide, and Melbourne.

Fourth—The tenders (whether confined to any particular companies or open) to be called for separate and distinct from any other service.

Fifth—Tenders to be invited for services from London to the Semaphore, Adelaide, and *vice versa*, in twenty-nine days, in thirty-one days, and in thirty-three days.

Sixth—The mail matter of any Colony desiring it to be landed at Adelaide, and forwarded by rail to Melbourne, Sydney, Brisbane, *et cetera ;* 10d. per lb. for letters and 1d. per lb. for other mail matter to be paid to each forwarding Colony ; South Australia to guarantee that there shall not be delay of more than six hours at Adelaide, and, if necessary, to employ special trains. South Australia and Victoria to arrange as to specials between Adelaide and Melbourne, and Victoria and New South Wales between Melbourne and Sydney.

Seventh—The mail steamers to continue on to Melbourne and Sydney.

Eighth—The tenders to include the local transit rates across Egypt, but the tenderers may carry mails by what route they think best, if they carry them in the specified time.

Ninth—All mail matter to be tendered for at { per lb. of letters. / per lb. of other matter. } amount to be given by tenderers.

Tenth—Penalties of £4 per hour for non-arrival in time, and bonuses of same amount for arrival before time (between port of departure in Europe and the Semaphore, Adelaide).

Eleventh—Great Britain and the contracting Colonies to send by the contracting steamers all mail matter not specially directed to be sent by particular route.

Twelfth—Great Britain to retain all her own postages, and pay cost of transit through to destination of all mail matter, including premiums on voyages from Great Britain. The contracting Colonies to do the same in connection with the trips from the Colonies to Great Britain.

Thirteenth—If any other Colony, not a party hereto, sends mail matter by contracting steamers it shall be carried at the same rates as for contracting Colonies, and on the same terms, including share of premiums and penalties.

Fourteenth—Premiums on mail matter despatched from the Colonies by any steamer to be paid by Colonies sending letters by such steamer in proportion to letters carried, and accounts to be adjusted quarterly.

Fifteenth—In the event of the contracting Colonies joining the Postal Union, any loss which may accrue in consequence of being obliged to carry mail matter for Union Countries at Union rates to be paid one-half by Great Britain and the other half by the contracting Colonies, in the proportion of weight of letters carried for such Colonies—taking an average of three months.

Sixteenth—No contract to be accepted without the consent of the three first-named Colonies.

Seventeenth—The tenders to be for five years.

6. It is also agreed that the contracting Colonies shall urge upon Great Britain the desirability of taking all possible steps to reduce the exorbitant rates now paid for the land transit of the Australian mails across Italy and France, namely 16 f. 50 c. per kilo of letters, *et cetera.*

7. This agreement is made subject to ratification by the respective Parliaments of the Colonies parties hereto.—Dated this 21st day of August, 1885.

JAMES NORTON,
Postmaster-General, New South Wales.

JAMES CAMPBELL,
Postmaster-General, Victoria.

JOHN A. COCKBURN,
Minister of Education, Controlling Postal Department, South Australia.

The Honorable Mr. Baker has since visited England, and the Imperial Government consented to co-operate with the Colonies in regard to calling for tenders for a weekly mail service between England and Australia, *via* Suez, on the basis of the foregoing agreement, but I am not yet able to report further upon the subject. The papers relating to the matter up to the present stage have already been laid before Parliament.

The

THE following returns show the number of letters, packets, and newspapes despatched and received by the mail packets on the respective routes, *via* Galle and Melbourne, *via* San Francisco, *via* Torres Straits, *via* the Orient Line, and *via* the Compagnie des Messageries Maritimes.

Year.	Route.	Despatched.						Received.					
		Intercolonial.			Foreign.			Intercolonial.			Foreign.		
		Letters.	Packets.	News-papers.	Letters.	Packets.	News-papers.	Letters.	Packets.	News-papers.	Letters.	Packets.	News-papers.
1884	Peninsular and Oriental S. N. Co.'s packets, *via* Colombo and Brindisi	....	....	....	138,972	6,555	52,618	9,998	1,258	8,044	435,111	45,716	327,569
1885		....	....	....	124,922	12,745	56,847	15,536	2,171	9,965	530,548	68,527	421,488
1884	Pacific Mail Steamship Co.'s packets, *via* San Francisco	15,592	1,557	17,917	148,422	9,873	152,574	12,342	1,141	10,392	204,249	25,318	275,724
1885		18,048	4,466	20,595	144,182	18,896	165,962	14,161	1,721	13,396	63,932	8,315	160,921
1884	Queensland Royal Mail Steamers, *via* Torres Straits	....	....	....	710	29	613	912	20	238	500	3	192
1885		....	....	....	658	118	543	871	2	266	985	2	591
1884	Orient Steam Navigation Co.'s packets, *via* Suez and Naples	....	....	....	392,224	28,507	344,122	4,391	508	3,966	379,833	48,381	273,216
1885		....	....	....	442,576	43,395	399,276	4,927	637	3,824	480,667	64,362	393,820
1884	Compagnie des Messageries Maritimes' packets, *via* Marseilles	....	....	....	14,813	1,300	6,502	1,029	93	686	7,409	37	6,227
1885		....	....	....	19,706	2,319	6,273	863	242	470	6,104	41	5,943

The following statements show the approximate net cost to the Colony of the San Francisco, Suez and Naples, and Colombo-Brindisi services :—

San Francisco Service.

For the period from the 1st January to 29th November, 1885, per the vessels of the Pacific Mail Steamship Company, under arrangement with New Zealand :—

Dr.	£ s. d.	£ s. d.
To payment to the New Zealand Government for mail services performed from 1st January to 29th November, 1885, at the rate of £7,000 per annum, for thirteen voyages between Sydney and San Francisco, and *vice versa*		6,090 19 9
Cr.		
By share of postage from the United Kingdom	250 0 0	
Estimated postages collected in and retained by the Colony	5,450 0 0	
		5,700 0 0
Net cost for period		390 19 9

For the period from 21st November to 31st December, 1885, per the vessels of the Union Steamship Company of New Zealand :—

Dr.		
To New South Wales subsidy to Union Steamship Co., at the rate of £10,000 per annum (less New South Wales share of contribution conditionally promised by the Postmaster-General of the United States, viz. :— £1,333 6s. 8d. per annum), two trips...	666 13 4	
New South Wales share of demurrage and premiums, two trips	126 13 4	
		793 6 8
Cr.		
By share of postage from the United Kingdom	20 0 0	
Share of contributions from non-contracting Colonies ...	70 0 0	
Estimated postages collected in and retained by the Colony	490 0 0	
		580 0 0
Net cost for period		213 6 8

The estimated cost of the Pacific Mail Service for the whole of the year 1885 is £604 6s. 5d.

Via

Via Suez and Naples, per Orient Company.

Dr.	£	s.	d.	£	s.	d.
Poundage to Orient Company on New South Wales mail matter	19,176	11	2			
Poundage to Orient Company on mails of other Colonies ...	31,671	7	9			
Premiums (less penalties)	15,674	0	0			
				66,521	18	11

Cr.	£	s.	d.	£	s.	d.	£	s.	d.
Amounts chargeable to—									
United Kingdom				5,660	0	0			
Queensland	6,546	16	5						
Victoria	13,640	16	7						
South Australia	8,199	8	2						
Tasmania	2,029	5	0						
Fiji...	79	0	1						
New Zealand	1,176	1	6						
				31,671	7	9			
Estimated postages collected in and retained by the Colony				15,840	0	0			
							53,171	7	9
Net cost to the Colony							13,350	11	2
The estimated net cost for 1884 was							12,431	9	10

Colombo-Brindisi Service.

Dr.						
Amount payable to Victoria	15,739	4	3			
" " " for overlanding by special trains, &c.	126	0	0			
				15,865	4	3
Cr.						
Postages from London	5,725	0	0			
" collected in and retained by the Colony	6,150	0	0			
				11,875	0	0
Net cost to the Colony				3,990	4	3
The estimated net cost for 1884 was				3,747	7	4

The following statement shows the net cost per pound weight of New South Wales mail matter conveyed to and from this Colony by the "Pacific," "Orient," and "Peninsular and Oriental" Mail Services, respectively, during the year 1885 :—

Pacific	net cost per lb.	$1\frac{5}{9}$ pence.
Orient	" "	$12\frac{4}{5}$ "
Peninsular and Oriental ...	" "	$5\frac{9}{10}$ "

In March the rates of postage chargeable on Intercolonial correspondence were made applicable to correspondence forwarded from New South Wales to those portions of New Guinea which are under British protection.

From 1st April the postage on letters for Spain and Portugal, *via* Italy, was reduced from 11d. to 9d. per $\frac{1}{2}$ ounce, and from the same date the collection of 1s. 1d. per half ounce on unpaid letters from those countries received in the mails from Italy was authorized.

The postage on letters forwarded to St. Helena, *via* the United Kingdom was, in June, reduced from 1s. 5d. to 11d. per half ounce.

The Kingdom of Siam, having entered the Postal Union, on the 1st July, 1885, authority was obtained to levy the following amended rates of postage on mail matter despatched to that country, *via* Torres Straits or Colombo, viz. :—

Letters per $\frac{1}{2}$ ounce	6d.
Newspapers, each	1d.
Packets, not exceeding 1 ounce	1d.
" " 2 ounces	2d.
Every additional 2 ounces	2d.

LETTERS,

LETTERS, NEWSPAPERS, PACKETS, AND POST CARDS, POSTED THROUGHOUT THE COLONY.

The following is a return of the estimated number of Letters, Newspapers, Packets and Post-cards, posted in the Colony during 1885, as compared with the number posted in the preceding year :—

	1884.	1885.
LETTERS.		
Posted for delivery within the Colony	37,289,800	34,023,000
" Australian Colonies and New Zealand	1,631,400	1,750,300
" Foreign despatch	723,500	793,300
Total	39,644,700	36,566,600
NEWSPAPERS.		
Posted for delivery within the Colony	21,373,900	21,579,500
" Australian Colonies and New Zealand	1,434,900	1,410,600
" Foreign despatch	584,100	703,300
Total	23,392,900	23,693,400
PACKETS.		
Posted for delivery within the Colony	2,705,900	2,894,200
" Australian Colonies and New Zealand	38,800	175,300
" Foreign despatch	47,000	92,900
Total	2,791,700	3,162,400
Total number of Post-cards posted	296,300	341,000

On several occasions in reports of previous years my predecessors have found it necessary to mention the difficulties which prevent an accurate or even a reliable estimate being made of the number of letters, newspapers, packets, and post-cards posted throughout the Colony, and at various times the officers of the Department have devised methods with a view of obtaining this information with as much exactitude as possible. Of course the only method of arriving at an absolutely correct result would be to count the whole of these articles posted; but to do this would so greatly delay the delivery and despatch of mails that it would be imprudent to make the attempt. For some years special efforts have been made to count the correspondence posted during one month in each quarter, and on the result of this count to calculate the returns for the whole year; but this plan was found to be very unreliable, inasmuch as if any extraordinary occurrence gave rise to a sudden increase in the correspondence during that month, then its result affected the returns for the whole year in a most misleading manner.

Last year a plan similar to that adopted in the London Post Office was tried, namely, that of weighing the correspondence at the head office and in some of the principal country post-offices. The above returns are largely based upon this new method, and in reference thereto the Assistant Superintendent of the Mail Branch reports as follows :—

"In accordance with instructions, the letters and packets posted at this Office during the months of June and September were weighed, and I now attach the returns.

"From frequent tests the average number of letters and packets per pound was found to be, viz. :—

"Town letters 65
"Country do. 55
"Packets 10

"These returns, as compared with those made out under the old system of counting, show a decrease in the number of letters, but a large increase in the number of packets; and this is accounted for from the fact that in commencing the new system every care was taken to separate the correspondence and weigh it under the proper heading."

The Superintendent himself adds to the Assistant's report the following remarks :—

"In order to test this new system of knowing the number of letters posted, by weighing in lieu of counting as heretofore, two reliable clerks were specially appointed to this duty, and I have every confidence in the returns sent in."

Notwithstanding the reports which have been given, I greatly fear that the returns are still unreliable; and therefore, whilst not impugning the work of the officers, but merely recognizing the difficulties which surround any attempt to obtain an accurate result, I give the figures in the above return for what they are worth. But, after all, the most reliable indication of the actual increase of the Department is to be found in its increasing revenue, and in the fact that the manipulation of the mails by officials has resulted in a general expression of opinion that the mail matter of all descriptions posted has largely increased in quantity during the past year.

DEAD LETTER BRANCH.

Number of ordinary Letters (except those containing articles of value) returned to the writers as unclaimed.						Number of registered letters returned as unclaimed.	Number of letters unregistered but containing articles of value returned as unclaimed.	Number of Letters returned to the following places as unclaimed.				
Year.	Originally addressed to places within the Colony.	Originally addressed to the neighbouring Colonies.	Originally addressed to the United Kingdom.	Originally addressed to other Countries.	Total.			Neighbouring Colonies.	United Kingdom.	Other Countries.	Total.	Number of letters returned as unstamped or insufficiently addressed.
1884 ...	187,860	14,829	2,656	937	206,282	2,277	1,407	21,364	11,746	2,763	35,873	18,768
1885 ...	207,807	18,171	2,629	646	229,253	3,096	1,564	18,975	9,765	2,703	31,443	19,714
Increase.	19,947	3,342	.....	.....	22,971	819	157	.....	.....	.....	.....	946
Decrease	.....	.....	27	291	.....	.....	.....	2,389	1,981	60	4,430	.....

Of the registered letters mentioned in the above return 2,340 originated in New South Wales, and on being opened, previous to return to the writers, were found to contain, besides correspondence and valuable enclosures, £1,876 17s. 11d. in coin, notes, and cheques. The remaining 756 were from places outside the Colony, and returned unopened as follows :—187 to the Colonies, 373 to London, and 196 to other countries.

In 1,564 unregistered letters were found valuable enclosures representing £22,355 1s. 9d. This amount included coin, bank notes, cheques, drafts, stamps, money orders, and promissory-notes.

Out of about 11,000 letters and packets passed on to the Dead Letter Office imperfectly addressed, the addresses of two-thirds were rectified and the letters forwarded, and the remainder were returned to the writers. In addition to the foregoing, 667 Chinese letters imperfectly addressed were forwarded to the intended addresses through the assistance of the Chinese Interpreter employed by the Department.

Of 135 packets containing articles of clothing, merchandise, &c., received with the addresses torn off, postage refused, &c., 13 only were applied for and delivered.

Of the unstamped letters, 2,242, which could not be returned to the writers through insufficient addresses and not being signed, were delivered to the addressees by means of the printed notices provided by the Department for that purpose.

152 letters, posted without addresses, five of which contained valuable enclosures, were returned to the writers.

Twenty letters and five packets bearing obscene addresses were destroyed.

About $\frac{1}{11}$ per cent. of the total number of letters posted in the Colony during 1885 were unclaimed.

In order to meet the wishes of a large number of business men, who suffered great inconvenience from the retention by the Postal Department during the lengthy period prescribed by law of unclaimed letters forwarded by them, His Excellency the Governor, with the advice of the Executive Council, in January, 1885, approved of such letters being readdressed and charged with the usual redirection fee on delivery, provided they were posted with the following endorsement :—

"If not delivered or claimed within fourteen days, readdress to ....
(name of sender may be given here.")

The number of letters, &c., delivered by the letter-carriers attached to the head office during the years 1884 and 1885 was as follows :—

	1884.	1885.
Unregistered letters	6,953,353	7,815,910
Registered letters	58,694	66,661
Books	49,137	55,041
Newspapers	1,012,163	1,066,183

As an illustration of the increase in the business of the Department which the practice of exchanging cards of greeting at the Christmas season creates, the following return showing the number of letters delivered by the City and Suburban letter-carriers on the 17th and 18th, as compared with the number delivered on the 24th and 25th December, will be of interest :—

17 December...	25,584	
18 "	28,274	
		53,858
24 "	60,744	
25 "	50,942	
		111,686
Increase		57,828

The amount of correspondence despatched from the Head Office, in closed mails, at the same period, was also very largely increased.

REGISTRATION

Registration Branch.

The number of registered letters which passed through the General Post Office in 1885 was 354,912, against 321,447 in 1884, giving an increase of 33,465.

Number of Mails received and despatched.

The following Return shows the number of Mails received at and despatched from the General Post Office during the years 1884 and 1885 :—

Year.	Received.		Despatched.		Total number of Mails which passed through the office.
	Inland.	Foreign.	Inland.	Foreign.	
1884	117,862	13,055	107,050	8,140	246,107
1885	121,640	13,875	124,881	8,803	269,199
Increase	3,778	820	17,831	663	23,092

The number of written communications received from the public during 1885, intimating changes of address, or requesting letters, &c., to be forwarded, was 18,316, against 18,257 in 1884.

The number of communications addressed to the Department, relating to the extension and improvement of the Service, to irregularities connected with the performance of mail contracts, and to the transit of letters, &c., through the post, and recorded in the year 1885, was 32,013, against 33,515 in 1884.

From the 1st August the Registration Branch was closed at 8 p.m., as it was found that very little business was transacted after that hour.

Revenue and Expenditure.

The following Statement shows the Revenue and Expenditure for the Year 1885.

Revenue.	£ s. d.	£ s. d.	Expenditure.	£ s. d.	£ s. d.
Sale of postage stamps	315,770 0 10		Salaries*	.....	123,039 1 2
Fees for private boxes	2,270 14 1		Less amount chargeable to Electric Telegraph Department, as per foot-note	5,934 6 2	
Postage on unpaid letters	4,115 7 0		Less amount chargeable to Money Order Office, as per foot-note	1,416 7 2	7,350 13 4
Miscellaneous receipts	1,098 5 9				115,688 7 10
Postage received from United Kingdom	13,513 17 10		Conveyance of Mails :—		
Contributions from Colonies on account of the San Francisco service	3,403 7 5	340,171 12 11	Per Orient steamers	35,074 14 10	
Less amount transferred to Stamp Duties as the approximate value of postage stamps used as duty stamps during the year	.....	24,000 0 0	Via San Francisco	7,283 1 10	
		316,171 12 11	,, Melbourne and Galle	11,680 7 10	
			,, Torres Straits	52 15 0	
			Per horse, coach, &c.	142,980 17 9	
			,, Government Railways	41,827 14 0	
			,, steam and sailing vessels	17,205 12 10	226,105 4 1
Balance of expenditure over revenue	.....	52,442 11 3	Contingencies †	.....	26,820 12 3
		£368,614 4 2			£368,614 4 2

* Since the 1st October, 1885, the Post Office Department has, under regulations made in conformity with section 7 of the Civil Service Act, paid the full salaries of officers in charge of amalgamated post and telegraph offices, who were, previous to that date, remunerated partly by salaries from the Post Office and Telegraph Departments, and partly by commissions on the sale of postage stamps and for the transaction of Money Order Office and Government Savings Bank business, but since the 1st October, 1885, the commissions referred to were discontinued to the officers mentioned, their salaries being so increased as to compensate them for the loss of such commissions. It was then arranged that when an amalgamated office transacted Money Order Office and Government Savings Bank business, the Money Order Department should be debited with one-ninth and the Telegraph and Post Office Departments with four-ninths each of the salary of the officer in charge of such office, and also, that when an amalgamated office did not transact Money Order Office and Government Savings Bank businsss, the Telegraph Department should be debited with four-ninths, and the Post Office Department with five-ninths, of the salary of the officer in charge of such office.

£1,416 7s. 2d., and £5,934 6s. 2d., are the amounts with which the Money Order and Telegraph Departments respectively should be debited under the arrangement referred to, showing the sum of £115,688 7s. 10d. to be charged to the Post Office Department, under the heading of Salaries for the year 1885.

† Comprising the cost of fuel, light, rent, repairs, furniture, forage, carts, horses, uniforms, stamps and seals, receivers, travelling and relieving expenses, overtime, sorting English mails, extra clerical aid, servants' wages for cleaning General Post Office, and incidental expenses.

The items under the head of expenditure are confined to the amounts actually paid from the votes of Parliament, directly at the disposal of the Postmaster-General.

The

The following Return shows the number, description, and value of Postage Stamps issued at the General Post Office during the years 1884 and 1885 :—

Number. 1884.	Number. 1885.	Description.	Value. 1884. £ s. d.	Value. 1885. £ s. d.
19,004,060*	22,164,350†	Penny	79,183 11 8	92,351 9 2
20,833,360‡	22,080,949§	Two-penny	173,611 6 8	184,007 18 2
64,100	59,200	Three-penny	801 5 0	740 0 0
277,560	307,770	Four-penny	4,626 0 0	5,129 10 0
17,688	2,828	Five-penny	368 10 0	58 18 4
915,940	1,155,340	Six-penny	22,898 10 0	28,883 10 0
44,975	30,945	Eight-penny	1,499 3 4	1,031 10 0
3,820	5,780	Nine-penny	143 5 0	216 15 0
612	1,116	Ten-penny	25 10 0	46 10 0
180,910	410,230	Shilling	9,045 10 0	20,511 10 0
8,816	10,726	Five-shilling	2,204 0 0	2,681 10 0
125	6,475	Newspaper wrappers	0 10 5	26 19 7
234,000	241,750	Envelopes—one-penny	1,053 0 0	1,087 17 6
36,000	29,125	Envelopes—two-penny	324 0 0	262 2 6
291,000	386,000	Post-cards	1,212 10 0	1,400 0 0
18,780	19,440	Registered-letter envelopes—four-pence	313 0 0	324 0 0
2,640	2,520	Reply post-cards	22 0 0	21 0 0
			£297,331 12 1	£338,781 0 3

* Includes 151,700 envelopes received from the public to be impressed with a penny stamp.
† Includes 114,300 envelopes received from the public to be impressed with a penny stamp.
‡ Includes 49,750 envelopes received from the public to be impressed with a two-penny stamp.
§ Includes 43,909 envelopes received from the public to be impressed with a two-penny stamp.

The following Return shows the number, description, and value of Postage Stamps repurchased from the public for cash, under a discount of 5 per cent., during the year 1885 :—

Number.	Description.	Value. £ s. d.
79,291	One-penny	330 7 7
240,773	Two-penny	2,006 8 10
206	Three-penny	2 11 6
489	Four-penny	8 3 0
33	Five-penny	0 13 9
6,070	Six-penny	151 15 0
35	Eight-penny	1 3 4
12	Ten-penny	0 10 0
957	One-shilling	47 17 0
14	Five-shilling	3 10 0
	Total	£2,553 0 0
	Less 5 per cent	127 13 0
		£2,425 7 0
Also 3,300 spoiled but unused 1d. envelopes, value		£13 15 0
„ 750 „ „ 2d. „ „		6 5 0
		20 0 0
	Less 10 per cent	2 0 0
		£18 0 0

A new form of one penny "O S" Postage Stamp (*i.e.* for use by Public Departments only) for envelopes and cards only was introduced in May. The following is a description of the new Stamp:—Profile of Queen Victoria to left on plain tinted groundwork, enclosed in oval band, containing "New South Wales Postage" over head and "One Penny" under, with the letters O.S. in top and bottom corners; the whole enclosed in a border of three lines. Oblong Stamp, red.

On the introduction of the system of prepayment of telegrams by postage stamps, on the 1st October, 1885, it was deemed necessary to provide stamps of a higher denomination than those previously in use, and, accordingly, authority was obtained for the issue of a ten-shilling and a one-pound stamp. Authority was also given for the issue of a new five-shilling stamp of the following description:—Profile of Queen Victoria to left with diadem on tinted background, enclosed in circle, containing the words "New South Wales" above and "Stamp Duty" underneath in white letters on oblong figured field, with "5s." at top and "Five Shillings" at bottom; the whole enclosed by border lines attached to centre at sides. The word "Postage" in black erased letters printed over "Stamp Duty." Color, centre and border lines violet, with green diaper field.

The "ten shilling" and "one pound" stamps, referred to above, are of a similar description, with the exception that the former has a scroll and the latter a carmine field.

In the year 1885 the average cost per mile of the Inland Mail Conveyance was about $5\frac{5}{8}$d., against $5\frac{1}{6}$d., the price per mile paid in the year 1884. The particulars as to the Mail Contracts for the Conveyance of Inland Mails will be found in the Appendix.

Appendix F.

COMPLAINTS.

COMPLAINTS.

In previous reports allusion has been made to some of the difficulties that attend the prompt delivery of inadequately addressed correspondence, and on the present occasion I deem it right to offer the following observations on this subject.

Persons have complained of delay in the delivery of letters that formerly arrived in due course. The letters bear such an address as "Mr. ——, George-street," or "Mr. ——, Circular Quay," and at first it would seem strange that after being duly delivered for some months they should subsequently suffer delay. To understand this, however, it is necessary to know that in a large Department like the Post Office, where so many letter-carriers are employed, it might happen that the regular carrier, who is familiar with the person's residence or office, is absent owing to sickness or some other cause. Indeed, as many as eleven carriers have at one time been absent from the Sydney beats alone, and their places have had to be filled by the employment of all the emergency carriers, and even by newly-appointed persons. These temporary carriers may be comparatively strange to the beats, and as—to follow up the illustration given—three carriers deliver at the Circular Quay, and no less than six in George-street, letters vaguely addressed may pass through the hands of several carriers before reaching the proper one and so suffer delay in delivery.

Some persons insist that it is the duty of the Post Office to promptly correct erroneous addresses without any delay to the letters. For example, complaint has been made that a letter addressed in error (say) to Bathurst-street instead of Liverpool-street, was not promptly delivered at the *correct* address, because the latter appeared in the Sydney Directory. Where it is possible, Directories are consulted, but the time and energy of the Department are devoted, and rightly too, to the speedy despatch and delivery of letters *as addressed.* It should be observed that there are in the Head Office officials whose occupation is analogous to that of the "blind clerks" in the London Office, and they do cause a large number of imperfectly addressed letters to reach their owners.

My main object in making the foregoing remarks is to ensure prompt delivery of correspondence by urging greater care on the part of the public in addressing letters, &c. Not merely the name of the street should be given correctly, but also the number or name of the house.

And, speaking of irregularly-posted letters, it may be mentioned that persons, especially those in business, and who are well known, have complained of what appears to them to be the absurd practice of returning to the senders letters which are posted unstamped, instead of sending them on and charging the deficiency, or even double the deficiency, to the addressees. The postal law does not permit of the course suggested being taken in the case of Colonial letters, but it allows this to be done with regard to places beyond the Colony by arrangement with the proper authorities. To meet what appeared to be the wishes of the public in this respect, an arrangement was some years since entered into between this Department and the London Post Office, whereby letters, even if wholly unstamped, might be sent to their destination and the postage, with a further rate as a fine, charged on delivery.

Such a measure, however, is looked upon not as a progressive but a retrogressive one. Some thirty years ago the prepayment of postage was optional, and consequently the Post Office, especially on St. Valentine's Day, was made the medium of conveying a large mass of anonymous matter of a scurrilous or obscene description, which the senders did not hesitate to put into the post, knowing that the Department was bound to carry it perhaps hundreds of miles, and, at any rate, offer it to the addressees, who in most cases refused it.

A case of such a kind occurred only a few days since. A letter addressed to a well known firm in this city was posted in England unstamped, and it was, in pursuance of the arrangement mentioned, sent on and charged with the postage, 6d., and another 6d. by way of fine, and the addressee, on paying the shilling and opening his letter, found it to be an anonymous one of the most obscene character.

Other objections exist to the optional prepayment of postage upon letters, one being the necessity for keeping accounts, and the postage stamp system was specially devised to avoid accounts as much as possible with the double object of protecting the revenue, as it is impossible to keep an effectual check upon charged letters, and to enable the sorting to be more rapidly done than was possible when unpaid letters had to be weighed, and postage marked upon them and debited to the various Postmasters.

Persons complaining of the delay or loss of letters, &c., generally assume that the Post Office is in fault. It hardly ever seems to strike them that the blame may rest with themselves or with their correspondents. Scarcely a week passes without some irregularity where the Post Office has been charged with carelessness, being cleared up in this way. Either the correspondent had neglected to post, or had entrusted the posting to somebody else, who had failed to execute the trust, or the sender himself had mislaid the letter; whilst mistakes made by senders in addressing letters to wrong numbers, wrong streets, and even wrong towns, are a fruitful source of complaint. In illustration of how blame is wrongfully thrown upon the Post Office,

Office, I will mention a case which was only recently investigated. A gentleman in Sydney complained that he sent an unregistered letter containing a cheque to a person, which, at the expiration of seven days, had not reached its address. Inquiries were promptly made, without any result, except that the postmaster stated that all letters for the addressee in question had been duly delivered to him whenever he called for them. Shortly afterwards, the complainant again wrote, intimating that the missing letter (enclosing the cheque) had been received by the addressee, and he added—"It was lying, so we are informed, in the Post Office," thus insinuating that the Post Office was to blame. Upon this the local postmaster was of course again referred to, when it transpired that the letter was found, not at the Post Office, but on the counter of the addressee's shop, where it had evidently been misplaced after delivery by the Post Office. And, moreover, when the postmaster interviewed the addressee the latter averred that he never told the complainant that the letter was, as above stated, "lying at the Post Office." Yet, up to the time the letter in question was found, its non-receipt would no doubt be alluded to in conversation as an instance of "the gross mismanagement of the Postal Department."

Of course the Post Office is not infallible; mistakes will occur, and letters are occasionally lost through the dishonesty of employés; but proof of the great want of care shown by persons addressing even important letters can be found in the fact (as mentioned in another portion of this report) that unclaimed letters—*i.e.*, letters so imperfectly addressed that the Department was unable to deliver them to the owners—containing cash and valuables amounting to £24,231 19s. 8d., passed through the Dead Letter Office during last year, whilst the total number of unclaimed letters was about 243,000, notwithstanding the efforts of the Department, by advertising in the Gazette (a copy of which advertisement is placed outside every Post Office in the Colony) and otherwise to find the addressees.

The locked box system, no doubt an excellent one, and much appreciated by the public, has one great disadvantage, and it is, that the most careful clerks, sorting in a hurry (and as a rule sorting must be done in a hurry) may inadvertently place a letter in the wrong box. The mistake so made is irremediable, as the owner of the box may have emptied it the minute after the letter has been missorted, and it rests with him whether to return the misdelivered letter or not. Certainly the box-holders as a rule are of that class of persons who would, and do, return the letters thus delivered in error, but in most cases the missorting and the misdelivering involve a delay of at least one post, which is doubtless annoying to the addressees, who may not understand the liability to error and delay from the cause described.

II.—MONEY ORDER DEPARTMENT.

A direct interchange of Money Orders has been established between this Colony and the following places, namely:—

Ceylon, Mauritius, and the Straits Settlements.

An agreement has also been completed with the London Post Office authorities by which Money Orders can be issued in this Colony, and made payable at any country with which the London office transacts Money Order business. Money Orders issued under this agreement are first advised to London, from thence they are readvised to the paying country, a small charge being deducted from the amount of the new order, by way of commission, on the following scale, namely:—

	£	s.	d.		£	s.	d.		s.	d.
For sums not exceeding	2	0	0	... ...	...		...	a charge of	0	3
For sums exceeding	2	0	0	but not exceeding	5	0	0	do.	0	6
Do	5	0	0	do	7	0	0	do.	0	9
Do	7	0	0	do	10	0	0	do.	1	0

No single order to exceed £10. The commission chargeable in this Colony is at the same rate as on orders drawn on the United Kingdom.

The following are the British and Foreign countries included in the arrangement, namely:—

Antigua	Dutch East Indies	Italy	Sierra Leone
Bahamas	Egypt	Jamaica	St. Helena
Barbadoes	Falkland Islands	Lagos	St. Kitts
Belgium	Gambia	Montserrat	St. Lucia
Bermuda	German Empire	Natal	St. Vincent
British Guiana	Gold Coast	Nevis	Sweden
Cyprus	Grenada	North Borneo	Switzerland
Danish West Indies	Holland	Norway	Tobago
Denmark	Honduras (British)	Portugal	Trinidad
Dominicia	Iceland	Seychelles	Turks Islands

During

During the year Money Order Offices were established in this Colony at—

Canterbury	Gunbar	Newbridge	Spring Hill
Carrathool	Luddenham	Riverstone	West Mitchell
Coolaman			

And the offices at Collie, Dalmorton, Maryland, and Wagra were discontinued.

The number of Money Order Offices in the Colony on 31st December, 1885, was 427.

The number of orders issued during the year was 337,856, amounting to £1,169,569 5s. 10d., against 305,883, amounting to £1,068,068 5s. 3d., for 1884, the difference showing an increase for the year 1885 of 31,973 in the number and £101,501 0s. 7d. in the amount.

The number of orders paid was 298,082, amounting to £997,960 19s. 1d., against 270,678, amounting to £921,904 6s. 7d. for 1884, being an increase of 17,404 in the number and £76,056 12s. 6d. in the amount for 1885.

The amount of Revenue received as commission on Money Orders was £14,243 5s. 6d., being £1,449 5s. 6d. in excess of the amount received in 1884.

The following comparative return will show the various countries where the Money Orders issued in New South Wales were made payable :—

Issued in New South Wales and payable	Issued in 1884.		Issued in 1885.		Increase in 1885.		Decrease in 1885.	
	No	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		£ s. d.		£ s. d.		£ s. d.		£ s. d.
In the United Kingdom	30,520	121,275 16 8	34,274	138,432 17 2	3,754	17,157 0 6	.	...
Germany	365	1,601 5 4	505	2,285 5 0	140	683 19 8	.	...
New South Wales	236,899	799,818 8 3	259,808	863,407 10 1	22,909	63,589 1 10	...	...
New Zealand	2,809	11,730 3 11	3,238	13,452 17 4	429	1,722 13 5	...	...
Queensland	5,105	20,221 3 11	5,241	20,471 1 1	136	249 17 2	...	...
South Australia	2,566	9,559 4 2	3 743	14,015 11 5	1,177	4,456 7 3	..	...
Tasmania	1,370	5,307 14 5	1,421	5,289 4 7	51	...	...	18 9 10
Victoria	24,345	87,535 11 2	26,216	91,121 16 10	1,871	3,586 5 8	...	...
Western Australia	66	255 17 0	100	337 11 4	34	81 14 4	.	...
Hong Kong	524	3,675 5 7	665	4,478 13 6	141	803 7 11	...	...
India	418	3,252 6 9	1,102	8,976 12 6	684	5,724 5 9	..	.
United States	798	3,305 16 11	1,139	4,873 18 10	341	1,568 1 11	...	...
Cape of Good Hope	28	137 17 6	93	527 13 5	65	389 15 11	...	...
Canada	70	391 13 8	111	546 12 9	41	154 19 1	.	...
Ceylon	. .	...	8	18 12 4	8	18 12 4	...	...
Italy	.	...	84	729 8 5	84	729 8 5		...
Sweden	...	...	47	268 7 6	47	268 7 6	...	...
Norway	..	...	24	135 8 0	24	135 8 0		...
Denmark	...	...	13	74 0 6	13	74 0 6	..	...
Switzerland	...	...	5	31 10 0	5	34 10 0	...	...
Malta	...	...	5	32 8 3	5	32 8 3	...	...
Egypt and other countries	. .	...	9	43 5 0	9	43 5 0	...	...
Mauritius	.	...	5	16 0 0	5	16 0 0	...	...
Totals	305,883	1,068,068 5 3	337,856	1,169,569 5 10	31,973	101,519 10 5	...	18 9 10

The following comparative return will show the various countries where the orders made payable in New South Wales were originally issued :—

Payable in New South Wales and issued.	Issued in 1884.		Issued in 1885.		Increase in 1885.		Decrease in 1885.	
	No.	Amount.	No.	Amount.	No.	Amount.	No	Amount.
		£ s. d		£ s. d.		£ s. d.		£ s. d.
In the United Kingdom	4,040	16,198 9 8	4,857	18,981 19 0	817	2,783 9 4	...	...
Germany	45	313 3 5	29	86 9 5	...	...	16	226 14 0
New South Wales	235,424	798,867 18 3	259,264	861,626 0 5	23,840	62,758 2 2	...	...
New Zealand	3,763	12,894 15 5	4,397	14,395 14 8	634	1,500 19 3	..	...
Queensland	10,135	39,344 7 0	11,690	47,303 17 3	1,555	7,959 10 3	..	...
South Australia	2,836	8,729 5 10	2,611	8,162 11 8	...	...	225	566 14 2
Tasmania	1,902	6,276 16 3	2,057	6,608 2 9	155	331 6 6		...
Victoria	11,741	36,093 19 0	11,527	35,961 4 4	...	...	214	132 14 8
Western Australia	213	701 7 10	233	806 6 3	20	104 18 5	...	...
Hong Kong	50	158 1 6	41	133 7 1	...	...	9	24 14 5
India	260	995 8 8	783	1,880 19 6	523	885 10 10	...	...
Cape of Good Hope	53	358 12 6	252	588 4 10	199	229 12 4	.	...
United States	170	700 17 4	222	1,026 3 0	52	325 5 8		...
Canada	46	271 3 11	36	176 12 10	. .	...	10	94 11 1
Natal	...	...	64	151 1 6	64	151 1 6	...	...
Mauritius	...	...	6	14 5 9	6	14 5 9	...	...
Norway	...	...	3	12 18 10	3	12 18 10	...	...
Denmark	...	...	2	10 12 9	2	10 12 9	..	...
Switzerland	...	...	3	27 2 10	3	27 2 10	...	...
Malta and other countries	.	...	5	7 4 5	5	7 4 5	...	...
Totals	270,678	921,904 6 7	298,082	997,960 19 1	27,878	77,102 0 10	474	1,045 8 4

III.—GOVERNMENT SAVINGS' BANK DEPARTMENT.

The Savings' Bank system has been extended to the following places, namely :—

Canowindra	Hartley Vale	Moama
Cudal	Hawke's Nest	Mitchell
Cundletown	Katoomba	Spring Vale
Dight's Forest		

The Banks at O'Connell, St. Alban's, South Bowenfells, and the Shipping offices, Sydney and Newcastle, were discontinued.

The number of deposits received during the year was 170,750, and the amount £1,152,583 0s. 8d., being an increase of 14,172 in the number and £118,881 17s. 3d. in the amount on the business in the year 1884.

The withdrawals for the year were 75,600, for £1,020,813 12s. 1d., being 4,068 in number, and £51,326 9s. 1d. in amount, greater than the previous year.

The deposits, together with the interest added, increased the balance at the credit of depositors from £1,290,931 6s. 8d. in 1884 to £1,471,894 1s. 11d. on 31st December, 1885.

The amount of interest at 4 per cent. added to depositors' accounts was £49,193 6s. 8d.

The average amount of each deposit was £6 15s. 0¼d., and of each withdrawal, £13 10s. 0½d. The average amount at the credit of each depositor's account at the close of the year was £25 11s. 7½d.

The following return will show the annual progress of the Government Savings' Bank system, from 1st September, 1871, to 31st December, 1885 :—

Year.	Number of deposits.	Interest added to Depositors' Accounts.	Amount of Deposits	Number of Withdrawals.	Amount of Withdrawals.	Balance at Credit of Depositors.
		£ s. d.	£ s. d.		£ s. d.	£ s. d.
1871	2,103	52 5 4	15,730 5 0	205	1,555 17 5	14,226 12 11
1872	8,415	1,633 6 3	93,533 16 4	2,058	28,450 7 11	80,943 7 7
1873	15,000	5,033 3 8	184,817 19 2	3,694	64,724 13 0	206,069 17 5
1874	25,186	9,372 6 9	232,522 7 1	7,530	144,851 8 4	303,113 2 11
1875	34,043	12,067 18 3	268,079 3 8	11,497	228,831 1 11	354,429 2 11
1876	38,592	13,364 5 1	285,039 12 0	14,694	251,535 8 3	401,297 11 9
1877	47,948	15,413 13 2	329,273 11 6	17,871	278,532 5 7	467,452 10 10
1878	59,932	16,999 18 2	360,704 10 2	22,594	365,132 1 9	480,024 17 5
1879	67,444	17,544 4 10	393,771 19 2	27,612	379,983 18 6	511,357 2 11
1880	76,402	19,091 0 0	457,778 13 11	30,342	401,730 13 10	586,496 3 0
1881	98,270	27,511 1 5	833,191 2 2	35,159	475,696 19 9	971,501 6 10
1882	121,868	39,063 18 4	891,199 12 7	48,443	743,310 14 5	1,158,454 3 4
1883	147,627	40,334 14 6	922,803 14 5	59,475	938,073 8 6	1,183,519 3 9
1884	156,578	43,198 2 6	1,033,701 3 5	71,532	969,487 3 0	1,290,931 6 8
1885	170,750	49,193 6 8	1,152,583 0 8	75,600	1,020,813 12 1	1,471,894 1 11
Total to 31 Dec., 1885	1,070,158	309,873 4 11	7,454,730 11 3	428,306	6,292,709 14 3	.....

The following return will show the increase in the business of the Government Savings' Bank for the year 1885, compared with the transactions of the year 1884 :—

Year.	Number of Government Savings' Banks in the Colony.	Number of Accounts opened.	Number of Accounts closed	Number of Accounts remaining open on 31st Dec.	Total Deposits, including interest.		Total Withdrawals.		Balance at credit of Depositors on 31st Dec.
					Number.	Amount.	Number.	Amount.	
						£ s. d.		£ s. d.	£ s. d.
1885	274	29,135	22,986	57,538	170,750	1,201,776 7 4	75,600	1,020,813 12 1	1,471,894 1 11
1884	269	27,449	21,771	51,399	156,578	1,076,899 5 11	71,532	969,487 3 0	1,290,931 6 8
Increase.	5	1,686	1,215	6,139	14,172	124,877 1 5	4,068	51,326 9 1	180,962 15 3

Appendix G. Appendix H. A detailed return showing the business transacted at each branch in the Colony will be found in the Appendix, as also a statement of the Liabilities and Assets, with the Auditor-General's certificate thereon.

The expenditure of the Money Order and Government Savings' Bank Department for salaries was £7,963 16s. 8d. ; for contingencies, £8,239 6s. 1d. ; total, £16,203 2s. 9d.

The number of persons employed in connection with the Money Order and Government Savings' Bank Department is as follows :—

1 Superintendent and Controller.	2 Assistant Tellers.	8 Probationers.
1 Chief Clerk and Examiner.	5 Money Order Ledger-keepers.	1 Storekeeper.
1 Teller.	5 Savings' Bank Ledger-keepers.	3 Messengers.
1 Examiner.	18 Clerks.	1 Housekeeper.
3 Assistant Examiners.		

Total 50

A great number of applications have been received for the extension of both the Money Order system and the Government Savings' Bank system to various parts of the Colony; but owing to the limited accommodation at the Head Office, Sydney, it has been found impossible to accede to these requests. In the course of a few months, however, when the Superintendent of the Money Order Office and Controller of the Government Savings' Bank will have taken up his new quarters in the extension of the General Post Office, these applications will be brought under consideration, and it may therefore be anticipated that both of these systems will be largely extended before long.

IV.—ELECTRIC TELEGRAPH DEPARTMENT.

The following return shows the extent of the Electric Telegraph Lines and the number of Stations in the Colony on the 31st December, 1885; also the Revenue and Expenditure of the Department for the year 1885 (including receipts and expenditure on account of the Telephone system) as compared with similar information for 1884 :—

Year	Extent of Electric Telegraph wire in actual use	Number of Stations.	Number of Messages transmitted during the year.	Revenue	Expenditure (exclusive of interest on cost of construction of lines)
	Miles chns. lnks.			£ s. d.	£ s. d.
1884	18,681 11 54	394	2,334,052	146,386 8 2	171,433 14 8 *
1885	19,864 54 33	404	2,625,992	155,073 10 3	181,448 5 2 †
Increase .	1,183 42 79	10	291,940	8,687 2 1	10,014 10 6

* This includes £12,617 1s 4d for British-Australian Cable Subsidy, and £2,500 for New Zealand Cable Subsidy
† This includes £13,069 13s 11d for British Australian Cable Subsidy, and £2,500 for New Zealand Cable Subsidy.

The Lines of Electric Telegraph completed and dismantled during the year 1885 were the following :—

Name of Line	Dismantled	New Line	Additional Wire.	Cost of Construction.
	Miles chains links	Miles chains links	Miles chains links	£ s. d.
Booligal to Wilcannia	... .	193 44 80	... .	8,797 0 4
Armidale to Mother of Ducks and Glen Innes...	58 13 33 (Line) 116 26 66 (Wire)	63 48 0	202 41 80	6,298 13 10
Bega to Nimitybelle	... .	42 64 0	0 26 0	1,519 18 8
Ballina to Brunswick River Heads	... .	32 42 38	. .....	1,302 18 4
Goodooga to Angledool	.. ..	14 0 0	18 0 0	740 5 0
Goulburn to Bungendore	... .	43 0 0	43 0 0	2,322 14 10
Bateman's Bay to Mogo	....	.	7 0 0	60 3 9
Byrock to Bourke	. ... .	48 40 0	48 40 0	2,586 6 11
Signal Station, Richmond River, to Ballina .	.. ..	2 7 0	1 0 0	119 2 5
Casino to Lismore and Coraki	.. ..	15 0 0	20 0 0	658 15 0
Cootamundra to Gundagai	... .	33 51 20	33 51 20	1,936 8 11
Howlong to Walbundrie	. ...	21 42 0	1 64 0	852 11 10
Menindie to Silverton	.. ..	82 0 0	5 0 0	4,903 19 4
Orange to Molong	.. ..	23 0 0	24 40 0	1,287 16 10
Piper's Flat to Mitchell	....	7 0 0	7 40 0	371 19 6
Pelican Flat to Pilot Station, Lake Macquarie...	. . .	2 6 40	0 9 60	113 18 2
Singleton to Tamworth and West Tamworth	. . ..	... . .	143 40 0	1,982 14 1
Murrumburrah to Young	....	18 19 20	23 59 20	1,145 9 5
Brunswick River to Tweed River	....	4 32 0	. ...	194 6 0
Albury to Wodonga Bridge	. .. .	... .	2 20 0	27 14 2
City Extensions (Telegraph and Telephone) .	... . .	6 39 0	122 15 0	2,986 10 1
No. of miles dismantled (line)	58 13 33			
No. of miles dismantled (wire)	116 26 66			
No. of miles of line erected during the year .	.....	653 35 98		
Less dismantled	... .	58 13 33		
		595 22 65		
No. of miles of additional wire erected during the year	... -	. . ..	704 46 80	
Less dismantled	... .	... .	116 26 66	
			588 20 14	
No. of miles of wire erected during the year	. ... . .	. ...	1,183 42 79	
Cost of construction for year ending 31st December, 1885	... .	. . ..	....	40,209 7 5
The total cost of the whole extent of Electric Telegraph communication in the Colony on 31st December, 1885, 19,864 miles 54 chains 33 links, was	... .	.....	. ...	641,669 0 7

Stations were opened during the year at the following places :—

Angledool	Guyra
Broadwater	Mitchell
Bowraville	Mogo
Canterbury	Silverton
Emu Plains	Walbundrie.

The lines in course of construction during the year 1885, and the estimated length thereof are shown in the following Return :—

Name of Line.	Estimated Distance.	
	New Line.	Additional Wire.
	m. chs. lks.	m. ch. lks.
Murrurundi to Doughboy Hollow	8 0 0	52 0 0
Glen Innes to Tenterfield	60 0 0	60 0 0
Louth to Wanaaring	77 0 0	.....
Bathurst to Dubbo	.....	133 0 0
Port Macquarie to Wauchope	8 0 0	5 0 0
	153 0 0	250 0 0

The Staff attached to the Electric Telegraph Department for the year 1885 was as follows, viz. :—

1 Superintendent.	2 Receiving Clerks.	2 Batterymen.
1 Assistant Superintendent.	1 Mechanician.	1 Stableman.
1 Accountant.	7 Instrument Fitters.	1 Office-keeper.
1 Manager.	5 Inspectors.	1 Manager (Telephones.)
1 Assistant Manager.	325 Station-masters.	1 Overseer (do.)
1 Continental Clerk.	297 Operators.	4 Assistant Overseers (do.)
1 Cable Clerk.	41 Line Repairers.	1 Line Overseer.
1 Ledger-keeper.	3 Messengers' Overseers.	11 Switch-board Attendants (do.)
1 Cashier.	348 Messengers.	1 Batteryman.
1 Telegraph Instructor.	1 Clerk in charge of Stores.	3 Engineers (Electric Lights.)
11 Clerks.	3 Clerks in Stores.	4 Assistants do.
19 Booking Clerks.		
	Total	1,103

The following amended Regulation regarding the Telephone system was brought into operation on January 1, 1885 :—"Each subscriber will be required to pay, *in advance*, a maintenance fee of five pounds (£5) per annum for lines not exceeding 1 mile in length, and for lines over 1 mile in length, five pounds (£5) per annum for the first mile, and two pounds ten shillings (£2 10s.) per annum for each additional mile or fraction thereof."

From the 2nd March the regulation regarding cipher messages, which were previously charged 50 per cent. above the ordinary rates, was so amended as to allow of such messages being transmitted at the ordinary rates, provided proper names or plain dictionary words are used, and that the length of each word does not exceed ten letters.

The system of pre-payment of telegrams by postage stamps was introduced on the 1st October, but being found to be open to the serious objection that it possessed absolutely no check upon the collections of country Station-masters, besides being otherwise objectionable, it was abolished, and the cash system reverted to on the 1st April, 1886.

Communication by cable between Australia and India was maintained without interruption during the year 1885, but one or other of the cables was unworkable from 17th June to 4th August, from 30th August to 25th September, and from 25th December to 18th January, 1886. Only one interruption occurred on the land line across the Australian Continent to Port Darwin. This was owing to the breaking of the wire near Giles' Well, north of Daly Waters, and lasted from 3·30 p.m. on 2nd December until 4·15 p.m. on the following day.

Appendix I. The Superintendent of Telegraphs (Mr. E. C. Cracknell) attended an International Conference held at Berlin in August, 1885. I append a Report I have received from him on the subject.

I have the honor to be,
My Lord,
Your Lordship's most obedient servant,
F. B. SUTTOR,
Postmaster-General.

General Post Office, Sydney, 21st July, 1886.

APPENDIX A.

Universal Postal Union.

Convention of Paris (1 June, 1878) as modified by the Additional Act of Lisbon (21 March, 1885), together with the Detailed Regulations for the Execution of the Convention similarly modified.

NOTE.

The General Postal Union was founded at Berne under a Treaty signed in that City on the 9th of October, 1874, with the following title and preamble :—

Treaty concerning the formation of a General Postal Union, concluded between Germany, Austro-Hungary, Belgium, Denmark, Egypt, Spain, the United States of America, France, Great Britain, Greece, Italy, Luxemburg, Norway, the Netherlands, Portugal, Roumania, Russia, Servia, Sweden, Switzerland, and Turkey.

The undersigned, plenipotentiaries of the Governments of the abovenamed countries, have by common consent, and subject to ratification, agreed upon the following Convention.

In 1876 British India and the French Colonies were admitted to the Union under an agreement signed at Berne on the 27th of January in that year by delegates from Germany, Austria, Hungary, Belgium, Egypt, Spain, France, the French Colonies, Great Britain, India, Italy, the Netherlands, and Sweden and Norway. In 1878, at a Congress held in Paris, the Union was further developed, and became the "Universal Postal Union." Other Countries and Colonies beyond sea were admitted ; the Berne Treaty was largely altered ; and, in its new form, the Union Convention was signed at Paris on the 1st of June, 1878, with the following title and preamble :—

Universal Postal Union concluded between Germany, the Argentine Republic, Austro-Hungary, Belgium, Brazil, Denmark and the Danish Colonies, Egypt, Spain and the Spanish Colonies, the United States of North America, France and the French Colonies, Great Britain and certain British Colonies, British India, Canada, Greece, Italy, Japan, Luxemburg, Mexico, Montenegro, Norway, the Netherlands and the Netherland Colonies, Peru, Persia, Portugal and the Portuguese Colonies, Roumania, Russia, Servia, Salvador, Sweden, Switzerland, and Turkey.

Convention.

The undersigned, plenipotentiaries of the Governments of the abovenamed countries, being assembled in Congress at Paris, by virtue of Article XVIII of the Treaty constituting the General Postal Union, concluded at Berne on the 9th of October, 1874, have by common consent and subject to ratification, revised the said Treaty in conformity with the following stipulations.

At a third Congress, held at Lisbon in 1885, the Convention of Paris was in its turn revised ; and on the 21st of March in that year an Additional Act to the Convention was signed, with the following title and preamble :—

Additional Act of Lisbon to the Convention of the 1st of June, 1878, concluded between Germany, the United States of America, the Argentine Republic, Austro-Hungary, Belgium, Bolivia, Brazil, Bulgaria, Chili, the United States of Colombia, the Republic of Costa Rica, Denmark and the Danish Colonies, the Dominican Republic, Egypt, Ecuador, Spain and the Spanish Colonies, France and the French Colonies, Great Britain and certain British Colonies, Canada, British India, Greece, Guatemala, the Republic of Hayti, the Kingdom of Hawaii, the Republic of Honduras, Italy, Japan, the Republic of Liberia, Luxemburg, Mexico, Montenegro, Nicaragua, Paraguay, the Netherlands and the Netherland Colonies, Peru, Persia, Portugal and the Portuguese Colonies, Roumania, Russia, Salvador, Servia, the Kingdom of Siam, Sweden and Norway, Switzerland, Turkey, Uruguay and the United States of Venezuela.

The undersigned, plenipotentiaries of the Governments of the countries specified above, assembled in Congress at Lisbon,

In virtue of Article XIX of the Convention concluded at Paris on the 1st of June, 1878,

Have, by common consent, and subject to ratification, resolved upon the following Additional Act.

The present reprint embodies so much of the Convention of Paris as remains unchanged, together with all the revisions and additions agreed to at Lisbon and there signed in the form of an Additional Act. The whole of the abovementioned documents, as signed, were in the French language. The following translation and that of the foregoing headings and preamble have been added in London.

Universal Postal Union.—Convention of Paris (1 June, 1878) as modified by the Additional Act of Lisbon (21 March, 1885).

Article I.

The countries between which the present Convention is concluded, as well as those which may adhere to it hereafter, form under the title of *Universal Postal Union*, a single postal territory for the reciprocal exchange of correspondence between their Post Offices.

Article II.

The stipulations of this Convention extend to letters, post-cards, both single and with reply paid, printed papers of every kind, commercial papers and samples of merchandise, originating in one of the countries of the Union and intended for another of those countries. They also apply, as far as regards transit within the Union, to the exchange by post of the articles above mentioned between the countries of the Union and countries foreign to the Union, whenever the services of two of the contracting parties at least are used for that exchange.

All the contracting countries are not bound to issue cards with reply paid, but they assume the obligation of returning the reply halves of cards received from other countries of the Union.

Article III.

The Postal Administrations of neighbouring countries or countries able to correspond directly with each other, without availing themselves of the services of a third administration, determine. by common consent, the conditions of the conveyance of the mails which they exchange across the frontier, or from one frontier to the other.

In the absence of any contrary arrangement, the direct sea conveyance between two countries by means of packets or vessels depending upon one of them shall be considered as a third service ; and this conveyance, as well as any performed between two offices of the same country, by the intermediary of sea or territorial services maintained by another country, is regulated by the stipulations of the following Article.

Article IV.

The right of transit is guaranteed throughout the entire territory of the Union.

Consequently, the several Postal Administrations of the Union may send reciprocally through the intermediary of one or of several of them, either closed mails or correspondence *à découvert*, according to the wants of the traffic and the requirements of the postal service.

The correspondence exchanged, whether *à découvert* or in closed mails, between two Administrations of the Union, by means of the services of one or of several other Administrations of the Union, is subject to the following transit charges, to be paid to each of the countries traversed, or whose services participate in the conveyance, viz. :—

1. For territorial transits, 2 francs per kilogramme of letters or post cards, and 25 centimes per kilogramme of other articles.
2. For sea transits, 15 francs per kilogramme of letters or post cards, and 1 franc per kilogramme of other articles.

It is, however, understood,—

1. That in all cases where the transit is already gratuitous at present, or subject to more advantageous conditions, such state of things is maintained, except in the case provided for in paragraph 3 following.
2. That in all cases where the sea transit rate is fixed at present at 5 francs per kilogramme of letters or post cards, and at 50 centimes per kilogramme of other articles, those rates are maintained.
3. That every sea transit not exceeding 300 nautical miles is gratuitous if the Administration concerned is already entitled on account of mails or correspondence benefiting by this transit, to the remuneration applicable to territorial transit ; in the contrary case, payment is made at the rate of 2 francs per kilogramme of letters and 25 centimes per kilogramme of other articles.

4. That, in the case of sea conveyance effected by two or more Administrations, the rates payable for the entire transit cannot exceed 15 francs per kilogramme of letters or post cards, and 1 franc per kilogramme of other articles; the rates in question are, in such case, shared between those Administrations in proportion to the distances traversed, without prejudice to other arrangements between the parties interested.
5. That the rates specified in the present Article do not apply either to conveyance by means of services depending upon Administrations foreign to the Union, or to conveyance within the Union by means of extraordinary services specially established or maintained by one Administration in the interest or at the request of one or several other Administrations. The conditions of these two categories of conveyance are regulated by mutual consent between the Administrations concerned.

The expenses of transit are borne by the administration of the country of origin.

The general accounting for those charges takes place on the basis of statements prepared every three years, during a period of twenty-eight days, to be determined on in the Detailed Regulations referred to in Article XIV hereafter.

Correspondence between Postal Administrations, the reply halves of double post cards, returned to the country of origin, articles redirected or missent, undelivered articles, acknowledgments of delivery, post office money orders or advices of the issue of orders, and all other documents relative to the postal service, are exempt from all charges for territorial or sea transit.

Article V.

The rates of postage for the conveyance of postal articles throughout the entire extent of the Union, including their delivery at the residence of the addressees in the countries of the Union where a delivery is or shall be organized, are fixed as follows:—

1. For letters, 25 centimes in case of prepayment, and double that amount in the contrary case, for each letter and for every weight of 15 grammes or fraction of 15 grammes.
2. For post cards, 10 centimes for single cards or for each of the two halves of cards with reply paid.
3. For printed papers of every kind, commercial papers, and samples of merchandise, 5 centimes for each article or packet bearing a particular address and for every weight of 50 grammes or fraction of 50 grammes, provided that such article or packet does not contain any letter or manuscript note having the character of actual and personal correspondence, and that it be made up in such a manner as to admit of its being easily examined.

The charge on commercial papers cannot be less than 25 centimes per packet, and the charge on patterns or samples cannot be less than 10 centimes per packet.

In addition to the rates, and the minima fixed by the preceding paragraphs, there may be levied,

1. For every article subject to the sea transit rates of 15 francs per kilogramme of letters or post cards and 1 franc per kilogramme of other articles, a surcharge which may not exceed 25 centimes per single rate for letters, 5 centimes per post card, and 5 centimes per 50 grammes or fraction of 50 grammes for other articles.
2. For every article conveyed by means of services maintained by Administrations foreign to the Union, or of extraordinary services in the Union, giving rise to special expenses, a surcharge in proportion to those expenses.

In case of insufficient prepayment, correspondence of every kind is liable to a charge equal to double the amount of the deficiency, to be paid by the addressees.*

There shall not be forwarded:—

1. Articles other than letters which are not prepaid at least partly, or which do not fulfil the conditions required above in order to pass at the reduced rate.
2. Articles of a nature likely to stain or injure the correspondence.
3. Packets of samples of merchandise which have a saleable valuable, or which exceed 250 grammes in weight, or measure more than 20 centimetres in length, 10 in breadth, and 5 in depth.
4. Lastly, packets of commercial papers and printed papers of every kind, the weight of which exceeds 2 kilogrammes, or which measure in any one direction more than 45 centimetres.

Article V *bis*.

The sender of a letter or other article can have it withdrawn from the post or have its address altered, so long as such article has not been delivered to the addressee.

The request for such withdrawal is sent by post or by telegraph at the expense of the sender, who must pay as follows:—

1. For every request by post, the amount payable for a registered single letter.
2. For every request by telegraph, the charge for a telegram according to the ordinary tariff.

The stipulations of this article are not obligatory for countries in which the legislation does not permit the sender to dispose of an article in its course through the post.

Article VI.

The articles specified in Article V may be registered.

Every registered article is liable, at the charge of the sender,—

1. To the ordinary prepaid rate of postage on the article, according to its nature.
2. To a fixed registration fee of 25 centimes at most in European States, and of 50 centimes at most in other countries, including a receipt given to the sender.

The sender of a registered article may obtain an acknowledgment of the delivery of such article, by paying in advance a fixed fee of 25 centimes at most.

Article VI *bis*.

In case of the loss of a registered article, and except in cases beyond control, the sender, or, at the request of the sender, the addressee is entitled to an indemnity of 50 francs.

The obligation of paying the indemnity rests with the Administration to which the despatching office is subordinate. To that Administration is reserved a remedy against the Administration responsible, that is to say, against the Administration on the territory or in the service of which the loss took place.

Until the contrary be proved, the responsibility rests with the Administration which, having received the article without making any observation, cannot establish the delivery to the addressee or the regular transfer to the following Administration, as the case may be.

The payment of the indemnity by the despatching office ought to take place as soon as possible, and at the latest within a year of the date of the application. The responsible office is bound to refund to the despatching office without delay the amount of the indemnity paid by the latter.

It is understood that the application for an indemnity is only entertained if made within a year of the posting of the registered article; after this term the applicant has no right to any indemnity.

If the loss occurred in course of conveyance between the exchanging offices of two adjacent countries, without its being possible to ascertain on which of the two territories the loss took place, the two Administrations concerned bear each a half of the loss.

The Administrations cease to be responsible for registered articles for which the owners have given a receipt on delivery.

As a temporary measure, the Administrations of countries beyond Europe, whose legislation is actually opposed to the principle of responsibility, are permitted to postpone the application of the preceding clause until the time when they shall have obtained by legislative enactment authority to subscribe to it. Up to that time the other Administrations of the Union are not bound to pay an indemnity for the loss, in their respective services, of registered articles addressed to or originating in the said countries.

Article

* The Lisbon Congress decided to regard this article as meaning that in all cases of non-prepayment, as of insufficient prepayment, the whole deficit should be doubled, whether such deficit be in the fundamental rate or in the surcharge.

Article VII.

Those countries of the Union which have not the franc for their monetary unit fix their charges at the equivalents, in their respective currencies, of the rates determined by the foregoing Articles V and VI Such countries have the option of rounding the fractions in conformity with the table inserted in the detailed regulations mentioned in Article XIV of the present Convention

Article VIII

Prepayment of postage on every description of article can be effected only by means of postage stamps valid in the country of origin for the correspondence of private individuals

Official correspondence relative to the postal service, and exchanged between postal administrations, is alone exempted from this obligation, and from all liability to charge.

Article IX

Each Administration keeps the whole of the sums which it collects by virtue of the foregoing Articles V, VI, VII, and VIII Consequently, there is no necessity under this head for any accounts between the several Administrations of the Union

Neither the senders nor the addressees of letters and other postal packets can be called upon to pay, either in the country of origin or in that of destination, any tax or postal duty other than those contemplated by the Articles above mentioned

Article IX *bis*

At the request of the sender, all classes of correspondence are sent to the addresses by a special messenger immediately on arrival in those countries of the Union which consent to undertake this service in their reciprocal relations

Such correspondence, which is called "express," is subject to a special charge for delivery, this charge is fixed at 30 centimes, and must be fully paid in advance by the sender, in addition to the ordinary postage It belongs to the Administration of the country of origin

When an article is destined for a place where there is no post office, the Postal Administration of the country of destination can levy an additional charge, up to the amount of the price fixed for delivery by express in its inland service, less the fixed charge paid by the sender, or its equivalent in the money of the country which levies this additional charge

"Express" letters, &c upon which the total amount of the charges payable in advance has not been prepaid are delivered by the ordinary means

Article X

No supplementary postage is charged for the redirection of postal packets within the Union

Undelivered correspondence does not when returned give rise to the repayment of the transit charges due to intermediary Administrations for the previous conveyance of such correspondence

Article XI

It is forbidden to the public to send by post—

1 Letters or packets containing pieces of money
2 Any packets whatever containing articles liable to Customs duty
3 Gold or silver bullion, precious stones, jewellery, or other precious articles, but only in case their insertion or transmission is forbidden by the legislation of the countries concerned

In case a packet falling under one of these prohibitions be delivered by one Administration of the Union to another Administration of the Union, the latter proceeds according to the manner and forms prescribed by its internal laws or regulations

The right is, moreover, reserved to the Government of every country of the Union to refuse to convey over its territory, or to deliver, articles passing at reduced rates, in regard to which the laws, ordinances, or decrees which regulate the conditions of their publication or circulation in that country have not been complied with, or correspondence of any kind bearing obviously inscriptions forbidden by the legal enactments or regulations in force in the same country

Article XII

The Offices of the Union which have relations with countries beyond the Union admit all the other Offices to take advantage of these relations for the exchange of correspondence with the said countries

The correspondence exchanged *à découvert* between a country of the Union and a country foreign to the Union, through the intermediary of another country of the Union, is treated, as regards the conveyance beyond the limits of the Union, in conformity with the conventions, arrangements, or special provisions governing the postal relations between the latter country and the country foreign to the Union

The rates chargeable on the correspondence in question consist of two distinct elements, viz,

1 The Union rate fixed by Articles V, VI, and VII of the present Convention.
2 A rate for the conveyance beyond the limits of the Union

The first of these rates is assigned,—

a For correspondence originating in the Union and addressed to foreign countries, to the despatching office in case of prepayment, and to the office of exchange in case of non prepayment,
b For correspondence originating in foreign countries and addressed to the Union, to the office of exchange in case of prepayment, and to the office of destination in case of non prepayment

The second of these rates is, in every case, assigned to the office of exchange

With regard to the expenses of transit within the Union, the correspondence originating in or addressed to a foreign country is assimilated to that from or for the country of the Union which maintains relations with the country foreign to the Union, unless such relations imply obligatory and partial prepayment, in which case the said Union country has the right to the territorial transit rates fixed by Article IV preceding

The general accounting for the postage chargeable for the conveyance beyond the limits of the Union takes place on the basis of statements, which are prepared at the same time as the statements drawn up by virtue of Article IV preceding, for the calculation of the charges for transit within the Union

As regards the correspondence exchanged in *closed mails* between a country of the Union and a country foreign to the Union, through the intermediary of another country of the Union, the transit thereof is subject,

Within the limits of the Union, to the rates fixed by Article IV of the present Convention,
Beyond the limits of the Union, to the conditions resulting from the special arrangements concluded or to be concluded for that purpose between the Administrations concerned

Article XIII

The exchange of letters of declared value, the post office money order system, the parcel post system, the collection of bills of exchange, &c, the system of certificates of identity, &c, form the subject of special arrangements between the various countries or groups of countries composing the Union.

Article XIV

The Postal Administrations of the various countries composing the Union are competent to draw up, by common consent, in the form of Detailed Regulations, all the measures of order and detail which are judged necessary

The several Administrations may, moreover, make amongst themselves the necessary arrangements on the subject of questions which do not concern the Union generally, provided that those arrangements do not derogate from the present Convention

The Administrations concerned are, however, permitted to come to mutual arrangements for the adoption of lower rates of postage within a radius of 30 kilometres.

Article

Article XV.

The present Convention does not involve alteration in the legislation of any country as regards anything which is not provided for by the stipulations contained in this Convention.

It does not restrict the right of the contracting parties to maintain and to conclude treaties, as well as to maintain and establish more restricted Unions, with a view to the improvement of postal relations.

Article XVI.

Under the name of the *International Bureau of the Universal Postal Union*, is maintained a central office, which is conducted under the supervision of the Swiss Postal Administration, and the expenses of which are borne by all the Offices of the Union.

This Office is charged with the duty of collecting, collating, publishing, and distributing information of every kind which concerns the international postal service; of giving, at the request of the parties concerned, an opinion upon questions in dispute; of making known proposals for modifying the acts of the Congress; of notifying alterations adopted; and, in general, of taking up such studies and labours as may be confided to it in the interest of the Postal Union.

Article XVII.

In case of disagreement between two or more members of the Union as to the interpretation of the present Convention or as to the responsibility of an Administration in case of the loss of a registered article, the question in dispute is decided by arbitration. To that end, each of the Administrations concerned chooses another member of the Union not directly interested in the matter.

The decision of the arbitrators is given by an absolute majority of votes.

In case of an equality of votes the arbitrators choose, with the view of settling the difference, another Administration equally uninterested in the question in dispute.

The stipulations of the present Article apply equally to all the agreements concluded in virtue of Article XIII, of the Convention of the 1st June 1878, modified by Article I, section IX, of the present Additional Act.

Article XVIII.

Countries which have not taken part in the present Convention are admitted to adhere to it upon their demand.

This adhesion is notified diplomatically to the Government of the Swiss Confederation, and by that Government to all the countries of the Union.

It implies, as a matter of course, accession to all the clauses and admission to all the advantages stipulated by the present Convention.

It devolves upon the Government of the Swiss Confederation to determine, by common consent with the Government of the country concerned, the share to be contributed by the Administration of this latter country towards the expenses of the International Bureau, and, if necessary, the rates to be levied by that Administration in conformity with Article VII preceding.

Article XIX.

Congresses of plenipotentiaries of the contracting countries, or simple administrative Conferences, according to the importance of the questions to be solved, are held, when a demand for them is made or approved by two-thirds, at least, of the Governments or Administrations, as the case may be.

A Congress shall, however, be held at least once in five years.

Each country may be represented either by one or by several delegates, or by the delegation of another country. But it is understood that the delegate or delegates of one country can be charged with the representation of two countries only, including the country they represent.

In the deliberations each country has one vote only.

Each Congress settles the place of meeting of the next Congress.

For Conferences, the Administrations settle the places of meeting on the proposal of the International Bureau.

Article XX.

In the interval which elapses between the meetings, any Postal Administration of a country of the Union has the right to address to the other Administrations belonging to it, through the intermediary of the International Bureau, proposals concerning the business of the Union. But, in order to come into force, those proposals must obtain—

1. Unanimity of votes, if they involve any modification of the stipulations of the present Article or the foregoing Articles II, III, IV, V, V *bis*, VI, VI *bis*, IX, and IX *bis*.
2. Two thirds of the votes, if they involve a modification of the stipulations of the Convention other than those of Articles II, III, IV, V, V *bis*, VI, VI *bis*, IX, IX *bis*, and XX.
3. A simple absolute majority, if they affect the interpretation of the stipulations of the Convention, except the case of dispute contemplated by the foregoing Article XVII.

Resolutions duly adopted are sanctioned in the first two cases by a diplomatic declaration, which the Government of the Swiss Confederation is charged with the duty of preparing and transmitting to all the Governments of the contracting countries, and in the third case by a simple notification from the International Bureau to all the Administrations of the Union.

Article XXI.

The following are considered as forming, for the application of Articles XVI, XIX, and XX preceding, a single country or administration, as the case may be:—

1. The Empire of British India.
2. The Dominion of Canada.
3. The whole of the Danish Colonies.
4. The whole of the Spanish Colonies.
5. The whole of the French Colonies.
6. The whole of the Netherland Colonies.
7. The whole of the Portuguese Colonies.

Article XXII.

The present Convention shall come into operation on the 1st of April, 1879, and shall remain in vigour during an indefinite period; but each contracting party has the right of withdrawing from the Union by means of a notice given, one year in advance, by its Government to the Government of the Swiss Confederation.

Article XXIII.

After the date on which the present Convention takes effect, all the stipulations of the Treaties, Conventions, Agreements, or other Acts previously concluded between the various countries or Administrations, in so far as those stipulations are not in accordance with the terms of the present Convention, are abrogated, without prejudice to the rights reserved by Article XV above.

The present Convention shall be ratified as soon as possible. The acts of ratification shall be exchanged at Paris.

In faith of which the plenipotentiaries of the abovenamed countries have signed the present Convention at Paris, the first of June, one thousand eight hundred and seventy-eight.

The

The whole of the changes made at the Lisbon Congress of 1885 in the text of the Convention of Paris, and embodied in the present reprint, form the substance of Article I of the Additional Act of Lisbon That Act consists of two Articles only . the following is the second —

Article II

1. The present Additional Act shall come into force on the 1st of April, 1886, and shall have the same duration as the Convention concluded at Paris on the 1st of June, 1878.

2 It shall be ratified as soon as possible The acts of ratification shall be exchanged at Lisbon.

In faith of which the plenipotentiaries of the countries enumerated above have signed the present Additional Act at Lisbon on the 21st of March, 1885.

The Treaty of Berne is signed as follows :—

On behalf of Great Britain	WM JAS. PAGE.
,, Germany	STEPHAN. GUNTHER
,, Austria	LE BARON DE KOLBENSTEINER. PILHAL
,, Hungary	M. GERVAY P. HEIM.
,, Belgium ..	FASSIAUX. VINCHENT. F. GIFE.
,, Denmark	FENGER.
,, Egypt .	MUZZI BEY.
,, Spain	ANGEL MANSI. EMILIO C. DE NAVASQUES.
,, United States of America	JOSEPH H. BLACKFAN.
,, France, 3 May, 1875	B d'HARCOURT.
,, Greece .	A. MANSOLAS. ALB BETANI.
,, Italy	TANTESIO
,, Luxemburg	VON RŒBE
,, Norway	C OPPEN.
,, Netherlands	HOFSTEDE. B SWEERTS DE LANDAS WYBORGH.
,, Portugal	EDUARDO LESSA
,, Roumania	GEORGE F. LAHOVARI
,, Russia	BARON VELHO. GEORGES POGGENPOHL.
,, Servia	MLADEN Z RADOJKOVITCH
,, Sweden	W ROOS.
,, Switzerland .	EUGENE BOREL NAEFF. DR J. HEER
,, Turkey	YANCO MACRIDI.

The Convention of Paris is signed as follows .—

On behalf of Great Britain and various British Colonies	F O. ADAMS. W J PAGE A. MACLEAN
,, Germany .	DR STEPHAN GUNTHER SACHSE
,, The Argentine Republic	CARLOS CALVO.
,, Austria	DEWEZ
,, Hungary	GERVAY.
,, Belgium	J VINCHENT F. GIFE
,, Brazil	VICOMTE D'ITAJUBA
,, Denmark and the Danish Colonies	SCHOU
,, Egypt	A. CAILLARD
,, Spain and the Spanish Colonies	G CRUZADA VILLAAMIL EMILIO C DE NAVASQUES
,, The United States of North America	JAMES N TYNER JOSEPH H. BLACKFAN
,, France	LEON SAY. AD COCHERY A BESNIER
,, The French Colonies	E ROY
,, British India	FRED R HOGG.
,, Canada	F O ADAMS W. J. PAGE A MACLEAN.
,, Greece	N. P. DELYANNI. A. MANSOLAS
,, Italy	J B TANTESIO
,, Japan	NAONOBOU SAMESHIMA. SAMUEL M. BRYAN
,, Luxemburg	V. DE RŒBE
,, Mexico	G BARREDA.
,, Montenegro	DEWEZ
,, Norway	CHR HEFTY
,, The Netherlands and the Dutch Colonies	HOFSTEDE. BARON SWEERTS DE LANDAS-WYBORGH.
,, Peru	JUAN M. DE GOYENECHE.
,, Persia	
,, Portugal	G A DE BARROS.
,, Roumania	C F. ROBESCO.
,, Russia	BARON VELHO. GEORGES POGGENPOHL.
,, Salvador	J. M TORRES CAICEDO
,, Servia . .	MLADEN Z RADOYCOVITCH.
,, Sweden	W ROOS.
,, Switzerland	DR. KERN. ED. HOHN.
,, Turkey	BEDROS COUYOUMGIAN.

The

The Additional Act of Lisbon is signed as follows —

On behalf of Great Britain and various British Colonies	S. A Blackwood H Buxton Forman
,, Germany	Sachse Fritsch.
,, the United States of America	William T Otto Jas S Crawford
,, the Argentine Republic	F P Hansen.
,, Austria	Dewez Varges
,, Hungary	Gervay
,, Belgium	F. Gife
,, Bolivia	Joaquin Caso
,, Brazil	Luiz C P Guimaraes
,, Bulgaria	R Ivanoff
,, Chili	M Martinez.
,, the United States of Columbia	Cesar Conto
,, the Republic of Costa-Rica	
,, Denmark and the Danish Colonies	Lund
,, the Dominican Republic	P Gomes da Silva.
,, Egypt	W F Halton.
,, Ecuador	Antonia Flores
,, Spain and the Spanish Colonies	S Alvarez Bugallal A. Hercé
,, France	Laboulaye A Besnier
,, the French Colonies	Laboulaye.
,, Canada	S A. Blackwood. H. Buxton Forman.
,, British India	H. E M James
,, Greece	Eugene Borel.
,, Guatemala	J Carrera
,, the Republic of Hayti	Laboulaye Ansault
,, the Kingdom of Hawaii	Eugene Borel
,, the Republic of Honduras .	J Carrera
,, Italy	J B Tantesio
,, Japan	Yasushi Nomura
,, the Republic of Liberia	Comte Senmarii
,, Luxemburg	Ch Rischard
,, Mexico	L Breton y Vedra
,, Montenegro	Dewez Varges
,, Nicaragua	Manuel J Alves Diniz
,, Paraguay	F. A Rebello
,, the Netherlands and the Dutch Colonies	Hofstede B Sweerts de Landas-Wyborgh
,, Peru	
,, Persia	N Semino
,, Portugal	Guilhermino Augusto de Barros. Ernesto Madeira Pinto
,, the Portugese Colonies	Guilhermino Augusto de Barros.
,, Roumania	Jon Ghika.
,, Russia	N. de Besack. Georges de Poggenpohl.
,, Salvador	
,, Servia	
,, the Kingdom of Siam	Prisdang
,, Sweden	W Roos
,, Norway .	Harald Aschf
,, Switzerland	Ed Hohn
,, Turkey	
,, Uruguay	Enrique Kubly
,, Vénézuela	J L Pera Crespo

The Final Protocols having reference to the Treaty of Berne, the Convention of Paris, and the Additional Act of Lisbon, are as follows The original document as signed was in each case in the French language,—the English version having been added in London

Treaty of Berne—Final Protocol

The undersigned, plenipotentiaries of the Governments of those countries which have signed this day the Treaty concerning the formation of a general Postal Union, have agreed as follows —

In case the French Government, which has demanded that the protocol be kept open for it, and which consequently figures among the contracting parties to the Treaty without having yet adhered thereto, should not decide to sign it, this Treaty shall be none the less definitive and binding for all the other contracting parties, whose representatives have signed it this day

In faith of which the undermentioned plenipotentiaries have drawn up the present final protocol, which shall have the same force and value as if the provisions which it contains were inserted in the Treaty itself, and they have signed it in a copy which shall remain in the archives of the Government of the Swiss Confederation, and of which a copy shall be handed to each party

Berne, 9 October, 1874

[Here follow the signatures of the Delegates of the Governments of Germany, Austro Hungary, Belgium, Denmark, Egypt, Spain, the United States of America, Great Britain, Greece, Italy, Luxemburg, Norway, the Netherlands, Portugal, Roumania, Russia, Servia, Sweden, Switzerland, and Turkey]

Convention of Paris —Final Protocol.

The undersigned, plenipotentiaries of the Governments of the countries which have this day signed the Convention of Paris, have agreed as follows —

I. Persia, which forms part of the Union, being unrepresented, will nevertheless be allowed to sign the Convention hereafter, provided that country confirms its adhesion by a diplomatic act with the Swiss Government, before the 1st of April, 1879

II The countries foreign to the Union, which have deferred their adhesion or which have not yet come to a decision, shall enter the Union on fulfilling the conditions specified in Article XVIII of the Convention

III. In case one or other of the Contracting Parties should not ratify the Convention, this Convention shall nevertheless be binding on the parties to it,

IV.

IV. The various British Colonies, other than Canada and British India, which are parties to the Convention, are Ceylon, the Straits Settlements, Labuan, Hong Kong, Mauritius and dependencies, Bermuda, British Guiana, Jamaica, and Trinidad.

In faith of which the undermentioned plenipotentiaries have drawn up the present final protocol, which shall have the same force and value as if the stipulations which it contains were inserted in the Convention itself; and they have signed it on a single copy, which shall be deposited in the archives of the French Government, and a copy of which shall be delivered to each party.

Paris, 1 June, 1878.

[Here follow the signatures of the Delegates of the Governments of Germany, the Argentine Republic, Austria, Hungary, Belgium, Brazil, Denmark and the Danish Colonies, Egypt, Spain and the Spanish Colonies, the United States of America, France, the French Colonies, Great Britain and certain British Colonies, British India, Canada, Greece, Italy, Japan, Luxemburg, Mexico, Montenegro, Norway, the Netherlands and Netherland Colonies, Peru, Portugal and the Portuguese Colonies, Roumania, Russia, Salvador, Servia, Sweeden, Switzerland, and Turkey.]

Additional Act at Lisbon—Final Protocol.

At the moment of proceeding to sign the Conventions settled by the Universal Postal Congress of Lisbon, the undersigned plenipotentiaries have agreed as follows:—

I. Peru, Salvador, Servia, and Turkey, which form part of the Postal Union, not having been represented at the Congress, the protocol remains open for them to adhere to the Conventions which have been concluded by it, or only to one or other of them. This is equally the case in regard to the Republic of Costa Rica, whose representative is not present at the sitting during which the Acts will be signed.

II. The British Colonies of Australia and the British Colonies of the Cape and Natal shall be admitted to adhere to those Conventions, or to one or other of them, and the protocol remains open to them for that purpose.

III. The protocol remains open in favour of the countries whose representatives have signed to-day the principal Convention alone, or only a certain number of the Conventions settled by the Congress, in order to allow them to adhere to the other Conventions signed this day, or to one or other of them.

IV. The adhesions contemplated in the foregoing Articles I, II, and III must be notified to the Portuguese Government by the respective Governments, in diplomatic form. The term accorded for that notification will expire on the 1st of February, 1886.

V. The representatives of the countries which have not hitherto adhered to one or other of the undermentioned Conventions, viz.:—

The Convention of the 1st of June, 1878.

The agreement, dated the 1st of June, 1878, concerning the exchange of letters with declared value.

The agreement of the 4th of June, 1878, concerning the exchange of postal money orders.

The Convention of the 3rd November, 1880, concerning the exchange of postal parcels without declaration of value, having been admitted to participate in the Additional Acts, modifying and completing those Conventions and agreements, their signature at the foot of one or other of such Additional Acts implies on their part, subject to ratification, adhesion in the name of their respective countries to the Convention or agreement to which such Additional Act relates, from the date on which the latter comes into force.

VI. In case one or more of the contracting parties to the postal Conventions signed to-day at Lisbon shall not ratify one or other of those Conventions, that Convention shall be none the less valid for the States which shall have ratified it.

In faith of which the undermentioned plenipotentiaries have drawn up the present final protocol, which shall have the same force and value as if its provisions were inserted in the text itself of the Conventions to which it relates; and they have signed it on a single copy, which shall remain in the archives of the Portuguese Government, and of which a copy shall be handed to each party.

Lisbon, twenty-first March, one thousand eight hundred and eighty-five.

[Here follow the signatures of the Delegates of the Governments of Germany, the United States of America, the Argentine Republic, Austria, Hungary, Belgium, Bolivia, Brazil, Bulgaria, Chili, the United States of Colombia, Denmark and the Danish Colonies, the Dominican Republic, Egypt, Eucador, Spain and the Spanish Colonies, France, the French Colonies, Great Britain and certain British Colonies, Canada, British India, Greece, Guatemala, the Republic of Hayti, the Kingdom of Hawaii, the Republic of Honduras, Italy, Japan, the Republic of Liberia, Luxemburg, Mexico, Montenegro, Nicaragua, Paraguay, the Netherlands and Netherland Colonies, Persia, Portugal, the Portuguese Colonies, Roumania, Russia, the Kingdom of Siam, Sweden, Norway, Switzerland, Uruguay, and Venezuela.]

DETAILED REGULATIONS.

The Detailed Regulations for the execution of the Treaty of Berne are signed by the Delegates who signed the Treaty itself: the preamble is as follows:—

The undersigned, having regard to Article XIII of the Treaty of the 9th October, 1874, concerning the formation of a General Postal Union, have, in the name of their respective offices, by common consent, agreed upon the following measures for ensuring the execution of the said Treaty.

The Delegates who signed the Convention of Paris also signed the Detailed Regulations for its execution, which bear accordingly a title enumerating the countries represented, and open with the following preamble:—

The undersigned, having regard to Article XIV of the Convention concluded at Paris on the 1st June, 1878, for the revision of the fundamental pact of the General Postal Union, have, in the name of their respective Administrations, by common consent, agreed upon the following measures for ensuring the execution of the said Convention.

The revisions and additions which the Lisbon Congress agreed to make in the abovenamed Detailed Regulations are embodied in an Additional Act signed by all the Delegates who signed the Additional Act to the Convention, and headed accordingly with a title enumerating the States represented, and with the following preamble:—

The Undersigned, having regard to Article XXXIV of the Detailed Regulations for the execution of the Convention of the 1st of June, 1878, have agreed, in the name of their respective Administrations, to import into those Regulations the following changes, which shall take effect from the 1st of April 1886.

The Detailed Regulations and Additional Act thereto, as signed, were in the French language only. The translation has been added in London.

UNIVERSAL POSTAL UNION.—DETAILED REGULATIONS FOR THE EXECUTION OF THE CONVENTION, SIGNED AT PARIS ON THE 1ST OF JUNE, 1878, AND MODIFIED AT LISBON BY THE ADDITIONAL ACT SIGNED ON THE 21ST OF MARCH, 1885.

I. Route of the Correspondence.

1. Each Administration is bound to forward, by the most rapid routes at its disposal for its own mails, the closed mails and the correspondence *à découvert* which are delivered to it by another Administration,

2. Administrations which avail themselves of the option to levy supplementary charges, as representing the extraordinary expenses pertaining to certain routes, are free not to forward by those routes when there may exist other means of communication, any insufficiently paid correspondence for which the employment of the said routes has not been expressly prescribed by the senders.

II. Exchange in Closed Mails.

1. The exchange of correspondence in closed mails between the Administrations of the Union is regulated by common consent between the Administrations concerned, and according to the necessities of the service.

2. If an exchange of correspondence takes place through the medium of one or of several other countries, due notice must be given to the post offices of those countries.

3. It is, moreover, obligatory, in this latter case, to make up closed mails in all cases in which the amount of the correspondence is such as to hinder the work of an intermediate Administration, according to the declaration of that Administration.

4 In case of alteration in a service of closed mails established between two Administrations through the medium of one or several other countries, the Administration which has originated the alteration gives notice thereof to the Administrations of the countries through the medium of which this exchange is maintained.

III Extraordinary Services

The extraordinary services of the Union giving rise to special charges, the fixing of which is reserved by the last paragraph of Article IV of the Convention for arrangement between the Administrations concerned, are exclusively—

1 Those which are maintained for the accelerated conveyance by land of the Indian Mail.
2. That which the Post Office of the United States of America maintains upon its territory for the conveyance of closed mails between the Atlantic Ocean and the Pacific Ocean
3. That which is established for the conveyance of mails by railway between Colon and Panama

IV Fixing the Rates of Postage

1 In execution of Article VII of the Convention, the Administrations of the countries of the Union which have not the franc as monetary unit, levy their rates of postage according to the following equivalents

Countries of the Union	25 centimes	10 centimes	5 centimes
Germany	20 pfennig	10 pfennig	5 pfennig
Argentine Republic	8 centavos	4 centavos	2 centavos
Austro Hungary	10 kreuzer	5 kreuzer	3 kreuzer
Bolivia	5 centavos	2 centavos	1 centavo
Brazil	100 reis	50 reis	25 reis
Canada	5 cents	2 cents	1 cent
Chilli	5 centavos	2 centavos	1 centavo
Costa Rica	5 centavos	2 centavos	1 centavo
Denmark	20 ore	10 ore	5 ore
Danish Colonies			
Greenland	20 ore	10 ore	5 ore
Danish West Indies	5 cents	2 cents	1 cent
Dominican Republic	5 centavos	2 centavos	1 centavo
Egypt	1 piastre	20 paras	10 paras
Ecuador	5 centavos	2 centavos	1 centavo
Spanish Colonies			
Cuba and Porto Rico	5 centavos	2 centavos	1 centavo
Phillipine Islands	5 centimos de peso	2 centimos de peso	1 centimo de peso
United States of America	5 cents	2 cents	1 cent
United States of Colombia	5 centavos	2 centavos	1 centavo
Great Britain	2½ pence	1 penny	½ penny
British Colonies			
Antigua, Bahamas, Barbados, Bermuda, Gold Coast, Dominica, Falkland Islands, Gambia, Grenada, Honduras, Jamaica, Lagos, Montserrat, Nevis, St Christopher, St Lucia, St Vincent, Sierra Leone, Tobago, Trinidad, Turks Islands, and Virgin Islands	2½ pence	1 penny	½ penny.
British Guiana, Hong Kong, Labuan, Straits Settlements, and Newfoundland	5 cents	2 cents	1 cent
Mauritius and its dependencies	10 cents of a rupee	4 cents of a rupee	2 cents of a rupee
Cyprus	2 piastres or 80 paras	1 piastre or 40 paras	½ piastre or 20 paras.
Ceylon	14 cents of a rupee	5 cents of a rupee	2½ cents of a rupee
Guatemala	5 centavos	2 centavos	1 centavo
Hayti	5 centavos de piastre	2 centavos de piastre	1 centavo de piastre
Hawaii	5 cents	2 cents	1 cent
Republic of Honduras	5 centavos	2 centavos	1 centavo
British India	2 annas	¾ anna	½ anna
Japan	5 sen	2 sen	1 sen
Liberia	5 cents	2 cents	1 cent
Mexico	5 centavos	2 centavos	1 centavo
Montenegro	10 soldi	5 soldi	3 soldi
Nicaragua	5 centavos	2 centavos	1 centavo
Norway	20 ore	10 ore	5 ore
Paraguay	5 centavos de peso	2 centavos de peso	1 centavo de peso
Netherlands and Netherland Colonies	12½ cents	5 cents	2½ cents
Peru	5 centavos	2 centavos	1 centavo.
Persia	6 shahis	2 shahis	1 shahi
Portugal and Portuguese Colonies, except Portuguese India	50 reis	20 reis	10 reis
Portuguese India	2 tangas	10 reis	5 reis
Russia	7 kopeks	3 kopeks	2 kopeks
Salvador	5 centavos de peso	2 centavos de peso	1 centavo de peso
Siam	7½ atts	3 atts	1½ att
Sweden	20 ore	10 ore	5 ore
Turkey	40 paras	20 paras	10 paras
Uruguay	5 centavos de piastre	2 centavos de piastre	1 centavo de piastre

2 In case of alteration in the monetary system of any one of the countries abovementioned, the Administration of that country must come to an understanding with the Swiss Post Office in order to modify the above equivalents, it devolves upon this latter Administration to notify the change to all the other offices of the Union through the medium of the International Bureau.

3 Any Administration, if it deems it necessary, may have recourse to the understanding contemplated by the preceding paragraph in case of an important modification in the value of its money

4 The monetary fractions resulting either from the complement of the charge applicable to insufficiently paid correspondence, or from the combination of the Union charges with the foreign charges or with the surcharges contemplated by Article V of the Convention, may be rounded by the offices which levy the payments But the sum to be added on this account must, in no case, exceed the value of one twentieth of a franc (5 centimes)

V —Correspondence with countries foreign to the Union

Offices of the Union which have relations with countries foreign to the Union furnish to the other offices of the Union a table according to the pattern C annexed to the present regulations, and indicating, with the conditions of transmission, the rates due for the conveyance beyond the Union of correspondence addressed to, or originating in, the countries aforesaid In the case provided for by the 10th paragraph of Article XII of the Convention, there may be added 5 centimes per single rate of letters and 2 centimes per single rate of other articles.

2.

2. In conformity with Article XII of the Convention there is levied, in addition to the foreign rates indicated in the table C :—

1. By the office of the Union which despatches paid correspondence for abroad, the rates of prepayment respectively applicable to correspondence of the same nature for the final country of the Union.

2. By the office of the Union to which is addressed unpaid or insufficiently paid correspondence originating abroad, as follows :—

a. For letters, the rate applicable to unpaid letters originating in the country of the Union, which serves as the intermediary.

b. For other articles, a charge equal to the prepaid rate on similar articles which are addressed from the Union country of destination to the Union country serving as the intermediary.

VI.—Application of the Stamps.

1. Correspondence despatched from countries of the Union is impressed with a stamp indicating the place or origin and the date of posting.

2. Correspondence originating in countries foreign to the Union is also marked, by the office of the Union which has received it, with a stamp indicating the point and date of entry into the service of that office.

3. Unpaid or insufficiently paid correspondence is, in addition, impressed with the stamp "T" (tax to be paid), the application of which devolves upon the office of the country of origin in cases of correspondence originating in the Union, and upon the office of the country of entry in cases of correspondence originating in countries foreign to the Union.

4. Registered articles must bear a label or the impression of a stamp reproducing conspicuously the capital letter R in Roman letters, each office having for the rest the option of adding to the letter R any special mark which it may find convenient (the name of the office or country of origin, the number of the letter, &c.)

5. The stamps or marks, the employment of which is prescribed by the present Article, are placed on the address side of the letter or packet.

5 *bis*. Articles to be sent by express are impressed with a stamp bearing in large letters the word "Express." The Administrations are, however, authorised to replace that stamp by a printed label, or by a written inscription underlined with a coloured pencil.

6. Every article of correspondence which does not bear the stamp "T" is considered as paid and treated accordingly, unless there be an obvious error.

VII.—Indication of the number of Rates and of the Amount of the Foreign Charges.

1. When a letter or other article of correspondence is liable, by reason of its weight, to more than a single rate of postage, the office of origin, or of entry into the Union, as the case may be, indicates in the upper left-hand corner of the address, in ordinary figures, the number of rates paid, or to be paid.

2. This regulation is not obligatory in the case of correspondence fully prepaid.

3. The foreign charges due, by virtue of Article XII of the Convention, and of Article V of the present regulations, for transit beyond the Union of correspondence addressed to or originating in countries foreign to the union, are indicated at the lower left-hand corner of the address of each article, as follows :—

1. By the office of the country of origin, in red figures, in case of correspondence regularly prepaid originating in the Union.

2. By the office of entry into the Union, in blue figures, in case of correspondence originating abroad, to be taxed by the Union office of destination.

VIII.—Insufficient Prepayment.

1. When an article is insufficiently prepaid by means of postage stamps, the despatching office indicates, in black figures, placed by the side of the postage stamps, the amount of the deficiency, expressing it in francs and centimes.

2. According to this indication, the office of exchange of the country of destination taxes the article with double the deficiency ascertained.

3. In case use be made of postage stamps not available for prepayment, no account is taken of them. This circumstance is indicated by the figure naught (0) placed by the side of the postage stamps.

IX.—Letter Bills.

1. The letter bills which accompany the mails exchanged between two Administrations of the Union are in conformity with the pattern A appended to the present regulations.

In case of exchanges by sea which, although periodical and regular, are not daily or on fixed days, the despatching offices must number their letter bills in an annual series for each office of origin and for each office of destination, mentioning, as far as possible, in the letter bill, the name of the Packet or vessel which carries the mail.

2. The registered correspondence is entered in Table No. 1 of the letter bill, with the following details : the name of the office of origin, the name of the addressee, and the place of destination, or simply the name of the office of origin and the number given to the article at that office.

Articles to be sent by express are entered numerically in Table I of the letter bill.

Acknowledgments of delivery relating to registered articles entered in Table I of the letter bill are mentioned by means of the letters A.R. placed opposite the entries of the article in question, in the observation column of that table.

Acknowledgments of delivery are in conformity with or analogous to the pattern A *bis* annexed. They must be drawn up in French or must bear a sublineary translation in that language.

Acknowledgments of delivery when returned are entered in the abovenamed table, either individually or collectively, according as they are more or less numerous.

3. When the number of registered articles usually sent from one office of exchange to another requires it, a special and separate list may be used to take the place of Table No. I of the letter bill.

4. In Table No. II are to be entered, with such details as the table requires, the closed mails contained by the direct mail to which the letter bill relates.

5. The number of separate packets or bags composing each depatch for a single destination is indicated in the right-hand top corner of the letter bill.

6. When it is deemed necessary for certain exchanges to make new tables or headings of the letter bill, the necessary steps may be taken after an understanding between the post offices concerned.

7. When an office of exchange has no correspondence to forward to a corresponding office, it must, nevertheless, make up in the usual form a mail which is composed simply of the letter bill.

8. In the case of closed mails sent by one Administration to another, to be conveyed by means of private ships, the number of letters and other articles is indicated in the letter bill or on the address of the mails.

X.—Registered Articles.

1. Registered articles, the acknowledgments of delivery relating to them, express letters, &c., and, if there be one, the special list contemplated in paragraph 3 of Article IX, are made up in a separate packet, which is to be suitably enclosed and sealed so as to preserve the contents.

2. This packet, attached to the letter bill, is placed in the centre of the mail.

3. The presence in the mail of a packet of registered articles, of which the description is given upon the special list mentioned in paragraph 1 above, is to be announced by the application at the head of the letter bill, either of a special entry or of the registration label or stamp in use in the country of origin.

4. It is understood that the mode of tying up and forwarding registered articles, prescribed by paragraphs 1 and 2 above, applies only to ordinary exchanges. For important exchanges it is for the offices concerned to prescribe by common consent special arrangements, subject in the one case as in the other to exceptional measures to be taken by the heads of the offices of exchange, when they have to insure the transmission of registered articles which, from their nature, their form, or their size, would not be capable of being enclosed in the principal mail.

5. Acknowledgments of delivery when returned are placed in an envelope by the office delivering the registered articles to which those acknowledgments relate. These envelopes, bearing the inscription "Returned acknowledgment of delivery: Post Office of . . . Country . . . " are submitted to the formalities of registration and despatched for their destination like ordinary registered articles.

XI.—Indemnity for the Loss of a registered Article.

When the indemnity due for the loss of a registered article has been paid by one Administration, on behalf of another Administration which is responsible for the loss, the latter is bound to repay the amount within three months after receiving notice of the payment. This repayment is effected either by means of a postal money order or a draft, or in specie current in the country to which payment is due.

XII.—Making up the Mails.

1. As a general rule the articles of which the mails consist must be classified and tied up according to the nature of the correspondence, the prepaid correspondence being separated from the unpaid and insufficiently prepaid.

2. Every mail, after having been tied with string, is enclosed in strong paper sufficient in quantity to prevent damage to the contents, then tied again with string on the outside, and sealed with wax, or fastened by means of a gummed paper label bearing an impression of the seal of the office. The mail is furnished with a printed address bearing, in small characters, the name of the despatching office and in larger characters the name of the office of destination: "from . . . for . . . ."

3. If the bulk of the mail requires it, it is enclosed in a bag properly fastened, sealed, and labelled.

4. The bags must be returned empty to the despatching office by the next mail, in the absence of other arrangements between the corresponding offices.

XIII.—Verification of the Mails.

1. The office of exchange which receives a mail ascertains, in the first place, whether the entries in the letter bill and on the registered letter list, if there be one, are correct.

If it detects errors or omissions, it immediately makes the necessary corrections on the letter bills or lists, taking care to strike out the erroneous entries with a pen, in such a manner as to admit of the original entries being deciphered.

3. These corrections are made by two officers. Except in the case of an obvious error, they are accepted in preference to the original statement.

4. A note of verification, in conformity with the pattern B hereto annexed, is prepared by the receiving office, and sent without delay, officially registered, to the despatching office.

5. The latter, after examination, returns it with any observations to which it may give rise.

6. In case of the failure of a mail, of a registered article, of the letter bill, or of the special list, the fact is immediately reported, in such form as may be desired, by two officers of the receiving office, and signified to the despatching office by means of the note of verification. If needful, the latter office may also be advised thereof by telegram, at the expense of the Administration which sends the telegram.

7. In case the receiving office shall not have forwarded by the first mail to the despatching office a note of verification, reporting errors or irregularities of any kind, the absence of that document is to be regarded as evidence of the due receipt of the mail and of its contents, until proof to the contrary.

XIV.—Registered Articles.—Address.—Conditions as to form and manner of fastening.

1. Correspondence addressed to initials or in pencil is not admitted to registration.

No special conditions as to form or fastening are prescribed for registered articles. Each office has the right to apply to such correspondence the regulations in force in its inland service.

XV.—Post Cards.

1. Post cards must be sent unenclosed. The front is reserved for the address, but the sender may add there his own name and address by means of a stamp, autograph stamp, or any method of printing.

2. Post cards must not exceed the following dimensions:—Length, 14 centimetres; width, 9 centimetres.

3. As far as possible, post cards issued specially for circulation in the Postal Union must bear in front, in the French language, or with a sublineary translation in that language, the following superscription:—

Post Card.—Universal Postal Union.

(Side reserved for the address.)

4. The postage stamp representing prepayment figures in one of the top corners of the front, as should also any supplementary stamp which may be added.

5. Except stamps for prepayment, it is forbidden to join or attach to post cards any article whatsoever.

6. As a general rule, post cards with reply prepaid must bear in front the printed superscription, on the first half, "Post card with reply paid"; on the second half, "Reply post card." Each of the two halves must, moreover, fulfil the other conditions laid down for single post cards; one half is doubled over the other, and they must not be closed up in any manner whatsoever.

7. The sender of a post card with reply paid may write his name and address on the front of the "Reply" half.

The "Reply" half can only be sent to the country in which it originates; in the contrary case it is not forwarded.

8. Post cards, both single and with reply paid, emanating from private industry, are admitted to international circulation, if agreeable to the laws of the country of origin, and if they be in conformity with the post cards issued by the post office of that country, at all events in regard to size and the substance of the paper.

XVI.—Commercial Papers.

1. The following are considered as commercial papers, and allowed to pass as such at the reduced postage specified in Article V of the Convention:—All papers or documents written or drawn wholly or partly by hand which have not the character of an *actual and personal correspondence*, such as papers of legal procedure, deeds of all kinds drawn up by public functionaries, way-bills or bills of lading, invoices, the various documents of insurance companies, copies or extracts of deeds under private seal, written on stamped or unstamped paper, scores or sheets of manuscript music, manuscripts of works or of newspapers forwarded separately, &c.

2. Commercial papers must be forwarded in wrappers or in open envelopes.

XVII.—Printed Papers of every kind.

1. The following are considered as printed papers and allowed to pass as such at the reduced postage sanctioned by Article V of the Convention, viz.: newspapers and periodical works, books, stitched or bound, pamphlets, sheets of music, visiting cards, address cards, proofs of printing, with or without the manuscripts relating thereto, papers impressed with points in relief for the use of the blind, engravings, photographs, pictures, drawings, plans, maps, catalogues, prospectuses, announcements, and notices of various kinds, printed, engraved, lithographed or autographed, and in general, all impressions or copies obtained upon paper, parchment, or cardboard, by means of printing, lithography, autography, or any other mechanical process easy to recognise, except the copying press.

The mechanical processes called chromography, polygraphy, hectography, papyrography, velocigraphy, &c., are considered as easy to recognise; but in order to pass at the reduced postage reproductions obtained by means of these processes must be brought to the post office counter, and must number at least twenty copies, precisely identical.

2. Stamps for prepayment, whether obliterated or not, and all printed articles constituting the sign of a monetary value, are excluded from transmission at the reduced postage.

3. The character of *actual and personal correspondence* cannot be ascribed to the following, viz. :—

1 To the signature of the sender or to the designation of his name or of his social standing, of his rank, of the place of origin, and of the date of despatch
2. To a dedication or mark of respect offered by the author
3. To marks or signs simply intended to call attention to passages in a text
4. To prices added or altered by hand in stock and share lists, prices current and market reports, catalogues, prospectuses and various notices
5. To offers of or orders for books, sent by means of a printed text in which the books offered or ordered are indicated by hand, either by striking out or underlining the titles.
6. To invoices and accounts sent with printed matter and relating thereto.
7. To printed matter bearing corrections of typographical errors.
8. Lastly, to annotations or corrections made upon proofs of printing or musical compositions, and relating to the text or to the making up of the work.

4. Printed papers must be either placed in wrappers upon rollers, between boards, in covers open at one side or at both ends, or in unclosed envelopes, or simply folded in such a manner as not to conceal the nature of the packet, or lastly, tied by a string easy to unfasten.

5. Address cards, and all printed matter of the form and substance of an unfolded card, may be forwarded without wrapper, envelope, fastening, or fold. Cards bearing the inscription "Post card" are not allowed to go at the rate for printed matter.

XVIII.—Patterns.

1. Samples of merchandise are only allowed to pass at the reduced postage which is allotted to them by Article V of the Convention, under the following conditions

2. They must be placed in bags, boxes, or open envelopes, in such a manner as to admit of easy inspection.

3. They must possess no saleable value, nor bear any writing beyond the name or the social position of the sender, the address of the addressee, a manufacturer's or trade mark, numbers, prices, and indications relative to weight or size, or to the quantity to be disposed of.

XIX.—Articles grouped together.

It is permitted to enclose in the same packet samples of merchandise, printed matter, and commercial papers, but subject to the following conditions .—

1. That each article taken singly shall not exceed the limits which are applicable to it as regards weight and size.
2. That the total weight must not exceed two kilogrammes per packet.
3. That the minimum charge shall be 25 centimes when the packet contains commercial papers, and 10 centimes when it consists of printed matter and samples.

XX.—Redirected Correspondence.

1. In execution of Article X of the Convention, and subject to the exceptions specified in paragraph 2 of the present article, correspondence of every kind circulating in the Union, addressed to persons who have changed their residence, is treated by the delivering office as if it had been addressed directly from the place of origin to the place of the new destination.

2. With regard to inland letters or packets of one country of the Union, which enter, in consequence of redirection, into the service of another country of the Union, the following rules are observed :—

1. Articles unpaid or insufficiently paid for their first transmission are treated as international correspondence, and subjected by the delivering office to the charge applicable to articles of the same nature addressed directly from the country of origin to the country in which the addressee may be.
2. Articles regularly prepaid for their first transmission, and on which the complementary postage pertaining to the further transmission has not been paid before their second despatch, are subjected, according to their nature, by the delivering office to a charge equal to the difference between the amount of postage already prepaid and that which would have been chargeable if the articles had been originally despatched to the new destination. The amount of this difference must be expressed in francs and centimes by the side of the stamps by the redirecting office.

In both cases the charges contemplated above remain to be defrayed by the addressees, even if, owing to successive redirections, the articles should return to the country of origin.

2 *bis*. When correspondence originally addressed from one part to another of a country of the Union, and prepaid in money, is redirected to another country, the redirecting office must indicate on each article the amount of the postage levied in money.

3. Mis-sent correspondence of all kinds is reforwarded without delay, by the quickest route, to its destination.

4. Correspondence of all kinds, ordinary or registered, which, being wrongly or insufficiently addressed, is returned to the senders in order that they may rectify or complete the address, is not, when reposted with the direction rectified or completed, regarded as redirected correspondence, but as being really fresh correspondence ; and it is consequently liable to a fresh postage.

XXI.—Undelivered Correspondence.

1. Correspondence of all kinds which is not delivered, from whatever cause, must be returned, as soon as possible after the period for keeping it required by the laws of the country of destination, and at the latest at the expiration of six months, through the medium of the respective offices of exchange and in a special bundle labelled "*Rebuts*."

2. Nevertheless, undelivered registered correspondence is returned to the office of exchange of the country of origin, as if it were registered correspondence addressed to that country, except that opposite the nominal entry in Table No. 1 of the letter bill, or in the separate list, the word "*Rebuts*" is entered in the column of observations by the returning office.

3. As an exception, two corresponding offices may by mutual consent adopt a different mode of returning undelivered correspondence, and may also dispense with reciprocally returning certain printed papers considered as deprived of value.

XXII.—Statistics of Transit Charges.

1. The statistics to be taken once every three years, in execution of Articles IV and XII of the Convention, for the settlement, as well of the expenses of transit within the Union as of the payments relating to conveyance beyond the limits of the Union, are prepared according to the stipulations of the following articles, during the first twenty-eight days of the month of May or of November, alternately, of the second year in each group of three years, to take effect retrospectively from the first year.

2. The statistics of May, 1885, will regulate the payments to be made from the 1st of January of that year till the end of March, 1886 The statistics of November, 1887, shall form the basis of payment from the 1st of April, 1886, till the end of 1888. The statistics of May, 1890, shall apply to the years 1889, 1890, and 1891; and so on.

3. If during the period to which the statistics apply a country having important relations should enter the Union, the countries of the Union whose situation, with regard to the payment of transit rates, might be modified in consequence of this circumstance, have the option of demanding special statistics relating exclusively to the countries which have lately entered.

XXIII.—Correspondence à découvert.

1. The office serving as the medium for the transmission of correspondence exchanged *a découvert*, either between two countries of the Union, or between a country of the Union and a country foreign to it, prepares beforehand for each of its correspondents of the Union, a table according to the pattern D annexed to the present regulations, in which it indicates, distinguishing, if needful, the different routes of transmission, the rates of payment by weight due to it for the conveyance within the Union of the two categories of correspondence by means of the services at its disposal, as well as the rates of payment by weight to be allowed by the office itself to other offices of the Union for the further conveyance of the said correspondence within the Union. If necessary, it communicates in due time with the offices of the countries to be traversed, as to the route which the correspondence shall take, and as to the rates to be paid upon it.

1 *bis*. When several routes to which different transit charges are applicable are available for the transmission on correspondence to one and the same country, the office of origin pays the transit office according to a single rate based upon the average of the several transit rates.

2.

2. A duplicate of the Table D is forwarded by the said office to the exchange office interested, and serves as the basis of a special account to be established between them with reference to the intermediate conveyance of the correspondence in question. This account is prepared by the office which receives the correspondence, and is submitted to the examination of the despatching office.

3. The despatching office prepares, according to the particulars given in the Form D furnished by its correspondent, tables in conformity with the pattern E hereto annexed, intended to show, for each mail, the charges for intermediate conveyance within the Union of the correspondence, without distinction of origin, sent in the mail for transmission by the intermediary of the said corresponding office. With this view the despatching office of exchange enters in Table No. 1 of a form E, which it sends with its despatch, the total weight, according to its nature, of the correspondence of this class, which it delivers *à découvert* to the corresponding office of exchange; and the latter, after verification, accepts such correspondence, and sends it to its destination, mixed with its own correspondence in respect of which the charges, if any, for further conveyance, are the same.

4 As regards the charges for conveyance beyond the limits of the Union of correspondence addressed to or originating in countries foreign to the Union, they are calculated according to the particulars given in the Table C mentioned in Article V of the present regulations, and entered in a lump sum in the Form E, as follows :—

In Table No. II in the case of paid correspondence for abroad (expense at the charge of the despatching office of the Union).

In Table No. III in the case of unpaid correspondence coming from abroad, and of redirected or undelivered correspondence marked with foreign charges to be refunded (expense at the charge of the Union office of destination).

5. Any error in the statement of the office of exchange which has despatched the Table E is immediately communicated to that office by means of a note of verification, notwithstanding the correction made in the table itself.

6. If there be no correspondence liable to a charge for intermediate or foreign conveyance, the Table E is not prepared, and the despatching office enters at the head of the letter bill the words "No Table E." In case of the erroneous omission of this table the irregularity is equally reported, by means of a note of verification, to the office in fault, and must be immediately repaired by this latter.

XXIV.—Closed Mails.

1. Correspondence exchanged in closed mails between two offices of the Union, or between one office of the Union and an office foreign to the Union, across the territory or by means of the services of one or more other offices, forms the subject of a statement in conformity with specimen F annexed to the present regulations, which is prepared according to the following stipulations.

2. As regards mails from one country of the Union to another country of the Union, the despatching office of exchange enters in the letter bill for the receiving office of exchange the net weight of letters and post cards, and that of other articles, without distinguishing the origin or destination of the correspondence. These entries are verified by the receiving office, which prepares, at the end of the statistical period, the statement above mentioned, in as many copies as there are offices interested, including that of the place of despatch.

3. In the four days which follow the closing of the statistical operations, the statements F are transmitted by the offices of exchange which have prepared them to the offices of exchange of the Administration indebted, in order to be accepted by them. The latter, after accepting these statements, send them to the central Administration to which they are subordinate, and on which falls the duty of distributing them amongst the offices concerned.

4. As regards closed mails exchanged between a country of the Union and a country foreign to the Union, by the medium of one or of several offices of the Union, the conveyance is effected in both directions at the charge of the said Union country, and the offices of exchange of that country themselves prepare, for each mail despatched or received, a statement F, which they send to the office of departure or entry; this latter prepares at the end of the statistical period a general statement, in as many copies as there are offices concerned, including itself and the office of the Union which has to pay. One copy of this statement is sent to the indebted office and one to each of the offices which have participated in the conveyance of the mails.

5. After each statistical period, those Administrations which have despatched transit mails send a list of such mails to the several Administrations whose services they have used.

6. The mere warehousing, at a port, of closed mails brought by one Packet and intended to go on by another does not involve payment of territorial transit charges to the post office of the place where the mails are warehoused.

XXV.—Account of Transit Charges.

1. The Tables E and F are incorporated in a special account, in which is shown, in francs and centimes, the annual amount of transit payment accruing to each office, by multiplying the totals by 13. In case the multiplier does not correspond with the periodicity of the service, the Administrations concerned shall arrange for the adoption of another multiplier. The duty of preparing this account devolves upon the office to which payment is due, which transmits it to the indebted office.

2. The payment which results from balancing the reciprocal accounts between two offices is made in hard cash (francs) by the indebted office to the office to which payment is due, by means of bills drawn upon the capital, or upon some commercial centre in the country to which this latter office belongs.

3. The preparation, transmission, and payment of the accounts of the transit charges pertaining to a particular year must be effected with as little delay as possible, and at the latest before the expiration of the first six months of the following year. In any case, if the office which has sent the account has not received in that interval any notes of correction, that account is considered as duly accepted. This stipulation applies equally to uncontested observations made by one office on the accounts furnished by another. When this term of six months has passed, the amounts due from one office to another office are subject to interest at the rate of five per cent. per annum, dating from the day of the expiration of the said term.

The payments of transit charges for the first year in each triennial period, and at need for the second year, are made provisionally at the end of such year, on the basis of the previous statistics, subject to an eventual adjustment of the accounts in accordance with the results of the new statistics.

4. Nevertheless, the option is reserved to the offices concerned, to make by common consent other arrangements than those which are set forth in the present article.

XXVI.—Exceptions in the matter of Weights.

As an exceptional measure, it is agreed that the States which, in consequence of their internal regulations, are unable to adopt the decimal metrical system of weight, have the right to substitute for it the ounce avoirdupois (28·3465 grammes), by assimilating a half ounce to 15 grammes, and two ounces to 50 grammes, and to raise, if needful, the limit of the single rate of postage of newspapers to four ounces; but under the express condition that, in the latter case, the postage on newspapers be not less than 10 centimes, and that an entire rate of postage be charged for each copy of the newspaper, even though several newspapers be included in the same packet.

XXVII.—Applications for ordinary Articles which have failed to reach their destination.

1. Every application respecting an ordinary article of correspondence which has failed to reach its destination gives rise to the following procedure.

2. A form similar to the pattern G annexed hereto is handed to the applicant, who is requested to fill up as exactly as possible the portion which concerns him.

3. The office at which the application originates transmits the form direct to the corresponding office. It is transmitted officially without any written communication.

4. The corresponding office causes the form to be handed to the addressee or sender, as the case may be, with the request that particulars on the subject may be furnished.

5. With these particulars added, the form is sent back officially to the office which prepared it.

6. When the application proves to be well founded, it is transmitted to the central Administration in order to serve as a basis for further investigations.

7. In the absence of any agreement to the contrary, the form is drawn up in French or bears a French translation.

8. Any Administration can require, by notification addressed to the International Bureau, that the exchange of applications, as far as such Administration is concerned, shall be effected through the medium of the central Administrations, or of an office specially designated.

XXVII *bis*.—Withdrawal of Correspondence and Correction of Addresses.

1. For requests to withdraw correspondence or to correct addresses, the sender must use a form in accordance with pattern H annexed to the present Regulations. In handing this application to the post office, the sender of the letter must establish his identity. The Administration of the country of origin assumes the responsibility in regard to identity; and, after its establishment, the course is as follows:—

1. If the request is meant to be sent by post, the form, together with a perfect fac-simile of the letter to be looked for, is despatched in a registered letter direct to the office of destination.
2. If the request is to be made by telegraph, the form is handed over to the telegraph service, which is entrusted with the transmission of its terms to the office of destination.

2. On receipt of the Form H, or of the telegram taking its place, the office of destination searches for the correspondence in question, and takes the necessary action on the request.

If, however, the case be one of an alteration of address requested by telegraph, the office of destination only retains the letter, and awaits the arrival of the necessary fac-simile before complying with the request.

If the search is fruitless, or if the article has already been delivered to the addressee, or if the request by telegraph is not explicit enough to admit of the article indicated being recognised with certainty, the fact is at once communicated to the office of origin, which informs the applicant accordingly.

3. In the absence of any understanding to the contrary, Form H is drawn up in French, or bears a sublineary translation in that language; and, in case the telegraph is used, the telegram is sent in French.

4. Any Administration can require, by notification addressed to the International Bureau, that the exchange of applications, as far as such Administration is concerned, shall be effected through the medium of the central Administrations, or of an office specially named.

XXVIII.—Division of the Expenses of the International Bureau.

1. The ordinary expenses of the International Bureau must not exceed the sum of 100,000 francs annually, irrespective of the special expenses to which the meeting of a Congress or of a Conference gives rise.

2. The Postal Administration of the Swiss Post Office supervises the expenses of the International Bureau, makes the necessary advances, and prepares the annual account, which is communicated to all the other Administrations.

3. For the apportionment of the expenses, the countries of the Union are divided into seven classes, each contributing in the proportion of a certain number of units, viz.:—

Class.	Units.
1st	25
2nd	20
3rd	15
4th	10
5th	5
6th	3
7th	1

4. These co-efficients are multiplied by the number of countries of each class, and the total of the products thus obtained furnishes the number of units by which the whole expense is to be divided. The quotient gives the amount of the unit of expense.

5. The countries of the Union are classified as follows, in view of the division of the expenses:—

1st class: Germany, Austro-Hungary, United States of America, France, Great Britain, British India, the whole of the other British Colonies except Canada, Italy, Russia, Turkey.
2nd class: Spain.
3rd class: Belgium, Brazil, Canada, Egypt, Japan, Netherlands, Roumania, Sweden, Spanish Colonies or Provinces beyond sea, French Colonies, Netherland East Indies.
4th class: Denmark, Norway, Portugal, Switzerland, Portuguese Colonies.
5th class: Argentine Republic, Bulgaria, Chili, United States of Columbia, Greece, Mexico, Peru, Servia.
6th class: Bolivia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Hayti, Republic of Honduras, Luxemburg, Nicaragua, Paraguay, Persia, Salvador, Kingdom of Siam, Uruguay, Venezuela, Danish Colonies, Colony of Curacao (or Netherland West Indies), Colony of Surinam (or Dutch Guiana).
7th class: Hawaii, Liberia, Montenegro.

XXIX.—Communications to be addressed to the International Bureau.

1. The International Bureau serves as the medium for regular and general notifications which concern the international relations.

2. The offices forming the Union must communicate to each other specially by the medium of the International Bureau:—

1. The particulars of the surcharges which they levy by virtue of Article V of the Convention, in addition to the Union rate, whether for sea postage, or for expenses of extraordinary conveyance, as well as a list of the countries in relation to which these surcharges are levied, and, if needful, the designation of the routes giving rise to the surcharges.
2. The collection of their postage stamps in triplicate.
3. Lastly, the Table C, the preparation of which is prescribed by Article V of the Regulations.

3. Every modification adopted hereafter, in regard to one or other of the five points above mentioned, must be notified without delay in the same manner.

4. The International Bureau equally receives from all the Administrations of the Union two copies of all the documents which they publish, as well relating to the inland service as to the international service.

5. Moreover, each Administration transmits in the first half of each year, to the International Bureau, a complete series of statistical details relating to the preceding year, in the form of tables filled up according to the directions of the International Bureau, which distributes with this object forms duly prepared.

6. Correspondence addressed by the Administrations of the Union to the International Bureau, and *vice versa*, is assimilated, as regards freedom from postage, to the correspondence exchanged between the Administrations.

XXIX *bis*.—General Statistics.

1. Every Administration sends to the International Bureau, at the end of the month of July in each year, as complete a series as possible of statistical returns relating to the preceding year, arranged in tables in conformity with or analogous to the patterns I, K, and L annexed.

2. Those services in which each transaction is recorded are dealt with in periodical statements based upon the entries made.

3. All other transactions are counted during one week at least for daily exchanges, and during four weeks for exchanges other than daily, each Administration having the option of counting separately the correspondence belonging to each category.

4. To each Administration is reserved the right of counting the correspondence at those periods in which the postal business approaches most nearly to the average.

5. To the International Bureau is entrusted the duty of printing and distributing the statistical forms to be filled up by each Administration, and of furnishing to any Administration on application all necessary information as to the rules to be followed, in order to ensure, as far as possible, uniformity of practice in taking the statistics.

XXX.—Duties of the International Bureau.

1. The International Bureau prepares general statistics for each year.

2. It publishes, by the aid of the documents which are put at its disposal, a special journal in the German, English, and French languages.

3. All the documents published by the International Bureau are distributed to the Administrations of the Union, in the proportion of the number of contributing units assigned to each by Article XXVIII preceding.

4. Any additional copies and documents which may be applied for by these Administrations are paid for separately at prime cost.

5. The International Bureau must, moreover, hold itself always at the disposal of the members of the Union for the purpose of furnishing them with any special information they may require upon questions relating to the international postal service.

6. The International Bureau makes known demands for the modification or interpretation of the stipulations which regulate the Union. It notifies the results of each application, and no modification or resolution adopted is binding until two months at least after its notification.

7. In questions to be settled by general consent, or by the majority of the Administrations of the Union, those whose replies have not been received within six months from the date of the Circular of the International Bureau submitting the question, are considered as not voting.

8. The International Bureau prepares the business to be submitted to approaching Congresses or Conferences. It undertakes the necessary copying and printing, the editing and distribution of amendments, minutes of proceedings, and other information.

9. The Director of the International Bureau attends the sittings of the Congresses or Conferences, and takes part in the discussions, but without the power of voting.

10. An annual report is issued under his superintendence, and is communicated to all the Administrations of the Union.

11. The official language of the International Bureau is the French language.

XXXI.—Language.

1. The letter bills, tables, statements, and other forms used by the Administration of the Union in their reciprocal relations must, as a general rule, be drawn up in the French language, unless the Administrations concerned arrange otherwise by direct agreement.

2. As regards official correspondence, the present state of things is maintained, unless any other arrangement should subsequently be agreed upon by common consent between the Administrations concerned.

XXXII.—Jurisdiction of the Union.

The following are considered as belonging to the Universal Postal Union :

1. The Island of Heligoland, as assimilated to Germany, from a postal point of view.
2. The principality of Lichtenstein, as subordinate to the Postal Administration of Austria.
3. Iceland and the Faroe Islands, as forming part of Denmark.
4. The Balearic Isles, the Canary Islands, and the Spanish possessions on the Northern Coast of Africa, as forming part of Spain ; the Republic of Andorra, and the postal establishments of Spain upon the West Coast of Morocco, as subordinate to the Postal Administration of Spain.
5. Algeria, as forming part of France ; the principality of Monaco and the French Post Offices established at Tunis, Tangiers (Morocco), and Shanghai (China), as subordinate to the Postal Administration of France ; Cambodia and Tonquin as assimilated, so far as regards the postal service, to the French Colony of Cochin China.
6. Gibraltar, as subordinate to the Postal Administration of Great Britain, as well as the postal agency which that Administration maintains at Tangiers (Morocco).
7. The post offices which the Administration of the English Colony of Hong Kong maintains at Hoihow (Kiung-Schow), Canton, Swatow, Amoy, Foo-Chow, Ningpo, Shanghai, and Hankow (China).
8. The Indian postal establishments of Aden, Muscat, the Persian Gulf, Guadur, and Mandalay, as subordinate to the Postal Administration of British India.
9. The Republic of St. Marino and the Italian offices of Tunis and Tripoli in Barbary, as subordinate to the Postal Administration of Italy.
10. The post offices which the Japanese Administration has established at Shanghai (China), Fusanpo, Genzanshin, and Jinsen (Corea).
11. Maderia and the Azores, as forming part of Portugal.
12. The Grand Duchy of Finland, as forming an integral part of the Empire of Russia.

XXXIII.

In the interval which elapses between the meetings, the Postal Administration of every country of the Union has the right of addressing to the other participating Administrations, through the medium of the International Bureau, proposals for modifying the present regulations. But, to become binding, those proposals must obtain—

1. Unanimity of votes, if they relate to the modification of the stipulations of Articles III, IV, V, XI, XXVI, XXXIII, and XXXIV.
2. Two-thirds of the votes, if they relate to the modification of the stipulations of Articles I, II, VIII, X, XIII, XIV, XV, XVI, XVII, XVIII, XIX, XX, XXII, XXIII, XXIV, XXV, XXVII, XXVII *bis*, XXIX *bis*, XXXI, and XXXII.
3. Simply an absolute majority, if they relate to the modification of stipulations other than those above indicated, or to the interpretation of the various stipulations of the Regulations.

Resolutions adopted in due form are made binding by a simple notification of the International Bureau to all the Administrations of the Union.

XXXIV.—Duration of the Regulations.

The present regulations shall be put into execution on the day on which the Convention of the 1st June, 1878, comes into force. They shall have the same duration as that Convention, unless they should be renewed by common consent between the parties concerned.

Done at Paris, the 1st of June, 1878.

The Additional Act of Lisbon, modifying the Regulations, is dated thus—

Done at Lisbon, the twenty-first of March, one thousand eight hundred and eighty-five.

Postal Administration of

A.

Correspondence with the Office at

LETTER BILL.

Date stamp of Despatching Office.

MAIL (despatch) from the Office of Exchange at for the Office of Exchange at

Left of 18 , at m. Arrived of 18 , at m.

Date stamp of Receiving Office.

I. REGISTERED ARTICLES.

No.	Date-stamp of origin	Names of Addressees, and places of destination, or registry numbers of the offices of origin.	Remarks.
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Official Registrations.

II. CLOSED MAILS.

Office of origin.	Office of destination.	Number of closed mails.	Remarks.

Despatching Officer.

Receiving Officer.

Aa.

Administration of

ACKNOWLEDGMENT OF DELIVERY.

{ of an insured letter / of a registered article } registered under No. , and addressed to M at on the of , 18 .

Date stamp of office of origin.

THE undersigned declares { that an insured letter / that a registered article } to the abovementioned address, and coming from has been duly delivered on the of , 18 .

Date stamp of delivering office.

Signature*

of addressee

of head of delivering office

* This acknowledgment must be signed by the addressee, or, where the regulations of the country of destination permit it, by the head of the delivering office it must then be placed in an envelope and sent back registered by the first opportunity.

Postal Administration of

B.

Correspondence with the office at

NOTE OF VERIFICATION.

Date stamp of despatching office.

For the correction and ascertaining of errors and irregularities of all kinds discovered in the mail from the office of exchange at for the office of exchange at despatch of of 18 , at m.

Date stamp of receiving office.

SUNDRY ERRORS OR IRREGULARITIES.

Missing mail, missing registered articles or letter bill, mail robbed, torn, or in bad condition, &c.

ERRORS OF ACCOUNT IN STATEMENT.

Distinguishing numbers of erroneous tables.	Description of correspondence or mails in connection with which the error occurs.	Statement by despatching office of exchange.	Statement by receiving office of exchange.	Grounds of correction.

the of 18 . the of 18 .

Seen and accepted,

Employés of the receiving office of exchange.

Head of despatching office of exchange.

Postal Administration of

C.

TABLE exhibiting the conditions under which can be exchanged *à découvert* between the Administrations of the Postal Union and the Administration of letters and other articles of correspondence originating in or intended for foreign countries, for which this latter administration serves as medium.

Nos.	Country of destination or of origin.	Ordinary letters.					Registered Letters.			Newspapers and other printed matter.		Samples of Merchandise.		Remarks.
		Conditions of pre-payment of postage.	Limits of prepay-ment of postage.	Weight in grams of a single letter.	Letters prepaid for abroad. Allow-ances. Foreign convey-ance.	Unpaid letters for abroad. Disburse-ments Foreign convey-ance.	Weight in grams of a single letter.	Allowances appertain-ing to transits outside the Union. Fixed Registration Fee.	Allowances appertain-ing to transits outside the Union. Convey-ance.	Weight in grams of a single packet.	Allow-ances (Foreign convey-ance).	Weight in grams of a single packet.	Allow-ances (Foreign convey-ance).	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

D.

Despatching Office — Receiving and Redespatching Office.

TRANSIT À DÉCOUVERT

(Within the bounds of the Union.)

TABLE exhibiting the rates of transit for correspondence forwarded *à découvert* by the Post Office at to the Post Office at

No	Country of destination or departure.	Transit Rate per Kilogram.			Remarks.
		Letters and post cards.	Other articles.	For transits through.	
1	2	3 Fr. c.	4 Fr. c.	5	6

Despatching Office — Receiving and Redespatching Office

E.

TRANSIT À DÉCOUVERT.

MAIL from the office of exchange at for the office of exchange at despatched on the of 18 at . m.

I. TRANSIT WITHIN THE UNION TO THE CHARGE OF DESPATCHING OFFICE.

(Correspondence of all kinds from the Union for the Union, and correspondence from the Union for foreign countries, and *vice versa*).

No.	Country of destination or departure.	Transit rate per kilogram.				Statement by despatching office of exchange.		Verification by receiving office of exchange.	
		Letters and post cards.		Other articles.		Letters and post cards.	Other articles.	Letters and post cards.	Other articles.
		Fr.	c.	Fr.	c.	Grams.	Grams.	Grams.	Grams.

II. FOREIGN CONVEYANCE AT THE CHARGE OF DESPATCHING OFFICE.

(Paid correspondence for countries foreign to the Union.)

	Statement by despatching office of exchange.		Verification by receiving office of exchange.	
	Fr.	c.	Fr.	c.
Total amount of foreign rates				

III. FOREIGN CONVEYANCE AT THE CHARGE OF RECEIVING OFFICE.

(Unpaid correspondence coming from countries foreign to the Union, including redirected and undelivered correspondence).

	Statement by despatching office of exchange.		Statement by receiving office of exchange.	
	Fr.	c.	Fr.	c.
Total amount of foreign rates				

Despatching Office **F.** Receiving Office

TRANSIT IN CLOSED MAILS.

MAILS from the office of exchange at for the office of exchange at despatched through the medium of

Dates.	First despatch from office of exchange at for office of exchange at		Second despatch from office of exchange at for office of exchange at		Third despatch from office of exchange at for office of exchange at	
	Net weight.		Net weight.		Net weight.	
	Letters and post cards.	Other articles.	Letters and post cards.	Other articles.	Letters and post cards.	Other articles.
	Grams.	Grams.	Grams.	Grams.	Grams.	Grams.
Totals						

the of 18

Head of Receiving Office of Exchange.

Seen and accepted
the of 18

Head of Despatching Office of Exchange.

Postal Administration
of
office at

Date stamp of despatching office

G.

INFORMATION TO BE FURNISHED IN CASE OF APPLICATION FOR AN ORDINARY ARTICLE OF CORRESPONDENCE WHICH HAS NOT COME TO HAND.

I. BY APPLICANT—(SENDER OR ADDRESSEE).

Questions.	Answers.
a. Description of missive (letter, post card, newspaper, or other printed matter, sample, or packet of commercial papers)? *b.* What was the address of the article sent? *c.* What is the exact address of the person to whom the article was directed? *d.* Was the missive large? *e.* What did it contain? (give as precise and complete a description as possible.) *f.* Precise or approximate date of posting? *g.* Name and residence of sender? *h.* In case of successful search to whom, the addressee or the sender, should the article applied for, be forwarded?	

II. BY THE SENDER.

i. Was it prepaid, and if so, what was the value of the postage stamps affixed? *j.* Date and hour of posting? *k.* Was it posted at the counter or in a receiver? In the latter case in which receiver? *l.* Was the posting effected by the sender himself or by some one else? In the latter case by whom?	
m. Special report by office of origin. *n.* Report by 1st intermediary office. *o.* Report by 2nd intermediary office.	

This form must be sent back to

Postal Administration
of
office at

Date stamp of receiving office

G.

III. INFORMATION TO BE FURNISHED BY THE ADDRESSEE IN CASE OF APPLICATION FOR AN ORDINARY ARTICLE OF CORRESPONDENCE WHICH HAS NOT COME TO HAND.

Questions.	Answers.
p. Has the missive reached the addressee? *q.* Is the correspondence generally called for at the post office or delivered at the house? *r.* To whom is it in the first instance entrusted? *s.* In the second case is the correspondence given to the addressee personally, or to a person in his employ; or is it placed properly into a special box? If so is this receptacle properly secured and regularly cleared? *t.* Has loss of correspondence often taken place already? And if so whence did the lost mail matter come from? *u.* Special report by office of destination. This form must be sent back to	

H.

REQUEST FOR WITHDRAWAL, OR FOR CORRECTION OF ADDRESS.*

APPLICATION BY POST.

(Memo. to be forwarded under registered cover, and at the expense of Applicant).

I. Request for withdrawal.

Please to return to the office at (of origin) to be restored to the sender the (description of article) forwarded to your office on the of 18 , and of the cover of which the attached fac-simile is an exact copy.

the of 18

Date stamp of office.

Post

II. Request for correction of address.

Please to substitute (such words) for (such other words) on the address of the (description of article) forwarded to your office on the of 18 , from the office at and of the cover of which the attached fac-simile is an exact copy.

the of 18 .

Date stamp of office.

Post

* Strike out first or second portion of sentence as required.

REQUEST BY TELEGRAPH.

(Telegram at the expense of person making the request).

I. Request for withdrawal.

To return to origin (such an article) addressed (this day or the) to M. (exact address of person for whom missive is intended).

Autograph stamp (situation and description)
Seal (description)
Envelope (form and colour)
Particularities (annotations or marks of any kind)

Office date stamp.

Post

*H. Request for correction of address.**

To substitute (such an item) for (such other item) on the address of (description of missive) despatched (this day or the) to your office for M. (exact address of person for whom missive is intended).

Autograph stamp (situation and description).
Seal (description)
Envelope (form and colour).
Particularities (annotations and marks of any kind).

the of 18 .

Date stamp of office.

Post

* N.B.—This request cannot be complied with until after receipt of fac-simile by post.

For the International Office of the Universal Postal Union at Berne.

I.—SATISTICAL TABLE OF THE

Anno

Year.	I.		II.—Postal								
			Number of Post Offices.							Number of receivers	
			At Home.								
	Superficial area in square kilometers.	Number of inhabitants according to census of 18	Offices charged with the reception and distribution of all kinds of postal matter.	Offices whose functions of reception and distribution of mail matter are restricted.	Other offices established for the despatch of mails.	Travelling offices.	Abroad.	Total number of post offices.	Number of postal district administrations.	Fixed post offices in towns and localities provided with a post office.	Fixed in the outlying country.
	2	3	4	5	6	7	8	9	10	11	12

II.—Postal

Year.	Horse changing stations.			Draught horses, etc.				Coaches and carts.			
					Private.				Private.		
	Government. Number.	Private. Number.	Total. Number.	State property. Number.	Gratuitous services. Number.	Subsidised services. Number.	Total. Number.	Government. Number.	Gratuitous services. Number.	Subsidised services. Number.	Total. Number.
	29	30	31	32	33	34	35	36	37	38	39

III.—Postal

Year.		Ordinary mail matter subject to postage.						
		Letters.		Post cards.		Printed matter.	Commercial papers.	Samples of merchandise.
		Paid. Number.	Unpaid. Number.	Single. Number.	With reply paid. Number.	Number.	Number.	Number.
	48	49	50	51	52	53	54	55
	Inland Service.....							
	International Service (Receipt)							
	International Service (Despatch).....							
	International Service (Transit)							

POSTAL SERVICE IN

18 .

ORGANISATION.

for the use of the public.				Staff											
Moveable– adapted to vehicles travelling on roads, etc.			Total No of Letter receivers	Number of Officers and Clerks.				Number of Postmen and subordinate Agents.				Number of Postmasters (to the exclusion of those who are at the same time in charge of of Offices)	Number of Mail-drivers and mail boys.	Number of Mail Contractors	Total of Staff.
Paved, macadamized, and ordinary.	Rail	On Sea, River, and Lake.		Service of the Central Administration.	Service of the District Administrations	Employed in Post Offices.	Total	Service of the Central Administration	Service of the District Administrations	Employed in Post Offices.	Total.				
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

ORGANISATION.

Extent of Inland Mail Lines worked				Number of Kilometers traversed annually Inland.			
On Railroads. Kilometers	On paved, macadamized, and ordinary roads. Kilometers.	On Sea, River, or Lake Kilometers.	Total. Kilometers.	On Railroads. Kilometers.	On paved, macadamized, and ordinary roads. Kilometers.	On Sea, River, and Lake. Kilometers	Total. Kilometers.
40	41	42	43	44	45	46	47

SERVICE.

Missives exempted from Postage.		Totals of articles entered in columns 49–57.	Registered Articles.		In the numbers of correspondence entered in columns 58, 59, and 60 there were to be sent by Express.	In the numbers of correspondence entered in columns 59 and 60 there were accompanied by acknowledgments of delivery.	Ordinary parcels.	Letters with declaration of value	
Letters. Number.	Post cards. Number.	Number.	Letters. Number.	Other articles. Number.	Number.	Number.	Number.	Number.	Value in Francs.
56	57	58	59	60	61	62	63	64	65

III.—Postal

Year		Parcels with Declaration of Value			Repay		
		Number	Weight Kilograms	Value Francs	Articles of correspondence Number	Parcels Number	Total Amount of repayments Francs
	66	67	68	69	70	71	72
	Inland Service						
	International Service—						
	(a) Receipt						
	(b) Despatch						
	(c) Transit						

III —Postal

Year		Amongst the number of articles entered in column 77 there were		Newspapers and other periodical publications served by subscription	
		Accompanied by acknowledgment of payment	To be delivered by Express	Number of Copies	Quantity of Numbers
	83	84	85	86	87
	Inland Service				
	International Service—				
	(a) Receipt				
	(b) Despatch				
	(c) Transit				

IV —Undelivered

Inland Service														
Correspondence which cannot be delivered					Undelivered correspondence for which an owner was found or which was returned to the sender					Correspondence remaining unclaimed				
Ordinary and registered letters	Single post cards, and post cards with reply paid	Printed matter	Commercial papers	Samples	Ordinary and registered letters	Single post cards, and post cards with reply paid	Printed matter	Commercial papers	Samples	Ordinary and registered letters	Single post cards, and post cards with reply paid	Printed matter	Commercial papers	Samples
94	95	96	97	98	99	100	101	102	103	104	105	106	107	108

V. Financial

Receipts	For the service of 18 .	
	Francs.	cents.
1. Proceeds of the sale of postage stamps and stamped forms		
2 Cash receipts		
3. Fares collected for the transport of passengers and for over weight of luggage		
4. Allowances received from foreign Administrations		
5. Various other receipts . . .		
Total receipts . .		

SERVICE.

ments.		In the number of articles entered in columns 63, 64, 67, 70, 71, there were		Post Office Orders		Collections of Outstanding Debts			
Refunds refused		Accompanied by acknowledgment of delivery.	To be sent by express.					Uncollected.	
Number	Amount Francs.	Number	Number	Number	Value. Francs	Number	Amounts to collect. Francs	Number	Amount. Francs.
73	74	75	76	77	78	79	80	81	82

SERVICE.

Proceeds of sale of Postage Stamps and other forms for prepayment.		Number of Estafettes despatched	Number of passengers carried		Number of closed Mails in transit
Number.	Amount. Francs		By the regular services	By extraordinary services	
88	89	90	91	92	93

CORRESPONDENCE.

International Service																			
Inland letters for abroad which have been sent to Dead Letter Office					Undelivered correspondence returned from abroad, which it was found possible to dispose of					Correspondence returned from abroad, which remains unclaimed					Correspondence from abroad undelivered and sent back to country of origin.				
Ordinary and registered letters	Post cards, single and with reply paid	Printed matter.	Commercial papers	Samples	Ordinary and registered letters	Post cards, single and with reply paid.	Printed matter	Commercial papers	Samples	Ordinary and registered letters	Post cards, single and with reply paid	Printed matter	Commercial papers	Samples	Ordinary and registered letters	Post cards, single and with reply paid	Printed matter.	Commercial papers.	Samples
109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128

STATEMENT.

Expenditure	For the service of 18 .	
	Francs.	cents.
1. Salaries and emoluments—		
a of officers and clerks		
b. Of postmen and other subordinate employés . .		
2 Purchase and maintenance of vessels and postal stores, cost of rent, of fuel and lighting, office furniture, and other small charges . .		
3 Cost of transport over rail, paved and macadamized roads, by sea and river (wherein is comprised the cost of construction and maintenance of post chaises)		
4. Indemnities for loss of and damage to mail matter		
5. Subsidies to mail contractors		
6. Subsidies to shipping companies		
7. Allowances paid to foreign Administrations		
8. Various other items of expenditure		
Total expenditure		

K.—STATISTICAL TABLE OF THE

Postal Administration of

For the

Countries.	Ordinary correspondence subject to postage.							Correspondence exempt from postage.
	Letters.		Post cards.		Printed matter.	Commercial papers.	Samples of merchandise.	
	Prepaid. Number.	Unpaid. Number.	Single. Number.	With reply paid. Number.	Number.	Number.	Number.	Number.
1	2	3	4	5	6	7	8	9
EUROPE.								
Germany								
Austria-Hungary								
Belgium								
AMERICA.								
Argentine Republic								
Brazil								
Canada								
Chili								
AFRICA.								
Egypt								
Liberia								
ASIA.								
British India								
Japan								
Totals								

Countries.	Repayments.					Among the number of articles entered in columns 15, 16, 18, 21, 22, were	
	Articles of correspondence.	Parcels.	Total amount of	Repayments refused.		Accompanied by acknowledgments of delivery.	To be sent on by express.
				Number.	Amount.		
	Number.	Number.	Francs.		Francs.	Number.	Number.
	21	22	23	24	25		27
EUROPE.							
Germany							
Austria and Hungary							
Belgium							
AMERICA.							
Argentine Republic							
Brazil							
Canada							
Chili							
AFRICA.							
Egypt							
Liberia							
ASIA.							
British India							
Japan							
Totals							

INTERNATIONAL SERVICE (RECEIPT).

Year 18 .

Total of articles entered in columns 2—9.	Registered articles.		In the numbers of correspondence entered in columns 10, 11, and 12 there were to be sent by express.	Among the numbers of correspondence entered in columns 11 and 12 were accompanied by acknowledgments of delivery.	Ordinary parcels.	Letters with declaration of value.		Parcels with declaration of value.		
	Letters.	Other articles.				Number.	Value.	Number.	Weight.	Value.
Number.	Number.	Number.	Number.	Number.	Number.		Francs.		Kilograms.	Francs.
10	11	12	13	14	15	16	17	18	19	

Post Office Orders.		Collections of outstanding debts.				Among the number of articles entered in columns 28 and 30 there were		Newspapers, &c., served by subscription.
				Not collected.				
Number.	Amount.	Number.	Amounts to collect.	Number.	Amount.	Accompanied by acknowledgments of delivery.	To be sent by express.	
	Francs.		Francs.		Francs.	Number.	Number.	Number.
28	29	30	31	32	33	34	35	36

Postal Administration of

L.—STATISTICAL TABLE OF THE

For the

Countries.	Ordinary missives subject to postage.							Articles exempt from postage.
	Letters.		Post cards.		Printed matter.	Commercial papers.	Samples of merchandise	
	Prepaid. Number.	Unpaid. Number.	Single. Number.	With reply paid. Number.	Number.	Number.	Number.	
	2	3		5	6	7	8	9
EUROPE.								
Germany								
Austria-Hungary								
Belgium								
AMERICA.								
Argentine Republic								
Brazil								
Canada								
Chili								
AFRICA.								
Egypt								
Liberia								
ASIA.								
British India								
Japan								
Totals								

Countries.	Repayments				
	Articles of correspondence. Number.	Parcels. Number.	Total amount of repayments Francs.	Repayments refused.	
				Number.	Amounts. Francs.
	21	22	23	24	25
EUROPE.					
Germany					
Austria-Hungary					
Belgium					
AMERICA.					
Argentine Republic					
Brazil					
Canada					
Chili					
AFRICA.					
Egypt					
Liberia					
ASIA.					
British India					
Japan					
Totals					

INTERNATIONAL SERVICE (DESPATCH).

Year 18 .

Totals of articles entered in columns 2—9.	Registered articles.		In the numbers of correspondence entered in columns 10, 11, and 12 there were to be forwarded by express,	In the numbers of correspondence entered in columns 11 and 12 there were, accompanied by acknowledgments of delivery	Ordinary parcels.	Letters with declaration of value.		Parcels with declaration of value.		
	Letters.	Other articles.								
Number.	Number.	Number.	Number.	Number.	Number.	Number.	Value. Francs.	Number.	Weight. Kilograms.	Value. Francs.
10	11	12	13	14	15	16	17	18	19	20

Amongst the number of articles entered in columns 15, 16, 18, 21 and 22 there were,		Post Office Orders.		Collection of outstanding debts.	Amongst the number of articles entered in columns 28 and 30 there were,		Newspapers, etc., served by subscription.
Accompanied by acknowledgments of delivery.	To be sent by express.	Number.	Value.		Accompanied by acknowledgments of delivery or payment.	To be forwarded by express.	
Number.	Number.		Francs.	Number.	Number.	Number.	Number.
26	27	28	29	30	31	32	33

B.

RETURN showing where the Government have erected or possess buildings, and where buildings are leased or otherwise provided, for Post and Telegraph Offices.

The Government possess buildings at the following places :—

Abattoirs.	Cootamundra.	Merriwa.	Singleton.
Aberdeen.	Copeland North.	Milton.	Sofala.
Albury (Post Office).	Corowa.	Moama.	South Grafton.
Do (Telegraph Office).	Cowra.	Molong.	Stroud.
Arakoon.	Deniliquin (Post Office).	Moree.	Sydney.
Araluen.	Do (Telegraph Office).	Morpeth.	Tamworth.
Armidale (Post Office).	Dubbo.	Moulamein.	Tarago.
Do (Telegraph Office).	Dungog.	Mount Victoria.	Tarcutta.
Balranald.	East Maitland.	Mudgee (Post Office).	Taree.
Barraba.	Edgecliffe.	Do (Telegraph Office).	Temora.
Bathurst (Post Office).	Emmaville.	Murrumburrah.	Tenterfield.
Do (Telegraph Office).	Euston.	Murrurundi (Telegraph Office).	Trunkey Creek.
Bega.	Forbes.	Muswellbrook (Post Office).	Tumut.
Bingera.	Glen Innes.	Do (Telegraph Office).	Ulmarra.
Blayney.	Gosford.	Narrabri.	Uralla.
Boggabri.	Goulburn.	Narrandera.	Urana.
Bombala.	Grafton.	Newcastle (Post Office).	Wagga Wagga.
Booligal.	Grenfell.	Do (Telegraph Office).	Walcha.
Bourke.	Gulgong.	Newtown.	Walgett.
Braidwood.	Gundagai.	Nimitybelle.	Wallsend.
Brewarrina.	Gunnedah.	Nowra.	Waratah.
Burrowa.	Gunning.	Nyngan.	Warialda.
Byrock.	Hay.	Orange.	Warren.
Camden.	Hill End.	Parkes.	Wellington.
Campbelltown.	Hillston.	Parramatta.	Wentworth.
Candelo.	Inverell.	Paterson.	West Kempsey.
Cannonbar.	Jerceelderie.	Penrith.	West Maitland (Post Office).
Carcoar.	Jerry's Plains.	Port Macquarie.	Do (Telegraph Office).
Cargo.	Junee Junction.	Queanbeyan.	Wilcannia.
Casino.	Kiama.	Quirindi.	William Street.
Cassilis.	Lambton.	Raymond Terrace.	Windsor.
Clarence Town.	La Perouse.	Redfern.	Wingham.
Cobar.	Lawrence.	Richmond.	Wollombi.
Cobargo.	Lismore.	Robertson.	Wollongong.
Coolah.	Lithgow.	Rockley.	Yass.
Cooma.	Liverpool.	Rylstone.	Young.
Coonabarabran.	Major's Creek.	St. Mary's.	
Coonamble.	Manly.	Scone.	
Cooranbong.	Menindie.		

Office accommodation is provided at the following Railway Stations, also the property of the Government :—

Aberdeen (R.T.S.)	Curlewis.	Maryvale (R.T.S.)	Rookwood (R.T.S.)
Allandale.	Currabubula.	Menangle (R.T.S.)	Rooty Hill.
Anvil Creek.	Darlington Railway Station (R.T.S.)	Merrylands.	Rydal (R.T.S.)
Armidale (R.T.S.)	Doughboy Hollow.	Millthorpe (R.T.S.)	Seven Hills (R.T.S.)
Arncliffe.	Douglas (R.T.S.)	Minto.	Singleton Railway Station (R.T.S.)
Ashfield.	Emu Plains (R.T.S.)	Moonbi Railway Station (R.T.S.)	Spring Hill (R.T.S.)
Auburn.	Eversleigh.	Mount Wilson.	Springs.
Baan Baa.	Fairfield (R.T.S.)	Mulgrave.	Springwood (R.T.S.)
Bethungra.	Farley.	Mullengudgery.	Stanmore.
Binalong.	George's Plains (R.T.S.)	Mullion Creek (R.T.S.)	Tarana (R.T.S.)
Blackheath.	Gerogery (R.T.S.)	Murrumbidgerie.	Tarro Railway Station.
Black Mountain.	Girilambone (R.T.S.)	Narrabri Railway Station (R.T.S.)	The Rock (R.T.S.)
Blacktown.	Glenbrook.	Narramine.	Towrang.
Blandford.	Glencoe.	Nevertire (R.T.S.)	Trangie.
Bomen (R.T.S.)	Granville.	Newbridge.	Uranquinty.
Bowenfels.	Grong Grong.	North Yanko.	Walcha Road.
Bowning.	Guyra (R.T.S.)	Nubba.	Wallendbeen (R.T.S.)
Broadalbane.	Harden (R.T.S.)	Old Junee.	Warne.
Breeza.	Harefield.	Perth.	Wentworth Falls.
Brewongle.	Haydonton (R.T.S.)	Petersham.	Werris Creek (R.T.S.)
Bundanoon.	Hexham (R.T.S.)	Piper's Flat.	Whitton (R.T.S)
Burwood.	Homebush.	Raglan (R.T.S.)	Willow-tree (R.T.S.)
Cabramatta.	Illabo.	Ravensworth (R.T.S.)	Wimbledon.
Capertee (R.T.S.)	Ironbarks (R.T.S)	Redfern Railway Station (R.T.S.)	Wingello.
Carrathool.	Jerrawa.	Redmyre.	Wingen (R.T.S.)
Clarence Tunnel.	Kentucky.	Riverstone (R.T.S.)	Woodford.
Colombo Creek.	Lawson (R.T.S.)	Rockdale.	Yass Railway Station (R.T.S.)
Colo Vale.	Lochinvar (R.T.S.)	Rocky Ponds.	Yerong Creek.
Coolaman (R.T.S.)	Locksley.		
Croydon.	Marulan (R.T.S.)		
Culcairn.			

NOTE.—R.T.S. signifies Railway Telegraph Station.

Office accommodation provided at Pilot Stations :—

Barranjoey.	Jervis Bay.	Port Stephens.	Ulladulla.
Gabo Island.	Manning River Heads.	Seal Rocks.	Yamba.
Green Cape.	Nambucca Heads.	South Head (Light-house).	Yarrahapinni.
Harrington.	Nelson's Bay.	Tweed Heads.	

Office accommodation provided free of charge for rent:—

Belmont	Darlington Point.	Kiandra.	Salt Creek.
Blackwall.	Eugowra.	Kurrajong Heights.	Shellharbour.
Bolivia.	Germanton.	Kyamba.	Stannifer.
Bowna	Gerringong.	Laurieton.	Stewart's Point.
Bowraville.	Gunnindera.	Lower Gundaroo.	Summer Hill.
Broadwater.	Gladesville.	Lucknow.	Tattersall's Hotel.
Bungwall Flat.	Hinton.	Mogo.	The Exchange (Telegraph Office).
Canterbury.	Jamberoo.	Molonglo.	Tomakin.
Dapto.	Kangaroo Valley.	Royal Hotel.	

Office accommodation provided by guarantors of Telegraph Lines —

Enngonia.	Tilpa.	Tumberumba.

Premises Rented.

Office.	Annual Rent £	s.	d.	Office.	Annual Rent £	s.	d.	Office.	Annual Rent £	s.	d.
Adaminaby	40	0	0	Gresford	20	0	0	Paddington (Branch Office)	156	0	0
Adelong (1)	70	0	0	Gulargambone	40	0	0	Palmer's Island	20	0	0
Angledool	31	4	0	Hamilton (10)	26	0	0	Pambula	25	0	0
Appin (Telegraph Office)	26	0	0	Harwood Island	32	10	0	Park street (Branch Office)	200	0	0
Ballina	36	0	0	Haymarket (Branch Office)	300	0	0	Peat's Ferry	15	0	0
Balmain (Branch Office) .	104	0	0	Howlong	52	0	0	Pelican Flat .	20	16	0
Baradine	40	0	0	Hunter's Hill	65	0	0	Picton	40	0	0
Barmedman	52	0	0	Ivanhoe	50	0	0	Pilliga	52	0	0
Barringun	78	0	0	Jindera	39	0	0	Pooncarie	50	0	0
Bateman's Bay (Telegraph Office)	30	0	0	Katoomba	26	0	0	Pyrmont	100	0	0
Bellbrook (Telegraph Office)	35	0	0	Kelso	20	0	0	Randwick	90	0	0
Bendemeer	36	0	0	Kempsey ...	50	0	0	Ryde (17)	30	0	0
Berrima	40	0	0	King street (12)	130	0	0	St Albans	39	0	0
Boat Harbour	10	0	0	King-street (Branch Office)	208	0	0	St Leonard's (Branch Office)	130	0	0
Bodilla	26	0	0	Kurrajong	39	0	0	St Peter's	50	0	0
Bowrall	104	0	0	Lake Cudgellico	52	0	0	Silverton	104	0	0
Branxton (2)	26	0	0	Leichhardt	65	0	0	Smithtown	39	0	0
Broke	25	0	0	Louth	50	0	0	South Woodburn	40	0	0
Broughton's Creek (3)	10	0	0	Lower Botany	39	0	0	Surry Hills	130	0	0
Brunswick	36	8	0	Maclean	60	0	0	Sutton Forest	26	0	0
Brushgrove	31	4	0	Manilla	40	0	0	Tabulam (Telegraph Office)	26	0	0
Bulahdelah	20	0	0	Marengo	20	0	0	Tambaroora (Post Office) .	20	0	0
Bulli (4)	24	0	0	Marrickville	66	6	0	Tamworth (Postmaster's Residence) (21) ...	100	0	0
Bundarra	40	0	0	Marsden's	26	0	0	Taralga	45	0	0
Bungendore	65	0	0	Marulan (14)	26	0	0	Tathra	26	0	0
Burrawang	20	0	0	Merimbula	40	0	0	Stables, York-street .	208	0	0
Cambewarra	15	0	0	Michelago	30	0	0	Land, Clarence-street ...	195	0	0
Camperdown	100	0	0	Miller's Point (Branch Office) . ..	156	0	0	Telegraph Stores, Clarence-street	550	0	0
Canowindra	40	0	0	Millie	40	0	0	Telegraph Stores, Kent-st.	300	0	0
Chatsworth Island	20	0	0	Minmi	39	0	0	Telegraph Stores, Bathurst-street	390	0	0
Clifton (7)	33	0	0	Mitchell	91	0	0	Terara	46	10	0
Cobargo (7)	40	0	0	Mittagong	50	0	0	The Exchange (Post Office)	100	0	0
Cobbora	20	0	0	Mogil Mogil	37	0	0	Tingha	52	0	0
Condobolin	75	0	0	Moiangarell (Telegraph Office) .. .	26	0	0	Timonee	26	0	0
Copmanhurst	28	0	0	Moruya (14)	50	0	0	Tocumwall	52	0	0
Corakai (Richmond River)	31	4	0	Mossgiel	52	0	0	Tuena	30	0	0
Croki (Manning River)	15	12	0	Moss Vale	100	0	0	Tumbulgum	26	0	0
Crookwell	70	0	0	Mount Hope	52	0	0	Wagga Wagga (Telegraph Office) (2)	80	0	0
Cudal	20	0	0	Mount M'Donald	40	0	0	Wallerawang	40	0	0
Cundletown	26	0	0	Mulwala	30	0	0	Wardell	40	0	0
Darlington	104	0	0	Mundooran .	45	0	0	Warkworth	15	12	0
Deepwater	26	0	0	Mungindi	35	0	0	Waterloo	85	0	0
Delegate (7)	14	0	0	Murrurundi (Post Office)	54	0	0	Waverley	83	0	0
Denman	30	0	0	Murwillumbah	44	4	0	Wee Waa	40	0	0
Eaubalong	40	0	0	Muswellbrook (15)	26	0	0	Wentworth . ..	104	0	0
Eden	75	0	0	Nambucca	24	0	0	West Tamworth	39	0	0
Fernmount	26	0	0	Nelligen	20	0	0	Wickham	65	0	0
Forster	30	0	0	Newcastle (16)	260	0	0	Wiseman's Ferry	50	0	0
Fredericton	50	0	0	Newton Boyd	13	0	0	Wolumla	35	0	0
George street West (8)	130	0	0	North Richmond	15	0	0	Woodburn	30	0	0
Gilgandra	45	10	0	Nundle	28	0	0	Woollahra	100	0	0
Gladstone	13	0	0	Nymagee (17)	50	0	0	Yetman (Telegraph Office)	50	0	0
Glebe ..	72	0	0	Nyngan (18)	52	0	0				
Gloucester	52	0	0	Oberon	35	0	0				
Gongolgon	32	0	0	Obley	30	0	0				
Goodooga .	30	0	0	Oxford-st (Branch Office)	290	0	0				
Greenwell Point (9)	13	0	0								

1 Postmaster also granted a rent allowance of £31 4s per annum 2 Allowed to Postmaster. 3 Postmaster also allowed £36 per annum as rent. 4 Postmaster also allowed £16 per annum as rent 5 Postmaster also allowed £13 per annum as rent 6 Premises rented temporarily. 7 Postmaster also allowed £26 per annum rent 8 Postmaster also allowed £65 per annum rent 9 Allowed to Postmaster 10 Allowed to Postmaster. 11 Allowed to Postmaster. 12 Sub let at a rental of £2 11s per week. 13 Allowed to Postmaster 14 Postmaster also allowed £35 per annum as rent 15 Allowed to Telegraph Station-master. 16 Rented during alteration to Government building 17 Postmaster also allowed £50 per annum as rent 18 Allowed to Postmaster. 19 Allowed to Postmaster. 20 Rented during alterations to Government building. 21 Allowance to Telegraph Station master for quarters.

C

LIST of Receiving Offices on 31st December, 1885

Names of Receiving Offices	Annual Salary £	s.	d.
Aberglasslyn ...	5	0	0
Altcar	5	0	0
Armidale Gully	5	0	0
Baerami	5	0	0
Ballanafad ...	5	0	0
Barber's Creek	5	0	0
Bedgerebong .	5	0	0
Ben Bullen	5	0	0
Ben Lomond Railway Stan	5	0	0
Berrellan	5	0	0
Berrima Colliery	5	0	0
Bindogandra	5	0	0
Blackman's Point	5	0	0
Bogan Gate	5	0	0
Bolaro	5	0	0
Bongongo	5	0	0
Booroolong	5	0	0
Borambil	5	0	0
Boree Creek	5	0	0
Bow	5	0	0
Brawlin	10	0	0
Bredbo	5	0	0
Brenda	5	0	0
Brindabella	5	0	0
Brodie's Plains	5	0	0
Brucedale	5	0	0
Bucca Bucca	5	0	0
Bungawalbin	5	0	0
Burns	5	0	0
Burrumbuttock	5	0	0
Cabramatta	5	0	0
Camden Haven	5	0	0
Carabost	5	0	0
Carrawobity	5	0	0
Cataract	5	0	0
Cave Creek	5	0	0
Chidowla	5	0	0
Cobham ..	5	0	0
Cochran Creek	5	0	0
Cockle Creek	5	0	0
Coff's Harbour	5	0	0
Collingullie .	5	0	0
Cooba	5	0	0
Countegany ..	5	0	0
Cowper	5	0	0
Cudgen	5	0	0
Cundumbul	5	0	0
Curban	5	0	0
Deep Creek	5	0	0
Dignam's Creek	5	0	0
Doree .	5	0	0
Downside	5	0	0
Doyle's Creek	5	0	0
Dry River	5	0	0
Dunoon	5	0	0
Emigrant Creek .	5	0	0
Farringdon	5	0	0
Faulconbridge	5	0	0
Ferrier's	5	0	0
Five-mile Creek .	5	0	0
French Park	5	0	0
Galley Swamp	5	0	0
George's Creek	5	0	0
Giant's Creek	5	0	0
Gillenbah	5	0	0
Gingerra Station	5	0	0
Gol Gol	5	0	0

Names of Receiving Offices	Annual Salary £	s.	d
Goonambil	5	0	0
Greghamstown	5	0	0
Gregra	5	0	0
Grogan	5	0	0
Gullen	5	0	0
Halton	5	0	0
Hatfield	5	0	0
Hickey's Creek	5	0	0
Hillas Creek	5	0	0
Hobby's Yards	5	0	0
Holy Flat	5	0	0
Hopefield	5	0	0
Inveralochy	5	0	0
Invergowrie	5	0	0
Ironbong	5	0	0
Jackson's Waterholes	5	0	0
Jingellic	5	0	0
Kaiser	5	0	0
Kangaroobie	5	0	0
Kangaroo Camp	5	0	0
Kerr's Creek	5	0	0
Kilgin	5	0	0
Kilrush	5	0	0
Knorrit Flat	5	0	0
Kyamba	*150	0	0
Lahey's Creek .	5	0	0
Lallarook	5	0	0
Lamb's Creek	5	0	0
Larbert	5	0	0
Larry's Flat .	5	0	0
Laurel Hill	5	0	0
Little Bombay	5	0	0
Little Plain	5	0	0
Lower Tarcutta	5	0	0
Luntsvale	5	0	0
Manar ...	5	0	0
Maracket	5	0	0
Marrana Creek	5	0	0
Maule's Creek	5	0	0
Meringlo	5	0	0
Merool Creek	5	0	0
Middle Adelong	5	0	0
Milburn Creek	5	0	0
Mitta Mitta	5	0	0
Monica Vale	5	0	0
Morago ...	5	0	0
Moiongla Creek	5	0	0
Mount Aubrey	5	0	0
Mount Druitt	5	0	0
Mount Pleasant	5	0	0
Mullengandra	5	0	0
Mumbil	5	0	0
Munmurra	5	0	0
Murragang	5	0	0
Myalla	5	0	0
Nanama	5	0	0
Nangus	5	0	0
Narrawa	5	0	0
Nerong	5	0	0
Newlands	5	0	0
Nicholson's	5	0	0
Noorong	5	0	0
North Bourke	5	0	0
North Yanko	5	0	0
Norton	5	0	0
Numbugga	5	0	0
Nubba	5	0	0

Names of Receiving Offices	Annual Salary £	s	d
Old Burra	5	0	0
Old Goree	5	0	0
Orabah	5	0	0
Orundumbi	5	0	0
Ournie	5	0	0
Parkesbourne	5	0	0
Pelican Island	5	0	0
Porter's Retreat	5	0	0
Pretty Gully	5	0	0
Puddledock	5	0	0
Pulpit Hill	5	0	0
Rock Flat	5	0	0
Rocky Ponds	5	0	0
Rosebrook	5	0	0
St. Thomas'	5	0	0
Salisbury Plains	5	0	0
Sally's Flat	5	0	0
Sandringham	5	0	0
Sandy Hill	5	0	0
Sassafras	5	0	0
Selmes'	5	0	0
Shannon Vale	5	0	0
Shaw	5	0	0
Shooter's Hill	5	0	0
South Casino	8	0	0
Spring Plains	5	0	0
Stanmore	5	0	0
Stony Crossing	5	0	0
Stuart's Point	5	0	0
Sunnyside	5	0	0
Sutton	5	0	0
Tantawanglo	5	0	0
Tathra Road	5	0	0
Tea Gardens	5	0	0
Telegherry	5	0	0
Terra Bella	5	0	0
Tharwa	5	0	0
Thuddungra	5	0	0
Thyra	5	0	0
Tichborne	5	0	0
Timbery Range	5	0	0
Tomboy	5	0	0
Tuckinjah	10	0	0
Ulin	5	0	0
Uley ..	5	0	0
Upper Chichester	5	0	0
Upper Lostock	5	0	0
Uranquinty	5	0	0
Wallangra	5	0	0
Wanstead	5	0	0
Wardry	5	0	0
Ward's River	5	0	0
Warkton .	5	0	0
Warrumbungul	5	0	0
Waverley Station	5	0	0
Wentworth Falls	5	0	0
Williamsdale	5	0	0
Wiseman's Creek	5	0	0
Womboo (Rogers')	5	0	0
Womboota (Edwards) .	5	0	0
Woodhall ..	5	0	0
Wright's	5	0	0
Wyagdon	5	0	0
Yambla ...	5	0	0
Yarrara	5	0	0
Yarrowitch	5	0	0
Yarrowyck	5	0	0
Yathella ...	5	0	0

* Includes salary as Telegraph master.

APPENDIX D.

RETURN showing names of Post Offices and Telegraph Stations, Salaries paid, number of Letters posted, Telegrams transmitted, Money Orders issued and paid, and Revenue received from each Office during the year 1885.

Name of Office.	Designation	Annual Salary.			Number of		Money Orders Issued.		Money Orders Paid.		Revenue.	
		Postal	Telegraph	Total	Letters Posted	Telegraph Messages.	No	Amount.	No.	Amount.	Postal.	Telegraphic
		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d	£ s d	£ s. d.
Abattoirs	Post and Telegraph Master	100 0 0		100 0 0	2,073	871					34 17 6	38 4 7
Aberdeen	Postmaster	35 0 0		35 0 0	13,287	519	266	741 10 8	44	191 16 9	195 19 6	29 3 4
Acacia Creek	do	10 0 0		10 0 0	2,871						14 12 6	
Adaminaby	Post and Telegraph Master	150 0 0		150 0 0	12,063	1,058	491	1,542 11 1	68	304 1 2	143 5 0	68 18 1
	Assistant	24 0 0		24 0 0								
Adamstown	Postmaster	10 0 0		10 0 0	5,103						21 9 0	
Adelong	Post and Telegraph Master	240 0 0		240 0 0	39,966	3,570	795	2,559 12 9	507	1,860 9 10	510 5 0	215 18 10
	Assistant	52 0 0		52 0 0								
	Messenger		52 0 0	52 0 0								
Adelong Crossing-place	Postmaster	34 0 0		34 0 0	2,832							
Albion Park	Postmistress	40 0 0		40 0 0	13,608						116 0 6	
Albury	Postmaster	380 0 0		380 0 0	279,978	226,357	1,681	6,243 14 3	1,660	5,101 2 11	2,314 3 0	1,342 15 5
	1st Assistant	235 0 0		235 0 0								
	2nd do	160 0 0		160 0 0								
	3rd do	135 0 0		135 0 0								
	4th do	120 0 0		120 0 0								
	5th do	100 0 0		100 0 0								
	Letter-carrier	144 0 0		144 0 0								
	do	108 0 0		108 0 0								
	do	104 0 0		104 0 0								
	Telegraph Master		260 0 0	260 0 0								
	2 Operators, at £160 each		320 0 0	320 0 0								
	1 do £100		100 0 0	100 0 0								
	Line-repairer		150 0 0	150 0 0								
	Batteryman		75 0 0	75 0 0								
	3 Messengers, 2 at £39 and 1 at £26		104 0 0	104 0 0								
Aliceton (1)	Postmaster	10 0 0		10 0 0	2,412						26 6 6	
Allandale	do	15 0 0		15 0 0	5,271						49 14 6	
Allynbrook	Postmistress	16 0 0		16 0 0	3,705						22 8 6	
Alma	do	10 0 0		10 0 0	321							
Alstonville	Postmaster	12 0 0		12 0 0	3,591						62 9 6	
Amosfield	do	10 0 0		10 0 0	1,254						18 10 6	
Angledool (2)	Post and Telegraph Master	190 0 0		190 0 0	7,419	1,436					57 19 6	128 16 10
Anvil Creek	Postmaster	35 0 0		35 0 0	15,528	761	375	1,234 10 6	164	531 7 7	179 8 0	45 19 2
	Letter-carrier and Messenger	26 0 0	26 0 0	52 0 0								
	Telegraph Master		85 0 0	85 0 0								
Appin	Postmistress	57 0 0		57 0 0	10,044	858	415	1,169 5 6	77	373 17 0	509 18 6	48 3 3
	Assistant	26 0 0		26 0 0								
	Telegraph Master		100 0 0	100 0 0								
Apple-tree Flat	Postmistress	15 0 0		15 0 0	2,070						12 13 6	
Arakoon	Post and Telegraph Master	10 0 0	75 0 0	85 0 0	1,779	906	131	377 17 9	18	56 0 7	11 14 0	61 10 7

Name of Office.	Designation.	Annual Salary. Postal.	Annual Salary. Telegraph.	Annual Salary. Total.	Number of Letters Posted.	Number of Telegraph Messages.	Money Orders Issued. No.	Money Orders Issued. Amount.	Money Orders Paid. No.	Money Orders Paid. Amount.	Revenue. Postal.	Revenue. Telegraphic.
		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Araluen	Post and Telegraph Master	200 0 0		200 0 0	16,011	1,072	661	1,649 0 7	295	933 18 4	168 11 6	61 0 10
	Assistant	26 0 0		26 0 0								
Argent's Hill	Postmaster	10 0 0		10 0 0	753						9 15 0	
Argoon	do	10 0 0		10 0 0	3,435						38 0 6	
Armidale	do	340 0 0		340 0 0	381,654	14,257	2,460	7,435 17 11	1,628	5,255 8 5	1,203 10 3	1,006 5 2
	1st Assistant	65 0 0		65 0 0								
	2nd do	55 0 0		55 0 0								
	3rd do	100 0 0		100 0 0								
	Letter-carrier	124 0 0		124 0 0								
	Telegraph Master		260 0 0	260 0 0								
	2 Operators, at £130 and £114		244 0 0	244 0 0								
	Line-repairer		150 0 0	150 0 0								
	2 Messengers, at £52 and £39		91 0 0	91 0 0								
Armidale Railway Station	Operator		26 0 0	26 0 0		2,632						148 11 4
Arncliffe	Postmaster	11 0 0		11 0 0	4,428						36 1 6	
	Telephone Operator		39 0 0	39 0 0								
Arthurville	do	10 0 0		10 0 0	1,059						17 11 0	
Ashfield	Post and Telegraph Mistress	180 0 0		180 0 0	224,016	5,870	705	2,130 0 0	597	1,919 13 8	432 9 6	263 10 0
	Letter-carrier	108 0 0		108 0 0								
	do	104 0 0		104 0 0								
	do	26 0 0		26 0 0								
	Receiver-clearer and Messenger	26 0 0	52 0 0	78 0 0								
	Operator		62 0 0	62 0 0								
	3 Messengers at £39		117 0 0	117 0 0								
Ashford	Postmistress	18 0 0		18 0 0	3,702						9 15 0	
Attunga	Postmaster	24 0 0		24 0 0	6,324						39 0 0	
Attunga Springs	do	10 0 0		10 0 0	1,686						22 8 6	
Auburn	do	10 0 0		10 0 0	5,640						15 12 0	
Australasian Steam Navigation Coy.	Operator					588						58 19 2
Avisford	Postmistress	14 0 0		14 0 0	960						7 16 0	
Baan Baa (3)	Postmaster	10 0 0		10 0 0	2,088						49 14 6	
Baker's Swamp	do	10 0 0		10 0 0	1,623						10 14 6	
Balala	do	11 0 0		11 0 0	1,863						24 7 6	
Bald Nob	do	10 0 0		10 0 0	1,962						11 14 0	
Ballalaba	do	21 0 0		21 0 0	1,728							
Ballina	Postmistress	30 0 0		30 0 0	40,122	8,083	1,310	4,847 19 6	255	1,004 19 7	477 15 0	471 10 9
	Assistant and Station-master	25 0 0	180 0 0	205 0 0								
	Operator		75 0 0	75 0 0								
	Messenger		52 0 0	52 0 0								
Balmain	Post and Telegraph Master	180 0 0		180 0 0	153,936	6,615	1,679	5,895 16 7	1,902	6,484 14 7	724 10 0	311 3 5
	1st Assistant and Operator	25 0 0	114 0 0	139 0 0								
	2nd do and Operator	37 10 0	37 10 0	75 0 0								
	Letter-carrier	135 0 0		135 0 0								
	2 Letter-carriers, at £124 each	248 0 0		248 0 0								
	2 do at £104 „	208 0 0		208 0 0								
	Letter-carrier	78 0 0		78 0 0								
	Mail-boy	78 0 0		78 0 0								
	4 Messengers, 3 at £39 and 1 at £26		143 0 0	143 0 0								
Balranald	Post and Telegraph Master	230 0 0		230 0 0	57,828	5,534	675	2,773 7 5	193	762 18 6	939 15 3	385 9 11
	1st Assistant and Operator	50 0 0	75 0 0	125 0 0								
	2nd do	25 0 0		25 0 0								
	Messenger		52 0 0	52 0 0								
Bandon Grove	Postmaster	21 0 0		21 0 0	3,756						39 19 6	
Bankstown	do	22 0 0		22 0 0	2,697						23 8 0	

Bannaby	do	11 0 0	...	11 0 0	1,011	...	...	...	...	...	19 10 0	...
Baradine	Post and Telegraph Master	120 0 0	...	120 0 0	4,761	1,290	207	450 15 9	20	77 0 11	35 10 0	78 17 6
Bargo	Postmaster	10 0 0	...	10 0 0	888	...	...	...	...	...	5 17 0	...
Barmedman	Post and Telegraph Master	170 0 0	...	170 0 0	11,025	1,239	404	1,810 5 2	50	177 6 0	78 0 0	81 13 4
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Barraba	Post and Telegraph Master	200 0 0	...	200 0 0	31,048	1,504	772	1,999 0 6	77	326 18 6	357 12 6	94 12 8
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Barragon	Postmaster	12 0 0	...	12 0 0	723	...	...	...	...	...	14 12 6	...
Barranjoey	Post and Telegraph Master	11 0 0	104 0 0	115 0 0	2,199	448	...	...	...	...	30 4 6	24 4 6
	Assistant	15 0 0	...	15 0 0	...	...	...	...	...	...	...	...
Barrengarry	Postmistress	16 0 0	...	16 0 0	5,760	...	...	...	...	...	58 10 0	...
Barrington	Postmaster	15 0 0	...	15 0 0	2,646	...	...	...	...	...	28 5 6	...
Barringun	Post and Telegraph Master	200 0 0	...	200 0 0	10,221	4,430	437	2,005 10 4	51	285 3 2	205 10 0	395 16 6
Barwang	Postmistress	14 0 0	...	14 0 0	903	...	...	...	...	...	...	...
Bateman's Bay	Post and Telegraph Master	160 0 0	...	160 0 0	8,046	1,766	630	2,356 15 11	281	1,492 2 5	169 10 6	94 9 11
Bathurst	Postmaster	400 0 0	...	400 0 0	489,063	18,113	4,936	18,843 14 7	5,553	16,849 11 3	3,476 14 0	1,200 2 5
	1st Assistant	180 0 0	...	180 0 0	...	...	...	...	...	...	...	...
	2nd do	130 0 0	...	130 0 0	...	...	...	...	...	...	...	...
	3rd do	130 0 0	...	130 0 0	...	...	...	...	...	...	...	...
	4th do	100 0 0	...	100 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	135 0 0	...	135 0 0	...	...	...	...	...	...	...	...
	do	120 0 0	...	120 0 0	...	...	...	...	...	...	...	...
	do	104 0 0	...	104 0 0	...	...	...	...	...	...	...	...
	Receiver-clearer	39 0 0	...	39 0 0	...	...	...	...	...	...	...	...
	Telegraph Station-master	...	310 0 0	310 0 0	...	...	...	...	...	...	...	...
	2 Operators—1 at £160 and 1 at £130	...	290 0 0	290 0 0	...	...	...	...	...	...	...	...
	4 Operators—3 at £114 and 1 at £75	...	417 0 0	417 0 0	...	...	...	...	...	...	...	...
	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	2 Messengers, at £39 and £26	...	65 0 0	65 0 0	...	...	...	...	...	...	...	...
Baulkham Hills	Postmaster	23 0 0	...	23 0 0	3,939	...	...	...	...	...	38 0 6	...
Bayview	Postmistress	10 0 0	...	10 0 0	2,319			...	...	...	36 1 6	...
Beaufort	Postmaster	10 0 0	...	10 0 0	717			...	...	...	11 14 0	...
Bega	Post and Telegraph Master	300 0 0		300 0 0	96,090	12,794	2,029	8,163 4 0	793	2,678 14 0	1,175 12 0	888 2 10
	Assistant and Operator	50 0 0	75 0 0	125 0 0	...	...	...	...	...	...	...	...
	do	25 0 0	...	25 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	75 0 0	...	75 0 0	...	...	...	...	...	...	...	...
	Messenger	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
Belarbigill	Postmaster	10 0 0	...	10 0 0	2,142	...	...	...	...	...	...	...
Belford	Postmistress	14 0 0	...	14 0 0	2,343	...	...	...	...	...	34 2 6	...
Bellbrook	do	10 0 0	...	10 0 0	1,701	359	...	...	...	...	39 0 0	18 5 1
	Telegraph Master	150 0 0	...	150 0 0	...	...	...	...	...	...	...	...
Bellinger Heads	Telegraph Station-master	...	26 0 0	26 0 0	...			...	...	...	...	...
Bell's Creek	Postmaster	16 0 0	...	16 0 0	1,698	...	...	...	...	...	7 16 0	...
Belmont	Postmistress	15 0 0	...	15 0 0	5,370	871	108	279 10 11	418	2,551 5 1	66 6 0	46 11 9
	Telephone Operator	...	36 0 0	36 0 0	...	...	...	...	...	...	...	...
Belmore	Postmaster	10 0 0	...	10 0 0	1,752	...	...	...	...	...	11 14 0	...
Bendemeer	Post and Telegraph Master	160 0 0	...	160 0 0	7,812	857	260	734 13 2	55	307 10 0	98 0 0	51 4 9
	Assistant	20 0 0	...	20 0 0	...	...	...	...	...	...	...	...
Bendolba	Postmistress	21 0 0	...	21 0 0	3,369	...	...	...	...	...	28 5 6	...
Ben Lomond	Postmaster	10 0 0	...	10 0 0	1,915	...		...	...	...	11 14 0	...
Bergalia	do	31 0 0	...	31 0 0	5,076		...	...	...	...	55 11 6	...
Bermagui	do	10 0 0	...	10 0 0	2,457	...	...	...	...	...	43 17 6	...
Berrigan (4)	Postmistress	10 0 0	...	10 0 0	1,614	...		...	...	...	23 8 0	...
Berrima	Postmistress and Telephone Operator	130 0 0	...	130 0 0	22,299	794	400	978 14 6	262	624 16 11	156 1 6	48 3 10
Bethungra	Postmaster	33 0 0	...	33 0 0	6,741	396	270	615 10 8	43	155 7 4	131 12 6	20 19 1
Bexhill	Postmistress	11 0 0	...	11 0 0	2,133		...	...	...	...	12 13 6	...
Bexley	do	10 0 0	...	10 0 0	2,688	...	...	...	...	...	11 14 0	...
Bibbenluke	do	16 0 0	...	16 0 0	7,350	...	...	...	...	...	48 15 0	...
Bigga	Postmaster	15 0 0	...	15 0 0	1,998	...	...	...	...	...	4 17 6	...

Name of Office.	Designation	Annual Salary. Postal	Annual Salary. Telegraph	Annual Salary. Total.	Number of Letters Posted.	Number of Telegraph Messages.	Money Orders Issued. No.	Money Orders Issued. Amount	Money Orders Paid No	Money Orders Paid Amount	Revenue. Postal	Revenue. Telegraph
		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d	£ s. d.	£ s. d.
Big Hill	Postmaster	19 0 0	...	19 0 0	2,160	...	...	...	...	...	32 3 6	...
Biloela	Postmistress	16 0 0	...	16 0 0	8,082	...	...	...	...	...	34 2 6	...
Bimbi	Postmaster	10 0 0	...	10 0 0	2,337	...	...	...	...	...	11 14 0	...
Binalong	do	38 0 0	...	38 0 0	19,740	1,101	913	2,599 12 3	142	348 0 9	224 5 0	63 5 1
	Assistant	12 0 0	...	12 0 0	...	...	...	...	...	...	...	...
Binda	Postmaster	22 0 0	...	22 0 0	7,509		282	620 9 0	48	174 13 6	46 16 0	...
Bingera	Post and Telegraph Master	190 0 0	...	190 0 0	23,175	3,120	804	2,694 8 11	189	814 6 0	372 10 0	215 5 4
	Operator	...	85 0 0	85 0 0		...	...	...	...	...	...	...
Binnaway	Postmaster	21 0 0	...	21 0 0	2,442	...	...	...	...	...	43 17 6	...
Bishop's Bridge	do	14 0 0	...	14 0 0	1,182		...	...	...	...	...	...
Blackheath	do	15 0 0	...	15 0 0	13,154	950	...	...	...	...	144 16 6	50 19 7
Black Mountain	Postmaster	10 0 0	...	10 0 0	3,480	...	...	...	...	...	90 13 6	...
Black Springs	do	14 0 0	...	14 0 0	3,288	...	71	126 0 2	12	19 11 1	20 9 6	...
Blacktown	do	50 0 0	...	50 0 0	17,607	1,747	...	...	...	...	30 4 6	97 6 8
Blackville	do	16 0 0	...	16 0 0	5,505	...	273	630 15 5	17	41 0 2	83 17 0	...
Blackwall	Post and Telegraph Master	25 0 0	52 0 0	77 0 0	5,988	911	...	...	...	...	5 17 0	55 11 5
Blakney Creek	Postmaster	10 0 0	...	10 0 0	1,041	...	...	...	...	...	11 14 0	
Blandford	Post and Telegraph Master	25 0 0	26 0 0	51 0 0	12,090	383	...	...	...	...	138 9 0	22 1 0
Blayney	do do	200 0 0	...	200 0 0	74,145	4,910	1,774	6,126 1 3	685	2,366 3 2	751 12 6	285 11 6
	Operator and Assistant	25 0 0	52 0 0	77 0 0	...	...	...	...	...	...	...	...
	Assistant	10 0 0	...	10 0 0			...	...	...	...	...	...
	Letter-carrier and Messenger	40 0 0	...	40 0 0	...	...	...	...	...	...	...	...
Blowering	Postmaster	11 0 0	...	11 0 0	1,752	...	...	...	...	...	0 19 6	...
Blue Gum Flat	do	12 0 0	...	12 0 0	3,111	...	...	...	...	...	60 9 0	...
Boambola	do	10 0 0	...	10 0 0	243	...	...	...	...	...	1 19 0	...
Boat Harbour	Post and Telegraph Mistress	15 0 0	52 0 0	67 0 0	8,208	1,273	475	1,862 11 4	27	81 6 1	97 10 0	80 17 8
Bobundarah	Postmaster	16 0 0	...	16 0 0	8,370	...	...	...	...	...	14 12 6	...
Bodalla	Post and Telegraph Master	170 0 0	...	170 0 0	13,908	1,601	677	2,799 4 11	81	410 1 3	162 19 6	99 7 1
	Assistant	15 0 0	...	15 0 0	...	...	...	...	...	...	...	...
Boggabri	Post and Telegraph Master	190 0 0	...	190 0 0	17,886	1,554	855	2,509 19 6	92	315 3 6	225 5 0	94 2 10
	Assistant and Operator	50 0 0	26 0 0	76 0 0	...	...	...	...	...	...	...	...
Boggy Flat	Postmistress	11 0 0	...	11 0 0	1,737	...	...	...	...	...	4 17 6	...
Bolivia	Post and Telegraph Master	140 0 0	...	140 0 0	12,129	1,338	776	3,021 12 3	72	336 4 4	166 15 0	94 4 8
	Messenger	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
Bomadary	Postmaster	23 0 0	...	23 0 0	8,094	...	...	...	...	...	25 7 0	...
Bombala	Post and Telegraph Master	280 0 0	...	280 0 0	53,814	6,598	883	2,985 7 8	388	1,025 5 1	621 13 0	427 15 7
	Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
	Assistant	50 0 0	...	50 0 0	...	...	...	...	...	...	...	...
Bomen	Postmaster	30 0 0	...	30 0 0	2,913	112	63	129 13 1	10	33 19 8	29 5 0	6 8 0
Bondi	Postmistress	20 0 0	...	20 0 0	10,416	...	...	...	...	...	76 1 0	...
Bonshaw	Postmaster	25 0 0	...	25 0 0	3,198	...	...	...	...	...	57 10 6	...
Bookham	do	34 0 0	...	34 0 0	22,365	...	...	...	...	...	69 4 6	...
Boolambayte	Postmistress	15 0 0	...	15 0 0	480	...	...	...	...	...	5 17 0	...
Booligal	Post and Telegraph Master	190 0 0	...	190 0 0	44,046	1,758	336	1,349 8 10	45	259 2 8	237 5 0	115 13 5
	Assistant and Operator	50 0 0	75 0 0	125 0 0	...	...	...	...	...	...	...	...
Boomey	Postmaster	10 0 0	...	10 0 0	1,980	...	...	...	...	...	18 10 6	...
Booral	Postmistress	21 0 0	...	21 0 0	8,550	...	...	...	...	...	49 14 6	...
Boorook	do	19 0 0	...	19 0 0	2,961	...	45	86 18 2	10	75 3 9	24 7 6	...
Booroorban	Postmaster	20 0 0	...	20 0 0	9,549	...	...	...	...	...	75 1 6	...
Borenore	Postmistress	10 0 0	...	10 0 0	3,042	...	...	...	...	...	48 15 0	...
Boro	Postmaster	20 0 0	...	20 0 0	6,156	...	...	...	...	...	...	...
Botany	do	38 0 0	...	38 0 0	8,853	...	218	484 11 1	234	837 15 10	73 2 6	...
	Letter-carrier	104 0 0	...	104 0 0	...	...	...	...	...	...	...	...

Botany Road (5)	Postmaster	10 0 0		10 0 0	3,036						22 8 6	
Bourbah (6)	do	10 0 0		10 0 0	693						2 18 6	
Bourke	Post and Telegraph Master	380 0 0		380 0 0	184,641	29,760	3,007	12,161 7 8	871	4,122 5 3	1,982 7 6	2,340 0 0
	1st Assistant	180 0 0		180 0 0								
	2nd do	110 0 0		110 0 0								
	3rd do	50 0 0		50 0 0								
	Operator		175 0 0	175 0 0								
	3 Operators at £150 each		450 0 0	450 0 0								
	Line-repairer		150 0 0	150 0 0								
	Messenger		52 0 0	52 0 0								
	Letter-carrier	104 0 0		104 0 0								
Bourke-street, Redfern	Postmaster	20 0 0		20 0 0	27,315						137 9 6	
Bowan Park	Postmistress	10 0 0		10 0 0	1,182						1 19 0	
Bowenfels	Postmaster	57 0 0		57 0 0	16,071	325	195	578 0 7	85	260 17 0	94 11 6	17 1 0
Bowling Alley Point	do	19 0 0		19 0 0	4,101						68 5 0	
Bowna	Post and Telegraph Master	120 0 0		120 0 0	6,393	690	105	225 10 10	13	35 10 0	106 17 0	39 7 0
Bowning	do do	48 0 0		48 0 0	16,482	850	497	1,253 8 5	81	185 14 11	195 0 0	48 6 11
	Assistant	20 0 0		20 0 0								
Bowrall	Post and Telegraph Master	190 0 0		190 0 0	89,034	3,903	1,206	3,156 12 0	450	1,484 13 0	839 0 0	224 9 6
	Assistant	37 10 0		37 10 0								
	Messenger		39 0 0	39 0 0								
Bowraville	Postmistress and Telephone Operator	26 0 0	26 0 0	52 0 0	6,225	254	292	1,161 3 10	24	109 3 8	40 19 0	13 8 6
Box Ridge	Postmistress	11 0 0		11 0 0	936						17 11 0	
Braidwood	Post and Telegraph Master	260 0 0		260 0 0	61,266	6,313	1,880	5,840 2 4	888	2,574 11 9	725 0 0	409 0 4
	Assistant and Operator	26 0 0	104 0 0	130 0 0								
	do Messenger	26 0 0	26 0 0	52 0 0								
	do Letter-carrier	52 0 0		52 0 0								
	Messenger		26 0 0	26 0 0								
Branxton	Post and Telegraph Master	140 0 0		140 0 0	24,705	1,131	702	2,448 7 5	422	2,044 15 4	179 11 0	67 17 2
	Assistant	52 0 0		52 0 0								
Breadalbane	Postmaster	39 0 0		39 0 0	7,254						118 19 0	
	Assistant	12 0 0		12 0 0								
Breeza	Post and Station-master	42 0 0	26 0 0	68 0 0	8,884	921	532	1,392 2 7	24	76 13 4	107 5 0	55 12 11
Brewarrina	Post and Telegraph Master	250 0 0		250 0 0	80,420	12,064	839	3,509 6 4	181	854 8 9	571 10 0	761 15 0
	Assistant and Operator	52 0 0	120 0 0	172 0 0								
	Operator		100 0 0	100 0 0								
	Line-repairer		150 0 0	150 0 0								
	Messenger		52 0 0	52 0 0								
Brewongle	Postmaster	47 0 0		47 0 0	25,914	529					87 15 0	30 17 6
Bridgeman	Postmistress	14 0 0		14 0 0	1,776						15 12 0	
Bringelly	Postmaster	27 0 0		27 0 0	5,352		111	232 18 4	15	71 2 0	24 7 6	
Broadwater (7)	Post and Telegraph Master	120 0 0		120 0 0	15,462	1,848					170 9 6	113 11 4
Brocklehurst	Postmistress	10 0 0		10 0 0	1,023							
Brogo	Postmaster	12 0 0		12 0 0	2,426							
Broke	Post and Telegraph Master	100 0 0		100 0 0	5,643	579	216	732 8 7	31	86 1 4	56 17 6	30 19 10
Brookfield	Postmistress	15 0 0		15 0 0	2,832						5 17 0	
Brooman	Postmaster	10 0 0		10 0 0	855						23 8 0	
Broughton's Creek	Post and Telegraph Master	220 0 0		220 0 0	23,730	2,277	618	1,575 18 8	118	411 5 2	409 4 6	123 16 10
	Assistant and Messenger	40 0 0	26 0 0	66 0 0								
Brownlow Hill	Postmistress	14 0 0		14 0 0	4,038						14 12 6	
Brown Mountain	Postmaster	15 0 0		15 0 0	4,332						39 19 6	
Brown's Creek	do	12 0 0		12 0 0	3,549						14 12 6	
Brownsville	do	20 0 0		20 0 0	7,305						55 11 6	
Brundah Creek	Postmistress	10 0 0		10 0 0	930						15 12 0	
Brungle	do	13 0 0		13 0 0	753						11 14 0	
Brunswick	Post and Telegraph Master	130 0 0		130 0 0	3,513	623					44 3 0	35 7 7
Brushgrove	do do	140 0 0		140 0 0	13,485	2,255	322	1,135 8 2	66	285 11 2	98 19 6	128 3 5
	Assistant	26 0 0		26 0 0								
Brushy Hill (8)	Postmaster	10 0 0		10 0 0	561						8 15 6	

Name of Office.	Designation.	Annual Salary. Postal.	Annual Salary. Telegraph.	Annual Salary. Total.	Number of Letters Posted	Number of Telegraph Messages	Money Orders Issued. No	Money Orders Issued. Amount.	Money Orders Paid. No	Money Orders Paid. Amount.	Revenue. Postal.	Revenue. Telegraphic.
		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Buchanan	Postmistress	13 0 0		13 0 0	2,061						14 12 6	
Buckley's Crossing-place	Postmaster	17 0 0		17 0 0	7,431						96 10 6	
Budgee Budgee	do	17 0 0		17 0 0	1,629							
Buena Vista	Postmistress	11 0 0		11 0 0	1,410						6 16 6	
Buggil	Postmaster	14 0 0		14 0 0	618							
Bukkulla	Postmistress	15 0 0		15 0 0	2,199							
Bulahdelah	Post and Telegraph Master	130 0 0		130 0 0	6,519	965	475	1,779 5 9	77	281 18 11	130 12 6	59 10 11
	Assistant and Messenger	26 0 0	26 0 0	52 0 0								
Bulgandramine	Postmaster	23 0 0		23 0 0	3,717						23 8 0	
Bulli	Post and Telegraph Master	210 0 0		210 0 0	10,632	3,747	897	2,894 17 7	213	713 0 7	347 5 0	206 11 0
	Operator		75 0 0	75 0 0								
	Messenger		26 0 0	26 0 0								
Bull Plain	Postmaster	10 0 0		10 0 0	1,731						9 15 0	
Bumberry	do	14 0 0		14 0 0	1,986						16 11 6	
Bumble (9)	do	10 0 0		10 0 0	1,782						2 18 6	
Bundanoon	do	31 0 0		31 0 0	10,155	450	327	823 12 10	135	390 7 2	141 7 6	23 19 1
Bundarra	Post and Telegraph Master	190 0 0		190 0 0	16,206	2,502	411	1,235 12 6	91	303 5 3	225 5 0	164 9 4
	Assistant	25 0 0		25 0 0								
Bundella	Postmistress	15 0 0		15 0 0	2,742						48 15 0	
Bungendore	Post and Telegraph Master	190 0 0		190 0 0	110,340	4,793	1,723	5,922 0 2	320	1,087 14 4	487 18 6	275 6 11
	Assistant and Messenger	26 0 0	26 0 0	52 0 0								
Bungonia	Postmistress	38 0 0		38 0 0	8,511		162	448 5 9	45	159 16 10	69 4 6	
Bungowannah	Postmaster	14 0 0		14 0 0	4,425						44 17 0	
Bungwall Flat	Post and Telegraph Mistress	26 0 0	52 0 0	78 0 0	7,359	1,000	371	841 7 2	20	96 11 0	62 8 0	59 10 0
Bunnan (10)	Postmistress	11 0 0		11 0 0	888						17 11 0	
Burraga	Postmaster	17 0 0		17 0 0	9,378		424	1,282 11 3	101	387 2 7	116 0 6	
Burragorang	Postmistress	13 0 0		13 0 0	5,271						30 4 6	
Burrawang	Post and Telegraph Master	130 0 0		130 0 0	16,221	768	328	696 0 1	111	305 0 0	198 0 0	52 19 9
	Assistant	26 0 0		26 0 0								
Burrendong	Postmaster	13 0 0		13 0 0	3,312						29 5 0	
Burrier	do	12 0 0		12 0 0	1,587						33 3 0	
Burrowa	Post and Telegraph Master	200 0 0		200 0 0	40,410	2,856	953	2,399 13 11	289	981 1 4	515 10 0	202 11 7
	Assistant and Messenger	26 0 0	39 0 0	65 0 0								
	Assistant	30 0 0		30 0 0								
Burwood	Post and Telegraph Master	220 0 0		220 0 0	128,821	6,665	813	2,777 18 11	633	2,174 13 7	724 10 0	279 7 2
	Assistant and Operator	52 0 0	26 0 0	78 0 0								
	Letter-carrier and Receiver Clearer	121 16 0		121 16 0								
	do	75 0 0		75 0 0								
	4 Messengers, at £52, £39, £39, and £26 each.		156 0 0	156 0 0								
Bylong	Postmaster	13 0 0		13 0 0	3,435						31 4 0	
Byng	Postmistress	15 0 0		15 0 0	3,102						26 6 6	
Byrock	Post and Telegraph Master	250 0 0		250 0 0	40,981	8,757	930	3,461 13 10	208	737 6 4	431 10 0	573 7 6
	Assistant	125 0 0		125 0 0								
	Messenger		52 0 0	52 0 0								
Cadia	Postmaster	14 0 0		14 0 0	3,401		99	241 5 1	79	245 13 7	39 19 6	
Caloola	do	16 0 0		16 0 0	1,320						10 14 6	
Camberwell	do	21 0 0		21 0 0	2,820						0 19 6	
Cambewarra	Post and Telephone Mistress	21 0 0	26 0 0	47 0 0	12,213	112	190	451 9 5	51	176 6 9	114 1 6	5 14 9
Camden	do Telegraph Master	180 0 0		180 0 0	50,856	2,765	785	2,066 9 3	406	1,358 3 11	467 14 0	157 5 5
	Assistant	50 0 0		50 0 0								
	Letter-carrier and Messenger	39 0 0	39 0 0	78 0 0								
Camden Haven Punt	Postmaster	29 0 0		29 0 0	4,638		159	479 3 1	18	61 16 5	27 6 0	

Camdenville	do	10 0 0	...	10 0 0	2,439	...	...	...	...	...	12 13 6	...
Campbelltown	Post and Telegraph Master	300 0 0	...	300 0 0	105,159	3,444	669	1,942 9 11	478	1,417 13 1	481 14 6	207 19 8
	Assistant	50 0 0	...	50 0 0	...	...	...	...	...	...	...	...
	Operator	...	85 0 0	85 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	104 0 0	...	104 0 0		...	...	...	...	...	...	...
	Messenger	...	52 0 0	...		...	...	...	...	...	...	...
Camperdown	Post and Telegraph Master	200 0 0	...	200 0 0	99,618	2,585	572	2,051 13 3	461	1,870 15 2	408 7 0	117 6 2
	Assistant and Messenger	20 0 0	52 0 0	72 0 0		...	...	...	...	...	...	...
	2 Messengers, at £52 and £26	...	78 0 0	78 0 0	...	...	...	...	...	...	...	...
Canadian Lead	Postmaster	20 0 0	...	20 0 0	2 244	...	81	136 12 1	12	53 0 0	...	...
Canberra	do	15 0 0	...	15 0 0	3,025	...	...	...	...	...	64 7 0	...
Candelo	Post and Telegraph Master	160 0 0	...	160 0 0	27,519	4,036	485	1,385 3 1	125	393 4 4	180 16 0	251 9 8
	Assistant	26 0 0	...	26 0 0	...	...	...	...	...	...	...	...
Canley Vale (11)	Postmaster	10 0 0	...	10 0 0	660	...	...	...	...	...	6 16 6	...
Cannonbar	Post and Telegraph Master	45 0 0	45 0 0	90 0 0	4,323	837	177	552 0 3	38	163 13 8	73 12 6	48 4 10
Canoblas	Postmaster	10 0 0	...	10 0 0	1,035	...	...	...	...	...	24 7 6	...
Canowindra (12)	Post and Telegraph Master	180 0 0	...	180 0 0	13,368	1,158	474	1,379 13 11	51	179 9 6	170 15 0	67 7 6
Canterbury (13)	Postmaster	30 0 0	...	30 0 0	16,830	164	96	255 15 4	95	175 11 3	92 9 6	5 18 5
	Operator	...	50 0 0	50 0 0	...	...	...	...	...	...	...	...
Capertee	Postmaster	70 0 0	...	70 0 0	4,998	195	302	696 15 2	63	194 6 3	115 1 0	11 18 4
Captain's Flat	do	10 0 0	...	10 0 0	747	...	...	...	...	...	11 14 0	
Carcoar	Post and Telegraph Master	240 0 0	...	240 0 0	67,620	4,659	1,562	5,984 14 0	627	1,718 7 2	707 4 6	287 15 0
	Assistant	50 0 0	...	50 0 0		...	...	...	...	...	...	...
	Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
	Messenger	...	39 0 0	39 0 0		...	...	...	...	...	...	...
Cargo	Post and Telegraph Master	...	...	...	15,246	928	337	1,008 7 4	80	311 10 5	104 6 6	56 1 4
Carinda (14)	Postmaster	15 0 0	...	15 0 0	1,391	...	...	...	...	...	37 1 0	...
Carlingford	Postmistress	15 0 0	...	15 0 0	3,594	...	...	...	...	...	15 12 0	...
Carlisle Gully	Postmaster	27 0 0	...	27 0 0	1,839	...	...	...	...	...	14 12 6	...
Carnsdale	Postmistress	13 0 0	...	13 0 0	912			...	...	...	2 18 6	...
Carrathool	Postmaster	31 0 0	...	31 0 0	16,026	1,828	216	712 6 8	32	127 15 2	221 6 6	114 9 1
Carrick	Postmistress	17 0 0	...	17 0 0	3,083	...	...	...	...	...	34 2 6	...
Carroll	Postmaster	30 0 0	...	30 0 0	5,226	...	172	253 3 1	14	67 6 0	37 1 0	...
Casino	Post and Telegraph Master	240 0 0	...	240 0 0	52,356	9,443	1,031	4,017 5 7	233	850 11 9	565 9 6	643 17 7
	Assistant	45 0 0	...	45 0 0		...	...	...	...	...	...	...
	Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
	Letter carrier	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	Messenger	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
Cassilis	Post and Telegraph Master	180 0 0	...	180 0 0	16,407	1,603	628	2,594 10 5	155	578 6 0	254 2 0	106 9 2
	Assistant	25 0 0	...	25 0 0		...	...	...	...	...	...	...
	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0		...	...	...	...	...	...	...
Castle Doyle	Postmistress	10 0 0	...	10 0 0	888		...	...		...	2 18 6	...
Castle Hill	Postmaster	26 0 0	...	26 0 0	4,464		...	...	...	...	80 18 6	...
Castle Mountain	do	10 0 0	...	10 0 0	2,436	...	...	...	...	...	16 11 6	...
Castlereagh	do	12 0 0	...	12 0 0	2,721	...	...	...	...	...	16 11 6	...
Cathcart	do	17 0 0	...	17 0 0	6,450		...	...	...	...	43 17 6	...
Cavan	do	10 0 0	...	10 0 0	396	...	...	...	...	...	2 18 6	...
Cedar Party Creek	do	10 0 0	...	10 0 0	921	...	...	...		...	11 14 0	...
Central Colo	do	10 0 0	...	10 0 0	414	...	...	...	...	...	2 18 6	...
Central M'Donald	do	14 0 0	...	14 0 0	1,147	...	...	...	...	...	34 2 6	...
Cessnock	do	15 0 0	...	15 0 0	4,197	...		...	...	...	...	...
Charlestown	Postmistress	23 0 0	...	23 0 0	6,747	...	229	631 10 11	42	121 18 7	23 8 0	...
Charleyong	Postmaster	10 0 0	...	10 0 0	921	...	...	...	...	...	10 14 6	...
Chatsbury	Postmistress	10 0 0	...	10 0 0	1,292	...	...	...	...	...	23 8 0	...
Chatswood	Postmaster	10 0 0	...	10 0 0	3,821		...	...	...	...	11 14 0	...
Chatsworth Island	Post and Telegraph Master	150 0 0	...	150 0 0	12,552	1,997	408	1,178 16 3	102	499 12 4	192 1 6	123 6 7
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Cheeseman's Creek	Postmaster	21 0 0	...	21 0 0	2,721	...	...	...	...	...	33 3 0	...

Name of Office.	Designation.	Annual Salary. Postal.	Annual Salary. Telegraph.	Annual Salary. Total.	No. of Letters Posted.	No. of Telegraph Messages.	Money Orders Issued. No.	Money Orders Issued. Amount.	Money Orders Paid. No.	Money Orders Paid. Amount.	Revenue. Postal.	Revenue. Telegraphic.
		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Clarence Town	Post and Telegraph Master	190 0 0		190 0 0	17,997	1,968	573	1,668 5 6	106	368 15 2	187 8 0	107 17 3
	Assistant	26 0 0		26 0 0								
	Messenger		39 0 0	39 0 0								
Clarence Tunnel	Postmaster	10 0 0		10 0 0	2,109						13 13 0	
Clarendon	do	18 0 0		18 0 0	7,086						44 17 0	
Clarevaulx	Postmistress	12 0 0		12 0 0	930						11 14 0	
Clarkson's Crossing	do	14 0 0		14 0 0	5,439		314	1,016 7 1	21	76 4 6	61 8 6	
Clifton	Post and Telegraph Master	140 0 0		140 0 0	19,737	700	1,035	3,982 6 7	120	474 19 2	227 13 6	43 6 11
	Messenger		39 0 0	39 0 0								
Clunes	Postmaster	11 0 0		11 0 0	2,166						27 6 0	
lybucca	do	10 0 0		10 0 0	1,206						3 18 0	
obar	Post and Telegraph Master	320 0 0		320 0 0	63,450	10,830	2,185	9,214 2 0	328	1,318 5 6	931 15 6	762 17 1
	Assistant	160 0 0		160 0 0								
	Operator		175 0 0	175 0 0								
	Messenger		52 0 0	52 0 0								
Cobargo	Post and Telegraph Master	140 0 0		140 0 0	24,264	2,054	582	1,953 9 9	88	257 19 11	269 15 0	119 4 8
	Assistant and Messenger	26 0 0	26 0 0	52 0 0								
Cobbadah	Postmistress	28 0 0		28 0 0	3,918						4 17 6	
Cobbitty	Postmaster	16 0 0		16 0 0	3,140						59 9 6	
Cobbora	Post and Telegraph Master	170 0 0		170 0 0	7,263	627					125 9 0	39 2 2
Codrington	Postmaster	13 0 0		13 0 0	2,565						23 8 0	
Colane	do	10 0 0		10 0 0	258							
Coldstream	Postmistress	10 0 0		10 0 0	873							
Colinton (15)	do	10 0 0		10 0 0	1,662						13 13 0	
Collarenebri	do	10 0 0		10 0 0	2,817						27 6 0	
Collector	do	26 0 0		26 0 0	7,284		157	393 19 6	46	125 13 7	42 18 0	
Collie (16)	Postmaster	14 0 0		14 0 0	1,944		102	351 0 4	3	20 0 0	39 0 0	
Colly Blue	Postmistress	11 0 0		11 0 0	1,902		116	371 1 11	2	1 9 0	0 17 6	
Colombo Creek	Postmaster	20 0 0		20 0 0	4,758						88 14 6	
Colo Vale	do	16 0 0		16 0 0	4,209						46 16 0	
Comerong (17)	do	10 0 0		10 0 0	246						2 18 6	
Como	do	10 0 0		10 0 0	2,118						14 12 6	
Comobella	Postmistress	10 0 0		10 0 0	1,128						13 13 0	
Conargo	Postmaster	19 0 0		19 0 0	9,606						113 2 0	
Concord	do	20 0 0		20 0 0	1,832						23 8 0	
	Letter-carrier	63 0 0		63 0 0								
Condobolin	Post and Telegraph Master	220 0 0		220 0 0	29,580	4,970	704	2,362 3 9	142	512 9 7	372 10 0	335 11 11
	Assistant	110 0 0		110 0 0								
	Messenger		26 0 0	26 0 0								
Conjola	Postmaster	21 0 0		21 0 0	1,773						28 5 6	
Cookardinia	do	13 0 0		13 0 0	3,546						54 12 0	
Coolabah (18)	do	10 0 0		10 0 0	636						5 17 0	
Coolac	do	25 0 0		25 0 0	8,736		270	1,184 11 6	15	38 0 8	89 14 0	
Coolah	Post and Telegraph Master	160 0 0		160 0 0	8,730	1,602	285	932 6 3	57	283 10 3	118 0 0	101 14 7
Coolaman (19)	Postmaster	20 0 0		20 0 0	16,422		208	579 18 5	42	141 4 6	214 10 0	
Coolongolook	Postmistress	10 0 0		10 0 0	1,944						53 12 6	
Cooma	Post and Telegraph Master	280 0 0		280 0 0	109,143	8,186	1,304	4,621 15 8	577	1,951 4 3	1,030 3 0	615 1 1
	1st Assistant	180 0 0		180 0 0								
	2nd do	110 0 0		110 0 0								
	Operator		114 0 0	114 0 0								
	Line-repairer		150 0 0	150 0 0								
	Letter-carrier		75 0 0	75 0 0								
Coonabarabran	Post and Telegraph Master	230 0 0		230 0 0	27,063	2,795	732	2,402 0 9	178	493 10 10	359 16 6	190 9 3

Coonabarabran	Assistant and Messenger	26 0 0	52 0 0	78 0 0	...	...	...	...	...	...	...	...
Coonamble	Post and Telegraph Master	270 0 0	...	270 0 0	74,907	10,840	1,063	3,343 0 0	287	1,205 11 1	920 3 6	745 8 11
	3 Operators, £104, £100, £75	...	279 0 0	279 0 0	...	...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
Coopernook	Post mistress	24 0 0	...	24 0 0	11,025	...	251	890 9 4	10	34 16 10	74 2 0	...
Cooranbong	Post and Telegraph Master	130 0 0	...	130 0 0	14,187	1,587	723	3,237 19 1	54	192 17 2	200 16 6	104 8 8
	Messenger	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
Cootamundra	Post and Telegraph Master	330 0 0		330 0 0	110,190	11,121	2,001	7,075 3 4	979	2,974 17 2	1,269 11 3	718 8 8
	Assistant and Operator	75 0 0		75 0 0	...	...	...	...	...	...	...	...
	do do	68 0 0	62 0 0	130 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	52 0 0	...	52 0 0	...	...		...	...	...	...	...
	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0			...	...	...	...	...	...
Cooyal	Postmistress	10 0 0	...	10 0 0	1,275	...	...	...	...	...	12 13 6	...
Copeland North	Post and Telegraph Master	100 0 0	...	100 0 0	9,516	922	633	2,233 4 2	162	715 9 4	124 7 6	55 19 9
	Assistant and Messenger	10 0 0	26 0 0	36 0 0	...	...	...	...	...	...	...	...
Copmanhurst	Post and Telegraph Master	120 0 0	...	120 0 0	5,430	1,066	...	...	...	...	123 16 0	76 9 10
Coraki	do do	180 0 0		180 0 0	24,946	3,677	477	1,522 4 4	99	444 16 8	211 2 6	207 18 2
	Messenger	...	26 0 0	26 0 0		...	...	...	...	...	...	...
Corangula	Postmistress	10 0 0	...	10 0 0	2,004	...		...	...	...	1 19 0	...
Coree	do	13 0 0		13 0 0	2,259	...	...	...	...	...	17 11 0	...
Corowa	Post and Telegraph Master	220 0 0	...	220 0 0	146,799	5,080	609	2,002 14 5	241	742 13 10	893 3 0	318 7 4
	Assistant and Messenger	26 0 0	26 0 0	52 0 0	...			...	...	...	...	...
	Letter-carrier	124 0 0	...	124 0 0	...		...	...	...	...	...	...
Corrowong	Postmistress	11 0 0	...	11 0 0	3,459	...	...	...	...	...	43 17 6	...
Corunna	Postmaster	10 0 0	...	10 0 0	2,085	...	140	342 0 7	27	98 16 7	26 6 6	...
Cow Flat	do	32 0 0	...	32 0 0	2,688		45	79 10 11	17	63 0 6	14 12 6	
Cowra	Post and Telegraph Master	240 0 0	...	240 0 0	82,896	6,041	1,433	5,307 8 10	274	991 7 11	735 10 0	380 5 0
	Assistant and Operator	52 0 0	104 0 0	156 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	50 0 0		50 0 0			...			...		...
	Messenger	...	26 0 0	26 0 0	...	...		...	...	...	...	...
Cox's River	Postmaster	11 0 0	...	11 0 0	912		...	...		...	5 17 0	...
Craigie	do	10 0 0	...	10 0 0	3,234	...	...	...		...	38 0 6	...
Cranbury	do	10 0 0		10 0 0	1,119	...		...	...	...	11 14 0	...
Croki	Post and Telegraph Master	130 0 0	...	130 0 0	9,786	1,384	261	685 12 1	44	227 10 3	88 4 6	79 13 5
Crookhaven Heads	Telegraph Operator	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
Crookwell	Post and Telegraph Master	200 0 0	...	200 0 0	22,868	2,250	854	2,348 17 5	146	426 7 7	362 10 0	135 6 7
	Assistant	20 0 0	...	20 0 0	...	...	...	...	...	...	...	...
Croydon	Post and Telegraph Mistress	50 0 0	26 0 0	76 0 0	107,820	1,019	...	...	...	...	195 0 0	39 13 1
	Letter-carrier	62 0 0	...	62 0 0		...	...	...	...	...	...	...
Crudine	Postmaster	19 0 0	...	19 0 0	1,713	...	...	...	...	...	15 12 0	...
Cudal	Post and Telegraph Master	140 0 0	...	140 0 0	23,652	1,606	518	1,317 10 11	132	379 10 2	303 15 0	95 6 10
	Assistant and Messenger	26 0 0	26 0 0	52 0 0		...	...	...	...	...	...	...
Cudgegong	Postmaster	19 0 0	...	19 0 0	11,034	...	104	248 0 9	35	119 13 11	46 16 0	...
Cudgen Scrub	do	10 0 0	...	10 0 0	1,554	...	...	...	...	...	17 11 0	...
Cugong	Postmistress	10 0 0	...	10 0 0	549	...	...	...	...	...	...	...
Culcairn	Postmaster	26 0 0	...	26 0 0	8,805	788	...	...	...	...	154 1 0	43 13 5
Cullenbone	Postmistress	12 0 0	...	12 0 0	1,125		...	...	...	...	8 15 6	...
Cullen Bullen	do	42 0 0	...	42 0 0	3,612		...	...	...	...	101 8 0	...
Cullinga	Postmaster	10 0 0	...	10 0 0	882	...	...	...	...	...	14 12 6	...
Cumnock	Postmistress	13 0 0	...	13 0 0	2,520	...	...	...	...	...	1 19 0	...
Cundletown (20)	Post and Telegraph Master	180 0 0	...	180 0 0	13,848	1,930	462	1,485 12 3	118	481 10 2	235 10 0	107 10 9
	Assistant and Operator	...	13 0 0	13 0 0	...	...	...	...	...	...	...	...
Cungegong	Postmaster	20 0 0	...	20 0 0	1,727	...	...	...	...	...	34 2 6	...
Cunningham	do	15 0 0	...	15 0 0	7,773	...	...	...	...	...	68 5 0	...
Curlewis	do	15 0 0	...	15 0 0	4,434	...	...	...	...	...	71 3 6	...
Currabubula	do	21 0 0	...	21 0 0	5,217	...	226	465 5 0	23	63 10 9	93 12 0	...
Currawang	Postmistress	17 0 0	...	17 0 0	2,568	...	87	192 15 7	55	279 16 9	24 7 6	...
Curraweela	Postmaster	15 0 0	...	15 0 0	1,620	...	...	...	...	...	14 12 6	...

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		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Dalmorton	Postmistress	19 0 0		19 0 0	1,968						21 9 0	
Dalton	Postmaster	21 0 0		21 0 0	7,971		168	298 11 3	25	55 11 7	88 14 6	
Dandaloo	do	26 0 0		26 0 0	29,889		227	927 4 9	20	50 3 7	123 17 0	
Dapto	Post and Telephone Master	42 0 0	26 0 0	68 0 0	7,143	627	233	529 11 2	42	188 13 11	69 4 6	33 16 7
Darby's Falls	Postmaster	11 0 0		11 0 0	930						12 13 6	
Darlington	Post and Telegraph Mistress	120 0 0		120 0 0	39,099	2,225	505	1,940 0 5	414	1,121 16 0	307 16 6	105 14 9
	Messenger		39 0 0	39 0 0								
Darlington Point	Post and Telegraph Master	110 0 0		110 0 0	24,612	504	281	745 19 7	27	153 1 0	100 18 6	31 5 1
Darlington Railway Station	Postmaster	23 0 0		23 0 0	5,652	273					48 15 0	15 7 2
Davies Creek	do	10 0 0		10 0 0	1,146							
Day Dream (21)	do	10 0 0		10 0 0	3,036						2 18 6	
Daysdale	Postmistress	16 0 0		16 0 0	9,293						14 12 6	
Deepwater	Post and Telegraph Master	150 0 0		150 0 0	12,051	1,592	505	1,700 0 11	57	260 15 2	127 12 6	103 9 5
Delegate	do do	110 0 0		110 0 0	12,684	1,475	396	1,047 15 8	39	172 4 11	132 5 0	90 18 5
	Messenger		39 0 0	39 0 0								
Demondrille (22)	Postmaster	10 0 0		10 0 0	636						9 15 0	
Denihquin	do	320 0 0		320 0 0	253,866	11,208	819	1,978 1 10	652	2,066 5 9	1,820 15 0	763 19 4
	1st Assistant	235 0 0		235 0 0								
	2nd do	160 0 0		160 0 0								
	Letter-carrier	135 0 0		135 0 0								
	Receiver-clerner	48 0 0		48 0 0								
	Telegraph Master		310 0 0	310 0 0								
	5 Operators, £175, £130, £114, £114, £90		623 0 0	623 0 0								
	Line-repairer		150 0 0	150 0 0								
	3 Messengers, £52, £39, £26		117 0 0	117 0 0								
Denison Town	Postmaster	19 0 0		19 0 0	5,070						39 0 0	
Denman	Post and Telegraph Mistress	100 0 0		100 0 0	24,495	1,152	349	1,038 9 6	57	241 2 11	232 11 6	68 8 5
	Operator		104 0 0	104 0 0								
Dingo Creek	Postmaster	14 0 0		14 0 0	1,530						4 17 6	
Doughboy Hollow (23)	do	10 0 0		10 0 0	579						6 16 6	
Douglas	do	20 0 0		20 0 0	8,049	671					42 18 0	47 2
Douglas Gap (24)	do	10 0 0		10 0 0	300						8 15 6	
Drake	Postmistress	12 0 0		12 0 0	2,916						14 12 6	
Druitt Town	Postmaster	15 0 0		15 0 0	5,325						39 0 0	
Drummoyne	do	12 0 0		12 0 0	2,985						22 8 6	
Dry Plain	do	10 0 0		10 0 0	894						14 12 6	
Dubbo	do	360 0 0		360 0 0	204,480	20,589	2,822	8,852 9 4	2,105	6,736 4 4	1,990 15 6	1,339 2 3
	1st Assistant	160 0 0		160 0 0								
	2nd do	100 0 0		100 0 0								
	3rd do	50 0 0		50 0 0								
	Letter-carrier	114 0 0		114 0 0								
	2 Operators, at £160, £114		274 0 0	274 0 0								
	Line-repairer		150 0 0	150 0 0								
	Messenger		39 0 0	39 0 0								
Duckmaloi	Postmistress	10 0 0		10 0 0	1,302						17 11 0	
Dunbar's Creek	Postmaster	10 0 0		10 0 0	1,164						20 9 6	
Dundee	do	18 0 0		18 0 0	5,181		149	418 8 10	14	44 19 5	6 16 6	
Dungaree	do	23 0 0		23 0 0	9,816		149	311 13 1	27	105 15 4	53 12 6	
Dungog	Post and Telegraph Master	200 0 0		200 0 0	29,661	2,631	500	1,380 17 9	165	570 15 9	443 4 0	151 16 1
	Assistant	52 0 0		52 0 0								
	Letter-carrier	26 0 0		26 0 0								
	Line-repairer		150 0 0	150 0 0								
Dungowan	Postmaster	15 0 0		15 0 0	2,838						57 10 6	

Dunkeld	do	12 0 0		12 0 0	1,125								
Dural	do	12 0 0		12 0 0	3,480							23 8 0	
Eagleton	Postmistress	10 0 0		10 0 0		786						4 17 6	
Eastern Creek	Postmaster	14 0 0		14 0 0	1,641							21 9 0	
East Kangaloon	do	15 0 0		15 0 0	4,014							44 17 0	
East Kempsey	do	25 0 0		25 0 0	4,671		113	422 13 0	15	60 2 0		39 0 0	
East Maitland	Post and Telegraph Master	260 0 0		260 0 0	100,374	4,805	1,068	3,927 0 3	679	2,040 7 9		513 10 0	297 11 1
	Assistant and Operator	110 0 0	52 0 0	162 0 0									
	Letter-carrier	120 0 0		120 0 0									
	do	100 0 0		100 0 0									
	Messenger		39 0 0	39 0 0									
East Raleigh	Postmaster	10 0 0		10 0 0	1,395							22 8 6	
East Wardell	do	16 0 0		16 0 0	2,571							69 8 0	
Eastwood	do	10 0 0		10 0 0	4,731							43 17 6	
Eauabalong	Post and Telegraph Master	190 0 0		190 0 0	19,638	1,367	254	1,057 11 5	26	154 11 5		352 10 0	98 0 8
	Operator		85 0 0	85 0 0									
Ebenezer	Postmistress	11 0 0		11 0 0	876							21 9 0	
Eccleston	Postmaster	18 0 0		18 0 0	1,797							26 6 6	
Eden	Post and Telegraph Master	170 0 0		170 0 0	15,525	3,982	543	1,986 15 9	141	624 9 5		215 15 0	232 6 8
	Line repairer		150 0 0	150 0 0									
Elderslie	Postmaster	12 0 0		12 0 0	996							8 15 6	
Edgecliff	Post and Telegraph Mistress	150 0 0		150 0 0	53,799	4,727						548 15 0	240 18 10
	Operator		85 0 0	85 0 0									
	2 Messengers, at £39 each		78 0 0	78 0 0									
Ellalong	Postmistress	13 0 0		13 0 0	3,924							103 7 0	
Ellenborough	do	12 0 0		12 0 0	1,854							14 12 6	
Elsmore	Postmaster	14 0 0		14 0 0	2,991							30 4 6	
Emmaville	Post and Telegraph Master	230 0 0		230 0 0	48,114	5,247	1,645	7,560 11 11	378	1,662 19 5		508 15 0	356 13 7
	Operator		100 0 0	100 0 0									
	Messenger		39 0 0	39 0 0									
Emu	Postmaster	23 0 0		23 0 0	4,215		57	170 5 2	219	609 6 4		39 0 0	
Emu Plains (25)	do	36 0 0		36 0 0	8,456	150	129	312 10 1	25	51 19 0		9 15 0	8 16 3
	Assistant	10 0 0		10 0 0									
Enfield	Postmaster	21 0 0		21 0 0	4,437								
Enngonia	Post and Telegraph Master	140 0 0		140 0 0	8,040	2,143						118 11 0	167 2 6
Ennis	Postmaster	21 0 0		21 0 0	1,986								
Erina	Postmistress	10 0 0		10 0 0	1,242							7 16 0	
Ermington	Postmaster	18 0 0		18 0 0	3,738							33 3 0	
Esrom	do	26 0 0		26 0 0	9,681								
Essington	do	11 0 0		11 0 0	1,149							12 13 6	
Eugowra	Post and Telegraph Master	160 0 0		160 0 0	14,292	788	392	1,012 7 11	68	320 12 5		39 0 0	44 11 8
	Messenger		39 0 0	39 0 0									
Euloure	Postmistress	13 0 0		13 0 0	3,798							18 10 6	
Eureka (26)	Postmaster	10 0 0		10 0 0	804							2 18 6	
Eurobodalla	do	30 0 0		30 0 0	3,198		127	525 3 0	4	9 15 0		43 17 6	
Eurunderee	do	18 0 0		18 0 0	3,063							21 9 0	
Euston	Post and Telegraph Master	160 0 0		160 0 0	11,877	1,263	402	1,950 6 8	21	49 16 7		153 5 0	87 0 8
	Assistant and Operator	25 0 0	104 0 0	129 0 0									
Evans' Plains	Postmaster	12 0 0		12 0 0	1,062							19 10 0	
Eversleigh	do	10 0 0		10 0 0	4,359							77 4 6	
Fairfield (27)	do	10 0 0		10 0 0	4,632							14 12 6	
Fairy Meadow	do	25 0 0		25 0 0	4,128							24 7 6	
Farley	Postmistress	10 0 0		10 0 0	1,473							11 14 0	
Farnell	Postmaster	10 0 0		10 0 0	3,444							43 17 6	
Fernmount	Post and Telegraph Master	150 0 0		150 0 0	11,661	2,789	552	2,051 19 10	99	476 17 11		176 15 0	165 10 6
	Assistant Operator		26 0 0	26 0 0									
Field of Mars	Postmistress	22 0 0		22 0 0	2,073							31 4 0	
Fig-Tree	Postmaster	32 0 0		32 0 0	7,218							70 4 0	
Firefly Creek	do	11 0 0		11 0 0	2,727							19 10 0	

Name of Office.	Designation.	Annual Salary. Postal.	Annual Salary. Telegraph.	Annual Salary. Total.	Number of Letters posted.	Number of Telegraph Messages.	Money Orders Issued. No.	Money Orders Issued. Amount.	Money Orders Paid. No.	Money Orders Paid. Amount.	Revenue. Postal.	Revenue. Telegraphic.
		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Fish River Creek	Postmaster	13 0 0		13 0 0	1,407							
Fitzgerald's Valley	Postmistress	10 0 0		10 0 0	1,104							
Five Dock	Postmaster	10 0 0		10 0 0	5,349							
	Letter-carrier	104 0 0		104 0 0								
Forbes	Post and Telegraph Master	300 0 0		300 0 0	106,014	13,429	1,516	4,315 15 1	820	2,680 14 8	1,321 0 0	907 6 6
	Assistant	160 0 0		160 0 0								
	Operator		150 0 0	150 0 0								
	do		100 0 0	100 0 0								
	Letter-carrier	135 0 0		135 0 0								
	Messenger		52 0 0	52 0 0								
	do		26 0 0	26 0 0								
Forest Reefs	Postmaster	17 0 0		17 0 0	5,556		253	743 18 7	28	85 19 1	58 10 0	
Forster	Post and Telegraph Master	110 0 0		110 0 0	7,602	909	253	664 7 8	29	130 13 11	70 11 6	49 17 10
Foxlow	Postmaster	14 0 0		14 0 0	2,796						38 0 6	
Frederickton	Post and Telegragh Master	130 0 0		130 0 0	13,764	2,192	269	891 16 3	47	174 5 0	113 17 0	113 18 6
	Assistant	26 0 0		26 0 0								
Freeman's Reach	Postmaster	15 0 0		15 0 0	2,163							
Freemantle	do	10 0 0		10 0 0	1,029						11 14 0	
Frogmoor	do	18 0 0		18 0 0	5,588		296	671 8 6	84	383 5 11	73 2 6	
Fullerton	do	11 0 0		11 0 0	1,059						12 13 6	
Gabo Island	Operator		62 0 0	62 0 0		43						1 18 9
Garah	Postmaster	10 0 0		10 0 0	2,130						39 19 6	
Garra (28)	Postmistress	15 0 0		15 0 0	1,728						18 10 6	
Gegedzerick	Postmaster	23 0 0		23 0 0	10,695		203	688 10 6	7	17 18 6	78 0 0	
Gentleman's Halt	do	10 0 0		10 0 0	966						30 4 6	
George's Plains	do	35 0 0		35 0 0	6,975	218					74 2 0	11 1 3
	Assistant	10 0 0		10 0 0								
George-street West	Post and Telegraph Master	240 0 0		240 0 0	124,287	5,418	1,394	5,025 16 9	418	1,341 15 9	442 0 0	255 9 1
	Assistant and Operator	25 0 0	104 0 0	129 0 0								
	Operator		62 0 0	62 0 0								
	2 Messengers, at £52 and £39 each		91 0 0	91 0 0								
German Creek	Postmistress	10 0 0		10 0 0	1,413						25 7 0	
German's Hill	Postmaster	10 0 0		10 0 0	1,029						15 4 0	
Germanton	Post and Telegraph Master	210 0 0		210 0 0	28,479	2,655	621	1,719 19 9	159	430 3 3	430 1 0	160 12 5
	Assistant	50 0 0		50 0 0								
Gerogery	Postmaster	22 0 0		22 0 0	6,609	470	167	454 1 0	35	118 2 2	161 17 0	26 4 6
Gerringong	Post and Telegraph Master	50 0 0	26 0 0	76 0 0	14,094	730	321	986 11 11	50	173 3 3	154 5 0	40 15 5
Gerrymberryn	Postmistress	10 0 0		10 0 0	1,113						18 10 6	
Ghinni Ghinni	Postmaster	18 0 0		18 0 0	1,695						34 2 6	
Gilgai	do	13 0 0		13 0 0	1,374						14 12 6	
Gilgandra	Post and Telegraph Master	200 0 0		200 0 0	14,943	1,151	422	1,269 5 7	23	59 17 2	176 15 0	75 2 0
	Assistant	26 0 0		26 0 0								
Gilgunnia	Postmaster	16 0 0		16 0 0	4,356						63 7 6	
Gilmore	do	11 0 0		11 0 0	1,914							
Gingkin	do	11 0 0		11 0 0	2,697							
Ginninderra	Post and Telegraph Master	100 0 0		100 0 0	6,062	680					22 8 6	
Girilambone	Postmaster and Operator	13 0 0	13 0 0	26 0 0	10,338	1,730	259	764 6 9	45	232 7 8	32 3 6	41 3 7
Gladesville	Postmistress	27 0 0		27 0 0	31,347	238					167 0 0	108 16 4
	Telegraph Operator		52 0 0	52 0 0							170 12 6	9 5 5
	Letter-carrier	40 0 0		40 0 0								
Gladstone	Post and Telegraph Master	19 0 0	36 0 0	55 0 0	4,897	1,296	254	945 3 6	21	65 0 8	27 15 6	65 8 2
Glanmire	Postmistress	42 0 0		42 0 0	2,289						448 10 0	
Glasston	do	14 0 0		14 0 0	2,621						24 7 6	

Glebe	Post and Telegraph Mistress	140 0 0	...	140 0 0	102,480	5,414	691	2,392 16 8	1,142	3,658 6 2	392 0 0	249 0 11
	Assistant	26 0 0	...	26 0 0	...	...	...	...	...	...	...	...
	3 Messengers—1 at £52, and 2 at £39 each	...	130 0 0	130 0 0	...	...	...	...	...	...	...	...
Glebeland	Postmistress	21 0 0	...	21 0 0	11,064	...	503	1,410 7 10	62	157 11 2	143 6 6	...
Glen Alice	Postmaster	14 0 0	...	14 0 0	1,716	...	...	...	...	...	24 7 6	...
Glenbrook	do	10 0 0	...	10 0 0	2,259	...	...	...	...	...	39 19 6	...
Glencoe	do	15 0 0	...	15 0 0	5,148	...	...	...	...	...	70 4 0	...
Glendon Brook	Postmistress	11 0 0	...	11 0 0	3,147	...	...	...	...	...	10 13 6	...
Glen Innes	Post and Telegraph Master	330 0 0	...	330 0 0	199,521	17,501	2,603	9,047 14 5	1,336	4,871 0 2	1,862 0 0	1,094 14 1
	1st Assistant	120 0 0	...	120 0 0	...	...	...	...	...	...	...	...
	2nd do	70 0 0	...	70 0 0	...	...	...	...	...	...	...	...
	3rd do	75 0 0	...	75 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	104 0 0	...	104 0 0	...	...	...	...	...	...	...	...
	Receiver-clearer	26 0 0	...	26 0 0	...	...	...	...	...	...	...	...
	5 Operators—2 at £150, 1 at £104, and 2 at £100 each	...	604 0 0	604 0 0	...	...	...	...	...	...	...	...
	Line repairer	...	125 0 0	125 0 0				...	...	...	...	...
	2 Messengers—1 at £52 and 1 at £39		91 0 0	91 0 0	...		...	...	...	...	...	...
Glen Morrison	Postmaster	12 0 0	...	12 0 0	1,713			...	...	...	37 1 0	...
Glennie's Creek	Postmistress	19 0 0	...	19 0 0	3,936	...	...	...	...	...	60 9 0	...
Glenoak	do	13 0 0	...	13 0 0	2,628		...	...	...	...	52 13 0	...
Glen William	Postmaster	10 0 0	...	10 0 0	1,518	...		...	...	...	15 12 0	...
Gloucester	Post and Telegraph Master	100 0 0	...	100 0 0	7,566	778	144	499 15 7	18	28 7 8	28 6 6	43 17 3
Gocup (29)	Postmaster	10 0 0	...	10 0 0	444	...		...	...	...	2 18 6	...
Golspie	do	15 0 0	...	15 0 0	4,116			...	...	...	32 3 6	...
Gongolgon	Post and Telegraph Master	190 0 0	...	190 0 0	5,580	1,613	276	1,022 7 10	22	102 19 8	76 16 0	102 14 0
Good Hope	Postmaster	10 0 0	...	10 0 0	657	...		...	...	...	5 17 0	...
Goodooga	Post and Telegraph Master	210 0 0	...	210 0 0	29,085	4,298	321	1,522 17 6	77	383 12 8	226 2 0	269 2 7
	Assistant and Messenger	26 0 0	26 0 0	52 0 0	...			...	...	...	...	...
Goolagong	Postmaster	14 0 0	...	14 0 0	5,148		...	...	...	...	53 12 6	...
Goolma	do	10 0 0	...	10 0 0	3,093	...		...		...	17 11 0	...
Goombargona	do	10 0 0	...	10 0 0	1,185	...	...	...	...	...	11 14 0	...
Goomoorah	do	10 0 0	...	10 0 0	3,147	...		...	...	...	29 5 0	...
Goonoo Goonoo	do	30 0 0	...	30 0 0	6,495	...	154	395 13 8	20	75 10 11	82 17 6	...
Goorangoola	do	15 0 0	...	15 0 0	1,383	...	...	...	...	...	41 18 6	...
Goran Lake	do	10 0 0	...	10 0 0	894	...	...	...	...	...	8 15 6	...
Gore Hill (30)	do	10 0 0	...	10 0 0	4,441	...	...	...	...	...	21 9 0	...
Gordon	Postmistress	22 0 0	...	22 0 0	5,097	...	...	...	...	...	67 5 6	...
Gosford	Post and Telegraph Master	200 0 0	...	200 0 0	42,552	5,367	1,410	5,324 4 9	212	749 3 7	494 4 6	341 6 9
	Assistant	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	Messenger	...	85 0 0	85 0 0	...	...	...	...	...	...	...	...
Goulburn	Postmaster	400 0 0	...	400 0 0	714,819	26,192	5,519	18,447 10 1	6,041	18,828 2 11	4,446 13 6	1,709 1 2
	1st Assistant	235 0 0	...	235 0 0		...	...	...	...	...	...	...
	2nd do	210 0 0	...	210 0 0	...	...	...	...	...	...	...	...
	3rd do	135 0 0	...	135 0 0	...	...	...	...	...	...	...	...
	4th do	110 0 0	...	110 0 0	...	...	...	...	...	...	...	...
	5th do	110 0 0	...	110 0 0	...	...	...	...	...	...	...	...
	6th do	75 0 0	...	75 0 0	...	...	...	...	...	...	...	...
	7th do	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	Stamper and Sorter	130 0 0	...	130 0 0	...	...	...	...	...	...	...	...
	2 Letter-carriers, at £120 each	240 0 0	...	240 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	114 0 0	...	114 0 0	...	...	...	...	...	...	...	...
	do	108 0 0	...	108 0 0	...	...	...	...	...	...	...	...
	do and Receiver-clearer	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	Telegraph-master	...	310 0 0	310 0 0	...	...	...	...	...	...	...	...
	6 Operators—2 at £130, 3 at £114, and 1 at £104 each.	...	706 0 0	706 0 0	...	...	...	...	...	...	...	...
	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
Goulburn	4 Messengers—3 at £52, and 1 at £39	...	195 0 0	195 0 0	...	...	...	...	...	...	...	...

Name of Office.	Designation.	Annual Salary			Number of		Money Orders Issued.		Money Orders Paid.		Revenue	
		Postal	Telegraph.	Total	Letters Posted	Telegraph Messages.	No	Amount	No.	Amount.	Postal	Telegraphic.
		£ s. d.	£ s. d.	£ s. d.				£ s. d		£ s. d.	£ s. d.	£ s. d.
Grafton	Post and Telegraph Master	360 0 0	...	360 0 0	295,563	24,108	2,774	11,627 13 11	1,333	4,369 1 10	1,622 15 6	1,611 17 10
	Assistant	100 0 0	.	100 0 0								
	Letter-carrier	124 0 0	..	124 0 0	.							
	do	114 0 0		114 0 0								
	Receiver-clearer	39 0 0	..	39 0 0								
	6 Operators—1 at £160, 2 at £150, 1 at £114, 1 at £100, and 1 at £62.		736 0 0	736 0 0								
	Line-repairer		150 0 0	150 0 0								
	2 Messengers, at £39 each		78 0 0	78 0 0								
Grahamstown	Postmaster	10 0 0		10 0 0	4,659						78 19 6	
Graman (31)	Postmistress	10 0 0		10 0 0	267						2 18 6	
Granville (32)	do	150 0 0		150 0 0	60,927	3,683	681	2,188 3 6	570	1,651 18 6	412 2 6	153 1 0
	Assistant	75 0 0		75 0 0								
	do	52 0 0		52 0 0								
	Operator		104 0 0	104 0 0								
	Messenger		52 0 0	52 0 0								
	Letter-carrier	90 0 0		90 0 0								
	do	52 0 0		52 0 0								
Green Cape	Telegraph-master		104 0 0	104 0 0		101						5 12 7
Greendale	Postmistress	16 0 0		16 0 0	2,313						67 5 6	
Greenfield Farm	Postmaster	11 0 0		11 0 0	1,161						11 14 0	
Greenhill	do	16 0 0		16 0 0	7,428		117	359 8 11	16	83 15 0	39 0 0	
Greenmantle	do	10 0 0		10 0 0	474						19 10 0	
Greenwell Point	Postmaster and Telegraph Operator	13 0 0	26 0 0	39 0 0	5,631	237	287	899 15 11	263	988 10 3	46 16 0	12 3 3
Greenwich	Postmistress	10 0 0		10 0 0	2,142						23 8 0	
Greenwich Park	do	10 0 0		10 0 0	1,083							
Grenfell	Post and Telegraph Master	260 0 0		260 0 0	65,433	5,148	1,103	3,482 12 2	402	1,176 17 2	691 16 0	325 17 2
	Assistant	50 0 0		50 0 0								
	Operator		100 0 0	100 0 0								
	Messenger		52 0 0	52 0 0								
Gresford	Postmaster and Telephone Operator	50 0 0	26 0 0	76 0 0	9,270						158 18 6	
Grong Grong Railway Station	Postmaster	10 0 0		10 0 0	3,120						65 6 6	
Grose Vale	do	10 0 0		10 0 0	13,875						11 14 0	
Guildford	Postmistress	11 0 0		11 0 0	2,100						18 11 6	
Gulargambone	Post and Telegraph Master	50 0 0	50 0 0	100 0 0	15,381	949					203 15 6	60 16 6
Gulgong	do do	240 0 0		240 0 0	33,244	4,162	965	2,841 4 4	557	2,143 16 6	593 0 0	297 3 2
	Assistant	75 0 0		75 0 0								
	Messenger		39 0 0	39 0 0								
Gunbar	Postmaster	21 0 0		21 0 0	9,606		93	251 3 2	2	6 4 0	107 5 0	
Gundagai	Post and Telegraph Master	260 0 0		260 0 0	99,185	7,095	1,443	4,871 1 7	420	1,405 1 6	628 0 0	445 5 11
	Assistant	25 0 0		25 0 0								
	Operator		104 0 0	104 0 0								
	Line repairer		150 0 0	150 0 0								
	Messenger		52 0 0	52 0 0								
Gundurimba	Postmaster	13 0 0		13 0 0	2,787						16 11 6	
Gundy	do	12 0 0		12 0 0	3,963						19 10 0	
Gungal	do	16 0 0		16 0 0	3,459						19 10 0	
Gunnedah	Post and Telegraph Master	280 0 0		280 0 0	69,270	9,883	1,457	4,313 11 2	656	1,973 4 8	1,121 17 6	653 14 7
	Assistant	50 0 0		50 0 0								
	2 Operators, at £114 and £100 each		214 0 0	214 0 0								
	Messenger		52 0 0	52 0 0								
Gunning	Post and Telegraph Master	180 0 0		180 0 0	35,079	1,568	697	1,904 4 1	369	1,221 12 6	361 14 0	93 4 10
	Assistant	50 0 0		50 0 0								
Guntawang	Postmaster	19 0 0		19 0 0	3,984						86 15 6	

Gurrundah	do	10 0 0		10 0 0	498						2 18 6		
Guyong	do	21 0 0		21 0 0	2,652		53	93 6 5	11	51 15 0	19 10 0		
Guyra (33)	do	30 0 0		30 0 0	22,170	624					229 2 6	38 0 1	
	Operator		26 0 0	26 0 0									
Hamilton	Post and Telegraph Mistress	100 0 0		100 0 0	21,489	1,389	724	2,444 7 2	271	749 1 6	138 8 0	74 0 8	
	Letter-carrier	104 0 0		104 0 0									
	Messenger		39 0 0	39 0 0									
Hanging Rock	Postmaster	14 0 0		14 0 0	2,580						39 0 0		
Harden	Post and Telegraph Master	120 0 0		120 0 0	17,736	1,829	691	1,822 17 8	140	437 7 8	158 0 0	100 19 7	
Harefield	Postmaster	16 0 0		16 0 0	3,442						38 0 6		
Hargraves	Postmistress	20 0 0		20 0 0	4,083		230	602 16 8	36	193 12 4	37 1 0		
Harrington	Post and Telegraph Mistress	10 0 0	26 0 0	36 0 0	1,908	320					5 17 0	11 15 0	
Harris-street	Postmaster	25 0 0		25 0 0	37,665		737	2,704 7 2	35	94 19 6	502 2 6		
Hartley	Postmistress	20 0 0		20 0 0	5,046		139	376 0 9	13	26 0 2	34 2 6		
Hartley Vale	do	20 0 0		20 0 0	9,852		541	1,609 2 0	100	214 0 6	98 9 6		
Harwood Island	Post and Telegraph Master	120 0 0		120 0 0	10 770	1,625					128 6 6	101 9 3	
Hawke's Nest (34)	Postmistress	16 0 0		16 0 0	2,211		163	585 5 10	28	120 13 5	33 3 0		
Hay	Post and Telegraph Master	370 0 0		370 0 0	242,973	20,814	1,907	7,269 19 6	999	3,512 16 1	2,074 16 6	1,382 8 6	
	1st Assistant	160 0 0		160 0 0									
	2nd do	100 0 0		100 0 0									
	2 Letter-carriers—1 at £104, 1 at £75	179 0 0		179 0 0									
	Operators—1 at £114, 2 at £75 each		264 0 0	264 0 0									
	Line-repairer		150 0 0	150 0 0									
	Messenger		52 0 0	52 0 0									
Haydonton	Postmistress	48 0 0		48 0 0	15,525	2,076					293 9 6	114 18 0	
	Railway Operator		26 0 0	26 0 0									
	Messenger		39 0 0	39 0 0									
Haymarket	Postmaster	400 0 0		400 0 0	625,017	23,519	4,939	17,646 11 9	3,390	10,687 14 3	2,583 8 6	1,258 1 6	
	1st Assistant	180 0 0		180 0 0									
	2nd do	75 0 0		75 0 0									
	Mail-boy	39 0 0		39 0 0									
	2 Operators, at £114 and £85 each		199 0 0	199 0 0									
	4 Messengers—1at £52, and 3 at £39 each		169 0 0	169 0 0									
Hermitage Plains	Postmaster	40 0 0		40 0 0	3,183								
Hexham	do	42 0 0		42 0 0	7,128	275	219	701 10 10	153	675 12 7	57 10 0	16 3 1	
Hill End	Post and Telegraph Master	210 0 0		210 0 0	19,824	1,137	507	1,548 16 5	590	2,332 0 11	205 15 0	68 9 0	
	Assistant	40 0 0		40 0 0									
	Letter-carrier	132 0 0		132 0 0									
Hillgrove	Postmaster	10 0 0		10 0 0	1,986						20 9 6		
Hillston	Post and Telegraph Master	250 0 0		250 0 0	76,689	5,850	519	2,085 3 1	259	1,107 16 7	501 5 0	409 13 5	
	Assistant	25 0 0		25 0 0									
	Messenger		52 0 0	52 0 0									
Hinton	Postmistress and Telephone Operator	40 0 0	26 0 0	66 0 0	14,961	123	148	452 0 9	84	308 11 7	107 5 0	5 5 1	
Holt's Flat	Postmaster	14 0 0		14 0 0	2,247						34 2 6		
Homebush	Post and Telegraph Master	180 0 0		180 0 0	18,675	4,051	152	668 7 5	69	215 9 7	116 18 0	225 0 1	
	Letter-carrier and Messenger	13 0 0	39 0 0	52 0 0									
	Messenger		39 0 0	39 0 0									
Home Rule	Postmaster	52 0 0		52 0 0	4,974		196	487 13 6	103	440 5 0	72 3 0		
Hornsby	Postmistress	30 0 0		30 0 0	7,401						110 3 6		
Hoskins' Town	Postmaster	11 0 0		11 0 0	2,442		156	489 14 9	10	34 1 8	29 5 0		
Howe's Valley	Postmistress	11 0 0		11 0 0	1,224						21 9 0		
Howlong	Post and Telegraph Master	150 0 0		150 0 0	13,623	1,660	340	1,248 14 3	38	126 6 11	176 14 6	91 1 8	
	Assistant	26 0 0		26 0 0									
Hungerford	Postmaster	50 0 0		50 0 0	29,802						38 0 6		
Hunter's Hill	Post and Telegraph Mistress	120 0 0		120 0 0	38,562	2,838					234 7 6	120 0 1	
	Letter-carrier	104 0 0		104 0 0									
	2 Messengers, at £39 each		78 0 0	78 0 0									
Huntingdon	Postmistress	12 0 0		12 0 0	2,055						39 0 0		
Hurstville	Postmaster	18 0 0		18 0 0	5,813		77	160 11 11	46	110 18 6	68 5 0		

Name of Office.	Designation.	Annual Salary. Postal.	Annual Salary. Telegraph.	Annual Salary. Total.	Number of Letters Posted.	Number of Telegraph Messages	Money Orders Issued No	Money Orders Issued Amount.	Money Orders Paid. No.	Money Orders Paid. Amount	Revenue. Postal.	Revenue. Telegraphic.
		£ s. d	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Idaville	Postmaster	10 0 0	...	10 0 0	915	...	...	...	...	...	4 17 6	...
Ilford	do	46 0 0	...	46 0 0	8,977	...	255	718 7 7	66	243 3 0	62 8 0	...
Illabo	do	24 0 0	...	24 0 0	5,649	...	145	389 5 11	18	75 9 8	57 10 6	...
Iluka	do	23 0 0	...	23 0 0	5,184	...	...	...	...	...	36 1 6	...
Inverell	Post and Telegraph Master	230 0 0	...	230 0 0	120,927	11,561	1,699	6,184 15 10	701	2,745 12 5	952 0 0	818 13 7
	Assistant	114 0 0	...	114 0 0	...	...	...	...	...	...	...	...
	do	75 0 0	...	75 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	104 0 0	...	104 0 0	...		...	...	...		...	...
	2 Operators—1 at £130 and 1 at £104	...	234 0 0	234 0 0	...	...	...	...		...		...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Ironbarks	Postmaster	36 0 0	...	36 0 0	12,672	765	673	2,334 4 7	125	513 4 0	209 12 6	48 8 8
Iron Cove Bridge	do	35 0 0	...	35 0 0	13,866	...	...	...		...	53 2 6	...
Ivanhoe	Post and Telegraph Master	190 0 0	...	190 0 0	25,851	2,349	199	580 13 9	34	143 7 0	256 5 0	168 5 7
Jamberoo	do do	44 0 0	26 0 0	70 0 0	34,008	687	243	542 5 1	119	362 10 10	182 6 6	36 17 1
Jeir	Postmaster	13 0 0	...	13 0 0	2,511	...	...	...	...	...	40 19 0	...
Jembaicumbene	do	13 0 0	...	13 0 0	1,266	...	...		...		16 11 6	...
Jereelderie	Post and Telegraph Master	230 0 0	...	230 0 0	90,588	5,111	564	1,631 11 7	148	471 9 2	568 0 0	356 17 1
	1st Assistant and Messenger	75 0 0	26 0 0	101 0 0	...		...	...	...	...	...	...
	2nd do	26 0 0	...	26 0 0	...		...	...	...	...	...	...
	Messenger		39 0 0	39 0 0		...	...	...	...	...	...	...
Jerrawa	Postmaster	20 0 0	...	20 0 0	3,620	...	...	...	...	...	61 8 6	...
Jerrong	do	11 0 0	...	11 0 0	840		...		...	...	16 11 6	...
Jerry's Plains	Post and Telegraph Master	190 0 0	...	190 0 0	12,339	1,286	215	655 9 8	57	182 16 6	112 15 0	81 13 2
	Messenger	...	39 0 0	39 0 0	...		...	...		...	...	...
Jervis Bay	Telegraph-master		75 0 0	75 0 0	...	263		...	...	...	...	7 11 4
Jimenbuan	Postmaster	10 0 0	...	10 0 0	1,278	...		...	...	...	44 17 0	...
Jindabyne	do	14 0 0	...	14 0 0	5,508	...	...	...	...	...	90 3 6	...
Jindera	Post and Telegraph Master	130 0 0	...	130 0 0	9,798	608	186	447 3 5	8	24 8 6	76 14 6	39 0 8
Joadja Creek	Postmaster	13 0 0	...	13 0 0	5,172	...	306	827 2 0	30	57 13 1	82 17 6	...
Jugiong	do	16 0 0	...	16 0 0	5,085		202	464 9 11	8	21 17 11	73 7 6	...
Junee Junction	do	190 0 0	...	190 0 0	57,279	6,532	1,582	4,948 19 7	452	1,469 10 6	693 16 6	388 15 7
	Telegraph-master	...	150 0 0	150 0 0	...		...	...	...	...	...	...
	Assistant	135 0 0	...	135 0 0	...	...	...		...	...	...	...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Kangaloon	Postmaster	14 0 0	...	14 0 0	3,228	...		...	...	...	71 3 6	...
Kangaroo Creek	do	15 0 0	...	15 0 0	1,140		...			...	17 11 0	...
Kangaroo Valley	Postmistress and Telephone Operator	29 0 0	26 0 0	55 0 0	19,785	250	482	1,267 9 10	104	411 16 6	186 4 6	14 17 8
Katoomba	Post and Telegraph Master	110 0 0	...	110 0 0	30,696	2,266	820	2,480 14 1	166	486 2 11	235 17 0	125 19 3
Kayuga	Postmistress	11 0 0		11 0 0	963	...	...	...	...	...	14 12 6	...
Keepit	do	13 0 0	...	13 0 0	2,061	...	...	...		...	15 12 0	...
Kelso	Post and Telegraph Master	110 0 0	...	110 0 0	28,693	954	285	720 19 7	53	170 8 1	249 7 6	57 8 9
	Assistant	30 0 0		30 0 0	...	...	...	...	...	...	...	...
Kempsey	Post and Telegraph Master	230 0 0	...	230 0 0	49,650	10,298	1,273	5,384 17 8	406	1,473 5 5	491 2 0	633 7 3
	Assistant and Messenger	50 0 0	52 0 0	102 0 0	...	...	...	...	...	...		...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Kentucky	Postmaster	28 0 0	...	28 0 0	5,682	...		...	...	...	55 11 6	...
Kerrabee	Postmistress	21 0 0	...	21 0 0	4,446	...	...	...	...	...	22 8 6	...
Khancoban	Postmaster	10 0 0	...	10 0 0	708	...	...	...	...	...	20 9 6	...
Kiama	Post and Telegraph Master	300 0 0	...	300 0 0	144,960	6,785	1,370	4,415 11 4	485	1,473 1 2	840 0 6	418 2 4
	Assistant	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	do and Additional Letter-carrier	26 0 0	...	26 0 0	...	...	...	...	...	...	...	...
	Letter-carrier and Messenger	25 0 0	26 0 0	51 0 0	...	...	...	...	...	...	...	...
	Telegraph Operator	...	62 0 0	62 0 0	...	...	...	...	...	...	...	...

	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
Kiandra	Post and Telegraph Master	150 0 0	...	150 0 0	9,241	1,536	472	1,630 13 9	25	90 12 9	97 10 0	97 17 0
Killawarra	Postmaster	10 0 0	...	10 0 0	867	...	...	...	...	...	11 14 0	...
Kimbriki	do	11 0 0	...	11 0 0	948	...	...	...	...	...	10 14 6	...
Kinchela Creek	do	10 0 0	...	10 0 0	2,769	...	...	...	...	...	28 10 0	...
Kincumber	Postmistress	13 0 0	...	13 0 0	2,295	...	70	239 0 1	12	34 12 10	34 2 6	...
Kingsgrove	Postmaster	10 0 0	...	10 0 0	1,128	...	...	...	...	...	8 15 6	...
King's Plains	Postmistress	11 0 0	...	11 0 0	522	...	...	...	...	...	...	...
Kingstown	do	18 0 0	...	18 0 0	1,656	...	...	...	...	...	11 14 0	...
King-street	Post and Telegraph Master	300 0 0	...	300 0 0	454,036	29,380	2,946	13,112 1 4	359	1,137 16 8	2,690 18 6	1,797 3 9
	Assistant	110 0 0	...	110 0 0	...	...	...	...	...	...	...	...
	2 Operators, at £130 and £85 each	...	215 0 0	215 0 0	...	...	...	...	...	...	...	...
Kiora	Postmistress	11 0 0	...	11 0 0	573	...	...	...	...	...	8 15 6	...
Kogarah	Postmaster	14 0 0	...	14 0 0	10,062	...	95	314 11 9	27	57 17 4	61 8 6	...
Krawarree	do	11 0 0	...	11 0 0	1,681	...	...	...	...	...	13 13 0	...
Kunopia	Postmistress	22 0 0	...	22 0 0	1,431	...	...	...	...	...	23 8 0	...
Kurrajong	Post and Telegraph Master	120 0 0	...	120 0 0	9,302	901	...	...	...	...	127 5 0	50 10 11
Kurrajong Heights	Postmaster and Telephone Operator	14 0 0	26 0 0	40 0 0	6,897	...	...	...	...	...	67 5 6	...
Kyamba (35)	Receiving and Telegraph Master	150 0 0	...	150 0 0	...	414	...	...	...	...	2 18 6	28 8 4
Laggan	Postmaster	35 0 0	...	35 0 0	25,038	...	...	...	...	...	51 13 6	...
Laguna	do	17 0 0	...	17 0 0	3,767	...	...	...	...	...	56 11 0	...
Lake Bathurst	do	17 0 0	...	17 0 0	6,867	...	...	...	...	...	112 2 6	...
Lake Cudgellico	Post and Telegraph Master	160 0 0	...	160 0 0	9,291	2,219	497	1,729 0 2	65	331 11 1	4 17 6	159 15 1
	Assistant	15 0 0	...	15 0 0	...	...	...	...	...	...	...	...
Lambton	Post and Telegraph Master	190 0 0	...	190 0 0	48,339	1,907	1,187	4,437 4 5	491	1,512 3 10	357 10 0	89 11 11
	Assistant and Letter-carrier	45 10 0	...	45 10 0	...	...	...	...	...	...	...	...
	Letter-carrier	124 0 0	...	124 0 0	...	...	...	...	...	...	...	...
Landsdown	Postmaster	10 0 0	...	10 0 0	1,422	...	...	...	...	...	14 12 6	...
Langworthy's	do	20 0 0	...	20 0 0	3,092	...	...	...	...	...	20 9 6	...
La Perouse	Post and Telegraph Master	160 0 0	...	160 0 0	1,902	21,341	...	...	...	...	2 18 6	31 8 4
	Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
Largs	Postmistress	24 0 0	...	24 0 0	10,938	...	...	...	...	...	42 18 0	...
Laurieton	Post and Telegraph Master	110 0 0	...	110 0 0	4,098	1,063	...	...	...	...	124 13 6	56 16 1
Lawrence	do do	150 0 0	...	150 0 0	16,147	3,541	526	1,540 16 0	74	251 3 2	74 13 6	195 12 0
	Assistant	20 0 0	...	20 0 0	...	...	...	...	...	...	...	...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Lawson (36)	Postmistress and Telegraph Operator	10 0 0	...	10 0 0	5,452	636	...	...	...	...	59 9 6	35 4 11
Legislative Assembly		...	...	...	...	293	...	...	...	...	...	19 10 2
Leichhardt	Post and Telegraph Mistress	150 0 0	...	150 0 0	161,886	2,374	545	1,886 18 4	640	2,552 14 3	286 0 0	103 8 11
	Assistant	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	2 Letter-carriers at £124 each	248 0 0	...	248 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	96 0 0	...	96 0 0	...	...	...	...	...	...	...	...
	Receiver-clearer	26 0 0	...	26 0 0	...	...	...	...	...	...	...	...
Leighwood (37)	Postmaster	10 0 0	...	10 0 0	96	...	...	...	...	...	2 18 6	...
Lidsdale	Postmistress	31 0 0	...	31 0 0	2,463	...	58	115 4 10	22	77 7 5	36 1 6	...
Limeburner's Creek	Postmaster	23 0 0	...	23 0 0	5,977	...	...	...	...	...	52 13 6	...
Limekilns	do	11 0 0	...	11 0 0	966	...	...	...	...	...	11 14 0	...
Lincoln	do	14 0 0	...	14 0 0	1,722	...	...	...	...	...	14 12 6	...
Lionsville (38)	do	16 0 0	...	16 0 0	2,641	...	27	82 14 2	6	34 8 4	34 2 6	...
Lismore	Post and Telegraph Master	250 0 0	...	250 0 0	89,839	14,215	1,971	7,210 9 10	772	2,995 7 0	896 8 6	912 11 6
	Assistant	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	78 0 0	...	78 0 0	...	...	...	...	...	...	...	...
Lithgow	Post and Telegraph Master	250 0 0	...	250 0 0	90,719	4,355	2,461	7,889 13 1	1,143	3,272 14 1	948 9 0	264 0 9
	Assistant	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...

835

Name of Office.	Designation.	Annual Salary. Postal.	Annual Salary. Telegraph.	Annual Salary. Total.	Number of Letters Posted.	Number of Telegraph Messages	Money Orders Issued. No.	Money Orders Issued. Amount.	Money Orders Paid No.	Money Orders Paid Amount.	Revenue. Postal	Revenue. Telegraphic.
		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Lithgow	Messenger	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
Little Billabong	Postmistress	41 0 0	...	41 0 0	8,589	...	...	...	...	...	42 18 0	...
Little Hartley	Postmaster	25 0 0	...	25 0 0	4,155	...	192	456 13 7	12	45 0 6	63 7 6	...
Liverpool	Post and Telegraph Master	240 0 0	...	240 0 0	76,038	3,000	857	2,192 16 9	568	1,609 17 2	511 1 0	166 0 2
	Assistant	20 0 0	...	20 0 0	...	...	...	...	...	...	...	...
	do and Operator	25 0 0	75 0 0	100 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	104 0 0	...	104 0 0	...	...	...	...	...	...	...	...
	Receiver-clearer and Messenger	16 0 0	26 0 0	42 0 0	...	...	...	...	...	...	...	...
Lochinvar	Postmaster and Railway Operator	42 0 0	26 0 0	42 0 0	18,768	1,120	153	392 18 6	231	965 1 4	175 10 0	62 1 5
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Locksley	Postmaster	10 0 0	...	10 0 0	1 137	...	...	...	...	...	9 15 0	...
Long Reach	Postmistress	16 0 0	...	16 0 0	3,735	...	...	...	...	...	19 10 0	...
Long Swamp	Postmaster	13 0 0	...	13 0 0	1,251	...	...	...	...	...	5 17 0	...
Lord Howe Island	do	10 0 0	...	10 0 0	27	...	...	...	...	...	0 19 6	...
Lostock	do	14 0 0	...	14 0 0	2,040	...	...	...	...	...	23 8 0	...
Louth	Post and Telegraph Master	190 0 0	...	190 0 0	19,038	2,247	353	1,676 18 9	44	278 8 11	149 10 0	153 11 7
	Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
Lower Botany	Post and Telegraph Mistress	110 0 0	...	110 0 0	16,776	1,359	...	...	...	...	103 17 6	59 19 10
	Letter-carrier	50 0 0	...	50 0 0	...	...	...	...	...	...	...	...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Lower Gundaroo	Post and Telegragh Master	110 0 0	...	110 0 0	16,095	774	454	1,578 11 0	62	201 10 5	108 0 0	46 11 11
	Assistant	12 0 0	...	12 0 0	...		...	...	...	...	...	...
Lower Hawkesbury	Postmaster	11 0 0	...	11 0 0	1,509	...	...	...	...	...	8 15 6	...
Lower Portland	do	14 0 0	...	14 0 0	2,994	...	...	...	...	...	9 15 0	...
Lower Temora	Postmistress	25 0 0	...	25 0 0	1,794	...	...	...	...	...	3 18 0	...
Lowesdale	Postmaster	11 0 0	...	11 0 0	1,983	...	...	...	...	...	4 17 6	...
Lowther	Postmistress	10 0 0	...	10 0 0	1,089	...	...	...	...	...	11 14 0	...
Lucknow	Postmaster and Operator	24 0 0	26 0 0	50 0 0	6,528	689	178	446 1 11	32	102 15 6	97 10 0	54 11 8
Luddenham	Postmistress	18 0 0	...	18 0 0	3,383	...	87	144 7 9	9	21 10 0	36 1 6	...
Lyndhurst	Postmaster	26 0 0	...	26 0 0	7,260	...	...	...	...	...	61 8 6	...
Macdonaldtown	Postmaster and Letter-carrier	90 0 0	...	90 0 0	38,325		119	299 17 10	229	665 11 8	320 15 6	...
Maclean	Post and Telegraph Master	230 0 0	...	230 0 0	30,500	6,235	1,165	4,213 10 4	260	931 10 8	466 14 0	386 1 0
	Assistant and Operator	40 0 0	52 0 0	92 0 0	...	...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
Mahonga	Postmaster	12 0 0	...	12 0 0	2,874		...	...			19 10 0	...
Major's Creek	Post and Telegraph Master	140 0 0	...	140 0 0	11,166	547	261	664 13 3	159	491 6 4	127 7 0	33 19 7
Mandalong	Postmistress	10 0 0	...	10 0 0	1,083		...	...	...	...	20 9 6	...
Mandurama	do	35 0 0	...	35 0 0	13,386	...		...	...	...	92 12 6	...
Mangrove Creek	Postmaster	12 0 0	...	12 0 0	1,857	...	...	...	...	...	11 14 0	...
Manilla	Post and Telegraph Master	170 0 0	...	170 0 0	12,894	1,323	534	1,282 0 0	52	210 0 5	62 14 6	86 13 11
	Assistant	26 0 0	...	26 0 0	...	...	...	...	...	...	...	...
Manly	Post and Telegraph Mistress	170 0 0	...	170 0 0	89,235	9,776	753	2,383 7 8	392	1,238 11 5	656 14 0	375 6 8
	Assistant and Operator	25 0 0	104 0 0	129 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	108 0 0	...	108 0 0	...	...	...	...	...	...	...	...
	Operator	...	75 0 0	75 0 0	...	...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
March	Postmaster	11 0 0	...	11 0 0	597	...	...	...	...	...	2 18 6	...
Marengo	Post and Telegraph Master	130 0 0	...	130 0 0	9,969	626	327	872 11 1	73	273 15 1	116 15 6	38 2 5
Marlee	Postmistress	11 0 0	...	11 0 0	2,404	...	...	...	...	...	21 9 0	...
Marrickville	Post and Telegraph Master	140 0 0	...	140 0 0	45,620	1,644	364	1,169 11 7	391	1,098 12 11	142 10 0	79 8 8
	Letter carrier	135 0 0	...	135 0 0	...	...	...	...	...	...	...	...
	do	108 0 0	...	108 0 0	...	...	...	...	...	...	...	...
	2 do at £50 each	100 0 0	...	100 0 0	...	...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...

	Letter-carrier and Receiver-clearer	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...	...
Marsdens	Post and Telegraph Master	150 0 0	...	150 0 0	13,269	1,429	306	922 11 1	33	97 10 1	158 10 0	91 15 1
Marshall Mount	Postmaster	10 0 0	...	10 0 0	684	...	...	...	...	...	...	...
Marulan	Post and Telegraph Master	160 0 0	...	160 0 0	26,757	1,563	510	1,229 0 3	223	753 1 4	234 0 0	91 14 8
Maryland	Postmaster	23 0 0	...	23 0 0	2,676	...	...	...	...	...	38 0 6	...
Maryvale	do	15 0 0	26 0 0	41 0 0	3,510	329	164	363 15 6	39	79 16 8	47 15 6	17 19 3
Mathoura	Postmaster and Operator	25 0 0	30 0 0	55 0 0	11,202	724	181	306 4 8	14	50 16 11	43 17 6	43 14 2
Maude	Postmaster	27 0 0	...	27 0 0	7,623	...	...	...	...	...	39 0 0	...
Mayfield	do	10 0 0	...	10 0 0	1,332	...	...	...	...	...	14 12 6	...
May's Hill	do	10 0 0	...	10 0 0	1,110	...	...	...	...	...	3 18 0	...
Meadow Flat	do	28 0 0	...	28 0 0	3,115	...	...	...	...	...	85 16 0	...
Menangle	do	37 0 0	...	37 0 0	8,457	288	...	...	...	...	134 11 0	15 17 6
Menindie	Post and Telegraph Master	230 0 0	...	230 0 0	24,919	3,396	284	1,138 5 5	63	312 15 4	415 15 0	284 2 6
	Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
Meranburn	Postmaster	30 0 0	...	30 0 0	4,968		202	502 12 4	18	51 11 11	87 15 0	...
Merimbula	Post and Telegraph Master	150 0 0	...	150 0 0	9,067	1,276	232	767 10 3	57	163 19 0	137 14 6	58 10 0
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Merindee	Postmistress	14 0 0	...	14 0 0	2,151	...	...	...	...	...	14 12 6	...
Merrilla	Postmaster	16 0 0	...	16 0 0	2,052	...	...	...	...	...	11 14 0	...
Merriwa	Post and Telegraph Mistress	100 0 0	...	100 0 0	30,909	1,790	590	1,979 0 5	116	323 1 11	314 2 6	110 13 7
	Assistant and Operator	25 0 0	104 0 0	129 0 0	...	...	...	...	...	...	...	...
	do	13 0 0	...	13 0 0	...	...	...	...	...	...	...	...
Merrygoen	Postmistress	25 0 0	...	25 0 0	5,812	...	...	...	...	...	94 11 6	...
Merrylands	Postmaster	10 0 0	...	10 0 0	4,335	...	...	...	...	...	20 9 6	...
Michelago	Postmistress	29 0 0	...	29 0 0	16,128	1,542	579	2,078 10 9	68	339 2 6	140 8 0	97 0 3
	Telegraph Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
Middle Arm	Postmaster	11 0 0	...	11 0 0	1,740	...	...	...	...	...	8 15 6	...
Middledale	Postmistress	10 0 0	...	10 0 0	467	...	...	...	...	...	5 17 0	...
Middleton-street	Postmaster	20 0 0	...	20 0 0	1,698	...	...	...	...	...	190 2 6	...
Millamurra	do	11 0 0	...	11 0 0	552	...	...	...	...	...	5 17 0	...
Miller's Forest	do	19 0 0	...	19 0 0	4,299	...	85	175 6 9	20	43 19 7	42 18 0	...
	Operator	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
Miller's Point	Post and Telegraph Master	240 0 0	...	240 0 0	68,864	3,943	1,870	9,116 6 9	250	821 11 4	534 7 6	234 11 11
	Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
	2 Messengers, at £52 and £39	...	91 0 0	91 0 0	...	...	...	...	...	...	...	...
Millfield	Postmaster	16 0 0	...	16 0 0	4,422	...	...	...	...	...	15 12 0	...
Millie	Post and Telegraph Master	130 0 0	...	130 0 0	14,691	1,318	149	431 0 6	16	92 2 8	146 9 0	84 4 2
Millthorpe	Postmaster	35 0 0	...	35 0 0	13,809	540	291	940 2 5	78	253 6 8	171 12 0	29 0 10
	Assistant	12 0 0	...	12 0 0	...	...	...	...	...	...	...	...
Milperinka	Postmaster	75 0 0	...	75 0 0	7,950	...	266	823 6 1	10	46 13 5	141 7 6	...
Milton	Post and Telegraph Master	220 0 0	...	220 0 0	50,793	3,093	577	1,540 8 2	260	1,095 19 5	435 12 6	172 9 2
	Assistant	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Minmi	Post and Telegraph Master	130 0 0	...	130 0 0	27,831	1,227	1,135	3,743 5 9	226	627 17 1	235 7 6	68 19 9
	Assistant and Messenger	13 0 0	26 0 0	39 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	78 0 0	...	78 0 0	...	...	...	...	...	...	...	...
Minto (39)	Postmaster	10 0 0	...	10 0 0	1,671	...	...	...	...	...	28 5 6	...
Mitchell (40)	Post and Telegraph Master	150 0 0	...	150 0 0	55,679	4,106	1,576	5,779 0 6	313	1,345 15 7	618 5 6	257 5 7
	Operator	...	100 0 0	100 0 0	...	...	...	...	...	...	...	...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Mitchell's Island	Postmistress	10 0 0	...	10 0 0	1,725	...	...	...	...	...	45 16 6	...
Mittagong	Post and Telegraph Master	200 0 0	...	200 0 0	50,508	3,273	1,214	3,360 4 2	535	1,853 16 9	464 16 0	192 12 8
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Moama	Post and Telegraph Master	220 0 0	...	220 0 0	63,498	1,221	232	647 14 3	155	467 0 2	224 12 6	76 2 1
	Assistant	100 0 0	...	100 0 0	...	...	...	...	...	...	...	...
	Receiver-clearer, and Messenger	13 0 0	13 0 0	26 0 0	...	...	...	...	...	...	...	...
Mogilla	Postmaster	10 0 0	...	10 0 0	1,032	...	...	...	...	...	11 14 0	...
Mogil Mogil	Post and Telegraph Master	160 0 0	...	160 0 0	7,218	1,049	201	755 6 10	16	72 15 0	84 9 0	70 19 9

Name of Office.	Designation.	Annual Salary. Postal.	Annual Salary. Telegraph.	Annual Salary. Total	Number of Letters Posted.	Number of Telegraph Messages.	Money Orders Issued. No.	Money Orders Issued. Amount.	Money Orders Paid. No.	Money Orders Paid. Amount.	Revenue. Postal.	Revenue. Telegraphic.
		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Mogo (41)	Postmaster	14 0 0	26 0 0	40 0 0	6,087	154	.....	.....	...	...	50 14 0	8 13 6
Moira	Postmistress	22 0 0	.....	22 0 0	3,084	.....	...	.....	.....	...	19 10 0	.....
Molong	Post and Telegraph Master	200 0 0	...	200 0 0	109,767	3,237	1,437	4,015 9 11	512	1,986 8 8	652 16 0	207 0 8
	Assistant and Messenger	75 0 0	39 0 0	114 0 0	...	...	...	.....	.....	.....	.....	.....
	Letter-carrier	52 0 0	.....	52 0 0			.....	...	.....	.....	...	.....
Molonglo	Postmaster	18 0 0	...	18 0 0	5,598	542	190	392 6 4	22	92 7 6	39 0 0	35 1 11
	Telegraph Master	.....	114 0 0	114 0 0			..	.....	..	.....	.....	.....
Monga	do	12 0 9	.....	12 0 0	2,331	.....	89	151 0 10	11	46 10 0	.....	.....
Monkerai	do	11 0 0	.....	11 0 0	1,161	...	.....	.....	.....	...	30 4 6	.....
Monkey	Postmistress	10 0 0	.....	10 0 0	3,373	.	.....	.....	.....	...	25 7 0	.....
Monteagle	Postmaster	10 0 0	.....	10 0 0	2,028	...	.....	.....	...	.....	35 2 0	.....
Montefiores	do	27 0 0	.....	27 0 0	5,517	...	...	.....	...	...	...	...
Moonan Brook	do	17 0 0	..	17 0 0	4,611	...	...	.....	...	...	108 4 6	...
Moonbi	Postmistress	12 0 0	...	12 0 0	2,343	.....	57	183 0 7	14	62 4 2	20 9 6	...
Moonbi Railway Station	Postmaster	19 0 0	.....	19 0 0	5,565	1,528	.....	.....	...	.....	99 9 0	90 14 8
	Operator		26 0 0	26 9 0			...	.....	...	.....	.....	.....
Moor Creek	do	10 0 0	.....	10 0 0	951	.....	...	.....	.....	.....	46 16 0	.....
Moorilda	do	19 0 0	.....	19 0 0	3,024	...	...	.....	...	...	50 14 0	...
Moorwatha (42)	Postmistress	10 0 0	.....	10 0 0	228	.....	.....	.....	.....	.....	2 18 6	.....
Morangarell	Postmaster	25 0 0	...	25 0 0	4,842	1,021	...	.....	.....	...	.....	62 9 2
	Telegraph Operator	.....	90 0 0	90 0 0			..	.....	.....	...	.....	.....
Moree	Post and Telegraph Master	180 0 0	...	180 0 0	80,220	8,443	1,121	4,735 12 5	210	861 3 6	884 2 0	656 11 2
	Assistant	40 0 0	...	40 0 0	...	.....	...	.....	...	...	.....	.....
	do and Operator	52 0 0	52 0 0	104 0 0	...	.....	.....	.....	...	.....	.....	.....
	Messenger	.....	39 0 0	39 0 0	...	.....	...	.....	.....	...	.....	...
Morpeth	Post and Telegraph Master	220 0 0	...	220 0 0	74,559	5,180	544	1,734 11 1	379	1,172 17 11	465 16 0	311 13 0
	Assistant	52 0 0	...	52 0 0	...	...	...	.....	...	.....	.....	.....
	Letter-carrier	132 0 0	...	132 0 0	...	.....	.....	.....	...	.....	.....	.....
Morton's Creek	Postmaster	10 0 0	...	10 0 0	2,340	.....	.....	.....	...	.....	38 0 6	..
Moruya	Post and Telegraph Master	220 0 0	...	220 0 0	39,339	4,783	1,056	3,201 5 8	507	1,664 19 8	485 10 0	282 6 3
	Assistant and Operator	62 0 0	52 0 0	114 0 0	....	.....		.....	..	.....	..	...
Moruya Heads	Telegraph Operator	.....	52 0 0	52 0 0	..	.....	...	.....	..	...	.....	.....
Morven	Postmaster	16 0 0	...	16 0 0	4,938	.....	.....	.....	...	.....	23 8 0	.....
Mossgiel	Postmistress	30 0 0	..	30 0 0	22,479	3 040	261	1,025 0 11	39	165 5 6	262 0 0	210 10 11
	Telegraph Operator	...	160 0 0	160 0 0	...	...	..	...	....	...	...	...
Moss Vale	Post and Telegraph Master	180 0 0	.....	180 0 0	73,053	4,703	1,015	2,811 6 2	555	1,627 18 7	451 4 0	268 11 8
	1st Assistant	100 0 0	.....	100 0 0	..	...	.....	.....	....	.....	.....	...
	2nd do	72 0 0	...	72 0 0	...	.....	.....	.....	...	...	...	.....
	Messenger	.....	39 0 0	39 0 0	.	.....	.	.....	.....	.....	...	...
Moulamein	Post and Telegraph Master	210 0 0	.....	210 0 0	22,977	1,341	151	360 6 7	34	103 14 8	196 0 0	91 1 2
Mount Adrah	Postmaster	10 0 0	.....	10 0 0	348	....	...	.....	.....	.....	.....	.....
Mount Carmel	Postmistress	25 0 0	.....	25 0 0	13,599	.....	...	.....	...	.....	73 2 6	.....
Mount Gipps	Postmaster	30 0 0	...	30 0 0	7,353	...	...	.....	...	.....	29 5 0	.
Mount Harris	do	25 0 0	...	25 0 0	5,715	...	.....	.....	.....	.....	2 18 6	.....
Mount Hope	Post and Telegraph Master	220 0 0	...	220 0 0	14,364	3,460	822	3,104 6 10	134	580 5 1	224 5 6	235 0 9
	Messenger	...	39 0 0	39 0 0	...	...	.....	.....	.....	.....	.....	.....
Mount Keira	Postmistress	10 0 0	...	10 0 0	2,898	...	.....	.....	.....	.....	29 5 0	.....
Mount Kembla	Postmaster	10 0 0	.....	10 0 0	6,129	...	.....	.....	.....	.....	14 12 6	.....
Mount Macquarie	do	12 0 0	.....	12 0 0	3,111	.....	.....	.....	.....	.....	33 3 0	.....
Mount McDonald	Post and Telegraph Master	180 0 0	.....	180 0 0	12,015	1,032	497	1,322 5 3	67	282 16 11	64 3 0	59 14 11
Mount Victoria	do do	230 0 0	.....	230 0 0	28,242	3,733	726	2,354 5 6	207	827 12 2	323 15 0	212 17 9
	Assistant	25 0 0	.....	25 0 0	.....	.....	.....	.....	.....	.....	.....	.....
	Operator	.....	75 0 0	75 0 0	.....	.....	.....	.....	.....	.....	.....	.....
	Messenger	.....	39 0 0	39 0 0	.....	.....	.....	.....	.....	.....	.....	.....

Mount Vincent	Postmaster	16 0 0		16 0 0	4,323		101	248 8 3	8	26 15 11	50 14 0	
Mount Wilson	do	20 0 0		20 0 0	6,216						16 11 6	
Mudgee	do	350 0 0		350 0 0	209,001	12,156	2,686	9,197 6 1	1,673	5,803 3 0	1,675 0 0	814 17 1
	Telegraph Master		260 0 0	260 0 0								
	Assistant	160 0 0		160 0 0								
	Letter-carrier	96 0 0		96 0 0								
	2 Operators, at £130 and £104 each		234 0 0	234 0 0								
	Line-repairer		150 0 0	150 0 0								
	Messenger		52 0 0	52 0 0								
Mulgoa	Postmistress	18 0 0		18 0 0	6,753						53 12 6	
Mulgrave	Postmaster	20 0 0		20 0 0	5,838						46 16 0	
Mulguthrie	Postmistress	10 0 0		10 0 0	918						4 17 6	
Mullaley	Postmaster	21 0 0		21 0 0	3,321						29 5 0	
Mullenderre	do	26 0 0		26 0 0	1,878							
Mullengudgery	do	10 0 0		10 0 0	3,855						37 1 0	
Mullet Creek (43)	do	10 0 0		10 0 0	1,704						6 16 6	
Mullion Creek	do	10 0 0		10 0 0	4,333	159					38 0 6	8 16 6
Mulloon	do	12 0 0		12 0 0	1,248						24 7 6	
Mulwala	Post and Telegraph Master	170 0 0		170 0 0	12,750	756	211	577 17 5	17	33 1 11	120 18 0	46 6 2
Mummell	Postmaster	14 0 0		14 0 0	2,514						15 12 0	
Mundooran	Post and Telegraph Master	110 0 0		110 0 0	18,164	754					142 7 0	48 8 11
Mungindi	do do	180 0 0		180 0 0	2,061	917					44 2 0	63 4 3
Mungunyah	Postmaster	13 0 0		13 0 0	1,425						15 12 0	
Murga	do	23 0 0		23 0 0	4,737						25 7 0	
Murraguldrie	Postmistress	11 0 0		11 0 0	3,156						48 15 0	
Murray Hut	Postmaster	13 0 0		13 0 0	2,928						25 7 0	
Murrumbateman	do	13 0 0		13 0 0	2,352						24 7 6	
Murrumbidgerie	do	14 0 0		14 0 0	4,382						59 9 6	
Murrumburrah	Post and Telegraph Master	220 0 0		220 0 0	41,256	3,822	1,284	4,309 12 5	343	1,224 5 1	652 14 0	218 15 11
	Operator		78 0 0	78 0 0								
	Messenger		52 0 0	52 0 0								
Murrungundy	Postmaster	10 0 0		10 0 0	2,457							
Murrurundi	do	210 0 0		210 0 0	75,072	2,652	1,237	3,259 0 11	658	1,464 10 1	446 0 0	190 12 1
	Telegraph Master		210 0 0	210 0 0								
	Assistant	40 0 0		40 0 0								
	2 Operators, £160 and £114		274 0 0	274 0 0								
	Line-repairer		150 0 0	150 0 0								
	Messenger		39 0 0	39 0 0								
Murwillumbah	Post and Telegraph Master	230 0 0		230 0 0	17,566	2,505	582	1,690 18 8	76	400 14 5	223 17 6	188 19 1
	Operator		114 0 0	114 0 0								
Muswellbrook	Postmaster	210 0 0		210 0 0	128,349	4,999	1,223	3,330 0 10	522	1,676 2 11	781 15 0	305 16 7
	Telegraph Master		190 0 0	190 0 0								
	Assistant	100 0 0		100 0 0								
	Letter-carrier	78 0 0		78 0 0								
	Operator		90 0 0	90 0 0								
	Messenger		52 0 0	52 0 0								
Muttama Reef	Postmaster	12 0 0		12 0 0	9,657		123	381 18 5	17	47 17 8	11 14 0	
Myrtleville	do	15 0 0		15 0 0	2,535						15 12 0	
Nambucca	Post and Telegraph Master	140 0 0		140 0 0	11,346	1,923	408	1,411 12 7	57	316 9 0	76 10 6	110 6 11
Nambucca Heads	Postmaster and Telegraph Operator	10 0 0	26 0 0	36 0 0	2,550	947					61 8 6	50 11 11
Nana Creek	Postmaster	20 0 0		20 0 0	2,286							
Narellan	do	40 0 0		40 0 0	11,913						109 4 0	
Naremburn	Postmistress	10 0 0		10 0 0	1,329							
Narrabri	Post and Telegraph Master	250 0 0		250 0 0	172,593	13,043	1,727	6,008 10 8	849	3,204 16 10	1,117 7 6	903 19 0
	1st Assistant	160 0 0		160 0 0								
	2nd do and Operator	26 0 0	120 0 0	146 0 0								
	3rd do	110 0 0		110 0 0								
	Letter-carrier	108 0 0		108 0 0								
	2 Operators, at £114 each		228 0 0	228 0 0								

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		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Narrabri	Line-repairer		150 0 0	150 0 0								
	Messenger		39 0 0	39 0 0								
Narrabri Railway Station	Postmaster	30 0 0		30 0 0	23,727	3,279	397	1,195 4 7	33	114 14 1	191 2 6	189 5 6
	Messenger		39 0 0	39 0 0								
Narramine	Postmaster	25 0 0		25 0 0	9,999						110 3 6	
Narrandera	Post and Telegraph Master	250 0 0		250 0 0	103,881	11,364	2,064	8,105 3 8	671	2,233 10 1	1,280 10 0	742 14 7
	1st Assistant and Operator	25 0 0	75 0 0	100 0 0								
	2nd do	100 0 0		100 0 0								
	Letter-carrier	78 0 0		78 0 0								
	Messenger		52 0 0	52 0 0								
Nelligen	Post and Telegraph Master	180 0 0		180 0 0	8,670	998	440	1,171 14 0	46	183 3 4	118 14 0	56 7 11
	Messenger		39 0 0	39 0 0								
Nelson's Bay	Post and Telegraph Master	120 0 0		120 0 0	1,269	1,403					60 19 0	70 15 2
Nelson's Plains	Postmistress	11 0 0		11 0 0	1,844						21 9 0	
Nerriga	Postmaster	12 0 0		12 0 0	2,774						15 12 0	
Nerrigundah	do	18 0 0		18 0 0	2,166		112	401 8 5	5	33 10 7	22 8 6	
Neurea	do	20 0 0		20 0 0	3,105						32 3 6	
Never Never	do	10 0 0		10 0 0	564						7 16 0	
Nevertire	do	25 0 0		25 0 0	15,384	3,682					234 0 0	213 8 2
Newbridge	do	35 0 0		35 0 0	9,654	510	168	420 15 5	41	126 19 9	136 10 0	28 7 7
	Assistant	20 0 0		20 0 0								
Newcastle (44)	Postmaster	400 0 0		400 0 0	824,094	53,752	7,822	31,086 18 0	5,152	18,104 5 2	6,513 3 11	3,722 2 10
	1st Assistant	210 0 0		210 0 0								
	2nd do	160 0 0		160 0 0								
	3rd do	110 0 0		110 0 0								
	4th do and Emergency Railway Sorter	160 0 0		160 0 0								
	Letter-carrier	147 0 0		147 0 0								
	do	135 0 0		135 0 0								
	do	124 0 0		124 0 0								
	Mail-boy	78 0 0		78 0 0								
	Receiver-clearer	39 0 0		39 0 0								
	Telegraph Station-master		310 0 0	310 0 0								
	7 Operators—1 at £160, 2 at £150, 3 at £130, and 1 at £100 each.		950 0 0	950 0 0								
	5 Messengers—1 at £52, and 4 at £39		208 0 0	208 0 0								
Newpark	Postmaster	10 0 0		10 0 0	7,431						11 14 0	
Newton Boyd	Telegraph-master		150 0 0	150 0 0		335						21 14 3
Newtown	Postmaster	250 0 0		250 0 0	293,058	11,755	2,171	6,831 15 9	2,311	7,523 15 5	940 8 6	555 18 11
	1st Assistant	135 0 0		135 0 0								
	2nd do and Operator	25 0 0	120 0 0	145 0 0								
	Operator		85 0 0	85 0 0								
	Letter-carrier	159 0 0		159 0 0								
	do	145 0 0		145 0 0								
	do	135 0 0		135 0 0								
	do	124 0 0		124 0 0								
	Assistant Letter-carrier	52 0 0		52 0 0								
	Receiver-clearer	50 0 0		50 0 0								
	2 Messengers, at £39 each		78 0 0	78 0 0								
Nimitybelle	Post and Telegraph Master	150 0 0		150 0 0	10,827	1,598	459	1,413 8 4	55	242 17 9	143 7 0	103 7 9
	Assistant	40 0 0		40 0 0								
	Messenger		39 0 0	39 0 0								
North Berry Jerry	Postmistress	20 0 0		20 0 0	3,846						62 8 0	
North Gobarralong	Postmaster	10 0 0		10 0 0	465						9 15 0	
North Parramatta	do	25 0 0		25 0 0	19,866						133 11 6	

North Richmond	Postmistress	22 0 0	...	22 0 0	5,755	550	...	...	...	...	96 10 6	29 13 0
	Telegraph Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
North Ryde (45)	Postmaster	10 0 0	...	10 0 0	921	...	...	...	...	...	7 16 0	...
North Tumbulgum	Postmistress	19 0 0	...	19 0 0	1,038	...	...	...	...	...	...	...
North Willoughby	do	22 0 0	...	22 0 0	7,290	...	...	...	...	...	73 2 6	...
Nowendoc	Postmaster	13 0 0	...	13 0 0	1,203	...	...	...	...	...	29 5 0	...
Nowra	Post and Telegraph Master	180 0 0	...	180 0 0	65,295	4,013	1,168	3,059 10 1	306	1,040 6 3	550 11 6	225 10 9
	Assistant	40 0 0	...	40 0 0	...	...	...	...	...	...	...	...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Nullamanna	Postmaster	10 0 0	...	10 0 0	1,464	...	...	...	...	...	13 13 0	...
Numba	do	27 0 0	...	27 0 0	5,106	...	269	856 14 10	46	150 6 0	40 19 0	...
Numeralla	do	11 0 0	...	11 0 0	720	...	...	...	...	...	11 14 0	...
Nundle	Post and Telegraph Master	100 0 0	...	100 0 0	13,017	935	454	1,834 18 10	85	308 8 5	107 0 0	58 2 1
Nymagee	do do	270 0 0	...	270 0 0	51,171	6,052	1,566	6,862 6 7	242	946 7 7	417 3 0	398 2 0
	Assistant	26 0 0	...	26 0 0	...	...	...	...	...	...	...	...
	Operator	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
Nyngan	Post and Telegraph Master	310 0 0	...	310 0 0	93,048	9,842	1,540	5,990 6 9	588	2,314 9 6	819 3 0	622 0 11
	Assistant	135 0 0	...	135 0 0	...	...	...	...	...	...	...	...
	Operator	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	Messenger	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	2 do at £52 each	...	104 0 0	104 0 0	...	...	...	...	...	...	...	...
Oaks	Postmistress	21 0 0	...	21 0 0	8,049	...	...	...	...	...	105 6 6	...
Oakwood	do	10 0 0	...	10 0 0	1,002	...	...	...	...	...	2 18 6	...
Oban	Postmaster	12 0 0	...	12 0 0	639	...	...	...	...	...	12 13 6	...
Oberon	Post and Telegraph Master	160 0 0	...	160 0 0	16,485	1,455	975	3,331 13 11	118	488 2 2	237 13 6	93 6 7
Obley (46)	do do	170 0 0	...	170 0 0	4,449	717	282	766 14 1	47	186 3 11	68 15 0	46 19 5
O'Connell	Postmistress	22 0 0	...	22 0 0	8,842	...	158	366 14 3	91	325 5 3	97 10 0	...
Old Junee	Postmaster	25 0 0	...	25 0 0	7,812	...	166	370 8 9	22	69 16 0	97 10 0	...
Onebygamba	do	50 0 0	...	50 0 0	10,568	...	144	428 16 0	13	41 5 6	262 5 6	...
Ophir	do	10 0 0	...	10 0 0	495	...	...	...	...	...	8 15 6	...
Orange	Post and Telegraph Master	360 0 0	...	360 0 0	297,949	16,221	3,677	11,720 17 9	2,279	7,408 9 2	1,032 15 0	1,002 13 0
	1st Assistant	180 0 0	...	180 0 0	...	...	...	...	...	...	...	...
	2nd do	72 0 0	...	72 0 0	...	...	...	...	...	...	...	...
	3rd do &c.	120 0 0	...	120 0 0	...		...	...	...	...	...	...
	Letter-carrier	104 0 0	...	104 0 0	...	...	...	...	...	...	...	...
	do	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	Receiver-clearer	18 4 0	...	18 4 0	...	...	...	...	...	...	...	...
	4 Operators—£160, £104, £100, and £75,		439 0 0	439 0 0	...	...	...	...	...	...	...	...
	2 Messengers, at £52 each	...	104 0 0	104 0 0	...	...	...	...	...	...	...	...
Otford (47)	Postmaster	10 0 0	...	10 0 0	5,118		...	...	...	...	86 15 0	...
Oxford-street	do	350 0 0	...	350 0 0	206,374	17,383	2,519	8,018 15 10	2,295	6,622 19 1	1,730 17 6	859 11 8
	Assistant	135 0 0	...	135 0 0		...	...	...	...	...	...	...
	3 Operators—£114, £104, and £85 each	...	303 0 0	303 0 0	...	...	...	...	...	...	...	...
	3 Messengers—2 at £52 and 1 at £39	...	143 0 0	143 0 0	...	...	...	...	...	...	...	...
Oxley	Postmaster	10 0 0	...	10 0 0	6,453	...	...	...	...	...	49 14 6	...
Oxley Island	do	13 0 0	...	13 0 0	2,070		...	...	...	...	39 0 0	...
Paddington	do	210 0 0	...	210 0 0	144,825	9,331	1,951	7,587 1 3	1,456	4,718 1 4	529 12 6	447 3 1
	2 Operators, at £85 each	...	170 0 0	170 0 0	...	...	...	...	...	...	...	...
	3 Messengers, at £39 each	...	117 0 0	117 0 0	...	...	...	...	...	...	...	...
Pallamallawa	Postmaster	10 0 0	...	10 0 0	6,855		...	...	...	...	15 12 0	...
Palmer's Island	Post and Telegraph Master	150 0 0	...	150 0 0	11,892	2,197	519	1,693 13 6	117	468 2 3	91 6 0	115 8
	Assistant	26 0 0	...	26 0 0	...	...	...	...	...	...	...	... 2
Palmer's Oakey	Postmaster	11 0 0	...	11 0 0	774	...	...	...	...	...	16 11 6	...
Pambula	Post and Telegraph Master	160 0 0	...	160 0 0	10,820	1 326	344	877 3 6	61	153 19 1	169 7 6	81 2 8
Parkes	do do	240 0 0		240 0 0	44,967	3,882	959	3,042 13 4	441	1,957 2 7	549 0 0	232 15 4
	Assistant and Operator	42 0 0	104 0 0	146 0 0	...	...	...	...	...	...	...	...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Park-street	Postmaster	300 0 0	...	300 0 0	554,475	24,018	3,694	14,226 7 5	1,986	5,440 6 9	2,728 15 0	1,284 4 3

Name of Office.	Designation.	Annual Salary. Postal.	Annual Salary. Telegraph.	Annual Salary. Total.	Number of Letters Posted	Number of Telegraph Messages	Money Orders Issued No.	Money Orders Issued Amount	Money Orders Paid. No.	Money Orders Paid. Amount.	Revenue. Postal.	Revenue. Telegraphic
		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d	£ s. d.
Park-street	Assistant	110 0 0	...	110 0 0	...	...	...	...	...	...	...	...
	Operator	...	114 0 0	114 0 0		...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
Park Village	Postmistress	14 0 0	...	14 0 0	2,730	...	...	...	...	...	39 0 0	...
Parramatta	Post and Telegraph Master	350 0 0	...	350 0 0	452,907	18,114	2,805	8,971 6 7	2,629	8,159 16 10	1,623 6 6	768 3 1
	1st Assistant	210 0 0	...	210 0 0	...	...	...	...	...	...	...	...
	2nd do	100 0 0	...	100 0 0	...	...	...	...	...	...	...	...
	3rd do	75 0 0	...	75 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	135 0 0	...	135 0 0	...	...	...	...	...	...	...	...
	do	135 0 0	...	135 0 0	...	...	...	...	...	...	...	...
	do	124 0 0	...	124 0 0	...	...	...	...	...	...	...	...
	Receiver-clearer	50 0 0	...	50 0 0	...	...	...	...	...	...	...	...
	2 Operators, at £160 and £114	...	274 0 0	274 0 0	...	...	...	...	...	...	...	...
	3 Messengers—2 at £52 and 1 at £39	...	143 0 0	143 0 0		...	...	...	...	...	...	...
Paterson	Post and Telegraph Master	180 0 0	...	180 0 0	16,575	2,065	303	792 7 11	115	427 7 5	211 17 0	129 12 5
	Assistant and Messenger	39 0 0	26 0 0	65 0 0	...	...	...	...	...	...	...	...
Peakhurst (48)	Postmistress	10 0 0	...	10 0 0	624	...	...	...	...	...	2 18 6	...
Peat's Ferry	Postmaster	40 0 0	...	40 0 0	10,395	...	747	2,890 16 2	34	101 8 3	176 9 6	...
Peel	Postmistress	40 0 0	...	40 0 0	6,849	...	...	...	...	...	51 13 6	...
Peelwood	Postmaster	18 0 0	...	18 0 0	5,283	...	...	...	...	...	48 15 0	...
Pejar	do	10 0 0	...	10 0 0	728	...	...	...	...	...	12 13 6	...
Pelican Flats	Post and Telegraph Master	120 0 0	...	120 0 0	10,164	842	337	1,216 9 7	63	246 10 1	58 16 0	50 14 2
Pennant Hills	Postmaster	13 0 0	...	13 0 0	3,117		...	...	...	...	19 10 0	...
Penrith	Post and Telegraph Master	240 0 0	...	240 0 0	73,149	4,744	1,225	3,317 2 5	741	2,144 19 4	769 17 6	271 17 10
	Assistant	50 0 0	...	50 0 0	...	...	...	...	...	...	...	...
	do and Operator	12 0 0	104 0 0	116 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
Perricoota	Postmaster	12 0 0	...	12 0 0	2,556	...	...	...	...		11 14 0	...
Perth	do	29 0 0	...	29 0 0	7,152	...	...	...	...	...	63 7 6	...
Petersham	Post and Telegraph Mistress	220 0 0	...	220 0 0	188,065	6,844	807	2,633 14 10	964	3,377 15 4	624 19 0	299 9 8
	Assistant and Operator	20 0 0	52 0 0	72 0 0	...	...		...	...	...	...	...
	2 Letter-carriers, at £108 each	216 0 0	...	216 0 0	...	...	...	...	...	...	...	...
	2 do at £104 and 1 at £78	182 0 0	...	182 0 0	...	...	...	...	...	...	...	...
	Receiver-clearer	52 0 0	...	52 0 0	...	...	...	...	...	...	...	...
	3 Messengers, at £52 each	...	156 0 0	156 0 0		...	...	...	...	...	...	...
Pian Creek	Postmistress	10 0 0	...	10 0 0	1,374		...	...	...	...	5 17 0	...
Picton	Post and Telegraph Master	180 0 0	...	180 0 0	59,367	3,060	1,280	3,439 14 7	426	1,347 13 8	509 19 0	182 9 7
	Assistant	26 0 0	52 0 0	78 0 0	...	...	...	...	...	...	...	...
Pilliga	Post and Telegraph Master	170 0 0	...	170 0 0	17,052	1,982	415	1,639 9 10	55	179 13 4	199 10 0	131 4 5
	Assistant	26 0 0	...	26 0 0	...	...	...	...	...	...	...	...
	Operator	...	104 0 0	104 0 0	...	...	...	...	...	...	...	...
Piper's Flat	Postmaster	10 0 0	...	10 0 0	3,633	...	...	...	...	...	46 16 0	...
Pitt Town	do	23 0 0	...	23 0 0	6,201	...	...	...	...	...	56 11 0	...
Pokolbin	Postmistress	10 0 0	...	10 0 0	4,281	...	...	...	...	...	11 14 0	...
Ponto	do	11 0 0	...	11 0 0	3,093	...	...	...	...	...	21 9 0	...
Pooncarie	Post and Telegraph Master	150 0 0	...	150 0 0	8,436	1,299	188	637 5 0	12	57 11 0	143 14 0	118 18 1
Port Macquarie	do do	250 0 0	...	250 0 0	42,411	5,909	1,233	4,869 18 8	281	1,198 1 8	549 15 0	331 14 9
	Assistant	30 0 0	...	30 0 0		...	...	...	...	...	...	...
	do and Operator	20 0 0	104 0 0	124 0 0	...	...	...	...	...	...	...	...
	do Messenger	26 0 0	26 0 0	52 0 0	...	...	...	...	...	...	...	...
Port Macquarie Pilot Station.	Operator	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
Port Stephens	do	...	...	...	...	60	...	...	...	...	...	2 1 6
Prospect	Postmaster	18 0 0	...	18 0 0	4,278	...	...	...	...	...	27 6 0	...

Prospect Reservoir	do	10 0 0		10 0 0	10,752						157 19 0	
Punkalla (49)	do	10 0 0		10 0 0	1,563						10 14 6	
Purnamoota (50)	do	10 0 0		10 0 0	5,712						5 17 0	
Putty	Postmistress	11 0 0		11 0 0	2,202						8 15 6	
Pyree	do	19 0 0		19 0 0	5,139						23 8 0	
Pyrmont	Post and Telegraph Master	190 0 0		190 0 0	71,050	4,682	864	2,876 17 3	658	2,169 0 0	447 5 0	252 16 0
	Assistant and Operator	15 0 0	75 0 0	90 0 0								
	2 Messengers, at £52 and £39 each		91 0 0	91 0 0								
Quambone	Postmaster	21 0 0		21 0 0	9 009						74 2 0	
Quarantine Station	Operator from Head Office as required					3,364						
Queanbeyan	Post and Telegraph Master	340 0 0		340 0 0	219,231	8,662	2,524	8,913 17 6	670	2,544 4 4	1,239 18 0	485 14 0
	Assistant and Operator	78 0 0	52 0 0	130 0 0								
	Letter-carrier	50 0 0		50 0 0								
	Messenger		39 0 0	39 0 0								
Quipolly	Postmaster	20 0 0		20 0 0	831						7 16 0	
Quipolly Creek	Postmistress	17 0 0		17 0 0	2,421						9 15 0	
Quirindi	Post and Telegraph Master	240 0 0		240 0 0	65,325	3,720	1,175	3,063 9 6	313	924 1 5	549 10 0	232 19 0
	Assistant	135 0 0		135 0 0								
	Messenger		39 0 0	39 0 0								
Raglan	Postmaster	30 0 0		30 0 0	2,154						29 5 0	
Rainbow Reach	do	11 0 0		11 0 0	921						16 11 6	
Randwick	Post and Telegraph Mistress	150 0 0		150 0 0	127,545	4,240	454	1,429 19 8	549	1,064 8 4	333 17 6	181 19 3
	Letter-carrier	104 0 0		104 0 0								
	do	75 0 0		75 0 0								
	2 Messengers, at £52 and £39 each		91 0 0	91 0 0								
Rankin's Springs	Postmaster	35 0 0		35 0 0	5,358						38 0 6	
Ravensworth	do	20 0 0		20 0 0	5,532						95 11 0	
Rawden Vale	do	11 0 0		11 0 0	4,632						9 15 0	
Rawdon Island	do	10 0 0		10 0 0	1 839						20 9 6	
Raymond Terrace	Post and Telegraph Master	210 0 0		210 0 0	50,157	2,997	684	2,071 14 1	395	1,547 1 6	371 15 0	164 12 6
	Assistant	52 0 0		52 0 0								
	Letter-carrier and Messenger	13 0 0	26 0 0	39 0 0								
Redbank	Postmistress	13 0 0		13 0 0	1,590						14 12 6	
Redfern	Postmaster	250 0 0		250 0 0	271,725	6,504	2,120	7,346 16 5	2,090	6,066 10 5	872 6 0	305 19 10
	Assistant	75 0 0										
	2 Operators at £114 and £75 each		189 0 0	189 0 0								
	2 Letter carriers at £147 each	294 0 0		294 0 0								
	Receiver-clearer	52 0 0		52 0 0								
	do	26 0 0		26 0 0								
	2 Messengers at £52 each		104 0 0	104 0 0								
Redfern Railway Station	Operator					15,538						783 2 1
Redmyre	Postmaster	10 0 0		10 0 0	37,026						122 17 0	
	Letter-carrier	65 0 0		65 0 0								
Red Range	Postmaster	12 0 0		12 0 0	2,073						11 14 0	
Reedy Flat	do	14 0 0		14 0 0	3,762		135	232 6 8	8	23 5 0	48 15 0	
Reidsdale	do	12 0 0		12 0 0	2,898						11 14 0	
Reid's Flat	do	19 0 0		19 0 0	3,087						28 5 6	
Richmond	Post and Telegraph Master	260 0 0		260 0 0	83,382	6,600	735	2,354 18 1	559	2,056 1 9	544 12 6	331 12 10
	Assistant	40 0 0		40 0 0								
	Operator		52 0 0	52 0 0								
	Letter-carrier	100 0 0		100 0 0								
	Messenger		39 0 0	39 0 0								
Riverstone (51)	Postmaster	25 0 0		25 0 0	12,702		174	407 0 8	93	242 14 2	122 17 0	
Rix's Creek	do	10 0 0		10 0 0	555							
Robertson	Post and Telegraph Master	130 0 0		130 0 0	32,490	599	439	1,000 4 11	51	191 8 0	161 15 0	36 6 4
	Assistant	10 0 0		10 0 0								
Rob Roy	Postmistress	12 0 0		12 0 0	1,593						8 15 6	
Rockdale	Postmaster	15 0 0		15 0 0	11,112						11 14 0	
Rockley	Post and Telegraph Master	180 0 0		180 0 0	16,498	892	428	1,175 19 4	90	346 8 6	211 17 0	57 0 1

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		£ s. d	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Rockley	Assistant	25 0 0		25 0 0								
Rocky Glen	Postmaster	22 0 0		22 0 0	3,549							
Rocky Hall	do	10 0 0		10 0 0	3,390						2 18 6	
Rocky Plain	do	10 0 0		10 0 0	1,414						22 8 6	
Rocky River	do	19 0 0		19 0 0	2,646						24 7 6	
Rolland's Plains	Postmistress	15 0 0		15 0 0	10,041						55 11 6	
Rookwood	Post and Telegraph Master	120 0 0		120 0 0	21,193	1,330	283	693 18 11	177	621 10 8	160 19 6	50 5 4
Rooty Hill	Postmaster	24 0 0		24 0 0	12,907		77	195 15 1	66	192 11 1	86 11 6	
Rosedale	Postmistress	10 0 0		10 0 0	1,581						17 11 0	
Rosewood (52)	do	10 0 0		10 0 0	2,385						11 14 0	
Rothbury	do	12 0 0		12 0 0	3,825						38 0 6	
Rouchell Brook	do	12 0 0		12 0 0	2,613						0 19 6	
Rous	Postmaster	20 0 0		20 0 0	4,719						40 19 0	
Rouse Hill	Postmistress	21 0 0		21 0 0	4,815						45 16 6	
Royal Hotel	Operator from Head Office					5,486						330 19 2
Rydal	Postmaster	60 0 0		60 0 0	13,998	1,100	373	1,088 3 0	78	311 0 4	195 19 6	57 12 11
Ryde	do	42 0 0		42 0 0	37,437	2,566	599	2,017 10 8	252	787 2 7	183 11 0	133 5 6
	Telegraph Operator		114 0 0	114 0 0								
	Letter-carrier	108 0 0		108 0 0								
	Messenger		39 0 0	39 0 0								
Rye Park	Postmaster	15 0 0		15 0 0	4,392						82 17 6	
Rylstone	Post and Telegraph Master	160 0 0		160 0 0	31,515	2,246	836	1,778 19 10	329	1,148 12 11	414 16 6	141 2 1
	Messenger		52 0 0	52 0 0								
Sackville Reach	Postmistress	12 0 0		12 0 0	2,274						72 3 0	
St. Albans (53)	Postmaster and Telephone Operator	16 0 0	26 0 0	42 0 0	5,457	318	259	687 2 3	31	134 19 0	38 0 6	17 3 10
St. Clair	Postmaster	11 0 0		11 0 0	1,101						11 14 0	
St. Ives (54)	do	10 0 0		10 0 0	345						10 14 6	
St. Leonard's	do	210 0 0		240 0 0	349,921	8,228	1,348	4,343 18 8	950	3,179 8 8	1,097 9 0	390 3 7
	Assistant and Operator	30 0 0	52 0 0	82 0 0								
	2 Letter-carriers, at £135 each	270 0 0		270 0 0								
	Letter-carrier	124 0 0		124 0 0								
	do	108 0 0		108 0 0								
	do	78 0 0		78 0 0								
	2 Receiver-clearers, at £78 and £50 each	128 0 0		128 0 0								
	Operator		60 0 0	60 0 0								
	4 Messengers, 2 at £39 and 2 at £26		130 0 0	130 0 0								
St. Mary's	Post and Telegraph Mistress	140 0 0		140 0 0	24,066	974	455	1,115 7 9	267	1,041 15 9	169 15 0	53 0 10
	Messenger		52 0 0	52 0 0								
St. Peter's	Post and Telegraph Mistress		26 0 0	26 0 0	29,937	1,600	425	1,415 17 10	241	758 4 3	158 18 6	68 13 3
	Letter-carrier	104 0 0		104 0 0								
	Messenger		26 0 0	26 0 0								
Salt Creek	Post and Telegraph Master	160 0 0		160 0 0	4,692	399					34 2 6	31 4 5
	Assistant	15 0 0		15 0 0								
Scone	Post and Telegraph Mistress	180 0 0		180 0 0	44,094	2,518	1,611	7,861 8 7	294	874 7 2	642 0 0	159 1 6
	Assistant	50 0 0		50 0 0								
	Operator		75 0 0	75 0 0								
	Messenger		39 0 0	39 0 0								
Scott's Flat	Postmaster	10 0 0		10 0 0	886						10 14 6	
Seaham	Postmistress	19 0 0		19 0 0	5,004						44 17 0	
Seal Rocks	Telegraph Operator		52 0 0	52 0 0		269						10 4 11
Sebastopol	Postmaster	10 0 0		10 0 0	1,335						10 14 6	
Sedgefield	do	10 0 0		10 0 0	1,161						8 15 6	

Seven Hills	do	25 0 0		25 0 0	6,081	375					35 2 6	15 16 8
Sheet of Bark	Postmistress	21 0 0		21 0 0	1,824						14 12 6	
Shellharbour	Post and Telegraph Master	40 0 0	26 0 0	66 0 0	19,053	997	233	545 1 10	64	230 10 2	136 10 0	
Shepard's Town	Postmistress	14 0 0		14 0 0	3,756						17 11 0	
Sherbrooke	Postmaster	12 0 0		12 0 0	1,707						0 19 6	
Sherwood	Postmistress	10 0 0		10 0 0	837						31 4 0	
Silverton (55)	Post and Telegraph Master	230 0 0		230 0 0	73,446	8,489	1,203	5,319 11 10	398	2,341 16 9	779 2 6	887 12 4
	Assistant and Letter-carrier	125 0 0		125 0 0								
	2 Operators, at £100 each		200 0 0	200 0 0								
Singleton	Post and Telegraph Master	310 0 0		310 0 0	148,608	7,058	2,196	7,405 4 4	1,578	5,324 1 10	1,546 16 0	462 12 0
	Assistant	120 0 0		120 0 0								
	2 Letter-carriers at £120 and £104 each	224 0 0		224 0 0								
	2 Operators, at £114 each		228 0 0	228 0 0								
	2 Messengers, at £39 and £26 each		65 0 0	65 0 0								
Singleton Railway Station	Telegraph Operator		26 0 0	26 0 0		1,233						64 13 5
Smithfield	Postmaster	32 0 0		32 0 0	12,405						187 4 0	
Smith Town	Post and Telegraph Master	160 0 0		160 0 0	9,585	3,075	330	1,091 13 3	37	194 13 10	92 12 6	168 11 2
	Messenger		26 0 0	26 0 0								
Sofala	Post and Telegraph Master	160 0 0		160 0 0	15,741	629	586	1,950 17 5	233	849 8 4	162 17 6	35 13 0
	Assistant	40 0 0		40 0 0								
Somerton	Postmistress	26 0 0		26 0 0	8,185		113	225 3 8	12	35 2 6	53 12 6	
South Bowenfels (56)	Postmaster	23 0 0		23 0 0	9,090		135	305 15 8	34	121 3 11	62 8 0	
Southgate	do	10 0 0		10 0 0	2,406						28 5 6	
South Grafton	Post and Telegraph Master	160 0 0		160 0 0	34,638	3,170	448	1,413 2 6	250	1,177 2 0	260 0 0	165 19 3
	Assistant	52 0 0		52 0 0								
	Letter carrier and Messenger		39 0 0	39 0 0								
South Gundagai	Postmaster	33 0 0		33 0 0	5,974						55 11 6	
South Head	Telegraph Messenger		52 0 0	52 0 0		1,651						57 10 3
South Mount Hope	Postmaster	10 0 0		10 0 0	4,362						34 2 6	
South Woodburn	Post and Telegraph Master	160 0 0		160 0 0	19,470	2,351	449	1,487 8 7	40	130 10 9	190 7 0	128 11 10
	Assistant	76 0 0		76 0 0								
Spicer's Creek	Postmaster	11 0 0		11 0 0	1,542						16 15 6	
Spring Hill (57)	do	25 0 0		25 0 0	8,157	401	159	407 0 0	23	90 3 8	109 3 6	21 17 9
Spring Ridge	do	11 0 0		11 0 0	2,394						29 5 0	
Springs	do	20 0 0		20 0 0	6,672						87 15 0	
Springside	Postmistress	16 0 0		16 0 0	1,770						2 18 6	
Springwood	Postmaster	26 0 0		26 0 0	10,296	990					190 2 6	55 2 7
	Letter-carrier and Messenger	23 0 0	26 0 0	49 0 0								
Stanborough	Postmistress	22 0 0		22 0 0	777							
Stanmfer	Post and Telegraph Master	120 0 0		120 0 0	7,464	763	178	625 8 0	26	97 18 6	59 0 0	47 19 9
Stockton	Postmistress	40 0 0		40 0 0	8,850						40 19 0	
Stonehenge (58)	Postmaster	10 0 0		10 0 0	2,163						5 17 0	
Stony Creek	do	10 0 0		10 0 0	1,560						2 18 6	
Stroud	Post and Telegraph Master	200 0 0		200 0 0	21,282	1,698	460	1,176 9 1	169	612 16 9	229 13 6	99 13 3
	Assistant	52 0 0		52 0 0								
	Messenger		26 0 0	26 0 0								
Stuart's Point	Telegraph Operator		26 0 0	26 0 0								
Summer Hill	Postmaster	33 0 0		33 0 0	55,698		165	474 12 11	199	594 6 5	380 5 0	
	Letter-carrier	104 0 0		104 0 0								
	do	52 0 0		52 0 0								
Summer Island	Postmaster	17 0 0		17 0 0	1,547		137	348 7 3	5	18 17 6	24 7 6	
Surry Hills	Post and Telegraph Mistress	160 0 0		160 0 0	48,987	4,211	841	2,847 6 11	645	1,951 8 8	171 9 6	203 0 6
	Assistant and Operator	26 0 0	52 0 0	78 0 0								
	Messenger		39 0 0	39 0 0								
Sutton Forest	Post and Telegraph Master	150 0 0		150 0 0	18,435	1,882					215 2 6	113 9 8
	Messenger		26 0 0	26 0 0								
Swallows' Nest	Postmistress	13 0 0		13 0 0	2,154						33 3 0	
Swan Bay	Postmaster	15 0 0		15 0 0	5,322						38 0 6	
Swan Vale	Postmaster	13 0 0		13 0 0	1,260						20 9 6	

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		£ s. d	£ s. d.	£ s. d				£ s. d.		£ s d.	£ s. d	£ s. d.
Sylvania	Postmistress	10 0 0	...	10 0 0	3,645						58 10 0	
Tabulam	Postmaster	22 0 0		22 0 0	6,882	843					63 7 6	53 14 11
	Telegraph Master		150 0 0	150 0 0								
	Assistant	10 0 0		10 0 0								
Tacking Point	Telegraph Operator		26 0 0	26 0 0								
Tambaroora	Postmaster	65 0 0		65 0 0	6,718		153	446 18 9	114	261 2 6	65 6 6	
Tambar Springs	do	20 0 0		20 0 0	5,298		164	475 17 11	9	32 16 8	48 15 0	
Tamworth	Post and Telegraph Master	350 0 0		350 0 0	289,914	15,977	2,232	7,617 0 5	2,529	7,403 6 3	1,894 14 0	1,077 4 5
	1st Assistant	135 0 0		135 0 0								
	2nd do and Operator	26 0 0	52 0 0	78 0 0								
	3rd do	39 0 0		39 0 0								
	Letter-carrier	147 0 0		147 0 0								
	do	135 0 0		135 0 0								
	do	39 0 0		39 0 0								
	7 Operators—1 at £130, 3 at £114, 2 at £85, 1 at £75.		717 0 0	717 0 0								
	Line-repairer		150 0 0	150 0 0								
	2 Messengers, at £52 each		104 0 0	104 0 0								
Tangmangaroo	Postmaster	19 0 0		19 0 0	2,394						18 10 6	
Tanja	do	10 0 0		10 0 0	1,029						2 18 6	
Taraago	Post and Telegraph Master	150 0 0		150 0 0	13,182	1,459	337	803 0 9	122	458 16 2	166 15 0	89 7 5
	Assistant	84 0 0		84 0 0								
Taralga	Post and Telegraph Master	160 0 0		160 0 0	20,034	1,208	490	1,346 13 0	127	427 5 10	205 17 6	73 2 7
	Assistant and Messenger	19 10 0	26 0 0	45 10 0								
Tarana	Postmaster	40 0 0		40 0 0	11,679	782	238	568 8 11	90	389 12 6	117 0 0	40 19 4
Tarcutta	Post and Telegraph Master	100 0 0		100 0 0	8,418	763	304	662 14 1	63	367 7 0	127 13 0	45 11 9
	Assistant	26 0 0		26 0 0								
Taree	Post and Telegraph Master	230 0 0		230 0 0	35,269	5,831	699	2,425 7 2	298	917 12 7	451 7 6	318 3 2
	Assistant and Messenger	39 0 0	39 0 0	78 0 0								
	Line-repairer		150 0 0	150 0 0								
Tarlo	Postmaster	20 0 0		20 0 0	2,685						17 11 0	
Tarro Railway Station	do	10 0 0		10 0 0	2,808						48 15 0	
Tatham	do	12 0 0		12 0 0	3,324						27 6 0	
Tathra	Postmaster and Telegraph Operator	10 0 0	75 0 0	85 0 0	1,638	989					26 6 6	47 16 8
Tattersall's	Telegraph Station master		130 0 0			7,572						455 18 4
Telegraph Point	Postmistress	25 0 0		25 0 0	2,955						28 5 6	
Temora	Post and Telegraph Master	200 0 0		200 0 0	51,210	4,081	1,011	3,239 18 5	484	2,385 10 7	472 5 0	232 1 10
	Operator		75 0 0	75 0 0								
	Messenger		39 0 0	39 0 0								
Tempe	Postmistress	36 0 0		36 0 0	5,574		89	237 7 2	29	59 19 7	66 6 0	
Tenandra	Postmaster	20 0 0		20 0 0	5,097							
Ten-mile Reefs	do	16 0 0		16 0 0	6,981		101	254 17 10	18	80 12 2	48 15 0	
Tenterfield	Post and Telegraph Master	350 0 0		350 0 0	80,093	156,712	1,303	4,197 19 7	516	2,361 19 1	728 9 0	523 10 3
	Assistant	140 0 0		140 0 0								
	Letter-carrier	52 0 0										
	2 Operators—1 at £160, and 1 at £100		260 0 0	260 0 0								
	Line-repairer		150 0 0	150 0 0								
	Messenger		39 0 0	39 0 0								
Tent Hill	Postmistress	17 0 0		17 0 0	6,102						10 14 6	
Terara	Post and Telegraph Master	190 0 0		190 0 0	13,251	2,441	461	1,410 2 0	115	334 15 2	151 15 0	135 0 5
	Assistant	40 0 0		40 0 0								
	Messenger		39 0 0	39 0 0								
The Bulga	Postmistress	10 0 0		10 0 0	2,571						27 6 0	

The Exchange	Postmaster	180 0 0	...	180 0 0	612,109	50,874	1,176	3,865 15 2	48	156 7 1	5,398 12 0	3,928 16 10
	Assistant	75 0 0	...	75 0 0	...	...	...	...	...	...	...	...
	Telegraph Station-master	...	130 0 0	130 0 0	...	...	...	...	...	...	...	...
The Gulf	Postmaster	10 0 0	...	10 0 0	639	...	...	...	...	...	10 14 6	...
The Junction	do	18 0 0	...	18 0 0	8,178	...	...	...	...	...	3 18 0	...
The Lagoon	do	11 0 0	...	11 0 0	870	...	...	...	...	...	5 17 0	...
The Reefs	Postmistress	10 0 0	...	10 0 0	1,392	...	...	...	...	...	15 12 0	...
The Rock	Postmaster	22 0 0	...	22 0 0	7,914	665	153	426 14 9	32	193 4 6	205 14 6	40 10 0
The Valley	Postmistress	10 0 0	...	10 0 0	2,097	...	...	...	...	...	2 18 6	...
Thurgoona	Postmaster	25 0 0	...	25 0 0	3,309	...	...	...	...	...	53 12 6	...
Tibooburra	do	40 0 0	...	40 0 0	9,805	...	133	496 16 11	8	35 11 8	78 0 0	...
Tighe's Hill	do	22 0 0	...	22 0 0	7,815	...	292	981 1 7	54	120 17 8	87 15 0	...
Tilba Tilba	do	12 0 0	...	12 0 0	4,208	...	...	...	...	...	63 7 6	...
Tilpa	Post and Telegraph Master	140 0 0	...	140 0 0	6,822	1,070	...	...	...	...	91 5 6	85 8 11
Timbarra	Postmistress	15 0 0	...	15 0 0	2,835	...	...	...	...	...	30 4 6	...
Timbilica	Postmaster	10 0 0	...	10 0 0	1,204	...	...	...	...	...	17 11 0	...
Timbriebungie	do	16 0 0	...	16 0 0	3,837	...	...	...	...	...	33 3 0	...
Timor	Postmistress	10 0 0	...	10 0 0	1,224	...	...	...	...	...	15 12 0	...
Tingha	Post and Telegraph Master	210 0 0	...	210 0 0	22,266	2,813	1,127	5,982 19 5	273	1,329 0 5	318 7 6	178 16 6
	Assistant	40 0 0	...	40 0 0	...	...	...	...	...	...	...	...
Tinonee	Post and Telegraph Master	160 0 0	...	160 0 0	13,599	1,479	324	890 9 0	45	191 0 2	181 6 6	77 12 2
	Assistant	20 0 0	...	20 0 0	...	...	...	...	...	...	...	...
Tintenbar	Postmaster	16 0 0	...	16 0 0	6,174	...	...	...	...	...	69 4 6	...
Tintin Hull	do	10 0 0	...	10 0 0	465	...	...	...		...	2 18 6	...
Tirrania	do	10 0 0	...	10 0 0	210		...			...	2 18 6	...
Tocumwall	Post and Telegraph Master	200 0 0	...	200 0 0	13,431	1,520	424	1,969 2 8	25	94 17 2	143 7 0	95 2 0
	Assistant	20 0 0	...	20 0 0	...	...	...	...	...	...	...	...
Tomago	Postmaster	17 0 0	...	17 0 0	1,404	...	...	...	...	...	11 14 0	...
Tomakin	do	10 0 0	...	10 0 0	720	703	...	...	...	...	...	45 3 10
	Operator	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
Tomerong	Postmaster	25 0 0	...	25 0 0	5,670		...	...	...	...	90 13 6	...
Toogong	Postmistress	23 0 0	...	23 0 0	3,234	...	...	...	...	...	27 6 0	...
Tooloom	do	14 0 0	...	14 0 0	2,964	...	...	...	...	...	42 18 0	...
Tooma	Postmaster	16 0 0	...	16 0 0	7,545	...		...	...	...	78 0 0	...
Torington	do	10 0 0	...	10 0 0	1,815	...	...	...	...	...	...	...
Towamba	do	13 0 0	...	13 0 0	3,462	...	...	...	...	...	73 2 6	...
Towrang	do	10 0 0	...	10 0 0	2,235	...	...	...	...	...	32 3 6	...
Trangie	do	25 0 0	...	25 0 0	14,070	...		...	...	...	188 3 6	...
Trevallyn	Postmistress	17 0 0	...	17 0 0	6,468	...	...	...	...	...	41 19 0	...
Trunkey Creek	Post and Telegraph Master	210 0 0	...	210 0 0	15,336	612	354	936 15 2	74	309 1 4	138 4 6	42 3 1
	Assistant	20 0 0	...	20 0 0	...	...	...	...	...	...	...	...
Tuena	Post and Telegraph Master	150 0 0	...	150 0 0	9,009	684	347	1,654 11 11	68	295 10 9	119 8 6	35 8 7
Tuggranong (59)	Postmistress	10 0 0	...	10 0 0	999	...	...	...	...	...	8 15 6	...
Tullimbar	Postmaster	12 0 0	...	12 0 0	5,409		141	251 10 9	6	14 3 5	43 17 6	...
Tumberumba	Post and Telegraph Mistress	170 0 0	...	170 0 0	51,900	2,664	612	1,813 4 9	120	480 6 6	361 0 0	173 13 7
	Assistant	75 0 0	...	75 0 0	...	...	...	...	...	...	...	...
Tumbulgum	Post and Telegraph Mistress	19 0 0	...	19 0 0	6,180	1,073	313	949 19 9	32	214 4 9	68 5 0	72 16 10
	Operator	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
Tumut	Post and Telegraph Master	270 0 0	...	270 0 0	73,944	5,930	1,053	3,058 5 6	394	1,389 16 11	787 9 0	403 0 10
	Assistant and Operator	25 0 0	104 0 0	129 0 0	...	...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
Turee Creek	Postmistress	10 0 0	...	10 0 0	732	...	...	...	...	...	4 17 6	...
Tweed Heads	Postmaster and Telegraph Operator	10 0 0	52 0 0	62 0 0	2,073	995	...	...	...	...	30 4 6	60 18 7
Two-mile Flat	Postmaster	13 0 0	...	13 0 0	1,518	...	...	...	...	...	15 12 0	...
Tyndale	do	10 0 0	...	10 0 0	729	...	...	...	...	...	8 15 6	...
Uarbry	Postmistress	11 0 0	...	11 0 0	1,959	...	...	...	...	...	12 13 6	...
Ulladulla	Post and Telegraph Mistress	23 0 0	26 0 0	49 0 0	5,796	97	133	390 15 5	80	418 15 2	37 1 0	5 8 8
Ulmarra	Post and Telegraph Master	150 0 0	...	150 0 0	23,352	2,962	453	1,527 1 4	90	393 2 0	222 16 0	181 5 2
	Assistant	65 0 0	...	65 0 0	...	...	...	...	...	...	...	...

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		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Ulmarra	Messenger		39 0 0	39 0 0								
Ultimo	Postmaster	50 0 0		50 0 0	45,324		308	892 5 0	238	569 14 9	326 9 6	
Unanderra	Postmistress	32 0 0		32 0 0	7,749							
Underbank	Postmaster	18 0 0		18 0 0	2,610						81 18 0	
Unumgar	do	23 0 0		23 0 0	495							
Upper Bankstown	do	13 0 0		13 0 0	1,335						4 17 6	
Upper Botobolar	do	10 0 0		10 0 0	576						0 19 6	
Upper Burragorang	Postmistress	10 0 0		10 0 0	1,359						15 12 0	
Upper Coldstream	Postmaster	10 0 0		10 0 0	882						22 8 6	
Upper Colo	do	15 0 0		15 0 0	2,559						71 3 6	
Upper Gundaroo	do	26 0 0		26 0 0	8,970		165	337 9 11	16	45 7 4	58 10 0	
Upper Manilla	Postmistress	26 0 0		26 0 0	3,237						37 1 0	
Upper Myall	Postmaster	14 0 0		14 0 0	924						16 11 6	
Upper North Creek	do	11 0 0		11 0 0	1,752		63	165 13 6	2	3 14 4		
Upper Pyramul	do	18 0 0		18 0 0	2,409		81	222 11 6	10	54 8 11	35 2 0	
Upper Turon	Postmistress	11 0 0		11 0 0	1,227						15 12 0	
Uralla	Post and Telegraph Master	230 0 0		230 0 0	48,984	3,455	894	3,076 12 4	331	1,093 16 1	628 15 6	212 6 7
	Assistant Operator	52 0 0	75 0 0	127 0 0								
	Messenger	52 0 0		52 0 0								
Urana	Post and Telegraph Master	230 0 0		230 0 0	44,727	3,775	575	2,430 1 7	128	512 16 4	496 4 6	258 3 7
	Assistant Operator	78 0 0	52 0 0	130 0 0								
	Messenger		52 0 0	52 0 0								
Urangeline	Postmaster	20 0 0		20 0 0	1,944						13 13 0	
Urawilkie	do	20 0 0		20 0 0	1,320							
Uriarra	do	10 0 0		10 0 0	1,059						15 12 0	
Vacy	Postmistress	20 0 0		20 0 0	10,830						69 4 6	
Vale of Clwydd	Postmaster	10 0 0		10 0 0	2,214						14 12 6	
Vere	Postmistress	15 0 0		15 0 0	1,368						34 2 6	
Vittoria	do	14 0 0		14 0 0	1,660						36 1 6	
Wagga Wagga	Postmaster	360 0 0		360 0 0	356,604	25 835	3,573	12,693 3 8	1,764	5,534 14 7	2,429 15 6	1,872 5 2
	1st Assistant	240 0 0		240 0 0								
	2nd do	210 0 0		210 0 0								
	3rd do	120 0 0		120 0 0								
	Letter-carrier	114 0 0		114 0 0								
	do	108 0 0		108 0 0								
	do	84 0 0		84 0 0								
	Telegraph Station-master		310 0 0	310 0 0								
	6 Operators—1 at £175, £160, £150, £130, £114, and £104 each		833 0 0	833 0 0								
	4 Messengers—2 at £52, and 2 at £39		182 0 0	182 0 0								
	Line-repairer		52 0 0	52 0 0								
Wagonga	Postmistress	15 0 0		15 0 0	1,353						17 11 0	
Wagonga Heads	Postmaster	10 0 0		10 0 0	336						1 19 0	
Wagra	Postmistress	21 0 0		21 0 0	8,463						14 12 6	
Walbundrie (60)	do	21 0 0		21 0 0	8,061	21					78 0 0	1 8 8
	Telegraph Master		100 0 0	100 0 0								
Walcha	Post and Telegraph Master	200 0 0		200 0 0	32,187	2,494	687	2,146 14 5	107	359 5 7	557 6 6	157 13 2
	Assistant and Operator	50 0 0	25 0 0	75 0 0								
	Messenger		26 0 0	26 0 0								
Walcha Road	Postmaster	28 0 0		28 0 0	19,117						171 12 0	
Walgett	Post and Telegraph Master	300 0 0		300 0 0	94,443	9,105	992	4,504 5 6	218	864 10 4	758 14 6	622 16 3
	1st Assistant	104 0 0		104 0 0								
	2nd do and Operator	26 0 0	104 0 0	130 0 0								

	3rd do do	26 0 0	75 0 0	101 0 0									
	Messenger		39 0 0	39 0 0									
Wallabadah	Postmaster	36 0 0		36 0 0	15,705		316	682 18 4	52	216 9 0	78 0 0		
Wallarobba	do	14 0 0		14 0 0	2,331						10 14 6		
Walla Walla	do	10 0 0		10 0 0	1,785						23 8 0		
Wallendbeen	do	30 0 0		30 0 0	10,998	614	184	497 12 6	59	164 2 9	180 7 6	34 9 2	
Wallerawang	Post and Telegraph Master	190 0 0		190 0 0	53,928	1,563	841	2,121 6 4	218	658 8 10	287 11 6	86 11 0	
	Assistant	25 0 0		25 0 0									
Walli	Postmaster	12 0 0		12 0 0	3,282						60 9 0		
Wallsend	Post and Telegraph Master	260 0 0		260 0 0	156,744	5,952	2,164	7,879 9 11	562	1,617 13 2	290 17 6	283 19 8	
	2 Letter-carriers, at £108 each	216 0 0		216 0 0									
	Operator		101 0 0	101 0 0									
Wamberal	Postmaster	12 0 0		12 0 0	1,248						9 15 0		
Wanaaring	do	50 0 0		50 0 0	11,469						157 19 0		
Wanchope	Postmistress	10 0 0		10 0 0	2,523						33 3 0		
Wandandian (61)	do	10 0 0		10 0 0	1,407						17 11 0		
Wandella	do	10 0 0		10 0 0	897								
Wandsworth	Postmaster	17 0 0		17 0 0	4,167		105	262 5 10	19	85 3 10	48 5 0		
Wanganella	Postmistress	31 0 0		31 0 0	17,010						61 8 6		
Wangat	do	10 0 0		10 0 0	1,035						12 13 6		
Waratah	Post and Telegraph Master	130 0 0		130 0 0	26,034	1,531	465	1,336 8 4	262	947 15 9	172 15 6	97 15 10	
	Letter-carrier	124 0 0		124 0 0									
	Receiver-clearer and Messenger	15 0 0	26 0 0	41 0 0									
Wardell	Post and Telegraph Master	140 0 0		140 0 0	17,688	3,370	697	2,368 11 3	136	488 17 6	226 6 6	203 11 5	
	Assistant	26 0 0		26 0 0									
Warialda	Post and Telegraph Master	210 0 0		210 0 0	35,184	3,144	544	2,041 8 7	166	493 14 1	614 10 6	206 6 6	
	Assistant	26 0 0		26 0 0									
	Operator		114 0 0	114 0 0									
	Line-repairer		125 0 0	125 0 0									
Warkworth	Postmistress	28 0 0		28 0 0	7,086	464					70 4 0	26 5 6	
	Telegraph Master		52 0 0	52 0 0									
Warne	Postmaster	16 0 0	52 0 0	16 0 0	9,060						80 18 6		
Warneton	do	15 0 0		15 0 0	1,824						32 3 6		
Waroo	Postmistress	10 0 0		10 0 0	1,668								
Warrah Ridge	Postmaster	10 0 0		10 0 0	1,416						10 14 6		
Warren	Post and Telegraph Master	240 0 0		240 0 0	30,229	4,304	921	3,417 13 8	130	555 0 3	524 11 6	285 18 3	
	Assistant	35 0 0		35 0 0									
	Messenger		39 0 0	39 0 0									
Waterloo	Post and Telegraph Master	130 0 0		130 0 0	27,567	1,901	700	1,988 6 2	683	2,367 16 8	9 15 0	85 7 4	
	2 Letter-carriers, at £108 and £104 each	212 0 0		212 0 0									
Watson's Bay	Postmistress	26 0 0		26 0 0	10,680		149	249 14 2	37	114 10 10	61 8 6		
	Letter-carrier	25 0 0		25 0 0									
Wattamolla	Postmaster	10 0 0		10 0 0	855						2 18 6		
Wattle Flat	do	33 0 0		33 0 0	8,475		257	712 11 5	150	601 19 4	94 11 6		
Waverley	Post and Telegraph Mistress	190 0 0		190 0 0	159,168	5,396	772	2,410 18 3	534	1,625 0 9	373 15 6	231 12 1	
	Assistant and Operator	37 10 0	52 0 0	89 10 0									
	3 Letter carriers—£108, £78, and £26 each.	212 0 0		212 0 0									
	2 Messengers, at £39 each		78 0 0	78 0 0									
Weddin	Postmaster	10 0 0		10 0 0	1,230						20 9 6		
Wee Waa	Post and Telegraph Master	140 0 0		140 0 0	11,298	1,538	438	1,912 3 0	28	131 17 10	132 7 6	106 2 3	
	Assistant	50 0 0		50 0 0									
Wellingrove	Postmaster	21 0 0		21 0 0	3,834						20 9 6		
Wellington	Post and Telegraph Master	290 0 0		290 0 0	67,989	5,377	1,607	4,626 0 0	696	2,653 3 5	904 13 0	320 0 3	
	Assistant and Operator	77 0 0	52 0 0	129 0 0									
	Letter-carrier and Messenger	39 0 0	26 0 0	65 0 0									
Wentworth	Post and Telegraph Master	360 0 0		360 0 0	91,741	56,113	951	4,008 7 2	238	1,008 6 9	985 2 6	734 6 9	
	Assistant	110 0 0		110 0 0									

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		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Wentworth	3 Operators, at £175, £150, and £100 each	...	425 0 0	425 0 0	...	...	...	...	...	...	...	...
	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	2 Messengers, at £26 each	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
Werombi	Postmistress	10 0 0	...	10 0 0	1,389	...	...	...	...	...	23 8 0	...
Werris Creek	Postmaster	16 0 0	...	16 0 0	12,054	1,753	438	1,141 18 0	44	104 15 8	170 12 6	100 17 4
	Assistant	26 0 0	...	26 0 0	...	...	...	...	...	...	...	...
	Operator	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
	Messenger	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
West Balmain	Postmaster	20 0 0	...	20 0 0	31,773	...	...	...	...	...	258 7 6	...
Westbrook	Postmistress	13 0 0	...	13 0 0	1,248	...	...	...	...	...	19 10 0	...
West Cambewarra	do	10 0 0	...	10 0 0	936	...	...	...	...	...	23 8 0	...
West Kempsey	Post and Telegraph Master	220 0 0	...	220 0 0	26,630	4,627	655	2,568 15 11	168	633 7 10	246 5 0	293 3 6
	Assistant	40 0 0	...	40 0 0	...	...	...	...	...	...	...	...
	Operator	...	62 0 0	62 0 0	...	...	...	...	...	...	...	...
	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
West Maitland	Postmaster	400 0 0	...	400 0 0	398,556	22,504	3,078	10,525 19 9	4,854	13,731 0 1	1,733 19 0	1,581 9 1
	1st Assistant	180 0 0	...	180 0 0	...	...	...	...	...	...	...	...
	2nd do	100 0 0	...	100 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	135 0 0	...	135 0 0	...	...	...	...	...	...	...	...
	do	120 0 0	...	120 0 0	...	...	...	...	...	...	...	...
	do	114 0 0	...	114 0 0	...	...	...	...	...	...	...	...
	do	50 0 0	...	50 0 0	...	...	...	...	...	...	...	...
	Telegraph Master	...	310 0 0	310 0 0	...	...	...	...	...	...	...	...
	7 Operators—1 at £160, 5 at £114, and 1 at £85 each	...	815 0 0	815 0 0	...	...	...	...	...	...	...	...
	Line-repairer	...	57 0 0	57 0 0	...	...	...	...	...	...	...	...
	3 Messengers—2 at £52, and 1 at £26 each	...	130 0 0	130 0 0	...	...	...	...	...	...	...	...
West Mitchell	Postmaster	18 0 0	...	18 0 0	4,410	...	...	...	...	...	103 7 0	...
West Tamworth	Post and Telegraph Master	160 0 0	...	160 0 0	21,570	1,272	317	950 11 5	222	862 4 4	132 17 0	73 6 0
	Assistant	15 0 0	...	15 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	39 0 0	...	39 0 0	...	...	...	...	...	...	...	...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
West Temora	Postmaster	11 0 0	...	11 0 0	1,239	...	...	...	...	...	...	...
Whealbah	do	13 0 0	...	13 0 0	3,678	...	...	...	...	...	46 16 0	...
Wheeo	Postmistress	29 0 0	...	29 0 0	1,683	...	...	...	...	...	12 13 6	...
Wherrol Flat	Postmaster	10 0 0	...	10 0 0	1,133	...	...	...	...	...	11 14 0	...
Whinstone Valley	do	11 0 0	...	11 0 0	1,293	...	...	...	...	...	12 13 6	...
Whiteman Creek	Postmistress	10 0 0	...	10 0 0	582	...	...	...	...	...	8 15 6	...
White Rock	do	14 0 0	...	14 0 0	879	...	...	...	...	...	26 6 6	...
Whittingham	do	33 0 0	...	33 0 0	10,362	...	...	...	...	...	76 1 0	...
Whitton	Postmaster and Operator	33 0 0	...	33 0 0	21,282	3,448	378	981 19 3	38	161 1 2	361 14 6	209 11 7
Wickham	Post and Telegraph Master	160 0 0	...	160 0 0	32,931	2,258	853	2,634 14 10	236	816 8 8	824 13 6	121 3 4
	Letter-carrier	114 0 0	...	114 0 0	...	...	...	...	...	...	...	...
	Messenger	...	52 0 0	52 0 0	...	...	...	...	...	...	...	...
Wilberforce	Postmaster	21 0 0	...	21 0 0	5,370	...	...	...	...	...	22 8 6	...
Wilcannia	Post and Telegraph Master	330 0 0	...	330 0 0	180,702	16,316	1,492	6,019 19 1	426	1,856 9 6	2,244 2 6	1,621 16 7
	1st. Assistant	110 0 0	...	110 0 0	...	...	...	...	...	...	...	...
	2nd. do and Operator	26 0 0	175 0 0	201 0 0	...	...	...	...	...	...	...	...
	3rd. do and Operator	16 0 0	150 0 0	166 0 0	...	...	...	...	...	...	...	...
	Operator	...	130 0 0	130 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	108 0 0	...	108 0 0	...	...	...	...	...	...	...	...
	2 Messengers, at £52 and £26 each	...	78 0 0	78 0 0	...	...	...	...	...	...	...	...
Wild's Meadow	Postmaster	18 0 0	...	18 0 0	4,443	...	...	...	...	...	74 2 0	...
Willanthry	do	13 0 0	...	13 0 0	5,664	...	42	136 19 8	...	...	28 6 6	...

William-street	do	340 0 0	...	340 0 0	160,155	14,386	2,427	8,439 8 10	1,269	3,850 4 10	1,867 14 6	725 4 8
	Assistant	75 0 0	... ...	75 0 0			..		..	.	... .	. . ..
	2 Operators, at £114 each	.	228 0 0	228 0 0		...	.				. .	. .....
	3 Messengers—1 at £52, and 2 at £39 each	...	130 0 0	130 0 0			.....			...	.. . .	. .. .. .
William Town	Postmaster	20 0 0	.	20 0 0	1,475			..			12 13 6	. .
Willow-Tree	do	27 0 0	.	27 0 0	12,795	668	277	622 2 9	27	97 1 6	187 4 0	39 0 2
	Operator	...	26 0 0	26 0 0		..	.		. .	.	26 6 6	
Willson's Downfall	do	19 0 0		19 0 0	6,027						...	.
Wilson	do	10 0 0		10 0 0	1,794		...	. . . .			12 13 6	.
Wilton	do	20 0 0		20 0 0	2,910		140	531 6 4	21	89 9 5	46 16 0	
Wimbledon	do	10 0 0		10 0 0	2,103						44 17 0	
Windellama	Postmistress	12 0 0		12 0 0	2,502	...					22 8 6	
Windeyer	Postmaster	19 0 0		19 0 0	6,717		89	189 14 8	51	224 16 0	23 8 0	
Winding Creek	do	14 0 0		14 0 0	4,785						64 7 0	..
Windsor	Post and Telegraph Master	320 0 0		320 0 0	108,123	5,870	1,217	3,769 12 6	767	2,442 0 1	879 3 0	326 6 6
	Assistant	52 0 0		52 0 0			..					...
	do and Operator	12 0 0	114 0 0	126 0 0						... ..		...
	Letter carrier	104 0 0		104 0 0								
	Messenger	.	52 0 0	52 0 0	..		...	...			.	
Wingello (62)	Postmaster	10 0 0		10 0 0	3,063		...				29 5 0	..
Wingen	do	18 0 0	.	18 0 0	6,822	286				...	98 9 6	15 16 4
	Operator		26 0 0	26 0 0								
Wingham	Post and Telegraph-master	180 0 0		180 0 0	26,607	1,940	540	1,466 15 0	112	431 13 0	303 3 6	144 9 4
	Assistant and Messenger	26 0 0	26 0 0	52 0 0	.							...
Wiseman's Ferry	Postmistress	15 0 0		15 0 0	6,723	1,081	368	1,228 8 1	25	108 7 2	77 0 6	59 0 4
	Telegraph Station-master		190 0 0	190 0 0				...				
Wollar	Postmistress	21 0 0	...	21 0 0	4,755		150	334 17 9	9	29 0 3	21 9 0	
Wollombi	Post and Telegraph Master	210 0 0		210 0 0	11,619	1,376	509	2 152 5 4	97	448 19 11	108 18 6	85 16 2
	Assistant and Operator	28 0 0	26 0 0	54 0 0				...				
Wollomombi	Postmaster	14 0 0		14 0 0	4,614				.		40 19 0	
Wollongbar	do	10 0 0	...	10 0 0	777	..			.		14 12 6	
Wollongong	Post and Telegraph Master	330 0 0		330 0 0	160,614	11,458	2,769	10,391 9 2	909	2,709 5 0	1,319 12 6	666 17 1
	1st Assistant	45 0 0		45 0 0		.	.					...
	2nd do and Operator	26 0 0	104 0 0	130 0 0						. .		.
	Letter-carrier	108 0 0		108 0 0				. ...	..			..
	do and Messenger	20 0 0	39 0 0	59 0 0			...		...			
Wollongough	Postmaster	21 0 0		21 0 0	3,708					.	. . .	.
Wolumla	Post and Telegraph Master	110 0 0	...	110 0 0	9,201	1,311	277	742 2 8	78	307 1 2	28 14 0	71 10 1
Wombat	Postmaster	32 0 0	.	32 0 0	6,279		131	327 14 5	34	118 13 0	87 15 0	...
Womora	do	10 0 0		10 0 0	9,216						7 16 0	
Woodburn	Post and Telegraph Master	160 0 0	.	160 0 0	12,378	1,911	378	1,220 4 7	108	508 0 5	37 7 6	115 2 1
	Assistant and Messenger	50 0 0	26 0 0	76 0 0				..		..	...	...
Woodford	Postmaster	10 0 0	.....	10 0 0	1,155					. .. . .	19 10 0	
Woodfordleigh	Postmistress	12 0 0	. ...	12 0 0	4,143						15 12 0	
Woodhill (63)	Postmaster	10 0 0		10 0 0	344					.	5 17 0	
Woodhouselee	do	17 0 0		17 0 0	4,326		...	...		...	58 10 0	
Woodlands	do	10 0 0		10 0 0	774	. ....		.	...	...	10 14 6	..
Woodside	do	13 0 0	...	13 0 0	3,090	...		...		.. ...	48 15 0	.....
Woodville	do	20 0 0		20 0 0	6,297		.	.	. .		56 11 0	
Woolgoolga	Postmistress	10 0 0	...	10 0 0	2,502				.		17 11 0	...
Woollahra	Post and Telegraph Master	160 0 0		160 0 0	56,487	3,618	709	2,232 11 4	495	1,407 5 6	314 0 0	147 12 0
	Operator		75 0 0	75 0 0		.		.....		. . .		...
	2 Messengers, at £52 and £39 each		91 0 0	91 0 0			...	...	.	. .		..
Woomargama	Postmistress	28 0 0		28 0 0	5,487			...			43 17 6	...
Woonona	Postmaster	39 0 0		39 0 0	8,523		293	968 3 7	58	170 10 7	124 10 0	...
Woore	Postmistress	14 0 0	...	14 0 0	3,963			. .	..	...	12 13 6	.....
Wowagin	Postmaster	10 0 0	...	10 0 0	405		.			. ...	8 15 6	...
Woy Woy	do	15 0 0		15 0 0	8,088	...	..		.	...	93 12 0	.
Wybong	do	11 0 0		11 0 0	1,281	..				..	20 9 6	.....

Name of Office.	Designation.	Annual Salary. Postal	Annual Salary. Telegraph.	Annual Salary. Total.	Number of Letters Posted.	Number of Telegraph Messages.	Money Orders Issued. No.	Money Orders Issued. Amount.	Money Orders Paid. No.	Money Orders Paid. Amount.	Revenue. Postal	Revenue. Telegraphic
		£ s. d.	£ s. d.	£ s. d.				£ s. d.		£ s. d.	£ s. d.	£ s. d.
Wyndham	Postmaster	14 0 0	...	14 0 0	3,339	...	...	...	...	...	39 0 0	...
Wyong Creek	Postmistress	12 0 0	...	12 0 0	3,828	...	...	...	...	...	...	...
Wyrallah	do	15 0 0	...	15 0 0	5,433	...	...	...	...	...	160 17 6	...
Yalwal	do	10 0 0	...	10 0 0	1,232	...	...	...	...	...	20 9 6	...
Yamba	Post and Telegraph Mistress	140 0 0	...	140 0 0	8,973	3,051	...	...	...	...	103 3 0	138 12 0
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Yammatree	Postmistress	10 0 0	...	10 0 0	3,498	...	...	...	...	...	34 2 6	...
Yandarlo	Postmaster	16 0 0	...	16 0 0	5,262	...	...	...	...	...	117 19 6	...
Yarra	Postmistress	15 0 0	...	15 0 0	1,989	...	...	...	...	...	16 11 6	...
Yarrahapinni	Post and Telegraph Mistress	10 0 0	52 0 0	62 0 0	1,402	780	...	...		...	12 13 6	27 18 9
Yarramalong	Postmistress	10 0 0	...	10 0 0	841	...	...	...	...	...	25 7 0	...
Yarraman	Postmaster	13 0 0	...	13 0 0	2,388	...	...	...	...	...	6 16 6	...
Yarras	Postmistress	12 0 0	...	12 0 0	1,731	...	...	...	...	...	27 6 0	...
Yass	Post and Telegraph Master	290 0 0	...	290 0 0	112,038	6,104	1,810	4,958 14 1	1,081	3 269 15 4	1,036 0 0	411 4 2
	Assistant and Operator	20 0 0	120 0 0	140 0 0	...	...	...	...	...	...	...	...
	Junior Assistant and Letter-carrier	88 0 0	...	88 0 0	...	...	...	...	...	...	...	...
	Operator	...	114 0 0	114 0 0	...	...	...	...	...	...	...	...
	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	Messenger	...	39 0 0	39 0 0	...	...	...	...	...	...	...	...
Yass Railway Station	Railway Operator	...	...	...	263	...	...	...	...	...	...	14 1 10
Yatteyatah	Postmistress	20 0 0	...	20 0 0	4,140	...	...	...	...	...	19 10 0	...
Yeoval	Postmaster	14 0 0	...	14 0 0	6,282	...	...	...	...	...	34 2 6	...
Yerong Creek	do	18 0 0	...	18 0 0	13,413	1,209	...	...	...	...	340 5 6	78 11 0
Yetholme	do	20 0 0	...	20 0 0	1,455	...	...	...	...	...	20 9 6	...
Yetman	do	28 0 0	180 0 0	208 0 0	9,030	1,162	...	...	...	...	78 0 0	89 18 2
Young	Post and Telegraph Master	310 0 0	...	310 0 0	164,133	12,877	2,816	10,224 9 1	896	2,588 19 11	1,709 5 6	893 0 5
	Assistant	114 0 0	...	114 0 0	...	...	...	...	...	...	...	...
	3 Operators, at £130, £114, and £75	...	319 0 0	319 0 0	...	...	...	...	...	...	...	...
	Line-repairer	...	150 0 0	150 0 0	...	...	...	...	...	...	...	...
	Letter-carrier	135 0 0	...	135 0 0	...	...	...	...	...	...	...	...
	Messenger	...	26 0 0	26 0 0	...	...	...	...	...	...	...	...
Yullundry	Postmaster	10 0 0	...	10 0 0	2,835	...	...	...	...	...	17 11 0	...
Yurrunga	do	10 0 0	...	10 0 0	2,325	...	...	...	...	...	8 15 6	...

(1) Established 1st April (2) Telegraph Office established 1st April. (3) Established 9th February. (4) Established 1st May. (5) Established 15th August. (6) Established 10th August. (7) Telegraph Office opened 21st January (8) Established 1st August (9) Established 1st May. (10) Closed 7th July, re-established 8th October. (11) Established 1st October. (12) Savings' Bank established 2nd March. (13) Telephone communication established 11th February. (14) Re established 20th April. (15) Established 1st November, (16) Money Order Office abolished 14th September. (17) Established 20th November. (18) Established 16th December. (19) Telegraph Office opened 23rd February. (20) Savings' Bank established 2nd March. (21) Established 15th August. (22) Established 1st September (23) Established 16th October. (24) Established 1st February. (25) Telegraph Office opened 28th August. (26) Established 1st September. (27) Established 20th February. (28) Closed 1st July, re opened 1st September. (29) Established 21st October. (30) Established 20th February. (31) Established 16th December (32) Telegraph Office opened 9th March. (33) Telegraph Office opened 7th September. (34) Savings' Bank established 2nd March. (35) Established 16th August. (36) Established 16th May. (37) Established 1st November. (38) Money Order Office established 16th February. (39) Established 16th January. (40) Savings' Bank established 2nd March, Telegraph Office opened 6th May (41) Telephone communication established 19th October. (42) Re-established 6th October. (43) Established 1st June. (44) Shipping Office Savings' Bank abolished 12th October. (45) Established 1st September. (46) Savings' Bank abolished 1st October (47) Established 1st May. (48) Established 9th November. (49) Established 1st June. (50) Established 1st March. (51) Money Order Office established 2nd March. (52) Established 1st August (53) Savings' Bank abolished 1st October, Telephone communication established 20th October. (54) Established 10th November. (55) Telegraph Office opened 26th August (56) Savings' Bank abolished 12th October. (57) Money Order and Savings' Bank established 2nd February. (58) Established 1st March. (59) Established 1st September. (60) Telegraph Office opened 18th December (61) Re-established 1st May. (62) Established 1st August. (63) Established 1st December.

The Postal revenue in the above return only includes the amount actually collected by each Postmaster. In many townships there are licensed vendors of postage stamps, and the sales by them, of course, affect the amount that would otherwise be accounted for by the Postmaster in each case.

E.

LIST of Stamp-sellers on the 31st December, 1885.

Name.	Residence	Date of Appointment
Abbott, Elizabeth	107, Oxford-street	21 June, 1873
Abbott, H. A	Braidwood	13 Oct, 1885
Abrahams, M C, & Co	340 & 342, Elizabeth street.	13 June, 1882
Adams, Eliza	91, Macquarie-street South	3 June, 1882
Ah How, James	Prince-street, Grafton	16 Sept, 1882
Aitkin, M	Elizabeth & Windsor Streets, Paddington.	2 Oct, 1884
Albrecht, George	12, Bourke-street, Woolloomooloo.	22 Mar, 1880
Alexander, James ...	William street, Bathurst	17 Oct, 1883
Alexander, S.	Abercrombie-st, Eveleigh	23 May, 1883
Allwood, John	81 & 86, Castlereagh-street	26 Oct, 1882
Anderson, P.	153, Lower George-street	8 Sept, 1882
Ardill, G. E	277, Pitt street	26 Oct, 1882
Armstrong, Arthur	160, Regent-street, Redfern	28 April, 1885
Armstrong, E. A .	Tintaldra, Victoria	6 Dec, 1876
Armstrong, G	Goulburn .. .	22 June, 1885
Arnold & Sons	415, Elizabeth-street	30 Mar, 1885
Arnott, Mrs. Eliza	Darby-street, Lake Road, Newcastle.	13 June, 1884
Ashfield .	Railway Station-master	17 Mar, 1884
Ashley, Mrs. L. E	Bondi Road, Waverley	12 Nov, 1885
Ashton, Miss M. A. K	Lachlan-street, Hay	9 July, 1884
Asser, H ...	Hunter-street, Newcastle	7 Mar, 1884
Aylmg, Charles P	Riverstone	25 Nov, 1884
Badge, Nancy E. M.	North Yass	30 June, 1884
Bailey, F. W .	Auburn-street, Goulburn	28 Feb., 1882
Baker, F. E.	53, Liverpool-street West	29 July, 1882
Barby, Mrs Elizabeth	66, Hunter-street	6 June, 1881
Barker, F. J.	85, Sussex-street	23 June, 1870
Barnes, Mrs. K. L .	Foster street, Leichhardt	8 May, 1885
Barratt, Mrs. M. ...	152, King-street	14 Jan, 1878
Barrett, George .	Spring's Buildings, Waverley	14 Aug, 1882
Batty, W. .	49, Regent-street, Redfern	9 July, 1885
Baxter, E.	Morris-street, Summer Hill	11 Feb, 1885
Beale & Co. ..	371a, Pitt-street	17 Sept, 1884
Beales, C. ..	Regent-street, Redfern	15 July, 1882
Bearcroft, Catherine	76, Bathurst-street West	15 Jan, 1885
Beare, J. C .. .	192, William-street	25 June, 1868
Becker, Julius E.	12, Bridge-street	18 Jan, 1884
Bell, Francis .	205½, Elizabeth-st., Redfern	14 July, 1883
Bennell, Joseph	Hampton-street, Croydon Park, Croydon.	4 Mar, 1885
Bennett, A ..	Darling Road, Balmain	28 Mar, 1884
Bennett, Alfred ..	*Evening News* Office, Market-street.	29 Sept, 1869
Bent, Chas	368, George-street	13 Aug, 1869
Bentley, Mrs Eliza J	190, William-street	14 May, 1881
Benyon, Mrs. E C	Tumberumba	29 April, 1884
Blair, Robert	West Maitland	6 Dec 1877
Blake, C. E.	443, Old South Head Road, Paddington.	3 Feb, 1883
Bluhdorn, Mrs. Catherine	159, Phillip-street	15 July, 1880
Board, Alfred James	Blue's Point Road, North Shore.	1 Aug, 1884
Bobrowski, Miss Amelia J.	Stewart-street, Bathurst ..	31 May, 1881
Bonarius, J. C	Hunter street, Newcastle	2 April, 1884
Bonner, Mrs. Elizabeth	Harris-street Ultimo	24 Feb, 1881
Boore & Long	35 and 37, Market-street	30 Nov, 1881
Both, Joseph	Botany Road, Waterloo	3 Sept, 1884
Boughton, John	"The Lion" Stores, Balmain	9 Aug, 1882
Bowtell, Charles .	204, Devonshire street, Surry Hills	28 May, 1883
Bowyer, George	410, Elizabeth-street South	26 May, 1865
Brady, L.	Rountree and Bay Streets, Balmain.	21 Sept, 1885
Breckenridge, Robt.	Newcastle	14 Aug, 1876
Breck, Frank	Redfern and Morehead Sts., Redfern.	22 Jan, 1885
Brown, Arthur	202, Elizabeth-street	11 Nov, 1881
Brown, Mrs	4, Argyle-place	17 April, 1879
Brown, Charles	Crown-street Wollongong	8 Mar, 1883
Brown, P. .	87, Market-street	21 Mar, 1884
Brown, Patrick	123, Elizabeth-street	8 May, 1885
Brown, T. .	Corner of Denham & Glebe Streets, Glebe	6 Nov, 1883
Brown & Shaw	321, Pitt-street	13 Nov, 1880
Bryant, George S	Corner of Abercrombie and Vine Streets, Redfern.	11 Mar, 1884
Buching, C. .	Hay	10 Nov, 1885
Buist, H. .	113, King-street	13 June, 1870
Bulkeley, R. H, & Co	Sunny Corner (Mitchell)	8 Dec, 1885
Bullard, William	342, George-street	7 Aug, 1879
Buncombe, R K	17, Hunter street	5 Nov, 1884
Burnett, S	92, Queen-street, Woollahra	12 Dec, 1882
Burns, James	287, Elizabeth-street	12 Dec., 1885
Burrell, Reuben	62, Hunter-street	17 Nov, 1882
Busbridge Bros	Auburn-street, Goulburn	12 Dec, 1885
Burwood	Railway Station-master	17 Mar., 1884
Butler, Thomas	163, York street	22 Dec, 1870
Byrne, Miss W	152, Old South Head Road	27 Jan, 1883
Cahir, James	Corner of Clifford & Cowper Streets, Goulburn.	30 April, 1883
Caine, Hanna	Clifford street, Goulburn	22 April, 1885
Callaghan, M J.	Mort-street, Balmain	16 June, 1874
Callaghan, Owen .	North Yass	11 June, 1883
Campbell, J L	Bowral	31 Aug, 1885
Cannon Miss Julian E	Vickery-street, Waverley .	8 June, 1883
Canterill, John & Co .	199, Oxford street, Darlinghurst.	24 June, 1885
Caristino, Angelo .	60, Oxford street	28 Mar, 1884
Carpenter, Ralph	Eleanor-street, Eastgrove, Goulburn.	27 April, 1885
Cashman, Edward	Moss Vale	24 July, 1884
Cassidy, Margaret	North Wagga Wagga	26 Aug., 1884
Castlemane, Mrs. R	Noumea, New Caledonia	30 Dec., 1872
Cash, William	11, George-street West ...	12 May, 1880
Caspersonn, Edward	Tumut	10 Nov, 1885
Castner, J. L	Redfern Railway Station	10 Feb, 1875
Causton, H. W. L.	Clarence-street	22 Mar, 1881
Charlton, J. J. ...	Moree .	6 Oct, 1885
Christie, William	170, William-street, Woolloomooloo.	7 Feb, 1884
Christmas, J. F. ...	Parramatta Road, Leichhardt.	17 Aug., 1883
Clamp, J ...	781, George-street	15 July, 1880
Clark, C. M.	High-street, West Maitland	14 Feb, 1876
Clark, James ...	Marrickville Road, Marrickville.	15 Nov, 1883
Clarke, Henry ...	Stanmore Road, Petersham	21 Feb, 1879
Clarke, J. W. R. ...	5 and 6, Market-buildings, George-street.	14 May, 1879
Clarke, E.	193, Oxford-street .	24 Dec, 1868
Cleary, M	Bourke-street, Goulburn	17 Jan, 1884
Coates & Tost	60, William-street .	27 April, 1872
Cocks, M. E. C	Redfern-street, Redfern	10 Sept., 1884
Coffin, Henry	John-street, South Singleton	22 July, 1885
Cohen, Sydney	408, George-street	8 July, 1880
Colburt, Charles	Grafton-street, Goulburn .	25 May, 1882
Cole, E R .	394, George street	22 Oct, 1867
Cole, J	Enmore Road, Newtown .	6 Feb, 1875
Coleman, A. M	"Court-house Hotel," Narrabri	18 Mar., 1884
Coleman, Edmund	Newtown, Lismore	5 July, 1884
Coleman, Mrs A ...	High Holborn and Cleveland Streets, Surry Hills.	20 Mar, 1882
Collins, Mrs	Corner of Liverpool and West Streets, Darlinghurst	27 Aug, 1885
Collins, Charles .	Narrabri ..	11 Aug, 1880
Comerford, Mrs	Corner of Ivy and Abercrombie Streets, Eveleigh	11 Mar., 1884
Conlon, M	Meehan-street, Yass	1 Nov, 1879
Connelly, Mrs Bessy	Glenmore Road . .	6 April, 1881
Conyngham, Mrs M. A.	16, Enmore Road, Newtown	4 June, 1885
Cook, E. W.	Oxford-street, Paddington, and Old South Head Road, Waverley.	1 June, 1885
Cook, Mrs.	150, Bullanaming-street, Redfern.	22 May, 1885
Cook, Samuel	Narrabri .	31 Jan, 1882
Cookes, Mrs. Caroline .	Bombala ...	9 Dec, 1882
Coombes Bros	55, George-street, Redfern..	6 Feb, 1885
Coote, John	Pine-street, Blackfriar's Estate.	8 Oct., 1885
Copland, J	165, Redfern-street, Redfern	22 Oct, 1885
Cornish, J C	165, George-street West	29 July, 1882
Correy Mrs. E....	229, Devonshire-street, Surry Hills.	14 Feb., 1883
Corrigan, Thomas	Marshall-street, Surry Hills	9 Oct, 1880
Cort, R, jun	Church-street, Parramatta..	11 Dec, 1885
Cox, Samuel .	Crookwell	15 Aug., 1880
Cox, William G	Goulburn	2 Feb, 1880
Craig & Aitken ...	680, George street	26 Aug., 1882
Craig, H J .	189, Cleveland-street	2 Dec, 1884
Cranney, W R	759, George-street	16 Dec, 1885
Crimson, Mrs E ..	77, Elizabeth-street, Redfern	22 May, 1884
Crofts, John	95, William street, Woolloomooloo.	12 May, 1882

Name.	Residence.	Date of Appointment
Cronin, P.	340, Liverpool-street, Darlinghurst.	21 Dec., 1885
Croydon	Railway Station-master	17 Mar, 1884
Culley, B.	Urana	15 Oct., 1885
Cusack, F.	Auburn-street, South Goulburn.	3 Feb, 1885
Dacey, J. R.	Waterloo	1 Oct, 1885
Daines, Alfred	Tichbourne, near Forbes	28 Feb., 1882
Dalton, William	Denison-street, Waverley	11 April, 1885
Darlington, Job	Queen-street, Woollahra	19 Aug, 1885
Davidson, A. W	Lawrence	29 Dec., 1880
Davies, Mrs. M. A	M'Namee's-terrace, Raglan-street, Alexandria.	29 Aug., 1884
Davies, C	Parramatta Road, Leichhardt.	2 May, 1884
Davies, D.	Tea Gardens, Old South Head Road, Waverley.	25 Sept, 1885
Davis, S.	Union and Harold Streets, Newtown.	19 Aug., 1884
Davison, E. B	Albion-street, Waverley	11 Mar., 1884
Dawson, H.	8, Brougham-street, Lyndhurst.	4 July, 1884
Dawson, Mrs. Margt.	28, Sussex-street	9 June, 1879
Dehy, Mrs. A.	Soudan-terrace, King-street, Newtown.	28 Nov, 1885
Devlin, J.	418, Oxford-street, Paddington.	3 Dec., 1885
Dimmock, Thomas	General Printing Office, West Maitland.	13 Aug, 1880
Dixson, Thomas	Parramatta	31 May, 1870
Dixon, E	Greta, Anvil Creek	2 Aug, 1875
Dodd, A.	Grey-street, Glen Innes	28 Feb., 1877
Donald, George	Hamilton	28 May, 1883
Dowling, F.	Delegate	21 Dec., 1885
Donovan, John J.	31, Bent-street	18 Aug, 1883
Downes, R.	281, Pitt-street	20 Aug., 1877
Downey, Mrs. Elizabeth A.	Darling Road, Balmain	27 July, 1883
Downey, George, jun	254, Harris-street, corner of Allen-street, Pyrmont	19 Aug, 1882
Drake, Henry	Hercules-street and Liverpool Road, Ashfield.	22 Jan, 1879
Dugdale, T. W.	Taree	4 Jan, 1876
Duschnitz, M.	Corner of Hunter and Elizabeth Streets.	28 Oct., 1885
Dyason, E. B.	Paddington	9 June, 1880
Dyson, G.	Old South Head Road, Waverley.	6 June, 1885
Eathorne, John R.	21, Sydney Arcade	22 June, 1883
Eaves, J. H.	102, Regent-street, Redfern	21 Aug., 1885
Edridge, Herbert	Corner of Devonshire and Elizabeth Streets.	27 Mar., 1885
Edward, W. T.	135, George-street West	26 Feb. 1883
Elder, James	71, King-street	21 May, 1880
Ellis, Richard	Catherine-st., Forest Lodge	21 Oct., 1882
Emert, William F. Colyton.	Mount Druitt, near Rooty Hill.	9 Feb, 1882
Emmett, Edward	107, Liverpool-street	19 June, 1885
Engelen, J. B.	Gundagai	15 Aug., 1881
Engisch, George	118, Oxford-st., Paddington	27 Mar, 1885
Evans, A. M.	235, Oxford-street	1 Feb., 1884
Eve, Jas.	159, Pitt-street	13 Nov, 1877
Everingham Christian	Narrabri	28 Mar, 1884
Eveleigh	Porter in charge, Railway Platform.	17 Mar., 1884
Fagan, James	Townsend-street, Albury	19 Dec., 1884
Fahrner, C. H.	225, Oxford-street, Darlinghurst.	22 Aug., 1885
Fairbarn, Mrs. C. L.	Addison Road, Marrickville	4 Aug., 1882
Fairfax, H. J.	Strathfield	17 April, 1883
Fairfax & Sons	Hunter and Pitt Streets	5 April, 1864
Falls & Soper	93, Oxford-street	7 Dec., 1885
Fieldhouse, E. & W.	Campbelltown	8 Aug., 1864
Filz, Mrs. Josephine	Evans-street, Balmain	23 Jan., 1883
Findlater, George	111, George-street West	23 Nov, 1885
Finegan, Mrs. Eliza	145, King-street, Newtown	28 Aug., 1884
Fitzpatrick, Mary A.	35, King-street	17 May, 1873
Flagg, E. H.	King and Nelson Streets, Newtown.	25 Aug., 1882
Flanagan, E. F.	586, George-street	28 June, 1864
Fletcher, Wm.	185, Pitt-street, Redfern	7 July, 1884
Fordham, James	Beattie-street, Balmain	2 Dec., 1884
Fortier, William, jun	101, Macquarie-street South	19 July, 1884
Fortier, William	89, Sussex-street	14 Nov, 1866
Foster, H. N.	144, William-street, Woolloomooloo.	5 July, 1880
Foster, Mrs. Sarah	48, Stanley-street, Woolloomooloo.	14 Nov., 1883
Fowles, Geo.	Buckland-street, Waterloo	27 Mar., 1876
Foxall, W. S.	Auburn-street, Goulburn	14 Feb., 1877
Foxall, William	92, Oxford-street	28 Feb., 1881
Frazer, George E.	83, George-street North	1 Nov., 1881
French, W.	17, Bennett-st., Surry Hills	5 Oct., 1880
Fry, T. H.	Waverley Station, Crudine	23 April, 1883
Fryer, Thomas	Kemp-street, Wallsend	19 July, 1879
Fryer, Thomas	Deniliquin	13 Oct., 1885
Fuller, C. E & Co	Pitt and Bathurst Streets	21 Sept, 1885
Fulljames Mr.	Beaconsfield Estate, Waterloo.	9 Dec., 1885
Furlong, Mrs. M.	59, Hunter-street	30 July, 1885
Gardner, Charles	69, Liverpool-street	3 June, 1884
Gayen, Nicholas	Phelps and Kendall Streets	9 April, 1884
Gelston, H. A.	Ocean-street, Woollahra	2 April, 1885
Gibbs, James	Corner of Alt and John Streets, North Ashfield.	7 Nov., 1882
Gibbs, Shallard, & Co	70, Pitt-street	17 Aug., 1868
Gibson, Henry W.	23, Sydney Arcade	20 Dec., 1881
Gilbert Brothers	George-street, Parramatta	8 Sept., 1882
Gleeson, Joseph M.	Maybe-street, Bombala	1 Aug., 1884
Goldman A. & Co.	Narrabri	24 Feb., 1883
Goldstein, Albert	24, Hunter-street	14 July, 1880
Good, Edward	Bourke	13 June, 1883
Good, W. C.	New Canterbury Road, Petersham.	27 May, 1885
Goodwin, Peter	Grafton-street, Goulburn	8 Dec., 1884
Gorbracht, H. T.	43, George street West	16 Sept., 1885
Gordon, A. M.	The Arcade, Dean-street, Albury.	11 Dec., 1885
Gordon & Gotch	357, George-street	8 April, 1865
Gourlay, W	Stanmore Road, Petersham	23 May, 1884
Granville	Railway Station-master	17 Mar., 1884
Green, James	Burwood Road, Burwood	19 May, 1882
Greenstreet, Thos.	Myrtle Creek, on the Lawrence and Casino Road.	31 Oct., 1883
Green, W.	Burwood, Newcastle	2 Nov., 1885
Green, Alfred P.	Woodville Road, Granville	12 June, 1884
Gregory, W.	Corner of Market and Elizabeth Streets.	21 Oct., 1885
Gregson, John	303, King-street, Newtown	16 April, 1884
Griffiths, T. E.	Dean-street, Albury	21 April, 1885
Guild, John	St. Mary's, South Creek	6 Sept, 1880
Gulliver, John	Newcastle	30 June, 1869
Gutteridge, E. S	662, George-street	23 Oct., 1884
Haines, E. H. C.	Meninga-street, Moama	27 Nov., 1885
Hall & Son	62, King-street West	6 Mar., 1883
Hall, James	Callan Park, Balmain Road	27 Aug, 1884
Hall, H.	51, George-street North	14 Oct., 1885
Hall, William	Mudgee	24 Oct., 1879
Hallett, Mrs. Jane	Morpeth	17 May, 1883
Halloran, John	29, Foveaux-street, Albion Estate	5 Jan., 1881
Hamilton	Railway Station-master	12 Sept., 1884
Hammond, W. E.	Station-street, Petersham	8 Oct., 1884
Hanlon, G.	48, Womerah Avenue, Darlinghurst.	29 Sept., 1885
Hardwick Brothers	Linsley-street, Cobar	5 April, 1883
Hardy, R. E.	303, Elizabeth-street, corner of Goulburn-street.	9 Mar., 1882
Harney, Richard	65, Elizabeth-street	25 May, 1882
Harper, W.	65, Upper William-st. South	24 June, 1869
Harper, F. A.	Sunny Corner (Mitchell)	11 Dec., 1885
Harris Bros.	549, King-street, Newtown	3 Jan, 1885
Harris, Samuel	Newcastle	30 Jan., 1880
Harris, Simon	Jereelderie	23 June, 1881
Harrison, Joseph	435, King-street, Newtown	11 Oct., 1884
Harrison, M.	93, Castlereagh-street	20 Aug., 1875
Hawkins, Mrs. J.	6, Newtown Road, Darlington.	25 Mar., 1884
Hayes, E J.	70, Castlereagh-street	29 June, 1885
Hayes, C. H.	Sec, Sydney Exchange	30 June, 1880
Hayes, John J.	63, Market-street	21 Mar., 1882
Hearle, F. A.	80½, Princes-street	3 Aug., 1883
Hemsworth, George	Mitchell	21 July, 1885
Henderson, P. & J.	Mount Vernon-st, Forest Lodge.	8 Oct., 1883
Hewitt, W. A	Blane-street, Newcastle	25 April, 1884
Heyes, William H.	Short-street, Balmain	18 Oct., 1882
Hill, George	796, George-street	13 Feb., 1877
Hill, George	44, Gloucester-street	22 June, 1883
Hill, J.	792, George-street	16 June, 1858
Hill Brothers	130, William-street	19 Oct., 1877
Hinchcliffe, S. A.	Waterloo	2 Aug., 1875
Hinder, E. J.	Glebe Road	10 Oct., 1877
Hirsch, Mrs. Bertha	Mount-street, St. Leonards	3 Sept., 1883
Hitchings, E.	381, Bourke-st, Surry Hills	14 Oct., 1885
Hoare, James	Darling-street, Balmain	22 May, 1882
Hodgkinson, James	242, South Head Road, Paddington.	15 Feb., 1882

Name	Residence	Date of Appointment.
Hogan, Peter John	New Canterbury Road, Marrickville.	2 May, 1884
Holmkvist, H	Vulcan-street, Moruya	17 Dec, 1885
Homebush	Railway Station-master	17 Mar, 1884
Hood, William ...	Milltown, Bathurst	3 July, 1885
Hordern, J. L.	211, Pitt street .	17 Mar, 1877
Hudson, G. .	St John's Road, Forest Lodge	30 Nov, 1883
Hughes, William	Cooma-street, Yass ...	12 June, 1884
Hunt, Mrs F. R.	Victoria Road, Marrickville	14 Mar., 1882
Hunter, W. C.	Wagga Wagga	19 July, 1869
Hutchinson, H. L	718, George-st, Haymarket	24 July, 1884
Ingham, Benjamin	24, Goulburn-street	17 July, 1882
Ireland, A.	115, Harbour-street .	14 April, 1882
Jackson, J E.	229, William-street	1 June, 1885
Jackson, William	Burfitt-street, Leichhardt...	11 May, 1881
Jacob, G L.	Nyngan	19 June, 1883
James, John .	Westmoreland-street, Forest Lodge.	9 Sept, 1882
James, D .	41, Oxford-street	27 April, 1870
James & Co.	515, George-street ...	17 May, 1877
James, S. L. ...	86, Woolloomooloo-street, Woolloomooloo.	12 Sept, 1883
Jansen, F.	78, Market-street	29 Sept, 1877
Jarvis, Thomas	Croydon Road, South Ashfield	17 Feb, 1883
Jay, Miss A. F.	112, Oxford-st, Paddington	16 April, 1885
Jaye, James	Lawson-street, Balmain	13 May, 1882
Jennings, R.	129, Elizabeth-st, Redfern	30 April, 1883
Jennett, M.	151, Liverpool-street ...	23 Aug, 1883
Jervis, E. ...	Refreshment-rooms, Goulburn Railway Station.	17 June, 1884
Johns, Franz	Blue's Point Road, North Shore.	21 Mar, 1881
Johnson, Charles A. ...	Euroka-street, St Leonards	13 Sept, 1884
Johnson, J.	"Sydney & Melbourne Palace Hotel," 231, George-street.	6 May, 1884
Johnson, James ...	298, Bourke-st., Surry Hills	6 July, 1883
Johnstone, E	Cooma-street, Yass	16 Nov., 1885
Jones, A	46, George-street West	2 Dec., 1868
Jones, E.	Lismore	1 June, 1885
Jones, J. R.	Bathurst .	1 Oct, 1862
Jones, W G	Ashfield	10 Aug, 1880
Joseph, Charles	Howick-street, Bathurst	16 Oct, 1883
Kaufman, M.	Corner of Nithsdale and Goulburn Streets	14 Sept., 1882
Kavanagh, M. .	Liverpool and Harbour Sts	2 Aug., 1877
Kay Ty	Anvil Creek .	15 Mar, 1882
Kerr, A. A	Goulburn	13 June, 1872
Keil, Werner	Stanmore Road, Petersham	27 July, 1881
Kilborne, M. L	George-street, Bathurst	10 Jan., 1883
Kimpton, E. .	389, Crown-st, Surry Hills	19 Feb., 1884
King, E. F.	544, Bourke-street, Surry Hills.	14 July, 1880
Kingcot, J. .	Kingston, Newtown	14 Aug, 1876
Kirby, Mrs S S	190, Pitt-street	11 Oct., 1878
Klinie, J. .	Campbell's Hill, West Maitland	9 June, 1875
Kluge, Charles	47, William-street	7 Oct, 1880
Knaggs & Co .	Newcastle ...	29 June, 1865
Knowles, E. H.	209, Sussex-street	2 Nov, 1874
Knox, Joseph	Hereford-st, Forest Lodge	8 Dec, 1881
Kollias, Kemos ...	Victoria-street, Darlinghurst	14 Dec., 1882
Lambert, J.	Peel-street, Tamworth	16 Oct, 1885
Lamond, J. J.	2, Macquarie-street South	27 May, 1882
Lang, William	12, Carlton-terrace, Irwin-st, off Abercrombie-street	23 June, 1881
Lassetter & Co	417, George-street ...	4 Oct, 1882
Latimer, W. F.	124, Queen-street, Woollahra	5 Nov, 1884
Laughton, J.R. & Co	194, Elizabeth-street	27 May, 1881
Lawrence, Richard	Paddington ..	9 Sept., 1882
Lawrence, Richard	66, Oxford-street	13 Feb, 1877
Layton, Robert	South Grafton ..	4 Dec, 1883
Lazar, Israel ...	74, Oxford-st, Paddington	22 Dec., 1885
Le Breton, Miss Louise	16, Barr's Haymarket Arcade	19 Feb, 1884
Lee & Ross	53, Market-street	14 June, 1879
Leigh, S T. & Co.	66, Pitt-street	1 July, 1880
Lennon, Anne ..	47, Windsor-street, Paddington.	23 Feb, 1884
Lensi, P.	67, Oxford-street	13 Sept, 1884
Leonard, Arthur	Lismore	27 May, 1884
Leslie, W. C.	Darling Road, Balmain	22 Aug, 1881
Lessels, Robert, & Son	Orange	13 July, 1880
Levy Mrs.	47 George-street West	4 Mar, 1881
Levy Brothers ...	George-street, Bathurst	30 Jan., 1882
Lewin & Berg	307, George-street	7 Aug, 1884
Lewis, Mrs Emily ...	St. Mark's	24 Nov., 1883
Ley, David	East Maitland	9 April, 1885
Livermore, W.	209, Oxford-street	29 Dec, 1884

Name	Residence	Date of Appointment.
Lloyd, H.	New South Wales Railway Bookstall Company, Railway Stations, Redfern, Newcastle, Parramatta, and Granville	7 Jan., 1882
Loewenthal, Charles J	Lawrence	29 Jan., 1885
Lolato, Valentine	133, George-street West .	19 Dec., 1884
Love, James R. ..	502, George-street	15 Mar., 1880
Lowe, Walter...	Prince-street, Grafton .	23 Oct, 1882
Lucas, John	157, King-street, Newtown..	14 Dec, 1882
Luigi, Garino	Corner of Bridge and Phillip Streets	16 July, 1885
Lunt, Thomas ...	Luntvale, Tarcutta	19 Jan, 1871
Luscombe, Richard	482, Bourke-st, Surry Hills	22 Sept., 1880
Lynch, Miss Hannah.	158, Elizabeth-street	6 Aug., 1880
Lynch, H	Corner of George and Piper Streets, Bathurst	3 Dec., 1885
M'Cann, Charles ...	Corner of Crown and Goulburn Streets, Surry Hills.	26 Sept., 1883
M'Caskie, John .	Crescent-street, Balmain	20 Sept., 1884
M'Casker, Michael J	Dangar's Village, Narrabri..	19 Mar., 1884
M'Crea, — ..	Nelson-street, Plattsburg, Wallsend.	21 Nov., 1883
M'Donald, A D. .	High-street, West Maitland	22 July, 1882
M'Donald, E. ...	Corner of Burwood Road, Burwood.	28 Feb., 1883
M'Donald, Mrs Jane	Goulburn . .	17 July, 1883
M'Donald Town	Railway Station-master .	17 Mar., 1884
M'Glew, Mrs. E. A. .	Enmore Road, Newtown ..	10 July, 1883
M'Knight, Mrs	Lower Fort-street .	23 Mar., 1881
M'Ilveen, George .	192, Cumberland-street	12 July, 1881
M'Kenzie, W.	Molong ..	28 Feb., 1884
M'Laurin, John ...	Goulburn .	5 Nov., 1885
M'Laughlin, J.	857, George-street .	27 Jan., 1885
M'Mahon, F J ...	23, Good Hope-street Paddington.	25 Feb., 1885
M'Manus J. ...	111, King-street	6 Mar., 1883
M'Neil, J.	70, Sussex-street .	20 Mar, 1860
M'Phail, Emma	90, William-street	3 Dec, 1872
M'Donald, Mrs. D.	William-street, Bathurst	30 Mar., 1885
Macleod, A.	Walker-street, North Shore	23 July, 1885
Macready, Hugh	King-street, Newtown	20 July, 1880
Maddock, W.	381, George-street	6 Aug., 1863
Madgwick, E. C .. .	Maclean	7 Sept., 1885
Mahler, Jacob	45, King-street West	2 June, 1880
Mallam, H. G. ...	Beardy-street, Armidale	9 Feb., 1877
Manning, Mrs	8, Oxford-street	10 Aug., 1880
Manning, J. G	56, Abercrombie-place ..	24 June, 1885
Manson, Mrs Mary.	Elizabeth-street, Waterloo..	10 Nov., 1880
Mappin, M.	90, Market-street	23 Aug., 1881
Marcus, Louis	62, Botany-street	4 Nov., 1880
Marks & Ferguson	Ashfield	29 Jan., 1884
Marshall, J., & Vincent, H. S.	Glen Innes .	19 June, 1882
Marshall, J. S	124, Market-street	19 June, 1880
Martindale, W.	Church-street, Parramatta North.	8 July, 1885
Matthews, William	Tamworth	8 Dec., 1883
Matthews, Charles	19, George-street West	16 Dec., 1880
Matthews, D.	Blayney	26 June, 1885
May, William	Legislative Assembly	11 July, 1879
Meads, Mrs. Catherine	231, William-street	23 May, 1881
Meeke, James	104, Redfern-street, Redfern	15 Feb., 1884
Merrick, Samuel	Victoria and Liverpool Sts, Darlinghurst.	20 Aug., 1880
Metcalfe, Mrs. E.	Deniliquin	14 Mar., 1884
Miller, Mrs	57, New Pitt-street	4 Dec, 1874
Milligan & Crowley .	Nyngan	14 Sept., 1883
Mills, A	31, Cleveland-st., Darlington	6 Aug, 1880
Milne, W. A	53, Pitt-street	20 Feb., 1882
Mitchell, James	15, King-street, Newtown	20 Sept., 1884
Mitchell, T. H.	Elizabeth-street, Croydon	7 Mar., 1884
Money, William W.	North Goulburn	4 Jan., 1884
Monk, Catherine A.	503, Crown-street, Surry Hills.	31 Oct., 1884
Montgomery, John	149, Bathurst-street	15 Mar., 1882
Montgomery, Hugh	Marulan	17 Sept., 1867
Montgomery, William	Cook's River Rd, St. Peter's	23 Nov., 1883
Mooney, M.	136, Oxford-street	23 Aug., 1878
Moore, H. Byron	Exchange, Melbourne	3 June, 1881
Moore, J.	554 George-street	23 July, 1856
Morcombe, John	Cowper-street, Waverley	10 Sept, 1885
Moorehouse, G.	2, Botany Road, Alexandria	9 Dec., 1884
Moore, Mrs. Catherine..	15, Glebe Point Road	22 Feb., 1884
Moore, Ralph	Moncur-street, Waverley Road.	15 July, 1884
Moore, James	Howick-street, Bathurst	1 Nov., 1884
Morgan, Mrs. Francis .	Regent-street, Camperdown	16 Mar., 1877
Morgan, T. N	Mittagong	7 Jan., 1885

Name.	Residence.	Date of Appointment.
Morison, F. W.	85, King-street	23 Feb, 1883
Morris, C.	211, Glebe Point Road	10 Dec., 1884
Moss, L. & Co.	5, Hunter-street	26 Mar, 1885
Moss, M. M.	255, Oxford-street	29 June, 1880
Mountford, Martha	230, George-street	11 Aug., 1871
Muir, Robert	6, Erskine-street	25 June, 1885
Mulholland, Joseph	King-street, Newtown	11 Mar, 1884
Mullany, P., Messrs. & Co.	Katoomba	24 Oct, 1884
Murphy, Sidney	Elizabeth and King Streets	16 Aug., 1876
Murphy, Felix	Bourke and Fitzroy Streets	30 Jan., 1879
Murphy, Dora	265 Pitt-street	23 Aug., 1883
Murphy, Theresa	427, Pitt-street	26 May, 1885
Murray, P.	Cowra	28 June, 1879
Murray, George	Erskineville Road, Macdonald Town.	20 Jan., 1880
Murray, Miss M. E.	25, Albert-street, Circular Quay.	10 Nov., 1880
Nagle, J. H.	West Maitland	2 June, 1873
Nash F.	Old South Head Road, Paddington.	2 Feb, 1883
Nash, William	649, George-street.	20 Jan., 1873
Negus, W. H.	Corner of Devonshire and Castlereagh Streets, Redfern.	12 Oct., 1885
Neilan, Martin	Old Newtown Road, Darlington.	26 Mar., 1881
Nelson, Olla	41, Upper William-st. North	3 Sept, 1883
Nesbitt, G.	Wagga Wagga	11 Nov., 1885
Newell, Ellen	Alfred-street, St Leonards	11 June, 1885
Newland, Thos.	339, Elizabeth-street	13 June, 1884
Newman, J. H.	659½, George-street	2 Sept., 1882
Newtown	Railway Station-master	17 Mar., 1884
Nicholls, G.	Stephen Court, Sydney	2 Feb, 1884
Nichols, James	Hawken and Laura Streets Camdenville.	16 Feb, 1885
Noake, John	320 & 446, George-street	14 Feb, 1872
Norwood, W. J.	Bathurst	13 April, 1876
O'Brien, William	324, Castlereagh-street	18 July, 1879
O'Neill, Miss	"Albion House," Monaro-street, Queanbeyan.	16 Feb, 1882
Orriell, Mrs. H.	Falcon-street, St Leonards	10 Sept, 1883
Page, G. W.	537, George-street	21 Dec., 1876
Page, Richard	Coogee Bay	2 Oct., 1882
Pampillonia, V.	Cook's River Road, St. Peter's	26 Feb., 1884
Parker, Mrs. Ann	Durham-street, Bathurst	21 April, 1885
Parramatta	Railway Station-master	17 Mar., 1884
Patterson, A. T.	147, King-street, Newtown.	15 Nov, 1884
Pattison, John D.	124, Pitt-street	7 July, 1882
Pauchane, John	72, Cooper-st., Surry Hills	17 July, 1882
Paul, T. J.	Nelson-st, North Annandale	28 April, 1882
Pembertin, F. M.	80, Oxford-street	18 April, 1883
Pemberthy, J.	General News Agency, Paddington.	12 Oct, 1880
Petersham	Railway Station-master	17 Mar, 1884
Phillips, Alfred F.	Regent-street, Redfern	26 Sept., 1879
Phillips, Joel	60, Market-street	10 July, 1880
Phillips, W. H.	182, Harris-street, Ultimo	22 Aug, 1883
Pickett, Mrs.	86, Quay-street, Darling Harbour.	10 Feb, 1882
Pinkerton, Messrs, & Son.	Junction-street, St Leonards	22 July, 1884
Plowman R.	March and Hill Streets, Orange.	7 Dec., 1878
Podio, Decio	172, King-street, Newtown	20 Mar, 1885
Polley, A. R.	Corner of Queen and Ocean Streets, Woollahra.	2 Nov., 1885
Pollitt, R.	Milson's Point, North Shore	7 May, 1884
Poppenhagen, F.	Refreshment Rooms, Railway Station, Redfern.	15 Nov., 1880
Porter, Robert	Lee-street, Wellington	28 Feb., 1881
Poulton, Joseph	161, Pitt-street	12 Nov, 1880
Poulton, W. T.	West Maitland	30 Nov, 1881
Powell, Joseph	118, Devonshire-street, Surry Hills.	25 Nov, 1881
Pratt, William	Petersham	22 Mar., 1880
Price, Granville	Forster and Wattle Streets, Leichhardt.	11 Dec., 1880
Prince, C.	149, King-street	19 June, 1880
Pring, James	New Canterbury Road, near Livingstone-street, Marrickville.	4 July, 1882
Protheroe, Mrs. James	Toothill-street, Petersham	31 July, 1884
Prowles, Albert	Corner of Victoria and Enmore Roads, Marrickville.	6 May, 1885
Pullen, W. T.	Cowper, near Brushgrove	18 Oct., 1880
Pullin, John	336, Castlereagh-street	2 Aug., 1880
Purves, Mrs A.	Glebe Road, Glebe	22 April, 1884
Rae, J. B.	Mullens-street, Balmain	7 Feb, 1881
Rampa, John	19 Market-street	11 Feb., 1884
Randell, Thomas	Corner of Ocean and Queen Streets, Woollahra.	29 Jan., 1885
Read, J.	443, Old South Head Road, Paddington.	24 Dec, 1881
Redgate, Wm.	292, Bourke-street	25 Feb., 1873
Redshaw, Thomas	96, Dowling-street, Paddington.	14 Sept., 1885
Reilly, P.	2, Macquarie-street South	8 April, 1863
Reynolds, P. E.	410, George-street	13 July, 1876
Riley, W. R.	Goulburn	27 Nov., 1862
Riordan, James	Union Club	21 Jan., 1879
Risbey, Mrs. Sarah	King-street, Newtown	31 Aug, 1880
Ritchie, John	51, Argyle-street.	1 Feb., 1884
Rix, William	Avondale, Bobundarah	13 Aug., 1884
Roberts, A. C.	57, King-street	24 Jan, 1883
Roberts, T. F.	Yass	10 Mar., 1881
Robertson, F.	192, Dowling-st, Woolloomooloo	30 Sept., 1880
Robertson, G.	361, George-street	13 Aug., 1878
Robinson, Francis W	140, Pyrmont Bridge Road	10 Oct., 1884
Robinson F.	239, Macquarie-street South	16 Aug., 1884
Roe, A. R.	Auburn-street, Goulburn	5 Dec., 1885
Rogers, John	90, King-street	9 Sept., 1882
Rookwood	Railway Station-master	17 Mar, 1884
Rossiter, F. R.	University-st., Camperdown	11 April, 1881
Rowland, Mr.	Corner of William and Bay Streets, Double Bay.	13 Sept., 1883
Rowley, William	King-st. South, Newtown	5 July, 1881
Russell, W.	217, Oxford-street,	18 Feb, 1885
Ryan, John	Lower George-street, Parramatta	12 Jan., 1883
Ryan, Miss M.	38, Francis-street	17 Sept., 1883
Ryan, John	473, Bourke-st., Surry Hills	3 June, 1882
Salamons, Charles	Tamworth	28 April, 1880
Sandon, C. T.	310, George-street	16 Feb., 1857
Sands, Mrs. Eliza	Queen-street, Woollahra	16 Mar., 1885
Sands, Robert	374, George-street.	25 Sept, 1873
Sandford, Thomas	131, George-street West	11 June, 1883
San Miguel, A.	Sydney Coffee Palace Hotel, 391, 393, 395 George-street	19 Aug., 1884
Saywell, T R	6, Park-street	7 April, 1863
Schaumburg, John	Eve's-terrace, Cowper-street, Waverley.	2 Dec., 1885
Searson, Rosabella	89, Corner of Albion and Bellevue Sts., Surry Hills.	29 June, 1885
Scott, John	22, Bond street	1 Sept., 1883
Scott, T. A	108, Woolloomooloo street.	22 Jan, 1884
Scriven, E.	West Maitland	15 April, 1875
Scurr, W. J., jun.	Yass	4 Jan, 1882
Shaw, Robert T.	New Ballarat, Wallsend	10 Mar., 1881
Sheedy, P. M	Church-street, Parramatta	30 June, 1882
Shoobridge, George	Auburn-st., South Goulburn	28 Jan., 1884
Sigmont, F. M.	Park and Pitt Streets	13 June, 1874
Simmons, Dan.	696, George-street	1 Mar, 1882
Simmons, G.	Parramatta Road, Annandale	15 Jan, 1885
Simpson, John	118, Cumberland-st, Sydney	10 Aug, 1883
Sippel Bros.	520, George-street	7 July, 1871
Sippell, John	Grenfell	25 June, 1885
Slatter, R.	Corner of Evelyn & Una Sts., Harris Park, Parramatta.	7 Nov., 1885
Small, W. J.	Darling Road, Balmain	29 Nov., 1880
Smee, F. A.	Cowper street, Waverley	8 Dec., 1881
Smith, E. T.	Darling Road. Balmain	7 April, 1881
Smith, G W	Liverpool Road, South Ashfield	7 June, 1883
Smith, J. F.	Gilgandra	30 Dec., 1880
Smith, Thos. L.	399, George-street	28 Jan, 1879
Smith, James	167, George street North	5 July, 1879
Smith, D	187, George-street	10 Aug., 1872
Smith, T. C.	Faulkiner-street, Armidale	23 Feb., 1880
Smith, Thomas	Railway Station Refreshment Rooms, Bathurst.	22 Nov., 1883
Smith, W. E.	28 & 30 Bridge-st., Sydney.	23 May, 1883
Smyth & Wells	Hunter and Phillip Streets.	28 Mar., 1859
Solomon, John	220 Pitt-street	27 July, 1885
Soul & Son	177, Pitt-street	13 Aug, 1874
Spence, Robert	385, Elizabeth-street.	31 May, 1884
Spring, G. W.	Cooma	2 Mar., 1880
Spragg, John E.	125, Oxford-street	9 Aug, 1880
Stalibra, L	St. John's Road, Forest Lodge	21 April, 1884
Stallwood, Charles	Corner of Forsyth and Avon Streets, Glebe Point.	23 Nov., 1885
Stallwood, R.	54 Castlereagh-street	20 April, 1875
Stanley, Herbert	Tweed Heads.	29 Aug., 1884
Stapleton, R. J.	Church-street, Parramatta	25 Mar, 1884
Stark, H	Corner of Darling & Jacques Streets, Balmain.	30 Oct., 1885
Steenbohm, A. M.	94, Bourke-street, Woolloomooloo	3 Nov., 1881

Name.	Residence.	Date of Appointment	me.	Residence.	Date of Appointment.
Stelter, John Peter ...	Tenterfield	23 Nov , 1883	Vincent, George	Goldsmith-street, Goulburn.	31 Jan., 1884
Stenning, W. A	Ben Boyd Road, Neutral Bay	7 Dec , 1882	Vincent, Robert.....	Corner of Elizabeth-street, Paddington.	7 Aug., 1883
Stevens, Joseph ..	Milson's Point, North Shore	2 Feb., 1878			
Stevens, George	Orange	28 Oct , 1880	Vivarelli, C.	26, Goulburn-street	14 Dec., 1885
Stevenson, Mrs. A. .. .	Cowra	7 Dec., 1885	Vivarelli, G.	85, Regent-street, Redfern...	21 April, 1885
Stewart, C. A . ..	159, King-street. . .	29 Feb., 1884	Volikers, H. A.	Prince-street, Grafton	25 Sept , 1876
Stewart, William Austin	Goulburn Club, Market Square, Goulburn.	9 May, 1884	Waddell, A.	Broughton Creek	26 Oct., 1885
			Wade, John	Moss Vale	11 Jan., 1882
Stewart & Clarke .	470, George-street. . . .	22 Jan., 1885	Wallace, Geo.	125, King-street	30 April, 1873
Stitz, F. .	Barker-street, Casino	13 Aug., 1883	Wallace, W. M....	496, George-street	4 Nov., 1882
Stone, C. R.	23, William-st. East, Sydney	23 Sept., 1884	Walsh, John	Goulburn	25 May, 1864
Strathfield	Porter in Charge Railway Platform.	17 Mar., 1884	Walsh, S. J.	154, King-street.....	20 April, 1885
			Walton, John	21, Sydney Arcade...	20 Dec., 1881
Strong, A.	Elgin-street, West Maitland	28 Sept., 1878	Ward, Joseph	Windsor	7 Mar., 1884
Strong, H.	Rous	24 July, 1882	Ward, M.	225, Oxford-street	29 Sept , 1885
Stuart, Henry	Ashfield	21 Feb., 1880	Watson, Edward	Darling-st. West, Balmain..	25 April, 1885
Sullivan, W. M.....	William-street, Orange.	26 Aug , 1884	Watson, G.	Ashfield	5 Jan., 1881
Summer Hill	Railway Station-master ..	17 Mar., 1884	Watson, R. A	Alfred & Castlereagh Streets	17 April, 1868
Swanson, A. G. M.....	Ryde	1 June, 1885	Watson, David	Grahamstown, near Adelong	5 July, 1881
Sweeney, T. F. ...	562, George-street . . .	4 Aug., 1879	Watt Bros.	Kidman's Block, George-st..	3 Feb., 1883
Swinney, Mrs. Elizabeth.	Paddington Library, South Head Road.	5 Jan , 1881	Webb, E , & Co. . . .	George-street, Bathurst.....	16 Aug., 1879
			Webb, William.	135, George-street West...	5 Jan., 1883
Sydenham, C. F	Bayle's-street, Newtown, Wagga Wagga.	2 Nov., 1885	Webber, Mrs.	45, Pitt-street.....	12 Oct., 1878
			Weber, P.	Araluen	14 Feb., 1870
Syer, G. C.	Grafton	24 Oct., 1882	Welch, James	Castlereagh and Cleveland Streets, Redfern.	6 June, 1883
Taylor, Elizabeth	49, Lyndhurst-street, Glebe	5 Aug., 1885			
Taylor, Thomas C.... .	Armidale	27 Dec., 1882	Welch, J	104, Buckingham-street, Strawberry Hills.	27 Feb., 1880
Thackrey, A. G. ...	Tram Terminus, Enmore. ..	21 April, 1885			
Thomas, G.... . . .	107, Glebe Road, Glebe .	24 Aug., 1880	Wells, H. E. A.....	Mudgee	15 June, 1885
Thompson, G. W.	Corner of Castlereagh & Redfern Streets, Redfern.	10 July, 1885	Welsh, Mrs	Railway-street, Petersham...	25 July, 1884
			West, R. A., & Co	King-street, Newtown.....	28 Sept,, 1880
Thompson, J.....	91, King-street . . .	6 Aug., 1884	West, Mrs T.	2, Enmore Road, Newtown	27 Mar., 1885
Thompson, James	46, Erskine-street	6 Sept., 1880	Whiting, Joseph	Taralga	19 July, 1866
Thomson, John	72, Pitt-street.	22 Aug , 1871	Whittell, Thomas .	116, Regent-street, Redfern	21 April, 1885
Thornthwaite & Co. .	8, Hunter-street .	20 Aug., 1881	Wiley, G. J.	158½, Old South Head Road, Woollahra.	20 June, 1885
Thornton, R.	413, Crown-st , Surry Hills.	6 June, 1881			
Thornton, R.	Corner of Gipps & Crown Sts.	24 June, 1881	Wilkins, A. K. . .	Market-street	12 Jan., 1883
Thrussell, Thomas... .	Mount-street, St. Leonards..	18 Mar., 1885	Williams, A.	81, Castlereagh-street.....	14 June, 1881
Tierney, Miss Mabel	554, George-street South.. .	27 July, 1880	Williams, N.	194, Elizabeth-street	6 June, 1885
Tilbury, Mrs C .	93, George-street West	17 Sept., 1883	Williams, Walter W	439, Crown-street ...	10 June, 1882
Tissington, Thomas	Rountree-street, Balmain. .	2 Feb., 1884	Wilshire, W. J.	" Royal Hotel," Sydney... .	30 Dec., 1875
Truss, Thomas	503, Crown-street, Surry Hills	26 April, 1882	Wilson, Charles	Otho-street, Inverell..	22 Feb , 1884
Tszekook, L.	54, Goulburn street	20 Jan , 1885	Wilson, Mrs. Mary .	98, Phillip-street.....	6 Sept., 1881
Tucker, Thomas	58, Bourke-st , Woolloomooloo .	20 May, 1884	Wilson & Field	Burwood	22 Dec., 1885
Tunks, George, sen. .	Parramatta North. ..	1 Aug , 1882	Wing, Joseph...	Miller-street, St. Leonards...	20 Nov , 1885
Turnbull, Mrs. Ellen...	Crown-street, Surry Hills	6 June, 1882	Winmill, H.	Myall Creek, Bingera	18 Aug., 1875
Turner, A. W. . .	Auburn street, Goulburn	11 May, 1885	Winton, E S.... . ..	St. Leonards	11 Aug., 1870
Turner & Henderson...	16 & 18, Hunter-street.	9 Dec., 1864	Witchell & Kendyn..	Crystal-street, Petersham...	11 July, 1884
Tweedie, C. L. .. .	Bombala	31 May, 1880	Wood, H.	Charing Cross, Waverley ..	17 Feb., 1883
Tynan, M.	Crown-street, Wollongong...	13 Oct., 1885	Wooderson, W. A .. .	Islington, Newcastle	12 June, 1885
Vaughan, T. H.....	Darling-street, Balmain ..	10 Aug , 1880	Woodhill & Murray. .	Clarendon House, Burwood.	5 Aug , 1880
Veal, S. H.	Mount-street, St. Leonards..	25 April, 1885	Woodlands, James R...	31, Taylor-st., Surry Hills...	24 Jan , 1884
Veness, Charles H. ...	Tamworth	22 July, 1882	Woods, John, & Co.	13, Bridge-street	15 Jan., 1885
Venteman, Mary	57, Dowling st., Woolloomooloo	29 June, 1883	Yeo, T. R.	183, Pitt-street	24 Sept., 1874
Vermeesch, J. C. .	280 King-street, Newtown...	30 Oct., 1885	Young, E. W	Petersham	23 May, 1884
Vial, Emma	302, Riley-street	21 Jan., 1876	Young, T. G.	97, Queen-street, Woollahra	29 June, 1883

F.

PARTICULARS of Contracts entered into for the conveyance of Post Office Mails from the 1st January, 1885.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication.	Mode of Conveyance	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No of times per week.		£ s. d.	
		WESTERN, SOUTHERN, AND NORTHERN ROADS.				
1 Cobb & Co.	Sydney	*Ilford and Rylstone	Six	2 or 4-horse coaches.	10,875 0 0	31 Dec., 1885.
		Gulgong, *Tallewang*, Denison Town, and Coolah.	Two ...			
		From Railway Station, Blayney, to Post Offices, Blayney and Carcoar.	Six			
		Railway Station, Blayney, and Post Offices, Blayney, Carcoar, Mandurama, Lyndhurst, Sheet of Bark, and Cowra	Six			
		Cowra and Grenfell	Three...			
		Orange, Kangaroobie, and Molong	Seven...			
		Forbes, Carrawobity, Bedgerebong, Mulguthrie, Boorambil, and Condobolin.	Two ...			
		Forbes, Waroo, Newlands, and Condobolin, along the south bank of the Lachlan River.	Two ...			
		Forbes, Tichborne, and Parkes	Three...			
		Nevertire Railway Station, and Post Offices, Nevertire, Nyngan, Hermitage Plains, and Cobar.	One ...			
		Bourke, North Bourke, and Hungerford, via Ford's Bridge, Yantabullabulla, and Brindingabba.	One ...			
		Bourke, Louth, Tilpa, Tankerooka, and Wilcannia, travelling on either side of the Darling River.	Two ...			
		Cobar and Louth	One ...			
		Railway Station, Cootamundra, Post Office, Cootamundra, Receiving Office, Brawlin, Muttama Reef, Coolac, Gundagai, South Gundagai, Adelong Crossing-place, Hillas Creek, Lower Tarcutta, and Tarcutta.	Six			
		Tarcutta, Kyamba, Little Billabong, *Garryowen*, and Germanton.	Three...			
		Little Billabong, Carabost, Rosewood, and Tumberumba.	Three...			
		Tumberumba, Burns, Tooma, *Welaregang Station*, Tintaldra (Victoria), *Welaregang Station*, Ournie, Jinjellic, Maracket, Wagra, Bowna, and Albury, via Camberoona, Dora Dora, Talmalmei, and Ournie Diggings (main road to be travelled between Camberoona and Wagra).†	Two ...			
		Railway Station, Culcairn, and Post Offices, Morven and Germanton. (Contractors to convey mails on either side of the Billabong Creek in times of flood).	Six			
		Germanton, Woomargama, Mullengandra, Bowna, Thurgoona, & Albury.	Six			
		Tamworth, Attunga, Manilla, Upper Manilla, Barraba, Cobbadah, Bingera, and Warialda, via Barker's, North Bingera.	Six			
		‡Armidale, Guyra, "Ben Lomond Hotel," Glencoe, and Glen Innes.	Six			
		Glen Innes, Dundee, Deepwater, Bolivia, *The Bluff*, and Tenterfield.	Six			
		Tenterfield, Willson's Downfall, Sugarloaf (Queensland), and Stanthorpe (Queensland).	Six			
		WESTERN ROADS.				
1 John Paul and Richard Smiles.	Parramatta	Railway Station and Post Office, Parramatta.	Four times or oftener daily.	Cart	78 0 0	31 Dec., 1885.
2 William Griffiths ...	Rouse Hill	Parramatta Railway Station and Post Offices, Parramatta, Baulkham Hills, and Rouse Hill.	Six	Spring-cart, 1 horse.	120 0 0	31 Dec, 1887.
3 Thos. Thompson .	Pennant Hills ...	Parramatta, Field of Mars Ermington, Carlingford, and Pennant Hills.	Six	Horseback	150 0 0	31 Dec., 1886.
4 D P. Horwood	Baulkham Hills .	Baulkham Hills, Castle Hill, and Dural	Six	Horseback	65 0 0	31 Dec., 1886.
5 Richard Wall	Blacktown	From Blacktown to Prospect, and Prospect Reservoir, via Boothtown, returning via Veteran Hall.	Six	Horseback	65 0 0	31 Dec., 1887.

* This portion of contract cancelled in consequence of the extension of the Railway to Rylstone, from 9th June, 1884.

† Whenever floods prevent the mails from being conveyed between Welaregang and Tintaldra, Contractors are required to leave the Tintaldra mail at Welaregang Station (Gray's), and proceed on their journey without waiting for the flood to subside, and on their return to Tintaldra, from either Tooma or Bowna, bring the mail on if it has not in the meantime been conveyed to its destination by other means.

‡ This portion of Contract cancelled in consequence of the extension of the Railway to Glen Innes, from 18th August, 1884.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No of times per week.		£ s. d.	
6 Richard Wall.....	Blacktown.....	From Prospect to Eastern Creek, Rooty Hill, and Blacktown, via Rooty Hill Public School.	Six	.....	65 0 0	31 Dec., 1885.
7 Patrick Ryan..... (Transferred to George Pendergast from 1 July, 1885.)	Windsor	Railway Station & Post Office, Windsor	Four times a day.	Waggonette, 2 horses.	9 0 0	31 Dec., 1885.
8 Patrick Ryan..... (Transferred to George Pendergast from 1 July, 1885.)	Windsor	From the Post Office to the Railway Station, Windsor.	Six	... .	35 0 0	31 Dec., 1885.
9 Mrs. Diana Voller ..	Freeman's Reach	Windsor and Freeman's Reach	Six	Horseback	35 0 0	31 Dec., 1885.
10 William Hawkins ...	Wilberforce	Windsor and Wilberforce.	Six	Horseback	37 0 0	31 Dec., 1886.
11 Thomas Thompson..	Pitt Town.....	Windsor and Pitt Town	Six	Horseback	40 0 0	31 Dec., 1886.
12 John Green.....	Wilberforce	Wilberforce, Ebenezer, and Sackville Reach.	Three	.. ..	18 0 0	31 Dec., 1886.
13 William Everingham	Lower Portland...	Sackville Reach and Lower Portland	Three	Horseback	40 0 0	31 Dec., 1885.
14 Thomas Everingham	Central Colo	Lower Portland and Central Colo .	One	Horseback	16 0 0	31 Dec., 1885.
*15 Joseph Brown	Pitt Town	Pitt Town and Wiseman's Ferry; Wiseman's Ferry, Central M'Donald, and St. Alban's.	Two ..... / Two	Coach ... / Horseback	130 0 0	31 Dec., 1885.
16 John J. Walker	Central M'Donald	Wiseman's Ferry and Mangrove Creek..	One ...	Horseback	17 0 0	31 Dec., 1887.
17 Thomas Preston	Wiseman's Ferry	Wiseman's Ferry and Lower Hawkesbury.	One	Horseback	14 15 0	31 Dec., 1885.
18 Thomas Preston	Wiseman's Ferry	Lower Hawkesbury and Gentleman's Halt.	One	Horseback	19 0 0	31 Dec., 1885.
19 Joseph Onus ..... (Transferred to Stephen Dunstan from 1 April, 1885.)	Richmond	Richmond, North Richmond, and Kurrajong.	Six . . .	4-wheeled conveyance	18 0 0	31 Dec., 1886.
20 Joseph Onus ..... (Transferred to Stephen Dunstan from 1 April, 1885.)	Richmond	Richmond and Grose Vale . . . . (Contractor to convey Mails once a week by 4-wheeled conveyance, and twice a week on horseback, if required by the Postmaster-General to do so, at the rate of £35 per annum.)	Six	4-wheeled conveyance twice a week; and horseback four times a week.	50 0 0	31 Dec., 1886.
21 Thos. Caterson	Upper Colo .	Kurrajong and Upper Colo	Two	Horseback	23 0 0	31 Dec., 1885.
22 Clement Houghton...	Richmond ..	Kurrajong and Kurrajong Heights	Six ..	Horseback three times a week, and 4-wheeled conveyance three times a week.	35 0 0	31 Dec., 1885.
23 Henry Gill	Upper Colo	Upper Colo, Putty, and Howe's Valley.	One ...	Horseback	85 0 0	31 Dec., 18 7.
24 John Worthington...	St. Mary's	Railway Station, South Creek, and Post Office, St Mary's.	Eighteen...	Horseback	45 0 0	31 Dec., 1885.
25 Alfred Colless.....	Penrith	Railway Station and Post Office, Penrith	Three times or oftener daily.	Horseback	55 0 0	31 Dec., 1885.
26 Alfred Colless	Penrith	Penrith and Castlereagh	Six	. .	60 0 0	31 Dec., 1885.
27 Louis J. Anschau ...	Luddenham ..	Penrith, Mulgoa, and Luddenham, via Main Road	Six . .	Horseback	72 0 0	31 Dec., 1887.
28 William Poll	Emu Plains	From Emu Plains to Emu; and from Emu to Emu Plains.	Twelve . / Six . ..	. .. ..	22 0 0	31 Dec., 1885.
29 Charles Hoy	Hartley	Railway Station and Post Office, Mount Victoria; and / Railway Station, Mount Victoria, and Post Offices, Mount Victoria, Little Hartley, Hartley, and Hartley Vale.	Twice or oftener daily / Seven .	.....	140 0 0	31 Dec., 1885.
30 John Ryan	Lowther .. .	Hartley and Lowther . . .	Two .	Horseback	22 10 0	31 Dec., 1887.
31 Charles Orchard	South Bowenfells	Bowenfells and South Bowenfells	Six . . .	Horseback	50 0 0	31 Dec., 1886.
32 Edwin H. Tucker ...	Cullen Bullen .	Ben Bullen Railway Station and Cullen Bullen.	Two . .	Horseback	35 0 0	31 Dec., 1887.
33 James Shervey	Capertee	Capertee Railway Station and Post Office.	Twice or oftener daily.	.....	50 0 0	31 Dec., 1887.
34 William Russell	Ilford	Capertee, Ilford, Cudgegong, Apple-tree Flat, and Mudgee.	Three .	4-wheeled vehicle.	247 0 0	31 Dec., 1885.
35 George A. Holland .	Rylstone	Capertee, Glen Alice, and Rylstone, via Gallagher's, Coco, the Crown, and Bogie.	Two	Horseback	135 0 0	31 Dec., 1887.
36 Thomas Ford	Ilford	Ilford, Waverley Station, Crudine, and Sofala.	Two ..	Horseback	80 0 0	31 Dec., 1887.
37 John Love	Rylstone	Railway Station and Post Office, Rylstone.	Twice or oftener daily as required.	4-wheeled conveyance or otherwise, drawn by one or more horses.	39 0 0	31 Dec., 1886.
†38 Henry Bisley ..... (Transferred to Wm H. Matthews from 1 July, 1885.)	Rylstone	Rylstone and Bylong . .	Two . .	Horseback	72 15 0	31 Dec., 1887.
39 James Gaffney.....	Upper Botobolar	Dungaree and Upper Botobolar, via Bara Creek.	One ...	Horseback	20 0 0	31 Dec., 1885.

* Contractor allowed £20 per annum extra to extend coach service to and from Windsor and Pitt Town, from 1st April, 1885.
† Contractor allowed £17 per annum extra to travel via Camboon, from 1 June, 1885.

Contractors' Names	Contractors' Addresses	Postal Lines	Frequency of Communication	Mode of Conveyance	Annual Amount payable to Contractors	Date of Termination of Contracts
			No of times per week		£ s d.	
40 Stephen Malone	Market-street, Mudgee.	Railway Station and Post Office, Mudgee.	Once or oftener daily.	Waggonette or coach, 1 or 2 horses, as required	20 0 0	31 Dec., 1886.
41 George Swords	Mudgee	Mudgee, Avisford, Hargraves, Windeyer, *Pure Point*, *Campbell's Creek*, *Long Creek*, Upper Pyramul, and Crudine.	Two	Horseback	145 0 0	31 Dec, 1886.
42 George Swords	Mudgee	Mudgee, Cullenbone, and Guntawang .	Two	Horseback	53 10 0	31 Dec, 1885.
43 John Hugh Gorrie	Mudgee	Mudgee and Merindee	Three	Horseback	88 0 0	31 Dec, 1886.
44 Wm. Kellett, jun	Mudgee	Mudgee, Stony Creek, Cooyal, Wollar, and Barragon.	Two	Horseback	95 0 0	31 Dec, 1885.
45 Daniel Cornwell .	Cassilis	Mudgee, Budgee Budgee, Ulan, and Cassilis, via Bobadeen (Contractor to convey Mails via the main road, by vehicle if required by the Postmaster General to do so, at the rate of £156 per annum)	Two	Horseback	99 0 0	31 Dec, 1886.
46 John Knowles	Mudgee	Mudgee, Eurunderee, Home Rule, and Gulgong.	Seven	2 or more horse coach	148 0 0	31 Dec, 1887.
47 George W. Last	Canadian Lead	Home Rule and Canadian Lead	Six	Horseback	40 0 0	31 Dec, 1887.
48 John Barry	Mudgee	Gulgong, Lahey's Creek, and Cobbora via Goodaman's.	Two	4 wheeled coach, 2 or more horses	199 19 0	31 Dec., 1887.
49 William Rowley	Gilgandra	Cobbora, Merrygoen, Mundooran, and Gilgandra.	Two	Coach, 2 horses	300 0 0	31 Dec, 1887.
50 Donald M'Arthur	Coolah	Mundooran, Merrygoen, and Coolah, via Queensborough Flat, Bothero, Digilah, and Dunikimini.	One	Horseback	60 0 0	31 Dec, 1886.
*51 Peter M'Gregor	Coonabarabran ..	Mundooran and Baradine, via Bundella, Yairagan, Bearbong, Bidden, Youl bong, Tunderbrine, Gumin Gumin, Tenandra, Panta, Windgadgen, and Goorianawa	Two ...	Horseback	300 0 0	31 Dec, 1887.
52 Thomas Baker	Meadow Flat	Rydal, Meadow Flat, Mitchell, West Mitchell, and Yetholme, via main road	Three (See foot note)	Vehicle	†140 0 0	31 Dec, 1886.
53 John T Franks .	Palmer's Oakey..	West Mitchell and Palmer's Oakey	Two		29 0 0	31 Dec, 1885.
54 John B. Keen ...	Oberon .	Tarana, *Mutton's Falls*, and Oberon	Three .	Coach, 2 or more horses	96 0 0	31 Dec., 1886.
‡55 L. P. Hanrahan	Black Springs .	Oberon and Black Springs , and Black Springs and Jerrong	Two / One	Horseback	59 10 0	31 Dec, 1886.
56 James Dennis .	Shooter's Hill Gingkin	Oberon, Gingkin, and Shooter's Hill	Two	Horseback	32 4 0	31 Dec, 1885.
57 John B Keen ..	Oberon	Oberon, Fish River Creek, and Duckmaloi	Three	Horseback	28 0 0	31 Dec, 1886.
58 George Roberts .	O'Connell	Brewongle and O'Connell	Six	Horseback	70 0 0	31 Dec., 1885.
59 Wm. Bailey ...	O'Connell	O Connell, Wiseman's Creek, and Essington	Two . ..	Horseback	31 0 0	31 Dec, 1886.
60 John Davison . .	Browne Hill, Glanmire	Railway Station, Raglan, and Post Office, Glanmire	Six	Horseback	35 0 0	31 Dec, 1885.
61 Jas. E. Marsden ..	Kelso .	Railway Station and Post Office, Kelso	Twelve or more.		35 0 0	31 Dec, 1887.
62 Richard J. Oldfield .	Bathurst . . .	Railway Station and Post Office, Bathurst	Twelve or more	Cart or conveyance	70 0 0	31 Dec., 1886.
63 John T. Jardine ...	Esrom .	Bathurst and Esrom, and Esrom, Dunkeld, Evan's Plains, and Fitzgerald's Valley	Six / Three	Horseback	110 0 0	31 Dec, 1885.
64 John T Jardine	Esrom . ..	Bathurst and Freemantle, via Benjamin Bullock, senior's, Turkey Ridge, and Rock Forest	One	Horseback	48 18 0	31 Dec, 1886.
65 William Moloney	Sofala	Bathurst, Peel, Wyagdon, Wattle Flat, and Sofala	Six	Coach, 2 or 4 horses	174 15 0	31 Dec, 1887.
66 Henry H Nichols (Transferred to Mrs Mary Nichols from 1 April, 1885)	Bathurst ...	Bathurst and White Rock ...	Six	Horseback	54 10 0	31 Dec., 1887.
67 Mary A D'Aran	Peel	Peel, Clear Creek, and Limekilns	Two ...	Horseback	56 0 0	31 Dec, 1886.
68 Frederick Marion	Millamurra	Peel and Millamurra ...	Two ...	Horseback	§30 0 0	31 Dec., 1887.
69 John T Franks	Palmer's Oakey .	Sofala and Upper Turon (junction of Palmer's Oakey Creek with Turon River), via main road past Wilde's.	Two . .	.	34 10 0	31 Dec, 1885.
70 William Cole	Box Ridge .	Sofala and Box Ridge ..	Two .	Horseback	35 0 0	31 Dec, 1885.
71 Henry Grose	Bathurst	Sofala, Sally's Flat, and Hill End	Three ...	2 horse coach.	175 0 0	31 Dec, 1885.
72 William Willard	Tambaroora	Hill End and Tambaroora ..	Six	Horseback	40 0 0	31 Dec, 1887.
73 Michael Carty .	Hargraves	Hill End, Tambaroora, and Hargraves	One	Horseback	26 10 0	31 Dec, 1886.
74 William Walsh . .	George's Plains	George's Plains Railway Station, and Post Offices, Cow Flat and Rockley	Six .	Coach, 2 or more horses.	125 0 0	31 Dec., 1886.
75 Fanny Whelan ..	The Lagoon ...	Cow Flat and the Lagoon	Two	Horseback	19 15 0	31 Dec, 1886.

* Contractor allowed £3 15s per annum extra in consequence of deviation to Warrumbungul, from 8 June, 1885

† Contractor allowed £110 per annum extra to convey mails an additional three times a week between Rydal, Meadow Flat, and Mitchell, from 1 January, 1885 Arrangement to terminate at three months notice on either side

‡ Contractor allowed £10 per annum extra to call at Porter's Retreat, from 6 December, 1885

§ Contractor to travel between Peel and Millamurra, via Duramana, for £o3 per annum, if required.

nt actors' Names.	nt actors' Addresses.	Postal Lines.	Freqnency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No. of times per week.		£ s. d.	
76 William Walsh	George's Plains...	Rockley, Swallow's Nest, and Burraga, via Sewell's and Warby's, Eagle Vale. (Contractor to convey Mails thrice a week, if required, at the rate of £105 per annum.)	Two	Horseback	75 0 0	31 Dec., 1885.
77 Cobb & Co.	Sydney	Railway Station, Newbridge, and Post Offices, Moorilda, Hobby's Yards, and Trunkey Creek.	Three.....	2 or 4 horse coach.	125 0 0	31 Dec., 1885.
78 Oswald Mackie	Caloola	Railway Station, Newbridge, and Post Office, Caloola.	Three.....	Horseback	29 15 0	31 Dec., 1885.
79 Matthew Ryan	Long Swamp.....	Trunkey Creek and Long Swamp.....	One	Horseback	12 0 0	31 Dec., 1886.
80 James Quinn	Trunkey Creek ...	Trunkey Creek and Tuena, via Sands, Coppahannia, and Pine Ridge.	Three.....	.....	92 0 0	31 Dec., 1886.
81 Stephen Donnellan...	Blayney.....	Blayney and Brown's Creek.....	Three.....	Horseback	42 0 0	31 Dec., 1885.
82 Mary J. B. White ...	King's Plains ...	Blayney and King's Plain.....	Two	Horseback	20 0 0	31 Dec., 1886.
83 Stephen Donnellan...	Blayney.....	Blayney, Greghamstown, and Vittoria...	Two	Horseback	56 0 0	31 Dec., 1885.
84 George Kable	Evan's Swamp, Moorilda.	Blayney, Norton, Shaw, and Mount Macquarie, via Five Islands.	Three.....	.....	55 0 0	31 Dec., 1887.
85 Henry Grant	Goolagong.....	Carcoar, Mandurama, Lyndhurst, Milburn Creek, and Mount M'Donald.	Three.....	2-horse coach.	129 10 0	31 Dec., 1887.
86 John Hade	Carcoar	Mandurama, Walli, and Canowindra, via Egan's, Cliefden, and Belmore. (Contractor to travel via Tenandra instead of via Belmore, if required.)	Two	Coach.....	186 0 0	31 Dec., 1885.
87 John Hade	Carcoar	Sheet of Bark and Canowindra, via "The Islands."	Three.....	Horseback	75 0 0	31 Dec., 1887.
88 Thos. Neville	Rock Hill, Sheet of Bark.	Sheet of Bark, Wangoola, Milburn Creek, and Mount M'Donald.	Three.....	4-wheeled vehicle, 2 horses.	104 0 0	31 Dec., 1887.
89 George Elliott.....	Mount M'Donald	Mount M'Donald and Darby's Falls ...	Two	.....	35 0 0	31 Dec., 1887.
90 Frederick L. Richardson.	Forbes	Cowra, Goolagong, and Forbes	Three.....	2-horse coach.	193 0 0	31 Dec., 1885.
91 John S. Dawson	Grenfell.....	Grenfell and Goolagong, via Warraderry Creek and Tin Pot.	One	Horseback	40 0 0	31 Dec., 1885.
92 Mark Willis	Millthorpe.....	Millthorpe Railway Station and Post Offices, Guyong and Byng.	Three.....	.....	60 0 0	31 Dec., 1885.
93 James Kelly	Forest Reefs	Milthorpe and Forest Reefs; and..... Forest Reefs and Cadia.	Three ... } One . ... }	Horseback	51 0 0	31 Dec., 1886.
94 Joseph Ewer ..... (Transferred to John Hayes, from 1 April, 1885).	Orange	Railway Station and Post Office, Orange	Twice or oftener daily.	Springcart 1 horse.	30 0 0	31 Dec., 1887.
95 Joseph Ewer ..... (Transferred to John Hayes, from 1 April, 1885.)	Orange	Orange and Lucknow	Six.....	.....	45 0 0	31 Dec., 1887.
96 Henry Grant	Goolagong.....	Orange, German's Hill, Cave Creek, Cargo, Canowindra, and Cowra, via Belmore.	Three.....	Coach and 2 horses	249 0 0	31 Dec., 1887.
97 Joseph Ewer ..... (Transferred to John Lamont, from 1 April, 1885.)	Orange	From Orange to Ophir, via Lewis Ponds, returning by direct road.	Two	Horseback	36 0 0	31 Dec., 1885.
98 Joseph Ewer ..... (Transferred to John M'Cann, from 1 April, 1885.)	Orange	Orange, Springside, Cadia, and Carcoar, via Burnt Yards.	One	Horseback	55 0 0	31 Dec., 1885.
99 Cobb & Co, ...	Sydney	Orange, Borenore, Cheeseman's Creek, Cudal, Toogong, Murga, Eugowra, and Forbes.	Six.....	Coach, 2 or 4 horses.	1,400 0 0	31 Dec., 1886.
100 Joseph Ewer ..... (Transferred to John Lamont, from 1 April, 1885.)	Orange	Orange and March.....	Two	Horseback	20 0 0	31 Dec., 1887.
101 Joseph Ewer ..... (Transferred to John Lamont, from 1 April, 1885.)	Orange	Orange and Canobolas	Two	Horseback	26 0 0	31 Dec., 1887.
102 John Cass	Goolagong.....	Canowindra, *Nyrang*, and Goolagong...	Two	Horseback	58 0 0	31 Dec., 1885.
103 Martin Kelly	Meranburn	Cheeseman's Creek, Gregra and Meranburn.	One	Horseback	34 12 6	31 Dec., 1885.
104 Michael Lannan	Cudal.....	Cudal, *Boree*, Gregra, and Meranburn .. (Contractor to convey Mails by buggy, if required by the Postmaster-General to do so, for a sum at the rate of £45 per annum.)	One	Horseback	35 0 0	31 Dec., 1885.
105 Edward Thornberry	Cudal.....	Cudal and Bowan Park	Three.....	Horseback	25 0 0	31 Dec., 1885.
106 Edward Hogan	Cargo.....	Toogong, Cranbury, and Cargo.....	Two	Horseback	39 10 0	31 Dec., 1885.
107 Chas. Fuller	Murga	Murga and Bumberry	One	.....	50 0 0	31 Dec., 1886.
108 Edward Hogan	Cargo.....	Forbes, Bogan Gate, and Dandaloo, via Blowclear, Gunning Bland, The Troughs, Gobondry, Burra Burra, Mumble Plains, Block H., Woodlands Homestead, and Albert Waterholes.	One.	Horseback or vehicle when required by Department.	170 0 0	31 Dec., 1887.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication. (No of times per week.)	Mode of Conveyance.	Annual Amount payable to Contractor. £ s. d.	Date of Termination of Contracts.
109 Frederick L. Richardson.	Forbes	Forbes and Marsden's, via Bundaburra and The Gap; and Forbes and Marsden's, via Wongagong Bundaburra Creek, Dog and Duck, Green Hills, Boyd, and Battery	Two / One ..	Horseback or 2-horse coach.	143 0 0	31 Dec., 1885.
110 Stephen Byrnes	Condobolin	Condobolin, Cugong, and Eauabalong, along the north side of the Lachlan River.	Two	Coach, 2 or 4 horses.	160 0 0	31 Dec., 1887.
111 Stephen Byrnes	Condobolin	Condobolin, Wardry, and Eauabalong, along the south side of the Lachlan River.	Two	4-wheeled coach, 2 or 4 horses	130 0 0	31 Dec., 1886.
112 William Budd.....	Lake Cudgellico..	Eauabalong and Lake Cudgellico	Two ...	Coach, 2 or more horses	50 0 0	31 Dec, 1886.
113 William Budd.....	Lake Cudgellico.	Eauabalong, Willanthry, Hillston, Whealbah, and Booligal.	Two ...	Coach, 4 horses.	275 0 0	31 Dec., 1886.
114 Thomas H. Rowe (Transferred to Thomas Budd, from 1 February, 1885.)	Nyngan	Eauabalong and Nymagee, via Welsh's, Dine Dine, Eremeran, Nangribone, Conley's, Overflows, Babinda, and Rosett's. (Contractor to convey Mails twice a week, if required by the Postmaster-General, at the rate of £330 per annum.)	One ..	4-wheeled vehicle drawn by 2 horses.	230 0 0	31 Dec., 1887.
*115 Thomas H. Rowe...	Nyngan	Nymagee and Cobar, via Rock Holes and Limekilns.	One	2 or more horse coach	189 0 0	31 Dec, 1887.
116 William Budd.....	Lake Cudgellico..	Willanthry, South Mount Hope, and Mount Hope.	Two	Coach, 2 or more horses	78 0 0	31 Dec., 1885.
†117 Patrick Cronin.....	Nymagee	Hillston, "*Mountain Well Hotel*," Mount Hope, Gilgunnia, *Sandy Creek* and Cobar. (Contractor to convey Mails once a week, if required by the Postmaster General to do so, at the rate of £300 per annum.)	Two	Coach, 2 or more horses	625 0 0	31 Dec., 1886.
‡118 Patrick Cronin	Nymagee . .	"*Mountain Well Hotel*" and Gilgunnia	One	2 or more horse coach	125 0 0	31 Dec, 1886.
119 Cobb & Co. (Transferred to J. S M'Comiskey, from 1 April, 1885.)	Sydney	*Sandy Creek* and Nymagee ..... (Contractor to convey Mails once a week, if required by the Postmaster-General to do so, at the rate of £30 per annum.)	Two	2 or more horse coach	55 0 0	31 Dec, 1886.
120 Joseph Williamson...	Boomey	Molong, Boomey, and Warne ..	Three	1 horse buggy	100 0 0	31 Dec., 1885.
121 Cobb & Co.	Sydney	Molong, Garra, Moranburn, Bumberry Bindogandra, and Parkes.	Six	Conveyance 1, 2, or 3 horses.	520 0 0	31 Dec, 1886.
122 James M'Cormack .	Cumnock . .	Molong, Cumnock, Yullundry, Yeoval, and Obley, via Bridgewater and the Gap, keeping the main road.	Three ..	4-wheeled vehicle, 2 or 4 horses	186 0 0	31 Dec., 1885.
§123 John Dain	Cundumbul	Molong and Cundumbul	Two .	Horseback	73 0 0	31 Dec. 1887.
124 Hy. W. Jones	Parkes . .	Parkes and Bulgandramine, via Ginninniguy and Coradgery.	Two ..	Horseback	74 10 0	31 Dec., 1887.
125 Frederick L. Richardson.	Forbes . . .	Parkes, Bogan Gate, and Condobolin, via Wathins' Gunning Bland Head Station, Old Gunning Bland, and Burrawang.	One	Horseback	79 0 0	31 Dec, 1885.
126 Walter Reakes .. . . (Transferred to Albert Reakes, from 1 Oct., 1885.)	Ten-mile Reefs	Obley, Ten-mile Reefs, Bulgandramine, and Dandaloo. (Contractor to travel once a week via Wanda Wondong, and once a week, via Graham's Dillederry)	Two .	Horseback	200 0 0	31 Dec, 1887.
127 Henry T. Pratt	Cannonbar . .	Dandaloo, Nyngan, and Cannonbar...	Two ...	Horseback	286 0 0	31 Dec., 1887.
128 William Scott, jun...	Ironbarks . .	Ironbarks and Burrendong	Three . .	Horseback	60 0 0	31 Dec, 1886.
129 John A. Brien	Neurea	Springs and Neurea; and Neurea and Baker's Swamp	Six ... .. / Two ...	Horseback	40 0 0	31 Dec, 1887.
130 David White	Montefiores . .	Railway Station and Post Office, Wellington.	Twice or oftener daily.	Cart	28 0 0	31 Dec., 1836.
131 Matthew Lahy .. .	Wellington	Wellington, Ponto, Terra Bella, and Dubbo, via Willandra Bridge.	Two	Horseback	103 0 0	31 Dec., 1885.
‖132 John Randell	Mudgee	Wellington, Kaiser, Lincoln, Spicer's Creek, Goolma, Two-mile Flat, Guntawang and Gulgong.	Two	2 horse covered coach.	195 0 0	31 Dec., 1885.
133 Hy. W. Jones	Parkes	Wellington, Yeoval, Mount Aubrey, and Parkes.	Two	2-horse coach.	224 10 0	31 Dec., 1887.
134 Richard J. Oldfield...	Bathurst	Wellington, Montefiores, Comobella, Murrungundy, Cobbora, Merrygoen, Warkton, and Coonabarabran, by the new line of road.	Two	Vehicle ...	600 0 0	31 Dec., 1886.
135 Thomas Porton	Ponto	Ponto, Terra Bella, and Arthurville.. .	One	Horseback	28 0 0	31 Dec, 1885.
136 Patrick Kelly	Woolaman, Alma	Lincoln and Alma (Woolaman)	One	Horseback	26 0 0	31 Dec., 1887.

* Contractor allowed £104 per annum extra to convey mails once a week between Nymagee and Cobar, via Priory and Shearlegs, from 1 October, 1885.
† Contract cancelled, 19 March, 1885.
‡ Contract cancelled, 19 March, 1885.
§ Contractor instructed to travel as follows, from 8 April, 1885:—By main road to gates leading to Cardington track, thence via Cardington (main road to be travelled in times of flood.)
‖ Contractor permitted to serve Kaiser by a branch mail on horseback, from 15 April, 1885.

Contractors' Names	Contractors' Addresses.	Postal Lines.	Frequency of Communication	Mode of Conveyance	Annual Amount payable to Contractors	Date of Termination of Contracts.
			No of times per week		£ s. d	
137 John Montgomery (Transferred to James Doyle, from 1 October, 1885.)	Coonabarabran ...	Merrygoen, Binnaway, and Coonabarabran, via Caigan, Sunnyside, Popa gandra, and Riversdale.	Two	Coach and 2 horses	177 0 0	31 Dec., 1887.
138 Peter M'Gregor	Coonabarabran	Coonabarabran and Tambar Springs, via Bradley's, at Baby Creek, Clay Holes, and Saltwater Creek	One	Horseback	65 0 0	31 Dec, 1887.
139 George Furney, jun.	Dubbo	Railway Station and Post Office, Dubbo	Twice or oftener daily.	4-wheeled vehicle.	68 0 0	31 Dec., 1885.
140 Cobb & Co.	Sydney	Dubbo, Brocklehurst, *Burslem's*, Gilgandra, Curban, Gulargambone, and Coonamble, via Coalboggie Creek, Talbragar Bridge, and Terramungamine	Three ...	2 or 4 horse coach.	1,350 0 0	31 Dec, 1886.
141 George Furney, jun	Dubbo	Dubbo, Beni, Murrungundy, and Cobbora	Two ..	2-horse 4-wheeled vehicle	96 0 0	31 Dec., 1885.
142 James S Weldon	Dubbo	Dubbo and Ten-mile Reef (Tomingly), and Ten mile Reef (Tomingly) and Bulgandramine	Three Two	2-horse coach.	198 0 0	31 Dec, 1885.
143 George Furney, jun	Dubbo	Dubbo and Beliribigill .	Two	Horseback	45 0 0	31 Dec., 1886.
144 Edmund Watman (Transferred to Benjamin Furney, from 1 February, 1885)	Dubbo	Dubbo and Obley, via The Meadows, the Springs, and Wambangalang	Two	Horseback	80 0 0	31 Dec, 1885.
145 Alex. W. Miller (Transferred to Henry Rowley, from 1 Nov, 1885)	Gilgandra	Gilgandra and Collie, and Collie and Tenandra via Merrigal, Bundella, and Wonbobbie	Two One	Horseback	130 0 0	31 Dec, 1887.
146 Alex. W Miller (Transferred to Henry Rowley, from 1 Nov 1885)	Gilgandra	Gilgandra and Collie, via Peter Smith's John Marchant's, E Maher's, A M'Kechnie's, James Markey's, Bonnington's, Looney's, Whiteman's, Hull's, Foran's, Myall Park, Bullagreen, New Merigal, and Merigal.	One	Horseback	70 0 0	31 Dec., 1887.
147 David Robertson ..	Warren	Gulargambone, Quambone, and Carinda, via M'Quade and Flynn's Stations	Two	Horseback	319 0 0	31 Dec, 1887.
148 Cobb & Co.	Sydney	Coonamble, Buggil, and Walgett, via Yowee, Bundy, Wingadee, and Nugal	Two ...	4-horse coach.	600 0 0	31 Dec., 1886.
149 John Colwell	Billeroy, near Coonamble	Coonamble, Urawilkie, and Baradine, via Nebea, Billeroy, Terembone, and Teridgerie	One ...	Horseback	125 0 0	31 Dec., 1885.
150 James Kelly	Coonamble	Coonamble and Carinda, via Tooloom, Narroway, Nelgourie, Ningy, Coonimbin, Pier Pier, and Gongolman	One	Horseback	145 0 0	31 Dec., 1885.
151 William Wilson	Warren	Narramine, Timbiriebungie, and Warren	Two	Horseback	175 0 0	31 Dec, 1885.
152 David Robertson	Warren .	Timbiriebungie and Tenandra, via Burroway, Bundemar, Reak's, and Wonbobbie	Two		144 0 0	31 Dec, 1886.
153 Florant J Martel	Dandaloo	Trangie and Dandaloo .	Two ..	Horseback	60 0 0	31 Dec, 1887.
154 Thomas Adams	Warren	Railway Station, Nevertire, and Post Office, Nevertire, and Post Offices, Nevertire and Warren ..	Once or oftener a day. Six	4-wheeled coach, 2 or more horses.	147 0 0	31 Dec., 1885.
155 Henry T. Pratt	Cannonbar...	Warren and Cannonbar	One	Horseback	84 0 0	31 Dec, 1885.
156 Thos Cook	Mount Foster, via Warren	Warren, Mount Harris, and Carinda	Two	Horseback	349 0 0	31 Dec., 1886.
157 William Wilson	Warren	Warren and Tenandra	One		39 0 0	31 Dec., 1885.
158 David Robertson	Warren	Warren, Tenandra, and Quambone	One	Horseback	74 0 0	31 Dec., 1885.
159 George W. Benton	Tenandra ..	Warren, Tenandra, and Coonamble, via Bourbah, (Donohoe's), on the Merri Merri, and M'Mahon's, on the west bank of the Castlereagh River.	One	2-horse waggonette	79 0 0	31 Dec, 1887.
160 Henry T Pratt	Cannonbar	Cannonbar and Colane	One	Horseback	46 0 0	31 Dec., 1885.
161 George W Benton	Tenandra	Tenandra and Quambone	One	Horseback	60 0 0	31 Dec, 1885.
162 Joseph Douglas	Pine Grove, Nyngan.	Railway Station and Post Office, Nyngan	Twice or oftener daily.	1 horse coach.	70 0 0	31 Dec., 1887.
163 Cobb & Co	Sydney	Nyngan, *Wicklow*, and Nymagee, by surveyed road (Contractors to convey Mails to and from Hermitage Plains and Nymagee, if required by the Postmaster General, at the rate of £290 per annum)	Three	2 or 4 horse coach	285 0 0	31 Dec., 1885.
164 Cobb & Co	Sydney ..	Nyngan, Hermitage Plains, and Cobar	Two	2 or 4 horse coach	445 0 0	31 Dec, 1885.
165 Walter C Colless	Brewarrina . .	Nyngan, Monkey, and Gongolgon ...	One ..	Buggy, 2 horses	400 0 0	31 Dec., 1886.
166 Edward F Reilly	Yarrawin, Marr Creek, Monkey	Monkey and Brewarrina, along the left bank of the Marra Creek.	One	Horseback	112 0 0	31 Dec, 1885.
*167 Cobb & Co.	Sydney	Gongolgon and Brewarrina	Two	Coach	260 0 0	31 Dec, 1886.

* Contract cancelled 2 September, 1885.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication.	Mode of Conveyance	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No of times per week		£ s. d.	
168 John Nowlan	Brewarrina	From Brewarrina to Enngonia, via the "Horse and Jockey Hotel" (Biree), Biree Station, Cocklerina, Kimbri, Colless', Corella, Leadnapper, Colless' Springs, and Shearer's Garari Station, returning to Brewarrina, via Nellie's Springs and Cooning. (Contractor to return by former route, if required by the Postmaster-General to do so.)	One	.....	145 10 0	31 Dec., 1885.
169 Walter C. Colless	Brewarrina	Brewarrina, *Willawillingbah*, and Goodooga, via Moorabilla, Bundabulla, Willah, Muckerawah, Bumble, and Bree Police Station.	One	4-horse coach.	155 0 0	31 Dec., 1885.
*170 Walter C. Colless	Brewarrina	Brewarrina, Talawanta, Brenda, and Goodooga, via Bundabulla, Llangboyde, on the Biree, Weilmoringh Station, on the Culgoa, Tatala, Guomery, and the Biree Stations.	One	Horseback	109 0 0	31 Dec., 1886.
†171 George Buist	Girilambone	Railway Station and Post Office, Girilambone.	Twice or oftener daily.	Waggonette, 2 horses.	84 0 0	31 Dec., 1886.
‡172 Cobb & Co.	Sydney	Byrock and Gongolgon Byrock and Bourke (Contractors to convey Mails six times a week between Byrock and Bourke, should the traffic be at any time sufficient to induce them to run a coach six times a week.)	Two Four	2 or 4 horse coach.	2,465 0 0	31 Dec., 1885.
173 Cobb & Co.	Sydney	Bourke, North Bourke, Mungunyah, Enngonia, and Barringun, via West Bourke, Gedia Camp Lake, Box-holes Native Dog Spring, Lila, and Belalie.	Two	Coach, 2 or 4 horses.	287 0 0	31 Dec., 1886.
174 Joseph Harris	Cobar	Bourke, Cobar, and the Cornish, Scottish, and Australian Copper Mines. (Contractor to convey Mails on horseback, if required by the Postmaster-General to do so, for a sum at the rate of £358 10s. per annum.)	One	2-horse buggy or coach.	394 0 0	31 Dec., 1886.
175 Thos. Doyle	Wanaaring	Bourke and Wanaaring	One	Horseback	240 0 0	31 Dec., 1886.
176 Charles J. Conway	Mungunyah	"Mungunyah Hotel," on the Warrego River, and Yantabullabulla Springs, via Lagoon Station, Wapwailah, Irrira, and Brewarra, on the Cuttaburra Creek.	One	Horseback and packhorse.	234 0 0	31 Dec., 1885.
177 Patrick Fitzgerald	Mungunyah	Mungunyah and Louth, via Lila Springs, Pirillie, Ford's Bridge, Winabrina, and Kirnie.	One	Horseback	147 10 0	31 Dec., 1885.
178 Thomas Doyle (Transferred to Donald Butler, from 1 July, 1885.)	Wanaaring	Wanaaring Post Office, & Delalah Downs Head Station, via Urisino, Elsinora, and Thurloo Downs.	One	.....	160 0 0	31 Dec., 1887.
		SOUTHERN ROADS.				
1 A. W. Robertson & John Wagner.	Hay	Railway Station and Post Office, Deniliquin.	Twelve or more.	Waggonette 1 or more horses.	2,329 0 0	31 Dec., 1885.
		Deniliquin, Morago, Moulamein, and Balranald, via Moolpar.	Two	2 or 4 horse American coach.		
		Hay, Gunbar, and Hillston	One	4-horse American coach.		
		Moama and Pericoota; and Pericoota, Womboota (Edwards'), and Womboo (Rogers'); With a branch mail to and from a point on the Moama and Pericoota line and Altcar Receiving Office.	Six Two Two	Waggonette, 2 horses.		
		§ Balranald, Tooleybuc, and Swan Hill	Two	2-horse American coach.		
		Balranald, Hatfield, Clare, and Ivanhoe via Darling Block D, Til Til, and Kilfera Station, with a branch mail to and from Clare and Manfred.	Two Two	4-wheeled American coach.		
2 Hugh Murphy	Liverpool	Railway Station and Post Office, Liverpool.	As often as required.	.....	48 2 0	31 Dec., 1886.
3 Charles Marsden	Liverpool	Liverpool, Denham Court (on return by Kemp's Creek), and Bringelly.	Six	Horseback	100 0 0	31 Dec., 1887.
‖4 Charles Marsden	Liverpool	Liverpool and Hinchinbrook	Six	Coach, 2 horses.	36 10 0	31 Dec., 1885.

* Contractor allowed £50 per annum extra, from 1 March, 1885, to convey mails by vehicle.
† Contractor allowed £30 to relinquish contract from 31 July, 1885.
‡ Contract cancelled from 2 September, 1885, in consequence of the extension of the Railway to Bourke.
§ Route altered to via Poon Boon and Murray Downs, from 16 August, 1885.
‖ Contractor allowed to convey mails on horseback, from 13 May, 1885. Contract terminated, with contractor's consent, on 16 June, 1885.

Contractors' Names.	Contractors' Addresses	Postal Lines.	Frequency of Communication	Mode of Conveyance	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No. of times per week		£ s. d	
5 Thos. Morehead . ..	Greendale	Bringelly and Greendale, via Greendale Public School and Greendale House	Six	Horseback	27 15 0	31 Dec., 1886.
6 James Waterworth	Camden	Railway Station and Post Office, Campbelltown.	Five times or oftener daily.	Horseback or vehicle if required	30 0 0	31 Dec., 1885.
7 James Waterworth	Camden .. .	Railway Station, Campbelltown, and Post Offices, Campbelltown, Appin, Bulli, Woonona, Fairy Meadow, and Wollongong.	Six	4-wheeled coach, 2 or more horses.	200 0 0	31 Dec., 1885.
8 James Waterworth	Camden	From Campbelltown to Appin . . ... (Contractor to carry Mails to and from Campbelltown and Appin for the sum of £65 per annum, if required by the Postmaster-General to do so).	Six	Coach ...	49 0 0	31 Dec., 1885.
9 James Waterworth	Camden	Narellan Tramway Platform, and Post Office.	Four times or oftener daily.	.....	26 0 0	31 Dec., 1885.
10 Thomas Cummings	Cobbitty	Narellan and Cobbitty	Six .	Horseback	45 0 0	31 Dec., 1887.
11 Jane T. Wasson	Brownlow Hill	Camden and Brownlow Hill .	Six	... .	60 0 0	31 Dec., 1887.
12 Mrs. Catherine Cuthel.	Werombi ...	Brownlow Hill and Werombi ..	Three ...	Horseback	32 0 0	31 Dec., 1885.
13 William Bucket	Albion Park	Bulli and Clifton	Six ..	Coach, 2 or more horses	52 10 0	31 Dec., 1887.
14 John T. Hunt	Dark Forest, Bulli.	Bulli and Sherbrooke	Four	...	25 0 0	Contract to terminate at three months' notice on either side.
15 Joseph Atkinson	Albion Park	Wollongong, Fig-tree, Unanderra, Brownsville, Dapto, Albion Park, Shellharbour, and Kiama.	Six.	3-horse covered coach.	149 10 0	31 Dec., 1885.
16 John Byron... . .	Wollongong	Wollongong and Mount Keira	Six.....	Horseback	24 0 0	31 Dec., 1887.
17 William James, sen.	Mount Kembla	Fig-tree and Mount Kembla	Six.	Horseback or by cart if required.	17 0 0	31 Dec., 1885.
18 John Taylor . ..	Marshall Mount, via Dapto.	Dapto and *Marshall Mount*	Three ..	.....	14 10 0	31 Dec., 1886.
19 Andrew Ryan .	Albion Park	Albion Park and Jamberoo	Three.....	Horseback	28 0 0	31 Dec., 1887.
20 Mrs. Sarah Jones ...	Wilton	Douglas, Cataract, and Wilton	Six	Horseback	60 0 0	31 Dec., 1886.
21 Francis Gray	Picton	Picton Railway Station and Post Office, Picton.	Two or three times daily.	Horseback	20 0 0	31 Dec., 1885.
22 Francis Gray . . .	Picton ..	Picton and Bargo .	Two	Horseback	18 0 0	31 Dec., 1885.
23 Francis Gray	Picton .	Picton and Oaks	Six.	Horseback	50 0 0	31 Dec., 1885.
24 Mary Gueirn	Oaks .	Oaks and Burragorang .	Three	... ...	29 0 0	31 Dec., 1887.
25 P. J. O'Rielly ..	Cox's River	Burragorang and Cox's River	Three	Horseback	40 0 0	31 Dec., 1885.
26 George Egan	Upper Burragorang.	Burragorang and Upper Burragorang	Two ...	Horseback	23 10 0	31 Dec., 1887.
27 William Brown . . (Transferred to William Gay, from 14 January, 1885)	Robertson	Bowral, Kangaloon, East Kangaloon, and Robertson.	Six.....	Horseback	119 0 0	31 Dec., 1886.
28 Luke Malone	Braidwood .	Railway Station and Post Office, Moss Vale; (including the clearance of the Letter Receiver at the Railway Station).	Fifteen or oftener. Six. .	1-horse conveyance.	65 0 0	31 Dec., 1885.
29 Timothy Hegarty .	Moss Vale	Post Offices, Moss Vale, and Berrima...	Twelve	Horseback	78 0 0	31 Dec., 1887.
30 Timothy Hegarty	Moss Vale	Moss Vale and Sutton Forest, and from Moss Vale to Sutton Forest, on arrival of the morning train from Sydney.	Seven .. Six	Horseback	80 0 0	31 Dec., 1887.
31 Owen Malone	Moss Vale	Moss Vale, Burrawang, Robertson, Jamberoo, and Kiama.	Six.... ..	4 wheeled vehicle, 1 or more horses.	400 0 0	31 Dec., 1887.
32 John Haddin and James Cullen.	Moss Vale	Moss Vale, Yurrunga, Barrengarry, Kangaroo Valley, Cambewarra, and Nowra.	Six. .	Vehicle, 2 horses.	200 0 0	31 Dec., 1887.
33 James Breen	Berrima	Berrima and Joadja Creek .	Two	Horseback	35 0 0	31 Dec., 1887.
34 Timothy Hegarty	Moss Vale ...	Sutton Forest and *Cross Roads* ...	Four	Horseback	30 0 0	31 Dec., 1886.
35 William Raftery .. .	Kiama . .	Kiama, Gerringong, and Broughton's Creek.	Six. .	Covered coach, 2 or more horses.	150 0 0	31 Dec., 1885.
36 Thos. Hetherington..	Broughton's Creek.	Kangaroo Valley and Broughton's Creek	Six.	.. .	89 0 0	31 Dec., 1886.
37 George Ulrick	Wattamolla	Kangaroo Valley and Wattamolla .	Two . ..	... ...	25 0 0	31 Dec., 1885.
38 Thos. Hetherington .	Broughton's Creek	Broughton's Creek and Nowra	Six... ...	Horseback	79 0 0	31 Dec., 1886.
39 William Kennedy .	Bomadary	Nowra and Bomadary	Six. ...	Horseback	35 0 0	31 Dec., 1885.
40 Edward Fletcher ..	Yalwal	Nowra and Burrier	Two	Horseback	25 0 0	31 Dec., 1885.
41 Patrick Ryan	Terara	Nowra, Tomerong, Wandandian, Conjola, Yatteyatah, Milton, & Ulladulla.	Six ...	4-wheeled coach, 2 horses.	350 0 0	31 Dec., 1886.

Contractors' Names	Contractors' Addrssses	Postal Lines	Frequency of Communication	Mode of Conveyance	Annual Amount payable to Contractors	Date of Termination of Contracts.
			No of times per week		£ s d.	
*42 Christopher Murray	Numba	Nowra, Terara, and Numba, via Green Hills	Six	Horseback, 2 or 4 wheeled vehicle, 1 horse	35 0 0	31 Dec, 1887.
43 Chas. M. Bindon	Terara	Nowra, Berrellan, Pyree, and Greenwell Point	Six	Horseback	49 0 0	31 Dec, 1886.
44 William Kennedy	Bomadary	Bomadary and *Coolangatta*	Six	Horseback	60 0 0	31 Dec, 1885.
45 Edward Fletcher (Transferred to Edward Fletcher, jun., from 1 April, 1885)	Yalwal	Burrier and Yalwal	Two	Horseback	35 0 0	31 Dec, 1887.
46 Edward Egan	Ulladulla	Conjola and *Redhead*	One	Horseback	12 15 0	31 Dec., 1886.
47 Joseph Bishop	Bateman's Bay	Milton, Brooman, Nelligen, and Bateman's Bay, via Currawang.	One	Horseback	98 0 0	31 Dec, 1885.
48 Thomas Mooney	Moruya	Bateman's Bay, Mogo, Mullenderree, and Moruya, and From Bateman's Bay to Mogo, Mullenderree, and Moruya †	Two ... / One	Horseback & coach, 4 horses	24 0 0	31 Dec, 1885.
49 Sarah Ann Sibbins	Tomakin	Mogo and Tomakin	One	.. ..	20 0 0	31 Dec, 1885.
50 Charles Jones	Marulan	Marulan and Bungonia	Six	Horseback or buggy	90 0 0	31 Dec., 1887
51 Charles Jones	Marulan	Marulan, Long Reach, and Big Hill	Three	Horseback	48 0 0	31 Dec, 1887.
52 James Cooper	Bungonia	Bungonia and Windellama	Two	Horseback	33 10 0	31 Dec., 1887.
53 Mrs Emily M'Mahon	Long Reach	Long Reach and Greenwich Park	Three	Horseback	27 0 0	31 Dec., 1885.
54 John Millane, jun	Goulburn	Railway Station and Post Office, Goulburn	Three or four times a day or oftener if required	Vehicle	50 0 0	31 Dec., 1886.
55 Wm M'Donald, jun	Crookwell	Goulburn and Crookwell	Two	4-wheeled buggy, 2 horses	49 0 0	31 Dec, 1886.
56 Wm, M'Donald, jun.	Crookwell	Goulburn, Woodhouselee, Laggan, and Crookwell	Three	Covered coach, 3 horses.	120 0 0	31 Dec, 1886.
57 Bernard M'Sorley	Wheeo	Goulburn, Mummell, Woore, Gullen, and Wheeo (including the conveyance of letters, &c., to and from the Wheeo Post Office, Selmes' Receiving Office, and the Wesleyan Chapel at Wheeo) (In times of flood, Contractor to travel direct between Mummell and Gullen, and to convey a branch mail to and from Corbet's, near the new bridge, over the Wollondilly and Woore.)	Three / Three	Coach, 2 horses	155 0 0	31 Dec., 1887
58 Andrew Larkin	Chatsbury, near Goulburn.	Goulburn, Tarlo, Chatsbury, Myrtleville, and Taralga.	Three	4-wheeled coach, 2 or more horses	110 0 0	31 Dec, 1885.
59 Andrew Larkin	Chatsbury, near Goulburn	Goulburn, Tarlo, Chatsbury, Myrtleville, and Taralga.	Three	4-wheeled vehicle, 2 horses	90 0 0	31 Dec, 1885
60 Arthur Pooley	Braidwood ...	‡Goulburn, Tarago, Boro, Manar, Braidwood, Bell's Creek, Araluen, Mullenderree, and Moruya; with a branch mail to and from Braidwood and Reidsdale.	Six / Two	4-wheeled vehicle, 2 or more horses.	788 0 0	31 Dec, 1885.
61 Robert A. Sykes	Spring Valley, near Goulburn	Goulburn and Currawang	Three	Horseback	58 0 0	31 Dec., 1887.
62 John Millane, jun	Goulburn	Goulburn or Curriawang Railway Platform, as required, and Inverialochy	Six	Vehicle	114 0 0	31 Dec., 1887.
63 John R M'Donald	Goulburn ...	Goulburn and Middle Arm	Two	Horseback	59 15 0	31 Dec, 1885.
64 James S Morgan	Laggan	Laggan, Peelwood, and Tuena ...	Three	4-wheeled conveyance, 2 or more horses	239 0 0	31 Dec., 1885.
65 Wm. Ritchie, sen	Fullerton	Laggan and Fullerton	Two	Horseback	50 0 0	31 Dec, 1885.
66 James Eldridge	Binda	Crookwell, Binda, Junction Point, and Tuena.	Three	2 horse coach between Crookwell and Binda, remainder on horse back	149 10 0	31 Dec., 1886.
67 Fredk. M'Guiness	Bigga	Binda, Bigga, and Reid's Flat (Contractor to travel via new Government road between Binda and Bigga)	Two		100 0 0	31 Dec, 1885.
68 John Bates	Greenmantle	Bigga, Greenmantle, and Lyndhurst	One	Horseback	29 0 0	31 Dec, 1886.
69 Patrick Hickey	Mount M'Donald	Bigga and Mount M'Donald	One		30 0 0	31 Dec, 1885.
70 Jas J. E Mortimer	Pejar	Woore and Pejar	Two	Horseback	17 0 0	31 Dec, 1886.
71 John M'Sorley	Wheeo	Wheeo and Narrawa; and Narrawa, Reid's Flat, *Graham*, and Cowra, along the south side of the Lachlan River, via Bennett's Springs	Two / One	Horseback	122 0 0	31 Dec, 1886.

* Contractor allowed £10 per annum extra, from 20 November, 1885, to extend contract to Comerong, three times a week

† It is clearly understood that the mails shall leave Bateman's Bay immediately after the arrival there of the steamer from Sydney, and shall leave Moruya in time to meet the steamer leaving Bateman's Bay for Sydney, the Contractor finding adequate means for both requirements

‡ Goulburn and Tarago portion of contract cancelled in consequence of the extension of the railway to Tarago from 3 January, 1884

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication (No of times per week)	Mode of Conveyance.	Annual Amount payable to Contractors. £ s. d	Date of Termination of Contracts.
72 Jeremiah G. Webster	Taralga	Taralga and Golspie .	Three	Horseback	52 10 0	31 Dec., 1885.
73 Ann Lillis	Taralga	Taralga and Bannaby	Two . .	Horseback	28 0 0	31 Dec., 1887.
74 Thos. & James Croak	Curraweela	Taralga and Curraweela; and Curraweela and Jerong	Two . / One	Horseback	48 10 0	31 Dec., 1886.
75 Ann Lillis	Taralga	Taralga, Wowagin, and Laggan .	One	Horseback	31 0 0	31 Dec., 1886.
76 Robert Sulliven	Boree Creek, Golspie.	Golspie and Leighwood... . .	Three	Horseback	19 0 0	31 Dec, 1885.
77 Arthur Pooley	Braidwood	Railway Station and Post Office, Tarago	Once or oftener daily.		52 0 0	31 Dec., 1885.
*78 John Moran .. .. (Transferred to Thomas Pooley, and John Malone from 1 July, 1885.)	Bungendore	Tarago, Bungendore, and Queanbeyan... (Contractor to convey Mails to and from Railway Station, Bungendore, and Post Offices, Bungendore and Queanbeyan, from the date of the opening of the railway to Bungendore to 31 December, 1887, at the rate of £175 per annum.)	Six	4-wheeled conveyance, 1 or more horses.	200 0 0	Contract to terminate on opening of railway to Bungendore.
79 George Phelps	Lake Bathurst	Tarago and Lake Bathurst	Six .	Horseback	45 0 0	31 Dec., 1887.
80 Patk. Griffin .	Boro ...	Boro and Mulloon .	Three	Horseback	30 0 0	31 Dec., 1887.
81 Patk. Griffin .. .	Boro	Boro and Mayfield .	Two	Horseback	14 0 0	31 Dec, 1887.
82 James M'Grath ..	Foxlow	Bungendore, Molonglo, and Foxlow	Three	Generally buggy, and occasionally horseback.	60 0 0	31 Dec., 1887.
83 Mchl. D. Donoghoe..	Foxlow	Queanbeyan, Molonglo, and Foxlow	One	Horseback or by 4-wheeled vehicle.	20 0 0	31 Dec., 1886.
84 Archibd. M'Donald...	Queanbeyan	Qeanbeyan and Uriarra, via Yarralumla	Two .	Horseback	72 0 0	31 Dec., 1886.
85 James O'Neill	Queanbeyan . . .	Queanbeyan, Tuggranong, and Tharwa, via Lanyon.	Three	4-wheeled vehicle, 1 or more horses, or horseback.	58 10 0	31 Dec, 1885.
86 Thos. Pooley and John Malone.	Queanbeyan . ..	Queanbeyan, Williamsdale, Michelago, Bredbo, and Cooma.	Six	4-wheeled vehicle, 2 or more horses.	800 0 0	31 Dec., 1886.
87 John M'Laughlin	Uriarra	Uriarra Post Office and Mr. T. Franklin's, Brindabella.	One .		24 15 0	31 Dec., 1885.
88 Charles Bates	Williamsdale . .	Williamsdale Receiving Office and Mr. John M'Pherson's, Old Burra Station.	Two .	Horseback	22 10 0	31 Dec., 1885.
89 Michael Seery ...	Hoskins' Town ...	Foxlow and Hoskins' Town ...	Three	Horseback	16 0 0	31 Dec., 1887.
90 Chas. S. Greenfield .	Gudgenby, Tharwa.	From Tharwa to Booroomba, Ororal, Gudgenby, and Naas, returning to Tharwa from Naas.	One	.	30 0 0	31 Dec., 1886.
91 Walter Goodwin .. .	Cooma	Cooma, Numeralla, Whinstone Valley, Ballanafad, and Foxlow.	One	.	130 0 0	31 Dec, 1885.
92 Thos. Brown	Cooma	Cooma, Gegedzerick, and Buckley's Crossing-place, via Woolway.	Two	4-wheeled coach, 2 horses.	168 0 0	31 Dec., 1885.
93 Thos. Brown ..	Cooma	Cooma, Gegedzerick, and Buckley's Crossing-place, via Woolway.	One	4-wheeled coach, 1 or 2 horses.	79 0 0	31 Dec, 1885.
94 Thos. Pooley and John Malone.	Queanbeyan	Cooma, Rock Flat, Nimitybelle, Holt's Flat, Bibbenluke, and Bombala.	Four ..	2-horse 4-wheeled vehicle.	693 0 0	31 Dec., 1885.
95 William Hughes	Cooma	Cooma and Bobundarah; and Cooma, Myalla, and Bobundarah ..	One / One	1-horse buggy	85 0 0	31 Dec., 1887.
96 O'Bryan M'Mahon...	Adaminaby	Cooma and Adaminaby, along the main or Wambrook road; and Adaminaby and Kiandra	One / One	Waggonette, 2 horses. / Horseback	179 0 0	31 Dec., 1885.
97 O'Bryan M'Mahon..	Adaminaby ..	Cooma, Adaminaby, Russell's, and Kiandra, via Middling Bank.	One	Horseback	109 10 0	31 Dec., 1885.
98 John Spencer .	Jindabyne	Gegedzerick and Jindabyne	Two	Coach	55 0 0	31 Dec, 1885.
99 John Spencer	Jindabyne	Gegedzerick and Rocky Plain	One	Horseback	35 0 0	31 Dec., 1885.
100 John Crisp .....:...	Jimenbuan .. .	Buckley's Crossing-place and Jimenbuan	One		50 0 0	31 Dec., 1885.
101 Michael Flood . ..	Bega	Nimitybelle, Brown Mountain Numbugga, and Bega, via Benbooka Station.	One	Horseback	59 0 0	31 Dec., 1886.
†102 John Kennedy ..	Bombala . .	Bombala, Craigie, and Delegate ...	Two	4-wheeled vehicle.	120 0 0	31 Dec, 1885.
		Bombala, Nicholson's, and Delegate; and	One	Horseback		
		Bombala, Mila, and Craigie, via Mahratta and Mr. George Stevenson's, at the Bog.	One			
103 Chas. J. Dudley ...	Bombala	Bombala, Cathcart, Rocky Hall, Wyndham, and Pambula	Two	Horseback	132 10 0	31 Dec., 1885.
104 William Sharpe	Candelo ..	Bombala, Cathcart, Candelo, Wolumla, and Merimbula.	One	Horseback or 2-horse coach.	100 0 0	31 Dec, 1887.
105 James Doyle	Corrowong .. .	Bombala and Tombong, via Bombala Station, Cambalong, and Quidong.	One	Horseback	38 0 0	31 Dec., 1887.
106 Henry Seears	Ironmongy, via Bobundarah.	Bobundarah, Timbery Range, and Bombala, via Gunningrah and Buckalong	One	...	100 0 0	31 Dec., 1885.
107 Sarah Stokes	Delegate	Delegate and Corrowong .	Three	Horseback	45 0 0	31 Dec., 1887.

* Railway to Bungendore opened 4 March, 1885. † Contractor agreed to travel via Nicholson's on his way to and from Bombala and Craigie, from 14 September, 1885.

Contractors' Names	Contractors' Addresses	Postal Lines	Frequency of Communication	Mode of Conveyance	Annual Amount payable to Contractors	Date of Termination of Contracts
			No of times per week		£ s. d.	
108 Edward Smith ..... (Transferred to George R. Gailey, from 1 October, 1885)	Colombo, via Candelo.	Candelo, Meringlo, & Brown Mountain, via Benbooka Station.	One	Horseback	31 0 0	31 Dec, 1887.
109 Edward Smith . (Transferred to George R. Gailey, from 1 October, 1885)	Colombo, via Candelo.	Candelo, Tantawanglo, Mogilla, and Brown Mountain	One	Horseback	34 0 0	31 Dec, 1887.
110 Patrick Collins ..	Candelo	Candelo and Mogilla	One		19 0 0	31 Dec, 1887.
111 James Robinson	Wyndham...	Candelo and Wyndham, via Myrtle Creek	One	Horseback	24 10 0	31 Dec., 1885.
112 A. A. M'Keahnie	Rosedale .	Adaminaby and Rosedale ..	Two	Horseback	24 0 0	31 Dec, 1885.
113 John R. King	Marlow, Braidwood.	Braidwood, Charleyong, Tomboy, Nerriga, Sassafras, and Nowra.	One	Horseback	100 0 0	31 Dec., 1887.
114 William Dunshea ...	Monga ...	Braidwood and Monga . ..	Two	Horseback	28 0 0	31 Dec, 1886.
115 P. P. J. Clinton and S. Richardson.	Nelligen	Braidwood and Nelligen	Two	4-wheeled vehicle, 1 or more horses	110 0 0	31 Dec, 1885.
116 James Allen	Braidwood .	Braidwood and Little Bombay ...	One	Horseback	10 0 0	31 Dec., 1887.
117 Patrick O'Heir	Jembaicumbene	Braidwood, Jembaicumbene, and Major's Creek	Three	Horseback or 2 wheeled vehicle	44 19 0	31 Dec, 1886.
118 John Stephens	Larbert ...	Braidwood and Larbert	Two	..	15 0 0	31 Dec., 1885.
119 George Coles ...	Major's Creek	Major's Creek and Ballalaba	Two	Horseback	15 10 0	31 Dec., 1887.
120 Denis Dempsey	Emu Flat, Braidwood.	Major's Creek and Krawarree	One	Horseback	24 18 0	31 Dec, 1886.
121 George Smith	Krawarree...	Ballalaba and Krawarree, via Jerrabat Gully.	One	Horseback	25 0 0	31 Dec, 1886.
122 George Smith	Krawarree ..	From Ballalaba to Braidwood; and from Braidwood to Ballalaba and Krawarree, via Stony Creek	One	Horseback	34 0 0	31 Dec, 1886.
123 Charles Crapp	Kiora ..	Moruya and Kiora	Two	Horseback	14 0 0	31 Dec., 1887.
124 Edmond Corrigan ...	Moruya	Moruya, Bergalia, Turlinjah, Bodalla, Eurobodalla, Dignam's Creek, Cobargo, Dry River, Brogo, and Bega.	Six ...	4 wheeled coach, 2 horses	537 0 0	31 Dec., 1885.
125 George Costin.....	Wagonga Heads	Bodalla and Wagonga Heads . . .	One	Horseback	30 0 0	31 Dec, 1885.
126 Edmond Corrigan ...	Moruya	Eurobodalla and Nerrigundah ...	Two	Horseback	27 0 0	31 Dec, 1887.
127 Edmond Corrigan ...	Moruya ...	Eurobodalla, Wagonga, Punkalla, Corunna, and Tilba Tilba	Two	Horseback	63 0 0	31 Dec, 1885.
128 David Dunsmore ...	Cobargo . .	Cobargo and Bermagui	Two . .	Horseback and 4 wheeled coach.	30 0 0	31 Dec., 1886.
129 David Dunsmore ...	Cobargo	Cobargo and Wandella . . .	Two	Horseback	18 0 0	31 Dec, 1886.
*130 George Peisley	Bega	Bega, Wolumla, Merimbula, Pambula and Eden.	Two	2-horse coach or horseback	72 0 0	31 Dec, 1886.
131 Edmond Corrigan ..	Moruya . ..	Bega and Candelo .	Six	Coach, 2 horses.	47 0 0	31 Dec., 1887.
132 Michael Flood	Bega	Bega and Tanja .. .	One	Horseback	19 10 0	31 Dec, 1885.
133 Peter Lenz (Transferred to J. R Rixon and J. M'Phee from 9 April, 1885)‡	Bega ..	Merimbula, Wolumla, and Bega; or Tathra, Tathra Road, and Bega, on arrival and departure of steamers.		4 horse coach.	30 0 0	31 Dec., 1886.
134 Peter Miller	Pambula	Merimbula Wharf and Post Offices Merimbula and Pambula.	One .	Horseback	23 0 0	31 Dec., 1887.
135 Donald Laing .	Towamba .	Eden and Towamba	Two		52 0 0	31 Dec, 1885.
136 John Hopkins ...	Eden	Eden and Timbalica	One . .		45 0 0	31 Dec., 1886.
137 Stewart Neale...	Breadalbane	Bredalbane and Collector	Six . ..		58 0 0	31 Dec. 1885.
138 Thos. Morton	Breadalbane .	Bredalbane and Gurrundah	One	Horseback	14 10 0	31 Dec, 1885.
139 Stewart Neale.. ...	Breadalbane	Breadalbane, Parkesbourne, and Merrilla	Three	Horseback	24 10 0	31 Dec., 1886.
140 William Wales ...	Lower Gundaroo	Railway Station and Post Office, Gunning.	Once or oftener daily.	Buggy, 1 horse	35 0 0	31 Dec., 1887.
†141 William Wales .	Lower Gundaroo...	Railway Station, Gunning, and Post Offices, Gunning, Lower Gundaroo Upper Gundaroo, Sutton, and Queenbeyan; and Railway Station, Gunning, and Post Offices, Gunning, Lower Gundaroo and Upper Gundaroo.	Three .. / Three	2-horse coach / Buggy once a week from Gunning to Upper Gundaroo at other times on horseback	322 0 0	31 Dec, 1885.
142 Richard Sheriff .	Gunning	Gunning and Dalton ...	Six ...	Horseback or buggy	65 0 0	31 Dec, 1886.
143 John M'Sorley	Grabben Gullen, via Wheeo	Gunning and Wheeo; and Dalton and Wheeo	One . / One ...	Horseback	69 19 0	31 Dec, 1885.
144 Joseph Bolton	Ginninderra ..	Upper Gundaroo and Ginninderra	Two	Horseback	45 0 0	31 Dec, 1885.
145 William T Randell	Burrowa ..	Dalton and Rye Park	One ...	Horseback	36 0 0	31 Dec, 1885.
146 Henry Douglas ...	Dalton ...	Dalton and Bevendale (Blakney Creek), via Byrneville	One	..	24 0 0	31 Dec., 1885.
147 George J Couch	Burrowa	Rye Park and Burrowa	Two	Buggy 1 or 2 horses	40 0 0	31 Dec., 1887.
148 John Couch	Yass ...	Yass Railway Station and Post Office, Yass, including the clearing of the Letter Receiver at North Yass	Seven or more	4-wheeled coach, 2 or more horses	41 0 0	31 Dec, 1886.

* Contractor allowed to omit Merimbula, and to serve it by a branch mail on horseback from Pambula on trial, from 26 June, 1885.
† Contractor agreed to convey a seventh mail a week from Upper and Lower Gundaroo to Gunning, from 14 November, 1885.

Contractors' Names.	Contractors' Addresses.	Postal Lines	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No of times per week		£ s. d.	
149 John Carey	Cavan	Yass and Cavan, via "Brassell's Inn," Waroo, and the main road, crossing the river at Bloomfield.	One	Horseback	50 0 0	31 Dec., 1885.
150 Alex. Dyce	Lower Gundaroo	Yass, Greenfield Farm, and Lower Gundaroo.	Two .. .	Horseback	72 0 0	32 Dec., 1885.
151 Argyle M'Callum ...	Good Hope	Yass and Good Hope, via Spring Creek	Two	Horseback	22 10 0	31 Dec , 1885.
152 Patrick J. Barry . .	Yass	Yass, Murrumbateman, Jeir, Ginninderra, Canberra, and Queanbeyan.	Three	Coach, 2 horses.	285 0 0	31 Dec , 1885.
153 Jas. P. O'Donnell ...	Glenbower, near Yass	Yass and Boambola . . .	One	Horseback	28 0 0	31 Dec , 1885.
154 Thomas Larkin	Nanama, Murrumbateman.	Murrumbateman and Nanama...	Two ..	Horseback	20 0 0	31 Dec , 1885.
155 Wm. J Grogan . .	Tangmargaroo	Bowning and Tangmangaroo .	Three .	..... .	60 0 0	31 Dec . 1885.
156 Wm. H. Vieq . .	Bookham	Bowning and Bookham	Three.	Horseback	58 0 0	31 Dec , 1886.
157 Michael Downing .	Tumut . ..	Bookham, Chidowla, Bongongo, and Tumut, via Smiths's, Kiley's, Red Hill, and Geary's, Wyangle.	One	Horseback	80 0 0	31 Dec., 1885.
158 John Carter	Binalong	Railway Station, Binalong, and Post Offices, Binalong and Burrowa; and Burrowa, Marengo, and Young	Six ..... / Three	Coach, 2 or 3 horses / Buggy, 1 or 2 horses.	126 0 0	31 Dec., 1886.
159 George Couch	Burrowa .	Burrowa and Frogmoor; and Frogmoor and Reid's Flat, via Hovell's Creek, and Phil's Creek.	Two ... / One ...	Vehicle, 1 or 2 horses.	79 10 0	31 Dec., 1887.
160 William Carroll	Burrowa .. .	Burrowa, Morongla Creek, and Cowra, via Narellan and Breakfast Creeks.	One ..	Vehicle	78 0 0	31 Dec., 1886.
161 Edward Morgan... .	Marengo	Marengo, Monica Vale, and Cowra, via Bang Bang, Watemandra, and Crowther.	Two	4-wheeled vehicle, 1 or more horses.	85 0 0	31 Dec., 1886.
*162 James W. Slatyer...	Young	Railway Platform, Murrumburrah and Post Offices, Murrumburrah, Wombat and Young.	Seven ...	4-wheeled coach, 2 or more horses.	175 0 0	Contract to terminate on the opening of the Railway between Murrumburrah & Young.
†163 Cobb & Co.	Sydney	Murrumburrah and Young, via Ridge Road.	Three	Coach ...	35 0 0	Contract to terminate at one month's notice on either side.
164 William Hunt ...	Barwang	Murrumburrah and Barwang	Three	Horseback	50 0 0	31 Dec , 1887.
165 Cobb & Co..... .	Sydney	Young, Weddin, and Grenfell	Seven	2 or 4 horse coach.	175 0 0	31 Dec , 1887.
166 Thos. Quinn	M'Henry's Creek, near Young.	Young, Thuddungra, Morangarell, and Marsden's, via Ballabala.	Two	2-horse vehicle.	250 0 0	31 Dec , 1887.
167 William Henry Tubman.	Temora ...	Young, Grogan, West Temora (The Rock), and Temora, via Milong.	Three.....	2-horse coach	248 17 6	31 Dec , 1887.
168 George A. Cranfield..	Young .	Young and Monteagle, via 5-mile and 10-mile.	Two ...	1 or 2 horse waggonette	59 0 0	31 Dec , 1885.
169 James W. Slatyer (Transferred to Cobb & Co., from 1 April, 1885.)	Young ...	Grenfell and Forbes . . .	Six. ...	4-wheeled coach, 2 or more horses.	325 0 0	31 Dec., 1887.
170 Thos. M'Farland . ... (Transferred to Wm. Bristow, from 1 April 1885)	Grenfell	Grenfell and Marsden's	Two	Horseback	100 0 0	31 Dec , 1885.
171 Thomas Brown ..	Brundah Creek...	Grenfell and Brundah Creek ..	Two	Horseback	28 0 0	31 Dec., 1887.
172 James Simpson	Emu Creek, Grenfell.	Grenfell, Bimbi, Morangarell, and West Temora, via Moonbucca and Narraburra.	One	Horseback	100 0 0	31 Dec , 1885.
173 Alfred F. Weakley...	Marsden's	Marsden's and Wollongough, via Tallebong. (Contractor to carry Mails by 2 or 3 horse light vehicle, if required, at the rate of £145 per annum.)	Two .	Horseback	130 0 0	31 Dec , 1887.
174 Joseph Burrett	Euroka, via Morangarell.	Morangarell and Barmedman via Tarangalay.	One	1-horse buggy.	30 0 0	31 Dec , 1885.
175 William J. Sweeney	Cullinga	Wallendbeen and Cullinga ..	Two	Horseback	30 0 0	31 Dec., 1885.
176 John Goodwin, sen...	Beggan Begg, via Cootamundra.	Cootamundra, Kilrush, and Jugiong, via The Grove, Cullinga Creek, Grovesend, Templemore, Cowong, Kyron, Rathden, Jereleamby, and Sandy Creek.	One	Horseback	60 0 0	31 Dec., 1885.
177 Wm. H. Cowan (Transferred to Mrs M. J. Cowan and James Heathwood, from 13 September, 1885)	Temora Road, Temora.	Cootamundra, Cowan's, and Temora, via Combaning.	Seven. ...	2 or more horse coach	285 0 0	31 Dec , 1887.
178 James Mackay	Congon, Cootamundra.	From Cootamundra to West Temora, via Dacey's, Geraldra, Grogan, Corumbie, and Narraburra Stations, returning to Cootamundra, via North Gundibindyal, Woodstown, Gundibindyal, and Stockinbingal.	Two ...	Horseback	130 0 0	31 Dec., 1885.

* Railway to Young opened 26 March, 1885.
† Contract cancelled from 25 March, 1885, in consequence of the extension of the railway to Young.

Contractors' Names	Contractors' Addresses.	Postal Lines	Frequency of Communication.	Mode of Conveyance	Annual Amount payable to Contractors	Date of Termination of Contracts.
			No of times per week		£ s. d.	
179 J B O'Rourke and B Courtney	Temora . .	Temora and Lower Temora	Seven ...	On foot or horseback if required	38 10 0	31 Dec, 1885
180 Robert Marshall	Barmedman . .	Temora and Barmedman	Three	1 or 2 horse coach	93 0 0	Contract to terminate at 3 months' notice on either side
181 William Henry Tubman	Temora	Temora and Merool Creek (Harman's)	Two	Buggy or horseback	55 0 0	31 Dec, 1886.
182 John Carberry	North Gobarralong	Coolac and North Gobarralong	Two .. .	Horseback	60 0 0	31 Dec, 1886.
183 James M'Namara .	Jugiong	Coolac and Jugiong	Three	Horseback	58 0 0	31 Dec., 1886.
184 George Passlow ...	Cooba Creek, Clarendon.	Gundagai Nangus, Clarendon, and Cooba, via Kimo, Tenandra, and Wantabadgery	Two	Horseback	150 0 0	31 Dec, 1885.
185 Ewen M'Kinnon	Brungle	Gundagai and Brungle	Two ..	Horseback	40 0 0	31 Dec, 1886
186 Cobb & Co.	Sydney ..	Gundagai and Tumut, via the marked-tree line, and Adelong Crossing place, Grahamstown Shepard's Town, Adelong, Gilmore, and Tumut.	Six* ... Six	4-wheeled conveyance	585 0 0	31 Dec, 1886.
187 Peter J. M'Alister	Wagga Wagga	Clarendon and Wagga Wagga, via Oura and Eunonyhareenyha	Two	Horseback	89 0 0	31 Dec, 1887.
188 John D. Hourigan	Reedy Flat	Adelong, Middle Adelong, Reedy Flat, Laurel Hill, and Tumberumba, via Hastedt's, Parrott Hill, and M'Bowling's, of Upper Tumberumba, and Adelong, Middle Adelong, Reedy Flat, Taradale, Bago Station, and Tumberumba.	One One ...	..	175 0 0	31 Dec., 1886.
189 Francis B. Bradford (Transferred to Wm Crain, from 1 July, 1885)	Mount Adrah	Adelong and Mount Adrah	One	Horseback (buggy when required by passengers)	26 0 0	31 Dec, 1886
190 Chas Leo Hart	Tumut	Tumut, Blowering, and Kiandra	One	Coach and horseback	99 0 0	31 Dec, 1887.
191 John Archer	Tarcutta	From Tarcutta to Murraguldrie, via Oberne, returning to Tarcutta, via Hartnett's and Nugent's on the south side of the Tarcutta Creek.	Three	Horseback	65 0 0	31 Dec, 1886.
192 Bryan O'B Hackett	Tooma	Tooma and Khancoban, via Opossum Point.	One	Horseback	52 0 0	31 Dec., 1887.
†193 Chas. S. Smith	Bethungra	Bethungra, Mitta Mitta, and Yammatree.	Two	Horseback	60 0 0	31 Dec, 1886.
194 Alex. M'Donald	Clarendon	Illabo Railway Station and Clarendon	Two		60 0 0	31 Dec., 1886
195 John T. Hely	Wagga Wagga	Railway Station and Post Office, Wagga Wagga	Three or four times a day as required	2-horse omnibus	70 0 0	31 Dec, 1886
196 Peter J. M'Alister	Wagga Wagga	Wagga Wagga and Tarcutta	Three	2 horse coach	234 15 0	31 Dec, 1885
197 Peter J M'Alister	Wagga Wagga	Wagga Wagga and Narrandera	Three	4-wheeled vehicle, 2 horses	280 0 0	31 Dec., 1885.
198 Peter J M'Alister	Wagga Wagga	Wagga Wagga, Downside, and Wollongough, via Marrar, The Rocks (M'Donald's), Mimosa, Quandary, Merool Creek, Broken Dam, Mandamah, and Wallandry	One	Coach, 3 or more horses	445 0 0	31 Dec, 1887.
199 William Macaulay	Brucedale	Wagga Wagga and Brucedale	Two	Horseback	22 0 0	31 Dec., 1887.
200 Peter J. M'Alister	Wagga Wagga	Wagga Wagga and *Mangopla*	Three	Horseback	89 0 0	31 Dec, 1887
201 Peter J. M'Alister	Wagga Wagga	Wagga Wagga, Yarragundry, and Collingullie	Three	Horseback	67 10 0	31 Dec, 1887
202 Peter J M'Alister	Wagga Wagga	Wagga Wagga and Pullitop Station, via Lake Albert, Gregado, Big Springs and Livingstone	Three	Horseback	89 0 0	31 Dec, 1887
203 Cobb & Co.	Sydney	Railway Station, The Rock, Receiving Office, Ferrier's and Post Office, Urana, via Broogong.	Four	2 or 4 horse coach	700 0 0	31 Dec, 1885.
204 Frederick J. Savage	Narrandera	The Rock, Jackson's Waterholes, Gillenbah, and Narrandera, via Bullenbong	One	Horseback or light 1-horse trap	87 0 0	31 Dec, 1886.
205 A. W. Robertson and J. Wagner	Hay	Urana, Jereelderie, Coree, Conargo, and Deniliquin.	Four	2-horse coach	1,650 0 0	31 Dec, 1885
206 H. A. Crawford & Co.	Albury	Urana, Goonambil, Daysdale, Lowesdale, and Corowa, and Jereelderie and Daysdale	Two One	1 or more horse coach Horseback or by coach as traffic requires	244 0 0	31 Dec, 1887.

* Contractors to convey mails three times a week only between Gundagai and Tumut, if required, at a reduced subsidy of £450 per annum.
† Contractor allowed £10 per annum extra, from 12 January 1885, in consequence of removal of Yammatree Post Office.

Contractors		Postal Lines.	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts
Names.	Addresses.		No of times per week		£ s. d.	
207 Townsend G. Warren	Urana	Urana and Mr. Guest's selection, 3 miles beyond Boree Creek. (Contractor to convey Mails once a week, if required by the Postmaster-General to do so, at the rate of £58 per annum)	Two	1 horse buggy or 2-horse coach.	89 0 0	31 Dec., 1887
*208 George Samuelson...	Jereelderie	Railway Station and Post Office, Jereelderie. (Contractor to convey Mails once or oftener daily, if required, at the rate of £52 per annum.)	Three	.	39 0 0	31 Dec., 1887.
209 William Mitchell	Yanko Station, Jereelderie.	Jereelderie, Wilson, Spring Plain, Argoon, *Waddai*, and Darlington Point, via Kulki	Two	Horseback & 1-horse buggy.	189 0 0	31 Dec., 1886.
210 Thomas Davidson	Jereelderie .	Jereelderie and *Broome*	Two	Horseback	49 0 0	31 Dec., 1885
211 Edmund Fletcher (Transferred to A. W. Robertson and J Wagner, from 1 April, 1885.)	Tocumwall	Jereelderie, Murray Hut, and Tocumwall. (Contractor to convey Mails once a week, if required by the Postmaster-General to do so, for a sum at the rate of £80 per annum)	Two	Horseback	100 0 0	31 Dec., 1885.
212 Mary Ann Darby (Transferred to A. D Hamilton, from 14 May, 1885)	Lowesdale .	Lowesdale and Middledale	One	. .	23 0 0	31 Dec., 1886
213 W. J. King	Boomanoomana, Corowa.	Corowa, Mulwala, and Tocumwall	Two	1 or 2 horse buggy or coach.	190 0 0	31 Dec. 1885
214 Martin J Nagle .	Corowa .	Corowa, Bull Plain, and O'Brien's, Victoria Park, via Redlands School and Sandy Ridges. (Contractor to travel as follows, if required by the Postmaster-General to do so :—Corowa, O'Brien's, Victoria Park, and Bull Plain, via Redlands School and Sandy Ridges) ; and	One	.	195 0 0	31 Dec., 1886.
		Corowa, Bull Plain, Berrigan, and Murray Hut, via Sedgwick's, Spry's, Pine Lodge, North Collendina, Kenneth Murchison's, M'Farlane's, Dicker's, Boxer's, Kilby's, Whiteley's, Wealand's, E. Creed's, W. Creed's, Carpenter's, Shand's, Green Hills, Mitchell's, M'Neill's, Fry's, Austin's, Brown's, M'Lelland's, Cooper's, Garland's, Burns', and Ryan's. (Contractor to convey Mails twice a week between Corowa and Murray Hut, if required by the Postmaster-General to do so, in consideration of an extra payment at the rate of £90 per annum.)	One ..		
215 Timothy Nagle	Corowa .	Corowa, Hopefield, and Carnsdale, via Tyrone School and Oil-tree, or Kentucky Station.	One .	. .	44 0 0	31 Dec., 1886.
216 William Thompson	Corowa	Corowa and Wahgunyah . (Contractor is required to provide proper means for crossing the river Murray when the bridge is flooded.)	Twelve	1-horse cab	26 0 0	31 Dec., 1885.
217 J. G Howard	Corowa	Tocumwal and Deniliquin .	Two	1 or 2 horse buggy or coach.	200 0 0	31 Dec., 1885.
218 Thomas Leahy	Bullenbong, The Rock.	Yerong Creek and Urangeline, by the main road.	Three	. . .	92 0 0	31 Dec., 1885.
219 Arthur T. Medcalf	Cookardinia	Morven and Cookardinia	Three .	Horseback or 1-horse buggy, if required.	70 0 0	31 Dec., 1885.
220 James Crichton .	Germanton .	Germanton and Yarrara	Two .. .	Horseback	60 0 0	31 Dec., 1885.
221 George Carter	Albury .	Railway Station and Post Office, Albury.	Three or four times a day, as required.	2 or more horse coach.	45 0 0	31 Dec., 1885.
222 H. A. Crawford & Co.	Albury . .	Albury, Dight's Forest, Burrumbuttock, Walbundrie, and Mahonga ; and	Three .	1 or more horse coach.	238 0 0	31 Dec., 1887.
		Mahonga and Urana .	One	Horseback		
223 William Spears	Corowa	Albury, Bungowannah, Howlong, and Corowa	Two	Coach or buggy.	170 0 0	31 Dec., 1885.
224 Walter Woltersdorff.	Dight's Forest	Dight's Forest, *Ebenezer*, and Walla Walla Station.	Two .	Horseback	100 0 0	31 Dec., 1886.
225 Stephen Ryan	Walbundrie .	Mahonga and Urangeline	One ..	Horseback	53 0 0	31 Dec., 1885.
†226 William Smith .	Howlong .	Howlong, Moorwatha, and Goombargona via the "Brocklesby Hotel."	Two .	Horseback	93 0 0	31 Dec., 1887.

* Contractor instructed to convey mails daily, from 21 December, 1885.
† Contractor allowed £4 10s. per annum extra, from 16 October, 1885, to call at new site of Moorwatha Post Office.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication	Mode of Conveyance	Annual Amount payable to Contractors	Date of Termination of Contracts.
			No. of times per week		£ s. d.	
227 Robert C. Hughes	Goombargona .	Goombargona and Carnsdale	One		20 0 0	31 Dec., 1885.
228 Cobb & Co.	Sydney	Junee Junction, The Reefs, Sebastopol, and Temora, via "Cooney's Inn."	One	Covered waggonette 2 or more horses	100 0 0	31 Dec., 1887.
229 William Fealy	Old Junee . .	Junee Junction and The Reefs, via "Cooney's Inn."	One	Horseback	48 0 0	31 Dec., 1887.
*230 Benjn. Heaslip .. ' .	North Berry Jerry	Coolaman Railway Station and North Berry Jerry; and North Berry Jerry and Mimosa West, via Public School.	Three One .	Horseback	91 0 0	31 Dec., 1885.
†231 John Barnes	Temora .	Coolaman Post Office and Ariah, via Cowabee, Murril Creek, Uley, and Warri.	One	2-horse coach.	125 0 0	31 Dec., 1885.
232 William J. Nicholls..	Murril Creek, via Uley.	From Uley to Warri, Bygoo, Bolera, and Yalgogrin Stations, returning to Uley.	One	Horseback	60 0 0	31 Dec., 1885.
233 Frederick J. Savage..	Narrandera ..	Railway Station and Post Office, Narrandera.	Twelve or more.	4-wheeled vehicle 1 or more horses.	79 0 0	31 Dec., 1885.
‡234 Edmund Fletcher ..	Jereelderie . . .	Narrandera, Colombo Creek, Old Goree, and Jereelderie, via Bundure Head Station and Yanko Station.	Two	Once a week on horseback and once a week by 2 horse coach.	170 0 0	31 Dec., 1885.
235 H. A. Crawford & Co.	Albury	Narrandera, Rankin's Springs, and Lake Cudgellico, via Medium Mumbledoon Barellan, North Gogeldra, Binya, Mount Elliott, Ballandra, and Coonapaira.	Two ...	Coach, 2 horses	584 15 0	31 Dec., 1885.
236 John F. Jones...	Darlington Point	Narrandera and Darlington Point .. .	Three ...	Horseback	148 0 0	31 Dec., 1885.
237 Frederick J. Savage ..	Narrandera ...	Narrandera and Waddai, on the south side of the river.	One	Horseback	69 0 0	31 Dec., 1885.
§238 H. A. Crawford & Co.	Albury	Coonong Railway Station and Urana (Contractors to convey Mails three times a week for a sum at the rate of £149 per annum, if required by the Postmaster-General to do so.)	Two . . .	Coach	120 0 0	31 Dec., 1885.
‖239 M. H. Enright .. .	Rankin's Springs	Rankin's Springs and Wallandry, via Eurathra, Malonga and Nariah. (Contractor to convey Mails twice a week, if required by the Postmaster-General to do so, at the rate of £175 per annum.)	One	Horseback	135 0 0	31 Dec., 1886.
240 David Paton	Wollongough ...	Wollongough and Lake Cudgellico, via Wollongough Station, Youngara, Monument Flats, Bygolorie, Gorman's Hill West, Dundoo Hills South, Boorobil and Gainbill Stations.	One	4-wheeled coach, 2 or more horses.	100 0 0	31 Dec., 1885.
241 H. A. Crawford & Co.	Albury	Whitton and *Mount Elliott* ..	Two ...	Horseback 2 or more horse coach when practicable.	98 0 0	31 Dec., 1885.
242 James Bradbury... . (Transferred to A. W. Robertson and J. Wagner, from 1 July, 1885.)	Maude	Darlington Point and Hay, travelling on the south side of the river. (Contractor to convey Mails twice a week, if required by the Postmaster-General to do so, at the rate of £275 per annum.)	Three.....	Carriage, 2 horses.	350 0 0	31 Dec., 1886.
243 William Legge .. .. (Transferred to Cameron Beaumont, from 1 July, 1885.)	Darlington Point	Darlington Railway Station and Darlington Point Post Office, near the river.	Seven	Waggonette, 1 or 2 horses.	48 10 0	31 Dec., 1887.
244 A. W. Robertson & J. Wagner.	Hay	Carrathool, Gunbar, and Hillston . .	One	2 or more horse coach.	147 0 0	31 Dec., 1887.
245 A. W. Robertson & J. Wagner.	Hay	Railway Station and Post Office, Hay...	Once or oftener per day.	4-wheeled waggonette.	45 0 0	31 Dec., 1886.
246 A. W. Robertson & J. Wagner.	Hay	Hay and Booligal	Three .. .	4-wheeled coach, 2 or more horses.	400 0 0	31 Dec., 1886.
247 A. W. Robertson & J. Wagner.	Hay	Hay, Booroorban, Wanganella, and Deniliquin.	Six	2-horse coach.	950 0 0	31 Dec., 1886.
248 Zachariah Burton...	Wentworth	Hay, Maude, Oxley, and Balranald, via Paika. (Contractor to travel once a week, when practicable, via Gilam and Nap Nap mail-box, which is on the north side of the river.)	Two ...	Coach.	495 0 0	31 Dec., 1885.

* Contractor allowed £30 per annum extra from 8 July, 1885, to convey mails once a week extra between North Berry Jerry and Mimosa West.
† Contractor allowed £75 per annum extra to convey mails as follows from 15 February, 1885.—From Coolaman to Ariah, via Cowabee, Murril Creek, Uley and Warri, returning via Yarrengerry, Wallarcobie, Mimosa West, and North Berry Jerry, twice a week
‡ Contract cancelled 19 May, 1885. The Narrandera and Colombo Creek portion of this contract cancelled, from 15 October, 1884, in consequence of the extension of the railway to Jereelderie.
§ Contractors instructed to commence tri-weekly service, from 1 May, 1885
‖ Contractor instructed to commence bi-weekly service, from 1 October, 1885.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of termination of Contracts.
			No. of times per week		£ s. d.	
249 Zachariah Burton ...	Wentworth ...	Hay, Maude, Oxley, and Balranald, via Paika.	One ..	Coach ...	300 0 0	31 Dec., 1885.
250 A. W. Robertson & J. Wagner.	Hay	Booligal, Mossgiel, Ivanhoe, and Wilcannia.	Three ..	4-horse coach.	1,950 0 0	31 Dec., 1886.
251 Robert Miller and John T. Miller.	Mossgiel...	Mossgiel and *Paddington*.	One	. .....	150 0 0	Contract to terminate at three months' notice on either side.
252 Deniliquin & Moama Railway Company.	Deniliquin	Deniliquin, Mathoura, Moira, Moama, and Echuca.	Six or more	Railway .	900 0 0	Contract to terminate at three months' notice on either side.
253 Michael Ryan	Deniliquin	Deniliquin, Cochran Creek, and Noorong, via Cobran and North Wakool.	One	4-wheeled buggy, 2 horses.	95 0 0	31 Dec., 1885.
254 Z. and S. Burton ...	Wentworth .. .	Oxley and Menindie, via Clare Station. (Should a more direct route than via Clare Station be determined on, contractors will be required to travel by it, and a reduction in proportion to the mileage will be made in the subsidy.)	One .	Coach, 4 horses.	594 0 0	31 Dec., 1885.
255 Zachariah Burton ...	Wentworth .	Balranald, Euston, and Wentworth ...	Two	Coach, 3 horses.	785 0 0	31 Dec., 1886.
256 Zachariah Burton .	Wentworth ...	Balranald, Euston, and Wentworth ...	One ..	....	345 0 0	31 Dec., 1886.
257 Z. & S. Burton	Wentworth ..	Wentworth, Pooncarie, Menindie, and Wilcannia.	Two	4-horse coach.	1,780 0 0	31 Dec., 1885.
258 Z. & S. Burton ...	Wentworth ...	Menindie and Mount Gipps... . .	One . . .	Horseback	200 0 0	31 Dec., 1886.
259 William H. Morrison	Wilcannia ..	Wilcannia, Wanaaring, and Hungerford	One .	2 or more horse coach.	1,500 0 0	31 Dec., 1885.
260 John Charters	Wilcannia ...	Wilcannia, *Tarella*, Yandarlo, Cobham, Milperinka, The Albert, and Tibooburra, via Mena Murtie, Kayrunneia Morden, and Yanderberry	Two ...	4-horse American coach.	1,500 0 0	31 Dec., 1885.
261 Geo. A. M'Gowan	Wilcannia ...	Wilcannia, Mount Gipps, & Silverton (Contractor to convey Mails twice a week for a sum at the rate of £800 per annum, if required by the Postmaster-General to do so.)	One .	2 or 4 horse coach.	450 0 0	Contract to terminate at three months' notice either side.
262 Z. & S. Burton	Wentworth	Mount Gipps and Silverton	One	Coach, 4 horses.	44 0 0	31 Dec., 1885.
*263 William H. Morrison. (Transferred to John Morrison, from 1 Mar., 1885.)	Tankerooka	*Tarella*, Gnalta, and Mount Gipps.	One	Horseback	386 0 0	31 Dec., 1885.
264 John Bergmier	Thargomindah, Queensland.	Tibooburra and Whompah	Once a fortnight.	Buggy, 2 horses.	50 0 0	31 Dec., 1885.
		NORTHERN ROADS.				
1 James Ritchie	St. Leonard's .	St. Leonard's and Buena Vista	Once a day.	Waggonette 2 or more horses.	31 1 0	31 Dec., 1885.
2 George Leafe	North Willoughby	St. Leonard's, Naremburn, and North Willoughby; and St. Leonard's and North Willoughby	Six ... .. Six	... .	80 0 0	31 Dec., 1887.
3 Richard Porter, jun.	Gordon, Lane Cove.	St Leonard's, Gore Hill, Chatswood, Gordon, and Hornsby.	Six	1-horse vehicle.	180 0 0	31 Dec., 1887.
4 James W. Cole ...	Peat's Ferry ..	Hornsby, Farnell, and Peat's Ferry .. .	Six . .	Horseback	145 0 0	31 Dec., 1886.
5 Joseph E. Black ...	Manly	Manly and *Newport*	Two .	Horseback	100 0 0	31 Dec., 1887.
6 Joseph E. Black ...	Manly	*Newport* and Barranjoey	Two	Horseback	56 0 0	31 Dec., 1887.
7 John O'Leary	Cooranbong ...	Gosford, Blue Gum Flat, Wyong Creek, and Cooranbong.	Two	Horseb ak	74 16 0	31 Dec., 1885.
8 Wm. N. Cain	Gosford	Gosford, Erina, and Wamberal ...	Two		28 0 0	31 Dec., 1886.
9 Alfred S. Jaques	Gosford	Gosford, Cockle Creek (Davis Town), and Kincumber.	Three . ..	Horseback	60 0 0	31 Dec., 1887.
10 M. J. Woodbury	Wyong Creek ..	Wyong Creek Post Office and Yarramalong.	One ..	Horseback	20 0 0	31 Dec., 1887.
11 Richard Gorman .	Cooranbong	Cooranbong and Wallsend	Three . .	Horseback	94 15 0	31 Dec., 1885.
12 John O'Leary	Cooranbong	Cooranbong and Mandalong	Two	Horseback	9 16 0	Contract to terminate at three months' notice on either side.
13 Edward Hooley	Newcastle	Newcastle Wharf, Post Office, and Railway Terminus.	Fourteen or more.	2-wheeled carts, 1 horse.	105 0 0	31 Dec., 1885.
14 Mrs. Hannah Carter	Stockton	Newcastle and Stockton.	Thirteen or more.	Boat or steamer.	65 0 0	31 Dec., 1885.
15 Peter James	Onebygamba	Newcastle and Onebygamba	Six or more.	Coach 2 or more horses.	30 0 0	31 Dec., 1887.
†16 John Simpson and George Rudge.	Charlestown	Newcastle, Glebeland, The Junction, and Charlestown.	Six	Horseback	60 0 0	31 Dec., 1886.
17 James Penglaze	Stockton	Stockton and William Town	Three ..	Horseback	59 0 0	31 Dec., 1886.
†18 John Thornton and John Simpson.	Charlestown	Charlestown, Belmont, and Pelican Flats.	Three	Horseback	56 0 0	31 Dec., 1885.

* Service between Tarella, Purnamoota, and Silverton, via Gnalta and Poolamacca, substituted for this contract, from 16 August, 1885.
† Contractors relieved of contract, 28 February, 1885.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication. (No of times per week)	Mode of Conveyance.	Annual Amount payable to Contractors. £ s. d.	Date of Termination of Contracts.
19 William C. Hawkins and George Hawkins	Waratah	Railway Station, Waratah, and Post Office, Waratah.	Six or Seven.	Spring van 1 or more horses.	20 0 0	31 Dec., 1886.
20 Charles Broadhead...	Lambton ...	Railway Station, Waratah, and Post Offices, Waratah, Lambton, and Wallsend.	Six .	Coach, 2 horses.	100 0 0	31 Dec., 1886.
21 Peter James	Onebygamba .. .	Wallsend and Minmi	Six	Coach, 2 or more horses.	57 10 0	31 Dec., 1887.
22 George Downing.	Platt-burg, Wallsend.	Wallsend and Winding Creek (Cockle Creek).	Three	.... .	52 0 0	31 Dec., 1885.
23 Henry Single ..... (Transferred to Charles M'Intyre, from 1 Oct., 1885)	Gloucester	Hexham Railway Station and Raymond Terrace; and Raymond Terrace, Limeburners' Creek, Booral, Stroud, Telegherry, Langworthy's, Ward's River, and Gloucester	Seven / Six	Coach, 4 horses.	580 0 0	31 Dec., 1887.
24 Henry Finlay	Raymond Terrace	Raymond Terrace and Nelson's Plains..	Six	Horseback	23 0 0	31 Dec, 1885.
25 Henry M'Namara ..	Miller's Forest	Raymond Terrace and Miller's Forest .	Six	Horseback	33 6 8	31 Dec., 1887.
26 J. T. Parker	Stroud	Limeburners' Creek, Alicoton Tea Gardens, and Hawke's Nest, via Covey Creek.	Two	Horseback	140 0 0	31 Dec., 1887.
27 John Ridgway	Booral	Booral and Bulahdelah... . . (Contractor to convey Mails on horse back, if required by the Postmaster-General, at the rate of £115 per annum)	Three	Coach, 2 horses.	182 10 0	31 Dec., 1886.
28 John Burke	Myall River, Bulahdelah.	Bulahdelah, Upper Myall, Firefly Creek, Clarkson's Crossing, Tinonee, and Taree, via Bunyah Station and Waterloo.	One	Horseback	79 19 0	31 Dec., 1885.
29 John Burke	Myall River, Bulahdelah.	Bulahdelah, Upper Myall, Firefly Creek, Clarkson's Crossing, Tinonee, and Taree, via Bunyah Station and Waterloo.	One	Horseback	85 0 0	31 Dec., 1885.
30 William Flannery	Bulahdelah	Bulahdelah, Boolambayte, Bungwall, Flat, and Forster, via M'Rae's Sawmills and Burruduc.	Two	Horseback	156 0 0	31 Dec., 1886.
31 Patrick O'Neill	Bulahdelah	Bulahdelah, Nerong, Tea Gardens, and Hawke's Nest. (Contractor to carry the Mails twice a week, if required by the Postmaster-General, at the rate of £90 per annum)	One .	Horseback	47 0 0	31 Dec, 1886.
32 Patrick O'Neill	Bulahdelah	Bulahdelah & Coolongolook (Worth's)	One	Horseback	45 0 0	31 Dec, 1886.
33 Walter H. Glover	Nelson's Bay	Hawke's Nest and Nelson's Bay	Two ...	Boat	40 0 0	31 Dec., 1885.
34 Donald M'Innes	Gloucester	Gloucester, Barrington, and Copeland North.	Six. ...	Coach and 2 horses.	49 0 0	31 Dec., 1885.
35 Patrick Keough ..	Taree	Gloucester, Larry's Flat, Tinonee, and Taree	Six.	Coach and 4 horses	480 0 0	31 Dec., 1887.
36 Charles Woods	Walcha	Gloucester Nowendoc, Orundumbi, and Walcha.	One ...	Horseback	104 0 0	31 Dec., 1887.
37 Neil M'Innes . .	Barrington	Barrington and Rawden Vale; and Rawden Vale and Kerepit* .	Two ... / One .	Horseback	67 10 0	31 Dec., 1885.
38 Thos. Murray . ..	Green Hill, via Tinonee.	Tinonee and Kimbriki, via Martin's, Latimer's, Monk's, Chapman's, Moore's, Murray's, Weatherley's, Mossman's, and Smith's.	Two ...	Horseback	40 0 0	31 Dec., 1887.
39 Alex M'Gilvray (Transferred to W A. M'Gilvray, from 1 July, 1885.)	Wingham	Taree and Wingham, via Woolla Woolla	Six.	4-wheeled vehicle, 1 or 2 horses	102 0 0	31 Dec., 1885.
40 Patrick Keough .	West Kempsey	Taree, Cundletown, Ghinni Ghinni, Croki, Coopernook, Holy Flat, Camden Haven Punt, and Port Macquarie.	Six.	Coach, 4 horses.	500 0 0	31 Dec., 1886.
41 Wm. Hy. Wearin	Redbank .	Taree and Redbank	Three	...	33 0 0	31 Dec., 1886.
42 Wm. Wootton ..	Taree ..	Taree and Forster	One .	Horseback	42 0 0	31 Dec, 1887.
43 William J. Brown	Wingham .	Wingham, Killawarra, and Woodside (Upper Manning).	Three ..	Horseback	63 0 0	31 Dec., 1887.
44 Alex. M'Gilvray (Transferred to W. A. M'Gilvray, from 1 July, 1885.)	Wingham . .	Wingham and Cedar Party Creek (W. Baines's).	Two ..	Horseback	20 0 0	31 Dec., 1885.
45 Alex. M'Gilvray (Transferred to W. A. M'Gilvray, from 1 July, 1885)	Wingham .. .	Wingham, Dingo Creek, and Marlee	Three ...	Horseback	54 0 0	31 Dec., 1885.
46 Wm. H. Green	Woodside	Woodside, Knorrit Flat, and Nowendoc, via Cooplacurripa.	One	Horseback	33 1 0	31 Dec., 1887.
47 James M'Pherson .	Dingo Creek .	Dingo Creek and Wherrol Flat. (Contractor to travel via Dingo Creek Bridge in times of flood.)	Two	... .	20 0 0	31 Dec., 1886.
48 Samuel Gallaway .	Cundletown	Cundletown and *Landsdown* .	Two	. ..	30 0 0	31 Dec., 1885.
49 John Robson, sen. ...	Cundletown	Cundletown, Oxley Island, & Mitchell's Island.	Two	Horseback	38 0 0	31 Dec., 1886.
50 Michael Williams	Camden Haven	Camden Haven Punt, Camden Haven, and Laurieton.	Three	.... ..	67 0 0	31 Dec., 1885.

* Contractor authorised to discontinue travelling to Kerepit until further instructed.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication. (No of times per week.)	Mode of Conveyance.	Annual Amount payable to Contractors. £ s. d.	Date of Termination of Contracts.
51 Wright Hampson ..	Port Macquarie...	Port Macquarie, Wanchope, Huntingdon, and the junction of the Ellenborough and Hastings Rivers.	Two ...	....	75 0 0	31 Dec., 1885.
52 John Witchard	Taree	Port Macquarie, Blackman's Point, Telegraph Point, East Kempsey, and Kempsey.	Six.....	Coach, 2 or more horses	200 0 0	31 Dec., 1886.
53 Wm. A. Spence ...	Port Macquarie ..	Port Macquarie, Blackman's Point, Rawdon Island, Ennis and Morton's Creek (Beechwood), via Craig's.	Three...	Horseback	119 0 0	31 Dec., 1886.
54 Edward Morcom..	Walcha	Ellenborough and Yarras; and Yarras and Walcha, via Lahey, Yarrowitch, Tia, Tiara, Waterloo, Europambola, and Ohio.	Two ... / One ..	Horseback	140 0 0	31 Dec., 1885.
55 John T. Stewart	Rolland's Plains.	Telegraph Point and Rolland's Plains .	Three	Horseback	45 0 0	31 Dec., 1886.
56 Christopher Felten	Kempsey .	Kempsey, West Kempsey, Greenhill, Warneton, and Sherwood.	Three.....	Horseback	55 0 0	31 Dec., 1886.
57 Christopher Felten	Kempsey	Kempsey, Frederickton, Smithtown, Gladstone, and Summer Island, via Seven Oaks. (Mails to be conveyed between Kempsey, Frederickton, and Gladstone by boat in times of flood.)	Three .	Horseback	75 0 0	31 Dec., 1886.
58 Chas. W. Farrell (Transferred to John Convery, from 1 Oct., 1885.)	Kempsey	Kempsey, Frederickton, Clybucca, Nambucca, Deep Creek, Fernmount, and Boat Harbour; with a branch mail to and from Nambucca and Nambucca Heads, via Thomas Davis' Saw Mills and the Lower Nambucca. [Contractor to convey Mails twice a week by 4-horse coach (branch mail on horseback), if required by the Postmaster-General to do so, at the rate of £260 per annum.]	Three .. / Three ..	Horseback, twice a week; coach, once a week. / Horseback	310 0 0	31 Dec., 1886.
59 John Borger	Greenhills, West Kempsey.	West Kempsey and Ccrangula	One ...	Horseback	25 0 0	31 Dec, 1885.
60 Samuel Elliott	Rainbow Reach	Summer Island, Pelican Island, and Rainbow Reach.	Two	Horseback, or by boat if required in times of flood.	30 0 0	31 Dec., 1887.
61 Samuel Elliott	Rainbow Reach...	Summer Island and Arakoon ...	Two ..	Horseback (boat in time o flood)	32 0 0	31 Dec., 1886.
62 Richard M'Carthy	Nambucca River..	Nambucca and Bowraville	Three	Horseback	35 0 0	31 Dec., 1887.
*63 George Henderson .	Frederickton .	Bowraville and Argent's Hill .	One	.. ...	21 0 0	Contract to terminate at three months' notice on either side.
64 Richard Goulding	East Raleigh.....	Fernmount and East Raleigh	Two	Horseback	25 0 0	31 Dec., 1886.
65 William Lean	Never Never ..	Boat Harbour and Never Never	One	Horseback	32 10 0	31 Dec., 1885.
66 Henry Fry & George H. Fry.	West Maitland ...	East Maitland, Largs, and Paterson, travelling via Belmore Bridge in times of flood; with a branch mail from and to Largs and Woodville.	Seven	3-horse coach.	119 0 0	31 Dec., 1887.
67 Walter J. Taylor ...	Buchanan	East Maitland, Buchanan, and Mount Vincent.	Three.....	Horseback	58 0 0	31 Dec., 1887.
68 George H. Fry ..	Gresford	Paterson, Vacy, Trevallyn, and Gresford	Six	2 or 4 horse coach.	125 0 0	31 Dec., 1887.
69 Henry Fry & George H. Fry.	West Maitland ..	Paterson, Wallarobba, and Dungog...	Three.....	3-horse coach.	145 0 0	31 Dec., 1887.
70 John Turnbull ...	Penshurst. Lostock	Gresford and Lostock	Three.....	... .	26 0 0	31 Dec., 1885.
71 Henry J. Sivyer...	Eccleston	Gresford, Allynbrook, Halton, and Eccleston.	Three.....	Horseback	99 0 0	31 Dec., 1886.
72 Treacy Dawson .	Hinton	From Morpeth to Hinton; and from Hinton to Morpeth	Fourteen... / Seven	Vehicle..	60 0 0	31 Dec., 1887.
73 Henry Fry	West Maitland	Hinton, Seaham, Glenoak, and Clarence Town; and Clarence Town, Brookfield, Newpark, and Dungog. (If floods prevent the mails being conveyed between Hinton and Seaham, Contractor must travel via West Maitland and the Belmore and Dunmore Bridges.)	Six ..... / Three .. .	Coach, 3 horses	290 0 0	31 Dec., 1886.
74 Charles Burgess....	Seaham	Seaham and *Eagleton*	Three ..	Horseback	26 0 0	31 Dec., 1887.
75 Charles Leonard	Glen William	Clarencetown and Glen William .	Six	.....	29 0 0	31 Dec., 1885.
76 Joseph Neilson ... . (Transferred to Wm Stanton, from 1 Oct., 1885.)	Mulconda, via Dungog.	Dungog, Bendolba, and Bandon Grove..	Three.. ...	Horseback	40 0 0	31 Dec., 1887.
77 John Eagleton ...	Monkerai ...	Dungog and Monkerai	One	Horseback	20 0 0	31 Dec., 1885.
78 William F. Simmons	Wirrabeloc Creek, Bendolba.	Bendolba and Underbank	Three...	Horseback	26 0 0	31 Dec., 1885.

* Contractor allowed £7 per annum extra, from 1 October, 1885, to convey mail twice a week.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication. (No of times per week.)	Mode of Conveyance.	Annual Amount payable to Contractors. £ s. d.	Date of Termination of Contracts.
79 James Levey	Bendolba	Bandon Grove and Wangat (Little River).	One ...	Horseback	24 0 0	Contract to terminate at three months' notice on either side.
80 John Eagleton	Monkerai	Monkerai and Langworthy's	Two ...	... .	25 0 0	31 Dec., 1885.
81 Thomas and Joseph Ingram.	West Maitland	Railway Station, High-street, and Post Office, West Maitland.	Six or more times a day as required.	Horse and van.	46 0 0	31 Dec., 1887.
82 John A. Gouldsbury	Cessnock	West Maitland, Bishop's Bridge, Cessnock, Millfield, and Wollombi; with a branch mail to and from Cessnock and Ellalong.	Three	Coach... . / Horseback	170 0 0	31 Dec., 1887.
83 Michael Murphy ...	Rutherford, via West Maitland	West Maitland, Aberglasslyn, Rosebrook, Lamb's Creek, and Elderslie, calling at Hillsborough, Irishtown, and Stanhope.	Two	Horseback	70 0 0	31 Dec., 1885.
84 Henry Brown	Laguna	Wollombi and Laguna	Three...	... .	19 10 0	31 Dec., 1886.
85 Charles Read	Lochinvar . .	Railway Station and Post Office, Lochinvar.	Thirteen or more.	Spring-cart, 1-horse.	51 0 0	31 Dec., 1885.
86 W. E. Hughes	Branxton	Railway Station and Post Office, Branxton.	Fourteen or more.	1-horse waggonette	35 0 0	31 Dec., 1886.
87 W. E. Hughes	Branxton	Branxton, Rothbury, and Pokolbin.....	Three.....	1-horse waggonette	45 0 0	31 Dec., 1885.
88 George Ernst	Elderslie	Branxton and Elderslie	Two	Horseback	30 0 0	31 Dec., 1885.
89 Francis Dorrington..	Singleton	Whittingham, Vere, and Broke .	Six	Horseback	70 0 0	31 Dec, 1887.
90 Richard Snelson.....	Singleton	Railway Station and Post Office, Singleton.	Fourteen or more.	... .	35 0 0	31 Dec., 1885.
91 William Newton.....	Jerry's Plains ...	Singleton, Boggy Flat, Warkworth, and Jerry's Plains, via Thorley's.	Three...	4-wheeled coach, 2 horses.	70 0 0	31 Dec., 1886.
92 James Benson	Sedgefield	Singleton, Scott's Flat, Sedgefield, Westbrook, and Glendon Brook.	Two	Horseback	38 7 6	31 Dec., 1887.
93 George Crittenden ..	St. Clair..... .	Singleton, Bridgeman, and St. Clair	Two	Horseback	40 0 0	31 Dec., 1887.
94 Job Granger	Olive Grove, near Singleton.	Singleton and Rix's Creek	Two ...	.....	12 0 0	31 Dec., 1885.
*95 Thos. Eather	Warkworth	Warkworth and The Bulga	Three .	Horseback	25 0 0	31 Dec., 1886.
96 James Merrick	Branch Creek, Howe's Valley.	The Bulga and Howe's Valley .	One .	... ...	33 0 0	31 Dec., 1887.
97 Benjamin Hardy ...	Doyle's Creek ..	Jerry's Plains and Doyle's Creek .	One	.....	14 0 0	31 Dec., 1885.
98 John A. Bower ..	Goorangoola	Bridgeman and Goorangoola	Two	Horseback	30 0 0	31 Dec., 1887.
99 Edward Langford ...	Camberwell ...	Glennie's Creek and Camberwell . (Contractor to convey the Mails arriving by the evening train when the steamer arrives too late at Newcastle for them to be forwarded by the mail train.)	Six or more, as required.	Horseback	30 0 0	31 Dec., 1885.
100 Thos. Linene	Muswellbrook ..	Railway Station and Post Office, Muswellbrook.	Fourteen or more.	Horse and cart.	50 0 0	31 Dec., 1886.
101 Cobb & Co.	Sydney	Muswellbrook, Denman, Giant's Creek, Gungal, and Merriwa.	Six	2 or 4 horse coach.	700 0 0	31 Dec., 1886.
102 Wm. Nowland ...	Muswellbrook	Muswellbrook and Wybong	Two ..	.....	31 0 0	31 Dec., 1887.
103 Edward Casey .	Kayuga ...	Muswellbrook and Kayuga	Three . .	Horseback	18 0 0	31 Dec., 1885.
104 John W. Attkins	Limestone Creek Dunbar's Creek	Muswellbrook and Dunbar's Creek	Two	Horseback	31 10 0	31 Dec., 1885.
105 Thos. James Purvis	Muswellbrook ..	Denman, Baerami, and Kerrabee, via Rosemount, Richmond Grove, and Bellmont.	Three .	Horseback	95 0 0	31 Dec., 1887.
106 John Meaney	Wollar	Kerrabee, Bylong, and Wollar ..	Two	Horseback	60 0 0	31 Dec., 1885.
107 Cobb & Co.	Sydney	Merriwa, Bow, and Cassilis . . (Contractors to convey Mails, if required by the Postmaster-General to do so, as follows:—Three times a week on horseback at £200, or by coach at £250 per annum, or four times a week on horseback at £250 per annum.)	Four	Coach.....	350 0 0	31 Dec., 1886.
108 John Meaney	Wollar	Merriwa and Wollar, via Kellick	One	..... .	37 0 0	31 Dec., 1887.
109 Thos. Cronin	Crompton, Idaville.	Merriwa and Idaville, via Terragong Mountain Station, Cream of Tartar Creek, and Messrs. Bourke and Simmons' residence. (Contractor to convey Mails twice a week, if required by the Postmaster-General, at the rate of £75 per annum.)	One ..	Horseback	30 0 0	31 Dec., 1886.
110 Thos. Braggett	Coolah	Cassilis, *Old Turee*, Coolah, and Binnaway.	Two	Horseback	139 0 0	31 Dec., 1887.
111 Harry Ruse	Cassilis	Cassilis, Uarbry, and Denison Town, via Lamb's, O'Malley's, and "Piper's Hotel."	Two .	Horseback	85 0 0	31 Dec., 1885.
112 James Lane	Wollar	Cassilis and Wollar	One .. .	Horseback	47 0 0	31 Dec, 1885.
113 George Piper	Cassilis	Cassilis and Turee Creek, via the surveyed line near Rotherwood.	Two ..	Horseback	40 0 0	31 Dec., 1886.
114 Charles Nott	Bolaro	Denison Town, Bolaro, and Cobbora	Two .. .	....	53 0 0	31 Dec., 1885.
115 Duncan Cumming ..	Davies' Creek ..	Aberdeen, Rouchell Brook, and Davies' Creek.	Two	Horseback	41 0 0	31 Dec., 1886.
116 George Newman	Scone	Railway Station and Post Office, Scone, including the clearance of the letter receiver at the Railway Station.	Twice or oftener daily.	Cart, 1 horse.	35 0 0	31 Dec., 1887.

* Contractor allowed £5 per annum extra, from 1 September, 1885, in consequence of the removal of The Bulga Post Office.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No. of times per week.		£ s. d.	
117 Jas. Hayne, jun.....	Scone	Scone, Gundy, and Moonan Brook	Two	.....	80 0 0	31 Dec., 1885.
118 Thos. Worrad.....	Scone	Scone and Bunnan	Two	Horseback	52 0 0	31 Dec., 1887.
119 Alex. Dodds	Scone	Scone and Woodlands, via Margin's and Thornthwaite.	One.....	.....	28 10 0	31 Dec., 1885.
*120 Levi Watson.....	Timor.....	Blandford and Timor (Silver Mines) ...	One.....	Horseback	20 0 0	31 Dec., 1887.
121 Mathew Shanahan ...	Murrurundi	Railway Station, Murrurundi, and Post Offices, Haydonton and Murrurundi.	Twice a day.	Horseback	33 0 0	31 Dec., 1885.
122 Stephen Tucker	Yarraman	Willow Tree, Glasston, Blackville, Yarraman, Bundella, and Tambar Springs.	Three.....	.....	467 0 0	31 Dec., 1885.
123 George Baldock	Wallabadah	Railway Station and Post Office, Quirindi.	Twelve or more.	.....	18 0 0	31 Dec., 1887.
124 George Baldock	Wallabadah	Quirindi, Castle Mountain, and Wallabadah, via Quirindi Station and Main Road.	Six	.....	53 0 0	31 Dec., 1887.
125 Cornelius P. O'Neill	Quirindi.....	Quirindi, Warrah Ridge, Pine Ridge, and Colly Blue, via Kickerbil and Webland.	Two	Horseback	120 0 0	31 Dec., 1886.
126 Edward Toohey	Spring Ridge.....	Quirindi, Spring Ridge, and Goran Lake (George Cameron's).	Two	Horseback	110 0 0	31 Dec., 1885.
127 George Burden	Quipolly	Railway Station and Post Office, Quipolly.	Two	Horseback	25 0 0	31 Dec., 1885.
128 Robert J. Nowland... (Transferred to Daniel Leary, from 1 April, 1885.)	Gunnedah	Railway Station and Post Office, Gunnedah.	Twelve or more.	2 or more horse coach.	39 15 0	31 Dec., 1885.
129 William Conway.....	Boggabri	Gunnedah and Boggabri, via Ballyragan, Sander's, Burburgate, Lander's, Gulligal, Lye's, Turner's Rose's, Milchengowrie, and Bradley's.	One	Horseback	50 0 0	31 Dec., 1887.
130 Daniel Leary	Gunnedah	Gunnedah, Mullaley, Rocky Glen, and Coonabarabran, via the new Government Road.	Three.....	2 or 4 horse coach.	340 0 0 (From 6 January.)	31 Dec., 1887.
131 James Murphy ..... (Transferred to Michael Murphy, from 1 October, 1885.)	Pilliga	Coonabarabran, Baradine, and Pilliga, via Yarragan, Gorah, Kianbri, Merriwee, Erinbri, Merebene, Wangan, and Etoo.	One	2-horse conveyance	147 0 0	31 Dec., 1887.
132 William Conway	Boggabri	Railway Station and Post Office, Boggabri.	Twelve or more.	1-horse buggy.	39 14 0	31 Dec., 1887.
133 Thomas O'Brian.....	Boggabri	Boggabri and Mullaley, via Wightman's, Nixon's, Jackson's, Clemesha's, Goolhi, Willmott's, and Cunningham's.	Two	Horseback	130 0 0	31 Dec., 1886.
134 Thomas O'Brian.....	Boggabri	Boggabri and Maule's Creek (Coolah Station), via Guest's, Chamberland's, Wolfe's, Clifford's, Carter's, Douse's, Harvey's Eather's, Billyena, Cox's Station, Fitzgerald's, Leard's, Goldman's, and Birreny.	Two	Horseback	80 0 0	31 Dec., 1885.
135 Thomas O'Brian.....	Boggabri	Boggabri and Narrabri, by the old mail line.	One	Horseback	65 0 0	31 Dec., 1885.
136 Thomas O'Brian.....	Boggabri	Boggabri, Barney, Springs, and Manilla	One	Horseback	80 0 0	31 Dec., 1885.
137 Robert Henry Hill...	Rocky Glen	Boggabri, Rocky Glen, and Baradine, via Ramsay's, Gullendaddy, Donaldson's, M'Lean, Lower Arrowraine, Pebble's, Boro, Yamambah, Redbank, Sandy Holes, Dandy North, and Whittenbrie.	One	.....	157 0 0	31 Dec., 1886.
138 Samuel Melvil and Daniel Leary. (Transferred to John Walker, from 1 June, 1885.)	Gunnedah	Mullaley, Tambar Springs, and Coolah, via Bando.	Two	2 or more horse coach.	225 0 0	31 Dec., 1885.
139 Martin Walsh.....	Narrabri.....	Railway Station and Post Office, Narrabri.	Six or more.	Vehicle or horseback	60 0 0	31 Dec., 1886.
140 Arthur Colless..... (Transferred to E. J. Nowland and D. Leary, from 1 July, 1885.)	Pilliga	Narrabri, Wee Waa, Pilliga, and Walgett. (Contractor to convey Mails four times a week, if required by the Postmaster-General to do so, at the rate of £1,800 per annum.)	Three.....	.....	1,600 0 0	31 Dec., 1885.
141 Samuel Melvil and E. Nowland. (Transferred to E. J. Nowland, from 1 April, 1885.)	Gunnedah	Narrabri, Millie, Bumble, and Moree... (Contractor to convey Mails six times a week at the rate of £1,000 per annum, if required).	Four	2 or 4 horse coach.	798 10 0 (From 6 January.)	31 Dec., 1887.
142 Alfred Thirkettle ...	Eulah Creek, Narrabri.	Narrabri and Dunmore's, via Gregory's, Arndell's Farm, Baker's, Billingsley's, Davis's, Capel's, Roache's, Orman's, Standford's, Pratt's, Sorel's, Thirkettle's, Miller's, and Ward's, Eulah Creek.	One	Horseback	35 0 0	31 Dec., 1886.

* Contract cancelled, 30 April, 1885.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No of times per week.		£ s. d.	
*143 Walter Wyatt	Gundemaine, near Narrabri.	Narrabri and Cryan, via Clay's, Gundemaine, Cobcroft's, Barker's Hardy's, Holland's, Wrightman's, Shanahan Walls, Shanahan Halls, Power's, Wyatt, Bacon, Mitchell, Pallet, Tooladunnah, Boolcarroll, J. Clark's, The Woodlands, Belarbo, Nowley, Moore's, Burren, Old Burren, Galara, and Gorian (Capel's).	Two	1-horse vehicle.	150 0 0	31 Dec., 1885.
144 Edward J. Nowland.	Gnnnedah...	Narrabri, Eulourie, and Bingera, via Killarney, Edgeroi, Single's, Berrigal (Terri-hi-hi Out Station), Rocky Creek, Pallal, and Derra Derra.	One . . .	Horseback	130 0 0	31 Dec., 1886.
145 John Facer	Molly, Narrabri ..	Wee Waa and Baradine, via Cuttabri, Cubble, Yuligle, Cumble, Upper Cumble, and Gibbean.	One .. .	Horseback	95 0 0	31 Dec., 1885.
146 Walter Wyatt . . .	Gundemaine, near Narrabri.	*Shanahan's* (on the Narrabri and Cryan mail line), Pian Creek, and Pilliga, via Nowland's, Holcombe's, Thompson's, Boo Boo, Pine Grove, Knight's, Russell's, Bennett's, Powell's, Dempsey's, Murphy's, and Bucklebone.	One	Horseback	70 0 0	31 Dec., 1885.
147 David Sully	Walgett	Walgett, Brewarrina, and Bourke, via Gingi, Ulah, Milrea, and Boorooma, calling at Yowendah and Brewan. (Contractor to perform the service by a 4 horse coach once a week, and on horseback once a week, if required by the Postmaster-General to do so, for a sum at the rate of £470 per annum)	Two .. .	Horseback	370 0 0	31 Dec., 1885.
148 William H. Gordon ..	Narrabri ..	Walgett, Collarenebri, Mogil Mogil, and Mungindi, via Eurie Eurie Manilla (Mercadool Homestead), Broomfield's, Bundabaruna, Brasen's, Caidmurra, and Wirrah. (Contractor to travel via Barrington if required.)	Two	2 or more horse coach, or packhorse.	450 0 0	31 Dec., 1885.
149 Arthur Colless (Transferred to E J Nowland and D. Leary, from 1 July, 1885.)	Pilliga .. .	Walgett, Angledool, Currawillinghi, Goodooga, and Brenda, (Tate's Station, Culgoa River), via "Gideon's Inn," Forrester's, on the Barwon and Narran Rivers, and Thorold's, on Bokhara River. (Contractor to travel between Currawillinghi and Goodooga, on south side of the Bokira and Biree Rivers, via the "Finger Post Inn," and Doyle's Station.)	One .	2 or more horse coach, or packhorse	165 0 0	31 Dec., 1885.
150 Arthur Colless . (Transferred to E. J Nowland and D Leary, from 1 July, 1885.)	Pilliga .. .	Walgett and Goodooga	One	2 or 4 horse conveyance	325 0 0	31 Dec., 1887.
151 Edward J. Nowland..	Gunnedah	Walgett and Goodooga, via Springs, Grawin, Wilby Wilby, and Muckerawa.	One	Horseback	130 0 0	31 Dec., 1886.
152 John M'Garry	Walgett..... ...	Walgett and Carinda, via Kidgear, Polly Brewan, Bogewong, and Warren Downs.	One	2-horse coach, or packhorse	119 15 0	31 Dec., 1886.
153 Walter Hynes	Collarenebri .. .	Collarenebri, on the Barwon, and Angledool, on the Narran River, via the 60-mile track and Dunumbral.	One	.....	132 0 0	31 Dec., 1885.
154 Robert J. Nowland... (Transferred to Daniel Leary from 1 April, 1885.)	Gunnedah	Mogil Mogil, Angledool, Currawillinghi, and Goodooga, via Bagot's, Brown's, Medlicott's, Moongulla, Pinegobla, and Yarrambah.	One	Packhorse.	140 0 0	31 Dec., 1885.
155 William H. Gordon...	Narrabri	Millie, New Oriel, and Mogil Mogil, via Bunna Bunna, Munyga, Oriel, Buleori, Colleytudula, Merriwynebone, Pockataroo, Collimungle, and Werribilli. (Contractor to travel by the following route, if required, viz., via Bunna Bunna, Buleori, Oriel, Munyga, Burrundoon, Collymongle, and Werribilli.)	One	2 or more horse coach.	280 0 0	31 Dec., 1885.
156 William H. Gordon..	Narrabri	Millie, New Oriel, and Mogil Mogil, via Bunna Bunna, Munyga, Oriel, Buleori, Colleytudula, Merriwynebone, Pockataroo, Collymongle, and Werribilli. (Contractor to convey Mails to and from Millie, New Oriel, and Collarenebri, via Bunna Bunna, Munyga Oriel, Buleori, Colleytudula, Merriwynebone, and Pockataroo, if required by the Postmaster-General to do so at the rate of £139 15s. per annum)	One . . .	Horseback	145 0 0	31 Dec., 1885.

* Contractor authorised to travel via Belson's, from 1 May, 1885.

Contractors		Postal Lines.	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts.
Names.	Addresses.					
			No. of times per week.		£ s. d.	
157 James N. Parry	Meroe.....	Millie, *Meroe*, *Currigundi*, and *Benarba*.	One	.....	130 0 0	31 Dec., 1886.
158 W. H. Cullen	Tareelari, Moree	Moree, Pallamallawa, and Warialda, via Boolooroo, and up the north bank of the Big River, past Tareelari crossing it at Boolooroo.	Two	Horseback and coach when practicable.	120 0 0	31 Dec., 1885.
159 William H. Gordon ..	Narrabri	Moree, Garah, and Mungindi, via Bogree, Midkin, Welbon, Cow Vale, Benarba, and Yarrawa.	Two	2 or more horse coach	220 0 0	31 Dec.. 1885.
160 Joseph Jurd	Boolooroo, Moree	Moree & *Meroe*, via Combadello; and *Meroe*, Burrendoon, and Mogil Mogil, via Myanblar and Collymongle.	Two ... One ...	Packhorse	238 0 0	31 Dec., 1887.
161 Jas. H. Carver	Moree.....	Moree and Keytah, via Milburndale, Lucksall, Barlow's, and Prairie Dale.	One	Horseback	55 0 0	31 Dec., 1885.
162 Duncan M'Callum ...	Moree.....	Garah and Kunopia, via Whalan New Station. (In time of flood Contractor to travel to and from Moree and Kunopia, via Garah and Whalan New Station, if necessary.)	Two	.....	120 0 0	31 Dec., 1886.
163 John L. Sternes	Myall Plain, Mungindi	Kunopia and Mungindi, via Graman, Colunah, Champain's, and Myall Plain.	One	Horseback	120 0 0	31 Dec., 1886.
164 W. J. Nichols.....	Boggabilla.....	Kunopia and Goondawindi	One	Horseback	69 0 0	31 Dec., 1886.
165 John Holcombe	Goonoo Goonoo	Railway Platform, Duri, and Goonoo Goonoo.	Six	Horsebaek	100 0 0	31 Dec., 1885.
166 George A. Englert ...	Tamworth	Railway Station, West Tamworth, and Post Offices, West Tamworth, and Tamworth.	Twelve or more.	Spring-cart, 1 horse, or 2 if required.	59 0 0	31 Dec., 1885.
167 Alex. Robson	Nundle	Tamworth, Dungowan, Bowling Alley Point, and Nundle, via Mills's, Wooloomon; and Nundle, Mount Pleasant, and Hanging Rock.	Four ..... Three.....	4-horse coach. Horseback	150 0 0	31 Dec., 1887.
168 George A. Ross	Manilla	Tamworth, Somerton, Carroll, and Gunnedah.	Three.....	Coach, 2 horses.	260 0 0	31 Dec., 1885.
169 James Mickelburgh..	Forest Farm, Moor Creek	Tamworth and Moor Creek	Two	Horseback	23 0 0	31 Dec., 1886.
170 John H. Fitzgerald...	Keepit	Somerton and Keepit	Two	Horseback	48 0 0	31 Dec., 1887.
171 Hector H. Halloran..	Barraba.....	Barraba, Eulourie, and Moree, via Burindi, Campo Santo, Tareela, Little Creek, Currangandi, Ullembarella, Pallal, Dera, Banghet, Gineroi, Gravesend, Binnigi, and Baldwin's.	One	Horseback	90 0 0	31 Dec., 1886.
172 Matthew J. Daley (Transferred to Henry S. Lake, from 1 April, 1885).	Moree	Barraba, Cobbadah, Eulourie, and Moree, via Crawley's Station, Currangandi, Ullembarella, Rocky Creek, Terry-hi-hi, Bundoowithildi, Thos. Pitman's, John P. Carrigan's, Owen E. Carrigan's, and Edwin Harris's.	One	Horseback	100 0 0	31 Dec., 1885.
173 John Melville	Inverell	Bingera, Little Plain, Rob Roy, and Inverell.	Two	Horseback	100 0 0	31 Dec., 1885.
174 William Forster	Bundarra	Bingera and Bundarra, via Coorangoora, Keira, Beverley, and Long Reach.	One	Horseback	65 0 0	31 Dec., 1886.
*175 Robert Griffiths ...	Bingera	Bingera and Upper Bingera	One	Horseback	35 0 0	31 Dec., 1887.
176 A. C. M'Leod	Goondiwindi.....	Warialda, Wallangra, Yetman, Boggabilla, and Goondiwindi (Queensland), via Gournama.	Two	Horseback	420 0 0	6 Jan., 1885.
177 Alexander Armstrong (Transferred to Joseph Cook, from 1 April, 1885.)	Goondiwindi.....	Warialda, Boggabilla, and Goondiwindi, via Oregon, Allison's, Old Gunyerwarildi, New Gunyerwarildi, Yalaroi, Tooloona, Coppermarenbillen, and the several selections on the Whalan water-course, between Coppermarenbillen and Boggabilla.	One	Horseback	210 0 0	31 Dec., 1885
178 William Didlick ...	Bendemeer	Railway Station, Moonbi, and Post Offices, Moonbi and Bendemeer.	Three.....	Horseback	59 10 0	31 Dec., 1887.
179 Edward Leidreiter ...	Bendemeer	Bendemeer and Kingstown, by the old mail line, via Green Valley.	One	Horseback	53 0 0	31 Dec., 1886.
180 G. M. Bowden	Walcha	Walcha Road and Walcha	Twelve ...	Coach, 2 horses.	68 0 0	31 Dec., 1887.
181 William Martin	Walcha Road ...	Walcha Road and Glen Morrison, via Surveyor's Creek Station, Aberbaldie and Ingleba.	One	Horseback	51 15 0	31 Dec., 1886.
182 John Egan	Walcha	Walcha and Yarrowitch, via Ohio, Europambola, Waterloo, Tiara and Tia.	One	Horseback	38 0 0	31 Dec., 1885.
183 Arthur E. Blanch ...	Carlisle Gully ...	Kentucky Railway Platform and Carlisle Gully, via Kentucky Station.	Two	Horseback	41 0 0	31 Dec., 1885.
184 William Carroll	Uralla	Railway Station and Post Office, Uralla	Twice or oftener daily as required.	1 horse and buggy.	20 0 0	31 Dec., 1886.

* Contract cancelled, 6 May, 1885.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No of times per week		£ s. d.	
185 John M'Ginty .. .. (Transferred to John Carroll, from 1 March 1885.)	Bendemeer	Uralla, Balala, and Bundarra, via Toryburn, Stony Batter, and King John Swamp; and Bundarra, Stanborough, Tingha, Gilgai, and Inverell.	Three Three	Coach ..... Vehicle ...	600 0 0	31 Dec., 1886.
186 James Green	Salisbury Court, Uralla.	Uralla, Salisbury Plains Station, and Salisbury Plains Receiving Office.	Two	Horseback	25 0 0	31 Dec., 1887.
187 Henry Bright . .	Uralla . .	Uralla and Rocky River	Three...	Horseback	23 0 0	31 Dec, 1885.
188 Reuben H. M'Neill..	Woolshed, Bundarra.	Bundarra and Barraba	One .	Horseback	69 0 0	31 Dec., 1885.
189 Wm. E. M'Ginty ..	Bundarra	Bundarra and Kingstown .	One	..	57 0 0	31 Dec., 1886.
190 Herbert King . .	Kingstown .	Kingstown and Orabah .. .	One	Horseback	23 0 0	31 Dec., 1886.
191 John Parker .	Tingha .	Tingha and Stannifer	Three	Horseback	57 4 0	31 Dec., 1887.
192 Thos. R. Burnham	Armidale . ..	Railway Station and Post Office, Armidale.	Twice or oftener daily.	Spring vehicle.	42 18 0	31 Dec., 1885.
193 Edward Keightley (Transferred to Alex. Simington, from 1 August, 1885.)	Bundarra	Armidale, Invergowrie, Yarrowyck, George's Creek, and Bundarra, via Laura Station, and Abington; and Armidale, Invergowrie, Yarrowyck, and Bundarra, via Laura Station, and Abington.	One ... One ...	Horseback	124 0 0	31 Dec., 1886.
194 John B. Fitzgerald	Armidale	Armidale and Oban, via Guyra, Rock Vale, Green Vale, Armidale Gully, Aberfoil, and Ward's Mistake Head Station; and Armidale and Oban, via Guyra, Coningdale, Kilkoy on the Chandler, Fairview, Camperdown, Lyndhurst, Aberfoil, and Ward's Mistake Head Station.	One ... One	Horseback	200 0 0	31 Dec., 1886.
195 W. M. Stevenson and P. Wade. (Transferred to P. Wade and Mrs. C Williams, from 1 May, 1885.)	Armidale .. .	Armidale, Booroolong, and *Sandy Creek*, via Eversleigh; Guyra, Wandsworth, Kangaroo Camp, and Tingha, via Ollera; and Wandsworth, Elsmore, Brodie's Plains, and Inverell, via Moredon, Paradise Creek, and Newstead.	Two One . One .. Two Three	Horseback Coach Vehicle .. Horseback Horseback	850 0 0	31 Dec, 1886.
196 John B. Fitzgerald..	Armidale	Armidale, Wollomombi, Bellbrook, Hickey's Creek, West Kempsey, and Kempsey, via Hillgrove, Giogla, Long Flat, Towel Creek, Peedre Creek, and Toorookoo.	One ..	Horseback	120 0 0	31 Dec, 1886.
197 Timothy Hawthorne	South Grafton ...	Armidale, Wollomombi, South Grafton, and Grafton, via Gara and Major Parke's Stations. (Contractor to travel alternately via Skinner's Creek, Blaxland's Flat, and Deadman's Creek.)	Two	Horseback	298 0 0	31 Dec., 1885.
198 Thos. R. Burnham	Armidale	Armidale and Puddledock	One	Horseback	23 8 0	31 Dec, 1885.
199 Andrew Cochrane ...	Castle Doyle	Armidale and Castle Doyle . . (Contractors to convey Mails twice a week for a sum at the rate of £34 13s. 4d. per annum, if required by the Postmaster-General to do so.)	One .	Horseback	17 6 8	31 Dec., 1886.
200 John B. Fitzgerald .	Armidale	Armidale and Mother of Ducks Railway Station, via Guyra	One .	.... .	75 0 0	31 Dec., 1886.
201 Nathan Howes	Ben Lomond	Ben Lomond (Railway line) and "Ben Lomond Hotel."	Three .	Horseback	36 0 0	31 Dec, 1886.
202 John Grimes	Newstead, via Armidale.	Elsmore and Stannifer.	Two .. .	.. .. ..	40 0 0	Contract to terminate at three months' notice on either side.
203 John Grimes	Newstead, via Armidale.	Glen Innes, Beaufort, Clarevaulx, and Wellingrove; and Wellingrove, Nullamanna, and Inverell, via King's Plains, Vever's Sheep Station, A. M'Leod's and Brown's.	Two ... Two ..	Horseback	158 0 0	31 Dec., 1885.
204 John Dilworth	Glen Innes .	Glen Innes, Swan Vale, and Inverell	Six. .	Coach, 2 horses.	600 0 0	31 Dec., 1886.
205 William Tweddell ...	Glen Innes	Glen Innes, *Severn*, Y. Water, and Emmaville.	Three	Coach and 2 horses.	150 0 0	Contract to terminate on the opening of the Railway to Deepwater.
206 Fredk. W. Wilcox.	South Grafton .	Glen Innes, Shannon Vale, Bald Nob, Dalmorton, South Grafton, and Grafton, via Shambigne, Buccarumbi, Broad Meadows, Newton Boyd, and Big Hill. (Contractor to convey Mails once a week on horseback, and once a week by coach, if required by the Postmaster-General to do so, for a sum at the rate of £500 per annum.)	Two .	Horseback	345 0 0	31 Dec., 1885.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No of times per week		£ s. d.	
207 Wm. A. Potter	Red Range	Glen Innes and Red Range. (Contractor to travel by surveyed road if required.)	Two	Horseback	39 4 0	31 Dec., 1887.
208 John M'Cutcheon ...	Wellingrove	Wellingrove and Emmaville, via Wellingrove Station and Strathbogie.	One	Horseback	60 0 0	31 Dec, 1886.
209 Kenneth M'Kenzie ..	Tent Hill	Emmaville and Tent Hill	Three	Horseback	38 0 0	31 Dec., 1886.
210 Kenneth M'Kenzie .	Tent Hill	Emmaville and The Gulf	One	Horseback	60 0 0	31 Dec., 1886.
211 David J. Davidson...	Tent Hill	Emmaville and Torington . . .	One	.....	55 0 0	Contract to terminate on the opening of the Railway to Deepwater.
*212 William Hope	Inverell	Inverell, Oakwood, and Warialda, via Bannockburn, Piersby Hall, Reedy Creek, Gragin, and Myalla.	Two	Horseback	150 0 0	31 Dec, 1886.
213 Robert Hughes	Bonshaw . ..	Inverell, Bukkulla, Ashford, and Bonshaw, via Byron, Dinton Vale, Edgerton, and Monkstadt, Fraser's Creek.	Two	Horseback	156 0 0	31 Dec., 1885.
214 W. B. Medhurst.....	Inverell	Inverell, Oakwood, and Wallangra, via Bannockburn, Kulki, and Graman.	Two	Horseback	119 0 0	31 Dec., 1886.
215 Thos. Herbert .... . (Transferred to Mrs. Ellen Herbert, from 1 February, 1885.)	Tenterfield	Bonshaw, Sunnyside, and Tenterfield, via Clifton Station, Mole Station, and the south side of the Severn River.	Two	Horseback	150 0 0	31 Dec., 1887.
216 Thos. Savage	Yetman .	Bonshaw, Texas (Queensland), and Yetman.	One ..	Horseback	68 10 0	31 Dec., 1887.
217 John Romer	Deepwater . .	Deepwater and Tent Hill .	Two . ..	..	80 0 0	31 Dec., 1885. or on the opening of the Railway to Deepwater
218 Clarence Smith ...	Drake	Tenterfield, Sandy Hill, Boorook, Drake, and Tabulam.	Two	Horseback	115 0 0	31 Dec, 1886.
219 Alex. Holme and Frank Thompson.	Grafton	Tenterfield, Timbarra, Lionsville, Copmanhurst, Whiteman Creek, and Grafton, via Poverty Point, Melara, and Yulgilbar	Two	Horseback	275 0 0	31 Dec., 1885.
220 Daniel Hollis ...	Tabulam	Drake, *Lunatic Reefs*, and Pretty Gully	Two ...	Horseback	75 0 0	31 Dec., 1885.
221 Henrietta Ware .	Tabulam	Tabulam, Murrugang, and Lawrence.	Two ..	Horseback	109 0 0	31 Dec, 1885.
222 Kenneth M'Lean .	Tooloom ..	Tabulam, Tooloom, Acacia Creek, and Killarney (Queensland), via Bunalbo Kangaroo Creek, Tooloom Station, New Koreelah, Old Koreelah, Lamb's Selection, Robertson's Sawmills, and Spring Creek.	Two .	Horseback	152 0 0	31 Dec., 1885.
223 Robert Paterson	Bookookoorara, via Tenterfield.	Willson's Downfall and Amosfield	Three	Horseback	45 10 0	31 Dec., 1885.
224 Jas. J. Kingsford ...	Dalveen, Queensland.	Dalveen (Queensland), and Maryland...	Six	Horseback	36 0 0	31 Dec, 1885.
225 John H. Hickey ...	Iluka ..	Clarence River Steamers and Post Offices, Iluka and Yamba, as required to meet steamers that arrive and depart, or that pass up and down the river; and	...	... .	60 0 0	31 Dec., 1885.
		Post Offices, Iluka and Yamba	Two			
226 Chas. Mulville ...	Harwood Island	Clarence River Steamers and Post Office, Harwood Island, as required to meet steamers that arrive and depart, or that pass up and down the river.	... .	.....	52 0 0	31 Dec, 1885.
227 Alex. Lang . (Transferred to Wm. Neale, from 1 June, 1885.)	South Woodburn	Harwood Island, Chatsworth Island, South Woodburn, and Woodburn.	Three† ...	2 or 4-horse coach.	96 0 0	31 Dec., 1885.
228 Arthur E. Olive	Myall Creek, via Lawrence.	Lawrence, Casino, and Lismore	Two	4 and 2 horse coach.	280 0 0	31 Dec., 1887.
229 John Davison	Coldstream ...	Brush Grove and Coldstream .. .	Two . .	Horseback	22 10 0	31 Dec., 1885.
230 A. E. Tuckwell	Brush Grove...	Brush Grove and Tyndale	Two ...	Horseback	25 0 0	31 Dec., 1885.
231 Thos. G. M'Callum	Coldstream	Ulmarra and Upper Coldstream	Two .	Horseback	20 0 0	31 Dec., 1885.
232 Henry Gill, jun .... (Transferred to C. G. Walsham, from 1 April, 1885)	North Grafton	Steamers Wharf, Grafton, and Post Office, Grafton, on arrival and departure of steamers.	. .	1-horse van.	20 0 0	31 Dec., 1886.
233 James Graham . (Transferred to Chas W. Nye, from 1 Oct, 1885.)	Woolgoolga	Grafton, South Grafton, Woolgoolga, Coff's Harbour, and Fernmount, via Corinda, and Small's Pine Creek.	Two	Horseback	175 0 0	31 Dec, 1887.
234 John D. Perrett	South Grafton	Grafton, South Grafton, Upper Kangaroo Creek, Bucca Bucca, and Nana Creek, via Lower Kangaroo Creek, and Glenreagh.	Two	Horseback	130 0 0	31 Dec., 1887.
235 John Murphy	Grafton	Grafton and Southgate	Two ...	Horseback	25 0 0	31 Dec., 1885.
236 Patrick M'Namara	South Grafton	South Grafton and Gerrymberryn	Two	Horseback	20 0 0	31 Dec., 1885.

* Contractor permitted to travel between Inverell and Warialda direct, instead of via Oakwood, from 21 January, 1885.
† Contractor permitted to discontinue conveyance of third mail subject to reconsideration.

Contractors' Names.	Contractors' Addresses	Postal Lines.	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts.
			No of times per week.		£ s. d.	
237 Richard Sheather ...	Woodburn.....	South Woodburn, Swan Bay, Bungawalbin, Coraki, Wyrallah, Gundurimba, and Lismore, including the porterage of mails between these offices (except Lismore) and the steamers. (Contractor is allowed to carry passengers and cargo, provided the punctual delivery of the mails be not interfered with.)	Two	Steam-launch.	297 10 0	31 Dec., 1885.
238 Richard Sheather ...	Woodburn.....	South Woodburn, Kilgin, Broadwater, East Wardell, Wardell, German Creek, and Ballina, via Green's, including the porterage of mails between these offices (except Ballina) and the steamers. (Contractor is allowed to carry passengers and cargo, provided the punctual delivery of the mails be not interfered with.)	Two	Steam-launch.	237 10 0	31 Dec., 1885.
239 John D. O'Kelly.....	Casino . .	Coraki, Codrington, Tatham, South Casino, and Casino.	Two .. .	Horseback	76 0 0	31 Dec., 1887.
240 Arthur E. Fowler ...	Rous	Wardell, Rous, and Alstonville	Two	Vehicle, 1 horse.	50 0 0	31 Dec., 1886.
241 Robert Rathborne ... (Transferred to A. C. Simpson, from 1 July, 1885.)	Casino	Casino and Unumgar (Sherwood's Station).	One ..	.	60 0 0	31 Dec., 1885.
242 James E. James	Dunoon	Lismore, Dunoon, and Murwillumbah ..	One ...	Horseback	140 0 0	31 Dec., 1887.
243 Chas. Barry	Tirrania... .	Lismore and Tirrania	One....	Horseback	12 0 0	31 Dec., 1885.
244 George Jarvis.....	Lismore	*Lismore and Bexhill..... ..... (Contractor to convey Mails once a week, if required by the Postmaster-General to do so, at the rate of £15 per annum.)	Two	(See foot note.)	30 0 0	31 Dec., 1886.
245 John M'Lennan	Lismore . .	Lismore and Wollongbar; and Wollongbar, Alstonville, and Ballina	Two One ..	Buggy or coach.	60 0 0	31 Dec., 1887.
246 William Kelly.....	Tweed River, Murwillumbah.	Murwillumbah and Tumbulgum	Three .	Horseback	50 0 0	31 Dec., 1887.
247 Robert Quirk	Tumbulgum	Tumbulgum and Tweed Heads, via Cudgen (Boyd's).	One	Boat ...	60 0 0	31 Dec., 1886.
248 Henry Clarke	Cudgen Scrub	Tumbulgum, Cudgen Scrub, and Brunswick.	One . . .	.....	50 0 0	31 Dec., 1885.
249 George Jarvis	Lismore . . .	*Bexhill and Clunes; and Clunes, Eureka, and Brunswick, via Benny's Creek and Togarah Grass, Main Road.	Two .... One	(See foot note.) Vehicle	80 0 0	31 Dec, 1886.
250 Robert Rathborne ... (Transferred to A. C. Simpson, from 1 July, 1885.)	Casino . . .	Casino and Tabulam, via Wooroowoolgin, Dyraaba, and Sandiland.	One .	.	60 0 0	31 Dec., 1885.
†251 George Topfer	Emigrant Creek.	Ballina, Emigrant Creek, and Tintenbar; and Tintenbar, Byron Creek (Campbell's), and Brunswick, via Hayter's, Boyle's, Stock's, Garvan's, Glissan's, & Hutchinson's.	Two ... One	Horseback	110 0 0	31 Dec., 1887.
252 James Ross, jun. ...	Upper North Creek.	Ballina and Upper North Creek	One	Boat	16 0 0	31 Dec., 1885.
		SUBURBAN ROADS.				
‡1 James Flannery	Sydney ...	General Post Office, Sydney, and Wharfs, on arrival and departure of English mails.	.	Spring vans and drays.	80 0 0	Contract to terminate at one month's notice on either side.
2 Owen Maguire	Foreman-street, Tempe.	General Post Office, Sydney, and the Post Offices, Newtown, Macdonaldtown, St. Peter's, Tempe, and site of late Post Office, Arncliffe.	Twelve	3-horse omnibus	117 0 0	31 Dec., 1885.
3 William Harmer ...	Watson's Bay ...	Circular Quay, Sydney, and Post Office, Watson's Bay. (From Sydney hours of departure to suit Contractor, but one or two return trips must be made at hours fixed by the Postmaster-General, who will also be at liberty to take advantage of any additional trips made from or to Watson's Bay, if considered necessary.)	Twelve ...	.....	10 0 0	31 Dec., 1885.
4 John Humphreys and Henry Hay.	Ryde	General Post Office, Sydney, and Post Offices, Drummoyne, Gladesville, and Ryde. (Contractors to be paid at the rate of ½d. per letter for any additional mails they may be required by the Postmaster-General to convey.)	Twice a day.	Waggonette, 2 or more horses.	130 0 0	31 Dec., 1885.

* Contractor permitted to convey mails by vehicle between Lismore and Clunes, and to serve Bexhill by a branch mail on horseback from the main road.
† Contractor permitted to convey mails between Ballina and Tintenbar by coach, from 20 January, 1885.
‡ Contract cancelled, 30 September, 1885.

Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication. (No. of times per week.)	Mode of Conveyance.	Annual Amount payable to Contractors. (£ s. d.)	Date of Termination of Contracts.
5 William Blake	Kogarah.....	Railway Station, Kogarah, and Post Offices, Kogarah and Woniora.	Twice a day.	4-wheeled waggonette, 2 horses.	33 0 0	31 Dec., 1885.
6 James Slocombe	Canterbury	From Ashfield to Canterbury; and from Canterbury to Ashfield	Thrice a day. Twice a day..	Horse-back.	70 0 0	31 Dec., 1886.
7 James Milner	Belmore.....	Canterbury and Belmore ..... (Contractor to convey Mails on horse-back, if required by the Postmaster-General to do so, for a sum at the rate of £50 per annum.)	Six	Coach.....	42 0 0	31 Dec., 1886.
8 William A. Jackson..	Bankstown.....	Burwood, Enfield, Druitt Town, Bankstown, and Upper Bankstown.	Twelve ...	4-wheeled vehicle, 2 or more horses.	155 0 0	31 Dec., 1886.

PARTICULARS of Contracts entered into for the Conveyance of Post Office Mails, subsequent to 1st January, 1885.

Date of commencement of Contracts.	No.	Contractors' Names.	Contractors' Addresses.	Postal Lines.	Frequency of Communication. (No. of times per week.)	Mode of Conveyance.	Annual Amount payable to Contractors. (£ s. d.)	Date of Termination of Contracts.
				NORTHERN ROAD.				
1885. 7 Jan.	[d]176	William M'Gregor ...	Goondiwindi, Queensland.	Warialda, Wallangra, Yetman, Boggabilla, and Goondiwindi (Queensland), via Gournama.	Two	Horseback	293 0 0	1887. 31 Dec.
				SOUTHERN ROADS.				
1 Feb.	[a]265	Robert Neels	Marengo	Marengo and Douglas Gap...	One	.....	10 0 0	31 Dec.
1 Mar.	[a]266	David Opie (Transferred to James Barber, from 25 July.)	Silverton	Silverton and Purnamoota ...	Two	4-wheeled vehicle, 2 or more horses.	65 0 0	Contract to terminate at three months' notice on either side.
1 Mar.	[b]267	Frederick Joseph Savage.	Narrandera	Narrandera and Colombo Creek, via Gillenbar, Cuddell Township, and Yarrabee.	Two	Horseback	69 0 0	31 Dec. (Contract to terminate at one month's notice on either side.)
				NORTHERN ROADS.				
1 Mar.	[e]16	Mrs. Elizabeth Green	New Lambton....	Newcastle, Glebeland, The Junction, and Charlestown.	Six	.....	80 0 0	31 Dec.
1 Mar.	[f]18	Mrs. Elizabeth Green	New Lambton....	Charlestown, Belmont, and Pelican Flats.	Three.....	.....	65 0 0	31 Dec.
1 Mar.	[ag]253	John George Veness...	Manilla	Manilla and Bendemeer.....	One	Horseback	57 10 0	Contract to terminate at three months' notice on either side.
				WESTERN ROADS.				
20 Mar. ...	[bh]117	John S. M'Comiskey..	Nymagee	*Sandy Creek*, Gilgunnia and Mount Hope. (Contractor to convey Mails once a week, for a sum at the rate of £195 per annum, if required by the Postmaster-General to do so.)	Two	Two-horse coach	295 0 0	31 Dec.
20 Mar. ...	[bk]118	Thomas J. Grace.....	Hillston.....	Hillston, "*Mountain Well Hotel*," and Gilgunnia.	One	Two or more horse coach	250 0 0	31 Dec.
				SOUTHERN ROADS.				
26 Mar. ...	[a]268	William John Roberts	Murrumburrah...	Railway Station and Post Office, Murrumburrah, including the clearance of the Letter-box at the Murrumburrah Station, when required.	Twice or oftener daily, as required.	One-horse buggy.	52 0 0	1885. 31 Dec.
26 Mar. ...	[a]269	George A. Cranfield...	Young	Railway Station and Post Office, Young.	Once or oftener daily, as required.	One-horse buggy or cart.	28 10 0	1886. 31 Dec.
26 Mar. ...	[a]270	Joseph Warren	Harden	Murrumburrah, Demondrille, and Wombat.	Six	Waggonette and 2 horses.	95 0 0	1885. 31 Dec.
				WESTERN ROAD.				
1 May ...	[a]179	James F. Lodge	Mandurama	Mandurama & Galley Swamp	One	One-horse vehicle.	12 0 0	31 Dec.
				SOUTHERN ROADS.				
1 May ...	[a]271	George Smith	Krawarree.....	Bredbo and Ballalaba, via Wangarah, Little Plain, and Anembo.	One	.....	78 10 0	1887. 31 Dec.

Date of commencement of contracts.	No.	Contractors' Names.	Contractors' Addresses	Postal Lines	Frequency of Communication.	Mode of Conveyance.	Annual Amount payable to Contractors.	Date of Termination of Contracts.
1885.					No of times per week.		£ s. d.	1887.
1 May ...	[a]272	William Gibson	Clifton	Clifton and Otford ..	Six	Two-horse buggy.	17 19 0	Contract to terminate at three months' notice on either side.
				NORTHERN ROADS.				
1 May ...	[c]120	Isaac Edmonds	Timor	Blandford and Timor (Silver Mines).	Two	Horseback	34 10 0	31 Dec.
1 May	[a]254	George Carey	Tooloom ...	Tooloom and Acacia Creek, via Mungarragan, Woodenbung, and White Swamp.	One ...	Horseback	64 0 0	1886. 31 Dec.
				SOUTHERN ROAD.				
20 May	[m]234	Frederick J. Savage ...	Narrandera ...	Colombo Creek, Old Goree and Jereelderie, via Bundure Head Station and Yanko Station.	Two	Once a week by coach or other four-wheeled vehicle, and once a week on horseback	131 0 0	1887. 31 Dec.
				NORTHERN ROAD.				
1 June ..	[a]255	Mrs. Mary Ann Taylor	Woy Woy	Woy Woy and Mullet Creek	Three.....?	.. ....	28 0 0	1886. 31 Dec.
				SOUTHERN ROAD.				
1 Aug. ...	[a]273	John Manyon	Five-mile Creek	Rye Park and Five-mile Creek, via Frost's Farm and Digger's Flat.	One	Horseback	19 0 0	31 Dec.
				WESTERN ROAD.				
1885. 13 Aug. ...	[m]180	Cobb & Co	Sydney	Byrock and Brewarrina, by the direct road	One	Horseback	79 0 0	Contract to terminate at one months' notice on either side.
				SUBURBAN ROAD.				
1 Sept. ..	[a]9	Alexander Adams	North Ryde	Ryde and North Ryde .	Six	Horseback or by horse and spring-cart.	24 0 0	Contract to terminate at three months notice on either side.
				WESTERN ROADS.				
3 Sept. ..	[b]181	Henry Nutter Gray ..	Byrock	Railway Station and Post Office, Byrock.	Twice or oftener daily as required.	One horse spring-cart.	75 0 0	1886. 31 Dec.
3 Sept. ...	[a]182	James Brown	Bourke	Railway Station and Post Office, Bourke.	Once or oftener daily as required	Vehicle, two or more horses.	44 15 0	1887. 31 Dec.
3 Sept. ...	[b]183	Cobb & Co.	Sydney	Byrock, *Tarcoon*, and Brewarrina.	Three .	....	560 0 0	1886. 31 Dec.
1 Oct. ..	[a]184	A. Francisco.....	Cobar	Cobar and Necarbo . . .	One	... .	100 0 0	Contract to terminate at three months notice on either side.
				SUBURBAN ROAD.				
1 Oct. ...	[b]1	James Flannery	128 Dowling-street.	General Post Office, Sydney, and Wharfs; and General Post Office, Sydney, and Redfern Railway Station.	On arrival and departure of English mails.	.. .. ..	150 0 0	Contract to terminate at one months' notice on either side.
				NORTHERN ROAD.				
1 Dec. ..	[p]253	Matthew Hall	Manilla... ...	Manilla and Bendemeer, via Old Currindi, Ukolan, Mundoway, Thom's, Cain's, Glen Barra, Watson's Creek Tin Mines, Longford's, Hanning's, and Blair's.	One	.....	59 0 0	Contract to terminate at three months' notice on either side.

(a) New line (b) New arrangement (c) Increased communication (d) In lieu of No 176, Northern Roads, in general list. (e) In lieu of No 16, Northern Roads, in general list (f) In lieu of No 18, Northern Roads, in general list (g) Contract cancelled, 30th November. (h) In lieu of portion of No 117, Western Roads, in general list (k) In lieu of portion of No 118, Western Roads, in general list. Contractor allowed to substitute for this contract a weekly service to and from Hillston, "Mountain Well Hotel," and Mount Hope, with a branch mail to and from "Mountain Well Hotel," Murroopa, Coombie, Merriwa Tank, Merribong, Merrimerriwa, and Yathong, from 16 September (l) In lieu of No 120, Northern Roads, in general list. (m) In lieu of No. 234, Southern Roads, in general list. (r) Contract cancelled, 2 September. ( ) In lieu of No 1, Suburban Roads, in general list. (p) In lieu of No. 253, Northern Roads, in general list.

G.

RETURN showing the Names of the various BRANCHES, the Dates of their ESTABLISHMENT, the Number of ACCOUNTS OPENED, the Number of ACCOUNTS CLOSED, and the Total Number and Amount of DEPOSITS and WITHDRAWALS, during the year 1885; and the Amount at Credit of DEPOSITORS on the 31st December, 1885.

Name of Branch	Date of establishment	Number of Accounts open at close of 1884	Number of Accounts opened during 1885	Number of Accounts closed during 1885	Number of Accounts remaining open at close of 1885	Balance on 31st December, 1884	Total Deposits, including Interest		Total Withdrawals		Balance at credit of Depositors at close of 1885.
							Number	Amount	Number	Amount.	
						£ s d		£ s d		£ s d	£ s d
Sydney (C O) ..	1 Oct, 1871	9,161	5,358	4,674	9,845	3,463 6 9 376,889 16 7	29,712	331,518 12 2	18,174	299,137 4 8	412,734 11 8
,, Shipping Master	1 April, 1876	1			1	25 10 5		1 0 0			26 10 5
Aberdeen	11 Dec, 1871	47	10	3	54	615 16 11	52	214 15 8	13	146 18 6	683 14 1
Adaminaby	12 July, 1875	43	11	10	44	703 4 11	33	274 14 4	19	262 3 4	715 15 11
Adelong	11 Dec, 1871	144	46	47	143	2,927 16 0	316	1,895 3 5	136	1,688 12 1	3,134 7 4
Albury	1 Oct, 1871	393	213	139	467	8,605 19 7	1,307	7,349 17 1	417	6,442 15 8	9,513 1 0
Anvil Creek	1 Mar, 1877	48	35	18	65	989 2 5	164	1,297 13 4	63	810 11 9	1,476 4 0
Arakoon .	1 Mar, 1882	21	10	20	11	423 12 8	48	553 16 6	39	804 3 2	173 6 0
Araluen	1 Sept, 1872	22	12	7	27	326 15 1	54	332 10 9	23	83 6 1	575 19 9
Armidale	1 Oct, 1871	661	175	147	689	18,469 8 5	1,344	10,833 2 3	595	10,476 6 7	18,826 4 1
Ashfield	1 Feb, 1875	170	146	81	235	2,861 5 6	786	3,122 18 10	296	2 527 9 5	3,456 14 11
Ballina	1 Sept, 1872	87	51	38	100	1,035 2 10	210	1,677 19 7	115	1,141 14 10	1,571 7 7
Balmain	1 Oct, 1871	903	546	362	1,087	13,284 0 1	3,595	14,149 18 11	1,247	11,537 5 10	15,896 13 2
Balranald	1 July, 1882	68	48	37	79	659 4 5	276	999 13 7	79	771 13 7	887 4 5
Barmedman	22 May, 1884	25	12	13	24	600 17 10	70	531 5 1	50	691 17 1	440 5 10
Barraba	2 Sept, 1881	11	8	6	13	38 11 9	30	170 17 6	10	67 18 2	141 11 1
Bathurst .	1 Oct, 1871	787	330	279	838	22,099 3 8	2,227	16,679 15 5	950	14,729 8 0	24,049 11 1
Bega	1 Sept, 1872	161	88	53	196	2,459 14 10	358	2,653 1 1	132	1,648 19 8	3,463 16 3
Belmont	12 Jan, 1881	6	9	3	12	9 6 8	24	145 19 11	5	37 12 9	117 13 10
Berrima	1 Oct, 1871	81	20	28	73	1,918 4 6	137	856 10 3	48	804 7 0	1,970 7 9
Bethungra	22 May, 1884	8	9	8	9	160 3 1	81	283 10 10	16	309 15 4	133 18 7
Binalong	1 Feb, 1875	11	4	6	9	405 0 0	38	245 13 1	17	286 11 1	364 2 0
Bingera	,, ,,	32	13	13	32	313 12 5	81	593 9 7	30	399 5 6	507 16 6
Blayney	1 April, 1878	58	79	44	93	1,058 10 9	235	1,956 13 11	151	1,336 6 6	1,678 18 2
Bodalla	2 July, 1875	80	28	25	83	1 609 9 2	113	995 4 7	46	726 11 2	1,878 2 7
Bombala	11 Dec, 1871	64	14	7	71	1,022 2 10	73	522 4 7	27	249 4 7	1,295 2 10
Bomen	2 Dec, 1878	13	3	4	12	198 19 11	19	99 9 6	10	90 19 5	207 10 0
Botany	1 Sept, 1874	83	30	30	88	622 16 1	340	996 16 11	89	717 2 10	905 10 2
Bourke	,, ,,	150	173	129	194	2,295 6 6	618	4,852 11 8	287	3,196 16 4	3,951 1 10
Bowenfells	1 Feb, 1875	49	4	4	49	661 6 3	44	280 11 1	19	144 9 11	797 7 5
Bowning	2 Sept, 1881	11	8	6	13	162 11 10	21	213 6 5	8	87 7 4	288 10 11
Bowrall	1 Sept, 1883	100	62	44	118	1 223 9 5	385	2,243 6 11	120	1,354 14 3	2,112 2 1
Braidwood	1 Oct, 1871	143	40	29	154	1,885 1 11	253	2,270 15 11	97	977 2 6	3,178 15 4
Branxton	1 Sept, 1874	64	25	18	71	2,016 4 1	91	343 13 10	23	226 6 7	215 5 0
Brewarrina	22 May, 1884	14	17	17	14	97 17 9	93	848 4 2	61	888 14 2	1,975 14 1
Broughton Creek	1 Jan, 1880	92	16	27	81	1,121 9 8	162	755 14 8	49	789 3 2	1,088 1 2
Brushgrove	1 July, 1882	28	16	8	36	211 16 3	85	495 12 2	23	327 1 3	380 7 2
Bulahdelah	1 Mar, 1878	35	14	6	43	1,409 0 2	55	835 1 1	14	406 18 10	1,837 2 5
Bulli	4 June, 1877	200	118	92	226	6,451 9 8	720	6,247 15 8	257	4,070 19 5	8,628 5 11
Bundanoon	22 Sept, 1879	48	9	14	43	980 18 10	88	574 5 9	49	724 8 11	830 15 8
Bundarra	1 Jan, 1874	49	16	7	58	485 15 7	53	320 10 2	14	172 8 6	633 17 3
Bungendore	22 May, 1884	67	97	73	91	1,141 0 7	342	3,255 11 2	154	1,939 9 5	2,457 2 4
Bungwall Flat	8 Oct, 1880	52	15	11	56	822 8 5	78	1,064 7 9	51	773 15 11	1,113 0 3
Burraga	22 May, 1884	13	10	6	17	332 7 4	31	406 18 11	18	368 17 2	370 9 1
Burrawang	8 Oct, 1880	48	11	9	50	660 8 9	77	537 6 5	28	598 18 0	598 17 2
Burrowa	12 July, 1875	55	24	12	67	574 4 9	110	447 6 4	42	369 5 1	652 6 0
Burwood	1 Sept, 1872	183	97	65	215	1 918 18 6	519	2,380 16 5	188	1,795 19 6	2,503 15 5
Camden	1 Oct, 1871	227	38	54	211	4 927 9 6	311	1,600 15 11	94	2,198 2 3	4,420 3 2
Campbelltown	,, ,,	242	39	65	216	7,497 17 11	310	3 677 10 5	251	3,957 5 3	7,218 3 1
Camperdown	11 Dec, 1871	163	162	96	229	1,345 1 9	1,035	3,203 6 5	357	2,302 0 7	2,246 7 7
Candelo	2 Sept, 1881	16	2	6	12	84 1 9	9	18 11 9	12	64 18 2	37 15 4
Cannonbar	12 July, 1875	16	1	6	11	1,038 10 9	14	412 13 8	10	213 6 4	1,237 18 1
Canowindra			19	1	18		78	152 5 6	4	75 9 9	76 15 9
Carcoar	22 Sept, 1872	46	115	53	108	670 2 5	299	2,786 12 8	120	1,457 17 5	1,998 17 8
Cargo	22 May, 1884	11	8	4	15	81 9 11	28	62 15 3	8	77 11 9	66 13 5
Carroll . .	1 Mar, 1883	6	4	1	9	25 7 3	10	52 16 6	1	10 0 0	68 3 9
Casino	1 Feb, 1875	34	29	8	55	738 0 3	89	852 3 1	30	490 18 6	1,099 4 10
Cassilis	1 Sept, 1872	76	11	14	73	2,782 10 11	70	912 14 7	37	868 9 5	2,826 16 1
Charlestown	1 Aug, 1879	44	28	27	45	260 5 3	144	764 5 8	56	435 14 1	588 16 10
Chatsworth Island	4 June, 1877	75	42	32	85	1,167 11 1	138	1,238 9 11	75	1,058 10 2	1,347 10 10
Clarence Town	8 Oct, 1880	11	8	4	15	262 16 7	59	127 7 4	13	280 15 6	109 8 5
Clifton	12 Jan, 1881	120	223	150	193	2,795 17 3	690	7,800 16 6	357	4,520 18 1	6,075 15 8
Cobar	2 Sept, 1881	186	135	211	110	7,079 7 7	594	5,751 12 10	322	6,293 3 2	6,537 17 3
Cobargo	2 Dec, 1878	41	12	10	43	510 3 11	71	406 0 3	27	373 11 7	542 12 7
Condobolin	,, ,,	27	17	8	36	491 15 5	75	471 5 1	37	379 16 8	583 3 10
Cooma	1 Oct, 1871	158	58	30	186	1,989 3 7	286	1,728 13 0	70	874 0 11	2,843 15 8
Coonabarabran	12 July, 1875	68	9	11	66	897 8 8	43	176 2 0	17	291 0 9	782 9 11
Coonamble	8 Oct, 1880	46	23	26	43	629 16 10	118	648 10 7	48	541 2 5	737 5 0
Cooranbong	12 July, 1875	17	67	26	58	287 19 1	148	2,163 14 10	56	683 12 6	1,768 1 5
Cootamundra	1 Mar, 1877	200	112	95	217	5,502 14 0	533	5,233 5 11	285	4,125 7 11	6,610 12 0
Copeland North	1 Mar, 1878	46	16	20	42	1,009 18 2	83	959 16 4	57	855 14 6	1,114 0 0
Corowa	14 Nov, 1881	108	39	41	106	1 337 5 10	224	1,734 11 11	75	953 12 8	2,118 5 1
Cow Flat	1 Sept, 1874	42		4	38	1,679 6 6	17	147 5 6	27	585 12 10	1,240 19 2
Cowra	1 Sept, 1874	58	48	33	73	885 3 3	157	1,231 6 8	91	780 15 11	1,335 14 0
Crookwell	8 Oct, 1880	40	18	12	46	377 8 8	92	241 2 1	20	185 2 3	433 8 6
Cudal			42	7	35		209	534 18 5	23	334 0 1	200 18 4
Cundletown			12	2	10		21	140 5 8	3	30 0 4	110 5 4
Darlington	1 Sept, 1882	97	159	96	160	811 0 9	1,015	3,649 14 8	318	2 130 5 5	2,330 10 0
Deniliquin	11 Dec, 1871	245	78	90	233	4,405 5 8	509	2,521 7 4	190	2,446 11 7	4,480 1 5
Denman	1 Jan, 1874	24	1	4	21	299 8 8	8	65 6 4	9	170 19 11	193 15 1
Dubbo	11 Dec, 1871	387	155	164	378	10,679 10 10	941	7,980 8 7	545	7,525 3 7	11,134 15 10
Dungog	1 Sept, 1874	61	30	12	79	997 11 1	100	624 11 5	27	361 0 2	1,261 2 4
East Maitland	1 Oct, 1871	76	45	21	100	2,009 3 6	243	1,597 16 8	94	1,167 18 4	2,439 1 10
Euabalong	1 April, 1880	12	8	6	14	241 10 6	24	198 10 7	11	116 14 11	323 6 2
Eden	1 Jan, 1874	36	7	8	35	1,489 4 4	32	547 17 3	38	724 18 4	1,312 3 3
Emmaville	1 Sept, 1874	186	70	37	219	4,914 8 9	332	4,073 16 9	140	2,446 9 10	6,541 15 8
Fernmount	1 Sept, 1872	73	14	7	80	1 391 3 5	44	282 1 3	19	446 17 5	1,226 7.
Forbes	11 Dec, 1871	178	61	36	203	2,681 0 6	304	2,112 3 8	89	1,101 16 0	3,691 8 2
Forster	1 Mar, 1883	58	21	10	69	647 5 11	152	677 0 0	23	313 18 2	1,010 7 9
George street West	11 Aug, 1873	944	543	530	957	19,702 8 4	3,551	17,682 2 6	1,640	17,282 13 11	20,101 16 11
Germanton	12 July, 1875	27	8	8	27	201 3 7	59	102 19 3	24	238 17 9	65 5 1
Gerogery	1 July, 1882	9	4	2	11	84 1 9	21	103 14 9	4	17 12 2	170 4 4
Gerringong	1 Jan, 1880	4	1		5	62 4 8	8	17 4 4	2	12 0 0	67 9 0
Girilambone	22 May, 1884	17	20	17	20	254 19 2	72	1,096 17 4	44	749 0 9	602 15 9
Gladstone	1 Sept, 1872	31	8	6	33	766 15 1	32	348 0 11	16	298 17 4	815 18 8
Glebe	1 Oct, 1871	315	203	177	341	3,815 1 8	1,177	5,379 5 0	570	4,747 0 11	4,447 5 9
Glen Innes	1 Sept, 1874	407	208	210	405	11,829 15 4	1,030	10,291 18 7	506	9,221 19 1	12,899 14 10
Gongolgon	1 July, 1882	21	6	7	20	70 1 3	34	270 19 11	11	55 11 9	285 9 5
Goonoo Goonoo	,, ,,	22	9	4	27	332 12 9	41	332 7 3	22	293 13 8	371 6 4
Gosford	1 Sept, 1874	91	159	71	179	2,038 0 2	486	5,045 13 10	187	2,674 11 6	4,409 2 6
Goulburn .	1 Oct, 1871	544	283	237	590	15,158 11 8	1,664	12,419 9 10	717	10,360 11 1	17,217 10 5
Grafton .	,, ,,	127	49	54	122	3,839 8 8	255	2,480 11 1	152	2,339 8 5	3,980 11 4
Granville	1 Jan, 1880	78	127	57	148	1,102 10 4	558	2,631 2 8	206	1,418 6 0	2,315 7 0

Name of Branch	Date of establishment	Number of Accounts open at close of 1884	Number of Accounts opened during 1885	Number of Accounts closed during 1885	Number of Accounts remaining open at close of 1885	Balance on 31st December, 1884	Total Deposits, Including Interest		Total Withdrawals		Balance at credit of Depositors at close of 1885
							Number	Amount	Number	Amount	
						£ s d		£ s		£ s d	£ s d
Grenfell	15 Jan, 1872	89	25	20	94	1 489 16 8	119	11 20 4 3	57	637 18 11	1 972 2 0
Gulgong	,, ,,	108	32	40	100	2,872 17 0	166	1 188 12 5	152	1,700 7 5	2,361 2 0
Gundagai	11 Dec, 1871	94	113	54	153	1,855 14 3	362	4 224 0 7	138	2,041 18 5	4,037 16 5
Gunnedah	12 July, 1875	144	33	44	133	4,820 18 11	233	2,394 2 4	116	2,489 11 1	4,725 10 2
Gunning	14 Nov, 1881	66	12	14	64	1,326 9 7	122	978 8 10	45	356 11 1	1,948 7 4
Hamilton	1 Sept, 1883	48	41	14	75	336 7 1	229	745 10 11	54	630 1 1	451 16 11
Harden	1 Sept, 1883	26	31	18	39	641 17 11	136	841 17 2	45	808 15 9	674 19 4
Harris street	1 Oct, 1871	237	193	146	284	3,928 2 6	1,766	5 032 7 10	526	4,732 1 1	4,228 9 3
Hartley Vale			43	15	28		159	1,090 0 2	30	347 6 0	742 14 2
Hawkes Nest			10		10		14	23 3 4			23 3 4
Hay	1 June, 1876	306	166	140	332	5,384 5 4	818	5,163 14 9	292	4,445 13 11	6,102 6 2
Haymarket	1 Mar, 1877	2,570	1,956	1,576	2,950	76,304 6 6	11,353	85,165 12 4	5,316	71,895 5 9	89,574 13 1
Hexham	1 Feb, 1875	15	5	7	13	169 9 6	20	181 6 11	12	175 12 4	175 4 1
Hill End	1 Jan, 1874	204	26	37	193	6,198 16 8	305	1,912 8 7	179	2,587 11 0	5,523 14 3
Hillston	1 Jan, 1880	30	7	3	34	533 10 0	53	414 11 1	21	241 10 10	706 10 3
Homebush	2 Sept, 1881	16	14	5	25	134 3 0	87	284 13 3	30	129 6 4	289 9 11
Home Rule	1 Jan, 1874	29	7	2	34	824 7 8	27	331 12 7	27	413 15 1	742 5 2
Inverell	1 Sept, 1874	168	36	43	161	2,209 13 4	223	1,264 13 0	81	1,091 0 3	2,383 6 1
Ivanhoe	22 May, 1884	7	6	3	10	27 18 0	30	50 0 8	5	46 7 9	31 10 11
Jamberoo	11 Aug, 1884	7	8	3	12	28 18 10	41	174 16 8	8	124 3 9	79 11 9
Jindera			13		13		26	110 11 3	1	17 0 0	93 11 3
Joadja Creek	22 May, 1884	19	20	10	29	558 5 0	99	855 5 5	34	309 7 8	1,104 2 9
Junee Junction	1 July, 1882	71	60	51	80	1,739 18 9	304	2,466 4 6	147	1,997 9 5	2,208 13 10
Kangaroo Valley	22 May, 1884	5	21	5	21	62 1 10	54	181 13 4	7	83 7 6	160 7 8
Katoomba			42	14	28		100	735 16 7	48	327 2 10	408 13 9
Kempsey	1 Feb, 1875	74	38	34	78	1,748 4 10	166	1,672 10 10	85	1,634 8 5	1,786 7 3
Kiama	1 Oct, 1871	241	127	115	253	4,704 0 2	708	3,394 11 4	297	2,994 12 5	5,103 19 1
Kiandra	1 Sept, 1883	35	11	23	23	629 3 6	45	271 10 10	38	707 8 6	193 5 10
King street	1 Mar, 1878	316	363	288	391	8,773 10 5	2,052	12,071 13 9	981	10,288 5 4	10,556 18 10
Lake Cudgellico	2 Sept, 1881	9	1	4	6	195 13 1	13	182 14 9	8	139 9 5	238 18 5
Lambton	1 Sept, 1874	218	130	109	239	6,993 9 10	619	5,063 13 11	321	5,563 15 6	6,493 8 3
Lawrence	22 May, 1884	11	17	11	17	75 6 8	68	357 15 4	21	117 4 2	315 17 10
Leichhardt	15 June, 1882	130	181	101	210	1,002 4 11	887	2,886 10 11	311	2,500 19 2	1,387 16 8
Lidsdale	12 July, 1875	48	11	15	44	1,860 18 1	82	812 12 10	40	775 8 2	1,898 2 9
Lismore	,, ,,	131	72	42	161	1 528 19 1	257	1,833 13 4	98	849 17 11	2,512 14 6
Lithgow	2 Dec, 1878	322	169	126	365	9,784 6 11	909	9,357 10 9	367	7,211 9 11	11,930 7 9
Liverpool	1 Oct, 1871	304	100	121	283	9,085 9 10	828	5,358 11 7	377	5,316 16 4	9,127 5 1
Lochinvar	12 July, 1875	24	2	6	20	402 14 4	20	96 9 7	8	164 1 0	335 2 11
Lower Gundagai	1 Dec, 1881	26	5	5	26	568 0 7	25	455 14 5	30	348 10 1	675 4 11
Macdonaldtown	1 Mar, 1882	45	50	27	68	447 8 2	372	525 0 11	85	426 13 10	545 15 3
Maclean		91	103	53	141	2,658 1 11	413	3,354 19 4	133	2,278 12 9	3,734 8 6
Major's Creek	1 Sept, 1875	76	40	12	104	1,188 14 4	269	1,893 19 6	70	680 9 11	2,402 3 11
Manilla	2 Sept, 1881	36	39	21	54	341 6 10	185	856 10 1	51	427 10 2	770 6 9
Manly	1 Feb, 1875	134	118	79	173	553 18 7	759	2,573 2 8	245	2,076 19 2	2,050 2 1
Marengo	1 July, 1882	20	6	3	23	136 2 5	35	202 16 7	18	96 15 5	242 3 7
Marrickville	1 Mar, 1882	84	87	50	121	1,234 17 8	532	2 091 6 5	155	1,388 4 6	1,937 19 7
Marsdens	22 May, 1884	28	12	10	30	234 4 3	82	257 13 10	15	180 7 6	311 10 7
Marulan	10 April, 1875	39	7	6	40	453 1 7	34	253 11 4	11	84 11 7	622 1 4
Maryvale	1 Mar, 1883	13	6	7	12	145 18 4	57	79 6 11	15	160 8 6	64 16 9
Meranburn	1 July, 1882	20	4	5	19	72 17 2	17	83 14 7	8	55 18 8	100 13 1
Merimbula	1 Jan, 1874	35	9	8	36	684 0 5	92	493 1 3	16	372 1 7	805 0 1
Merriwa	1 Sept, 1874	17	23	12	28	434 3 3	74	481 17 4	27	433 3 1	482 17 6
Miller's Point	6 Feb, 1878	797	299	202	894	11,425 15 9	2,960	16,324 2 3	1,256	12,590 11 4	15,159 6 8
Millthorpe	22 Sept, 1879	16	5	2	19	245 18 2	29	455 18 5	10	170 17 8	530 18 11
Milton	1 Jan, 1874	63	14	15	62	1,119 17 8	52	250 0 10	20	226 9 4	1,143 9 2
Minmi	1 June, 1876	176	101	67	210	6,918 15 6	523	4,866 2 9	190	4,047 8 5	7,737 9 10
Mitchell			52	17	35		127	1,238 0 9	38	345 11 2	892 9 7
Mittagong	1 Sept, 1872	211	49	54	206	7,080 14 10	319	3,116 7 11	175	3,274 1 9	6,923 1 0
Moama			12	3	9		25	247 8 5	3	24 3 6	223 4 11
Molong	1 Oct, 1871	94	50	31	113	1,281 10 7	281	1,503 8 6	103	1,309 0 8	1,475 18 5
Moree	1 April, 1880	49	29	15	63	675 2 5	97	809 5 0	46	486 0 4	998 7 1
Morpeth	1 Oct, 1871	185	50	37	198	5,697 1 8	278	2,503 3 11	117	2,179 0 5	6,021 5 2
Moruya	1 Jan, 1874	92	32	38	86	2,044 0 6	156	1,209 8 7	69	1,063 6 9	2,190 2 4
Mossgiel	12 Jan, 1881	22	9	6	25	432 8 9	51	248 17 7	14	185 8 6	495 17 10
Moss Vale	1 Sept, 1876	105	36	27	114	1,355 11 1	164	1,168 15 11	65	738 7 4	1,785 19 8
Mount Hope	1 July, 1882	23	34	17	40	813 15 9	122	914 11 1	39	704 13 2	1,023 13 8
Mount Victoria	1 Aug, 1876	82	26	15	93	2 615 18 8	209	1,891 2 4	89	1,816 4 8	2,690 16 4
Mudgee	1 Oct, 1871	151	34	45	140	3,357 11 6	314	2,184 9 2	147	2,209 14 10	3,332 5 10
Murrumburrah	1 Mar, 1877	163	46	62	147	4,558 8 5	387	4,681 6 10	177	3,756 12 4	5 483 2 11
Murrurundi	1 Oct, 1871	163	59	47	175	4 398 10 1	320	2,487 6 6	112	1,828 15 8	5,057 0 11
Muswellbrook	11 Dec, 1871	143	46	21	168	2,967 2 6	275	2,094 6 9	105	1,671 9 9	3,389 19 6
Narrabri	2 June, 1873	146	62	55	153	2,718 12 3	305	1,485 0 2	144	1,384 4 8	2,819 7 9
,, Railway Station	11 Aug, 1884	6	11	3	14	99 6 5	76	367 9 4	11	111 9 8	355 6 1
Narrandera	1 July, 1882	140	85	73	152	3,628 11 2	433	3,415 16 1	187	2,559 19 10	4,484 7 5
Nelligen	12 July, 1875	30	6	10	26	256 13 4	43	243 5 10	20	193 0 1	306 19 1
Newcastle	1 Oct, 1871	1,615	966	743	1 838	51 016 13 11	5,638	43,040 18 2	2,270	39,483 14 2	54,574 17 11
Newtown	1 Oct, 1871	1,984	10,36	753	2,267	28,817 13 10	6,800	24,822 7 8	2,473	27,594 18 10	36 045 2 8
Nowra	22 Sept, 1879	104	44	32	116	1,777 14 5	267	1,897 0 9	115	1,306 1 6	2,368 13 8
Numba	12 July, 1875	39	6	7	38	782 7 9	42	399 11 1	15	348 9 5	833 9 5
Nundle	1 Sept, 1874	52	4	8	48	698 1 3	21	231 15 9	18	318 7 10	611 9 2
Nymagee	1 July, 1882	76	89	47	118	2,475 11 9	507	3,414 17 5	121	2,312 1 5	3,578 7 9
Nyngan		60	50	47	63	1,366 17 3	269	1,844 8 8	136	1,503 6 6	1,707 19 5
Oberon	1 July, 1882	15	11	5	21	400 17 11	40	477 6 6	18	235 9 6	642 14 11
O'Connell	12 Jan, 1881										
Orange	11 Dec, 1871	523	267	222	568	10,602 14 9	1,358	10,173 19 1	623	8,800 1 8	11,976 12 2
Oxford street	11 Aug, 1873	2,485	758	643	2 600	50 267 7 4	8,057	44,223 0 7	3,796	41,869 6 8	52,621 1 3
Paddington	,, ,,	872	403	334	941	11,681 15 7	3 518	15,250 17 8	1,272	12,732 7 10	14,200 5 5
Pambula	1 Mar, 1883	15	9	4	20	303 3 1	42	283 6 3	15	290 0 11	296 8 5
Parkes	1 Jan, 1874	125	37	28	134	2,959 18 3	199	1,175 5 3	84	1,398 10 5	2 736 13 1
Park street	20 May, 1878	771	613	538	846	15,757 18 3	3,929	21,710 4 9	1,785	18 795 15 4	18 672 7 8
Parramatta	1 Oct, 1871	718	420	350	788	15,530 19 8	2,525	15,630 15 10	1,037	12,829 5 0	18,332 10 6
Paterson	12 July, 1875	24	11	4	31	122 0 0	17	107 5 0	6	43 3 7	186 1 5
Peat's Ferry	22 May, 1884	18	149	72	95	272 11 7	377	3,896 4 7	158	1,438 0 5	2,730 15 9
Pelican Flat	8 Oct, 1880	27	22	13	36	498 6 1	58	408 1 1	38	293 0 4	613 6 10
Penrith	1 Oct, 1871	227	113	74	266	4,798 14 8	720	4,583 16 8	239	3,833 16 11	5,548 14 5
Petersham	1 Feb, 1875	199	77	66	210	2,813 12 5	528	2,560 1 3	248	2,090 18 6	3,282 15 2
Picton	1 Sept, 1874	180	78	39	219	3,935 15 1	430	2,644 6 11	153	2,081 4 2	4,498 17 10
Pilliga	2 Sept, 1881	19	6	6	19	127 12 6	45	292 3 10	14	196 5 3	223 11 1
Port Macquarie	11 Dec, 1871	129	33	32	130	5,286 13 4	181	1,501 10 4	67	2,428 0 9	4,360 2 11
Pyrmont	1 Nov, 1882	256	303	216	343	4,301 0 10	1,808	7,290 18 10	694	4,954 9 11	6,637 9 9
Queanbeyan	11 Dec, 1871	93	281	246	128	1 081 1 2	805	8,508 1 7	254	3,984 0 3	5,605 2 6
Quirindi	1 July, 1882	54	48	21	81	1,378 1 2	147	1,147 5 8	60	740 8 6	1,784 18 4
Raymond Terrace	1 Sept, 1872	110	33	26	117	2,580 3 11	215	1 376 14 3	69	1,271 4 9	2,685 13 5
Redfern	1 Oct, 1871	841	545	418	968	16,296 15 8	3,916	18,095 6 2	1,491	14 124 0 1	20,268 1 9
Richmond	1 Dec, 1871	173	57	29	201	2,315 10 3	371	1,588 16 2	100	1,240 6 5	2,664 0 0
Robertson	1 July, 1882	18	11	3	26	142 15 4	42	298 2 0	12	127 13 5	313 3 11
Rockley	1 Jan, 1880	38	11	9	40	463 4 6	70	482 6 3	36	346 16 4	598 14 5
Rookwood	12 July, 1875	49	40	30	59	482 18 4	238	1,003 1 5	62	565 0 2	920 19 7
Rydal	1 Jan, 1874	76	14	8	82	2 895 19 4	105	777 5 0	46	794 19 6	2,878 4 10
Ryde	1 Feb, 1875	168	95	63	200	3 336 4 9	477	3,377 17 2	216	3,211 11 11	3,502 10 0
Rylstone	2 June 1873	104	10	32	82	3,981 10 2	107	1,218 9 3	92	1,248 3 11	3,951 15 6
Scone	11 Dec, 1871	66	30	21	75	1,730 4 9	111	1,118 5 4	62	889 7 0	1,959 3 1
Silverton	22 May, 1885	8	29	15	22	132 14 5	80	994 15 0	30	565 14 2	561 15 3
Singleton	1 Oct, 1871	372	123	83	412	7,094 2 11	718	5,162 4 6	251	3,908 9 10	8,347 17 7

Name of Branch	Date of establishment	Number of Accounts open at close of 1884	Number of Accounts opened during 1885	Number of Accounts closed during 1885	Number of Accounts remaining open at close of 1885	Balance on 31st December, 1884	Total Deposits, including Interest		Total Withdrawals		Balance at credit of Depositors at close of 1885
							Number	Amount	Number	Amount	
						£ s d		£ s d		£ s. d.	£ s d
Sofala	1 Sept, 1874	87	8	15	80	2,015 16 5	101	795 15 11	55	819 15 0	1,991 17 4
South Bowenfells	1 Feb, 1875										
South Grafton	1 Mar, 1883	17	9	9	17	333 13 0	41	264 4 1	12	357 1 5	240 15 8
South Woodburn	1 Sept, 1883	14	29	13	30	85 11 6	111	754 5 4	29	279 9 11	560 6 11
Spring Hill			13	1	12		17	40 11 7	2	34 0 7	6 11 0
St Albans	1 Mar, 1883	11	1	4	8	106 6 5	31	78 13 1	4	154 18 9	30 0 9
St Leonards	1 Feb, 1875	598	423	266	755	8,704 2 7	2,543	11,519 15 3	898	9,802 2 4	10,421 15 6
St Mary's	1 Sept, 1876	58	23	22	59	733 10 0	132	989 4 3	45	516 15 7	1,205 18 8
St Peter's	1 Mar, 1882	51	53	37	67	697 14 2	248	897 3 4	105	820 11 3	774 6 3
Stroud	1 Feb, 1875	63	20	16	67	1,468 14 9	96	769 12 2	45	949 4 5	1,289 2 6
Summerhill	11 Aug, 1884	3	22	8	17	18 11 10	88	254 12 7	24	114 10 10	158 13 7
Surry Hills	15 Sept, 1883	150	230	135	245	1,071 4 1	1,221	3,311 1 8	385	1,935 11 1	2,446 14 8
Tamworth	11 Dec, 1871	496	166	174	488	18,820 3 6	1,168	9,229 10 6	500	9,581 17 9	18,467 16 3
Tarago	22 May, 1884	20	7	5	22	410 18 11	68	432 4 9	39	325 11 6	517 12 2
Taree	1 Feb, 1875	111	31	25	117	1,778 17 1	184	1,478 19 5	115	1,109 6 7	2,148 9 11
Temora	8 Oct, 1880	121	46	49	118	3,399 17 4	553	2,699 5 2	229	2,421 0 8	3,678 1 10
Tenterfield	1 Sept, 1874	238	132	141	229	8,365 11 5	595	7,562 7 2	358	7,370 4 2	8,557 14 5
Terara	1 Sept, 1872	107	17	21	103	2,018 5 10	141	663 3 4	56	888 2 5	1,793 6 9
Tingha	1 July, 1882	31	15	5	41	546 13 3	126	686 6 1	20	394 11 8	838 7 8
Trunkey Creek	1 Feb, 1875	33	6	5	34	965 0 8	44	398 7 1	29	493 19 9	869 8 0
Tumbulgum	1 Sept, 1874	53	34	34	53	1,200 8 5	92	870 6 11	54	1,035 17 7	1,034 17 9
Tumut	1 Feb, 1875	102	26	20	108	851 1 3	149	722 17 5	38	478 8 2	1,095 10 6
Ulladulla	1 Sept, 1872	12	2	1	13	172 0 3	15	62 0 3	3	9 1 0	224 19 6
Ulmarra	12 July, 1875	27	11	6	32	370 13 4	46	475 9 5	14	322 13 4	523 9 5
Ultimo	8 Aug, 1882	213	206	178	241	2,105 1 2	1,421	2,974 18 0	460	2,439 11 0	2,640 8 2
Upper North Creek	12 Jan, 1881	12	2		14	8 1 9	5	5 12 0	1	1 15 0	11 18 9
Uralla	1 Mar, 1878	104	42	32	114	3,114 17 0	251	1,980 14 5	100	1,474 15 0	3,620 16 5
Urana	1 Sept, 1883	34	19	19	34	206 3 0	61	265 2 9	23	185 15 11	285 9 10
Wagga Wagga	11 Dec, 1871	547	252	238	561	12,610 1 3	1,360	9,524 8 6	583	8,793 1 1	13,341 8 8
Walcha	2 Sept, 1881	63	30	9	84	862 6 10	134	640 18 1	20	233 9 10	1,269 15 1
Walgett	8 Oct, 1880	90	22	31	81	1,046 13 6	93	1,059 19 10	56	968 9 2	1,138 4 2
Wallsend	1 Sept, 1874	360	217	184	393	9,159 14 7	1,130	8,308 3 5	448	7,851 9 2	9 616 8 10
Waratah	11 Dec, 1871	67	26	20	73	1,124 16 10	137	954 4 1	63	920 7 1	1,158 13 10
Wardell	1 Jan, 1876	80	50	43	87	1,607 7 5	168	1,063 11 4	125	1,184 3 0	1,986 15 9
Warialda	1 Sept, 1874	36	28	16	48	869 17 7	90	698 5 10	33	530 3 3	1,038 0 2
Warren	1 July, 1882	43	31	19	55	781 16 0	116	723 12 9	43	604 15 10	900 12 11
Waterloo	25 June, 1883	255	325	243	337	3,206 10 10	2,051	6,580 12 3	699	5,060 17 9	4,726 5 4
Watson's Bay	1 Feb, 1875	53	22	25	50	360 12 5	127	536 16 3	61	354 13 6	542 15 2
Waverley	1 Aug, 1876	274	198	125	347	3,577 4 10	1,289	5,456 0 4	393	3,551 19 7	5,481 5 7
Wee Waa	11 Dec, 1871	48	1	3	46	1,368 1 1	26	120 14 1	9	248 17 3	1,239 17 11
Wellington	2 June, 1873	129	64	38	155	3,769 12 2	414	2,510 14 0	140	2,407 3 0	3,873 3 2
Wentworth	1 Mar, 1883	72	40	32	80	1,325 16 9	165	1,178 9 2	66	1,208 7 6	1,295 18 5
West Kempsey	1 Sept, 1874	86	35	32	89	1,869 7 7	162	1,291 19 8	93	1,655 15 10	1,505 11 5
West Maitland	1 Oct, 1871	253	215	153	315	6,082 1 2	997	6,977 2 7	447	5,263 3 6	7,796 0 3
West Tamworth	5 May, 1879	27	19	11	35	807 1 1	80	311 15 4	21	650 18 2	467 18 3
Whitton	22 May, 1884	25	23	11	37	155 2 6	95	591 0 0	23	268 19 11	477 2 7
Wickham	22 May, 1884	55	33	41	97	328 10 9	407	1,563 3 3	108	762 3 6	1,129 10 6
Wilcannia	5 May, 1879	70	71	50	91	1,157 14 6	257	1,817 1 10	111	1,598 9 3	1,376 7 1
Willanthry	2 Sept, 1881	3	4	2	5	12 3 8	4	59 1 4	2	23 3 4	48 1 8
William street	11 Aug, 1873	1,555	698	623	1,630	34,173 13 4	5,207	24,346 19 6	2,113	24,535 17 2	33,984 15 8
Windsor	1 Oct, 1871	95	21	28	88	3,477 8 1	173	1,126 11 11	93	2,316 5 2	2,287 14 10
Wingham	11 Dec, 1871	50	34	9	75	464 7 10	188	604 11 10	21	360 17 1	708 2 7
Wiseman's Ferry	1 July, 1882	54	10	18	46	1,015 5 4	546	592 1 0	27	736 1 10	871 4 6
Wollombi	11 Dec, 1871	48	4	10	42	1,174 17 3	47	391 14 4	20	198 0 9	1,368 10 10
Wollongong	1 Oct, 1871	201	218	111	308	6,018 10 2	857	7,785 14 10	308	4,127 16 6	9,676 8 6
Woodburn	5 May, 1879	20	18	14	24	200 2 2	43	413 6 4	29	201 5 8	412 2 10
Woollahra	8 Feb, 1872	204	134	72	266	2,145 5 8	755	3,033 17 3	242	2,230 6 8	2,948 16 3
Woonona	11 Dec, 1871	77	21	14	84	2,720 0 8	162	1,759 8 3	52	1,051 9 7	3,427 19 4
Yass	8 Sept, 1872	219	63	61	221	3,581 19 1	356	2,220 0 7	154	2,194 9 1	3,607 10 7
Young	11 Dec, 1871	329	241	146	424	7,296 19 5	900	9,059 8 3	352	5,329 15 8	11,026 12 0
Grand Totals		51,389	29,135	22,986	57,538	1,290,931 6 8	170,749	1,201,776 7 3	75,599	1,020,813 12 1	1,471,894 1 11

H.

ACCOUNT of all deposits received and paid from 1st January to 31st December, 1885, together with a statement of the total amount due to all Depositors at the close of 1885.

	£ s. d		£ s. d.
Balance brought forward from 1884 . .	1,290,931 6 8	By amount of Repayments during 1885 ...	1,020,813 12 1
To Cash received from Depositors during 1885	1,152,583 0 8	Balance as per Savings' Bank Ledgers . . 1,467,804 8 1	
Interest added to Depositors' Accounts for 1885	49,193 6 8	Unpaid warrants 4,089 13 10	
			1,471,894 1 11
£	2,492,707 14 0	£	2,492,707 14 0

LIABILITIES AND ASSETS.

	£ s d.		£ s. d.
To Balance due to all Depositors at close of 1885	1,471,894 1 11	By amount of Security in the Treasury Chest, viz .—	
		New South Wales "Four per Cents" ..	296,466 13 11
		Debentures	89,200 0 0
		Cash in hands of Controller . ..	7,100 11 4
		Ditto in Treasury, not invested ...	1,055,727 8 2
		Interest due on balance remaining uninvested to 31st December, 1885, computed at 4% . .	38,203 16 4
Balance (excess of Assets)	16,588 7 10	Interest due on investments to 31st December, 1885	1,784 0 0
£	1,488,482 9 9	£	1,488,482 9 9

PROFIT

PROFIT AND LOSS ACCOUNT.

	£	s	d		£	s.	d.
To Departmental Expenses for 1885	3,500	0	0	Balance from preceding Account . .	15,651	4	10
Interest added to Depositors' Accounts for 1885	49,193	6	8	By amount of Interest on investments in "Four per cents" .. .	15,426	13	4
				Interest due on balance in the Treasury, not invested on 31st December, 1885, at 4%	38,203	16	4
Balance	16,588	7	10				
£	69,281	14	6	£	69,281	14	6

F. W. HILL, Controller,
Money Order and Government Savings' Bank Department,
Sydney, 23rd February, 1886

DANIEL O'CONNOR,
Postmaster-General.

I certify that the foregoing Statement of all Deposits received and paid from 1st January to 31st December, 1885, has been examined and found to correspond with the Books and Accounts of the Government Savings' Bank.

EDWARD A RENNIE,
Auditor-General.

I.

REPORT of the Superintendent of Telegraphs relative to the International Telegraphic Conference held at Berlin in 1885.

I LEFT London for Berlin on the 7th August, 1885, to be present at the opening of the International Telegraphic Conference held in that city on the 10th of same month The first meeting was held on the latter date, which was merely formal, to arrange the details of working, hours of attendance, &c

At the following meeting two committees were formed, one for the revision of the General Regulations for the internal working of the whole telegraph service throughout the world, and the other for re adjusting the tariff of charges.

Germany proposed a universal tariff for the whole of Europe, but this was considered too general, and met with very little response from the larger states, as their revenue from telegraphs would in many cases have been seriously affected. A modified German proposal was then submitted, which was ultimately carried

I was invited with Mr. Murray Smith and Mr Todd to meet the representatives of the cable companies, on several occasions, to discuss and arrange the proposed reduction of rates to Australia, which at first was agreed, subject to certain conditions, to be a reduction of 2s 6d per word for the public and from 6s 5d to 2s 8d reduction to the Press, but these preliminary arrangements were afterwards found to be impracticable in consequence of India objecting to reduce her transit rates over a land line from Bombay to Madras, of some 650 miles, India insisting on a transit rate of 7d per word

The rates ultimately determined upon were, for public messages to Adelaide 8s 8d per word, and for the Press 2s 8d per word, which was a reduction of 20 per cent to the public; but as the Colonies are not in accord as to an extension of the term by six and a quarter years, for the present subsidy of £32,400 per annum, the reduction to the public instead of being 8s. to Adelaide will be only reduced, from 1st July next, by 1s 4d per word, and 2s 8d per word for the Press; this I do not consider a concession on the part of the companies worthy of consideration

The Conference continued their deliberations until the 17th September, when the resolutions were signed by the delegates The new rules, regulations, and tariffs were confirmed, and translations have now reached the Colonies, which will come into operation on the 1st July next

I forward herewith a copy of the International Telegraph Convention with Berlin Revision of Service Regulations, and Tariffs, 1885.

E C CRACKNELL,
27/5/86.

INTERNATIONAL TELEGRAPH CONVENTION WITH BERLIN REVISION OF SERVICE REGULATIONS AND TARIFFS, 1885.

[*Translated by Alfred Brasher, Director of Traffic, Indo European Government Telegraph Department—By permission of the Right Honourable the Secretary of State for India in Council*]

Annexures to the St. Petersburg Convention.—Berlin Revision.

INDEX.

I.—International Service Regulations.

		PAGE
1.	International System	130
2.	General traffic arrangements	131
3.	Manner of writing, and acceptance of telegrams	131
4.	Tariffs .	132
5.	Counting words	134
6.	Payment of charges	135
7.	Transmission of telegrams. . .	135
	a. Signals—	
	A. Morse Signals .	135
	B Hughes Signals	136
	b. Order of transmission	136
	c. Procedure .	137
	d Receipt and official repetitions	137
	e. Routes to be followed	138
	f Interruptions; transmission in duplicate..	138
	g Stoppage of messages; control	138
8.	Delivery at destination	138
9.	Special telegrams	139
	a. Urgent private telegrams	139
	b Prepaid replies	139
	c Collated telegrams	140
	d. Acknowledgments of receipt .	140
	e. Telegrams to follow	140
	f Multiple telegrams	140
	g. Telegrams to places beyond the international lines	141
	h Semaphoric telegrams	141
	i General rules applicable to special telegrams	141
10	Service telegrams	141
11	Telephonic service	142
12	Records ..	142
13	Refunds .	142
14	Accounts	143
15	Reservations	144
16	International office; reciprocal communications .	144
17	Conferences	145
18.	Adhesions. Relations with non adhering Administrations ..	145

II.—Tables of International Tariffs drawn up in execution of article 15 of the Convention and Arts. XVI. to XX Service Regulations.

PAGE.

1. Table A. European System. Rates per word from country to country, fixed in execution of paragraph 2, Regulation XIX
2 Table B Extra European System Rates fixed for the formation of extra-European tariffs, in execution of Regulation XX

Terminal and transit rates per word

Uniform rate for messages between Europe and India

International

International Convention.

Art. 1.

The High Contracting Parties recognise the right of all persons to correspond by means of the international telegraphs.

Art. 2.

They undertake to adopt all necessary measures to insure the secrecy of messages, and their prompt despatch.

Art. 3.

They, however, declare that they accept no responsibility on account of the service of the international telegraphs.

Art. 4.

Each Government undertakes to devote to the international telegraph service special wires, in sufficient number to insure a rapid transmission of telegrams.

These wires shall be established and worked in the best manner that experience in the service has made known.

Art. 5.

Telegrams are classed in three categories :—

1st. Government Telegrams : those which emanate from the Chief of the State, Ministers, Commanders-in-Chief of Land or Sea Forces, and Diplomatic or Consular Agents of the Contracting Governments ; also the replies to such telegrams.

2nd. Service Telegrams : those which emanate from the Telegraph Administrations of the Contracting States, and which relate either to the service of the international telegraphs or to objects of public interest agreed upon between the said Administrations.

3rd. Private Telegrams.

In transmission, Government telegrams take precedence of other telegrams.

Art. 6.

Government and service telegrams may be forwarded on all occasions in secret language.

Private telegrams in secret language may be exchanged between two States which admit that mode of correspondence.

States which do not admit private telegrams in secret language to emanate from, or terminate at, their offices, will allow them to pass in transit, unless the service be suspended, as defined in Art. 8.

Art. 7.

The High Contracting Parties reserve to themselves the power to stop the transmission of any private telegram which may appear dangerous to the security of the State, or which may be contrary to the laws of the country, to public order, or decency.

Art. 8.

Each Government also reserves to itself the power to interrupt the system of the international telegraphs for an indefinite period, if it judges it necessary, either generally, or only upon certain lines and for certain kinds of messages, upon condition that it immediately advises each of the other Contracting Governments.

Art. 9.

The High Contracting Parties engage to enable every sender to profit by the different arrangements agreed upon between the Telegraph Administrations of the Contracting States, for the purpose of giving additional guarantees and facilities for the transmission and delivery of messages.

They also undertake to enable him to profit by the arrangements made and notified by any one of the other States, for the employment of special means of transmission or delivery.

Art. 10.

The High Contracting Parties declare their adoption of the following bases for the formation of International Tariffs:—

The charge for all messages exchanged, by the same route, between the offices of any two of the Contracting States, shall be uniform. In applying this principle, however, a State may be subdivided in Europe into two large territorial divisions, but not more.

The rate of charge is laid down from State to State, under agreement between the terminal Governments and the intermediate Governments.

The charges composing the tariffs applicable to the messages exchanged between the Contracting States may, at any time, be modified by a common agreement.

The franc is the monetary unit employed in the composition of international tariffs.

Art. 11.

Telegrams relating to the international telegraph service of the Contracting States are transmitted free over all the lines of the said States.

Act. 12.

The High Contracting Parties reciprocally owe each other account of the charges which they respectively collect.

Art. 13.

The stipulations of the present Convention are completed by Service Regulations, the provisions of which may be, at any time, modified by common accord by the Administrations of the Contracting States.

Art. 14.

A central office, placed under the superior authority of the chief Administration of one of the Contracting Governments, designated for that purpose in the Service Regulations, is appointed to collect, arrange, and publish information of all kinds relating to international telegraphy, to circulate requests for modifications of tariffs and Service Regulations, to give notice of the changes adopted, and generally to study all subjects, and execute all work entrusted to it in the interest of international telegraphy.

The expenses incurred in working this office are supported by all the Administrations of the Contracting States.

Art. 15.

The Tariffs and Service Regulations provided for by Articles 10 and 13 are annexed to the present Convention. They possess the same value, and come into operation at the same time as the Convention.

They will be subjected to revisions, at which all the States which have taken part in them, will have the right to be represented.

With this object, Administrative Conferences will take place periodically, each Conference fixing the time and place of the next meeting.

Art 16.

These Conferences are composed of delegates representing the Administrations of the Contracting States.

In the deliberations, each Administration has a right to one vote, provided always that when there are different Administrations of the same Government, a request to this effect shall have been made through the diplomatic channel to the Government of the country in which the Conference is to take place, before the date fixed for its opening, and also that each of the different Administrations has a special and distinct representative.

The

The revisions resulting from the deliberations of the Conferences can only come into operation after they have been approved by all the Governments of the Contracting States.

ART. 17.

The High Contracting Parties reserve to themselves respectively the right to make separately, among themselves, particular arrangements of every kind in matters of service which do not interest the generality of the States.

ART. 18.

States which have not taken part in the present Convention will be admitted to adhere to it on their request.

This adhesion will be notified through the diplomatic channel to the Contracting State in which the last Conference was held, and by that State to all the others.

It will convey, with full right, accession to all the clauses and admission to all the advantages stipulated by the present Convention.

ART. 19.

Telegraphic relations with non-adhering States or private Companies, are regulated, in the general interest of the progressive development of communication by the Service Regulations provided for by Article 13 of the present Convention.

ART. 20.

The present Convention will be put into execution from 1st January, 1876, new style, and will remain in force for an indefinite period, or until the lapse of one year from the date of its renunciation.

A renunciation made by any State only affects that State. The Convention remains in force for the other Contracting Parties.

ART. 21, and last.

The present Convention will be ratified and the ratifications exchanged at St. Petersburg with as little delay as possible.

Done at St. Petersburg, the $\frac{10}{22}$ July, 1875.

INTERNATIONAL SERVICE REGULATIONS ANNEXED TO THE TELEGRAPH CONVENTION OF ST. PETERSBURG.—BERLIN REVISION.

Article 13 of the Convention.

The stipulations of the present Convention are completed by Service Regulations, the provisions of which may be, at any time, modified by common accord by the Administrations of the Contracting States.

1. *International System.*

Article 4 of the Convention.

Each Government undertakes to devote to the international telegraph service special wires, in sufficient number to insure a rapid transmission of telegrams.

These wires shall be established and worked in the best manner that experience in the service has made known.

I.

1. Offices between which the exchange of traffic is continuous or very active, are, as far as possible, connected by direct wires of at least 0·197 in. in diameter, if of iron ; if not of iron, they must be equivalent in solidity and electrical conductivity. The service of these wires, relieved from the work of intermediate offices, is as a rule devoted to traffic between the two offices named as their extreme points.

2. The wires may be taken from this special service in case of derangement of the lines, but they should be returned to it as soon as the derangement ceases.

3. The Telegraph Administrations indicate one or more intermediate offices, on each wire, which are obliged to receive messages in transit, when direct transmission between the two terminal offices is impossible.

II.

1. The Administrations co-operate, within the limits of their respective spheres of action, for the protection of the international wires and submarine cables ; they combine their arrangements so that the best results may be obtained from each wire.

2. The Departmental heads of the sections next to the frontiers, communicate with each other direct to insure, as far as they are concerned, the execution of these arrangements.

III.

The Morse and Hughes instruments remain concurrently adopted for the service of the international wires, until a new understanding is effected respecting the introduction of other instruments.

IV.

1. Between important towns of the Contracting States, the service is, as far as possible, permanent, day and night, without interruption.

2. Ordinary offices performing full day duty, are open to the public, at least from 8 a.m. to 9 p.m.

3. The hours during which offices of limited duty are kept open, are fixed by the respective Administrations of the Contracting States. Each State is at liberty to arrange that offices of full day duty shall perform only limited duty on Sundays. It communicates this arrangement to the International Office, which notifies it to the other Administrations.

4. Offices at which the duty is not permanent cannot be closed before transmitting all their international telegrams to an office at which the duty is permanent.

5. Between two offices of different States, communicating by a direct wire, the signal for closing is given by the office belonging to the State whose capital is situated the most to the west.

6. This rule applies to the closing of the diaries, and to the division of the watches, in offices performing permanent duty.

7. The same time is kept by all the offices of each State ; this is generally the mean time of the capital of the State

V.

In documents used in the international service, the following notations are adopted to designate the telegraph offices :—

N. Office performing permanent duty (day and night).

$\frac{N.}{2.}$ Office performing day duty prolonged to midnight.

C. Office performing full day duty.

L. Office performing limited day duty (*i.e.*, open during a number of hours less than the offices performing full day duty).

F. Railway telegraph office open for private messages.
P. Office of a private company.
S. Semaphore station.
E. Office open during the stay of the Court only.
B. Office open during the bathing season only.
H. Office open during the winter season only.
} These notations can be combined with those preceding.

$\frac{L.}{B.C.}$ Office performing full duty during the bathing season, and limited duty during the rest of the year.

$\frac{L.}{H.C.}$ Office performing full duty during the winter, and limited the rest of the year.

* Office closed.

2 *General Traffic Arrangements.*

Article 1 of the Convention.

The High Contracting Parties recognise the right of all persons to correspond by means of the international telegraphs

Article 2 of the Convention.

They undertake to adopt all necessary measures to insure the secrecy of messages, and their prompt despatch.

Article 3 of the Convention.

They, however, declare that they accept no responsibility on account of the service of the international telegraphs.

Article 5 of the Convention.

Telegrams are classed in three categories :—

1st. Government Telegrams : those which emanate from the Chief of the State, Ministers, Commanders-in-Chief of Land or Sea Forces, and Diplomatic or Consular Agents of the Contracting Governments ; also the replies to such telegrams.

2nd. Service Telegrams : those which emanate from the Telegraph Administrations of the Contracting States, and which relate either to the service of the international telegraphs or to objects of public interest agreed upon between the said Administrations.

3rd. Private Telegrams.

In transmission, Government telegrams take precedence of other telegrams.

Article 7 of the Convention.

The High Contracting Parties reserve to themselves the power to stop the transmission of any private telegram which may appear dangerous to the security of the State, or which may be contrary to the laws of the country, to public order or decency.

Article 8 of the Convention.

Each Government also reserves to itself the power to interrupt the system of the international telegraphs for an indefinite period, if it judges it necessary, either generally, or only upon certain lines and for certain kinds of messages, upon condition of its immediately advising each of the other Contracting Governments.

3. *Manner of Writing and Acceptance of Telegrams.*

Article 6 of the Convention.

Government and service telegrams may be forwarded on all occasions in secret language.

Private telegrams in secret language may be exchanged between two States which admit that mode of correspondence.

States which do not admit private telegrams in secret language to emanate from, or terminate at, their offices, will allow them to pass in transit unless the service be suspended, as defined in Art. 8.

VI.

1. Telegrams may be written in plain language, in preconcerted language, or in cipher.

2. The body of telegrams in preconcerted language, or in cipher, may contain one or more passages in plain language. In this case, the passages in preconcerted language or in cipher should be placed between parentheses, separating them from the parts in plain language which precede or follow.

VII.

1. Telegrams in plain language must offer an intelligible sense in any one of the languages used in the territories of the Contracting States, or in Latin.

2. Each Administration designates, amongst the languages used in the territories of the State to which it belongs, those which it considers suitable for international telegraphic correspondence in plain language.

3. Service telegrams are written in French, unless the Administrations concerned have arranged for the use of another language.

4. This rule applies to the instructions in the preamble, and to service notices which accompany the transmission of messages, as also to the cases provided for in paragraphs 5 and 6 of Regulation X.

VIII.

1. By preconcerted language is understood the employment of words which, while presenting in the case of each an intrinsic sense, do not form phrases intelligible to the Administrations engaged in transmission.

2. These words are extracted from vocabularies admitted for international messages in preconcerted language.

3. Telegrams in preconcerted language must contain only words of ten characters at most, belonging to the English, French, German, Italian, Dutch, Portuguese, Spanish and Latin languages. Each telegram may contain words taken from all the abovementioned languages.

4. Proper names cannot be employed in the composition of codes. They are only admitted in telegrams in preconcerted language, with their signification in plain language.

5. The original sending office can demand the production of the vocabulary, for the purpose of controlling the execution of the preceding regulations, and verifying the authenticity of the words employed.

IX.

1. The following are considered as telegrams in cipher :—

a. Those which are composed of figures or of letters having a secret meaning.

b. Those which contain either any series or groups of figures or letters, the meaning of which may not be understood by the original sending office, or words, names, or collections of letters, not fulfilling the conditions required for plain language (Regulation VII), or preconcerted language (Regulation VIII).

2. The part in cipher must be composed exclusively of letters of the alphabet, or exclusively of Arabic figures.

3. Extra-European Administrations are authorized to decline to admit upon their lines private telegrams containing letters which have a secret meaning.

X.

1. The telegram to be transmitted should be legibly written in characters which have their equivalents in the official table of telegraph signals (Regulation XI), and which are in use in the country where the telegram is presented.

2. The body of the message should be preceded by the address, which may be written in a preconcerted or abbreviated form. But the faculty accorded to a receiver to have a telegram thus addressed delivered to him must depend upon an arrangement made between such receiver and the telegraph office. Every address must contain at least two words, the first representing the address of the receiver, the second indicating the name of the terminal telegraph office.

3. Each of the contracting Administrations has the power to accept or refuse an originating telegram without $\frac{\text{text}}{\text{body}}$; but the transit and delivery at destination of such telegrams is obligatory upon all Administrations.

4. The signature may be similarly abbreviated or omitted. When it forms one of the words to be transmitted, it should be placed after the body of the message. When it is omitted, the last word of the message takes its place in indicating the telegram in official communications relating to it.

5. The sender should write on the form, immediately before the address, his instructions relative to delivery at destination, prepayment of reply, acknowledgment of receipt, to its being an urgent or collated telegram, to its being a telegram to follow, to be delivered open, &c.

6. These instructions may be written in the abbreviated form adopted for the official instructions between the offices. In this case they are placed between parentheses, and each instruction is counted as one word only. When they are expressed in ordinary language, they should be written in French.

7. Every interlineation, reference, erasure, or alteration, must be authorised by the sender of the telegram or by his representative.

XI.

The characters available for the composition of telegrams are as follows :—

Letters.

A, B, C, D, E, É, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z.

Figures.
1, 2, 3, 4, 5, 6, 7, 8, 9, 0.

Punctuation and other Signs.

Full stop (.), comma (,), semicoln (;), colon (:), note of interrogation (?), note of exclamation (!), apostrophe ('), hyphen, (-), parenthesis ( ), inverted commas ("), bar of division (/), underline.

Official Codes.

Urgent private telegram, D; paid service, ST; reply paid, RP; reply paid urgent, RPD; $\frac{\text{collated}}{\text{repeated}}$ telegram, TC acknowledgment of receipt, CR; telegram to follow, FS; post paid, PP; post registered, PR.; express paid, XP.; estafette paid, EP; telegram delivered open, RO.

By the Morse Instrument only.

The letters: Ä, A, or Á, N, Ö, Ü.

By the Hughes Instrument only.
The signs: cross (+), double hyphen (=)

XII.

1. The address should contain all the particulars necessary to insure the delivery of the telegram at its destination. With the exception of personal names, these particulars should be written in French, or in the language of the country to which the telegram is addressed.
2. The address of private telegrams should always be such that delivery to the receiver can be effected without difficulty, or the necessity of making inquiries.
3. For large towns, it should comprise the name of the street and the number; or, in default of these particulars, the name of the profession of the receiver, or similar information.
4. For small towns even, the name of the receiver ought, if possible, to be accompanied by information sufficient to guide the delivering office, in case of any alteration of the proper name.
5. The name of the terminal country is essential whenever doubt is possible as to the direction to be given to the telegram.
6. Telegrams containing addresses which are not in accordance with the conditions of the preceding paragraphs, should nevertheless be transmitted.
7. In all cases, the sender supports the consequence of insufficiency of address.

XIII.

1. Government telegrams should bear the seal or stamp of the authority that sends them. This formality is not exacted when the authenticity of the telegram can give rise to no doubt.
2. The right to return a reply as a Government telegram is recognised on production of the original Government telegram.
3. Telegrams from Consular Agents who are engaged in commerce, are not considered as Government telegrams, except when they are addressed to an official personage, and when they relate to official affairs. Telegrams which do not fulfil the last-named conditions are not, however, refused by the sending office, but the latter immediately reports them to the central Administration.

XIV.

1. In service telegrams the signature is not transmitted; these telegrams are addressed in the following form :—

Paris from St. Petersburg.
Director-General to Director-General.

2. In service notices exchanged between the offices relative to contingencies of transmission, the service is sent with a number only, and without address or signature.

XV.

1. The sender of a private telegram is bound to prove his identity, when requested to do so by the sending office.
2. He has, on his side, the power of including in his telegram the legalisation of his signature. He may have the legalisation transmitted either as written, or by the formula: "*Signature legalised by . . . .*"
3. The office satisfies itself that the legalisation is genuine. Except when the signature is known to it, the office cannot regard it as authentic unless it is accompanied by the seal or stamp of the legalising authority. In all other cases, it must refuse to accept or transmit the legalisation.
4. The legalisation, as transmitted, enters in the number of words charged for. It is placed after the signature of the telegram.

4. *Tariffs.*

Article 10 of the Convention.

The High Contracting Parties declare their adoption of the following bases for the formation of international tariffs:

The charge for all messages exchanged by the same route, between the offices of any two of the Contracting States, shall be uniform. In applying this principle, however, a State may be subdivided in Europe into two large territorial divisions, but not more.

The rate of charge is laid down from State to State, under agreement between the terminal Governments and the intermediate Governments.

The charges composing the tariffs applicable to the messages exchanged between the Contracting States may, any time, be modified by a common agreement.

The franc is the monetary unit employed in the composition of international tariffs.

Article 11 of the Convention.

Telegrams relating to the international telegraph service of the Contracting States are transmitted free over lines of the said States.

XVI

The tariff for the telegraphic transmission of international traffic is composed of :—
a. The terminal rates of the original and final Administrations.
b. The transit rates of intermediate Administrations, if any.

XVII.

The rate is fixed per word pure and simple; each Administration may, however, collect the rate in the form most convenient to it, but under the conditions set forth in Regulation XXI.

XVIII.

1. For European traffic, one and the same elementary terminal rate only, and one and the same elementary transit rate only, are adopted for all the States.
2. The elementary terminal rate is fixed at ten centimes.

3. The elementary transit rate is fixed at eight centimes.

4. These two elementary rates are reduced respectively to six centimes and a half and to four centimes for the following States :—Belgium, Bosnia-Herzegovina, Bulgaria, Denmark, Greece, Luxemburg, Montenegro, the Netherlands, Portugal, Roumania, Servia, and Switzerland.

5. Other States of the European system possess equally the power to reduce their terminal rates for all or a portion of their traffic.

6. Nevertheless, Russia and Turkey, owing to the exceptional conditions which affect the establishment and maintenance of their lines, have the power to apply higher terminal and transit rates than the elementary rates above mentioned.

7. A special transit rate may be fixed, in each particular case, for transmission by submarine cables.

XIX.

1. The tariff to be collected for traffic between two countries is, on all occasions and by all routes, the tariff of the existing route which, by the normal application of the elementary rates, produces the lowest figure, subject to the exceptions which may arise from the application of clause 7 of the preceding Regulation.

2. Table A, annexed to the present Regulations, sets forth the tariff from country to country, in accordance with the above stipulations and the declarations accepted by the Conference.

XX.

For extra-European traffic, the tariff is fixed in conformity with table B, also annexed to the present Regulations.

XXI.

1. The charges collected under Regulations XVI to XX, may be rounded, by an increase or decrease, either after application of the normal rates per word fixed in accordance with the tables annexed to the present Regulations, or by an increase or decrease of those normal rates, to suit the monetary or other convenience of the original country.

2. Alterations made in execution of the preceding paragraph apply only to the charges collected by the original office, and in no way affect the division of the rates due to the other Administrations concerned. They must be so regulated that the difference between the rate collected for a telegram of fifteen words and the exact rate, calculated in conformity with the tables, by means of the equivalents in the following paragraph, shall not exceed one-fifteenth of the latter rate.

3. The following are the maximum amounts collected for a franc :—

In Germany, 0·85 of a mark.
In Austria and Hungary, 50 kreuzers (Austrian value).
In Bosnia-Herzegovina, 50 kreuzers (Austrian value).
In Bulgaria, 1 lei.
In Cochin-China, ·22 of a piaster.
In Denmark, 0·80 of a krone.
In Egypt, 3 piasters 34 paras, tariff money.
In Spain, 1 peseta.
In Great Britain, 10d.
In Greece, 1·20 drachma, or 1·08 new drachma.
In British India, 0·53 of a rupee.
In Italy, 1 lira.
In Japan, 0·24 silver yen.
In Montenegro, 50 kreuzers (Austrian value).
In Norway, 0·80 of a krone.
In the Netherlands and Dutch East Indies, 0·50 of a florin.
In Persia, 26 schahis.
In Portugal, 200 reis.
In Roumania, 1 lei.
In Russia, 0·25 of a metallic rouble.
In Servia, 1 dinar.
In Siam, 3 fuangs.
In Sweden, 0·80 of a krone.
In Turkey, 4 piasters, 13 paras, 1 aspre medjidies.

4. Payment may be demanded at metallic value.

XXII.

1. Alterations of the rate or bases of application of the tariffs which may be agreed upon between interested States, by virtue of paragraph 4 of Article 10 and of Article 17 of the Convention, should have for object and effect, not the creation of competition in charges between existing routes, but, on the contrary, the opening of as many routes as possible to the public at equal charges ; and the necessary combinations should be so made that the terminal rates of the first and final Administrations remain equal, no matter what route is followed.

2. No new charge, no modification of either a general or partial character affecting the tariffs, shall come into operation before the lapse of, at least, fifteen days after its notification by the International Office, the date of notification not included.

XXIII.

1. Telegraph Administrations and offices adopt all necessary measures to diminish, as much as possible, the number and length of service telegrams, to which the privilege of free transmission is accorded by Article 11 of the Convention.

2. Information not of an emergent nature is asked for or given through the post, by prepaid letters.

XXIV.

1. Every rectifying or completing telegram, and every communication exchanged between two telegraph offices, at the request of a sender or receiver, respecting a telegram already transmitted, or in course of transmission, is a service telegram charged for at ordinary rates.

2. The sender or receiver of any telegram may, within an interval of seventy-two hours, following departure or arrival, as the case may be, request the correction of any words which may appear to him to be doubtful. The following sums must be deposited :—

(*a*) If the request is made by the sender, the price of a telegram containing the number of words to be repeated, and the price of a reply if he desires one.

(*b*) If the request is made by the receiver—1st. the price of a telegram conveying it ; 2nd. the price of a telegram for the reply.

3. Telegrams sent in the case provided for under the letter *b*, in the preceding paragraph, are expressed in the following form :—

"Calcutta from London ST (*paid service*), RP4 (*the figure* 4 *comprises the number of words to be repeated, say* 3 *plus one word for the name of the receiver of the telegram to be corrected*), twenty-six (*date of telegram to be corrected*), BROWN (*receiver's name*). Repeat first, fourth, ninth (*words of the body of the original telegram to be corrected*)."
Or else: "Repeat word (or . . . words) after . . . . ."

The reply takes the following form :—"London from Calcutta ST (*paid service*), BROWN (*receiver's name*), albatross, scrutiny, commune (*the three words of the original telegram, the repetition of which is asked for*)."

4. These telegrams rank with service telegrams and bear the prefix ST.

5. Charges collected for rectifying telegrams are refunded if the original telegram was a $\frac{\text{collated}}{\text{repeated}}$ telegram, and the repetition shows that the word or words repeated were incorrectly rendered in the original. In a case in which some of the words were correctly rendered in the original telegram and some incorrectly, the portion of the charges, corresponding to the number of words employed, in the application and reply, to obtain the repetition of the words correctly rendered in the original telegram, is not refunded.

6. The refund of the charges for rectifying telegrams relating to non-collated telegrams, is optional with the Administration which sends the requests for rectification.

7. No refund is due on account of the original telegram which caused the request for rectification.

8. When the words which have to be repeated are written in a doubtful manner, the original office sends after the repetition a service notice advising the delivery office of the circumstance and requesting that the immediate refund be deferred.

9. Charges collected for rectifying telegrams and for replies to them, remain entirely in the hands of the Administration which collected them, and are not entered in the international accounts.

XXV.

1 When a sender, availing himself of the power accorded to him by Regulation XLII, indicates a circuitous route, he must pay the sum of the normal transit rates, calculated in accordance with Reg XVIII, and the tables specified in Regs XIX and XX above

2 The indication of the route written by the sender is transmitted in the preamble, as an official instruction, and is not charged for

3 The Administrations of the Contracting States undertake to avoid, as far as possible changes of rates arising from interruption of submarine cables

5 *Counting Words.*

XXVI

1 All that the sender writes in his telegram, to be transmitted, is included in reckoning the cost, except as stated in paragraph 9 of the following Regulation, and in paragraph 2 of Regulation XXV

2 Words, numbers, or signs added by the office, in the interest of the service, are not charged for.

3 The name of the original sending station, and the date, hour, and minute of the deposit of the message, are officially written on the copy delivered to the receiver

4 The sender can insert these particulars, wholly, or in part, in the body of his telegram In which case they enter in the number of words charged for.

XXVII.

1. The maximum length of a word is fixed at fifteen characters, according to the Morse alphabet; any excess up to fifteen additional characters, is counted as a word

2 For extra European traffic, the maximum is fixed at ten characters

3 Nevertheless, in both the European and the extra European systems, but only in the address, the name of the delivery office and the name of the country in which the telegram has to be delivered are counted respectively as one word only, no matter how many characters are employed, on condition that these proper names are written as they appear in the official nomenclature of the International Office

4 Words joined by a hyphen are counted as so many separate words

5 Words separated by an apostrophe are counted as so many separate words

6 Combinations or alterations of words contrary to the usage of the language are not admitted Nevertheless, proper names of towns and persons, names of places, boulevards, streets, &c , the names of ships, and numbers written at length, are counted for the number of words employed by the sender to express them

7 Numbers expressed in figures are counted at the rate of five figures to a word, plus one word for any excess The same rule applies in counting groups of letters For extra European traffic, the number of words to which a group of figures or letters corresponds, is obtained by dividing the figures by three, and adding if necessary a word for the remainder

8 Every separate character, whether letter or figure, is counted as a word The same applies to an underline

9 Signs of punctuation, hyphens, apostrophes, inverted commas, parentheses, fresh paragraphs, are not counted. On extra European lines the transmission of these signs is not obligatory

10 Decimal points and commas used in the formation of numbers and bars of division, are each counted as a figure.

11. Letters added to figures to form ordinal numbers are each counted as a figure

12 The counting of the original sending office is decisive as regards the number of words both in transmission and in the international accounts Nevertheless, when the telegram is expressed in the language of the delivery office and contains combinations of words contrary to the usage of such language, the latter office has the power of recovering from the receiver the amount of insufficient charge, which remains in the hands of the final Administration When this power is exercised, the telegram is not delivered to the receiver until the supplementary charge is paid The sender is informed by a service notice, in case the payment is refused

XXVIII

The following examples determine the interpretation of the rules to be followed in counting words, subject to the exception provided for in § 3 of the preceding regulation —

[Equivalents]	Description of Traffic European	Description of Traffic Extra European
Responsibility (14 characters)	1 word	2 words
Kriegsgeschichten (15 characters)	1 ,,	2 ,,
Inconstitutionality (19 characters)	2 ,,	2 ,,
A t il	3 ,,	3 ,
Today (without hyphen) .	1 ,,	1 ,,
That's to say	4 ,,	4 ,,
Weston Super-Mare	3 ,,	3 ,,
Westonsupermare (15 characters)	1 ,,	2 ,,
Newyork	1 ,,	1 ,,
New-York	2 ,,	2 ,,
Frankfort on Main	3 ,,	3 ,,
Frankfort a/M	2 ,,	2 ,,
Frankfortmain	1 ,,	2 ,,
Rio de Janeiro	3 ,,	3 ,,
Riodejaneiro (12 characters)	1 ,,	2 ,,
New South Wales	3 ,,	3 ,,
Newsouthwales (13 characters)	1 ,,	2 ,,
Van de Brande	3 ,,	3 ,,
Vandebrande (11 characters)	1 ,,	2 ,,
Du Bois	2 ,,	2 ,,
Dubois	1 ,,	1 ,,
Belgrave Square	2 ,,	2 ,,
Belgravesquare (14 characters)	2 ,,	2 ,,
Hyde Park	2 ,,	2 ,,
Hydepark	2 ,,	2 ,,
Hydepark Square	2 ,,	2 ,,
Hydeparksquare (14 characters)	2 ,,	2 ,,
St James Street	3 ,,	3 ,
Saintjames Street	2 ,,	2 ,,
Portland Place	2 ,,	2 ,,
Rue de la paix	4 ,,	4 ,,
Rue delapaix	2 ,,	2 ,,
Princeofwales (ship)	1 ,,	2 ,,
44½ (5 figures and signs)	1 ,,	2 ,,
444⅓ (6 ,, ,,)	2 ,,	2 ,,
444,5 (5 ,, ,,)	1 ,,	2 ,,
444,56(6 ,, ,,)	2 ,,	2 ,,

[Equivalents]	Description of Traffic European	Description of Traffic Extra European
10 pounds 10 shillings	4 words	4 words.
10s 10d	3 ,,	3 ,,
10s 10d	2 ,,	3 ,,
Rs 793,8	3 ,,	3 ,,
11 R 10	1 ,,	2 ,,
11, 10	2 ,,	3 ,,
The 17th	3 ,,	3 ,,
The 1529th	1 ,,	2 ,,
44/2	1 ,,	1 ,,
44/	1 ,,	2 ,,
2%	3 ,,	3 ,,
2 p%	2 ,,	2 ,
Eight /10	2 ,,	2 ,
5/ twelfths	2 ,,	2 ,,
5 bis	2 ,,	2 ,,
5 ter	2 ,,	2 ,,
54 58	3 ,,	4 ,
30th power of*	4 ,,	4 ,,
15 multiplied by 6*)	4 ,,	4 ,,
Deux cent trente quatre	2 ,,	2 ,,
Deuxcenttrentequatre (20 characters)	5 ,,	5 ,,
Two hundred and thirty four	2 ,,	3 ,,
Twohundredandthirty four (23 characters)	1 ,,	1 ,,
E	2 ,,	2 ,,
E M	2 ,,	2 ,,
Emmthf (six letters)	1 ,,	2 ,,
Tmrlz (five letters)	2 ,,	2 ,,
CH22 (trade mark)	2 ,,	2 ,,
ADVGMY (,,)	1 ,,	2 ,,
AP/M (,,)	2 ,,	2 ,,
3/M (,,)	4 ,,	4 ,,
C,H F 45 (,,)	9 ,,	9 ,,
The matter is urgent ; leave at once (7 words and 2 underlines)†		

XXIX.

* Telegraph instruments cannot reproduce such expressions as 30^a, 30 × 6 (sign of multiplication) &c Senders should be requested to substitute the meaning at length, as "15 multiplied by 6 &c

† The signal for an underline is transmitted before and after each word or passage to be underlined

XXIX

In telegrams containing preconcerted language or cipher language, the plain words are counted in conformity with paragraphs 1 to 6 of Regulation XXVII. Words in preconcerted language are counted according to the rules laid down in paragraph 3 of Regulation VIII. Groups of figures or letters and words, names, or collections of letters, not admissible in plain or preconcerted language, are counted according to the rules laid down in paragraphs 7 to 11 of Regulation XXVII.

6. *Payment of Charges.*

XXX.

1. Charges for messages are prepaid, except as provided for in the following cases, *i.e.*, the supplementary charge for messages to follow (Reg. LVI, § 6), the charge for express (Reg. LX, § 1), and the charge for semaphoric telegrams (Reg. LXII, § 6), which are collected by the delivery office.

2. The sender of an international telegram has the right to request a receipt for it, showing the amount paid.

3. The sending office is entitled to charge and retain a booking fee for this service within the limits of a quarter of a franc.

4. In every case where charges have to be collected on arrival, the telegram is only given over to the addressee upon payment of the amount due.

5. If the charges to be collected by the delivering office are not recovered, the loss is borne by that office, except where special agreements have been concluded in conformity with Art. 17 of the Convention, and except also in the cases provided for by Regulations LVI and LXII hereafter, for the retransmission of telegrams to follow and for semaphoric telegrams.

6. Telegraph Administrations take, however, as far as possible, the necessary measures in order that charges due on delivery which are not paid by the addressee, be recovered from the sender. When such recovery is effected the department which effects it credits the department interested with the amount.

XXXI.

1. Insufficient charges collected in error, and charges or expenses not recovered from the addressee in consequence of his refusing to pay them, or of its being impossible to find him, should be completed by the sender.

2. On the other hand, charges erroneously collected in excess are returned. No return, however, is made on account of an excess of stamps used by the sender unless he applies for it.

7. *Transmission of Telegrams.*

a. Signals.

XXXII.

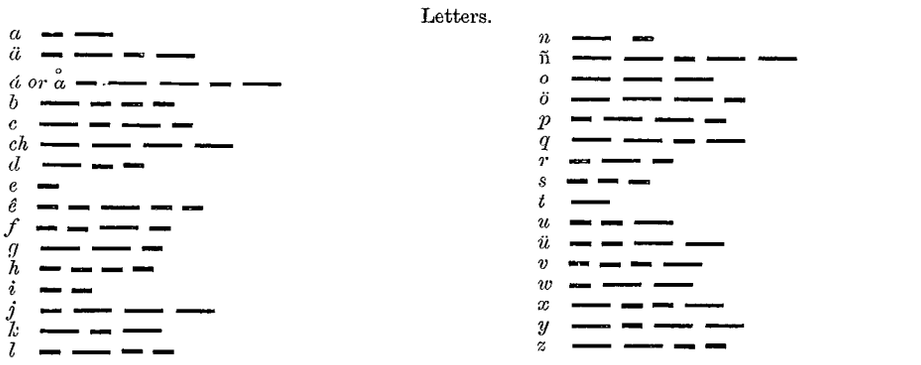
The following tables show the signals employed in working the Morse and Hughes instruments.

A. Morse Signals.

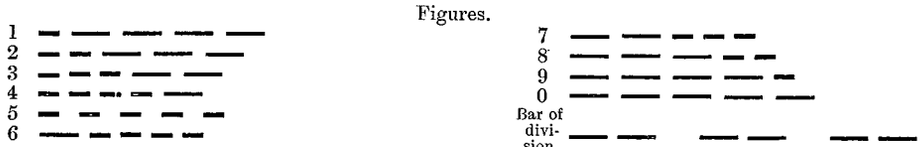
Length of signals and spacing.

1. A bar is equal to 3 dots.
2. The space between the signals which form the same letter is equal to 1 dot.
3. The space between two letters is equal to 3 dots.
4. The space between two words is equal to 5 dots.

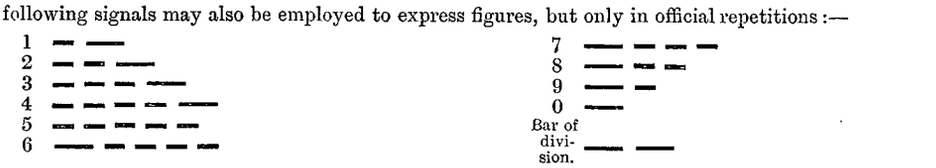
Letters.



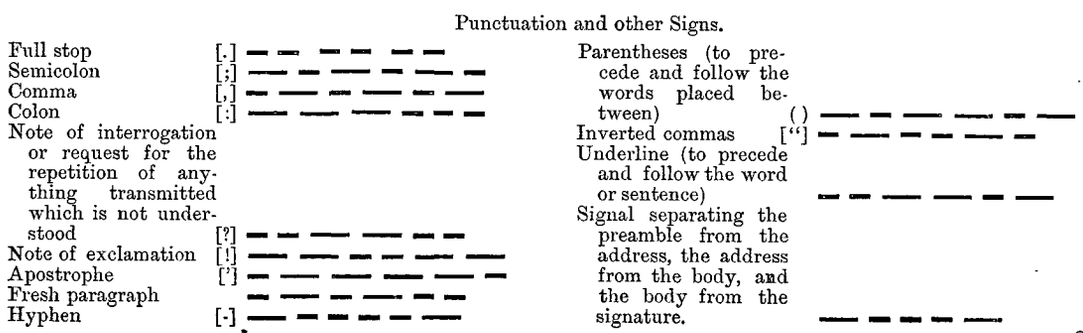
Figures.



The following signals may also be employed to express figures, but only in official repetitions :—



Punctuation and other Signs.



Official

Official Instructions.

Government telegram	— — —	Post paid	— — — — — — — —
Service ,,	— —	Post registered	— — — — — — —
Urgent private telegram	— — —	Express paid	— — — — — — — —
Non-urgent private telegram	— — — —	Estafette paid	— — — — —
Paid service	— — — —	Telegram delivered open	— — — — — —
Reply paid	— — — — — — —	Call signal (preliminary of every transmission)	— — — — —
Urgent reply paid	— — — — — — — — — —	Understood	— — — — —
Collated telegram, Repeated	— — — — —	Error	— — — — — — — —
Acknowledgment of receipt	— — — — — — —	End of transmission	— — — — —
Telegram to follow	— — — — — —	Request to transmit	— — — — — —
		Wait	— — — — —
		Receipt finished	— — — — — — — —

B.—Hughes Signals.

Letters.

A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z.

Figures.

1, 2, 3, 4, 5, 6, 7, 8, 9, 0.

Punctuation and other signs.

Full stop, comma, semicolon, colon, note of interrogation, note of exclamation, apostrophe, cross +, hyphen, accented é, bar of division /, double hyphen =, parenthesis left (, parenthesis right), &, inverted commas ".

The space between two numbers is marked by two blanks. In transmitting and collating a fractional number which is not a decimal, the whole number must be separated by a blank from the numerator of the vulgar fraction which follows. (Example : 1 3/4, and not 13/4.

Words and sentences underlined are preceded and followed by two hyphens. (Example : —— —— *without delay* —— ——), and are underlined by hand by the receiving clerk.

Official Instructions.

Government telegram	S.
Service ,,	A.
Urgent private ,,	D.
Non-urgent private telegram	P.
Paid service	ST.
Reply paid	RP.
Urgent reply paid	RPD.
Collated telegram	TC.
Acknowledgment of receipt	CR.
Telegram to follow	FS.
Post paid	PP.
Post registered	PR.
Express paid	XP.
Estaffette paid	EP.
Telegram delivered open	RO.

To call or answer a station : give blank and N alternately.

To adjust the synchronism and to ask with that object for a continued repetition of the same signal : give blank, I, and T, as many times as may be necessary.

To request or facilitate the adjustment of the electro-magnet : give blank, I, N, and T, repeated as many times as necessary.

To give wait : give A T T, followed by the probable duration of the wait.

To indicate an error : give two or three N's without any sign of punctuation.

To interrupt transmission : give two or three letters of any kind with sufficient space between them.

Accents upon the letter E are made by hand with a pen or pencil at the end of the words (with or without s) when they are essential to the sense. (Ex. "*Achète acheté*"). In the latter case, the sending clerk repeats the word after the signature, and shows the accented E in it between two blanks, in order to impress it upon the attention of the receiving office. For ä, ö, and ü,—ae, oe, and ue are signalled.

b. Order of Transmission.

XXXIII.

1. The transmission of telegrams takes place in the following order :—

a. Government telegrams.
b. Service ,,
c. Urgent private ,,
d. Non-urgent private telegrams.

2. Every office which receives by an international wire a telegram presented as a Government or service telegram, retransmits it as such.

3. Service notices emanating from the different offices and relating to contingencies of transmission, circulate throughout the international system in the same manner as service telegrams.

XXXIV.

1. A telegram commenced cannot be interrupted to give place to a communication of superior rank, except in case of absolute emergency.

2. Telegrams of the same rank are transmitted by the original sending offices in the order of their deposit by the senders, and by the intermediate offices in the order of their reception.

3. At intermediate offices, local telegrams and transit telegrams which have to be sent by the same wires, are placed together and transmitted without distinction, according to the time received at the office.

4. Between two offices in direct communication, telegrams of the same rank are transmitted in alternate order.

5. This rule, and that in paragraph 1 of Regulation XXXIII may, however, be departed from in the interest of quickness of transmission, on lines where the traffic is continuous, or which are worked by special instruments.

XXXV.

1. On the Morse instrument, Government telegrams, service telegrams, and urgent private telegrams are not counted in the alternate order of transmission.

2. The transmission of telegrams by the Hughes instrument is effected by alternate series. The heads of the two offices in communication fix the number of telegrams, of whatsoever class they may be, constituting each series. In doing this they take account of the length of the telegrams and exigencies of service. No series may, however, comprise more than ten telegrams. Telegrams of the same series are considered as forming a single transmission, which should not be interrupted, except in case of great emergency. As a general rule, any telegram of two hundred words or upwards is considered as forming an entire series. This mode of transmission may be applied in signalling by the Morse instrument on important lines where the work is continuous ; but in this case a series must not comprise more than five telegrams, and any telegram containing one hundred words or upwards is considered as forming a series.

3. The office which has transmitted a series has a right to continue if on finishing the series it comes upon a Government or service telegram, or an urgent private telegram which possesses the right of priority, unless the office which has just received, has already commenced to transmit in its turn.

4. By either instrument, when the transmission of a telegram or of a series is finished, the office which has received, transmits in its turn, if it has a telegram; if not, the other continues. If there is nothing further to transmit on either side, the two offices give each other reciprocally the signal *Zero*.

c. Mode of Proceeding.

XXXVI.

1. All correspondence between two offices commences by the call signal, or the code of the office called.

2. The office called must reply immediately, giving its code [name], and if it is prevented from receiving, adding the signal for wait, followed by a figure indicating in minutes, the probable duration of the wait. If the probable duration exceeds ten minutes, a reason should be given.

3. No office called has the power of refusing to receive any telegrams offered, no matter what their destination may be. In case, however, of obvious error, the sending office is bound to rectify it immediately it is pointed out by a service notice from the receiving office.

4. Nor must any telegram be refused or delayed on account of the official instructions not being regular. It must be received, and then if necessary a service notice must be forwarded to the original sending office requesting the rectification, in conformity with Regulation LXVI hereafter.

XXXVII.

1. When the office which has just called receives, without further signal, the code of the office which replies, it transmits in the following order the official instructions, constituting the preamble of the telegram :—

a. Description of telegram, by means of one of the letters S, A, D, when it is a Government telegram, a service telegram, or an urgent private telegram.
b. Name of office of destination.*
c. Name of the original sending office, preceded by the word *from*. [Example : *Paris from Brussels.*)†
d. Number of the telegram.
e. Number of words.

(In cipher telegrams this is done as follows :—

1st, the total number of words chargeable ;
2nd, the number of words in ordinary language ;
3rd, if requisite, the number of groups of figures or of letters.)

f. Time of deposit of telegram, (by three numbers, date, hour, and minute, with $\frac{\text{A.M.}}{m}$ or $\frac{\text{P.M.}}{s}$ added.

In signalling by the Morse instrument, the notices a.m. or p.m. as well as the date, may be omitted, when there can be no doubt respecting them.

In transmitting by the Hughes instrument, the date is signalled in the form of a fraction, the numerator indicating the day and the denominator the month.

g. Route to be followed (when the sender has specified it in writing in his telegram) (Regulation XXV, § 2, and XLII, § 5) ;
h. Any instructions which the sender is not bound to include in the paid portion of his message, such as : duplicate, &c. (Reg. XLIV, § 7) ; charges to be collected (Reg. LVI, § 8) .. ... addresses (Reg. LVIII, § 3) ; semaphoric telegram (Reg. LXII, §§ 5 and 6).

The instructions indicated by the letters b, d, and f, are not obligatory on extra-European lines.

2. After the preamble above specified, follow in succession, the sender's instructions, when necessary, between parenthesis (Reg. X, § 6), the address, the body of the telegram, and the signature.

3. In telegrams transmitted by the Morse instrument, the sign for separation (— — — — —) is placed between the preamble and the address, between the address and the body, and between the body and the signature—the whole terminating by the signal of "end of transmission" (— — — — —).

4. In telegrams transmitted by the Hughes instrument, a double hyphen (=) is employed to separate the preamble from the address, the address from the body, and the body from the signature—and each telegram is terminated by a (+).

5. Instructions expressed in the official codes are also preceded and followed by the signal (=) on the Hughes instrument, and by the signal (— — — — —) on the Morse instrument.

6. If the sending clerk perceives that he has made an error, he should stop, give the signal for error, repeat the last word sent correctly, and continue from there the corrected transmission.

7. In the same manner, if the receiving clerk receives a word he cannot make out, he should interrupt the sending clerk by the same signal, and repeat the last word understood, followed by a note of interrogation. The sending clerk then continues the transmission from that word, doing his utmost to render his signals as plain as possible.

8. With the exception of the cases determined upon by the different Administrations in concert, it is forbidden to employ any abbreviation whatsoever in transmitting the contents of a telegram, or to modify the contents in any way whatsoever. Every telegram should be transmitted as the sender has written it, following his copy.

d. Receipt and Official Repetitions.

XXXVIII.

Immediately after transmission, the clerk who has received compares, in the case of each telegram, the number of words it contains with the number announced, and acknowledges the receipt of the telegram, or of the telegrams constituting a series. The acknowledgment of receipt is given in the following form : *R* . . . . (*number of telegrams received, specifying the first and last number of the series*). Example : R 10 157 980.

XXXIX.

1. In case of a difference in the number of words, he informs the sending clerk of it. If the latter finds he simply made an error in the number announced, he replies *right*, and at the same time gives the correct number.—Example : "18 *right*." If not, he repeats the first letter of each word until he comes to the passage omitted, which is then inserted.

2. When the difference does not arise from an error in transmission, the rectification of the number announced can only be effected by an agreement between the original sending office and the office in correspondence with it. In the absence of such agreement, the number of words announced by the original sending office is admitted.

XL.

1. For the protection of their responsibility, signal clerks are entitled to give or demand the repetition in part or in full of telegrams they have forwarded or received. On the Morse instrument the repetition is made by the clerk who has received, and on the Hughes instrument by the clerk who has forwarded, at the end of the telegram or series. On the Morse instrument, the clerk who gives the repetition must, if there is any correction, reproduce the words or numbers corrected. In case of omission, this second repetition is exacted by the clerk who transmitted. Government telegrams in secret language (figures or letters) must be officially repeated from beginning to end by the receiving office, the same as is done in the case of collated telegrams.

2. When repetition is made of numbers followed by fractions, or of fractions whose numerator consists of two or more figures, the numerator must, in order to avoid confusion, be sent back at length in the form of a word. Thus $\frac{1}{16}$ must be repeated 1 one 16 to distinguish it from $\frac{11}{16}$, and $\frac{13}{4}$ must be repeated thirteen 4 to distinguish it from $1\frac{3}{4}$. 3.

* When the telegram is for a place where there is no telegraph office, the preamble does not specify such place, but the terminal telegraph office by the agency of which the telegram has to be dispatched to its destination, or sent by post.

† The country or geographical situation of the original sending office should be added, 1st. when there is another office of the same name. 2nd. when its opening has not been published by the International Office.

3. Under no pretext can this repetition be delayed or interrupted. When the verification is completed, the office which has received gives to the sending office the signal of *receipt finished*, followed, in the case of a series, by the number of telegrams received.

XLI.

1. Rectifications relative to telegrams of a series previously transmitted, are effected by service notices addressed to the delivering offices. These services state the names and addresses of the receivers.

2. Requests for information relating to a previous series are also made by service notices.

3. Should it happen, in consequence of an interruption, or from any other cause whatsoever, that the repetition cannot be received, this circumstance does not prevent the delivery of the telegram to the addressee, subject to notifying to him the subsequent rectification when necessary.

e. Routes to be followed.

XLII.

1. If the sender does not prescribe the route to be followed, each of the Administrations from which the routes diverge remains judge of the direction by which to forward the telegram.

2. If, on the contrary, the sender has prescribed the route to be followed, the respective Administrations are bound to conform to his instructions, unless the route indicated be interrupted, or transmission by it would seem to involve serious delay, in which cases no complaint can be entertained.

3. The different routes by which telegrams may be transmitted are indicated by concise directions, agreed upon in concert by the Administrations interested.

4. If a sender requests that his message be forwarded by telegraph to a particular office which he specifies, and thence by post to destination, the offices are required to carry out his instructions.

5. The sender who wishes to prescribe the route to be followed must himself write the corresponding direction in the margin of his message. This direction is transmitted in the preamble (Regulation XXV, § 2, and XXXVII, § 1 *g*), but not beyond the point where it ceases to be of use.

f. Interruptions. Transmission in duplicate.

XLIII.

1. When an interruption to the regular means of communication occurs during the transmission of a telegram, the office beyond which the interruption exists immediately sends the telegram by post (official registered letter or by express messenger), or by any more rapid means of transport available, as for example by an indirect telegraph route (Regulation LXXV, § 4). The postal charges are supported by the office which thus despatches the telegram. The cover containing it should have the word *telegram* written on the outside.

2. An office which has recourse to any other means of despatch than the telegraph, addresses the telegram, according to circumstance, either to the nearest telegraph office able to continue its transmission, to the terminal office, or to the receiver direct, if the address is within the limits of the State which thus sends on the telegram. As soon as communication is re-established, the telegram is transmitted afresh by telegraph, unless its receipt has been previously acknowledged, or unless, in consequence of exceptional pressure, its re-transmission would be manifestly injurious to the general traffic.

3. Telegrams for extra-European countries are not sent on by a more expensive route unless the sender has deposited the corresponding charge.

XLIV.

1. Telegrams which for any reason whatever are sent to a telegraph office by post, are accompanied by a numbered abstract. At the same time, the office which sends them gives notice of their despatch to the offiee addressed by means of a service telegram stating the number of telegrams sent and the time of their departure, provided the state of the lines permits of its doing so.

2. Upon the arrival of the packet, the office addressed ascertains that the number of telegrams announced has duly arrrived ; in which case it acknowledges their receipt upon the abstract, and immediately returns it to the sending office. It repeats this acknowledgment as soon as communication by telegraph is re-established, by a service in the following form :—

Received 63 *msesages, as advised in abstract No. . . . . of* 30*th March.*

3. The rules in the preceding paragraph must be equally observed by an office which receives a number of telegrams by post without any notice relating to them.

4. When a packet of telegrams announced does not arrive, the sending office must be immediately advised of it. The latter can, according to circumstances, send afresh by post, or trasmit the telegrams by telegraph, provided later telegrams are not made to suffer.

5. The office which transmits by telegraph, telegrams already forwarded by post, informs the office to which they were directed, by a service notice expressed in the following form :—

Berlin from Goerlitz. Telegrams Nos. . . . . of abstract No. . . . . re-transmitted in duplicate.

6. When, in the case provided for in Regulation XLIII, a telegram is sent direct to the receiver, it is accompanied by a notice of the interruption of the lines.

7. When for any reason whatsoever a telegram already despatched by any other means, as by post, or another wire, is transmitted afresh by telegraph, this re-transmission in duplicate should be made clear by an official instruction in the preamble, thus :

Duplicate. Already forwarded to . . (name of office) the . . . (date) by wire No. . . . (or) via . . (or) by post.

g. Stoppage of Messages—Control.

XLV.

1. Any sender can, by proving his identity, stop, if in time, the transmission of a telegram deposited by him.

2. When the sender withdraws or stops his telegram before transmission has been commenced, the charges are returned to him, less a fixed sum of 5d., the fee of the sending office.

3. If the telegram is already transmitted, the sender's only means of requesting it to be cancelled is by a telegram, for which he must pay. This telegram is, if practicable, transmitted in succession to the different offices to which the original telegram was transmitted, until it rejoins the latter. If the sender has paid for a reply by telegraph, the office which cancels the telegram advises the sending office of it. If no reply has been paid for, it communicates the information by an unpaid letter. The sending office returns to the sender the charges for his first telegram and cancelling telegram, belonging to the distance not traversed.

XLVI.

1. The power reserved under Article 7 of the Convention of stopping the transmission of any private telegram which may appear dangerous to the security of the State, or which may be contrary to the laws of the country, to public order or decency, should only be made use of on condition of immediately advising the Administration to which the original sending office belongs.

2. This control is exercised by the terminal or intermediate offices, subject to recourse to the Central Administration, which decides without appeal.

3. The transmission of Government telegrams takes place by right. Telegraph offices have no control to exercise over them.

8. *Delivery.*

XLVII.

1. Telegrams may be addressed either to the place of residence of the receiver, or poste restante, or telegraph restant.

2. They are delivered or sent to their destination, in the order of their reception or priority.

3. Telegrams addressed to the place of residence, within the delivery limits of the telegraph office, are at once taken their address.

4.

4. Telegrams which have to be deposited poste restante, are immediately posted by the terminal office. If telegrams bear the instruction "post," they are posted as prepaid letters, without charge to sender or receiver, If they bear the instruction "post registered" or "(P.R.)," they are posted as registered letters. having in this case to pay a maximum fee of 50 centimes, belonging to the original Administration

5. Telegrams addressed to passengers of a vessel touching at a port, are delivered, if possible, before their disembarkation.

XLVIII.

1. A telegram taken to the place of residence may be delivered either to the receiver, the adult members of his family, to his employés, lodgers, or landlord, or to the porter of the hotel or house; unless the receiver has designated in writing a special person, or the sender has requested that the message be delivered into the hands of the addressee only. The sender may also request that the telegram be delivered open. The latter mode of delivery is not, however, obligatory upon Administrations which declare their non-acceptance of it.

2. The two latter requests are inserted before the address of the telegram and reproduced in the direction of the message by the delivery office, which gives its messenger the necessary orders for their observance.

3. When a telegram cannot be delivered, the delivery office forwards to the sending office a service notice indicating the cause of non-delivery, in the following form :—

No. . . of the (date and address exactly as received) unknown, refused, not arrived, left, &c.

4. The sending office verifies the correctness of the address, and if it has been erroneously transmitted, rectifies it immediately by a service notice in the following form : *No. . . of (date) for (corrected address), first transmission incorrect.*

5. If not, it, if possible, advises the sender, each Administration being entitled to charge for such communication a fee not exceeding 5d. The sender can only complete, rectify, or confirm, the address by a prepaid telegram.

6. If, in consequence of inexactitude or insufficiency of address, or absence, or refusal of the addressee, any express charges are not recovered at destination, the amount of them is specified in the service, in order that the sender may be requested to pay them. If not defrayed by the sender, the delivery office supports the loss arising from their non-payment.

7. If the door is not opened at the address given, or if the messenger finds no one who will consent to take in the telegram for the receiver, notice is left at the address given, and the telegram is brought back to the office, to be delivered te the receiver upon his application.

8. When the telegram is addressed $\frac{\text{bureau restant,}}{\text{office waiting,}}$ it is only delivered to the receiver, or to a person duly appointed by him.

9. In the cases provided for by paragraphs 7 and 8 of the present Regulation, any telegram which is not claimed by the end of six weeks, is destroyed.

9. *Special Telegrams.*

Article 9 of the Convention.

The High Contracting Parties engage to enable every sender to profit by the different arrangements agreed upon between the Telegraph Administrations of the Contracting States, for the purpose of giving additional guarantees and facilities for the transmission and delivery of messages.

They also undertake to enable him to profit by the arrangements made and notified by any one of the other States, for the employment of special means of transmission or delivery.

a Urgent Private Telegrams.

XLIX.

1. The sender of a private telegram may obtain priority of transmission by writing the word *urgent* or "(D)" before the address, and by paying three times the charge for an ordinary telegram of the same length for the same transit.

2. Urgent private telegrams have precedence of other private telegrams, and their priority amongst themselves is regulated according to the conditions stated in paragraph 2, Regulation XXXIV.

3. The rules in the preceding paragraphs are not obligatory upon Administrations which declare their inability to apply them, either to a portion, or to the whole of the telegrams passing by their lines.

4. Administrations which only accept urgent telegrams in transit, should admit them either on wires where transmission is direct across their territory or in their transmitting offices, between telegrams from the same country and for the same destination. The transit rates due to them are tripled as for the other portions of the journey.

b. Prepaid Replies.

L.

1. Any sender can prepay the reply which he requests his correspondent to return; but the prepayment cannot exceed the tariff of a telegram, of whatever kind it may be, of thirty words for the same transit, unless it be to obtain the repitition of a telegram previously transmitted in conformity with Regulation XXIV.

2. When the sender does not specify the number of words for which he prepays a reply, charge is made for an ordinary telegram of ten words, transmitted by the same route.

3. When he wishes to specify the number of words, the sender must complete the instruction of "Reply paid" or "(RP)," by inserting the number of words, and pay the corresponding amount, within the limits authorised by paragraph 1 of the present Regulation.

4. If the sender of a multiple telegram wishes to prepay the replies which he requests the receivers to return, he must write the notice "Reply paid" or "(RP)" before the address of each receiver whose reply he prepays.

5. If a sender wishes to prepay an urgent reply, he must write before the address the notice "Reply paid urgent" or "(RPD)," and the charge made is for an urgent telegram of ten words by the same route. The sender may, if he wishes, complete his notice by specifying the number of words prepaid for the reply, and pay the corresponding amount within the limit of paragraph 1.

LI.

1. At the place of destination, the delivery office remits to the receiver an order which entitles him to send free of charge, within the limits of the amount prepaid, a telegram to any destination whatever. This order remains in force for six weeks only, counting from its date; after which, it is considered to have lapsed, and the amount prepaid remains to the credit of the delivery office.

2. When the receiver does not make use of the order, the money deposited for the reply is never refunded in the case of European traffic, whilst it may be in the case of extra-European traffic.

3. In the latter case, the receiver must, before the expiration of the limit of six weeks fixed by paragraph 1 of the present Regulation, return the order to the office which delivered it, accompanied by a request for the amount to be reimbursed to the sender.

4. The same course is then followed as in ordinary refunds.

5. If the receiver refuses the order for the reply, the delivery office immediately informs the sender of it by a service notice, which takes the place of the reply.

6. The service notice is forwarded, as a private telegram, in the following form :—

Reply to No.... .... . of . ..... .the receiver has refused.

7. When the telegram cannot be delivered as soon as it arrives, from circumstances provided for in paragraph 3 Regulation XLVIII, a service notice is transmitted in the form prescribed by that paragraph.

8. If their is no rectification, the official reply is forwarded in the same form as above specified, at the end of eight days or before the lapse of that time, when the endeavours made to find the receiver have proved unavailing.

LII.

1. The provisions of the two preceding Regulations are not compulsory upon extra-European Administrations which declare their inability to apply them.

2. In dealing with these Administrations, the money deposited for the reply is placed to the credit of the delivery office, which adopts such means as it considers suitable to enable the receiver to avail himself of it.

c. Repeated / Collated Telegrams.

LIII.

1. The sender of any telegram may request that it be collated, in which case he writes before the address the notice "Repetition" or "(TC)," and the different offices employed in its transmission repeat it to each other integrally.

2. Whatever instrument is used, the repetition is given by the office which receives, and immediately after the transmission of the telegram to be collated.

3. The charge for collating is equal to a quarter of the charge for an ordinary telegram of the same length for the same transit.

d. Acknowledgments of Receipt.

LIV.

1. The sender of any telegram may request that a notice of the time at which it is handed to the receiver be trans mittd to him by telegraph immediately after its delivery. He inserts before the address the notice "Acknowledgment of receipt" or "(CR)."

2. The charge for an acknowledgment of receipt is equal to that of an ordinary telegram of ten words by the same route.

LV.

1. An Acknowledgment of receipt is announced by the abbreviation "(CR)" and transmitted in the following form :—

(*CR.*) *Paris from Berne. Telegram No.* .....*delivered to*.....(*address of receiver*) *the*..... (*date, hour and minute*), (*or reason of non-delivery*).

2. Acknowledgments of receipt have an official No. from the office which sends them. They take precedence of private telegrams.

3. In the case provided for in paragraph 3, Regulation XLVIII, the acknowledgment of receipt is preceded by the service notice required by that paragraph. The acknowledgment of receipt is then despatched, either after the delivery of the telegram, if that has become possible, or after a lapse of twenty-four hours, if delivery has not been effected.

e. Telegrams to follow.

LVI.

1. Any sender may request, by inserting the notice "To follow" or "(FS)" before the address, that the terminal office shall cause his telegram to follow the receiver within the limits of Europe.

2. When a telegram bears the notice *faire suivre* / *to follow* or "(FS)" without further instructions, the terminal office, after presenting it at the address given, retransmits it immediately, if requisite, to the new address supplied at the residence of the receiver. This new address is inserted in the telegram after the first one.

3. If no new address be supplied, it keeps the telegram in the office, observing the provisions of paragraphs 3 and 7 of Reg. XLVIII. If the telegram is retransmitted, and the second office cannot find the receiver at the new address, the telegram is retained by that office.

4. If the notice *faire suivre* / *to follow* or "(FS)" is accompanied by successive addresses, the telegram is successively transmitted to each, until the last, if necessary ; and the last office treats it in accordance with the regulations of the preceding paragraph.

5. The original contents of the telegram to follow should be transmitted in full to the successive delivery offices, and reproduced in the copy addressed to the receiver ; but in the preamble, each office reproduces, as place of destination (Reg. XXXVII, § 1, letter b), only that of the first address to which the telegram has still to be sent.

6. The international charge to be prepaid by the sender for telegrams to follow, is simply the charge calculated to the first terminal office, all the addresses entering in the number of words charged for. The supplementary charges are obtained from the receiver. In the case provided for in paragraph 2 the charge for the new transmission is arrived at by adding the total number of words forming the original message to the number contained in the new address.

7. The charges to be obtained from the receiver for additional transmissions, calculated from the first terminal office indicated in the address, should, at each retransmission, be officially notified in the preamble.

8. This notification is given in the following form : *Charges to be collected*.....*s*.....*d*. If the extra transmissions take place within the limits of the State to which the terminal office belongs, the supplementary charges to be collected from the receiver are calculated, for each retransmission, according to the internal tariff of the State. If the retransmissions take place beyond these limits, the supplementary charges are ascertained by treating each international retransmission as a separate telegram. The tariff for each retransmission is the tariff applicable to traffic exchanged between the State which retransmits and that to which the telegram is retransmitted.

9. If the charges for retransmission are not recovered by the delivery office, the Administration to which the latter belongs is reimbursed the amount of the charges due to the Administrations by a reimbursement draft.

LVII.

1. Any person, on furnishing proof of identity, can request that telegrams which may arrive at a telegraph office to be delivered to him, within the delivery radius of that office, be retransmitted to him in accordance with the conditions of the preceding Regulation, to the address which he supplies.

2. Requests for retransmission should be made in writing.

3. Each Administration reserves to itself the power of retransmitting, when necessary, in accordance with the information given at the residence of the receiver, telegrams respecting which no special instructions have been otherwise furnished.

f. Multiple Telegrams.

LVIII.

1. A multiple telegram may be addressed either to several persons in the same place, or to one person at several residences in the same place.

2. A telegram addressed to several persons, or to one person at several residences in the same place, with or without further despatch by post, is charged for as a single telegram; but a copying fee of 5d. per telegram not exceeding 100 words, is charged for each destination after the first. Beyond 100 words, the copying fee is increased by 5d. for every additional, or fractional part of, 100 words. In calculating this fee, all the words in the body of the message, the signature, and the address are counted, each copy being treated separately.

3. In transmitting a telegram addressed to the same place or to different places served by the same office, either to several receivers or to the same receiver at several residences, with or without further despatch by post or express, the number of addresses must be stated in the preamble.

4. In the first case provided for by paragraph 1 of the present Regulation, each copy of the telegram should bear only its own address, unless the sender has requested the contrary. This request should be entered in the address, and consequently be included in the number of words charged for.

g.

g. Telegrams to places beyond the International System.

LIX.

1. Telegrams addressed to places beyond the international telegraph lines, may, according to the sender's request, be despatched to destination by express or by post. Their despatch by express can, however, only be requested when they are for States which, in conformity with Article 9 of the Convention, have organized a mode of transport for the delivery of telegrams more rapid than the post, and have notified to the other States the arrangements made to that effect.

2. The address of telegrams to be conveyed beyond the telegraph lines is written in the following form : *Express* (or *post*) *M. Müller Johannisthal, Berlin;* the name of the terminal telegraph office being written last.

LX.

1. The expense of transport beyond the telegraph offices, by quicker means than the post, in States where such service is organised, is obtained from the receiver.

2. The sender, however, of a telegram requesting an acknowledgment of receipt, can prepay this transport by depositing a sum for the purpose, to be fixed by the sending office, subject to after adjustment. The acknowledgment of receipt states the amount expended.

3. The only exception to this rule is for transport beyond terminal offices on extra-European lines, the cost of which has been fixed and notified by the terminal Administration. In this case, the cost is collected by the sending office, and no acknowledgment of receipt or subsequent adjustment is required.

4. In every case provided for by the preceding paragraphs 2 and 3, the words *Express paid* or "(XP)" *Estafette paid* or "(EP)" are written before the address and charged for. Subject to the exception provided for in § 3 these notices include an acknowledgment of receipt, without the necessity of adding the instruction "(C.R.)."

LXI.

1. The terminal office has a right to employ the post :—

a. In the absence of directions in the telegram as to the means of transport to be employed ;

b. When the means indicated differ from the mode adopted and notified by the terminal State, in conformity with Article 9 of the Convention.

c. When there is a claim to be made for porterage against a receiver who has previously refused to pay such charges. In the latter case the telegram may be deposited in the box, as an unpaid letter.

2. In every case the employment of the post is obligatory upon the terminal office, when no more rapid means is available.

3. Telegrams of all kinds which have to be sent to their destination by post, are handed to the Post Office by the terminal office, without any charge being made to the sender, or to the receiver, except in the three following cases :—

4. Telegrams which have to be posted as registered letters : for these a maximum charge of 5d. is made, which remains to the credit of the original administration.

5. Messages which have to be sent by sea. For these a varying charge is collected by the sending office. The amount of this charge is fixed by the Administration which undertakes the despatch, and is notified to all the others.

6. Telegrams transmitted to a telegraph office situated near a frontier, in order to be forwarded by post over the neighbouring territory. These are deposited in the box as unpaid letters, and the postage is charged to the receiver.

7. If, however, there is a serious interruption to the telegraphic communication crossing the frontier, Regulation XLIII is to be acted upon.

8. When a telegram, to be forwarded as a registered letter, cannot immediately be registered, it is, in order to take advantage of a postal departure, first posted as an ordinary letter ; and a duplicate is addressed as a registered letter as soon as possible.

h. Semaphoric Telegrams.

LXII.

1. Semaphoric telegrams are telegrams exchanged with ships at sea by the medium of semaphores established or to be established on the coasts of any of the Contracting States.

2. They should be written either in the language of the country in which is situated the semaphore station which has to signal them, or in signals of the universal commercial code. In the latter case they are considered as cipher telegrams.

3. When they are for ships at sea, the address should contain, in addition to the ordinary direction, the name or official number of the vessel and its nationality.

4. In the case of Government semaphoric telegrams signalled from a ship at sea, the seal is replaced by the distinctive sign of command. The name of the vessel should be given.

5. Every semaphoric telegram must contain the official instruction *semaphoric* in the preamble.

6. The charge for telegrams exchanged with ships at sea, by the medium of semaphores, is fixed at one shilling and eight pence per telegram. This charge is added to the cost of its transmission by the electric telegraph, calculated according to the ordinary rules. The total is collected from the sender for telegrams addressed to ships at sea, and from the receiver for telegrams signalled from ships at sea (Regulation XXX, § 1). In the latter case, the instruction, *s. d. to be collected,* should be inserted in the preamble. If it cannot be collected, the terminal Administration is paid the amount of charges due by means of a reimbursement draft.

LXIII.

1. Telegrams from a ship at sea are transmitted to their destination in signals of the commercial code, when the ship requests it.

2. When the ship does not request it, they are translated into ordinary language by the chief of the semaphore station and transmitted to destination.

3. Telegrams which it has been impossible to signal from semaphore stations to the ships to which they are addressed within thirty days of the date of their original deposit (date of deposit not included) are considered as dead letters.

4. In case the ship to which a semaphoric telegram is addressed does not arrive within the term of twenty-eight days, the semaphore station forwards a service notice to the sender on the morning of the twenty-ninth day. The sender has the power, on paying for an ordinary aërial telegram of ten words, to request the retention of his telegram for another thirty days, and so on. If this request is not made, the telegram is treated as a dead letter on the thirtieth day.

i. General Regulations applicable to Special Telegrams.

LXIV.

In applying the preceding Regulations, the facilities given to the public for urgent telegrams, prepaid replies, repeated telegrams, acknowledgments of receipt, telegrams to follow, multiple telegrams, and telegrams to be forwarded beyond the lines may be combined, the instructions in §§ 5 and 6 of Regulation X being duly observed.

10. *Service Telegrams.*

Article 5 of the Convention.

Telegrams are classed in three categories :—

1st. Government Telegrams : those which, &c.

2nd. Service Telegrams : those which emanate from the Telegraph Administrations of the contracting States, and which relate either to the service of the international telegraphs or to objects of public interest agreed upon between the said Administrations.

. . . . . .

Article 11 of the Convention.

Telegrams relating to the international telegraph service of the Contracting States are transmitted free over all the lines of the said States.

LXV.

LXV.

1. Services are divided into service telegrams, properly so called, the form of which is given in paragraph 1, Regulation XIV, and service notices, which are treated of in § 2 of the same Regulation.

2. Service telegrams should be limited to cases of an urgent character (Reg. XXIII).

3. They may be forwarded in secret language on all occasions (Article 6 of the Convention), and should as a general rule be expressed in French (Reg. VII, § 3).

LXVI.

1. Service notices are exchanged from office to office whenever the contingencies of transmission necessitate it, especially when the service instructions of a telegram already transmitted are irregular (Reg. XXXVI, § 4), when rectifications or instructions are necessary relating to telegrams of a series already transmitted (Reg. XLI, §§ 1 and 2), when telegrams have been forwarded by post to a telegraph office in consequence of interruption of the telegraph lines (Reg. XLIV), when a telegram cannot be delivered to the receiver (Reg. XLVIII), when a ship to which a semaphoric telegram is addressed has not arrived within the limit of twenty-eight days (Reg. LXIII, § 4).

2. A service notice relating to a telegram previously transmitted is sent, if practicable, by the same route as that followed by the original telegram. The service should contain all the information necessary to facilitate the search for the original telegram, such as the date of the latter, its address and signature.

3. If any transit office has all the necessary information to reply to a service notice or to act upon it, it does so, in order to avoid needless retransmission.

11. *Telephonic Service.*

LXVII.

1. International telephonic communication may be established, as the want arises, by the Administrations of the Contracting States, either by the construction of special wires or the appropriation of already existing wires to that service.

2. In the absence of special arrangements between the said Administrations, the wires are led into a central office of each Administration, and may by that means, be connected either with the telephone offices open to the public, with private houses, counting houses, workshops, &c.

3. The Administrations agree as to the choice of instruments and details of working; they also fix, by common accord, the rate to be allotted to each of the telephonic lines.

4. The unit adopted, both for the collection of the charges and the duration of the communication, is a conversation of five minutes.

5. The use of the telephone follows the order of the applications. Not more than two consecutive conversations of five minutes each can be accorded to the same speakers, except when no other application is made either before or during such two conversations.

12. *Records.*

LXVIII.

1. The originals of telegrams and documents relating to them, retained by the Administrations, are preserved during at least six months, counting from their date, with all necessary precautions to secure their secrecy.

2. This delay is extended to eighteen months in the case of extra-European telegrams.

LXIX.

1. The originals or copies of telegrams can only be communicated to the sender or to the receiver, after proof of his identity, or to the authorised representative of either of them.

2. The sender and receiver of a telegram or their authorised representatives have a right to be furnished with certified true copies of that telegram, or of the copy delivered at destination, if the latter has been preserved by the terminal Administration. This right lapses after the expiration of the time fixed for preserving the records.

3. A fixed charge of 5d. is made for every copy delivered in conformity with the present Regulation, if the telegram does not exceed one hundred words. Beyond one hundred words, the charge is 5d. for each hundred, or fraction of a hundred words.

4. Telegraph Administrations are not obliged to produce or give copies of the telegrams above-mentioned, unless the senders, the receivers, or their authorised representatives, furnish the necessary information to enable the telegrams to be found to which their requests refer.

13. *Refunds.*

LXX.

1. The Administration which received the charges, makes the following refunds to the sender, after reclaiming, when necessary, from the other Administrations :—

a. The full cost of every telegram which has experienced serious delay, or failed to reach its destination, through the fault of the telegraph service.

b. The full cost of every collated telegram which has manifestly been unable to fulfil its object, in consequence of errors made in its transmission.

c. In extra-European traffic, the cost of every word omitted in the transmission of an ordinary telegram, through the fault of the telegraph service. This rule, however, is not applicable when the receiver has discovered the omission and had it rectified under Regulation XXIV, §§ 1 and 2.

2. In case of interruption of a submarine line, the sender of every telegram has a right to the refund of the portion of the charge belonging to the distance not traversed, deduction being made, if necessary, of the expense incurred in sending the telegram by any other mode of transport.

3. These rules do not apply to telegrams transmitted by the lines of a non-adhering Administration, which would not, on its side, make similar refunds.

4. In the cases provided for in the preceding paragraphs, the refund rules only apply to the tariff of the actual telegrams lost, delayed, or mutilated, including any supplementary charges collected, and to the charges for telegrams specified in Reg. XXIV. They do not apply to the cost of other messages necessitated or rendered useless by the loss, delay, or mutilation.

LXXI.

1. Every claim for refund should be made, under penalty of rejection, within two months of the date of the telegram. This period is extended to six months for extra-European telegrams.

2. Every claim should be made to the original sending Administration, and be supported by documentary evidence—*i.e.*, in case of non-delivery, by a written statement from the terminal office or addressee; and in case of mutilation or delay, by the copy of the telegram actually delivered. The claim may, however, be presented by the addressee to the terminal Administration, which decides whether it can deal with it, or whether it should be forwarded to the sending Administration.

3. When a claim is admitted to be well founded by the Administrations interested, the refund is made by the original sending Administration.

4. If the sender does not reside in the country where he deposited his telegram for transmission, he can have his claim forwarded to the original sending Administration through the medium of another Administration. In this case the latter is, if requisite, deputed to make the refund.

5. Claims transferred from Administration to Administration are accompanied by the originals, copies, or extracts of all letters or papers which relate to them. A precis of these papers should be given in French when they are not written in that language, or in a language understood by all the Administrations interested.

6. A complaint is not transferred from Administration to Administration :—

a. When the matter complained of does not constitute a claim for refund.

b. When it refers to a telegram which, not being in accordance with the reglementary conditions prescribed for observance by the public with regard to composition, language, legible writing, address, instructions for transport beyond the lines, &c., has been accepted for transmission at the sender's risk.

LXXII.

1. In the case of every telegram not delivered at its destination, the reimbursement is supported by the Administrations on the lines of which the irregularities were made that prevented the telegram from reaching the receiver.

2. If a complaint of non-delivery is rejected, the delivery of the telegram should be proved by a receipt, or by a declaration from the terminal Administration.

3. In case of delay, the claim for reimbursement is absolute if the telegram did not reach its destination sooner than it would have done by post, or when the delay exceeds forty-eight hours for a telegram in Europe, or 144 hours for a telegram proceeding beyond the limits of Europe.

4. The integral return of the charge is effected at the expense of the Administrations which caused the delay, and is supported in proportion to the delay on the lines of each of them.

5. In case of mutilation of a collated telegram, the first Administration specifies the errors which prevented the telegram from fulfilling its object, and the contributive shares of the different Administrations are regulated according to the number of errors thus specified, a word ommitted or added counting for an error.

6. The contributive share for the alteration of a word mutilated successively on the lines of several Administrations, is supported by the first of the Administrations in fault.

7. Errors or omissions are chargeable :—

a. Against the two offices : when words, numbers, or characters, having been omitted or added, the receiving office fails to verify the number ofwords ; when paid $\frac{\text{collation}}{\text{repetition}}$ is omitted or incompletely performd ; when by the Hughes instrument, defective working takes place and is not remedied.

b. Against the receiving office : when it omits to act upon a rectification made to its repetition by the sending office ; when in case an official repetition is sent, it fails to correct the first transmission in accordance with it.

c. Against the sending office : in all other cases.

8. In case of a partial refund on account of a telegram with one or more copies, the total charge received is divided by the number of copies, and the quotient represents the amount of refund for each copy, the telegram itself entering in the calculation as one copy.

9. When the office which is responsible for an error or omission cannot be ascertained, in consequence of the absence or insufficiency of documentary proof, the Administration which fails to furnish the proof is chargeable with the refund.

10. When a claim has been presented and put in circulation within the limits of time fixed by paragraph 1, Reg. LXXI, and the result has not been notified within the period fixed by Reg. LXVIII for the preservation of the records, the Administration which originally received the claim, refunds the charge applied for, and the reimbursement is debited against the Administration which delayed the investigation of the claim.

11. For extra-European traffic, the reimbursement is supported by the different Government Administrations or private companies over the lines of which the telegram was transmitted, each Administration giving up its share of the charge.

LXXIII.

1. When a telegram is stopped, under Articles 7 and 8 of the Convention, the charge made for its transmission is returned to the sender, if he claims it, and the refund is supported by the Administration which stopped the telegram.

2. If, however, that Administration has, in conformity with Article 8, given notice of its non-acceptance of a particular description of telegrams, the refund of the charges of any telegrams of such description which may be subsequently stopped, should be supported by the original sending Administration from the date the notice reached it.

14. *Accounts.*

Article 12 of the Convention.

The High Contracting Parties reciprocally owe each other account of the charges which they respectively collect.

LXXIV.

1. The franc is the monetary unit employed in the preparation of international accounts.

2. Each State credits the next State with the full tariff of all the telegrams it transmits to it, calculated from the frontier of the two States to destination.

3. But the contrary is the case when a State transfers a semaphoric telegram received from the sea, or when it retransmits a telegram to follow (faire suivre). It then debits the next State with the charge of the semaphoric telegram from its starting point, or the telegram to follow from the point of its first retransmission, to the common frontier of the two States. (Regulations LVI §§ 6 to 9, and LXII § 6)

4. Terminal charges may be settled direct between terminal States, after an understanding has been effected between such States and the intermediate States.

5. Charges may, by common agreement, be settled according to the number of telegrams which cross the frontier, without taking into account the number of words and accessory dues. In this case, the proportions of the next State, and of each of the following States, if any, are determined by means of averages agreed to by those concerned. (Regulation LXXVI, § 3)

6. When Regulation LXXXVII, is applied, the contracting Administration in direct relation with a non-adhering line is deputed to regulate the accounts between such line and the Contracting Administrations to which it serves as an intermedium for transmission.

LXXV.

1. Charges for copies or transport beyond the lines, belong to the State which delivered the copies or effected the transport.

2. The normal charges for prepaid replies and acknowledgments of receipt are placed to the credit of the terminal Administration, either in the accounts or in the calculation of the averages referred to in paragraph 5 of the preceding Regulation. Nevertheless, when the charge deposited for a reply is refunded, in accordance with paragraphs 2, 3, and 4, of Reg. LI, the normal charge is deducted from the next monthly account of the sending Administration which made the refund.

3. Replies and acknowledgments of receipt are treated in transmission and in the accounts, the same as ordinary telegrams.

4. In European traffic when a telegram in course of transmission quits the route for which its tariff was calculated, the charge collected for its transit is divided, from the point where the normal route was left, among the Administrations employed in its transmission, in the proportion of their normal transit rates. In the case of traffic between adjoining countries following a circuitous route, the original Administration pays the normal transit rates in the absence of special arrangements.

5. In extra-European traffic, when a telegram, of whatever kind, is transmitted by a different route from that which regulated its cost, the difference of rate is borne by the Administration which diverted the telegram, subject to recourse to any other Administration which may have caused the change of route.

LXXVI.

1. The charge which serves as the basis for division between the States and, when necessary, for the calculation of the averages mentioned in paragraph 5 of Regulation LXXIV, is that which results from the proper application of the tariffs fixed between the interested States, without taking account of errors in charging which may have occurred.

2. But the number of words announced by the sending office serves as the basis for the application of the charge, except in the case where, owing to an error in transmission, it may have been rectified by common accord between the original sending office and the transmitting office.

3. To determine the average rates, a complete monthly account is prepared, exhibiting each telegram separately, with its extra charges of whatsoever nature (Reg. LXXV). The total of the charges, calculated for each State for the entire

entire month, is divided by the number of telegrams; the quotient represents the mean rate applicable to each telegram in subsequent accounts until a revision is made. This revision, unless under exceptional circumstances, should not be made before the lapse of a year.

LXXVII.

1. The reciprocal adjustment of accounts takes place at the end of each month
2. The deductions and establishment of the balance take place at the end of each quarter
3. The balance, thus established, is paid in actual francs of gold to the State which is creditor, unless the two Administrations concerned have arranged for the use of another money.
4. The cost of making the remittance is defrayed by the Administration which has to receive it

LXXVIII

1. The exchange of the monthly accounts takes place within a quarter of a year of the month to which they relate.
2. The revision of the accounts takes place within six months from the date on which they are sent This is the maximum delay The Administration which does not receive any correction within that time, has full right to consider the accounts admitted This regulation is also applicable to the observations made by one Administration on the accounts sent in by another.
3 The monthly accounts are admitted without revision, when the difference between the totals arrived at by the two Administrations interested does not exceed 1% of the debit of the Administration whose accounts are questioned Should a revision have been commenced, it should be stopped, if an exchange of observations between the Administrations interested shows that the difference which led to the revision is within the limits of 1%
4 No claim is admitted in the accounts respecting European telegrams which are more than six months old, or respecting extra-European telegrams which are more than eighteen months old.

15. *Reservations*

Article 17 of the Convention.

The High Contracting Parties reserve to themselves respectively the right to make separately, among themselves, particular arrangements of every kind in matters of service which do not interest the generality of the States.

LXXIX

The details of service to which the reservation provided for in Article 17 of the Convention applies, are especially:
The establishment of tariffs from State to State
The adjustment of accounts
The adoption of special instruments or vocabularies between certain points and in certain defined cases.
The application of the system of telegraph stamps
The transmission of money orders by telegraph
The collection of charges on telegrams at their destination.
The delivery of telegrams at destination.
The power of transmitting at reduced rates messages for the Press, at fixed hours and on specified conditions, without injury to the general service, or of letting for that purpose special wires on payment of rent
The extension of the right of franking to service telegrams which relate to meteorology or any other objects of public interest.

16 *International Office —Reciprocal Communications*

Article 14 of the Convention

A central office, placed under the superior authority of the chief Administration of one of the Contracting Governments, designated for that purpose in the Service Regulations, is appointed to collect, arrange, and publish information of all kinds relating to international telegraphy, to circulate requests for modifications of tariffs and service regulations, to give notice of the changes adopted, and generally to study all subjects and execute all work entrusted to it in the interests of international telegraphy
The expenses incurred in working this office are supported by all the Administrations of the Contracting States.

LXXX

1. The central office provided for by Article 14 of the Convention receives the title of International Office of the Telegraph Administrations
2. The chief Administration of the Swiss Confederation is deputed to organise the International Office according to the conditions defined in the following Regulations LXXXI to LXXXIII

LXXXI.

1 The joint expenses of the International Office of the Telegraph Administrations should not exceed the sum of £2,800 per annum, not including special expenses caused by an International Conference. This sum may be subsequently increased by the consent of all the contracting parties
2. The Administration entrusted, under Article 14 of the Convention, with the direction of the International Office, controls the expenses, makes the necessary advances, and prepares the annual accounts, which are communicated to all the other Administrations interested.
3 For the division of the expenses the contracting or adhering States are divided into six classes, each contributing in the proportion of a certain number of parts, *i e.*

1st	Class,	25 parts.
2nd	,,	20 ,,
3rd	,,	15 ,,
4th	,,	10 ,,
5th	,,	5 ,,
6th	,,	3 ,,

4 These co efficients are multiplied by the number of States of each class, and the sum of the products thus obtained shows the number of parts by which the total expense is to be divided The quotient represents the value of a part
5. For the contribution of expenses the Administrations of the Contracting States are divided, as follows, into the six classes mentioned in the preceding paragraph
1st class Germany, Brazil, France, Great Britain, British India, Italy, Russia, Turkey.
2nd class. Austria, Spain, Hungary
3rd class Belgium, Netherlands, Dutch East Indies, Norway, Roumania, Sweden.
4th class South Australia, Cape of Good Hope, Denmark, Egypt, Japan, New South Wales, New Zealand, Switzerland, Tasmania, Victoria
5th class Bosnia-Herzegovina, Bulgaria, Cochin China, Greece, Portugal, Senegal, Servia, Siam, Tunisia.
6th class Luxemburg, Montenegro, Natal, Persia.

LXXXII

1. The Administrations of the Contracting States forward to each other reciprocally all documents relating to their internal administration, and communicate to each other every improvement which they may introduce.
2. As a general rule, the International Office serves as the medium for these communications
3. The said Administrations send by post, by prepaid letter, to the International Office notice of all measures relative to the composition and alterations of tariffs, both internal and international, to the opening of new lines and the closing of existing lines, so far as they affect the international service; also, to the opening and closing of offices, and to alterations in the hours of duty. The printed or written documents on the subject issued by the Administrations are forwarded to the International Office either at the date of their issue or on the first of the ensuing month at latest.

4.

4. In addition to this, the said Administration send to that office, by telegraph, notices of all interruptions and restorations of communication affecting international traffic.

5. They prepare as completely as possible, and send to the International Office so as to arrive at the commencement of each year, statistical tables, showing the amount and movement of traffic, the situation of the lines, the number of offices, instruments, &c. These statistics are made up in the manner indicated by the International Office, which distributes forms fully prepared for the purpose.

6. They send also to that office two copies of the different publications which they issue.

7. The International Office, moreover, receives information respecting all experiments instituted by each Administration in the different branches of the service.

LXXXIII.

1. The International Office arranges and publishes the tariffs. It duly communicates to the Administrations all particulars relating to them, especially those mentioned in paragraph 3 of the preceding Regulation. When the communications are of an urgent nature, the International Office transmits them by telegraph, especially in the cases provided for by paragraph 4 of the same Regulation. In notifications relating to changes of tariffs, it forwards its communications in such a form as will admit of the changes being at once inserted in the columns of the tables of rates annexed to the Convention.

2. The International Office prepares tables of general statistics.

3. It edits, by the aid of the documents placed at its disposal, a telegraph journal in the French language.

4. It prepares, publishes, and periodically revises an official telegraph map.

5. It should, moreover, keep itself at all times at the disposal of the Administrations of the Contracting States, in order to furnish them with every kind of special information affecting international telegraphy which they may require.

6. The documents printed by the International Office are distributed to the Administrations of the Contracting States, in the proportion of the number of their contributive shares, as defined in Regulation LXXXI. Any additional copies required by the Administrations are charged for separately at cost price. This also applies to copies applied for by private companies.

7. The number of copies to be thus supplied should be decided upon once for all, until further notice; and sufficient time should be given to the International Office to arrange for printing the number of copies required.

8. The International Office circulates, when so instructed by one or more Administrations interested, requests for modifications in the Tariffs and Service Regulations provided for by articles 10 and 13 of the Convention. After obtaining the unanimous consent of the Administrations concerned, and when necessary the concurrence of any other Administration interested, it duly notifies the changes adopted. It is required moreover to notifiy all changes of Tariffs and Service Regulations, whatever form may be followed for their adoption. Such notification will not be acted upon until after a lapse of at least two months in the case of modifications in the Regulations, and of at least fifteen days in the case of the changes of tariffs, and in case of any dispute, not until the point in question be settled.

9. In questions to be resolved by the assent of the Contracting Administrations, those which fail to cause their replies to arrive within the maximum delay of four months are considered as assenting.

10. The International Office prepares the materials for the Telegraph Conferences. It attends to the editing, printing, and distribution of the amendments, minutes, copies and other papers.

11. The Director of that office assists at the sittings of the Conference, and takes part in the discussions, without a vote.

12. The International Office makes an annual report upon its management, which is communicated to all the Administrations of the Contracting States.

13. The management of the said office is also submitted to the approval of the Conferences provided for by article 15 of the Convention.

17. *Conferences.*

Article 15 of the Convention.

The Tariffs and Service Regulations provided for by Articles 10 and 13 are annexed to the present Convention. They possess the same value and come into operation at the same time as the Convention.

They will be subjected to revisions, at which all the States which have taken part in them will have the right to be represented.

With this object, Administrative Conferences will take place periodically; each Conference fixing the time and place of the next meeting.

Article 16 of the Convention.

These Conferences are composed of delegates representing the Administrations of the Contracting States.

In the deliberations, each Administration has a right to one vote, provided always that when there are different Administrations of the same Government, a request to this effect shall have been made through the diplomatic channel to the Government of the country in which the Conference is to take place, before the date fixed for its opening, and also that each of the different Administrations has a special and distinct representative.

The revisions resulting from the deliberations of the Conferences can only come into operation after they have been approved by all the Governments of the Contracting States.

LXXXIV.

The period fixed for the meeting of the Conferences provided for by paragraph 3, Article 15 of the Convention, is made earlier, should ten at least of the Contracting States request it.

18. *Adhesions. Relations with non-adhering Lines.*

Article 18 of the Convention.

States which have not taken part in the present Convention will be admitted to adhere to it on their request.

This adhesion will be notified through the diplomatic channel to the Contracting State in which the last Conference was held, and by that State to all the others.

It will convey, with full right, accession to all the clauses and admission to all the advantages stipulated by the present Convention.

Article 19 of the Convention.

Telegraphic relations with non-adhering States or private Companies are regulated, in the general interest of the progressive development of communication, by the Service Regulations provided for by Article 13 of the present Convention.

LXXXV.

1. In the case of adhesions provided for by Article 18 of the Convention, the Administrations of the Contracting States may refuse the benefit of their conventional tariffs to Administrations which may request to adhere, without on their own part conforming their tariffs to those of the States interested.

2. Administrations which possess, out of Europe, lines for which they have adhered to the Convention, state which of the two systems, European or extra-European, they intend to apply to them. This statement is implied by the inscription in the tariff tables, or is notified subsequently through the medium of the International Office.

LXXXVI.

1. Private Telegraph Companies, which work within the limits of one or more of the Contracting States and participate in the international service, are considered in relation to that service, as forming an integral portion of the telegraph system of those States.

2. Other private Telegraph Companies are admitted to the advantages stipulated in the Convention and present Service Regulations, on their acceding to all their obligatory clauses, and on the notification of the State which granted them the concession or authority to work. This notification takes place in conformity with the second paragraph of Article 18 of the Convention.

3. This accession should be imposed upon Companies whose lines link two or more of the Contracting States together, to the extent that they may be bound by their Articles of concession, to submit themselves, in this respect, to the obligations prescribed by the State which granted the concession.

4.

4. Private Telegraph Companies which may apply to any one of the Contracting States for authorisation to connect their cables with the system of such State, shall only obtain it upon a formal engagement to submit the amount of their tariffs for the approval of the State according the concession, and not to apply any change either in the Tariffs or Service Regulations except on a notification from the International Office, which shall only be operative after the expiration of time specified in para. 8, Reg. LXXXIII. This stipulation may be departed from in favour of Companies which may find themselves in competition with others not subjected to the same formalities.

5. The reserve which forms the object of paragraph 1 of the preceding Regulation is also applicable to the abovementioned private Companies.

LXXXVII.

1. When telegraphic relations are opened with non-adhering States, or with private enterprises which have not acceded to the obligatory provisions of the present Regulations, these provisions are invariably applied to their traffic in that portion of its transit which takes place in the territory of the contracting or adhering States.

2. The Administrations interested fix the rate to be applied to that portion of its transit. This rate, determined within the limits of Regs. XIX and XX, is added to that of the non-participating lines.

Thus agreed to at Berlin, the 17th of September, 1885, by the undersigned delegates, in conformity with Articles 15 and 16 of the Convention of St. Petersburg, to come into force the 1st July, 1886.

DR. V. STEPHAN.
HAKE, SCHEFFLER, FRITSCH, LE SAGE.
On behalf of Germany.

CHARLES TODD.
On behalf of South Australia.

BRUNNER, WOLSCHITZ.
On behalf of Austria.

L. DE KOLLER.
On behalf of Hungary.

F. DELARGE.
On behalf of Belgium.

PARMANN.
On behalf of Bosnia-Hersegovina.

BARON DE CAPANEMA.
On behalf of Brazil.

R. IVANOFF.
On behalf of Bulgaria.

R. DUVIVIER.
On behalf of Cochin China.

HÖNCKE, LUND.
On behalf of Denmark.

ERNEST AYSCOPHE FLOYER, SKANDER FAHMY.
On behalf of Egypt.

V. COROMINA.
On behalf of Spain.

FRIBOURG, E. LORIN.
On behalf of France.

C. H. B. PATEY, H. C. FISCHER, P. BENTON.
On behalf of Great Britain.

M. A. DURUTTI.
On behalf of Greece.

BATEMAN CHAMPAIN, C. H. REYNOLDS.
On behalf of British India.

DAMICO.
On behalf of Italy.

T. ISHIE.
On behalf of Japan.

MONGENAST.
On behalf of Luxemburg.

BRUNNER, WOLSCHITZ.
On behalf of Montenegro.

C. NIELSEN, F. BUGGE.
On behalf of Norway.

E. C. CRACKNELL,
On behalf of New South Wales.

HOFSTEDE.
On behalf of The Netherlands, and Netherlands-Indi

On behalf of Persia.

GUILHERMINO AUGUSTO DE BARROS.
On behalf of Portugal.

COLONEL PASTIA. J. JACOVESCO.
On behalf of Roumania.

N. DE BESACK. E. OUSSOF.
On behalf of Russia.

R. DUVIVIER.
On behalf of Senegal.

ST. JOWANOWITCH.
On behalf of Servia.

PRISDANG.
On behalf of Siam.

D. NORDLANDER, HERMANN UDDENBERG.
On behalf of Sweden.

FREY.
On behalf of Switzerland.

J. HENNIKER HEATON.
On behalf of Tasmania.

E. LORIN.
On behalf of Tunisia.

OHAN BAGDADLIAN.
On behalf of Turkey.

On behalf of Victoria.

Table A.—European System.

Rate per word from Country to Country. Drawn up in execution of Paragraph 2, Article XIX of Service Regulations.

From— \ To—	Germany.	Austria and Hungary.	Bosnia-Herzegovina.	Belgium.	Bulgaria.	Denmark.	Spain.	Canary Islands.	France.	Algeria.	Gibraltar.	Great Britain.	Channel Islands.	Greece.	Greek Islands.	Heligoland.	Italy.	Luxemburg.	Malta.	Montenegro.	Norway.	Netherlands.	Portugal.	Roumania.	Russia.	Senegal.	Servia.	Sweden.	Switzerland.	Tunisia.	Turkey.
Germany	...	20	24.5	16.5	28.5	16.5	28	**1.76**	20	32	32.5	35	33	52.5	56	21	24	16.5	44.5	24.5	28	16.5	32.5	24.5	40	**3.26**	24.5	20	16.5	32	52
Austria and Hungary		...	16.5	24.5	20.5	24.5	32	**1.80**	24	36	36.5	43	37	44.5	48	29	20	24.5	40.5	16.5	36	24.5	36.5	16.5	40	**3.30**	16.5	28	16.5	36	...
Bosnia-Herzegovina			...	29	17	29	36.5	**1.845**	28.5	40.5	41	47.5	41.5	37	40.5	33.5	24.5	29	45	21	40.5	29	41	17	44.5	**3.345**	13	32.5	21	40.5	...
Belgium				...	33	21	24.5	**1.725**	16.5	28.5	29	27.5	29.5	57	60.5	25.5	24.5	13	45	29	32.5	13	29	29	44.5	**3.225**	29	30	21	28.5	56.5
Bulgaria					...	33	40.5	**1.885**	32.5	44.5	45	51.5	45.5	37	40.5	37.5	28.5	33	49	25	44.5	33	45	13	40.5	**3.385**	13	36.5	25	44.5	...
Denmark						...	36.5	**1.805**	28.5	40.5	41	40	41.5	57	60.5	25.5	28.5	21	49	29	23	21	41	29	48.5	**3.345**	29	16.5	21	40.5	56.5
Spain							...	**1.50**	20	32	16.5	45	33	61.5	65	37	34	24.5	48.5	36.5	48	28.5	16.5	36.5	61	**3.10**	36.5	44	24.5	32	61
Canary Islands								...	**1.68**	**1.80**	**1.645**	**1.93**	**1.81**	**2.095**	**2.13**	**1.85**	**1.82**	**1.725**	**1.965**	**1.845**	**1.92**	**1.76**	**1.645**	**1.845**	**2.09**	**1.50**	**1.845**	**1.94**	**1.725**	**1.80**	**2·09**
France									...	...	24.5	31	25	53.5	57	29	20	16.5	40.5	28.5	40	20.5	24.5	28.5	48	**2.50**	28.5	35	16.5	...	53
Algeria										...	34.5	43	37	63.5	67	41	30	28.5	32.5	40.5	52	32.5	36.5	40.5	60	**2.62**	40.5	47	28.5	..	60.5
Gibraltar											...	55	37.5	66	69.5	41.5	32.5	29	34.5	41	52.5	33	21	41	60.5	**3.145**	41	44.5	29	34.5	65.5
Great Britain												...	...	72.5	76	44	43	31.5	70	47.5	40	31.5	55	47.5	63	**3.43**	47.5	50	35.5	43	72
Channel Islands													...	66.5	70	42	33	29.5	53.5	41.5	53	33.5	37.5	41.5	61	**3.31**	41.5	47	29.5	37	66
Greece														...	10	61.5	40	57	66	37	68.5	57	66	...	68.5	**3.595**	37	60.5	49	63.5	...
Greek Islands															...	65	43.5	60.5	69.5	40.5	72	60.5	69.5	...	72	**3.63**	40.5	64	52.5	67	...
Heligoland																...	33	25.5	53.5	33.5	37	25.5	41.5	33.5	49	**3.35**	33.5	29	25.5	41	61
Italy																	...	24.5	30	24.5	40	28.5	32.5	24.5	53	**3.26**	24.5	42	16.5	30	45
Luxemburg																		...	45	29	32.5	17	29	29	44.5	**3.225**	29	24.5	21	28.5	56.5
Malta																			...	45	60.5	49	41	45	68.5	**3.465**	45	52.5	37	32.5	65.5
Montenegro																				...	40.5	29	41	21	44.5	**3.345**	21	32.5	21	40.5	...
Norway																					...	32.5	52.5	40.5	48	**3.46**	40.5	20	32.5	52	68
Netherlands																						...	33	29	44.5	**3.265**	29	24.5	21	32.5	56.5
Portugal																							...	41	60.5	**3.145**	41	44.5	29	36.5	65.5
Roumania																								...	36.5	**3.345**	13	32.5	21	40.5	...
Russia																									..	**3.59**	40.5	45	44.5	60	68
Senegal																										...	**3.345**	**3.44**	**3.225**	**3.30**	**3.59**
Servia																											...	32.5	21	40.5	...
Sweden																												...	30	47	65
Switzerland																													...	28.5	48.5
Tunisia																														...	65
Turkey																															...

OBSERVATIONS.

1. In this table alphabetical order has been followed. A distinctive column has been given to each service in cases where the rates are not exclusively those of the country to which the service belongs.
2. The rates between Turkey and neighbouring States have not been fixed. The rates of the London Revision will remain in force for their traffic until new figures shall have been agreed upon.
3. This table does not affect special arrangements concluded between certain States.

Table B —Extra-European System.

Rates fixed for the formation of extra European tariffs, in execution of Art XX of Service Regulations.

Terminal and Transit Rates per word

Names of States	Description of Traffic	Terminal Rates in francs	Transit Rates in francs	Remarks
		Frs Cts	Frs Cts	
Germany	1st For messages exchanged by the Trieste cable between Great Britain, Belgium, and Luxemburg on the one side and Aden, South Africa, and Egypt on the other		0 15	
	2nd For all other messages	0 225	0 225	
	Terminal Rate			
Austria and Hungary	For all messages	0 225		
	Transit Rates			
	1st Between the landing place of the Trieste Corfu cable and all frontiers of Austria for messages exchanged between Aden, South Africa, and Egypt, on the one side, and on the other			
	a Algeria and Tunisia, Germany, Belgium Bulgaria Denmark, Spain, France, Gibraltar Great Britain, Heligoland, Luxemburg, Norway, Holland, Portugal, Sweden, and Switzerland		0 075	
	b Bosnia Herzegovina, Montenegro, and Servia		0 10	
	c Roumania		0 175	
	2nd For all other messages		0 225	This rate is reduced to 0 075 for messages exchanged by the Trieste cable between Great Britain, on one side, and India and countries beyond, on the other The reduction does not however affect the uniform tariff of 5 francs per word for India
	Eastern Company's Rates			
	1st Between the Austrian coast at Trieste and the Egyptian coast at Alexandria, for messages with the following countries —			
	a Germany, Austria, and Hungary, Belgium Bosnia Herzegovina, Denmark, Heligoland, Luxemburg, Montenegro, Norway Holland Roumania, Russia in Europe, and Caucasus, Servia, and Sweden	1 45	1 45	Includes the Greek and Turkish transits
	b Algeria and Tunisia Spain, France, Gibraltar and Portugal	1 30	1 30	
	c Great Britain and Switzerland	1 375	1 375	
	d Bulgaria	1 40	1 40	
	2nd Between the Austrian coast at Trieste and Aden for messages of the following countries —			
	a Great Britain and Switzerland	3 975	3 975	Includes the Greek, Turkish, and Egyptian transits.
	b Algeria and Tunisia, Spain, France, Gibraltar, and Portugal	3 90	3 90	
	c Bulgaria	4 0	4 0	
	d All others	4 05	4 05	
	3rd Between the Austrian coast at Trieste and the frontiers of Greece for messages of extra European countries with Greece or Turkey	0 275	0 275	Includes the Greek terminal or transit.
Belgium	For all messages	0 075	0 075	
Bosnia—Herzegovina	For all messages	0 075	0 075	
	Terminal Rates			
Brazil	1st From Recife (Pernambuco)			
	a For the North or Centre region	1 0		
	b For the South region	2 0		
	2nd From Belem (Para)			
	a For the North region	1 0		
	b For the centre region	2 0		
	c For the South region	3 0		
	Transit Rates			
	Between Jaguarao or Uruguyana and			
	a Any frontier point in the South region		1 0	
	b Any frontier point in the Centre region		2 0	
	c Any frontier point in the North region		3 0	
Bulgaria	For all messages	0 075	0 075	
Cape of Good Hope	For all messages	0 20	0 20	The terminal rate is shared with Natal for messages exchanged by the Durban cable
Denmark	1st For messages which pass by the State lines only	0 075	0 075	
	2nd For messages transmitted by the cables of the Great Northern Telegraph Company, except the cables with England (*vide* Great Britain here under), but including the State lines	0 225	0 225	
	Terminal Rates			
Egypt	For all messages exchanged with—			
	1st The first region	0 25		
	2nd The second region	0 50		
	3rd The third region	0 75		
	Transit Rates			
	1st Within the limits of the first region		0 25	
	2nd Between Suakin and other frontiers		0 75	
	Eastern Company's Rates			
	N B —The following rates entered as terminal are the charges for Alexandria For other offices in Egypt, the rates applicable are the transit rates plus a terminal rate of 25 centimes for Egypt entered above, which, in the case of messages to and from Alexandria, Suez, or Cairo, belongs to the Company			
	Between the coast of Egypt (Alexandria) and			
	1st Malta			
	a For messages exchanged with Malta	1 30		Includes the Maltese terminal rate, belonging to the Eastern Company
	b For all other messages	1 0	1 0	
	2nd Otranto	1 225	1 225	Includes the Ottoman transit for Candia and the Greek transit
	3rd Greece	1 225	1 225	Includes the Ottoman transit for Candia and the Greek terminal or transit
	4th Candia	0 80	0 80	
	5th Rhodes	1 05	1 05	Includes the transit for Candia which is gratuitous for Ottoman messages
	II Between the coast of Egypt and Cyprus	0 90	0 90	
	III Between Malta and Rhodes, via Alexandria	1 55	1 25	

Names of States	Description of Traffic.	Terminal Rates in francs.	Transit Rates in francs.	Remarks.
		Frs. cts.	Frs. cts.	
EGYPT—*continued.*	IV. Between Suakin and Egypt:			
	a. For messages to and from Egypt or Cyprus ..	1 35	.... .	Rate shared with the Egyptian Government, except for Alexandria, Cairo, Suez, and Port Said.
	b. For messages to and from other countries, via Alexandria.	1 10	1 10	Includes the Egyptian transit belonging to the Company. This rate is reduced to 0·85 and to 0 775 for messages between Hèdjaz and Yemen, on the one side, and Turkey (including Tripoli, Africa) on the other, exchanged via Alexandria-Constantinople or Alexandria-Catherine.
	c. For messages to and from other countries, via El-Arich or any other route which may be opened.	1 60	1 60	Rate belongs exclusively to the Company. This rate is reduced to 1 fr. for messages exchanged between Hèdjaz and Yemen, on the one side, and Turkey (including Tripoli, Africa) on the other.
SPAIN	For all messages	0 1875	0 1875	The transit rate is reduced by the Bilbao route to 0·145 for messages to and from Great Britain or transiting by Great Britain to or from the Brazilian cable.
	Transit rate for the cable between Cadiz and the Canaries.	.....	1 50	
	THE DIRECT SPANISH TELEGRAPH COMPANY'S RATE:			
	For the Barcelona-Marseilles cable	...	0 30	
FRANCE (including Algeria and Tunisia)	For all messages	0 225	0 225	
	Transit of the Marseilles-Algiers Cable:			
	For all messages	.....	0 225	
	THE COUTANCE-JERSEY CABLE COMPANY'S RATES:			
	For all messages	0 225	0 225	
	THE EASTERN COMPANY'S RATE:			
	Between Marseilles and Bona (Algeria)	.. ...	0 225	
FRANCE (Cochin-China).	*Terminal Rates:*			
	1st. For messages exchanged with India and countries beyond, via Tavoy.	0 50	0 50	
	2nd. For messages exchanged with the kingdom of Siam.	0 35	.....	
	3rd. For messages exchanged via the cables..	0 15	.....	
	Transit Rates:			
	For messages with the kingdom of Siam.....	.....	0 35	
FRANCE (Senegal).	Transit rate for cable between the Canaries and Senegal	. ....	1 50	Includes the Senegal terminal rate.
	Senegal terminal rate for all messages not passing via the cable between the Canaries and Senegal.	0 225	. .	
GREAT BRITAIN AND IRELAND.	For all messages exchanged by the following routes: -		The transit charge is obtained by adding the terminal rates for the transmission as far as Great Britain, on one side, to the rates charged from Great Britain on the other.	
	1st. Germany	0 30		
	2nd. Belgium	0 225		
	3rd. Denmark	0 30		
	4th. Spain.....	0 5625		This rate is reduced to 0·44 for messages exchanged with the Brazilian cable, via Bilbao.
	5th. France	0 225		
	6th. Gibraltar	0 90		Including the terminal rate for Gibraltar belonging to the Eastern Company.
	7th. Malta	0 90		Including the terminal rate for Malta belonging to the Eastern Company.
	8th. Norway..	0 2625		
	9th. Holland	0 30		
	10th. Portugal	0 60		This rate is reduced to 0·4875 for messages to or from Spain.
	N.B.—The above-mentioned rates numbered 1 to 10 are divided with the Submarine Cable Companies.			
	RATES FOR GIBRALTAR:			
	For all messages passing over the Spanish lines	0 075	0 075	
	THE HELIGOLAND COMPANY'S RATE:			
	For all messages	0 20		
	THE EASTERN COMPANY'S RATES:			
	1st. Between Gibraltar and—			
	a. Carcavellos	0 225	0 225	
	b. Vigo.....	0 50	0 50	
	c. Malta	0 625	0 625	
	2nd. Between Malta and—			
	a. Carcavellos	0 70	0 70	The transit rate is reduced to 0·625 for messages to or from Spain.
	b. Vigo	0 70	0 70	
	c Marseilles	0 45	0 45	
	d. Bona	0 225	0 225	

		Terminal Rates in francs.	Transit Rates in francs. For messages to or from India, or countries beyond India, by land line	Transit Rates in francs. For messages to or from countries beyond India, by cable	Remarks.
		Frs. cts	Frs. cts.	Frs cts.	
GREAT BRITAIN (BRITISH INDIA)	A. THE PERSIAN GULF CABLE RATES:				
	1st. From Fao to Bushire	0 45	0 45	0 30	The rate of 0·45 is also the Fao-Bushire transit rate for all other messages.
	2nd From Fao to other offices of the Persian Gulf.	2 10	2 10	1 39	
	3rd. Between Bushire and the other offices of the Persian Gulf.	1 65	1 455	1 09	

Names of States	Description of Traffic	Terminal Rates in francs	Transit Rates in francs	Remarks
		Frs cts	Frs cts	
GREAT BRITAIN BRITISH INDIA—*continued*	B RATES FOR INDIA PROPER *Terminal Rates*			
	I From the Bombay or Kurrachee frontiers			
	1st For messages exchanged between contracting or adhering Administrations and India			
	a W of Chittagong	0 575		
	b E of Chittagong and Island of Ceylon	0 825		
	c Burmah	1 025		Rate divided with Burmah
	2nd For messages exchanged with non contracting or non adhering Administrations on one side, and India on the other			
	a W of Chittagong	1 0		
	b E of Chittagong and the Island of Ceylon	1 25		
	c Burmah	1 45		Rate divided with Burmah
	II From the frontier of Madras			
	For all messages with India—			
	a W of Chittagong	0 80		
	b E of Chittagong and the Island of Ceylon	1 05		
	c. Burmah	1 25		Rate divided with Burmah
	III From the frontier of Rangoon or Siam (Tavoy)			
	For all messages with India—			
	a E of Chittagong	0 80		
	b W of Chittagong	1 05		
	c Island of Ceylon	1 30		
	d Burmah	1 00		Rate divided with Burmah
	IV From the frontiers of Bombay or Kurrachee, via Madras Penang Rangoon			
	For all messages with India			
	a E of Chittagong	1 35*		Rate divided with Burmah
	b Burmah	1 55*		* These rates are added to the Eastern Extension Company's charges for the transit of the Madras Penang Rangoon cables N B The proportion for Burmah in the charges above given is fr 0 20
	Transit Rate			
	Between all frontiers and for all messages	. . . .	0 75	
	THE EASTERN COMPANY'S RATES			
	I Between Aden and—			
	a Suakin	1 90	1 90	
	b Egypt			
	1st For messages to and from Egypt	3 25		Rate divided with the Egyptian Government, except for Alexandria, Cairo, and Suez
	2nd For messages to and from other countries by the frontier of El Arich or any other new route which may be subsequently opened	3 50		Rate belongs exclusively to Company
	c Candia	3 50		Including Egyptian transit
	d Rhodes	3 75	.	Including Egyptian transit and transit through Candia, which is gratuitous for Ottoman messages
	e Greece	3 825		Including the Egyptian transit, the Ottoman transit for Candia, and the Greek transit.
	f Otranto	3 825		
	g Malta			
	1st For messages exchanged with Malta	3 90		Including the Egyptian transit
	2nd For all other messages	3 60		

	Terminal Rates in francs	Transit Rates in francs: For messages to or from India, or countries beyond India by land line	Transit Rates in francs: For messages to or from countries beyond India by cable	Remarks
	Frs cts	Frs cts	Frs cts	
II Between the coast of India and—				
a Aden	2 85			
b Suakim	3 0	3 0	3 0	
c Egypt				
1st For messages with Egypt	3 75	3 75	3 75	
2nd For messages transiting by Egypt via El Arich, or by any new route which may be opened		4 0	4 0	
3rd For messages exchanged with Rhodes		4 425	3 50	Including the Egyptian transit and the Candia transit, which is gratuitous for Ottoman messages

		Terminal Rates in francs	Transit Rates in francs	Remarks
		Frs cts	Frs cts	
GREECE	1st For all messages passing by the Continental lines only	0 075	0 075	
	2nd For messages passing by the Greek cables, and for all the islands of the Archipelago, including the rate for Greece	0 275	0 275	
ITALY	1st Between Valona on one side and the landing places of Ontranto Corfu and Ontranto Zante on the other, and between the landing places of those two cables	.	0 075	
	2nd For all other messages	0 225	0 225	
	EASTERN COMPANY'S RATES			
JAPAN	Between Modica and Malta	0 225	0 225	
	For all messages	0 85		This rate extends to the offices in the Corea
	Rates for the cable from Japan to Corea			
	1st From the coast of Japan to the Island of Tsu chima	.	1 50	
	2nd From the coast of Japan to Fusan (Corea)		2 0	
LUXEMBURG	For all messages	0 05	0 05	
MONTENEGRO	For all messages	0 075	0 075	
NATAL	For all messages	0 20*	0 20	The transit rate is shared with the Cape of Good Hope for traffic exchanged with the latter Colony *No terminal rate is collected for traffic exchanged with Durban via the cables of the Eastern and South African Company

Names of States.	Description of Traffic.	Terminal Rates in francs.	Transit Rates in francs.	Remarks.
		Frs cts.	Frs cts	
NORWAY	For all messages	0 1125	0 1125	
HOLLAND	For all messages	0 075	0 075	
HOLLAND: (DUTCH EAST INDIES)	For all messages	0 15	0 15	
PERSIA	*Terminal Rates:*			
	1st For messages exchanged with India and countries beyond.	1 55	. . . .	
	2nd. For all others	0 60	.	
	Transit Rates:			
	1st Between the frontiers of Turkey and Russia	.. .	1 0	
	2nd. Between other frontiers for messages.			
	a. To or from India or countries beyond by land line	.. .	0 94	
	b. To or from countries beyond India by cable	..	0 705	
PORTUGAL	1st. For all messages exchanged with Portugal by the Brazilian cable, which do not originate or terminate at Portuguese possessions.	0 15	... ..	
	2nd. For all messages passing from one of the cables of the Eastern Company to the Brazilian cable, and *vice versa.*	... ..	0 075	
	3rd. For all other messages	0 075	0 1125	The transit rate, via Bilbao, is reduced to 0·09 for messages to or from Great Britain, or transiting via Great Britain to or from the Brazilian Cable.
	Special rates for the Islands of—			
	a. Madeira	0 075	....	These rates are added to those of the Brazilian Submarine Company.
	b. St Vincent	0 075	0 125	
	THE EASTERN COMPANY'S RATES:			
	Between Carcavellos and Vigo	0 30	0 30	
ROUMANIA	For all messages	0 075	0 075	
RUSSIA	*Terminal Rates:*			
	1st. For messages exchanged from the European frontiers with—			
	a. Russia in Europe	0 375	..	
	b. Russia in the Caucasus	0 675	. ...	
	c. Russia in Asia, West of the meridian of Werkne Oudinsk.	1 50	.....	
	d. Russia in Asia, East of the meridian of Werkne Oudinsk.	2 625	. ...	
	2nd. From the frontiers of Persia or Turkey in Asia for messages exchanged between India or countries beyond on one side, and on the other—			
	a. Russia in Europe, including the Caucasus	1 53	.....	
	b. Russia in Asia (1st and 2nd regions)	2 53	.... .	
	3rd. From the same frontiers for all other messages exchanged with—			
	a. Russia in the Caucasus	0 30	.. .	
	b Russia in Europe	0 675		
	c. Russia in Asia (1st region)	1 80	....	
	d Russia in Asia (2nd region)	3 00	. .	
	4th. From Wladiwostock:			
	a For Russia in Asia (1st and 2nd regions)	1 73	.....	
	b. For Russia in Europe and Russia in the Caucasus.	2 73	.....	
	Transit Charges:			
	1st. Between the European frontiers for all messages	.....	0 375	
	2nd. Between the European frontiers, on one side, and the frontiers of Persia or Asiatic Turkey on the other, for messages exchanged with—			
	a India or countries beyond by land line	....	1 505	
	b Countries beyond India by cable	..	1 18	
	3rd. Between the same frontiers for all other messages	..	0 70	
	4th. Between the frontier of Turkey in Asia and the frontier of Persia for messages exchanged with India or countries beyond	.....	1 0	
	5th Between the same frontiers for other messages	.....	0 30	
	6th. Between Wladiwostock and all other frontiers	. ....	3 0	
	7th Between the frontier of Bokhara and all others	.....	1 50	
	THE BLACK SEA TELEGRAPH COMPANY'S RATES:			
	1st. For messages exchanged between Russia and Egypt.	. ....	0 40	
	2nd. For all others	.....	0 45	
SERVIA	For all messages	0 075	0 075	
SIAM	*Terminal Rates*			
	a. From the Indian frontier (Tavoy)	0 575	...	
	b. From the Cochin-China frontier (Cambodia)	0 40	.....	
	Transit Rates:			
	For all messages	.....	0 575	
SWEDEN	For all messages	0 1875	0 15	
SWITZERLAND	For all messages	0 075	0 075	
TURKEY	*Terminal Rates:*			
	1st. From the European frontiers:			
	a For Turkey in Europe	0 25	.. .	
	b For Turkey in Asia, and Archipelago of Turkey in Asia.	0 75	. ..	Includes the rate belonging to the Eastern Company fixed at 0.17 for Scio and Tenedos, and 0 35 for the Island of Candia.
	2nd From the Asiatic Turkish frontiers:			
	a. For Turkey in Asia	0 75	.....	
	b For Turkey in Europe and the Archipelago of Turkey in Asia	1 0	. .	Includes the rate belonging to the Eastern Company, which in this case is fixed at 0.23 for Scio and Tenedos, and 0.45 for the Island of Candia. This rate is reduced to 0.25 for messages exchanged with Egypt, the Soudan, Hedjaz, and Yemen.
	Tripolitan Rates:			
	From the coast of Tripoli:			
	a. For the Tripoli office	0 15	... ..	This rate is not charged for Ottoman messages.
	b. For the other offices	0 30	. ....	
	Hedjaz and Yemen Rates:			
	From the Suakim coast (including the rate belonging to the cable from Suakim to Jedda)	1 50	.. .	This rate is reduced to 0 50 for Ottoman messages including Tripoli Africa.
	Rate for the Island of Candia	0 15	.... .	

Names of States.	Description of Traffic.	Terminal Rates in francs.	Transit Rates in francs.	Remarks.
	Transit Rates:	Frs. Cts.	Frs. Cts.	
TURKEY—*continued.*	1st. Between the European frontiers ..		0 25	
	2nd Between the frontiers of Turkey in Asia	....	0 75	
	3rd. Between the frontiers of Turkey in Europe and those of Turkey in Asia—			
	a. For messages to or from India or countries beyond by land line.	.... .	1 525	
	b. For messages to or from countries beyond India by cable.	... ..	1 035	
	c For messages exchanged with Persia, via Khanikin or Bachkaleh.	.. ...	0 70	
	d. For all others	.....	1 0	The transit rate from Constantinople (Odessa cable) to Chesmeh is reduced to 0·125 fr. for Russo-Egyptian messages exchanged via Candia-Alexandria.
	Rate for the Isle of Candia	.... .	0 075	
	N.B. The rate for the contingent transmission by the Salonica-Tenedos Dardanelles Constantinople cables of the Eastern Company is fixed at 0·20 fr, to be collected in addition to the normal rates. The Ottoman rates on account of different landing-places of certain cables of the Eastern Company, *i.e.*, on account of Tenedos, Salonica, the Dardanelles, Besika, and Constantinople (Tenedos Cable) are the same as the rates applicable on account of the Asiatic frontier of Chesmeh.			
	Rate of the Eastern Company:			
	Rate of the Malta-Tripoli cable for all messages	.....	0 60	

Uniform tariff for messages between Europe and India.

The charges for messages between Europe (except Turkey and Russia) and India are fixed uniformly at the following figures :

	West of Chittagong.	East of Chittagong.	
	Frs. Cts.	Frs. Cts.	
a. Via Turkey			
b. Via Russia	5 00	5 25	
c. Via the Eastern Telegraph Company's route (including Russia and Turkey in Europe)	5 00	5 25	

These charges are divided as follows :—

Via Turkey.

	For messages to or from—			Observation.
	India.	Countries beyond India, by land line.	Countries beyond India by cable.	The uniform tariff for messages via Turkey not having been fixed before the close of the Conference, its division cannot be set forth in this table. The rates will be subsequently notified by the International Office.
	Frs. Cts	Frs. Cts.	Frs. Cts	
Europe				
Turkey				
Persian Gulf				
India				

Via Russia.

	For messages to or from—		
	India.	Countries beyond India, by land-line.	Countries beyond India, by cable.
	Frs. Cts	Frs. Cts.	Frs Cts.
Europe	0 525	0 525	0 525
Russia	1 505	1 505	1 180
Persia	0 940	0 940	0 705
Persian Gulf	1 455	1 455	1 090
India	0 575	0 750	0 750
	5 000	5 175	4 250

By Eastern Company's Route.

	For messages to or from—		
	India.	Countries beyond India, by land line.	Countries beyond India, by cable of Eastern Extension Company.
	Frs. Cts.	Frs. Cts.	Frs. Cts.
Europe and Eastern Company.	4 425	4 425	3 500
India	0 575	0 750	0 750
	5 000	5 175	4 250

In settling with adjoining Administrations, the European States deduct or receive the exact rates apportioned to them in Table B, extra-European System. The difference more or less which may exist between the sum thus apportioned and the figure entered above as constituting the general rate for Europe is placed to the account of the extra-European Administrations.

Thus agreed to, in Berlin, 17th September, 1885, by the undersigned delegates, in conformity with Articles 15 and 16 of the St. Petersburg Convention, to enter into force the 1st of July, 1886.

(*Here follow the signatures entered on page* 146.)

Sydney : Thomas Richards, Government Printer.—1886.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

BRANCH POST OFFICES—WILLIAM-STREET, PADDINGTON, HAY-MARKET, AND OXFORD-STREET.

(BUSINESS AT DURING 1878, 1883, 1884, AND 1885.)

Ordered by the Legislative Assembly to be printed, 1 *September,* 1886.

RETURN showing the amount of Postal, Telegraph, Money Order, and Savings' Bank business transacted at the Branch Post Office at WILLIAM-STREET during the years 1878, 1883, 1884, 1885.

	1878.	1883.	1884.	1885.
Number of letters posted in twelve months	*.....	166,794	152,925	160,155
Number of telegrams transmitted	4,702	9,409	11,356	14,386
Number of Money Orders issued	1,137	2,216	2,348	2,427
Amount of Money Orders issued	£4,263 13 6	£8,078 8 7	£8,260 16 11	£8,439 8 10
Number of Money Orders paid	554	1,191	1,247	1,269
Amount of Money Orders paid	£1,794 10 8	£3,661 13 0	£3,616 1 3	£3,850 4 10
Number of Deposits	3,785	5,878	5,268	5,207
Amount of Deposits	£12,756 15 6	£25,883 10 9	£26,679 10 6	£24,346 19 6
Number of Withdrawals	1,037	1,991	2,167	2,113
Amount of Withdrawals	£12,196 7 4	£24,908 8 1	£22,238 10 11	£24,535 17 2
REVENUE.				
Post Office	£3,492 4 0	£1,787 3 6	£2,490 3 0	£1,867 14 6
Telegraphs	292 13 11	568 14 0	629 16 8	725 4 8

* Local returns of letters posted in 1878 have been destroyed.

1 September, 1886.

W. L. CARTER,
Accountant.

RETURN showing the amount of Postal, Telegraph, Money Order, and Savings' Bank business transacted at the Branch Post Office at PADDINGTON during the years 1878, 1883, 1884, 1885.

	1878.	1883.	1884.	1885.
Number of letters posted in twelve months	*.....	90,651	109,845	144,825
Number of telegrams transmitted	1,828	5,447	6,863	9,331
Number of Money Orders issued	383	1,062	1,160	1,951
Amount of Money Orders issued	£1,271 13 6	£3,553 16 11	£3,849 1 4	£7,587 1 3
Number of Money Orders paid	457	1,002	1,206	1,456
Amount of Money Orders paid	£1,581 12 11	£3,617 7 2	£4,007 3 3	£4,718 1 4
Number of Deposits	1,273	2,675	2,823	3,518
Amount of Deposits	£5,173 2 9	£9,860 7 11	£11,748 8 9	£15,250 17 8
Number of Withdrawals	350	991	1,098	1,272
Amount of Withdrawals	£4,362 13 10	£10,651 11 1	£11,193 12 11	£12,732 7 10
REVENUE.				
Post Office	£687 16 0	£730 5 6	£555 15 0	£529 12 6
Telegraphs	93 2 10	278 10 6	346 4 10	447 3 1

* Local returns of letters posted in 1878 have been destroyed.

1 September, 1886.

W. L. CARTER,
Accountant.

RETURN

RETURN showing the Amount of Postal, Telegraph, Money Order, and Savings' Banks business transacted at the Branch Post Office at HAYMARKET, during years 1878, 1883, 1884, 1885.

	1878	1883	1884	1885.
Number of letters posted in twelve months	*	442,638	586,250	625,017
Number of telegrams transmitted	8,063	16,549	20,139	23,519
Number of Money Orders issued	1,575	4,276	4,491	4,939
Amount of Money Orders issued	£5,981 6 10	£16,343 17 2	£17,084 3 7	£17,646 11 9
Number of Money Orders paid	886	2,958	3,105	3,390
Amount of Money Orders paid	£3,279 5 1	£9,660 5 11	£9,545 4 8	£10,687 14 3
Number of deposits	3,578	10,360	10,537	11,353
Amount of deposits	£21,473 5 10	£69,889 5 11	£73,295 3 10	£85,165 12 4
Number of withdrawals	1,140	4,459	5,115	5,316
Amount of withdrawals	£14,820 4 6	£60,840 13 4	£65,940 18 11	£71,895 5 9
REVENUE				
Post Office	£2,489 10 0	£2,209 10 9	£2,714 12 6	£2,583 8 6
Telegraphs	514 9 3	974 6 9	1,150 18 1	1,258 1 6

* Local returns of letters posted in 1878 have been destroyed

W. L. CARTER,
Accountant.

1st September, 1886.

RETURN showing the Amount of Postal, Telegraph, Money Order, and Savings' Banks business transacted at the Branch Post Office at OXFORD-STREET, during the years 1878, 1883, 1884, 1885.

	1878	1883	1884	1885
Number of letters posted in twelve months	*	155,298	182,682	206,374
Number of telegrams transmitted	5,198	10,747	13,508	17,383
Number of Money Orders issued	1,169	2,088	2,510	2,519
Amount of Money Orders issued	£3,657 1 2	£6,945 11 1	£8,316 7 8	£8,018 15 10
Number of Money Orders paid	1,117	2,041	2,144	2,295
Amount of Money Orders paid	£3,417 3 4	£6,090 12 11	£5,984 14 1	£6,622 19 1
Number of deposits	5,201	8,424	8,678	8,057
Amount of deposits	£22,057 18 0	£37,906 1 3	£43,610 4 7	£44,223 0 7
Number of withdrawals	1,752	3,326	3,685	3,796
Amount of withdrawals	£20,373 16 5	£38,279 18 3	£40,065 5 10	£41,869 6 8
REVENUE.				
Post Office	£1,292 0 0	£2,300 0 6	£2,418 8 0	£1,730 17 6
Telegraphs	312 8 7	644 18 9	744 3 4	859 11 8

* Local returns of letters posted in 1878 have been destroyed

W. L CARTER,
Accountant.

1st September, 1886.

Sydney Thomas Richards, Government Printer —1886

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MAIL COMMUNICATION BETWEEN NEW SOUTH WALES AND THE UNITED KINGDOM *VIA* SUEZ.

PAPERS RELATING TO THE EXTENSION OF THE CONTRACT WITH THE ORIENT STEAM NAVIGATION COMPANY TO FEBRUARY, 1888.)

Ordered by the Legislative Assembly to be printed, 24 *November,* 1885.

The Manager, Orient Company, to The Secretary, General Post Office, Sydney.

Sir, Orient Line of Steamers, Sydney, 13 June, 1885.

I now beg to put in the form of a letter the substance of what I said to you at our recent interview.

The existing Postal Contract between your Government and my Company will expire on 30th November, 1886.

That contract was regarded at the time it was arranged as of a tentative character, and its duration was accordingly fixed for a shorter period than is usual in such cases.

I venture to think that the experiment has proved successful, but the records of your Department will show particularly how far the service has been appreciated by the public.

The period of eighteen months which the contract has still to run is short enough for maturing measures for the satisfactory development of the service thereafter, and before entering upon such measures it is important that my Company should have an understanding with your Government.

In view of the foregoing, I would respectfully submit that the time is now opportune for making arrangements for the future of a permanent character; and I beg to inquire, accordingly, whether the Honorable the Postmaster-General will be prepared to explain, at an early date, the views of the Government as to a renewal of the contract with my Company for a lengthened period.

I have, &c.,
G. SKELTON YUILL,
Manager in Australia.

Submitted,—S.H.L., 15/6/85.

The Secretary, General Post Office, Sydney, to the Manager, Orient Company.

Sir, General Post Office, Sydney, 20 June, 1885.

Referring to your letter of the 13th instant, and interviews with the Postmaster-General, on the subject of the renewal of your contract for the conveyance of mails, I am directed to inform you that the whole question of future ocean mail services is now engaging the careful attention of the Government.

In the meantime, and with a view to clear the way for future negotiations, the Government propose submitting to Parliament a resolution that the present contract with your Company be extended to the period when the Peninsular and Oriental Company's contract with the Government of Victoria will expire, about February, 1888. If continued beyond that time, to be terminable on six months' notice.

I have, &c.,
S. H. LAMBTON,
Secretary.

The

The Manager, Orient Company, to The Secretary, General Post Office, Sydney.

Sir, Orient Line of Steamers, Sydney, 22 June, 1885.

I have the honor to acknowledge receipt of your letter of 20th instant, informing me that the whole question of the future ocean mail service is now engaging the attention of the Government, but that in the meantime, and with a view to clear the way to future negotiations, the Government propose to submit to Parliament a resolution that the present contract with the Orient Company be extended to at least February, 1888, when the P. and O. Company's contract with the Government of Victoria will expire, and if continued beyond that period to be terminable by six months' notice.

It is not directly stated in your letter, but I infer from its tenor, that the intention is that the contract should not expire in February, 1888, except on six months' previous notice. I should be glad to have your confirmation of this.

I beg to tender my thanks to the Honorable the Postmaster-General for the above information, and would ask the further favour of his giving me whatever indication he can, when the opportune time arrives, of the intentions of the Government bearing upon the more permanent settlement of the question.

I have, &c.,
G. SKELTON YUILL,
Manager in Australia.

Submitted.—S.H.L., 25/6/85. I see no objection to give the notice asked for.—J.N., 25/6/85.

The Secretary, General Post Office, Sydney, to The Manager, Orient Company, Sydney.

Sir, General Post Office, Sydney, 30 June, 1885.

In reply to your letter dated the 22nd instant, inquiring, in connection with the proposal to submit a resolution to Parliament for the extension of the Orient Mail Contract till February, 1888, and if continued beyond that period to be terminable by six months' notice, whether it is intended that the contract shall *not* expire in February, 1888, except on six months' previous notice, I am directed to inform you that the Postmaster-General sees no objection to give the notice asked for whether the Government decide to terminate the contract in February, 1888, or at any subsequent date.

I have, &c.,
S. H. LAMBTON,
Secretary.

The Manager, Orient Company, to The Secretary, General Post Office, Sydney.

Sir, Orient Line of Steamers, Sydney, 1 July, 1885.

I have the honor to acknowledge receipt of your letter, 85/B. 7,051 of 30th ultimo, regarding the notice to be given of the termination of the Mail Contract between my Company and your Government, and to thank you for the information therein contained.

I have, &c.,
(For G. Skelton Yuill,
Manager in Australia),
THOS. W. PUGH.

Sydney: Thomas Richards, Government Printer.—1885.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

FUTURE MAIL COMMUNICATION BETWEEN GREAT BRITAIN AND AUSTRALIA *VIA* SUEZ.

(CORRESPONDENCE.)

Ordered by the Legislative Assembly to be printed, 9 *December,* 1885.

SCHEDULE.

NO.		PAGE.
1.	The Agent-General for New South Wales to the Colonial Secretary, New South Wales, dated 30 July, 1884	1
2.	The Chief Secretary, South Australia, to the Colonial Secretary, New South Wales, dated 21 January, 1885	2
3.	Report by the Secretary to the Post Office, New South Wales, dated 29 January, upon the despatch, with enclosures, from the Agent-General on the question of future subsidies for ocean mail lines	3
4.	Circular Telegram from the Secretary of State for the Colonies to the Australian Governors, received 4 February, 1885	3
5.	The Agent-General for New South Wales to the Colonial Secretary, New South Wales, dated 23 January, 1885	3
6.	The Secretary to the Post Office to the Principal Under Secretary, dated 29 June, 1885	4
7.	The Secretary to the Post Office to the Principal Under Secretary, dated 29 June, 1885	4
8.	The Colonial Secretary, New South Wales, to His Excellency the Governor	5
9.	The Colonial Secretary, New South Wales, to the Agent-General for New South Wales, dated 6 July, 1885	5
10.	His Excellency the Governor, New South Wales, to Colonial Secretary, New South Wales, dated 7 July, 1885	5
11.	The Right Honorable the Secretary of State for the Colonies (telegram) to His Excellency the Governor, New South Wales, dated 23rd July, 1885	6
12.	Memo. of the Secretary to the Post Office	6
13.	Memorandum of Agreement, dated 21 August, 1885	6
14.	Joint telegram to the Right Honorable the Secretary of State for the Colonies regarding the combined ocean mail service	7
15.	The Right Honorable the Secretary of State for the Colonies to His Excellency the Governor of New South Wales, dated 4 August, 1885	7
16.	Telegram from the Under Secretary, Adelaide, to the Principal Under Secretary, Sydney, dated 17 November, 1885	8
17.	Colonial Secretary, New South Wales, to Colonial Secretary, Queensland, and to Premier, New Zealand, dated 2 September, 1885	8
18.	The Premier, New Zealand, to the Colonial Secretary, New South Wales, dated 12 October, 1885	8

No. 1.

The Agent-General to The Colonial Secretary.

Mail Service.

Sir, 5, Westminster Chambers, Westminster, S.W., 30 July, 1884.

I have the honor to forward, for your information and consideration, copy of a letter addressed to me by the Colonial Office, covering a communication from the Treasury having reference to the arrangements to be made in connection with the Postal Service to the Colonies at the termination of the existing Peninsular and Oriental contract in 1888; and I should be glad to be favoured, at the earliest moment, with the views of your Government, in order that I may place them before the Secretary of State for the Colonies. 28th July, /84.

I have informed Lord Derby that I would prefer expressing no opinion regarding the question until I know the views of my Government, and that I will address his Lordship so soon as I am in receipt of your reply to this communication.

I have, &c.,
SAUL SAMUEL.

The Postmaster-General.—A.S., 6/9/84. The Secretary to the Post Office.—C.W., B.C., 8 Sept., /84.

[*Enclosure.*]

Sir, Colonial Office, Downing-street, 28 July, 1884.

The Lords Commissioners of the Treasury have drawn the attention of the Earl of Derby to the question of the Eastern Mail Service with a view to the arrangements to be made upon the expiration of the present contract with the Peninsular and Oriental Steamship Company.

2. That contract, I am to observe, will terminate on the 31st January, 1888, if two years' notice be given; and, although this date is comparatively remote, the Lords Commissioners of the Treasury, in concurrence with the Postmaster-General, are of opinion that the variety of the interests involved, as well as the inherent difficulties of the question, make its consideration desirable thus far in advance of the date when practical steps will have to be taken; and they have suggested that notice of the termination of the existing contract should be given, and that the subject in the meantime should be thoroughly investigated in all its bearings, paying due regard to all the different interests concerned.

3. The enclosed extract from a report by the Postmaster-General indicates the most important of the questions which would have to be considered; but before taking any steps in the matter Lord Derby would be glad to be favoured with an expression of your views generally on the subject.

You will probably be in a position fully to explain the views of your Government at the proper time respecting any details which may come in course of discussion.

I am, &c.,
R. H. MEADE.

Extract from Postmaster-General's Report to the Treasury, dated 30 May, 1884.

* * * * * * * * * * * *

1. In view of the marked development in the steam-shipping trade to India and the Australian Colonies within the last few years, would it be possible to avoid giving a subsidy to any particular company by placing the mail service to the East on a footing similar to that on which the mail service to the United States will be placed under the new plan about to be brought into operation in September next, *i.e.*, of taking up the most efficient vessels available from time to time and paying only for the weight of the correspondence actually carried.

If such an arrangement were practicable it might be found that a great saving would result, and also that the countries interested would have a more frequent mail service. Moreover, if subsidies could be dispensed with, the great advantage would be secured of abolishing the evil inseparably associated with all subsidies, namely, that by favouring one company they curtail the benefit of free competition.

2. Would time be saved in carrying mails to China if they were landed at Bombay and taken by railway from Bombay to Calcutta, whence it is presumed frequent opportunities offer for conveying them to their destination by lines of steamers already existing?

3. The arrangements now made for the apportionment of the cost of the packet service between England, India, Ceylon, the Straits Settlements, and Hongkong seem to require revision; and this is especially the case with regard to the apportionment of the postage on the correspondence exchanged between England and the Australian Colonies. * * * *

No. 2.

The Chief Secretary, South Australia, to The Colonial Secretary, New South Wales.

Sir, Chief Secretary's Office, Adelaide, 21 January, 1885.

I have the honor to transmit for your information draft of a despatch proposed to be sent by this Government to the Right Honorable the Secretary of State for the Colonies, in answer to his of 28th July last, on the subject of ocean postal arrangements between the United Kingdom and the Colonies.

It is of the utmost importance that the Colonies of New South Wales, Victoria, and South Australia should act in complete concert regarding this matter, and accordingly my colleague, the Minister of Justice and Education, the controlling Minister of the Postal Department of this Colony, will in all probability visit Sydney and Melbourne at an early date, with the view of a mutual understanding being arrived at respecting the matter, in order that a similar despatch (if agreed upon) may be sent to the Secretary of State by your Government and that of Victoria.

I have, &c.,
JOHN COLTON.

The Postmaster-General.—W.B.D. The Secretary to the Post Office.—C.W., B.C., 6 February, 1885.

[*Enclosure.*]

In answer to your despatch of July 28th, 1884, and enclosure therein, addressed to the Agent-General for South Australia, I have the honor, on behalf of this Government, to inform you:—

1. That in their opinion the time has not yet arrived, nor on the expiration of the present contract with the P. and O. Steamship Company (January 31st, 1888) will it have arrived, when the Colonies can altogether dispense with subsidies to ocean steamship companies, and rely on the means suggested by the Postmaster-General of Great Britain in his report to the Treasury, dated May 30th, 1884, to ensure the due carriage of mails.

2. This Government, however, entirely coincide with the Postmaster-General in the opinion that all payments for the carriage of mails should take the form of payment by weight of the correspondence actually carried.

3. They further think that in any new arrangements to come into force on the expiration of the existing contracts with the P. and O. Company it should be mutually agreed to that in respect of mails between the Colonies and the United Kingdom each country should pay the through cost of transit to destination on all mails it despatches, and retain the whole of its postage, so as to obviate the necessity for complicated accounts between the postal departments. With regard to correspondence with other countries, the Colonies would in like manner pay the through cost of all the mails they despatch, and be paid such proportion of the union sea transit rate on outward mails as may accrue to the section of the service for which they may be responsible.

4. As joint action between the Imperial Government and the Colonies is necessary to ensure an economical but really efficient weekly mail service, fitting in wholly or in part with the India and China mails, it is urged that the Home Government should at an early date state what section of the service they are prepared to undertake, and take such steps as they may think necessary to secure the adoption of a general scheme which will best meet the requirements of the United Kingdom and the Colonies.

5. I have the honor to call your attention to the charge of 16 francs 50 centimes per kilogramme for carriage of letters through France and Italy, and to respectfully ask that action may be taken by the British Post Office Department to secure a reduction of these charges.

6. It is intended to suggest to and urge upon the Governments of the other Colonies the advisability of united action, in order to obtain the most efficient service and the best possible terms from the steamship companies.

No. 3.

Report by the Secretary to the Post Office, New South Wales.

It would perhaps be desirable to reply to the Agent-General's despatch of 30th July last as soon as possible.

The question seeming to be one of policy, I offered no remarks on the despatch, but the Postmaster-General has asked for my views on the matter before dealing with it.

The Australasian Colonies are at present connected with the rest of the world by no fewer than five lines of mail contract steamers (for particulars of lines see attached paper), besides several other lines of fast steamers not under contract. The competition is likely to be still greater as time goes on.

In January, 1888, when the P. and O. Company's contract can be terminated, I think the time will have arrived when subsidies (though possibly not contracts) might fairly cease, and the steamers carrying Australasian mails be paid so much per lb. for the correspondence carried, with an extra sum by way of bonus, these being the principles on which the present contract with the Orient Company is based. If the Australasian Colonies could be induced to concur in such a system a uniform rate of payment could be determined on, and, in case of fast passages, the bonus or premium might, in lieu of being wholly paid as at present by one (*i.e.*, the contracting) Colony, be shared by each Colony whose mails were carried by the particular steamer earning the bonus.

Under the new arrangement for carriage of British mails to America the Imperial Government it appears selects the most efficient steamers. The Colonies on the one hand, and Great Britain on the other, might do the same, the only difficulty that would probably arise would be that, as the choice would of course not be in all cases a unanimous one, the premium for fast passages would have to be sometimes borne by one or two Colonies only. For instance, if the Torres Straits line still continued running without subsidy it is likely that Queensland would be the only colony using it, and, of course, would have to pay all the agreed-on bonuses for the quick passages. There is a line of steamers running to New Zealand *viâ* Hobart which would probably be used by Tasmania only, and in which case the bonus would be borne only by that colony. But this is perhaps a detail which will not need to be gone into at the present stage.

In the last sentence of the extract from the Report of the Postmaster-General of Great Britain a suggestion is made as to the reapportionment of the postage on correspondance exchanged between England and the Colonies. Now, it seems to me that if such an arrangement as I have indicated, namely, the abolition of all subsidies, and the payment of a poundage rate on correspondence, with bonus for quick passages, could be agreed to by *all* the Australasian Colonies, and also by Great Britain, the simplest course to adopt with regard to postages would be for the despatching country or colony to retain the whole of its own collections, and pay the whole cost of transit of the mails to destination, including the bonuses for the quick passages.

S.H.L., 29/1/85.

Company.	Subsidy.	By whom paid.
1. Peninsular and Oriental Steam Navigation	£85,000 per annum	Victoria.
2. Pacific Mail Steamship	£31,250 per annum	New Zealand.
3. Orient Steam Navigation	12s. per lb. for letters. 1s. „ „ packets. 6d. „ „ newspapers. Premium for early arrival, £5 per hour. Penalty for late arrival, £4 per hour. 39 days being the time allowed for conveyance of mails between Melbourne and London.	New South Wales.
4. British-India Steam Navigation	£55,000 per annum	Queensland.
5. Messageries Maritimes	.....	France.

No. 4.

Circular Telegram from The Right Honorable the Secretary of State for the Colonies to The Australian Governors.

[Received 4th February.]

Her Majesty's Government have under consideration mail service. Would be glad to know—1st. At expiration of existing arrangements, in the year 1888, for conveyance of Eastern mail, would Colonial Governments join in conveying and providing transport of mails from Brindisi and other Continental ports to Australia, and *vice versâ*, or would they prefer, as at present, to arrange for conveyance of our mails to and from point on China line, to be determined, short of above-mentioned port. 2nd. If you agree to join general contract, will you agree to share loss, if any, sustained by conveyance on basis already existing as regards India—this country paying half the amount, Colonies dividing remainder according to their share in correspondence with and distance conveyed. 3rd. Would Colony join single contract, if obtainable on advantageous terms, to enter Eastern service, Australia, China, India, or do you prefer to divide service into two or more contracts, providing, as at present, weekly service at least?

The Colonial Secretary.—A.L., 6/12/85. The Secretary to Post Office.—C.W., B.C., 9/2/85.

No. 5.

The Agent-General to The Colonial Secretary.

Sir, 5, Westminster Chambers, Westminster, S.W., 23 January, 1885.

In continuation of my letter of the 30th July last, No. 84–264 4673, on the subject of the arrangements to be made in connection with the Postal Service to the Colonies at the termination of the existing Peninsular and Oriental Company's contract in 1888, I have now the honor to forward for your information copy of a letter received by me from the Secretary of State for the Colonies, inviting me to meet a Committee at the Colonial Office on the 19th instant, to discuss *confidentially* the question of combining in one contract the whole Eastern Mail Service after the present contracts expire. 12 Jan, 1885.

I accordingly attended the Committee at the appointed time, the following gentlemen, with others, being present:—Mr. G. C. Barrington, of the Treasury, in the Chair; Mr. John Bramston, of the Colonial Office; Mr. E. H. Rea, of the Post Office; Sir Arthur Blyth, K.C.M.G.; Mr. R. Murray Smith, C.M.G.; and Mr. J. F. Garrick.

The Agents-General stated that any opinion they expressed was simply founded upon their own views, as they had received no instructions in regard to the matter, which must be dealt with by the respective Colonial Governments.

It was arranged that Mr. Barrington and Mr. Rea should formulate a proposal to be submitted by the Agents-General to their respective Governments. So soon as this reaches me I will transmit it for your consideration.

I have, &c.,
SAUL SAMUEL.

The Postmaster-General.—W.B.D.

The Secretary to the Post Office.—C.W., B.C., 7 March, 1885. Read.—J.N., 4/5/85.

[*Enclosure.*]

Colonial Office to Agent-General.

Sir,

Downing-street, 12 January, 1885.

Referring to the letter from this Department of the 28th July last, relating to the mail service, I am directed by the Earl of Derby to ask whether it would be convenient to you to meet the Committee here at their next sitting on Monday next at 3·30 p.m., and discuss confidentially the question of combining in one contract the whole Eastern Mail Service after the present contracts expire.

I am, &c.,
ROBERT G. W. HERBERT.

No. 6.

The Secretary to the Post Office to The Principal Under Secretary.

Sir,

General Post Office, 29 June, 1885.

With reference to the cablegram of the Right Honorable the Secretary of State for the Colonies, dated 4th February last, inviting an expression of opinion as to the future Ocean Mail Service arrangements between Australia and the United Kingdom, I am directed to request that you will be so good as to move the Honorable the Colonial Secretary to cause a reply to the following effect to be sent, namely,—That it is the opinion of this Government that the principles which govern the present mail agreement between this Colony and the Orient Company—as indicated in the letter of its Managing Director in Australia to the Postmaster-General, Sydney, dated 3rd August, 1883 (copy of which is enclosed)—should underlie all future ocean mail contracts; and that it has been determined by this Colony to submit a resolution to Parliament for the extension of the present contract agreement with the Orient Steam Navigation Company, so that it shall terminate concurrently with the mail contract between the Victorian Government and the Peninsular and Oriental Steam Navigation Company in January, 1888.

Further, that negotiations are about to be opened with the Victorian Government with a view of arranging, if possible, for a joint contract with the Peninsular and Oriental and the Orient Steam Navigation Companies for a weekly mail service between Australia and the mother country on a similar basis to that upon which the existing contract between New South Wales and the Orient Company, before alluded to, was founded; such new contract to be for a period of nine or ten years—subject to a periodical review every three years as to the normal time for delivery of the mails, as the pivot on which the bonus and fines should depend, so that the Colonies may have some control in keeping the contractors up to the advancing development of ocean steaming.

It might be mentioned that this Government has further proposed to the Government of Victoria that the Government of South Australia—and, indeed, that all the Australian Colonies—might be invited to join in such a contract.

I have, &c.,
S. H. LAMBTON.

[Enclosure—See papers ordered by the Legislative Assembly to be printed, on 9th October, 1883.]

No. 7.

The Secretary to the Post Office to The Principal Under Secretary.

Sir,

General Post Office, Sydney, 29 June, 1885.

I am directed to request that you will be so good as to move the Honorable the Colonial Secretary to cause a communication to be addressed to the Government of Victoria to the following effect, namely:—That in view of—

1. The cablegram of the Right Honorable the Secretary of State for the Colonies, dated 4th February last, inviting an expression of opinion on the part of the Australasian Colonies in regard to the arrangements for future Ocean Mail Services.
2. The termination of the contract between the Government of Victoria and the Peninsular and Oriental Steam Navigation Company in January, 1888.
3. The termination in November, 1886, of the agreement between the Government of New South Wales and the Orient Steam Navigation Company for conveyance of mails between this Colony and England,—

it has been determined by the Government of this Colony to submit a resolution to Parliament for the extension of the present contract with the Orient Company, so as to terminate it concurrently with the contract between the Victorian Government and the Peninsular and Oriental Company.

That in further view of the foregoing facts it is considered desirable that the Victorian and South Australian, as well as the other Australian Governments, should be invited to co-operate with New South Wales in making joint arrangements with the Peninsular and Oriental and the Orient Steam Navigation Companies for a weekly mail service between Australia and the mother country, to take effect in the year 1888, on terms based on like principles to those which govern the existing contract between New South Wales and the Orient Company—which principles are indicated in the letter from the Manager in Australia of the Orient Steam Navigation Company to the Postmaster-General of New South Wales, dated 23rd August, 1883, copy of which is enclosed.

That

That it is further considered, that these two companies having served the Colonies well during many years should not be subjected to the annoyance of competition being invited. The proposed arrangements are very different from that of a direct postal subsidy, and it should not be lost sight of that these companies have been constantly building fast and expensive boats for the purpose of giving us a better service than they were bound to do by the strict letter of their contracts.

It is suggested that these companies might receive a nine or ten years contract, subject to a periodical review every three years as to the normal time for the delivery of mails, as the pivot on which the bonus and fines depend, so that the Colonies may have some means of keeping the contractors up to the advancing development of ocean steaming.

It might be intimated to the Government of Victoria that, in reply to the cablegram from the Secretary of State for the Colonies before alluded to, it is intended to inform the Secretary of State that in the opinion of the Government of this Colony the principles which govern the present contract between the Orient Company and New South Wales should underlie all future contracts for ocean mail services between Australia and the mother country, and that we are now in communication with the Government of Victoria on the question of a future mail service, in which the colonies of New South Wales and Victoria, and possibly the other Australian Colonies, might join.

I have, &c.,
S. H. LAMBTON.

[Enclosure—See papers ordered by Legislative Assembly to be printed, on the 9th October, 1883.]

Submitted that letter be addressed accordingly to the Premier of Victoria.—30 June, /85. Let letter be prepared accordingly.—A.S., 1/7/85. Premier of Victoria, 2nd July, /85.

No. 8.
Minute for His Excellency the Governor.

WITH regard to the telegram of 4th February last, received by His Excellency from the Principal Secretary of State for the Colonies, inviting an expression of opinion as to the future Ocean Mail Service arrangements between Australia and the United Kingdom, I am now in a position to place on record the conclusion to which His Excellency's Ministers have come on the subject.

It is considered that the principles which govern the present mail agreement between this Colony and the Orient Company, as indicated in the letter of its Managing Director in Australia to the Postmaster-General, Sydney, dated 23rd August, 1883 (copy of which is attached), should underlie all future mail contracts; and it is proposed to submit a resolution to Parliament for the extension of the present contract agreement with the Orient Steam Navigation Company, so that it shall terminate concurrently with the mail contract between the Victorian Government and the Peninsular and Oriental Steam Navigation Company in January, 1888.

Negotiations are about to be opened with the Victorian Government, with a view of arranging, if possible, for a joint contract with the Peninsular and Oriental and the Orient Steam Navigation Companies, for a weekly mail service between Australia and the mother country, on a similar basis to that upon which the existing contract between New South Wales and the Orient Company, before alluded to, was founded; such new contract to be for a period of nine or ten years, subject to a periodical review every three years as to the normal time for delivery of the mails, as the pivot on which the bonus and fines should depend, so that the Colonies may have some control in keeping the contractors up to the advancing development of ocean steaming.

It has been proposed to the Government of Victoria that the Government of South Australia, and, indeed, that all the Australian Colonies, might be invited to join in such a contract.

Colonial Secretary's Office, 3 July, 1885. ALEX. STUART.

[Enclosure—See papers ordered by Legislative Assembly to be printed, on the 9th October, 1883.]

No. 9.
The Colonial Secretary to The Agent-General.

Sir, New South Wales, 6 July, 1885.

A telegram, dated the 4th February last, having been received by His Excellency the Governor from the Principal Secretary of State for the Colonies, inviting an expression of opinion as to the future Ocean Mail Service arrangements between Australia and the United Kingdom, I have the honor to enclose for your information a copy of a minute that has been forwarded to His Excellency for transmission to the Secretary of State, conveying the conclusion to which the Government have come on the subject. (Enclosure, see No. 8.) 3 July, 1885.

I have, &c.,
ALEX. STUART.

No. 10.
His Excellency the Governor to The Colonial Secretary.

Sir, Government House, Sydney, 7 July, 1885.

In reply to your letter of 3rd instant, No. 85/7318, enclosing minute on the future Ocean Mail Service arrangement between Australia and England, I have the honor to annex copy of a telegram which I despatched to the Secretary of State for the Colonies on the 4th instant.

2. By Thursday's mail I am forwarding copy of the minute above alluded to.

I have, &c.,
AUGUSTUS LOFTUS.

The Postmaster-General.—A.S., 10 July, /85. The Secretary to the Post Office.—J.B., for P.U.S., B.C., 11 July, /85. Seen.—J.N., 14/7/85.

[*Enclosure.*]

[*Enclosure.*]

Telegram from Governor, New South Wales, to Secretary of State.

4 July, 1885.

THIS Government propose to ask Parliament for extension of present contract with Orient Company to terminate concurrently with Victorian contract with Peninsular and Oriental Company in January, 1888. Negotiations with Victoria opened, suggesting joint contract with both companies for weekly mail on similar basis as existing contract between this Government and Orient Company—such contract for nine or ten years. Periodical review every three years as to delivery of mails. That all Australasian Colonies might join.

AUGUSTUS LOFTUS.

No. 11.

Telegram from The Right Honorable the Secretary of State to His Excellency the Governor.

23 July, 1885.

REFERRING to your telegram of 4th July, it was Colonial Governments proposed arranging for mails to point on China line. If so, you may consider Her Majesty's Government withdraws proposal contained in my telegram of February 4th, for single contract entire service. Inform Australian Governments. Despatch follows by mail as to calling for tenders simultaneously.

Minute of His Excellency the Governor.

"This telegram has been likewise forwarded to all the Australasian Governments, except Fiji."—A.L.

The Colonial Secretary.—A.L., 25/7/85. The Postmaster-General.—A.S., July, /85. The Secretary to the Post Office.—J.B., for P.U.S., B.C., 29 July, /85.

No. 12.

Memo. of the Secretary to the Post Office.

IN February, 1885, the Honorable R. C. Baker, then Minister of Justice and Education of South Australia, visited Melbourne and Sydney with the view of arranging for joint action by Australian Colonies in regard to future mail service *via* Suez. After a lengthy consideration of the matter, and a second visit in July, 1885, to Melbourne and Sydney by Mr. Baker (who was then specially commissioned by the South Australian Government to attend to this matter, he being no longer a member of the South Australian Government) the terms of a joint agreement were drafted. Mr. Baker then (*i.e.*, in July, 1885) proceeded to England, it was understood, to aid the South Australian Agent-General there in furthering this proposal. Subsequently this agreement was modified by the Governments of the respective Colonies of New South Wales, Victoria, and South Australia, and an agreement, dated 21st August, 1885, was signed on behalf of these Colonies.

No. 13.

Memorandum of Agreement.

MEMORANDUM of agreement made between the Colonies of New South Wales, Victoria, South Australia, Tasmania, Queensland, Western Australia, and New Zealand.

It is agreed as follows :—

1. This agreement is primarily entered into by the three Colonies first-named; and unless all three of such Colonies sign or agree to the same it shall not be considered binding on any one or more of such Colonies who have signed or agreed hereto.

2. As soon as the three first-named Colonies shall have assented hereto the other Colonies beforementioned shall be invited to become parties hereto.

3. The Colony of New South Wales shall invite the Colonies of Queensland and New Zealand to become parties hereto; the Colony of Victoria shall invite the Colony of Tasmania to become a party hereto; and the Colony of South Australia shall invite the Colony of Western Australia to become a party hereto.

4. This agreement is entered into as a preliminary to a joint answer being sent by the Colonies to the telegram of Lord Derby, of the 4th February, 1885, to the Governors of the various Colonies *re* postal matters, and in order to secure joint and concerted action on the part of the Colonies in reference to the postal matters referred to in such telegram.

5. As soon as the first three Colonies named have assented hereto a telegram shall be sent to the British Government, in answer to the said telegram of the 4th February, suggesting the following arrangements between Great Britain and the Colonies on the termination of the present agreement between Great Britain and the Peninsular and Oriental Steamship Company :—

First—Great Britain to invite tenders on behalf of herself and the contracting Colonies for a mail service or mail services to be performed by British ships.

Second—Tenders to be called—

(*a*) For a weekly service.

(*b*) For a fortnightly service, to alternate with another fortnightly service, so as to secure a weekly service.

Third—Such service or services to be from Brindisi, Naples, or some other port in Europe, to be named by the tenderers, and approved of by the other contracting parties, to Sydney, *viâ* King George's Sound, Adelaide, and Melbourne.

Fourth—The tenders (whether confined to any particular companies or open) to be called for separate and distinct from any other service.

Fifth—Tenders to be invited for services from London to the Semaphore, Adelaide, and *vice versâ*, in twenty-nine days, in thirty-one days, and in thirty-three days.

Sixth—

Sixth—The mail matter of any Colony desiring it to be landed at Adelaide, and forwarded by rail to Melbourne, Sydney, Brisbane, *et cetera*; 10d. per lb. for letters and 1d. per lb. for other mail matter to be paid to each forwarding Colony; South Australia to guarantee that there shall not be delay of more than six hours at Adelaide, and, if necessary, to employ special trains. South Australia and Victoria to arrange as to specials between Adelaide and Melbourne, and Victoria and New South Wales between Melbourne and Sydney.

Seventh—The mail steamers to continue on to Melbourne and Sydney.

Eighth—The tenders to include the local transit rates across Egypt, but the tenderers may carry mails by what route they think best, if they carry them in the specified time.

Ninth—All mail matter to be tendered for at { per lb. of letters. / per lb. of other matter. } amount to be given by tenderers.

Tenth—Penalties of £4 per hour for non-arrival in time, and bonuses of same amount for arrival before time (between port of departure in Europe and the Semaphore, Adelaide).

Eleventh—Great Britain and the contracting Colonies to send by the contracting steamers all mail matter not specially directed to be sent by particular route.

Twelfth—Great Britain to retain all her own postages, and pay cost of transit. through to destination of all mail matter, including premiums on voyages from Great Britain. The contracting Colonies to do the same in connection with the trips from the Colonies to Great Britain.

Thirteenth—If any other Colony, not a party hereto, sends mail matter by contracting steamers it shall be carried at the same rates as for contracting Colonies, and on the same terms, including share of premiums and penalties.

Fourteenth—Premiums on mail matter despatched from the Colonies by any steamer to be paid by Colonies sending letters by such steamer in proportion to letters carried, and accounts to be adjusted quarterly.

Fifteenth—In the event of the contracting Colonies joining the Postal Union, any loss which may accrue in consequence of being obliged to carry mail matter for Union Countries at Union rates to be paid one-half by Great Britain and the other half by the contracting Colonies, in the proportion of weight of letters carried for such Colonies—taking an average of three months.

Sixteenth—No contract to be accepted without the consent of the three first-named Colonies.

Seventeenth—The tenders to be for five years.

6. It is also agreed that the contracting Colonies shall urge upon Great Britain the desirability of taking all possible steps to reduce the exorbitant rates now paid for the land transit of the Australian mails across Italy and France, namely 16 f. 50 c. per kilo of letters, *et cetera*.

7. This agreement is made subject to ratification by the respective Parliaments of the Colonies parties hereto.—Dated this 21st day of August, 1885.

JAMES NORTON,
Postmaster-General, New South Wales.
JAMES CAMPBELL,
Postmaster-General, Victoria.
JOHN A. COCKBURN,
Minister of Education, Controlling Postal Department, South Australia.

No. 14.

Joint Telegram to The Right Honorable the Secretary of State for the Colonies.

OCEAN Mail Services, New South Wales, Victoria, South Australia agree to following, and invite other Colonies :—England to invite tenders on behalf herself and Colonies, for weekly service, also for fortnightly service, by different companies, to alternate so as to give weekly service. Colonies prefer service by two companies distinct from other services. Brindisi, Naples, or other approved port, to Western Australia, Adelaide, Melbourne, Sydney. Mails, if required, to be landed Adelaide. Tenders to be for twenty-nine, thirty-one, and thirty-three days to Adelaide. Mail matter to be tendered for at so much per pound for letters and so much other matter, including Egyptian rates. Penalties and premiums four pounds hour. England and Colonies to send all mail matter not otherwise marked. Contract five years. England retain her postages, and pay cost of transit including premiums on outward mails; Colonies same homewards. Should Colonies join Union, England to pay half loss, Colonies half.

Governor, New South Wales.
Governor, Victoria.
Governor, South Australia.

(For date see No. 16.)

No. 15.

The Right Honorable the Secretary of State for the Colonies to His Excellency the Governor, New South Wales.

My Lord, Downing-street, 4 August, 1885.

Referring to your telegram of the 4th ultimo on the subject of the Mail Service, and to my reply of the 23rd ultimo, I have the honor to inform you that Her Majesty's Government will immediately give notice to the Peninsula and Oriental Steamship Company to discontinue the present service at the conclusion of their contract, and are prepared to call for tenders for the services to India and China.

The tenders are to be sent in by the 31st March, 1886.

I would remind you that on the last occasion it was made a subject of complaint that the Peninsula and Oriental Co., having already obtained the Imperial contract, were enabled to place the Colonies at a disadvantage in negotiating their contracts, and I give you this early information of the proceedings of Her Majesty's Government in order to obviate any similar cause of complaint on this occasion; and I would point out that it may be of advantage to the Colonies to arrange that the tenders for their services should be sent in not later than the date fixed by the Home Government for sending in the tenders for the India and China Services.

I have, &c.,
FRED. STANLEY.

Col. Sec. for the Postmaster-Genl. I request to be favoured with a reply which I may forward to the Sec. of State.—A.L., 30/9/85. The Postmaster-General.—P.A.J., 12/10/85. The Secretary to the Post Office, B.C., 12 Oct., /85.—C.W.

This despatch does not, I think, require any immediate action. A joint telegram from New South Wales, Victoria, and South Australia has recently been prepared for transmission to the Secretary of State proposing the terms on which these three Colonies, and possibly others, could join with Great Britain in a combined Mail Service between Australasia and the mother country. The matter might rest until we have a reply to this telegram.—S.H.L., 19/10/85.

Approved. The Col. Sec., 19/10/85.—J.S. The Principal Under Secretary, B.C., 19/10/85.—S.H.L. His Excellency.—P.A.J., 22/10/85. Seen.—A.L., 23/10/85.

No. 16.

Telegram from Under Secretary, Adelaide, to Principal Under Secretary, Sydney.

17 November, 1885.

JOINT telegram *re* Ocean Mail Service has now been despatched.

H. J. ANDREWS,
Under Secretary.

The Secretary to the Post Office.—C.W., B.C., 18/11/85.

Submitted.—I would suggest that the Colonial Secretary's Department should be asked to send the following cablegram to the Agent-General, viz.:—"See joint cablegram lately sent from Governors, New South Wales, Victoria, South Australia, to Secretary State Colonies *re* future mail service, being modification of agreement which Baker took Home. Tell him."—S.H.L., 19/11/85.

Approved.—J.S., 19/11/85. The Principal Under Secretary.—S.H.L., B.C., 20/11/85. Prepare Cable.—C.W., 21/11/85. Telegram 21. The Secretary to the Post Office.—C.W., B.C., 21/11/85.

No. 17.

The Colonial Secretary, New South Wales, to The Colonial Secretary, Queensland.

Sir, Colonial Secretary's Office, Sydney, 2 September, 1885.

I have the honor, at the instance of my colleague the Postmaster-General, to transmit to you copies of an agreement which has been entered into by the colonies of New South Wales, Victoria, and South Australia, concerning future Ocean Mail Services, and to request that you will be so good as to bring such agreement under the consideration of your Government with a view to the Colony of Queensland becoming a party thereto.

I have, &c.,
ALEX. STUART.

[Enclosure—See No. 13.]

Similar letter addressed to the Hon. the Premier of New Zealand, Wellington.

No. 18.

The Premier, New Zealand, to The Colonial Secretary, New South Wales.

Sir, New Zealand, Premier's Office, Wellington, 12 October, 1885.

I have the honor to inform you that this Government has had under consideration your letter of the 2nd ultimo, with enclosed copy of the agreement entered into by the Colonies of New South Wales, Victoria, and South Australia, concerning future Ocean Mail Services.

We acknowledge the courtesy and consideration of your Government and the other contracting parties in offering to New Zealand to join them as one of the contractors, but this Colony proposes to send and receive its mails by other routes, and the use it would therefore make of the Suez route would be so small that we do not think it advisable to recommend to Parliament that New Zealand should join in the contract. We shall, however, be content to become responsible under the thirteenth clause of the agreement, but not to the conditions imposed by the eleventh clause.

I have, &c.,
ROBERT STOUT.

Sydney: Thomas Richards, Government Printer.—1885.

[9*d*.]

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

FUTURE MAIL COMMUNICATION BETWEEN GREAT BRITAIN AND AUSTRALIA, *VIA* SUEZ.

(FURTHER CORRESPONDENCE.)

Ordered by the Legislative Assembly to be printed, 23 *February*, 1886.

SCHEDULE.

NO.		PAGE.
1.	The Chief Secretary, Adelaide, to the Colonial Secretary, New South Wales. 4 January, 1886	1
2.	Cablegram from the Agent-General, London, to the Colonial Secretary, New South Wales. 7 January, 1886	1
3.	Telegram from the Acting Colonial Secretary, Queensland, to the Colonial Secretary, New South Wales. 6 February, 1886	2
4.	Telegram from Deputy Postmaster-General, Adelaide, to the Secretary to the Post Office, Sydney. 18 January, 1886	2
5.	Telegram from Secretary to the Post Office, Sydney, to the Deputy Postmaster-General, Adelaide. 19 January, 1886	2
6.	Hon. R. C. Baker to the Postmaster-General, New South Wales. 30 December, 1885	2

No. 1.

The Chief Secretary, Adelaide, to The Colonial Secretary, New South Wales.

Sir, Chief Secretary's Office, Adelaide, 4 January, 1886.

I beg to inform you that I have this day received a communication from the Acting Colonial Secretary of Western Australia, intimating that the Government of that Colony is prepared to become a party to the Memorandum of Agreement in respect of proposed new Ocean Mail Service.

I have, &c.,
J. C. BRAY.

The Postmaster-General.—JOHN R., 29/1/86. The Secretary to the Post Office, B.C., 29 Jan., 1886.—C.W. Place with papers.—S.H.L., 2/2/86.

No. 2.

Cablegram from Agent-General, London, to Colonial Secretary, New South Wales.

7 January, 1886.

BAKER anxious to know if Queensland join postal contract. Ascertain. Important they should. More Colonies join less cost. Pressing. Telegraph reply. SAMUEL.

The Postmaster-General.—JOHN R., 14/1/86. The Secretary to the Post Office, B.C., 14 Jan., 1886.—C.W.

So far as I am aware, no reply has yet been received from the Queensland Government to the despatch of the late Colonial Secretary, dated 2nd September last, inviting that Colony, in accordance with the 2nd clause of the agreement, to become a party thereto. Perhaps it would be desirable to inquire by telegram if the Queensland Government have arrived at any decision in the matter. A copy of the printed papers as laid before Parliament, including the agreement, is submitted herewith.—S.H.L., 16/1/86.

Approved. Forward to the Hon. Colonial Secretary.—D.O'C., 16/1/86. The Principal Under Secretary. Urgent, B.C., 16/1/86.—S.H.L. A telegram might be sent to Queensland making the necessary inquiries.—C.W., 25/1/86. Yes.—JOHN R., 29/1/86. Telegram sent, 30 January, 1886.

No. 3.

Telegram from Acting Colonial Secretary, Queensland, to Colonial Secretary, New South Wales.

6 February, 1886.

No decision arrived at *re* postal contract, but matter will be dealt with on return of Premier and Colonial Treasurer.

R. B. MORETON.

The Secretary to the Post Office, B.C., 10/2/86.—C.W.

No. 4.

Telegram from Deputy Postmaster-General, Adelaide, to Secretary to the Post Office, Sydney.

18 January, 1886.

CAN you inform me if Queensland and New Zealand have yet given replies as to joining in the new Mail Contract?

ED. SQUIRE.

No. 5.

Telegram from Secretary to the Post Office, Sydney, to Deputy Postmaster-General, Adelaide.

19 January, 1886.

COPY of New Zealand reply, *re* Ocean Mail Service, sent you with letter 21st ultimo; no reply from Queensland.

S. H. LAMBTON.

No. 6.

The Hon. R. C. Baker to The Postmaster-General, New South Wales.

Sir, 13, Albemarle-street, London, 30 December, 1885.

I have the honor to inform you that the Imperial Government have agreed to the scheme for the distribution of postages between Great Britain and the Australian Colonies; and to the proposal to call for tenders for the carriage of mail matter, on the terms and in the manner set forth in the agreement lately entered into between the Colonies of New South Wales, Victoria, and South Australia.

Enclosed is a copy of a letter from the Postmaster-General of Great Britain, bearing date the 29th day of December instant.

I remain, &c.,

R. C. BAKER.

N.B.—Since writing the above the conditions of tendering have been sent to me.

[*Enclosure.*]

The London Post Office to The Hon. R. C. Baker.

Sir, General Post Office, London, 29 December, 1885.

I am directed by the Postmaster-General to acknowledge the receipt of your letter of the 23rd instant, on the subject of the Australian Mail Service, and to inform you, in reply, that, acceding to the wishes of the Australian Colonies, as expressed in the Agreement which you forwarded to the Colonial Office on the 20th of October last, Her Majesty's Government have arranged to call for tenders for an Australian Mail Service, on the conditions proposed in that Agreement.

Conditions of tender have been drawn up, and are now under the consideration of the Treasury; and the Postmaster-General has forwarded to that Board a copy of your letter asking that the conditions, before being finally settled, may be submitted to you for approval on behalf of the contracting Colonies.

I am, &c.,

C. H. B. PATEY.

Sydney Thomas Richards, Government Printer.—1886.

[3*d*.]

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

FUTURE MAIL COMMUNICATION BETWEEN GREAT BRITAIN AND AUSTRALIA, *VIA* SUEZ.

(FURTHER CORRESPONDENCE).

Ordered by the Legislative Assembly to be printed, 21 *April*, 1886.

SCHEDULE.

NO.		PAGE.
1.	Despatch from the Honorable R. C. Baker, London, to the Honorable the Postmaster-General, New South Wales, dated 2nd February, 1886	1
2.	Telegram from the Colonial Secretary, Queensland, to the Premier, New South Wales, dated 5th April, 1886	5
3.	Letter from the Secretary to the Post Office, Sydney, to the Principal Under Secretary, dated 15th April, 1886	6
4.	Despatch from the Secretary of State for the Colonies to His Excellency the Governor, New South Wales, dated 12th February, 1886	6
5.	Telegram from the Deputy Postmaster-General, Melbourne, to the Secretary to the Post Office, Sydney, dated 21st April, 1886	6

No. 1.

The Hon. R. C. Baker, London, to The Postmaster-General of New South Wales.

Re Australian Postal Union.

Sir, 27, Ashley-place, Victoria-street, London, S.W., 21 February, 1886.

I have the honor to enclose herewith—

1. Copy of letter from myself to Mr. Blackwood, dated 12th January, 1886.
2. Same to same, dated 18th January, 1886.
3. Copy of letter from Mr. Blackwood to myself, dated 1st February, 1886.
4. Copy of advertisement calling for tenders.
5. Copy of conditions of tendering.

By which you will see that the whole matter has been concluded satisfactorily, all the demands of the Colonies having been attended to.

The advertisement does not confine the tendering to British ships, and although it is hardly possible that the tender of any Foreign Company would be accepted, the fact that they are not expressly excluded may tend to moderate the demands of the British Companies, and if a lower tender from a Foreign Company is not accepted the extra subsidy, payable by the Colonies, will be known, and may be looked upon as a contribution towards the preservation of the integrity of the Empire.

The Post Office authorities state that they have never issued any advertisement expressly excluding Foreign competition.

The time for receipt of tenders is the 30th April next, and as I leave England in the middle of May, and as the Postmaster-General has to report upon the tenders to the Treasury, who have to again investigate them from a financial point of view, it is certain that no recommendation as to the acceptance, or otherwise, of any tender will be made by the British authorities until after my departure, and I have now to ask that your Government will be pleased to relieve me from and after that date from the further conduct of this affair and send such instructions to your Agent-General, or otherwise arrange as they may think best.

I will, however, in the meantime press upon the British authorities the advisability of taking the action asked for in clause 6 of the agreement between the Colonies, viz. :—Securing the reduction of the exorbitant charges made by the French and Italian Governments for the territorial transit of the mails to Brindisi and Naples, and there are grounds for anticipating some measure of success.

Thanking you for the confidence your Government has reposed in me, and hoping that the negotiation carried on and the arrangement made with the British Government are such as will meet with your approval.

I have, &c.,
R. C. BAKER.

N.B.—It is matter for regret that Queensland has not joined the other Colonies, as you will see by the contract your Government agreed to invite their co-operation, and it was because of this arrangement that Sir Saul Samuel, with the concurrence of Mr. Garrick, sent the telegram of the 12th January, to which no reply has yet been received. It is evident that the *certainty* of obtaining the correspondence from the Southern portion of that Colony would induce tenderers to quote a lower rate per lb., and it is hardly fair that Queensland should, by inaction, force the other Colonies to pay an increased subsidy and then claim advantages under any contract which may be made, equal in all respects to those of the contracting Colonies. If a favourable reply is received from Queensland before 30th April, please telegraph at once, and advertisement calling for tenders can be altered.

R. C. B.

[*Enclosure*

[*Enclosure No.* 1.]

The Hon. R. C. Baker to The Hon. S. A. Blackwood.

Sir, 27, Ashley-place, S.W., 12 January, 1886.

I have the honor to return copy of conditions of tendering for the Australian Mail Service, transmitted to me in yours of 31st December, 1885.

After consultation with the Agents-General of the Colonies of New South Wales, Victoria, and South Australia, and with the permanent head of the Post Office of South Australia (Mr. C. Todd, C.M.G.), I have the honor to suggest the following alterations and modifications :—1st. Provision should be made for the carriage of matter sent by parcels post, as it is almost a certainty that if not before 1st February, 1888, at all events during the continuance of the contract a parcel post will be established between Great Britain and the Australian Colonies; this could be done either by fixing in the conditions the rate per lb. (say 2d. ?) which shall be charged by the contractors, or asking them to tender at per lb. for the carriage of such matter; the former alternative appears to me the best, as the latter would make the tendering too complicated. I am aware that the agreement between the Colonies is silent on this point, but that is only because it was overlooked.

2nd. The clause in the advertisement defining the mail matter which the contractor will be entitled to carry should, I venture to submit, run as follows :—"The correspondence to and from New South Wales, Victoria, South Australia, and Western Australia, will (unless specially superscribed to be sent by any particular route) be forwarded by the mail steamers employed under this contract, the other Colonies of Australasia will be invited to send their correspondence by such mail steamers, but correspondence to New Zealand will only be sent when specially so superscribed."

The Agent-General of South Australia, at my request, sent the following telegram to his Government:—"Have Western Australia, Tasmania, and Queensland joined postal contract. Telegraph reply. More Colonies agree, send all postages, lower the tenders." A reply was yesterday received as follows :—"Western Australia joins, Tasmania undecided." The Colonial Office will, I understand, authorise the insertion of Western Australia amongst the Colonies who agree to send and receive all postages by contracting steamers.

The Government of New South Wales is in communication with the Government of Queensland as to the position Queensland will take, and a telegram to the Agent-General, Sir Saul Samuel, is expected daily; on this point more definite information may be sent to you shortly.

3rd. The rate the contractors will have to pay for land transit across Egypt should be definitely fixed, as the fewer elements of uncertainty in the conditions of tendering the greater the probability of favourable tenders. Union rates would, I submit, be fair, and about what is paid by the British Post Office under their special agreement.

4th. As the contracting Colonies possess Parliamentary Institutions, and their respective Ministers will have to lay the contract before their respective Parliaments, I should be obliged if an official intimation were given that the contract will not be laid before the House of Commons until it has been legally ratified by the contracting Colonies, New South Wales and South Australia.

5th. There are other suggestions, not perhaps of much importance, made by notes in the margin of the conditions, which I have now the honor to return.

I remain, &c.,
R. C. BAKER.

[*Enclosure No.* 2.]

The Hon. R. C. Baker to The Hon. S. A. Blackwood.

Sir, 27, Ashley-place, Victoria-street, London, S.W., 18 January, 1886.

In pursuance of the agreement arrived at at an interview to-day, I have the honor to again address you on the subject of the call for tenders for the Australian mails.

The arguments advanced by Mr. Rea and yourself in reference to the parcels post question, viz. :—

1st. That the call for tenders is from Brindisi or some other European port, and that parcels would not be sent by that route.

2nd. That there is no necessity for great speed in the transmission of parcels.

3rd. That it would sometimes be desirable to send the parcels by other than the contracting steamers, have convinced me that your conclusion to omit all reference to a parcels post in the call for tenders is right.

I understand that you agree with all the other alterations suggested in my letter of 12th instant, and will modify the conditions accordingly.

Enclosed you will find those various suggestions alluded to in the 5th paragraph of such letter, modified as agreed between us, and it can be understood that the present enclosure is substituted for the condition of tendering returned in same of the 12th instant.

As your usual form of advertisement does not expressly confine the tenders to British ships, it may perhaps be as well to adhere to the usual form and defer any discussion on the point until after the tenders have been received. I do not think however that unless extraordinary circumstances should arise there is any probability of the Australian Colonies altering their expressed intention.

I remain, &c.,
R. C. BAKER.

[*Enclosure No.* 3.]

The Hon. E. H. Rea to The Hon. R. C. Baker.

Sir, General Post Office, London, 1 February, 1886.

Referring to your letters of the 12th and 18th of last month, I am directed by the Postmaster-General to transmit to you some copies of the advertisement issued by this Department inviting tenders for the conveyance of Australian mails, and also some printed copies of the conditions of contract which have been drawn up for this service.

You will observe that clauses 4, 6, and 19 of the conditions of contract have been altered in accordance with your suggestion, and that clause 31 has been extended in such a manner as to show that the contract will not be binding until it has been approved of by a resolution of the House of Commons, and by the *Legislatures of New South Wales, Victoria, and South Australia.* The

The word "British" has been struck out of the original draft advertisement, thus leaving persons tendering free to offer vessels of any nationality for the service; and Western Australia has been inserted as one of the Colonies to and from which the correspondence will be forwarded by the mail steamers employed under the contract.

Finally, the latest date for sending in tenders has been fixed for the 30th April next.

I am, &c.,
EDW. H. REA.

[*Enclosure No.* 4.]

(Royal Arms.)

Contract for the conveyance of Australian mails.

General Post Office, London, 1 February, 1886.

NOTICE is hereby given that on Friday, the 30th of April, 1886, the Postmaster-General will be ready to receive tenders from such persons as may be willing to enter into a contract for the performance of either of the following services by steam-vessels :—

1. A weekly service from Brindisi or Naples (Italy), or some other port in Europe, to be selected by the contractor subject to the approval of the Postmaster-General, to Adelaide (Semaphore), calling at King George's Sound; and back from Adelaide (Semaphore) to Brindisi or Naples, or other selected port in Europe, calling at King George's Sound. The mail packets to continue the voyage from Adelaide to Melbourne and Sydney, and *vice versâ*, with or without mails on board.
2. A fortnightly service, to alternate with another fortnightly service, from Brindisi or Naples (Italy), or some other port in Europe, to be selected by the contractor subject to the approval of the Postmaster-General, to Adelaide (Semaphore), calling at King George's Sound; and back from Adelaide (Semaphore) to Brindisi or Naples, or other selected port in Europe, calling at King George's Sound. The mail packets to continue the voyage from Adelaide to Melbourne and Sydney, and *vice versâ*, with or without mails on board.

The Service to be separate and distinct from any other Mail Service.

No contract will be entered into for a period exceeding five years.

Payment will be made on the net weight of correspondence carried.

The correspondence to and from New South Wales, Victoria, South Australia, and Western Australia will (unless specially superscribed to be sent by any particular route) be forwarded by the mail steamers employed under this contract. The other Colonies of Australia will be invited to receive and send their correspondence by such mail steamers, but correspondence to and from New Zealand will only be sent when specially so superscribed.

The Postmaster-General thinks it well to state that the average weekly weight of letters and other mail matter carried during the past year by the packets conveying the mails between Suez and Melbourne has been as follows :—

	Outward Mails.		Homeward Mails.	
	Letters.	Other Mail matter.	Letters.	Other Mail matter.
	lbs.	lbs.	lbs.	lbs.
New South Wales	415	4,894	315	2,421
Victoria	378	5,163	325	3,404
South Australia	129	1,920	111	792
Western Australia	20	399	17	107
Tasmania...	39	799	35	291
Queensland	136	2,013	84	634
New Zealand	31	395	7	7
Total...	1,148	15,583	894	7,656

Printed forms of tender may be obtained on application, personal or written, at the Secretary's Office, General Post Office, London.

Every tender must be addressed to the Secretary of the Post Office, and must bear in the left-hand corner of the envelope, the words "Tender for the Conveyance of Australian Mails."

No tender will be received after 1 o'clock on the day above mentioned.

Enclosure No. 5.

*Tender for conveying Her Majesty's Mails between Brindisi, Naples, or some other port in Europe, and Adelaide (Semaphore), via King George's Sound.**

Sir,

We hereby offer to convey Her Majesty's mails on the conditions marked "A," by steam-vessels of adequate power, between the Port of ‡ and the Port of Adelaide. The mails to be conveyed between the Port of and the Port of Adelaide (Semaphore) in 628 hours.

1st. Once a week, for a payment of per lb. net weight of letters and post cards, and per lb. net weight of other mail matter. 2nd.

‡ Here state the port in Europe it is proposed to depart from and arrive at.

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* All tenders must be addressed to the Secretary of the Post Office, with the words, "Tender for the conveyance of Australian Mails" in the left-hand corner of the envelope. Other things equal, a preference will be given to a tender made upon this printed form and in exact accordance therewith. Even, however, when this form is used, the parties tendering may, *in a separate letter*, to be forwarded with the tender, suggest for consideration any alteration in the conditions or other otherwise. The Postmaster-General does not engage, irrespective of other considerations, to accept the lowest tender, nor does he engage to accept any tender.

2nd. Once a fortnight, to alternate with another fortnightly service, for a payment of per lb. net weight of letters and post cards, and per lb. net weight of other mail matter.

The above payments to cover the local transit rates across Egypt should we elect to send the mails by Railway through Egypt instead of through the Suez Canal.

† Here state what abatement would be made if the number of hours allowed for the voyage were increased to 676 or 724 hours.

†

We agree to be subject to the deductions specified in the sixth condition.

We propose as our sureties, in the penalty of £20,000, Mr. of and Mr. of and we refer you to as persons of whom enquiry can be made as to the responsibility of such sureties.

We agree to commence the service on the 1st of February, 1888, and, should such service not be commenced on such day, or on the first day thereafter which the Postmaster-General may fix as the day of sailing, we agree to pay to Her Majesty the sum of one hundred pounds for every day from that time until the said service shall be begun by us; but so that the whole amount of deductions for such failure shall not exceed £20,000.

And we agree to execute a formal contract for the performance of the said service, to be drawn up by the Solicitor to the Post Office, and to be in accordance with the said conditions marked "A."

We are, Sir,
Your obedient Servants,
(*Signature*)
(*Address*)

The Secretary of the Post Office.

CONDITIONS REFERRED TO AS MARKED A.

1. The contractors to convey, during the continuance of the contract, Her Majesty's mails each way between and King George's Sound and Adelaide (Semaphore), and, if required, also to and from Melbourne and Sydney, and *vice versâ*. The mail steamers in any case to continue the voyage on to Melbourne and Sydney, whether with or without mails on board, and to commence the return voyage at Sydney, calling at Melbourne.

2. The service to be separate and distinct from any other mail service.

3. The mails must be conveyed from to Adelaide (Semaphore) and from Adelaide (Semaphore) to in 628 hours, including the call at King George's Sound, for the purpose of landing and embarking mails.

4. All mail matter to be tendered for at a rate per pound net weight of letters and post cards, and at a rate per pound net weight of other matter, including newspapers, book packets, patterns, &c., at an amount to be stated by the persons tendering. The tenders thus made are to include the cost of the local transit through Egypt, should the contractors elect to send the mails by railway across the Isthmus of Suez. As, however, the contractors themselves could not undertake this land portion of the service on their own account, payment for such transit would be made by the British Post Office under arrangements with the Egyptian Post Office, and would be recovered from the contractors; but in no case would a charge be made in excess of the Postal Union rates, amounting to two francs per kilogramme of letters and post cards, and twenty-five centimes per kilogramme of other articles.

5. Under the term "Her Majesty's Mails," are to be comprehended all boxes, bags, or packets of letters, newspapers, books, printed papers, and all other articles transmissible by the post, without regard either to the place to which they may be addressed or to that in which they may have originated; also all empty bags, empty boxes, and other stores and articles used or to be used in carrying on the Post Office Service, which shall be sent by or to or from any Post Office to or from which any mails are to be conveyed, but for which latter no payment shall be made.

6. A sum of two hundred and fifty pounds to be forfeited on each occasion when the contractors fail in providing a vessel, in accordance with their contract, ready to put to sea at the appointed time, or when such a vessel shall not actually put to sea and proceed on her voyage at the appointed time, and a further sum of fifty pounds to be forfeited for every day's failure in providing such a vessel after such appointed time; but so that these deductions shall not in the aggregate exceed the freight for mails payable for such voyage, plus the sum of one thousand pounds. The contractors also to be subject to forfeit the sum of four pounds per hour for every complete hour consumed on any voyage beyond the number of hours allowed for the voyage, such forfeitures to be made from whatever cause the delay may arise; but so that the total amount of the forfeiture for delay on any one voyage shall never exceed the freight for mails payable for such voyage.

7. The payment by the contractors of any sum by way of forfeiture or otherwise shall in no way prejudice the right of the Postmaster-General to treat the failure to provide a proper vessel at the appointed time, or to perform a voyage at or within the appointed period, as a breach of the Contract.

8. The contractors to supply, during the continuance of the contract, and to the satisfaction of the Postmaster-General, a sufficient number of steam-vessels of adequate power, and in all respects suited for the performance of the service within the time stipulated in the tender.

9. The vessels to be always supplied with all necessary and proper machinery, engines, apparel, furniture, stores, tackle, boats, fuel, lamps, oil, tallow, provisions, anchors, cables, fire-pumps, and other proper means for extinguishing fire, lightning conductors, charts, chronometers, proper nautical instruments, and whatever else may be necessary for equipping the said vessels, and rendering them constantly efficient for the service to be performed. The vessels to be manned by legally qualified and competent officers, and by a sufficient crew of engineers, able seamen, and other men, and with a competent surgeon.

10. If the Postmaster-General shall consider any of the vessels unfit for the conveyance of mails, he may require the contractors to show cause why such vessel should not be withdrawn from the service, and unless within six weeks after such requisition the contractors shall show cause to the contrary to the satisfaction of the Postmaster-General, he may at any time after the expiration of the said period declare such vessel to be unfit for the conveyance of mails, and after such declaration shall have been made it shall not

not be lawful for the contractors to employ such vessel in the performance of the contract. In order to determine whether the Postmaster-General shall be justified in declaring any vessel unfit for the conveyance of mails, or whether the contractors shall be able to show cause to the contrary, a special examination shall be made of the hull and machinery of any such vessel by such person or persons as may be selected for that purpose by the Postmaster-General.

11. The equipments, officers, engineers, and crew of each vessel, when such vessel is in any British port, shall be subject at all times to the inspection of the Postmaster-General, or of such other person or persons as he shall at any time or times authorise to make such inspection.

12. The days and hours of departure from the Ports of and Adelaide to be fixed by the Postmaster-General, and to be subject to alteration by him from time to time on a notice to the contractors of three months. The Postmaster-General also to have power, by an order to the Commander, to delay the departure of any vessel from any port for a period not exceeding twenty-four hours.

13. The contractors to provide, to the satisfaction of the Postmaster-General, a separate and convenient place of deposit for the mails on board each vessel.

14. The contractors and all commanding and other officers of the vessels which may be employed in the performance of the contract, and all agents, seamen, and servants of the contractors, shall, at all times during the continuance of the contract, punctually attend to the orders of the Postmaster-General as to the mode, time, and place of embarking and disembarking mails.

15. The commander shall take charge of the mails, and be responsible for their due receipt and delivery. He shall also make the usual Post Office declaration, and furnish such journal, returns, and other information, and perform such other services, as the Postmaster-General may from time to time require.

16. Except such letters as are not required by law to pass through the Post Office, the contractors not to receive, or permit to be received, for conveyance on board any of the vessels employed under the contract, any letters other than those contained in Her Majesty's mails. No mails must be conveyed on behalf of any Colony or Foreign Country without permission of the Postmaster-General; and the whole postage of every mail shall, under all circumstances, be at his disposal.

17. The contractors not to convey in any of the vessels, employed under this contract, any nitro-glycerine or any other article which shall have been legally declared specially dangerous.

18. Every vessel which may have started, or which should have started, before the termination of the contract, must complete its voyage in like manner as if the contract remained in force, but the contractors shall not be entitled to any further payment by reason thereof.

19. The Postmaster-General to be free to delegate from time to time any of his powers to such persons as he may choose.

20. The contractors to make any arrangements which may be required relative to Quarantine.

21. Except where otherwise specified, none of the duties enumerated in the foregoing conditions to give the contractors any claim to remuneration beyond the general subsidy.

22. Every sum of money forfeited by the contractors, to be considered as stipulated or ascertained or liquidated damages, and to be payable whether any damage shall or shall not have been sustained by reason of the breach for which the penalty may be levied. The amount to be deducted by the Postmaster-General out of any moneys then payable, or which may thereafter become payable, to the contractors; or, at his discretion, the payment thereof may be enforced, with full costs of suit.

23. The contract to continue in force for five years.

24. Subject to deductions for forfeitures or otherwise, payments to be made quarterly at the Genera Post Office out of moneys to be provided by Parliament.

25. All notices which the Postmaster-General or any of his officers or agents are authorised to give, either to be delivered to the Commander of any vessel of the contractors or to any officer or agent of the contractors in charge of any such vessel, or to be left at the office or last known place of business of the contractors.

26. The contractors not to assign, underlet, or dispose of the contract, or any part thereof, without the consent, in writing, of the Postmaster-General.

27. In case of the breach of the 26th condition, or in case of a great or habitual breach of the contract of any other kind, the Postmaster-General to have power, and that without previous notice, to terminate the contract; such termination not to give the contractors any claim to compensation.

28. In pursuance of the provisions of the Act 22 Geo. 3, c. 45, no Member of the House of Commons to be admitted to any share of the contract, or to any benefit arising therefrom.

29. For the due fulfilment of the contract, the contractors to enter into a bond, with two responsible sureties, to be named in their tenders, in the penalty of £20,000. Such penalty to be considered and recoverable as liquidated damages.

30. Any arbitration pursuant to the contract shall conform to the provisions of the Common Law Procedure Act, 1854, or any statutory modification thereof.

31. The contract will not be binding until it has been approved of by a resolution of the House of Commons, and by the Legislatures of New South Wales, Victoria, and South Australia.

No. 2.

Telegram from Premier of Queensland to Premier of New South Wales.

5 April, 1886.

Referring to your telegram of 27th March as to mail contract, this Government will be prepared to join the contracting Colonies on condition as to what mail matter shall be sent by contract steamers practically the same as those now existing. With respect to the letters to be sent by P. & O. and Orient steamers, provision will however have to be made for carriage of mails overland from Sydney to Border similar to that made in contract with respect to carriage through South Australia, and we are disposed to think that the proposed charges of tenpence per pound by each Colony, amounting to two shillings and sixpence altogether is high and might be reduced. Letter follows.

S. W. GRIFFITH.

Submitted.—R.S., 6/4/86. Acknowledge receipt.—P.A.J., 6/4/86. Done.—R.S., 6/4/86. For my hon. colleague the Postmaster-General.—P.A.J., 6/4/86. The Secretary, General Post Office.—G.E., 8/4/86.

It

It is important that the London Post Office, as well as any intending tenderers, should know as long as possible before the 30th instant (the date for receipt of tenders) what Colonies are likely to join in the new service and to what extent they will use it. This telegram from Queensland does not afford very much information on these points, but I take it that what is meant is that they will use the new service whenever it is found to be advantageous to them in regard to alternating with their own service, and that they will probably use it to about the same extent as they now use the P. & O. and Orient line. The Agent-General might be so informed by wire.—S.H.L., 9/4/86. Approved.—F.B.S., 14/4/86.

No. 3.

The Secretary to the Post Office, Sydney, to The Principal Under Secretary, Sydney.

Sir, General Post Office, Sydney, 15 April, 1886.

With reference to the matter of future mail communication between Great Britain and Australia *via* Suez, I am directed to enclose herewith a cablegram addressed to the Agent-General to the effect that the Colony of Queensland will probably use the proposed new service to the same extent as it now does the Peninsular and Oriental and Orient lines, and to request that you will be good enough to move the Colonial Secretary to cause the same to be transmitted to Sir Saul Samuel.

I have, &c.,
S. H. LAMBTON.

Prepare cable. Cablegram to Agent-General, 17/4/86. The Secretary to the Post Office.—C.W., P.U.S., B.C., 17 April, 1886.

Copy of Cablegram.

Understood Queensland will use proposed ocean mail service about same extent as it now does Orient and Peninsular lines. Inform Post Office.

No. 4.

The Right Honorable the Secretary of State for the Colonies to His Excellency the Governor of New South Wales.

N. S. Wales.
(No. 21.)

My Lord, Downing-street, 12 February, 1886.

With reference to previous correspondence respecting the arrangements for the Australian Mail Service, I have the honor to transmit to you, for the information of your Lordship's Government, copies of the advertisement, issued by the General Post Office, calling for tenders for the Australian Mail Service, and of the form of tender referred to in the advertisement.

The new Service is to commence on the 1st February, 1888, and your Government will no doubt see the importance of taking up the consideration of the matter with as little delay as possible, so as to give the contractors, whose tender is accepted, full time for making their preparations, and this will especially be the case if the contractor or one of the contractors should be some company or person other than the Peninsular and Oriental Co. or the Orient Steam Navigation Co. As soon as possible after the 30th April, the day fixed as the last day on which tenders can be received, I will inform you by telegraph of the amount of the payments named in the tenders and of the name of the tenderer whose offer is recommended for acceptance.

The conditions, annexed to the blank form of tender enclosed, have been framed so as to form the basis of the contract which would be entered into, if any tender is accepted; and I would suggest that your Government may perhaps think it desirable, in order that the contract may be completed in sufficient time to enable the successful contractor to provide the requisite steamer, to submit these conditions to the Colonial Legislature with a resolution approving them, and authorising the Government or the Agent-General of the Colony, alone or in conjunction with the Agents-General of the two other Colonies, whose concurrence in the contract is necessary, to approve, on behalf of the Colony, a formal contract embodying these conditions as they now stand, or with such reasonable modifications in them as Her Majesty's Government may be willing to accept in case any such modification should be suggested in the manner authorised in the foot-note to the form of tender.

It might also expedite the conclusion of the matter if your Ministers were able to obtain from the Legislative authority to agree with Her Majesty's Government upon the tender to be accepted, for much delay would be caused if the necessary resolutions are not passed in the Session of the present year.

I have, &c.,
GRANVILLE.

NOTE.—The enclosures herein referred to are the same as those forwarded by Mr. Baker and marked Nos. 4 and 5.

Colonial Secretary, for the Government.—C., 13/4/86. The Postmaster-General.—G.R.D., 16/4/86. The Secretary to the Post Office.—C.W., P.U.S., B.C., 16 April, 1886.

No. 5.

Telegram from Deputy Postmaster-General, Melbourne, to Secretary to Post Office, Sydney.

21 April, 1886.

No definite answer has been received from Tasmania *re* Baker agreement, a second communication urging adhesion to it has been sent, and reply daily expected.

Sydney: Thomas Richards, Government Printer.—1886.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MAIL COMMUNICATION BETWEEN GREAT BRITAIN AND AUSTRALIA, *VIA* SUEZ.

(MESSAGE No. 20.)

Ordered by the Legislative Assembly to be printed, 4 *May*, 1886.

CARRINGTON,
Governor.

Message No. 20.

In accordance with the provisions contained in the 54th section of the Constitution Act, the Governor recommends, for the consideration of the Legislative Assembly, the expediency of making provision to meet the requisite expenses in connection with "the agreement dated 21st August, 1885, made between the respective Postmasters General of the Colonies of New South Wales, Victoria, and South Australia, providing mail communication between Great Britain and Australia, *viâ* Suez, on the termination of the existing mail contracts with the Orient Steam Navigation Company and the Peninsular and Oriental Steam Navigation Company in January, 1888."

Government House,
Sydney, 4*th May*, 1886.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MAIL SERVICE BETWEEN SYDNEY AND SAN FRANCISCO.

(NEW MAIL CONTRACT BETWEEN COLONIES OF NEW SOUTH WALES AND NEW ZEALAND.)

Ordered by the Legislative Assembly to be printed, 24 *November*, 1885.

SCHEDULE.

NO.		PAGE.
1.	Messrs. Gilchrist, Watt, & Co. to Postmaster-General. 1 June, 1885	2
2.	Secretary to Post Office, Sydney, to Messrs. Gilchrist, Watt, & Co. 6 June, 1885	2
3.	Secretary of General Post Office, Wellington, N.Z., to Secretary, General Post Office, Sydney. 6 August, 1885	2
4.	Messrs. Gilchrist, Watt, & Co. to Postmaster-General. 14 August, 1885	3
5.	Secretary to Post Office, Sydney, to Secretary to Post Office, Wellington, N.Z. 21 August, 1885	4
6.	Telegram from Postmaster-General, Wellington, N Z., to Postmaster-General, Sydney. 29 August, 1885	4
7.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 1 September, 1885	4
8.	Messrs. Gilchrist, Watt, & Co. to Colonial Secretary. 9 September, 1885	4
9.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 11 September, 1885	5
10.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 14 September, 1885	5
11.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 17 September, 1885	5
12.	Messrs. Gilchrist, Watt, & Co. to Colonial Secretary. 17 September, 1885	5
13.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 17 September, 1885	5
14.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 18 September, 1885	5
15.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 21 September, 1885	6
16.	Chamber of Commerce, Sydney, to Colonial Secretary. 21 September, 1885	6
17.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 22 September, 1885	6
18.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 23 September, 1885	6
19.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 23 September, 1885	6
20.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 24 September, 1885	6
21.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 25 September, 1885	7
22.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 25 September, 1885	7
23.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 26 September, 1885	7
24.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 26 September, 1885	7
25.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 28 September, 1885	7
26.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 29 September, 1885	8
27.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 29 September, 1885	8
28.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 3 October, 1885	8
29.	Telegram from Postmaster-General, Sydney, to Secretary, General Post Office, Sydney. 3 October, 1885	8
30.	Telegram from Secretary, General Post-office, Sydney, to Colonial Secretary, Sydney. 3 October, 1885	8
31.	Telegram from Colonial Secretary to Secretary General Post Office, Sydney. 3 October, 1885	8
32.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 7 October, 1885	8
33.	Minute of Postmaster-General, addressed to His Excellency the Governor and the Executive Council. 7 October, 1885	9
34.	Secretary, General Post Office, Wellington, N.Z., to Secretary, General Post Office, Sydney. 10 October, 1885	10
35.	Secretary to General Post Office to Crown Solicitor. 22 October, 1885	10
36.	Secretary, General Post Office, to Crown Solicitor. 28 October, 1885	10
37.	Secretary, General Post Office, Wellington, N.Z., to Secretary, General Post Office, Sydney. 12 October, 1885	10
38.	Principal Under-Secretary to Messrs. Gilchrist, Watt, & Co. 19 October, 1885	11
39.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 28 October, 1885	11
40.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 28 October, 1885	11
41.	Chamber of Commerce to Postmaster-General. 30 October, 1885	11
42.	Report from *S. M. Herald re* deputation from Chamber of Commerce, that waited on Postmaster-General. 31 October, 1885	11
43.	Crown Solicitor to Secretary, General Post Office. 3 November, 1885	12
44.	Report from *S. M. Herald re* deputation that waited on Postmaster-General. 4 November, 1885	17
45.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z. 4 November, 1885	18
46.	Secretary, General Post Office, Sydney, to Secretary, General Post Office, Wellington, N.Z. 4 November, 1885	18
47.	Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney. 6 November, 1885	18
48.	Telegram from Postmaster-General, Sydney, to Postmaster-General, Washington. 7 November, 1885	19
49.	Secretary General Post Office, Wellington, N.Z., to Secretary, General Post Office, Sydney. 26 October, 1885	19

MAIL SERVICE BETWEEN SYDNEY AND SAN FRANCISCO.

No. 1.

Messrs. Gilchrist, Watt, & Co. to The Postmaster-General.

Sir, Sydney, 1 June, 1885.

We are requested by the contractors for the San Francisco Mail Service to ascertain from you the views of the Government as to the renewal of the contract on its termination in November next, and whether you prefer to make an independent contract for a line direct San Francisco to Sydney, or, as hitherto, in conjunction with New Zealand.

All our correspondence on these matters was conducted with this Government until your notice of withdrawal in August last, and this Government acted on behalf of both Governments; hence we address ourselves in the first instance to you, and desire an early reply, to guide us as to making a proposition to New Zealand, and of what nature.

We have, &c.,
GILCHRIST, WATT, & CO.,
General Agents for the Contractors, San Francisco Mail Service.

Submitted.—S.H.L., 3/6/85. Inform that the whole question of mail services with Great Britain and Europe is now being considered by the Government, and that until some determination has been arrived at it will not be possible to give any definite reply to Messrs. G., W., & Co.'s communication.—J.N., 4/6/85.

No. 2.

The Secretary to Post Office, Sydney, to Messrs. Gilchrist, Watt, & Co.

Sir, 6 June, 1885.

I am directed by the Postmaster-General to acknowledge the receipt of your letter of the 1st instant, inquiring as to the renewal of the contract with the Pacific Mail Steamship Company for the conveyance of mails *via* San Francisco, and, in reply, to inform you that the whole question of mail services with Great Britain and Europe is now being considered by the Government, and until some determination has been arrived at it is not possible to give any definite reply to your communication.

I have, &c.,
S. H. LAMBTON.

No. 3.

The Secretary, General Post Office, Wellington, N.Z., to The Secretary, General Post Office, Sydney.

Sir, General Post Office, Wellington, 6 August, 1885.

In connection with the advertising for tenders for the renewal of the San Francisco Mail Service, I have taken the liberty of informing the tenderers that the particulars and conditions may be seen at your office.

May I ask you, therefore, to be so good as to give effect to this by distributing the forms when applied for. Ten copies have been forwarded you.

I have, &c.,
W. GRAY,
Secretary.

I see no objection to this.—J.N.

New Zealand and San Francisco Mail Service.

PARTICULARS AND CONDITIONS.

THE Postmaster-General of New Zealand is prepared to receive tenders for the conveyance of mails between San Francisco and New Zealand, with the Port of Auckland as the terminus, once each way in every four weeks, with a branch service between Auckland and such port in Australia as may hereafter be agreed upon, for a period not exceeding three years from the commencement of the service.

The mails to be carried will be all such mails as the Postmaster-General may from time to time require the contractors to carry to and from such Australian port, Auckland, and San Francisco, the intermediate port of Honolulu in the Sandwich Islands, and any other place.

The service between Auckland and San Francisco may be performed by not less than two vessels, each being a good, substantial, and efficient screw steam-vessel of the first class, and fully equal to Class 100, A1, Lloyd's Register, and of not less than 2,500 gross registered tonnage, propelled by first-rate engines of adequate power, and having spar-decks, and large capacity for passengers and cargo, and ample ventilation for passing through tropical latitudes; and each vessel will be required to be under the command of a competent captain, having ample experience in the command of screw steam-vessels.

The service between San Francisco and Auckland to be performed in eighteen days or 432 hours each way. The branch service between Auckland and Australia to be performed in five days, or such lesser time as the Postmaster-General may appoint, and by such vessels, other than the vessels employed between San Francisco and Auckland, as may from time to time be approved by the Postmaster-General.

Separate tenders for a nineteen days' (456 hours') service between San Francisco and Auckland may also be sent in.

The vessels to be employed between Auckland and San Francisco and in the branch service are to be furnished with all necessary machinery, tackle, &c., and to be subject to the approval of the Postmaster-General before being employed.

The Postmaster-General is to have full power to inspect the vessels employed between San Francisco and Auckland, and in the branch service, their officers and crew, and to suspend the use of any vessel which may not be considered satisfactory, or to prevent the employment of any officer, engineer, or crew appearing to him to be ineligible.

The

The one twenty-sixth part of the subsidy will be paid by the Postmaster-General on the completion of the conveyanc of each mail in accordance with the contract, and will be paid at Wellington.

If any vessel shall not be at the port of departure from time to time in due time, and ready to perform the service, a sum of £250, and a further sum of £50 per day, is to be paid by the contractors, to, or may be deducted by, the Postmaster-General as liquidated and ascertained damages; but he may remit or reduce these sums if satisfied that the default shall have arisen from causes over which the contractors had no control.

A bonus of £5 will be paid by the Postmaster-General for the delivery of the mails at Auckland or San Francisco, as the case may be, for every hour before the contract time, and a penalty of £4 an hour will be deducted for late delivery.

All subsidies obtained from other countries than Great Britain and her Colonies, or any of the Polynesian Islands, except the Hawaiin Islands, for the conveyance of mails, are to belong to the contractors, if made under arrangements approved by the Postmaster-General.

The vessels must be provided with safe and convenient places of deposit for the mails, rendered vermin-proof, with locks, keys, and secure fastenings.

The contractors will have to provide the necessary lights and accommodation for sorting and making up the mails on board, with a separate and convenient room on the spar-deck for the purpose, rendering any assistance required for conveying the mails between the mail-room and the sorting-room.

The Postmaster-General is to be at liberty to intrust the custody of the mails to the master or commander of the vessel; and, in case of the officer in charge of the mails being absent, the master or commander is to take them in charge; and the contractors are to be responsible for the receipt, safe custody, and delivery of the mails.

All directions of the officers in charge of the mails are to be attended to so far as the same are reasonable and consistent with the safety of the vessel. The contractors are to have no claim for postage. A suitable first-class accommodation for a Mail Officer or Agent, and one assistant for the Postmaster-General, with a properly-fitted state-room for their exclusive use, is to be provided on board the vessels, and such officers or agents and assistants are to be victualled by the contractors as chief-cabin passengers without charge; and, during the time a vessel may stay at any port except Auckland or San Francisco, such officers, agents, and assistants are to be allowed to remain on board, and are to be victualled by the contractors.

The contractors are not to pay light, pilotage, tonnage, or harbour dues at Auckland.

The contract, or any part thereof, is not to be assigned or underlet without the consent in writing of the Postmaster-General. If the contract be assigned or underlet, or if there be a great or habitual non-performance or non-observance of the contract, and the Postmaster-General shall be of opinion that the contractors are not *bona fide* carrying out the contract, he is to be at liberty to determine it without previous notice, with liberty, nevertheless, to the contractors to have submitted to arbitration the question whether or not there was such a great or habitual non-performance or non-observance of the contract as to justify such determination; but the Postmaster-General is to incur no liability in case the determination be not upheld.

The Postmaster-General may except from any such determination any voyage or voyages, and the same shall be completed, and vessels *en route* are, notwithstanding the determination, to complete their voyage; and in these cases the contract is to be considered as terminated when the mails required to be carried, or then being carried, shall have been delivered.

The contractors are to bind themselves to pay to the Postmaster-General the sum of £20,000 by way of liquidated damages in case they shall fail to commence the service, or, having commenced it, shall wilfully refuse or neglect to carry on the same.

The contractors shall, within twenty-one days after notification in writing of the acceptance of the tender, execute a contract under seal with the Postmaster-General embodying the tender and these conditions, or in such other form as the Postmaster-General may decide, and, if required, enter, with two sureties, to be approved by the Postmaster-General, into a joint and several bond in the sum of £20,000.

Any disputes which may arise between the Postmaster-General and the contractors are to be subject to reference.

Tenders are to be made only in the accompanying printed form, and attached to these particulars and conditions, and are to be delivered at the General Post Office, Wellington, on or before Monday, the 7th of September, 1885, sealed up and indorsed "Tender for San Francisco Mail Service," and addressed to the Postmaster-General of New Zealand, Wellington, New Zealand.

The Postmaster-General does not bind himself to accept the lowest or any tender.

FORM OF TENDER.

To the Postmaster-General of New Zealand.

Sir,

hereby offer to convey mails between San Francisco and Auckland, with a branch service to and from an Australian port and Auckland, once in every four weeks, during a period of three years from the date of commencement of the service, on or about the 18th day of November, 1885, and to provide for the service between Auckland and San Francisco at least two ships of the description above mentioned, and such other ships for the branch service, and under and according to the provisions, conditions, and stipulations contained in the advertisement and conditions of contract above referred to, for the sum of £ , say per annum, and payable by the Postmaster-General of New Zealand in respect to each separate mail, but to be subject to deductions as above mentioned in respect to each mail not conveyed within the contract time; and, in case you accept this tender, undertake and agree forthwith to execute a contract, and further undertake and agree, upon the like request, to execute, together with two sureties, to be approved by you, a bond according to the form above mentioned.

Dated this day of , 18

(*Name or names in full.*)
(*Address or addresses.*)
(*Qualification.*)

The names, addresses, and qualifications of two referees for each of the persons signing the tender to be added below

Names, tonnage, and horse-power of the vessels to be employed between San Francisco and Auckland:—

Names, tonnage, and horse-power of the vessels to be employed between Auckland and an Australian port:—

No. 4.

Messrs. Gilchrist, Watt, & Co. to The Postmaster-General.

Sydney, 14 August, 1885.

Sir,

Referring to our letter of the 1st June, we beg to draw your attention to the tenders recently called for in Wellington, as follows:—

Deliverable at Wellington 7th September. Four-weekly service (eighteen days) between San Francisco, Honolulu, and Auckland—branch service (five days) to an Australian port to be hereafter designated.

Tenders have only been called for in New Zealand and Australia—not in England or America.

You will note the terminus is at Auckland, with a branch to an Australian port not named.

We would like much to have an indication of the views of this Government as to the future of the San Francisco contract, so that if you are prepared to take it up as a direct line, Sydney, Honolulu, possibly

possibly Fiji, and San Francisco, we may advise the Pacific Mail Steamship Company in time to prevent their binding themselves to New Zealand, or arranging other employment for the steamers now engaged in the service.

We have, &c.,
GILCHRIST, WATT, & CO.,
General Agents for the Contractors,
San Francisco Mail Service.

No. 5.

The Secretary to Post Office, Sydney, to The Secretary, Post Office, Wellington, N. Z.

Sir,

21 August, 1885.

I have the honor to acknowledge receipt of your letter of the 6th instant, forwarding ten (10) copies of the particulars and conditions of the renewal of the San Francisco Mail Service Contract, by your Colony, and requesting that they may be distributed to the tenderers who may apply for them at this office, and in reply to inform you that your request will be complied with by this Department.

I have, &c.,
S. H. LAMBTON.

No. 6.

Telegram from Postmaster-General, Wellington, N. Z., to Postmaster-General, Sydney.

Wellington, 29 August, 1885.

'Frisco. service. Shall now be glad to hear from you that your Cabinet agree to contribute £7,000 a year towards cost proposed new service; have sent you copies conditions of contract, and you will see advertisements calling for tenders in Sydney papers.

JULIUS VOGEL,
Postmaster-General.

No. 7.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N. Z.

1 September, 1885.

My Cabinet will gladly consider question of contributing to 'Frisco service terminating here, but are not likely to contribute seven thousand to service terminating New Zealand and carried here by branch line.

JAMES NORTON,
Postmaster-General.

No. 8.

Messrs. Gilchrist, Watt, & Co. to The Colonial Secretary.

Sir,

Sydney, 9 September, 1885.

Referring to our letters of the 1st June and 14th August to the Postmaster-General, on the approaching termination of the San Francisco contract, and to your verbal communication of to-day, our advices from the owner of the "Australia" and "Zealandia" authorized us to negotiate for a service Sydney to San Francisco, *via* Honolulu, once each calendar month, for £25,000 per annum; but some time having elapsed since this offer, we would now require to get his sanction before making a contract.

If you are disposed to entertain this favourably, we will ask his sanction by telegraph.

We are anxious to get your answer as speedily as possible, as we have reason to believe another Steam Company is now negotiating to purchase or charter these two steamers for the purpose of undertaking the service now called for by New Zealand; for if the steamers were withdrawn it would involve considerable delay before other steamers could be placed on the line, and it is exceedingly improbable that any other Company could undertake the service on terms so favourable as those which the present contractors are willing to accept, in consequence of their steamers being on the station and being admirably adapted for the work.

If it is the wish of the Government that a tender should also be made for the service by way of Auckland, carrying the New Zealand mails, this would necessitate the employment of a third boat, and would cost more money. Probably in that case any subsidy paid by New Zealand might be arranged to divide equally betwixt New South Wales and the contractors; the same should be the case if the steamer be required to call at Fiji and there pick up the New Zealand mails.

We have, &c.,
GILCHRIST, WATT, & CO.

The Postmaster-General.—A.S. 26/9/85. The Secretary to the Post Office, B.C., 28 Sept., 1885.—C.W.

The Colonial Secretary may be asked to inform Messrs. Gilchrist, Watt, & Co., that this Government has agreed to join with New Zealand in a Mail Service between Sydney and San Francisco, subject to the approval of Parliament, and is therefore not now in a position to negotiate with the Pacific Mail Company for the performance of such a service.—J.N., 7/10/85.

The Principal Under Secretary, B.C., 14/10/85.—S.H.L. It is necessary that Messrs. Gilchrist, Watt, & Co. should be informed of this.—C.W., 17/10/85. Approved.—G.R.D.

No. 9.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

Wellington, 11 September, 1885.

'Frisco Service. If we make Sydney terminus, will you pay fourteen thousand pounds (£14,000), receiving half contribution other Colonies? Twenty-five days Sydney; other details subject your approval. Please reply to-morrow, as Parliament prorogues early next week.

JULIUS VOGEL,
P.M.G.

No. 10.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

Wellington, 14 September, 1885.

Service, Sydney, Auckland, 'Frisco with Sydney terminus will cost much more than I anticipated. Thought when last wiring you obtain it for thirty thousand, now least price seems forty, and if we arrange it should have to ask you pay fourteen thousand and leave us whole of payments from other Colonies. We are not, however, favourable to this arrangement; we prefer another proposal, Sydney, Auckland, Honolulu, there connecting with fine steamers of Spreckles Bros., known as Oceanic Coy., which run steamers twice monthly between Honolulu and Francisco. Representative of Coy. here making arrangements with Union Coy. and Pearce's agents. We are decidedly favourable to this, as it is cheaper, and we think mail service will be better, as contractors' influence will obtain railway facilities; the cost is thirty thousand, not exceed twenty-five days; service Sydney, 'Frisco, Sydney terminus. Boat proceed from there Auckland, Honolulu, and back; Oceanic boats wait Honolulu, 'Frisco, twenty-four hours without demurrage, cost thirty thousand, contractors keeping any payments from America, Honolulu. We will recommend to our Parliament if you will contribute nine thousand, leaving us payments from other Colonies. Please reply quickly.

JULIUS VOGEL,
Postmaster-General.

No. 11.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

Wellington, 17 September, 1885.

'Frisco Service. You will greatly oblige the Government by an answer early to-day, as Parliament is within a few hours proroguing.

JULIUS VOGEL,
Postmaster-General.

No. 12.

Messrs. Gilchrist, Watt, & Co., to The Colonial Secretary.

Sir, Sydney, 17 September, 1885.

Referring to our negotiations for the renewal of the San Francisco Service, on behalf of the Pacific Mail Steamship Coy., we think it only right to request that no contract should be entered into without giving that Company the opportunity of tendering for the service with Sydney as the terminus.

Their intimate knowledge of the trade made them decline to tender for a service terminating at Auckland; and as we see from the Press that New Zealand is about to arrange for a service terminating at Sydney, it is only right that they should have the opportunity of tendering if they wish to do so.

The Pacific Mail Steamship Co. consider they have reason to complain of the treatment they have experienced in the contract now expiring, and we trust you will see that a second injustice at the hands of New Zealand is not done them.

We have, &c.,
GILCHRIST, WATT, & CO.,
General Agents, Pacific Mail Steamship Co.

P.S.—We write you thus because we learn by wire that the Agents of the Pacific Mail Company at Auckland have entered a protest with New Zealand on behalf of the Pacific Mail Company against any contract being entered into in which they are deprived of the opportunity of tendering.

Seen.—A.S. The Secretary to the Post Office, B.C., 12 Oct., 85.—C.W.

No. 13.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

Sydney, 17 September, 1885.

My Cabinet objects to proposed Honolulu Mail Service, but will submit to Parliament any proposition to contribute not more than ten thousand to a four-weekly service, 'Frisco, Auckland, Sydney; you retaining all contributions from other Colonies.

J. NORTON,
Postmaster-General.

No. 14.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

18 September, 1885.

From Auckland telegram publish this morning in Sydney papers I am afraid my last telegram to you may have been misunderstood. Let it be distinctly understood that my Government will not be a party to any junction service.

JAMES NORTON,
Postmaster-General.

No. 15.

No. 15.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

21 September, 1885.

PLEASE inform whether you have or can arrange mail service, 'Frisco, Auckland, Sydney.

JAMES NORTON,
Postmaster-General.

No. 16.

The Chamber of Commerce, Sydney, to The Colonial Secretary.

Sir, Exchange, Sydney, 21 September, 1885.

At a meeting of the Committee of the Sydney Chamber of Commerce held this morning the following resolution was passed, which I now have the honor to communicate to you:—

"That this Chamber is of opinion that the San Francisco Mail Service should be continued, with Sydney as a terminal port, provided that the Government can arrange it at a reasonable cost.

I have, &c.,
HENRY CHAS. MITCHELL,
Secretary.

Submitted, 22/9/85. The Postmaster-General.—A.S. The Secretary to the Post Office, B.C., 22 Sept., 85.—C.W.

No. 17.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

22 September, 1885.

YOUR telegrams received *re* 'Frisco; venture ask you reconsider matter. Connection at Honolulu will mean contract in which Union Company, Mr. Pearce, and Oceanic Company, chiefly owned by Messrs. Spreckles Brothers all interested; suitable arrangements will be made for transhipping mails, passengers, and cargo at Honolulu. Oceanic Company runs fortnightly steamers between Honolulu, 'Frisco; they have two vessels, each 3,000 tons and 3,000 horse power, capable high speed, splendidly fitted for passengers, modern improvements, built 1883, superior anything hitherto on 'Frisco line. Our mail agent has reported very favourably on them. We think also Spreckles' influence secure us facilities from Railway Companies, and additional speed, which English Companies quite unable command. The route would be Sydney, Auckland, Honolulu, 'Frisco, and back. Spreckles would do Honolulu, 'Frisco, and Union Company, and Pearce Honolulu, Auckland, Sydney; time not exceed twenty and twenty-five days, Auckland and Sydney respectively, but shall try obtain half day concession. Contract for three years. You will have by far the greater advantage from this service, and we will accept £7,000 from you, you paying and receiving third bonuses and penalties, and leaving us contributions other Colonies. Great importance. Reply quickly. Spreckles' agent has to return, besides many arrangements require to be made to take up service.

JULIUS VOGEL.

No. 18.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

23 September, 1885.

AFTER careful reconsideration this Government is willing, subject to approval of Parliament, to join in service between Sydney and 'Frisco *via* Auckland and Honolulu for £7,000 per annum, but requires to see proposed contract and to be furnished with full particulars of steamers and arrangements.

JAMES NORTON,
Postmaster-General.

No. 19.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

23 September, 1885.

As this Colony must be party to contract for 'Frisco service, and you ask us to bear and receive one-third bonuses and penalties, would it not be simpler for this Colony to pay ten thousand, being one-third of contract, and receive the postages of the other Australian Colonies? Being thus joint contractors, we would be able to remit pilotage and dock dues as under former contract.

JAMES NORTON,
Postmaster-General.

No. 20.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

24 September, 1885.

AM I to understand that your telegram of yesterday refers to service proposed with break at Honolulu, and that you include third share bonuses and premiums? Will you also bring at once before Parliament, subject of course to your approving contract and steamers. I am waiting enter into particulars of contract with intending contractors until I hear positively from you. When we go into details I shall advise and consult you.

JULIUS VOGEL.

No. 21.

No. 21.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

Wellington, 25 September, 1885.

YOUR telegram yesterday received. There are practical difficulties making you party to contract because of time; I will make going to Sydney contingent on your arranging with us, we can then enter into sub-contract with you based on contract. If you prefer paying ten thousand and receiving half colonial contributions, and paying and receiving half bonuses and penalties, I am willing otherwise, seven thousand, and third premiums and penalties, we taking all from other Colonies dock and light dues understood to be free in either case, have cabled Postmaster-General, United States, urgently asking special contribution, four thousand yearly in addition to payment American mail, matter which contractors receive. If, which I doubt, four thousand be granted, will divide equally between you, contractors, and ourselves. I understand you approve connection at Honolulu. Please reply whole subject.

JULIUS VOGEL.

No. 22.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

25 September, 1885.

WE see no practical difficulty in being made party to contract, which is what we understood you offered. We want direct control over contractors. So far as our part of service is concerned, we never remit dues except to vessels under contract to us. We prefer to pay ten thousand and pay and receive one-third bonuses and penalties, receiving not half but all contributions of other Australian Colonies, which probably will not amount to the extra three thousand. We do not object to change of vessels at Honolulu, provided contract and our payment cover entire service Sydney to 'Frisco. We will submit question to Parliament, which we expect will approve.

J.N.

No. 23.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

Wellington, 26 September, 1885.

To meet your wishes will frame contract to make you party to it; must however ask you let us fix date departure London Sydney to alternate with direct service. You are misinformed amount other Colonies contributions for years not below five now about six thousand, and, as Union Company, Pearce and Spreckles can push trade, American correspondence sure increase. You must choose between ten thousand and half contributions, or seven thousand, and we keeping the whole in either case, you paying and receiving one-third bonuses, penalties. Please reply.

JULIUS VOGEL.

No. 24.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

Wellington, 26 September, 1885.

BELOW see cablegram to Washington and tolerably favourable reply. I propose dividing the four thousand equally between you, contractors, and ourselves, Postmaster-General United States negotiating for service Sydney, Auckland, Honolulu, 'Frisco, connecting at Honolulu with Spreckle's steamers. "*Will you undertake for three years, give twenty thousand dollars yearly in excess of present payments for carriage American mails. Reply immediate definitely, as continuation service probably depends on your decision.*" Reply "*such continuance, contract not authorized, will allow such sum while desirable unless Congress forbids. Villis, Postmaster-General, Washington.*"

JULIUS VOGEL.

No. 25.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

28 September, 1885.

'FRISCO Service.—We understand your proposition to be as follows:—Contract between New Zealand, New South Wales, Union Company, Pearce and Oceanic Company, for three years' service between Sydney, Auckland, Honolulu, without break, by Union Company or Pearce's boats; thence between Honolulu and 'Frisco by Oceanic Company's boats, which will wait at Honolulu, if necessary, twenty-four hours without demurrage. Time not to exceed twenty-five days between Sydney and 'Frisco. New South Wales to pay £10,000 per annum, and one-third bonuses for extra speed; and to receive half contributions from other Australian Colonies, one-third penalties chargeable to contractors, and one-third of any subsidy which may be obtained from United States. New South Wales to remit to contract boats all dock and other dues, as in case of late Pacific contract. Proper provision to be made in contract for suitable boats and conveniences for transhipment as mentioned in your telegrams; you to prepare contract and submit it to us for approval. You may fix time-table. On receipt of your reply confirming above, we will submit matter for approval of Parliament.

JAMES NORTON.

No. 26.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

Wellington, 29 September, 1885.

YOUR telegram correct, excepting that we are only to divide the £4,000 from United States, indicated by the telegrams, of which I sent you copies; other subsidies, if any, obtainable from States contractors. Very desirable, if possible, you should avoid publishing cablegram on the two points relating to twenty-five days' service and demurrage, as we are trying to make voyage twenty-four and half days and to obtain forty-eight hours free of demurrage at 'Frisco and Honolulu. If known you are contented with less, contractors will not grant. The contract will be made between two Postmasters-General and contractors; we shall all sign and then send to you. There will be clause making contract inoperative without your signature, and declaring that if there are any points with which you are not satisfied they shall be subject to reconsideration. Hope you will get Parliamentary sanction at once. I calculate net cost of service, exclusive penalties and bonuses, will be about £16,000 to us, and to you about £6,000; this, of course, exclusive of postages you and we will receive in our own Colonies and from England.

JULIUS VOGEL.

No. 27.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

29 September, 1885.

I EXPECT you to obtain further concessions in matter of time and demurrage, but thought it better to accept terms mentioned by you, so as to leave final arrangements entirely in your hands, relying on your expressed expectation of obtaining better terms. I fully understand that contractors are to keep all payments from United States, except the four thousand. My last telegram to you was published this morning.

JAMES NORTON,
Postmaster-General.

No. 28.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

3 October, 1885.

PAPER contains cablegram that your Parliament prorogued with view to general election; will you sign 'Frisco contract without express authority, or sign subject to subsequent ratification by Parliament or to its remaining on table without disallowance during sixty days first Session, which I believe is English mode of procedure; payments under contract to be continued until disallowance. Kindly reply soon as possible.

JULIUS VOGEL.

No. 29.

Telegram from Postmaster-General, Sydney, to Secretary, General Post Office, Sydney.

Springwood, 3 October, 1885.

IF Premier approves I propose to telegraph to Vogel as follows:—"I will sign contract subject to ratification by Parliament, and will continue payments until disallowance."

JAMES NORTON,
Postmaster-General.

No. 30.

Telegram from Secretary, General Post Office, Sydney, to Colonial Secretary, Sydney.

3 October, 1885.

POSTMASTER-GENERAL at Springwood telegraphs to me as follows:—"If Premier approves I propose to telegraph Vogel as follows:—'I will sign contract subject to ratification by Parliament, and will continue payments until disallowance.' If you concur I will send Mr. Norton's reply on to New Zealand, and inform Mr. Norton accordingly."

No. 31.

Telegram from Colonial Secretary to Secretary, General Post Office, Sydney.

Ashfield, 3 October, 1885.

I QUITE approve; you will therefore please telegraph to Vogel.

ALEX. STUART.

Telegram sent to New Zealand accordingly on 3rd October, 1885.—JAS. D.

No. 32.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

7 October, 1885.

I ATTACH copy of clause *re* your signature and approval your Parliament; the contract is with Union Company, who sub-contract with Oceanic; option open to Pearce to come in until Friday; if he refuse latter vessels will be employed, time twenty-five days, bonuses not to exceed thirty-six hours and detention

detention Honolulu thirty-six hours free demurrage; beyond that until mails ready, £5 an hour. Reply if you approve clause as follows:—"This contract shall not be operative but wholly void unless the Postmaster of New South Wales shall execute it within twenty days after the date first hereinbefore written; and it is hereby expressly agreed that if there are matters in the said contract with which the said Postmaster-General is dissatisfied or which he desires to be reconsidered, the same shall be open to reconsideration and he may execute the contract, subject to its reconsideration. If the Postmaster-General of New South Wales shall avail himself of this provision, the Postmaster-General of New Zealand shall be deemed equally entitled to reconsider the same matters, and his execution of these presents shall be deemed to have been made, subject to this reservation if such reconsideration is required, then it shall take place in such manner as may be mutually agreed to between the Postmasters-General and the contractors; and it is further approved that the execution of this contract by the Postmaster-General of New South Wales shall be subject to the condition that he adopts the contract, subject to its being ratified by the Parliament of New South Wales during its next succeeding session, but that until the ratification is refused the said Postmaster-General shall continue to perform this contract on his part, including payments for any voyage commenced at the time of such refusal by the said Parliament."

JULIUS VOGEL.

I see no objection to proposed clause or to the terms mentioned in the first part of the telegram. Forward to Colonial Secretary.—J.N., 7/10/85.

No. 33.

Minute for Executive Council.

General Post Office, Sydney, 7 October, 1885.

The authority of His Excellency the Governor and the Executive Council is requested to enable the Postmaster-General to enter into a contract, jointly with New Zealand, with the owners of steamships of not less tonnage than those employed in the late contract with the Pacific Mail Company, for a line of mail communication between Sydney and San Francisco *via* Auckland and Honolulu, with liberty to change steamers at the latter port, Sydney being the terminal port on this side; this Colony to contribute one-third of the contract amount, or £10,000 per annum, and be entitled to receive in reduction thereof one-half the contribution or postage rates from the other Australian Colonies and one-third of any contribution made by the Postmaster-General of the United States.

It is understood that the contract is with the Union Steamship Company of New Zealand, who sub-contract with the Oceanic Company, and possibly with Mr. Pearce, who is interested in the steamships "Zealandia" and "Australia." The time to be twenty-five days between San Francisco and Sydney, with bonuses to be paid for time gained, not exceeding thirty-six hours, at £5 an hour; detention at Honolulu thirty-six hours, free of demurrage; beyond that until mails ready, £5 an hour allowed.

The contract to contain a clause to the following effect:—"This contract shall not be operative but wholly void unless the Postmaster-General of New South Wales shall execute it within twenty days after the date first hereinbefore written; and it is hereby expressly agreed that if there are matters in the said contract with which the said Postmaster-General is dissatisfied or which he desires to be reconsidered the same shall be open to reconsideration, and he may execute the contract subject to its reconsideration. If the Postmaster-General of New South Wales shall avail himself of this provision the Postmaster-General of New Zealand shall be deemed equally entitled to reconsider the same matters, and his execution of these presents shall be deemed to have been made subject to this reservation. If such reconsideration is required then it shall take place in such manner as may be mutually agreed to between the Postmasters-General and the contractors; and it is further approved that the execution of this contract by the Postmaster-General of New South Wales shall be subject to the condition that he adopts the contract subject to its being ratified by the Parliament of New South Wales during its next succeeding session, but that until the ratification is refused the said Postmaster-General shall continue to perform this contract on his part, including payments for any voyage commenced at the time of such refusal by the said Parliament."

JOHN SEE.

The Executive Council having carefully consided the terms of the proposed agreement for a line of mail communication between Sydney and San Francisco, *via* Auckland and Honolulu, approve of the same, and advise that authority be granted to enter into a contract upon the terms herein specified.

ALEX. C. BUDGE,
Clerk of the Council.

Min. 85-38, 20/10/85. Approved.—A.L., 20/10/85. Confirmed, 27/10/85. Place with papers.—S.H.L., 31/19/85.

The following Notice of Motion was submitted with above Minute for Executive Council.

General Post Office, Sydney, 2 October, 1885.

Legislative Assembly.—Notice of Motion.—Friday, 2 October, 1885.

Government Business—Notice of Motion:—

1. Sir Alexander Stuart to move, That this House will, to-morrow, resolve itself into a Committee of the Whole to consider the following Resolutions:—
   (1.) That this House approves of a contract being entered into, jointly with New Zealand, with the owners of steamships of not less tonnage than those employed in the late contract with the Pacific Mail Company, for a line of mail communication between Sydney and San Francisco *via* Auckland and Honolulu, with liberty to change steamers at the latter port, Sydney being the terminal port on this side.
   (2.) That for such service this Colony do contribute one-third of the contract amount, or £10,000 per annum, and be entitled to receive in reduction thereof one-half the contribution or postage rates from the other Australian Colonies, and one-third of any contribution made by the Postmaster-General of the United States.
   (3.) That the foregoing Resolutions be communicated by Address to His Excellency the Governor.

No. 34.

The Secretary, General Post Office, Wellington, N.Z., to The Secretary, General Post Office, Sydney.

Sir, General Post Office, Wellington, 10 October, 1885.

I am directed by the Postmaster-General to forward you three copies of the proposed contract for the San Francisco Mail Service, which has been agreed to by the contracting Company, and was signed yesterday by Sir Julius Vogel. The Union Company will execute early next week, and so soon as their seal has been affixed the contract will be forwarded to you for ratification and execution by your Postmaster-General.

I also enclose half a dozen copies of the approved time-table, and would add that it has now been definitely arranged that Mr. Pearce is to come in, and that his boats the "Australia" and "Zealandia" are to be employed to carry out that part of the service between Sydney and Honolulu. The boats to be employed between Honolulu and San Francisco are the "Alameda" and the "Mariposa," owned by the Oceanic Steamship Company, in every way suitable for the service. They are vessels of 3,000 tons, capable of attaining a speed of 16 knots an hour, and fitted with all modern improvements.

I have, &c.,
W. GRAY,
Secretary.

P.S.—Should there be any points in the contract requiring explanation, Sir Julius Vogel would be glad if your Postmaster-General would at once communicate by cable.—W.G.

No. 35.

The Secretary to General Post Office to The Crown Solicitor.

Sir. General Post Office, Sydney, 22 October, 1885.

I am directed to forward herewith a printed copy of a contract between the Postmaster-General of New Zealand and the Postmaster-General of New South Wales and the Union Steamship Company of New Zealand, for a mail service between Sydney and San Francisco, the original of which contract has been executed by Sir Julius Vogel.

I am to state that the facts related in the contract are correct, and to request that you will be so good as to advise the Postmaster-General whether there is any legal objection to the phraseology of the document,

Mr. See will be glad if you will give this matter your early attention.

I have, &c.,
S. H. LAMBTON.

No. 36.

The Secretary, General Post Office, to The Crown Solicitor.

Sir, 28 October, 1885.

Referring to my letter of the 22nd instant, forwarding you a copy of the proposed agreement between the Postmaster-General of New Zealand, the Postmaster-General of New South Wales, and the Union Steamship Company of New Zealand, I am directed by the Postmaster-General to state that it is exceedingly necessary that this contract should be very binding in regard to Sydney being one of the terminal points of the service, and that the steamer leaving Sydney shall proceed right through to Honolulu *via* Auckland, and the steamer leaving Honolulu in each case shall come right on to Sydney *via* Auckland without any transhipment into a second steamer.

In perusing the agreement in question, therefore, will you be kind enough to bear this point in mind.

I have, &c.,
S. H. LAMBTON.

No. 37.

The Secretary, General Post Office, Wellington, N.Z., to The Secretary, General Post Office, Sydney.

Sir, General Post Office, Wellington, 12 October, 1885.

By the "Hauroto" on Saturday I forwarded you copies of the new San Francisco contract as signed by the Postmaster-General of this Colony. I now forward you in triplicate the contract executed by the Union Steamship Company as well, for the purpose of having it signed by the Postmaster-General of New South Wales.

You will observe that the name of the Postmaster-General of your Colony has been left blank. This somewhat unusual course had to be followed in consequence of it having been assumed that Mr. Norton had resigned and his successor had not been officially announced. You will no doubt see fit to communicate by telegraph should there be any points in the contract requiring elucidation.

I have, &c.,
W. GRAY,
Secretary.

This contract has been carefully examined, and appears to be in terms of the arrangement agreed to. A copy was sent to the Crown Solicitor for revision on the 22nd ult., but has not yet been returned. On inquiry of him I learn that he is awaiting the Attorney-General's opinion as to whether the contract fully provided for the steamer which leaves Sydney going through to Honolulu, and for that which leaves Honolulu coming through to Sydney. As the time stipulated in the contract within which the Postmaster-General of New South Wales is to execute it is presumed to expire to-day, and as the 46th clause provides for the Postmaster-General of New South Wales executing subject to reconsideration of any matters with which he is dissatisfied, the document is submitted herewith.—S.H.L., 3/11/85.

No. 38.

No. 38.

The Principal Under Secretary to Messrs. Gilchrist, Watt, & Co.

Gentlemen, Colonial Secretary's Office, Sydney, 19 October, 1885.

In reply to your letter of the 9th ultimo, offering, on behalf of the owner of the "Australia" and "Zealandia," to enter into a contract for a mail service between Sydney and San Francisco, *via* Honolulu, once in each calendar month, for £25,000 per annum, I am directed by the Colonial Secretary to inform you that this Government has agreed to join with New Zealand in a mail service between Sydney and San Francisco, subject to approval of Parliament, and is therefore not now in a position to negotiate with the Pacific Mail Company for the performance of such a service.

I have, &c.,
CRITCHETT WALKER,
Principal Under Secretary.

No. 39.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

28 October, 1885.

Re 'Frisco service. Is Pearce in the contract?

JOHN SEE,
Postmaster-General.

No. 40.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

THE Union is to work Pearce's boats, under sub-arrangements of which I am not cognizant. Believe they have settled terms between them on basis Union acting as Pearce's agents. We have primarily to look to Union Co.

JULIUS VOGEL.

No. 41.

The Chamber of Commerce to The Postmaster-General.

Sir, Sydney, 30 October, 1885.

Referring to the deputation from this Chamber to you this morning, relative to proposed contract for mails *via* San Francisco, I have now the honor to hand you copy of the resolutions adopted at a meeting of the Chamber held at 11·30 this morning (the copy furnished you at time of deputation being a rough one hurriedly written at the meeting before alluded to).

I have, &c.,
HENRY CHAS. MITCHELL.

1st. It having been reported that the Government of New South Wales has entered into an agreement with the Government of New Zealand to pay a certain sum annually towards the cost of a Pacific Mail Service from Sydney, *via* Auckland to Honolulu, by the Union Steamship Company of New Zealand, to be continued thence to San Francisco by an American Company, this Chamber expresses its strong disapproval of such a service, involving as it does the transhipment of mails and the consequent risk of delay.

2nd. That the Chamber further disapproves of any subsidy being paid towards a mail service for which tenders have not been called in the most public manner.

3rd. That whilst it may be fairly argued that the time has arrived for the abolition of all steam postal subsidies, it would be good policy on the part of the Government, if no satisfactory arrangement can be made with New Zealand, to pay a liberal subsidy for an independent service direct from Sydney to San Francisco.

No. 42.

Report from *S. M. Herald, re* Deputation from Chamber of Commerce.

[Extract from the *Sydney Morning Herald* of the 31st October, 1885.]

THE SAN FRANCISCO MAIL SERVICE—DEPUTATION FROM THE CHAMBER OF COMMERCE.

YESTERDAY a deputation from the Chamber of Commerce, consisting of Mr. W. Murray (Chairman), Mr. W. M'Millan (Vice-chairman), Messrs. Gotthelf, W. A. Cottee, G. Prosser, W. Bell, G. Toser, J. Burns, J. H. Story, and Mitchell (Secretary), had an interview with the Hon. Postmaster-General in reference to the San Francisco Mail Service.

Mr. W. G. Murray thanked the Minister for giving them so early an opportunity of meeting him, and he was thankful they had in Mr. See a business man to meet in regard to this matter. He desired to state that the Chamber of Commerce, on the 21st September last, passed the following resolution:—"That this Chamber is of opinion that the San Francisco service should be continued, with Sydney as the terminal port, provided that the Government arrange it at a reasonable cost." Since then they had been informed through the public Press of what had been done in the matter, and it seemed to some members of the Chamber of Commerce that the arrangements made did not meet the requirements of the public or the wishes of the Chamber. The matter had been considered by the Chamber at two or three meetings, and at a meeting held that morning resolutions were discussed and adopted as follows:—"1. It having been reported that the Government of New South Wales has entered into an agreement with the Government of New Zealand to pay a certain sum annually towards the cost of a Pacific Mail Service from Sydney *via* Auckland to Honolulu by the Union Steamship Company of New Zealand, to be continued thence to San Francisco by an American Company, this Chamber expresses its strong disapproval of such a service, involving as it does the transhipment of mails and the consequent risk of delay. 2. That the Chamber further disapproves

disapproves of any subsidy being paid towards a mail service, for which tenders have not been called in the most public manner. 3. That, whilst it may be fairly argued that the time has arrived for the abolition of all steam postal subsidies, it would be good policy on the part of the Government, if no satisfactory arrangement can be made with New Zealand to pay a liberal subsidy for an independent service direct from Sydney to San Francisco." He looked upon the mails as the only excuse for a subsidy at all, for passengers and cargo could pay their own way.

Mr. M'Millan said these resolutions were more of a suggestive character than anything else, indicating the general feeling of the commercial community, more particularly with regard to a breach in the service. They desired to avoid the idea that they wished to take up any antagonistic or anti-federal position with regard to New Zealand, but they thought any arrangement that might be made should be of a thoroughly mutual character, and that there should be full publicity with regard to calling for tenders. Those, they thought, were the lines that should have been adopted, instead of being carried on secretly, and bursting upon the Sydney public in the manner in which it had. They felt that the service between Sydney, Auckland, and San Francisco should be continued, but it appeared that the New Zealand people had made a hard and fast contract, while our agreement was subject to the approval of Parliament. They thought that if the New Zealand Government had absolutely committed themselves to the break at Honolulu, it might be advisable for this Government to consider the carrying out of a direct service either straight to San Francisco, or by way of Auckland. The break would be a very serious difficulty and obstruction to the business between this Colony and America, which had been growing so greatly of late years. He did not see where there could be any ultimate economy in having a break. If the steamers of the Oceanic Company were not good enough to be put upon this line, they were not good enough to go from America to Honolulu. The Chamber of Commerce felt, with regard to mails, cargo, and the comfort of passengers, it would be a great calamity if the break at Honolulu were insisted upon. If it could be carried out, they believed that a moderate subsidy would enable them to have a direct service for themselves. If the Government agreed that there should be a service without a break, they decidedly said it could not be done in conjunction with the New Zealand Government.

Mr. Prosser thought it rather strange when one steamer more would be sufficient for the direct service, that they could not have that extra steamer, and have the benefit of the direct service.

Mr. Gotthelf referred to the inconvenience and loss likely to arise from the transhipment of cargo, and he pointed out that passengers would be unable to ensure getting berths when they changed at Honolulu from one steamer to the other.

Mr. See said they were no doubt all aware that the negotiations for the proposed contract were carried out by Mr. Norton before his accession to office. However, he had made himself acquainted with the details of what had been done by his predecessor, and he had had all the telegrams prepared which had passed on the subject between Sir Julius Vogel and the late Postmaster-General, and from these, which have already been published, he quoted largely to the deputation. It then only remained for him to say that he thought he was bound to carry out the intentions of the late Postmaster-General, though the Parliament might refuse to ratify what the late Government had done. They were in this position,—that unless they agreed to this they would have no service at all. He reminded them that Sydney was to be the terminus of the service; and, with regard to the passenger accommodation, one-fourth would always be reserved absolutely in the Oceanic Company, and they had agreed to reserve more if necessary. The steamers they proposed to perform the service with between Sydney and Honolulu were the "Zealandia" and the "Australia." Then it was proposed on the line from Honolulu to San Francisco to have steamers of 3,000 tons, with expansion gear; and they were supposed to travel 16 knots an hour. Every facility would be afforded at Honolulu for the transhipment of mails and passengers, and thirty-six hours would be allowed there. He desired also to point out that New Zealand was always a great attraction for travellers; and to have a direct service, not touching at New Zealand, would take a great many passengers from us; and further, it was a question whether we should not be acting in opposition to those federal principles which we should all like to see carried out. With regard to the cost of the services, the net cost to the Colony of the service as proposed would be only £1,300, as against £17,000 for a direct service. There were, of course, questions that Parliament would have to consider. He had endeavoured to place the deputation in possession of all the details of what had taken place up to the time of his taking office, and he felt that he was in duty bound to carry out the arrangements commenced by his predecessor, subject, of course, to the approval of Parliament. With regard to what had been said in reference to damage to cargo, he informed them that the Company coming here would be liable to us, and whatever grievance we had we should look to that Company to make it good. It was quite optional for our Parliament to cancel this contract, and it was optional for New Zealand to carry it on, but in the event of our having a direct line we should have two competing lines to America. If the service was found not to be a good one, it was quite competent for Parliament to refuse to ratify it; if it was a good one, it was better for us to have this service. He had every confidence in the Union Company fulfilling everything they had undertaken to do.

No. 43.

The Crown Solicitor to The Secretary, General Post Office.

Sir, Crown Solicitor's Office, Sydney, 3 November, 1885.

I have the honor to return herewith the printed copy of the proposed contract for the San Francisco Mail Service, and to state that I have submitted same for the perusal of the Honorable the Attorney-General, who states that he thinks the marginal alteration in paragraph 5 will be advisable to place the question of terminal port and transhipping beyond all doubt.

I have, &c.,
JOHN WILLIAMS,
Crown Solicitor.

Prepare telegram to New Zealand informing that Postmaster-General has signed the contract, mentioning alteration.—S.H.L., 4/11/85. Telegram sent, 4/11/85.—Jas. D.

SAN FRANCISCO MAIL SERVICE.

Contract between the Postmaster-General of New Zealand, the Postmaster-General of New South Wales, and the Union Steamship Company of New Zealand (Limited).

Articles of agreement made and entered into this ninth day of October, one thousand eight hundred and eighty-five, between the Honorable Sir Julius Vogel, K.C.M.G., the Postmaster-General of the Colony of New Zealand, as such Postmaster-General, and acting for and on behalf of the Government of the said Colony, of the first part; the Postmaster-General of the Colony of New South Wales for the time being, as such Postmaster-General, and acting for and on behalf of the Government of the said Colony, of the second part; and the Union Steamship Company of New Zealand (Limited), of Dunedin, in the Colony of New Zealand, hereinafter designated "the contractors," of the third part: Witness that the contractors do for themselves, their successors, and assigns (so far as the covenants and agreements hereinafter contained are to be observed and performed by the contractors), hereby covenant with the Postmaster-General of the Colony of New Zealand and his successors, and with the Postmaster-General of the Colony of New South Wales and his successors, and also as a separate covenant with each of the Postmasters-General and his successors: And the Postmaster-General of the Colony of New Zealand and the Postmaster-General of the Colony of New South Wales do and each of them doth, for and on behalf of himself respectively as such Postmaster-General, and his successors respectively, and the Government of the Colony for which he is now respectively the Postmaster-General (but so far only as the covenants and agreements hereinafter contained are to be observed or performed by or are applicable to the Government of the said Colonies respectively), hereby covenant with the contractors and their successors in manner following, that is to say:—

1. In the construction of these presents the following words and expressions shall mean and include (unless such meaning shall be inconsistent with the context) as follows:—

"Postmaster-General of New Zealand" means the Postmaster-General for the time being of that Colony:

"Postmaster-General of New South Wales" means the Postmaster-General for the time being of that Colony:

"Postmasters-General" means the Postmaster-General for the time being of New Zealand and the Postmaster-General for the time being of New South Wales:

"Contractors" includes the successors and assigns of the contractors:

"Mails" includes all boxes, bags, or packets of letters, newspapers, books, or printed papers, patterns, and all other articles transmissible by post, without regard either to the place to which they may be addressed or to that in which they may have originated; also all empty bags, empty boxes, and other stores and articles used or to be used in carrying on the Post Office service:

"Mail" means the aggregate of mails transmitted at any one time by any of the vessels for the time being employed in the mail service under this contract: and

"Hours" means hours calculated according to Greenwich time.

2. The contractors shall from time to time, and at all times hereafter, during a period of three years, computed from the twenty-first day of November, one thousand eight hundred and eighty-five, unless previously terminated in pursuance of the provision in that behalf hereinafter contained, convey all Her Majesty's mails which, and all other mails of whatever country or place which, the Postmasters-General or either of them shall at any time and from time to time require the contractors to convey, from and to the following ports, that is to say, Sydney, Auckland, Honolulu, San Francisco, and any port or ports intermediate between Sydney and San Francisco at which the steam-vessels hereinafter mentioned may call as hereinafter mentioned, or any of such ports, and within the respective times and in manner hereinafter provided for; and, so long as the whole or any part of the services hereby agreed to be performed ought to be performed in pursuance of this contract, shall and will provide and keep seaworthy and in complete repair and readiness for such purpose a sufficient number of and not less than four good, substantial, and efficient screw steam-vessels of the first class, and fully equal to class 100 A1 Lloyd's Register, and of not less gross register tonnage than two thousand five hundred tons each, constructed of iron, and propelled by first-rate engines of adequate power for the performance of the voyages, within the times hereinafter specified, and having spar decks, and large capacity for passengers and cargo, and ample ventilation for passing through tropical latitudes.

Of the vessels to be so provided, two vessels shall be employed between San Francisco and Honolulu, and two vessels between Honolulu, Auckland, and Sydney. One half of the passenger accommodation afforded by each vessel running between San Francisco and Honolulu is to be reserved for and appropriated to passengers to and from Auckland and Sydney; and one half of the passenger accommodation afforded by each vessel running between Honolulu, Auckland, and Sydney is to be reserved for and appropriated to passengers to and from each of the said Colonies respectively: Provided that, should any of the four screw steam-vessels aforesaid become disabled through tempestuous weather or by reason of accident beyond the control of the contractors, then it shall be lawful for the contractors to provide and equip a screw steam-vessel or vessels as substitute or substitutes, capable of performing the voyage within the time specified, and any substitute vessel shall not be of any less gross tonnage than 2,500 tons: Provided further that in any special case, and with the written consent of the Postmasters-General, a vessel of less than 2,500 tons gross register may be used as such substitute vessel as aforesaid, and every such vessel shall be subject to the terms and conditions of this contract for or in respect of any voyage as aforesaid so far as such terms and conditions are applicable.

3. The steam-vessels to be employed under this contract shall be always furnished with all necessary and proper machinery, engines, apparel, furniture, stores, tackle, boats, fuel, lamps, oil, tallow, provisions, anchors, cables, fire-pumps and other proper means for extinguishing fire, lightning-conductors, charts, chronometers, nautical instruments, and whatsoever else may be necessary for equipping the said vessels and rendering them constantly efficient for the performance of the voyages within the times hereinafter specified and for the service hereby agreed to be performed, and also manned and provided with competent and legally-qualified officers, the master or commander having ample experience in command of screw steam-vessels, and with a sufficient number of efficient engineers, and a sufficient crew of able seamen and other men, and with a competent surgeon, to be in all respects, as to vessels, engines, equipments, and capacity, subject in the first instance, and from time to time and at all times afterwards, to the approval of the Postmasters-General or of such other person or persons as they shall jointly or severally at any time or times or from time to time authorize to inspect and examine the same; and no vessel shall be employed or used for the purposes of this contract until approved as aforesaid. Every vessel used for the purposes of this contract other than those now or lately used in the existing San Francisco mail service, known as the "Zealandia" and "Australia," shall be fitted with refrigerators or ice-chambers, in which fish ova or other natural productions may be carried or conveyed, and such refrigerators shall be fitted with all necessary appliances and machinery for working and keeping the same effective:

Provided nevertheless, and it is hereby declared, that the contractors, so long as they shall convey the mails within the times and in the manner hereinafter provided, shall not be required to keep more than four vessels actually engaged in conveying the mails, and furnished with stores, fuel, and provisions, and manned and provided with officers, engineers, crew, and a surgeon as hereinbefore provided for.

4. The Postmasters-General, or either of them, shall have full power whenever and as often as they or he may deem it requisite, by any of their or his qualified officers or agents, to inspect the officers, engineers, and crew of all or any of the vessels employed or to be employed in the performance of this contract, and to survey all or any of such vessels, and the hulls thereof, and the engines, machinery, furniture, tackle, apparel, stores, and equipments of every such vessel; and any defect or deficiency that may be discovered on any such survey shall be forthwith repaired or supplied by the contractors. And for the purposes aforesaid the said vessel shall (if necessary) be opened in their hulls whenever the said officers or agents may so require; and if any such vessel or any part thereof, or any engines, machinery, furniture, tackle, apparel, boats, stores, or equipments, shall on any such survey be declared by any such officers or agents unseaworthy or not adapted to the service hereby agreed to be performed, or any such officers, engineers, or crew shall be so declared ineligible, every vessel which shall be disapproved of, or in which such deficiency or defect shall appear, shall be deemed insufficient for any service hereby agreed to be performed, and shall not be again employed in the conveyance of mails until such defect or deficiency has been repaired or supplied to the satisfaction of the Postmasters-General or officer requiring the same; and any of such officers, engineers, or crew declared ineligible shall not be employed in the said service.

5. The mails shall be conveyed thirteen times in each year between San Francisco, Auckland, and Sydney, by way of Honolulu, and at the same rate between Sydney, Auckland, and San Francisco, by way of Honolulu, *without transhipment except at Honolulu;** and the vessels respectively employed to convey the mails shall leave the said ports of Sydney, Auckland, Honolulu, and San Francisco on the days and at the times to be from time to time appointed for the purpose by the Postmaster-General

* Note.—The portions of clause 5 which are printed in italics are those proposed by the Postmaster-General of New South Wales, and referred to in the attestation clause as the alterations marked in red ink.

Postmaster-General of New Zealand, who shall allow a sufficient time at the ports of Auckland and Honolulu for the delivery and receipt of mails, and the embarkation or landing of passengers and cargo, *Sydney being the terminal port for all such voyages.** The said vessels, on each voyage between San Francisco, Honolulu, Auckland, and Sydney, and between Sydney, Auckland, Honolulu, and San Francisco, shall call, if required by the Postmasters-General but not otherwise, off the Navigator Islands, for the purpose of landing and receiving mails, and, with the consent in writing of the Postmasters-General, between Sydney and San Francisco: Provided that, if any vessel shall be required as aforesaid to call off the Navigator Islands, and be detained for the purpose of receiving or delivering mails exceeding one hour, then such additional time beyond such hour shall be added to the duration of the voyage.

6. The contractors, at their own expense, shall deliver and take the mails to and from the steamers at Honolulu and to and from the shore at convenient places, to be from time to time appointed by the Postmasters-General respectively, in the respective ports from and to which the mails are to be conveyed; and also shall convey the same and the officers having charge of them to and from such steamers and to and from the shore as may be necessary, in suitable boats, furnished with suitable coverings for the mails, and properly equipped and manned; and shall from time to time convey the officers or agents of the Postmasters-General respectively to and from such steamers and to and from the shore at any of the said ports, as often as may be necessary in the execution of their duties respectively, in the event of a suitable boat not being conveniently obtainable from the shore for the purpose.

7. If either of the said Postmasters-General or their respective officers or agents shall at any time deem it requisite for the public service that any vessel should be delayed beyond the appointed time of departure, it shall be lawful for either of the Postmasters-General or such officers or agents to order such delay, not exceeding thirty-six hours at San Francisco or Honolulu, and not exceeding twenty-four hours at either Sydney or Auckland, free of charge for demurrage, by letter addressed to and delivered to the commander of the vessel or the person acting as such, or left for him at the office of the contractors in the port or on board the vessel, three hours at least before the hour appointed for departure.

And in order to insure the due carrying of the mails to and from San Francisco and Honolulu, the contractors, without any such notice, shall delay the departure of any vessels (if necessary), at San Francisco and Honolulu respectively, six days, to await the arrival of the mails from London for Australia and New Zealand, and six days at Honolulu, for the arrival there of the mails from Sydney and Auckland for London. For such detention at San Francisco, but not at Honolulu, demurrage at the rate of five pounds an hour shall be paid the contractors; such days to be reckoned from the due date of the arrival of the said mails respectively, but for the first thirty-six hours there shall be no payment for demurrage. The Postmaster-General of New Zealand shall also be at liberty from time to time to postpone the times of departure of the said vessels from the port of Auckland for a longer period than twenty-four hours, with the consent of the Postmaster-General of New South Wales, but not otherwise; but for every hour over such twenty-four hours demurrage at the rate of five pounds an hour shall be paid.

8. If from any cause whatsoever, at any time or times hereafter, one of the vessels aforesaid shall not be at the ports of San Francisco, Honolulu, Auckland, and Sydney respectively, ready to put to sea in due time to perform the services hereby contracted to be performed, the contractors shall pay as liquidated damages to the Postmaster-General in respect of every mail that shall be delayed by reason of any such default as aforesaid the sum of two hundred pounds, and the further sum of fifty pounds for every successive twenty-four hours which shall elapse between the time at which the mail shall be appointed to leave the port and the time at which the vessel conveying the same shall leave the port, whether such vessel shall be one of those aforesaid or any other vessel which the Postmasters-General shall think fit to employ or to sanction being employed for the purpose: Provided that the Postmasters-General shall have power to remit or reduce any of the sums payable, as in this clause mentioned, if they shall be satisfied that any such default as aforesaid was attributable to causes over which the contractors had no control: Provided also that the maximum amount to be paid by the contractors under this clause in respect of such defaults for any one voyage shall not exceed one thousand pounds.

9. The mails shall be safely conveyed from San Francisco to Sydney within six hundred hours, and from Sydney to San Francisco within a like period, and from San Francisco to Auckland within four hundred and eighty hours, and from Auckland to San Francisco within a like period; the times aforesaid to be calculated from the times appointed for the departure of the mail respectively, unless any vessel shall be delayed in consequence of the mail not being ready for embarkation in due time either at San Francisco or at Sydney or at Auckland, in which case the time shall be calculated from the time of the mail being ready for delivery at the port where the delay shall take place.

In case of the loss of any of the mails by wreck of any mail-vessel or otherwise, the contractors shall with all possible despatch, at their own cost, do all such acts and take all such measures as may be reasonably done and taken to recover the mails so lost; and the contractors shall be liable for all damage or injury to any of the mails, from whatever cause the same may arise or happen, except fire, the act of God, or the Queen's enemies.

10. The payment of all the services mentioned in this contract shall be thirty thousand pounds per annum, less the deduction next hereinafter mentioned, viz.: the Postmaster-General of the United States has agreed by cablegram to pay (in excess of present payments for the carriage of the United States mails) four thousand pounds towards the services herein provided unless Congress forbids, and, if such payment shall be made, two-thirds of the said sum of four thousand pounds shall be deducted from the total payment of thirty thousand pounds.

The contractors shall collect the said four thousand pounds, and account as aforesaid to the Postmasters-General for two-thirds of that sum, which two-thirds shall be equally divided between the Postmasters-General, and the contractors shall be entitled to retain the other third. If the Postmaster-General of the United States is prevented by Congress from paying the four thousand pounds, then the Postmasters-General shall make up the payment to the thirty thousand pounds aforesaid, in the proportion of twenty thousand pounds by the Postmaster-General of New Zealand to ten thousand pounds by the Postmaster-General of New South Wales.

11. Of the total sum payable under this contract, ten thousand pounds shall be paid by the Postmaster-General of New South Wales, and twenty thousand pounds shall be paid by the Postmaster-General of New Zealand; but from such payments there shall be deducted by each of the Postmasters-General respectively an amount equal to one-third of the four thousand pounds agreed to be paid by the Postmaster-General of the United States as aforesaid.

12. The contractors on account of each voyage shall pay to the Postmasters-General as a penalty four pounds for every hour in excess of the number of hours mentioned in clause 9, occupied by such voyage; and any such penalty may be deducted by the Postmasters-General from any payments due to the contractors: Provided that the Postmasters-General may remit any of the penalties which in their joint opinion should not be enforced.

13. For each and every mail which the contractors shall deliver at Sydney from San Francisco, or shall deliver at San Francisco from Sydney, before the expiration of the time appointed in clause 9, they shall be paid by the Postmasters-General the sum of five pounds by way of bonus for every complete hour saved; but no bonus for any voyage between San Francisco and Sydney and Sydney and San Francisco respectively shall be paid for any period in excess of thirty-six hours saved.

14. The sums payable to the contractors under this contract shall be in full satisfaction for all services rendered in the conveyance, receipt, and delivery of all Her Majesty's mails which, and all other mails which, may be conveyed under this contract from, to, and at all or any of the ports aforesaid, or otherwise, and shall be payable at the respective Treasuries in the places appointed for payment, to an agent to be appointed by the contractors at each of those places to receive the same respectively immediately after the due delivery of each mail in each Colony, or the advice by cablegram from San Francisco, or by the return mail from thence, of the due delivery of the mail there shall be received, as the case may be: Provided always that the provisions hereinbefore contained for payment for the conveyance of mails otherwise than within the time stipulated for in clause 9 of these presents shall not be deemed or construed to relieve the contractors from liability for default in the due performance of the stipulations contained in the same clause, or to disentitle the Postmasters-General to determine this contract under clause 25 of these presents on account of any such default, it being hereby expressly agreed that the performance of the service hereby contracted to be performed within the times mentioned in clause 9 of these presents shall be deemed and held to be the essence of this contract.

15. The Colonies of New South Wales and New Zealand, or either of them, shall be entitled to retain to their or its own use respectively any subsidy or payment allowed to them or either of them by the Government of the United Kingdom of Great Britain and Ireland, and to retain and divide between them equally any subsidy or payment which may be agreed to be paid by any other Australasian Colony or dependency, or any of the Polynesian Islands, for the conveyance of mails over the aforesaid routes, after deducting any payments made or expenses (if any) incurred by the Postmasters-General or either of them for the conveying mails to or from any or either of the ports or places hereinbefore appointed for the receipt or

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or delivery of mails. The contractors shall be entitled to the benefit of and to receive any subsidies or payments which the contractors may be able to induce any Government other than as aforesaid to agree to pay for the conveyance of mails over the aforesaid routes, after deducting any payments made or expenses (if any) incurred by the Postmasters-General or either of them for the conveying mails to and from any and either of the ports or places aforesaid, provided the arrangements for the services in respect of any such subsidy shall be approved by the Postmasters-General: Provided that nothing in this clause contained shall be deemed to affect the payments which may be made by the United States under clause 10.

16. The contractors shall provide, to the satisfaction of the Postmasters-General, or either of them, on board all steam-vessels employed under this contract, proper, safe, and convenient places of deposit for the mails, with locks, keys, and secure fastenings; and every such place of deposit shall be rendered and kept vermin-proof.

17. The contractors shall also provide, to the satisfaction of the Postmasters General or either of them, all necessary and suitable accommodation, including lights, for the purpose of sorting and making up the mails on board the several vessels employed under this contract, and, on being required to do so by the Postmasters-General or either of them, shall at their own cost erect or set apart in each of the said vessels on the spar deck a separate and convenient room for such purposes; and all such furniture, lamps, fittings, and other conveniences shall be from time to time cleansed and kept in repair, and the oil for the lamps supplied, by the servants of and at the cost of the contractors. The master or commander of each of the said vessels shall also, if required, provide assistance for conveying the mails between the mail-room and the sorting-room, and also render such other assistance as may from time to time be needed, without charge.

18. If the Postmasters-General, or either of them, shall think fit to entrust the charge and custody of the mails, or his respective mail, to the master or commander of any vessel to be employed under this contract, and in all cases where the officer or other person appointed to have charge of the mail shall be absent to the knowledge of the master or commander of such vessel, such master or commander shall, without any charge, take due care of, and the contractors shall be responsible for, the receipt, safe custody, and delivery of the said mail at the several appointed places on the shore in the respective ports, as part of the services hereby contracted to be rendered. The master or commander shall also make the usual Post Office declaration, and furnish such journal returns and other information, and perform such other services, as the Postmasters-General or either of them, or their or either of their officers, shall from time to time reasonably require.

19. The contractors and all commanding and other officers in charge of the vessels employed under this contract shall at all times punctually attend to the orders and directions of the Postmasters-General or either of them, their or either of their officers or agents, as to the mode, time, and place of landing, transhipping, delivering, and receiving the mails, subject to the special provisions herein contained, and so far as such orders and directions are reasonable and consistent with the safety of the vessels.

20. The contractors shall have no claim to any postage nor to any sum on account thereof for mails carried in any vessel employed in the service under this contract, or on account of any services rendered, except as herein specially provided to be paid, and excepting such payments as the United States may make for carriage of mails in excess of the four thousand pounds mentioned in clause 10.

21. The contractors shall provide suitable first-class accommodation, including a cabin or state-room, for the exclusive use of a mail officer or agent for each of the Postmasters-General and for one assistant for such Postmasters-General or either of them on board each of the vessels employed under this contract, who shall be at liberty to use such accommodation as may be required for the performance of their duties; and such officers or agents and assistant shall be victualled by the contractors as chief-cabin passengers, without charge either for their passages or victualling; and whilst the vessel stays at any port excepting the ports of Sydney and San Francisco, to or from which the mails are conveyed, such officers, agents, and assistants shall be allowed to remain on board and shall be victualled as aforesaid.

22. Every such mail officer or agent and assistant shall be recognized and treated by the contractors, their officers and agents, as the agents of the Postmasters-General respectively, or Postmaster-General, by whom he may have been appointed, as the case may be, and as having full authority in all cases to require a due and strict performance of this contract: Provided that no such agent, officer, or assistant shall have power to control or interfere with any master, commander, or officer in the performance of his duty; and every such agent, officer, and assistant shall be subject to all general orders issued by the master or commander for the good order, health, and comfort of the passengers and crew and the safety of the vessels.

23. During the continuance of this contract, and so long as the same shall be faithfully carried out by the contractors, no charge for pilotage, tonnage, light-house, or harbour dues shall be made in New South Wales for any of the steam-vessels employed in carrying out this contract; and the contractors shall be at liberty to use once in every four weeks, for five days at a time, the Fitzroy Dry Dock at Sydney, if not leased or otherwise occupied, and also the workshops there, on payment only of the expenses of and attending such use; and no charge for light-house dues or tonnage, or other harbour dues, as defined by "The Harbours Act, 1878," or any Act amending the same or read therewith, shall be made at Auckland in respect of any of the steam-vessels employed in carrying out this contract.

24. This contract, or any part thereof, shall not be assigned or underlet or disposed of by the contractors without the joint consent, in writing, of the Postmasters-General first obtained for such purpose: Provided that, for the performance of that portion of this contract which provides for the conveyance and delivery of mails between Honolulu and San Francisco and San Francisco and Honolulu, the contractors are hereby empowered (without any such consent as aforesaid) to underlet such performance to a Company incorporated under the laws of the State of California, and known as "The Oceanic Steamship Company" of San Francisco; but such underletting shall not be deemed to affect the liability of the contractors for the due performance of the entire services provided for by this contract.

25. In case this contract, or any part thereof, shall be assigned, underlet, or otherwise disposed of by the contractors otherwise than with such consent as last aforesaid, or in case of any great or habitual non-performance or non-observance of this contract, or of any of the covenants, matters, or things herein contained; and on the part of the contractors, their officers, agents, or servants, or any of them, to be observed or performed, and whether there be or be not any penalty or sum of money payable by the contractors for any such non-observance or non-performance, it shall be lawful for the Postmasters-General, if they shall be of opinion that the contractors are not *bona fide* carrying out the provisions herein contained, and they shall so think fit (notwithstanding there may or may not have been any former non-observance or non-performance of this contract), by writing under their hands, to determine this contract, without any previous notice to the contractors or their agents; and the contractors shall not be entitled to any compensation in respect of such determination, and such determination shall not deprive the Postmasters-General of any rights or remedies to which they would otherwise be entitled by reason of any non-observance or non performance of any of the provisions herein contained.

26. The Postmasters General, or either of them, may, if they or he think fit, except from any such determination any voyage or voyages; and if any vessel or vessels should have started before the determination of this contract, or before the masters or commanders thereof could have received the news of such determination, or should after the determination start with a mail on any voyage or voyages so excepted as aforesaid, the voyage or voyages shall be continued and performed, and the mails be delivered and received, as if this contract had remained in force with regard to any such vessels; and with respect to such vessels this contract shall be considered as having terminated only when such vessels shall have reached their port or place of destination, and the mails carried by them shall have been delivered.

27. All notices or directions which are hereby authorized to be given to the contractors, their officers, servants, or agents, may be delivered to the master or commander of any of the said vessels, or other officer or agent of the contractors in the charge or management of any vessel employed in the performance of this contract on board such vessel, or left for the contractors on board such vessel, or at either of the offices or houses of business at Sydney or Dunedin of the contractors or their agents, and any notices or directions so given or left shall be binding on the contractors: Provided that any notice of the determination of this contract shall be given to the contractors, or left for them at their last known office or place of business in Sydney or Dunedin, as the Postmasters-General may think fit.

28. It shall be lawful for the Postmasters-General, or either of them, by writing under their respective hands, at any time, and from time to time, to delegate all or any of the powers, whether joint or several, vested in them or him respectively by virtue of this contract of such person or persons as they or he may think fit.

29. If the contractors shall fail to commence the performance of the services hereby contracted to be by them performed according to the provisions hereof, or, having commenced the same, shall refuse or wilfuly neglect to carry on the same according to the true intent and meaning of these presents, they shall forfeit and pay to the said Postmasters-General the sum of seven thousand five hundred pounds, to be divided between the Postmasters-General in the proportion of two-thirds to the Postmaster-General of New Zealand and one-third to the Postmaster-General of New South Wales, and such sum shall be received as liquidated damages, and not as a penalty.

30. All and every the sums of money hereby stipulated to be paid by the contractors shall be considered as liquidated or ascertained damages, whether any damage or loss shall have or shall not have been sustained, and may be set off by the Postmaster-General, or either of them, against any moneys payable to the contractors under or by virtue of these presents, or may be enforced by both or either of the Postmasters General as a debt due, with full costs of suit, at their or his discretion: Provided always that the payment by the contractors of any sums of money for any neglect or default in the observance or performance of the covenants or agreements herein contained shall not in any manner prejudice the rights of the Postmasters-General, or either of them, to treat such defaults as a non-observance or non-performance of this contract on the part of the contractors.

31. If any dispute, question, difference, or controversy shall arise between the Postmasters-General or their respective Governments and the contractors touching these presents or any clause or thing herein contained, or the construction thereof, or any matter in any way connected with these presents or the operation hereof, or the rights, duties, or liabilities of the said Governments respectively, or of the contractors, in connection with the premises, then and in every or any such case the matter in difference shall be referred to arbitration in manner hereinafter mentioned, and the award of the arbitrator or the arbitrators or the umpire appointed as hereinafter mentioned, as the case may be, shall be binding and conclusive in every respect.

32. Unless the Postmasters-General and the contractors shall concur in the appointment of a single arbitrator, each party, on the request of the other party, shall nominate and appoint an arbitrator, to whom such dispute, question, difference, or controversy shall be referred; and every appointment of an arbitrator shall be made on the part of the Postmasters General under their hands, and on the part of the contractors under their corporate seal; and such appointment shall be made in duplicate, and be delivered, one part to the other party and the other part to the arbitrator on the part of the party by whom the same shall be made; and after any such appointment shall have been made neither party shall have power to revoke the same without the consent of the other, nor shall the death of either party operate as a revocation; and if for the space of fourteen days after any such dispute shall have arisen, and after a request in writing in which shall be stated the matters required to be referred to arbitration shall have been served upon the Postmasters-General respectively, or given to the contractors, or left for them at their last known office or place of business in Sydney, or Dunedin, as the case may be, by the one party or the other party, to appoint an arbitrator, such last-mentioned party fail to appoint an arbitrator, then, upon such failure, the party making the request, and having appointed an arbitrator, may appoint such arbitrator to act on behalf of both parties; and such arbitrator may proceed to hear and determine the matters which shall be in dispute, and in such case the award or determination of such single arbitrator shall be final.

33. If, before the matters so referred shall be determined, any arbitrator appointed by either party die or become incapable, the party by whom such arbitrator was appointed, his successors in office, or successors or assigns, may nominate and appoint in writing some other person to act in his place; and, if for the space of fourteen days after notice in writing from the other party for that purpose he fail to do so, the remaining or other arbitrator may proceed *ex parte*, and every arbitrator so to be substituted as aforesaid shall have the same powers and authorities as were vested in the former arbitrator at the time of such his death or disability as aforesaid.

34. Where more than one arbitrator shall have been appointed, such arbitrators shall, before they enter upon the matters referred to them, nominate and appoint by writing under their hands an umpire to decide on any such matters on which they shall differ or which shall be referred to him, and, if such umpire shall die or become incapable to act, they shall forthwith after such death or incapacity appoint another umpire in his place, and the decision of every such umpire on the matters so referred to him shall be final.

35. If in either of the cases aforesaid the said arbitrators shall refuse, or shall for fourteen days after the request of either party to such arbitration, neglect to appoint an umpire, the Governor for the time being of the Colony of New Zealand shall, on the application of either party to such arbitration, appoint an umpire, and the decision of such umpire on the matters on which the arbitrators shall differ or which shall be referred to him shall be final.

36. If, when a single arbitrator shall have been appointed or shall be proceeding *ex parte* under any of the provisions herein contained, such arbitrator shall die or become incapable to act before he shall have made his award, the matters referred to him shall be determined by arbitration in the same manner as if no such arbitrator had been appointed.

37. If, where more than one arbitrator shall have been appointed, either of the arbitrators refuse or for fourteen days neglect to act, the other arbitrator may proceed *ex parte*, and the decision of such other arbitrator shall be as effectual as if he had been the single arbitrator appointed by both parties.

38. If, where more than one arbitrator shall have been appointed, and where neither of them shall refuse or neglect to act as aforesaid, such arbitrators shall fail to make their award within three calendar months after the day on which the last of such arbitrators shall have been appointed, or within such extended time (if any) as shall have been appointed for that purpose by both such arbitrators under their hands, the matters referred to them shall be determined by the umpire to be appointed as aforesaid, and the umpire shall make his award within three calendar months after the time when his duties shall commence, or within such extended time (if any) as shall have been appointed for that purpose by the umpire under his hand.

39. The said arbitrator or arbitrators or their umpire may call for the production of any documents in the possession or power of either party which they or he may think necessary for determining the question in dispute, and may examine the parties or their witnesses on oath, and administer the oaths necessary for that purpose.

40. The cost of every such arbitration and of the award shall be in the discretion of the arbitrator, arbitrators, or umpire, who may direct to and by whom and in what manner the same or any part thereof shall be paid.

41. The arbitration shall take place and be conducted at Wellington, New Zealand; and the arbitrator or arbitrators or the umpire, as the case may be, shall deliver his or their award in writing to the Postmasters General; and the Postmasters-General shall retain the same, and shall forthwith, on demand, at their own expense, furnish a copy thereof to the contractors, and shall at all times, on demand, produce the said award and allow the same to be inspected or examined by the contractors or any person appointed by them for that purpose.

42. This submission to arbitration may be made a rule of the Supreme Court of Judicature in England or Ireland respectively, or of any division thereof, or of the Supreme Court in any of the said Colonies, on the application of either of the Postmasters-General or the contractors.

43. Except where express provision is made to the contrary, all sums of money payable by the Postmasters-General, under or by virtue of this contract, for delivery of mails, or for demurrage, shall be so paid in the proportion of two-thirds by the Postmaster-General of New Zealand and one third by the Postmaster-General of New South Wales; and, except as aforesaid, all sums payable by or recoverable from the contractors for damages or as penalties shall be apportioned between the said Postmasters-General in the like proportion.

44. Notwithstanding anything contained in this contract, the period within which the services herein provided for shall terminate may be extended by the Postmasters-General so as to include an additional voyage from San Francisco to Sydney, and all the terms and provisions of this contract so far as applicable shall apply and extend to the said voyage.

45 In any case under the provisions of this contract, where any act or thing may be done or performed jointly by the Postmasters-General, it shall be sufficient for all purposes if any document signed or action taken by one of the said Postmasters-General purports to be so signed or taken as well on his own behalf as on behalf of the other Postmaster-General, and such document or action shall be binding and effectual as regards the contractors accordingly, who shall not have any right to require proof that each Postmaster-General is a consenting party thereto. But, as between themselves, consent to the signing of any document, or the taking of any such joint action, may be communicated by one of the Postmasters-General to the other of them in any way he may think fit.

46 The Postmaster-General of New South Wales shall execute this contract within twenty-five days after the date first hereinbefore written. And it is hereby expressly agreed that if there are matters in the said contract with which the said Postmaster-General is dissatisfied, or which he desires to be reconsidered, the same shall be open to reconsideration, and he may execute the contract subject to such reconsideration. If the Postmaster General of New South Wales shall avail himself of this provision, the Postmaster-General of New Zealand shall be deemed equally entitled to reconsider the same matters, and his execution of these presents shall be deemed to have been made subject to this reservation.

If any such reconsideration is required, then it shall be determined in such manner as may be mutually agreed between the Postmasters General and the contractors.

And it is further agreed that the execution of this contract by the Postmaster General of New South Wales shall be on the condition that he executes the contract subject to its being ratified by the Parliament of New South Wales during its next succeeding session; but until such ratification is refused the said Postmaster General shall continue to perform this contract on his part, including payments for any voyage commenced at the time of such refusal by the said Parliament.

47. Should the Postmaster-General of New South Wales decline to execute the contract, or should such ratification as aforesaid be refused, it shall be optional with the Postmaster-General of New Zealand to terminate this contract, upon his giving written notice to the contractors for that purpose, or to undertake the joint liabilities of the said Postmasters-General under this contract, subject to such modifications thereof as he and the contractors may agree.

In witness whereof the said parties to these presents of the first and second parts have hereunto set their hands and seals, and the contractors have hereunto caused their common seal to be affixed, the day and year first above written.

Signed, sealed, and delivered by the said Sir Julius Vogel, as Postmaster-General of New Zealand, in the presence of,— } JULIUS VOGEL. (L.S.)

W. GRAY.

Signed, sealed, and delivered by John See, as Postmaster-General of New South Wales for the time being, subject to the alterations marked in red ink in clause five, being made a part of the contract, in the presence of,— } JOHN SEE. (L.S.)

S. H. LAMBTON,
Secretary, Post Office, New South Wales.

The Common Seal of the Union Steamship Company of New Zealand, Limited, was hereunto affixed in the presence of,— } (L.S.)

GEO. MCCLEAN,
JAMES MILLS,
Directors of the said Company.

No. 44.

Report from *S. M. Herald re* deputation that waited on Postmaster-General.

(Extract from *Sydney Morning Herald* of 4th November, 1885.)

THE SAN FRANCISCO MAIL SERVICE.—DEPUTATION TO THE POSTMASTER-GENERAL.

YESTERDAY morning a deputation, consisting of Mr. E. Barton, M.L.A.; Mr. S. H. Hyam, M.L.A.; Mr. J. C. Neild, M.L.A.; Messrs. W. Bradley, E. Hughes, Gillies, and Captains Broomfield, Knight, Ghest, and Turner, waited upon the Hon. John See, Postmaster-General, in reference to the San Francisco mail service.

Mr. W. Bradley said he had presided at a meeting held at the Exchange on the 30th October, when the following resolutions were agreed to:—"That the proposed mail contract to America (involving a transhipment at Honolulu) is most injurious to the interests of the mercantile and general public of this Colony." "That such interests demand that a direct and uninterrupted service from Sydney to San Francisco should be arranged for." The meeting was perfectly unanimous, and the present deputation was appointed to interview the Postmaster-General upon the subject. He had found out only the previous night that within three years 40,000 bales of wool were shipped by the late line to San Francisco, of the value of £800,000.

Mr. S. H. Hyam said that this was a matter that affected the Colony generally, and more particularly the merchants of Sydney. It would be idle for him to tell Mr. See the effect upon the cargo of transhipment at Auckland and Honolulu; it would be deteriorated very materially, and at the expense of the importers. He was not in love with the Union Company, who, from his experience, were not likely to benefit the mercantile community; and as they had failed to keep faith with individuals, were not likely to keep faith with the public at large. In supporting the establishment of a direct line, he was only echoing the feelings of all those gentlemen who had assembled at the Exchange on Friday last. He was sure that if the Postmaster-General signed the contract now before him it would not be endorsed by the public generally. He could state that there was a Company now prepared to undertake to run a direct line between Sydney and San Francisco, with fast and commodious steamers, for a subsidy of something like £20,000 or under, and he thought this Colony could well afford to carry on a line like that, the benefit of which would far more than repay the cost. He suggested that the Minister should defer signing the contract, in order that he might give due consideration to the matters brought before him by the deputation.

Mr. J. C. Neild said that this contract must necessarily come before Parliament for final approval; and it must be patent, after the expression of opinion of the Chamber of Commerce, and of the meeting from which that deputation came, that there was a strong probability that Parliament might fail to endorse the contract, and he therefore urged the Minister to pause before he assented to an arrangement which would so little commend itself to those who had given consideration to the matter. As a mail-carrying line the cost should not be a paramount consideration, because if the same principle were applied to postal matters generally we should have to be going back instead of advancing. With regard to freight, it had been stated that, for every ton of goods delivered by the San Francisco steamers at Auckland, there were nine brought to Sydney. One importer alone had paid £3,600 per annum for freight on green fruit, and it was only reasonable to suppose that the other importers would together pay a like amount, so that there would be an average of over £500 a trip on the freight of green fruit alone. If this contract was carried out, freight would have to remain a full fortnight at Honolulu, which would altogether preclude the shipment of perishable articles. Then again, there was a divided responsibility as to the delivery of goods in a damaged condition. They would not know whether they were to look to the parties who brought the goods to Honolulu, or those who brought them from Honolulu here, or those who had charge of them while they remained at Honolulu.

Captain Broomfield urged that it was the duty of New South Wales to encourage a line for passengers and the safe delivery of letters, in case of a rupture in any other part of the world. America was becoming every day more and more like ourselves. He hoped to live to see the day when America would be joined hand-in-hand with England. It was very important for us that a line should be established through a country that would always remain neutral, so that we could at all times safely convey our mails and passengers by that route. If Auckland were dropped and the steamers went direct three days could be saved, and he was in a position to endorse the statement that it could be done for £20,000 or under. Such a line, if established, would be very little expense indeed.

Captain Ghest pointed out that the transhipment of freight at Honolulu would be very objectionable, causing endless trouble and expense. A direct line would save three days between here and San

Francisco;

Francisco; the time by the train across America was being decreased, and the Atlantic steamers had now made the passage in little over six days. There was no reason why we should not have a mail service by way of San Francisco in thirty-five days at the most. Tourists would not use the proposed line, in view of the transhipment at Honolulu and the uncertainty of what cabins they would be able to get. Besides, the steamers of the Oceanic Company were American-built, and were not so comfortable as those of British build.

Mr. Gillies suggested that, before the contract was signed, there should be sufficient time allowed for the shipping world to compete for this service. It could be easily done with a small subsidy from the Government.

Mr. Hughes, as a large shipper of specie—he had sent £100,000 in sovereigns by the last boat, and would send a similar amount by the next—called attention to the risk caused by the proposed transhipment at Honolulu.

Mr. E. Barton said there were two things necessary in this mail service—one was speed, and the other was the avoidance of breaches in the service. If the time could be reduced to thirty-five days, that would compare favourably with any other line, while it would ensure communication with a country which was every day becoming more intimate with this. There was apparent every day in America a tendency towards the relaxation of their fiscal policy, which would greatly increase the facilities for commercial intercourse between the two countries. It was, then, very desirable that we should secure direct postal communication with America. The service should be as direct as possible and as fast as possible, and the route should be one which in times of foreign complication would be accessible to this country.

Mr. See assured the deputation that he was very glad to see them and to hear their views. He reminded them that these negotiations were conducted before he entered office, and he felt he was bound to carry out what his predecessor had commenced, subject, of course, to the will of Parliament. It would be an act of repudiation on his part were he to refuse to sign the contract, but it would be optional for Parliament to say whether they would accept it or not. He had listened with great attention to the arguments used by the deputation, and some of the points were very good ones indeed. They must remember that the present journey was a series of breaks from San Francisco almost to London. With regard to the passenger accommodation, it was proposed by the conditions of the contract that one-half the passenger accommodation of the Oceanic steamers should be reserved entirely for passengers from Australia and New Zealand, and there was a further provision that more accommodation should be reserved if required. At the same time you booked your berth to Honolulu you booked by the Oceanic line on to San Francisco. He was informed that the Oceanic Company's steamers were very fine boats indeed. He recapitulated the circumstances attendant upon the Californian mail service until the time of the present contract. He assured the deputation that the steamers would only remain twenty-four hours in Auckland, unless by the concurrence of the Government of New South Wales, while they would remain twelve or fourteen days in Sydney, which was the terminal port; and for this we paid £10,000, while New Zealand paid £20,000, so that we only paid one-third of the subsidy, although, as the deputation had stated, nine-tenths of the cargo came here. With regard to the transhipment of goods at Honolulu, there was a stringent provision that all perishable goods were to be shipped at once by the steamer taking the mails. He admitted the advantages of the direct service, but the last estimate submitted to the Government was for £25,000. Any service to be successful must be by way of New Zealand, for the sake of passengers, unless there was some difficulty on the part of New Zealand to prevent it. The service now proposed would only cost this Colony £1,300 net, as against the £20,000 spoken of by the deputation for a direct service. He considered that the gentlemen present, as well as the other deputation, had done their duty in bringing their views before him and before the country, and he was thankful for information from gentlemen of such large experience. He was sorry that, under the circumstances, he could not comply with the request of the deputation to defer the matter, as far as the Government was concerned.

No. 45.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

4 November, 1885.

HAVE signed 'Frisco contract, subject to insertion of words "without transhipment except at Honolulu" after word Honolulu, line 3 of clause 5, and insertion of words "Sydney being terminal port for all such voyages" after word cargo, in line 7 of same clause. I return to you two parts by post, retaining one for use here.

JOHN SEE,
Postmaster-General.

No. 46.

The Secretary, General Post Office, Sydney, to The Secretary, General Post Office, Wellington, N.Z.

4 November, 1885.

Sir,

With reference to the cablegram sent to-day by the Postmaster-General of this Colony to Sir Julius Vogel, I am directed to forward to you two parts of the contract agreement between New South Wales, New Zealand, and the Union Steamship Company, duly executed—the third part having been detained here for the use of this Department.

I have, &c.,
S. H. LAMBTON.

No. 47.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

6 November, 1885.

'FRISCO contract. Union Company written formal letter approving alterations you desire. I also concur. Cable received "Almeda" comes right through, San Francisco to Auckland and Sydney. I have telegraphed

telegraphed Postmaster-General, Washington, as follows :—"Almeda" starts new postal contract from 'Frisco ; send all mails by her, Postmaster-General, New Zealand, and desirable you should send similar cablegram, it will be courteous to do so, for United States is virtually party to contract.

JULIUS VOGEL.

No. 48.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Washington.

7 November, 1885.

"ALMEDA" starts new postal contract from 'Frisco on 21st November. Send all mails by her.

POSTMASTER-GENERAL,
Sydney.

No. 49.

The Secretary, General Post Office, Wellington, N.Z., to The Secretary, General Post Office, Sydney.

Sir, General Post Office, Wellington, 26 October, 1885.

As the steamers "Alameda" and "Mariposa" are comparatively unknown in the Colonies, I have been directed to forward you the following particulars gathered from the List of Merchant Vessels of the United States for 1884, published by the United States Treasury, and also from the reports furnished by one of our mail agents. Both of the steamers were built in 1883 ; they are stated to be of 3,158 tons gross, 1,959 net, and the engines of 3,000 horse-power nominal. The steamers are fitted with the electric light. Each is capable of accommodating 100 saloon passengers, and accommodation is said to be very superior. The cabins are large and elegantly appointed, the berths being fitted with spring mattresses and other modern improvements. Each steamer has a social hall on the upper deck, and it is stated that the saloon accommodation arrangements are similar to those on the "Wairarapa" and "Manapouri." The saloon cabins are on the upper and lower decks, as in the case of the "Australia" and "Zealandia." The nominal speed of the steamers is between 15 and 16 knots. The steamers run between Honolulu and San Francisco regularly in seven days. This is at a speed of 12·5 knots an hour, and they accomplish the distance with ease. The steamers were specially built for the trade they are now engaged in, that is, between San Francisco and Honolulu, and they are in every way suited to carry out that part of the mail service in which it is intended they shall be employed. By the return of the "Zealandia" further particulars, and also drawings of the "Alameda" and "Mariposa," will be received, and copies will be sent you at the earliest opportunity. I have, &c.,

W. GRAY,
Secretary.

Sydney : Thomas Richards, Government Printer.—1885.

[1*s.* 3*d.*]

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MAIL SERVICE BETWEEN SYDNEY AND SAN FRANCISCO.

(NEW CONTRACT—FURTHER PAPERS.)

Ordered by the Legislative Assembly to be printed, 30 *March*, 1886.

SCHEDULE.

NO.		PAGE.
1.	Cablegram from Postmaster-General of New Zealand to Postmaster-General of New South Wales. 4 February, 1886	1
2.	Cablegram from Postmaster-General of New South Wales to Postmaster-General of New Zealand. 23 March, 1886	1
3.	Cablegram from Postmaster-General of New Zealand to Postmaster-General of New South Wales. 26 March, 1886	1

No. 1.

Cablegram from Postmaster-General of New Zealand to Postmaster-General of New South Wales.

4 February, 1886.

UNION Company are willing to alter 'Frisco Contract to permanently do service without break at Honolulu for additional seven thousand pounds yearly. We think break at Honolulu not unsatisfactory, but we will be willing to alter it in deference to what are understood to be the wishes in Sydney. We will pay one-half the seven thousand pounds, or if you think we ought to do so, we will pay the same proportion as for rest of contract money, namely—two-thirds. Very desirable definitely settled matter.

JULIUS VOGEL.

No. 2.

Cablegram from Postmaster-General of New South Wales to Postmaster-General of New Zealand.

23 March, 1886.

THIS Government will pay one-third of sum required by Union Company for carrying on 'Frisco Service without break, as stated in your telegram of February 4th, provided total to be paid by both Colonies does not exceed seven thousand pounds yearly. Think Company may take a lower sum. This arrangement to be subject to approval of Parliament; will submit resolution as soon as I hear from you. Excuse delay in replying to you, change of Government and my illness cause.

F. B. SUTTOR.

No. 3.

Cablegram from Postmaster-General of New Zealand to Postmaster-General of New South Wales.

26 March, 1886.

UNION Company will not take less than seven thousand. Have agreed with them for that sum, beginning with voyage "Mariposa" on way from San Francisco, and including "Alameda's" present voyage. We pay two-thirds, you one-third; agreement subject to approval your Parliament.

JULIUS VOGEL.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

POSTAL CONTRACT—SYDNEY AND SAN FRANCISCO, *VIA* AUCKLAND AND HONOLULU.

(MESSAGE No. 1.)

Ordered by the Legislative Assembly to be printed, 9 *December*, 1885.

ALFRED STEPHEN, *Message No.* 1.
Lieutenant-Governor.

In accordance with the provisions contained in the 54th section of the Constitution Act, the Lieutenant-Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with a contract, dated the 9th October, 1885, between the Postmaster-General of New Zealand and the Postmaster-General of New South Wales on the one part and the Union Steamship Company (Limited) on the other part, for a line of mail communication between Sydney and San Francisco, *via* Auckland and Honolulu.

Government House,
Sydney, 8 *December*, 1885.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

POSTAL COMMUNICATION BETWEEN SYDNEY AND SAN FRANCISCO, *VIA* AUCKLAND AND HONOLULU.

(MESSAGE No. 12.)

Ordered by the Legislative Assembly to be printed, 30 *March*, 1886.

CARRINGTON,
Governor.

Message No. 12.

In accordance with the provisions contained in the 54th section of the Constitution Act, the Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with a contract entered into jointly with New Zealand, with the owners of steamships of not less tonnage than those employed in the late contract with the Pacific Mail Company, for a line of mail communication between Sydney and San Francisco *via* Auckland and Honolulu, Sydney being the terminal port on this side.

Government House,
Sydney, 30 *March*, 1886.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PACIFIC MAIL SERVICE.

(PAPERS.)

Ordered by the Legislative Assembly to be printed, 24 November, 1885.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 29th September, 1885, That there be laid upon the Table of this House,—

"Copies of all papers relating to the present Contract for the Pacific Mail "Service, and the arrangement in reference thereto entered into with the "New Zealand Government in connection with which the Pacific Mail "Company has complained of its being deprived of the contribution agreed "to be paid by the New South Wales Government."

(Mr. Burns.)

SCHEDULE.

NO.		PAGE.
1.	The Postmaster-General, Sydney, to Messrs. Gilchrist, Watt, & Co. 28 August, 1884	3
2.	Copy of clause of the Contract alluded to in foregoing letter, and Resolutions of Parliament	3
3.	Messrs. Gilchrist, Watt, & Co. to the Postmaster-General, Sydney. 28 August, 1884	3
4.	Memorial from Chamber of Commerce of San Francisco to the Colonial Secretary, Sydney. 2 August, 1884	4
5.	The Secretary to the Post Office, Sydney, to the Principal Under Secretary. 3 September, 1884	4
6.	Cablegram from Sir Julius Vogel, Wellington, N.Z., to the Postmaster-General, Sydney, 4 September, 1884	4
7.	Cablegram from the Postmaster-General, Sydney, to the Postmaster-General, Wellington, N.Z. 6 September, 1884	5
8.	The Secretary to the Post Office, Sydney, to the Secretary to the Post Office, Wellington, N.Z. 8 September, 1884	5
9.	The Secretary to the Post Office, Sydney, to the Secretary to the Post Office, Wellington, N.Z. 10 September, 1884	5
10.	Messrs. Gilchrist, Watt, & Co. to the Postmaster-General, Sydney. 11 September, 1884	5
11.	Messrs. Gilchrist, Watt, & Co. to the Postmaster-General, Sydney. 12 September, 1884	5
12.	Minute of the Postmaster-General. 15 September, 1884	5
13.	Minute of the Secretary to the Post Office. 18 September, 1884	6
14.	Minute of the Postmaster-General. 23 September, 1884	6
15.	The Principal Under Secretary to the Secretary to the Post Office. 22 September, 1884	7
16.	The Secretary to the Post Office, Sydney, to Messrs. Gilchrist, Watt, & Co. 27 September, 1884	7
17.	Messrs. Gilchrist, Watt, & Co. to the Postmaster-General, Sydney. 30 September, 1884	7
18.	The Secretary to the Post Office, Sydney, to Messrs. Gilchrist, Watt, & Co. 4 October, 1884	8
19.	Messrs. Gilchrist, Watt, & Co., to the Postmaster-General, Sydney. 6 October, 1884	8
20.	The Secretary to the Post Office, Sydney, to Messrs. Gilchrist, Watt, & Co. 10 October, 1884	8

9—A

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NO. PAGE

21. Cablegram from the Postmaster-General, Sydney, to the Postmaster-General, Wellington, N.Z. 10 October, 1884 8
22. Messrs. Gilchrist, Watt, & Co. to the Postmaster-General, Sydney. 13 October, 1884 8
23. Cablegram from the Postmaster-General, Wellington, N.Z., to the Postmaster-General, Sydney. 13 October, 1884 9
24. Cablegram from the Postmaster-General, Sydney, to the Postmaster-General, Wellington, N.Z. 14 October, 1884 9
25. Messrs. Gilchrist, Watt, & Co. to the Postmaster-General, Sydney. 8 November, 1884 9
26. The Secretary to the Post Office, Sydney, to Messrs. Gilchrist, Watt, & Co. 19 November, 1884 9
27. Cablegram from the Postmaster-General, Wellington, N.Z., to the Postmaster-General, Sydney. 13 November, 1884 9
28. Cablegram from the Postmaster-General, Wellington, N. Z., to the Postmaster-General, Sydney. 28 November, 1884 9
29. Cablegram from the Postmaster-General, Sydney, to the Postmaster-General, Wellington, N. Z. 2 December, 1884 10
30. Cablegram from the Postmaster-General, Wellington, N. Z., to the Postmaster-General, Sydney. 3 December, 1884 10
31. Cablegram from the Postmaster-General, Sydney, to the Postmaster-General, Wellington, N. Z. 3 December, 1884 10
32. Cablegram from the Postmaster-General, Wellington, N. Z., to the Postmaster-General, Sydney. 3 December, 1884 10
33. Cablegram from the Postmaster-General, Sydney, to the Postmaster-General, Wellington, N. Z. 4 December, 1884 10
34. Cablegram from the Postmaster-General, Sydney, to the Postmaster-General, Wellington, N. Z. 5 December, 1884 10
35. Minute of the Postmaster-General, Sydney, addressed to His Excellency the Governor and the Executive Council. 13 December, 1884 10
36. Telegram from the Postmaster-General, Sydney, to the Postmasters-General, Melbourne, Adelaide, Hobart, Perth, and Brisbane. 5 December, 1884 11
37. Messrs. Gilchrist, Watt, & Co. to the Postmaster-General, Sydney. 14 March, 1885 11
38. Minute of the Postmaster-General. 18 March, 1885 11
39. The Secretary to the Post Office, Sydney, to Messrs. Gilchrist, Watt, & Co. 19 March, 1885 12
40. Messrs. Gilchrist, Watt, & Co. to the Postmaster-General, Sydney. 25 March, 1885 12
41. The Postmaster-General, Sydney, to Messrs. Gilchrist, Watt, & Co. 25 March, 1885 12
42. Messrs. Gilchrist, Watt, & Co. to the Postmaster-General, Sydney. 25 March, 1885 12
43. Minute of the Postmaster-General. 26 March, 1885 13
44. The Secretary to the Post Office, Sydney, to Messrs. Gilchrist, Watt, & Co. 26 March, 1885 13
45. Cablegram from the Postmaster-General, Sydney, to the Postmaster-General, Wellington, N. Z. 27 March, 1885 13
46. The Secretary to the Post Office, Sydney, to the Secretary to the Post Office, Wellington, N. Z. 28 March, 1885 13
47. Cablegram from the Postmaster-General, Wellington, N.Z., to the Postmaster-General, Sydney. 30 March, 1885 13
48. The Secretary to the Post Office, Wellington, N.Z., to the Secretary to the Post Office, Sydney. 24 April, 1885 14
49. Messrs. Gilchrist, Watt, & Co. to the Postmaster-General, Sydney. 1 July, 1885 14
50. Messrs. Gilchrist, Watt, & Co. to the Colonial Secretary, Sydney. 22 July, 1885 15
51. Minute of Colonial Secretary. 23 July, 1885 20
52. Minute of Secretary to the Post Office. 27 July, 1885 20
53. Minute of the Postmaster-General. 14 August, 1885 20

PACIFIC MAIL SERVICE.

No. 1.

The Postmaster-General to Messrs. Gilchrist, Watt, & Co.

Gentlemen, General Post Office, Sydney, 28 August, 1884.

With reference to the provision in the Pacific Mail Steam-ship Company's contract for the conveyance of mails between Sydney and San Francisco—that the contractors will endeavour to obtain from the Government of the United States or from other sources a contribution on account of the amounts payable under the contract equal to one-third of the total amount of the subsidy payable for such service, and providing further that, in the event of the contractors not succeeding in obtaining such contribution, it shall be lawful for the Postmaster-General of the Colony of New South Wales to withdraw from the agreement at the end of twelve calendar months from the 29th November, 1883, on giving three months' previous notice of his desire to do so—I have to state that, as no intimation has reached this Department of the contractors having succeeded in obtaining any such contribution as aforesaid, I hereby give the stipulated three months' notice of withdrawal of the Colony of New South Wales from the contract in question.

Will you be good enough to acknowledge the receipt of this letter.

I have, &c.,
JAMES NORTON.

No. 2.

COPY of the clause of the Contract alluded to by the Postmaster-General, in his letter dated 28th August, 1884, to Messrs. Gilchrist, Watt, & Co., and of the Resolutions adopted by Parliament, in April, 1883, in regard thereto.

Copy of clause of Contract:—

15. The contractors will endeavour to obtain from the Government of the United States or from other sources a contribution on account of the amounts payable under this contract for carrying the said mails from Sydney to San Francisco and from San Francisco to Sydney and from Auckland to San Francisco and from San Francisco to Auckland equal to one-third of the total amount of the moneys payable hereunder for such services And it is hereby expressly agreed that if any such contribution shall be obtained as aforesaid the same shall be applied and go in reduction of the payments agreed to be made under this contract and that as between the Postmaster-General of New South Wales and the Postmaster-General of New Zealand such reduction shall be divided equally between them in respect of the payments agreed to be made under this contract And it is hereby also expressly declared and agreed between the several parties hereto that if the contractors shall not succeed in obtaining such contribution as aforesaid it shall be lawful for the Postmaster-General of the Colony of New South Wales to withdraw from this agreement at the end of twelve calendar months from the said twenty-ninth day of November one thousand eight hundred and eighty-three on giving three months previous notice to the contractors of his desire so to do and that the service of such notice upon the contractors shall be deemed and taken to have been sufficiently made if the same is left with the agents for the time being of the said contractors in New South Wales Provided that immediately upon such notice being served on the contractors as aforesaid they shall cause a copy thereof to be forwarded to the Postmaster-General of New Zealand for his information.

Copy of Resolutions:—

(1.) That, subject to the Imperial Government agreeing to continue to convey the mails to San Francisco as heretofore, the contract between the Colonies of New South Wales and New Zealand with the Pacific Mail Company be extended for a period not exceeding two years from the expiry of the present contract in November next, at an annual subsidy not exceeding £50,000, of which the portion falling upon this Colony shall not exceed £18,750, and subject to the following conditions, viz.:—

That it shall be optional for this Colony to withdraw from such extended contract at the end of twelve months, on giving three months' previous notice, in the event of the Pacific Mail Company not having obtained from the United States Government, or from other sources, a contribution equal to one-third of the total annual subsidy for such extended contract, and in diminution of the contribution payable by the contracting Colonies respectively.

That the service shall be performed with the acceleration upon the present contract time of at least twenty-four hours on each voyage to and from Sydney and San Francisco during the first year, and during the second year at least forty-eight hours, subject to the same terms, conditions, premiums, and penalties as heretofore; with this exception—that the Company be relieved from keeping a fourth steamer, but that such shall not absolve them from the penalties for any failure.

(2.) That the foregoing Resolutions be transmitted by Address to His Excellency the Governor.

No. 3.

Messrs. Gilchrist, Watt, & Co., to The Postmaster-General, Sydney.

Sir, Sydney, 28 August, 1884.

We have the honor to acknowledge receipt of your letter, No. B 84–9,519, of this date, giving three months' notice of your withdrawal from the Pacific Mail Contract.

We regret to receive this intimation, but hope some arrangement may be come to before November as will result in the continuation of the service. We have, &c.,

GILCHRIST, WATT, & CO.,
General Agents, Pacific Mail Steamship Co. of New York.

No. 4.

No. 4.

Memorial from the Chamber of Commerce of San Francisco to the Colonial Secretary, Sydney.

Sir, San Francisco, 2 August, 1884.

I have the honor to send you herewith a memorial addressed by this Chamber to the Government of New South Wales, with reference to the continuance of Ocean Mail Service with this country; and would respectfully request that you transmit the memorial to Parliament at the first opportunity.

Very respectfully, &c.,
D. J. STAPLES,
First Vice-President.

Submitted, 1/9/84. The Postmaster-General.—A.S., 2/9/84. The Secretary to the Post Office. B.C., 2 Sept., '84.—C.W.

The Chamber of Commerce of San Francisco.

July 24th, 1884.

To the Honorable the Legislative Council and Legislative Assembly of New South Wales, in Parliament assembled.

The Chamber of Commerce of San Francisco desires respectfully to express its earnest wish that the present Mail Steamship Service with New South Wales may be permanently continued, for the mutual benefit of the communities interested.

This Chamber is well aware that your Government has done more than its share in this respect, and it has been a source of regret to us that the laws of the United States have not permitted special contracts to be made for the carriage of ocean mails. The law has been so changed, however, that such contracts are permissible in the future; and in this view of the case, we can consistently urge the Government of New South Wales to continue the service until the Congress of the United States meets, in December next, when every possible influence will be used to second your efforts on behalf of this important Ocean Mail Service, of so great mutual benefit to the Colony of New South Wales and the Pacific Coast of the United States.

With much respect, and confident of the co-operation of your honorable body,

THE CHAMBER OF COMMERCE OF SAN FRANCISCO.
D. J. Staples, First Vice-President.
Andrew Welch, Second Vice-President.
W. L. Merry, Trustee.
Jacob S. Saber, ,,
J. N. Knowles, ,,
A. P. Elfelt, ,,
H. L. E. Meyer, ,,
C. L. Taylor, ,,
A. Crawford, ,,
J. J. McKinnon, ,,
G. W. McNear, ,,
Eugene de Sablo, ,,
Attest—Morris Marcus, Secretary.

Minute of the Postmaster-General, Sydney, on the Memorial forwarded to the Colonial Secretary by the Chamber of Commerce of San Francisco.

I WOULD suggest that a reply be forwarded to Mr. Staples informing him that, before the receipt of his letter, the Postmaster-General of New South Wales, pursuant to a power contained in the existing mail service contract with the Pacific Mail Company, had given notice of withdrawal from that contract, on the ground that the Company had failed to obtain from the American Government a contribution of one-third of the £50,000 stipulated to be paid yearly by the Colonies of New South Wales and New Zealand, and that it may perhaps be now impossible to continue or renew the service now being carried on, till the end of November. Regret the necessity which has arisen for discontinuing a service which has for many years been the means of fostering the growth of friendly intercourse and commercial relations between New South Wales and the United States of America.

Inform that the document forwarded for presentation to Parliament was unfortunately in such a form that it could not be presented to either Chamber.—J.N., 15/10/84.

The Principal Under-Secretary.—S.H.L., B.C., 16/10/84. Mr. Staples might be informed in terms of the Postmaster-General's minute.—C.W., 20/10/84. Approved.—W.B.D., 23.

No. 5.

The Secretary to the Post Office, Sydney, to The Principal Under Secretary.

Sir, General Post Office, Sydney, 3 September, 1884.

It having been considered expedient to address a letter to Messrs. Gilchrist, Watt, & Co., General Agents for the Pacific Mail Steamship Company of New York, giving three months' notice of the intention of the Postmaster-General of this Colony to withdraw from the San Francisco Mail Contract, I am directed to enclose herewith a copy thereof, as well as a copy of the acknowledgment received from Messrs. Gilchrist, Watt, & Co., and to request that you will be so good as to move the Colonial Secretary to forward the same for the information of the Agent-General.

I am to add that it would be as well to ask Sir Saul Samuel to advise the London Post Office as to the position of this matter, so that the Office may be prepared to receive any instructions that may hereafter be issued in regard to this mail service.

I have, &c.,
S. H. LAMBTON.

No. 6.

Cablegram from Sir Julius Vogel, Wellington, N.Z., to Postmaster-General, Sydney.

Wellington.

WOULD be much obliged by your stating whether you purpose continuing 'Frisco service till November, 1885.

JULIUS VOGEL,
4th September, 1884.

No. 7.

No. 7.

Cablegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

6 September, 1884.

I HAVE given the requisite notice of our withdrawal, on 29th November next, from 'Frisco contract, but this will not prevent me considering any proposal from contractors.

JAMES NORTON.
Postmaster-General.

No. 8.

The Secretary to the Post Office, Sydney, to The Secretary to the Post Office, Wellington, N.Z.

Sir, General Post Office, Sydney, 8 September, 1884.

I am directed to enclose herewith, for the information of your Department, a copy of a letter addressed by the Postmaster-General to Messrs. Gilchrist, Watt, & Coy., General Agents for the Pacific Mail Steamship Company of New York, giving three months' notice of this Colony's withdrawal from the San Francisco contract, as well as a copy of the acknowledgment received from Messrs. Gilchrist, Watt, & Coy.

I have, &c.,
S. H. LAMBTON,
Secretary.

No. 9.

The Secretary to the Post Office, Sydney, to the Secretary to the Post Office, Wellington, N.Z.

10 September, 1884.

REFERRING to telegram of 6th inst, to Sir Julius Vogel,—Mr. Norton now desires to point out that our published time-table expires with the arrivals at Sydney, 24th October, and 'Frisco, 5th November. We having notified withdrawal do not consider necessary to issue another table for our last two trips, namely, from 'Frisco, 25th October; Sydney, 6th November. You may, however, think fit to issue one in your interest, and to instruct London Office accordingly.

No. 10.

Messrs. Gilchrist, Watt, & Co. to The Postmaster-General, Sydney.

Sir, Sydney, 11 September, 1884.

We have the honor to inform you that we are in receipt of a cablegram from the Pacific Mail Steamship Company, New York, requesting us to ascertain from you if the New South Wales Government are willing to pay £13,000 for the unexpired portion of the New Zealand Mail Contract, that is from November, 1884, to November, 1885.

Present annual subsidy for twenty-six trips:—

New South Wales...	£18,750
New Zealand	31,250
	£50,000

£13,000 would be equal to a reduction of £5,750 from the above £18,750.

We will be glad to receive a reply at your convenience, to enable us to cable the Head Office, New York.

We have, &c.,
GILCHRIST, WATT, & CO.,
General Agents,
Pacific Mail S.s. Coy. of New York.

Submitted (two papers)—S.H.L., 13/9/84.

No. 11.

Messrs. Gilchrist, Watt, & Co. to The Postmaster-General, Sydney.

Sir, Sydney, 12 September, 1884.

Our London Office cable us to ascertain what reduction in subsidy would secure the renewal of the Californian Mail Service for three years from November next.

They think for a three years service contractors might be induced to accept £42,000 subsidy instead of the present £50,000, being equal to a reduction of £8,000 per annum.

We will be pleased to learn your views on the matter, and what prospect there is of the above proposal being carried out.

We have, &c.,
GILCHRIST, WATT, & CO.,
General Agents,
Pacific Mail S.S. Coy., New York.

No. 12.

Minute of the Postmaster-General.

San Francisco Mail Service.

THE contract with the Pacific Mail Company was made for two years from 29th November, 1883, at £18,750 per annum, but was terminable by New South Wales at end of first year, if the Company could not obtain from the American Government a subsidy of one-third (£6,250).

I have given notice to terminate the contract, and the Company now asks whether we will agree to continue it to the end of the two years if our liability is reduced to £13,000.

This would make a difference in our favour of £5,750, being only £500 less than the stipulated one-third, and it is almost certain that next year America will come to some definite arrangement with respect to contributing to the cost of this service.

I think we should agree to the Company's proposition, especially as the Peninsular and Oriental Service to Melbourne is terminable at the end of the year 1888, on notice to be given in 1886, and during or before that year it is probable that some general arrangement will be come to between the Australasian Colonies and Great Britain with respect to the principle on which all the Australian services should be carried out.

It is advisable to continue the service if possible, with the view of encouraging and extending our commercial relations with America, and it might become a necessity to us in the not improbable event of a general European war, or of the spread of cholera or other such disease. J.N.

15/9/84.

Cabinet approves, if the contribution from New South Wales cannot be reduced by one-third.—A.S., 15/9/84.

No. 13.

Minute of Secretary to the Post Office.

Report upon offer from Pacific Mail Company of reduced subsidy.

I SUBMIT a statement prepared by the Accountant of this Office showing how the Department would be affected by the acceptance of the offer now made by the Pacific Mail Company, as compared with its position if the Company had succeeded in obtaining contributions from the United States, or other sources, in terms of the 15th clause of the contract.

This statement shows that, by accepting the offer just made, and continuing the service for another year from 29th November, we should give up £2,583 6s. 8d.

The contractors appear to assume that the New Zealand Government is willing to forego its right to one-half of the abatement—a right which it may fairly be assumed it possesses, as the 15th clause before referred to provides that contractors shall endeavour to obtain foreign contributions to the extent of one-third of the whole subsidy of £50,000 a year payable by the two Colonies, and that this one-third shall be divided equally between them. S.H.L.

18/9/84.

MEMORANDUM showing the effect to this Colony of the proposal to reduce the subsidy payable by New South Wales to the Pacific Mail Steamship Company from £18,750 to £13,000 per annum, as compared with the provisions of clause 15 of the Contract of the 3rd June last:—

	£	s.	d.	£	s.	d.
Contract.						
Present annual subsidy	18,750	0	0			
Deduct one-sixth of £50,000, being the N. S. Wales proportion of reduction provided under clause 15 of the contract of the 3rd June, 1884	8,333	6	8			
Subsidy provided by contract	10,416	13	4			
Reduction	.....			8,333	6	8
Present proposal.						
Present annual subsidy payable by New South Wales	18,750	0	0			
Proposed reduced subsidy	13,000	0	0			
Reduction	.....			5,750	0	0
Difference between present proposal and stipulation of contract, and in favour of the latter	.....			2,583	6	8

W.L.C.

17/9/84.

No. 14.

Minute of the Postmaster-General.

San Francisco Mail Service.

I FIND that a mistake was made in my former minute as to the contribution which the Company was to obtain from the American Government, or rather the distribution of same between New South Wales and New Zealand.

The whole subsidy was £50,000, of which New Zealand paid £31,249 9s. 11d., and New South Wales £18,750 0s. 2d. (or a little more than one-third of the entire subsidy).

New South Wales was authorized to terminate the contract at the end of the first year if the Company did not obtain a subsidy from the American Government or other sources of one-third of the entire subsidy (or £16,666 10s.), and if this could be obtained, one-half (amounting to £8,333 5s.), not one-third as before stated, was to be allowed by way of set-off against the New South Wales portion of the subsidy.

The Company now offers to reduce our liability to £13,000, being £2,583 5s. less than the half which we should have obtained if the American Government had agreed to contribute one-third of the whole subsidy.

Formerly America allowed us something on account of our own and English mails carried through her territory, but this allowance has been discontinued.

This sum amounted to £8,000, and was divided equally between New South Wales and New Zealand.

The Company has always received certain allowances for mails despatched from Canada and America (during year ended June 1883 the amount the Company received was over £2,500), and perhaps the Company ought to allow the contracting Colonies the benefit of this allowance.

J.N., 23/9/84.

No. 15.

The Principal Under Secretary to The Secretary to the Post Office.

Sir, Colonial Secretary's Office, Sydney, 22 September, 1884.

In reply to your letter of the 3rd instant, I am directed by the Colonial Secretary to state, for the information of the Postmaster-General, that the Agent-General for this Colony has been duly communicated with regarding the withdrawal of the Colony from the San Francisco Mail Contract.

I have, &c.,
CRITCHETT WALKER,
Principal Under-Secretary.

Read.—S.H.L., 24/9/84.

No. 16.

The Secretary to the Post Office to Messrs. Gilchrist, Watt, & Co.

Gentlemen, General Post Office, Sydney, 27 September, 1884.

I am directed to state that, after very careful consideration by himself and the Cabinet, the Postmaster-General is now able to communicate with you on the subject of the Pacific Mail Contract and the question mentioned in your letter of the 11th instant, whether the New South Wales Government is willing to pay £13,000 for the continuance of the service from March, 1884, till November, 1885.

You are aware that the subsidy agreed to be paid by New South Wales and New Zealand for the performance of this service amounted to £50,000, of which New Zealand was to pay £31,249 9s. 11d., and New South Wales £18,750 0s. 2d. (or a little more than one-third of the entire subsidy), a few shillings of the £50,000 being lost in apportioning the subsidy between the different trips to be performed by the Company's vessels.

The contract, as you are also aware, contains a stipulation that New South Wales might withdraw from it at the end of the first year, on giving the notice which has been lately given to you, unless the Company could procure from the American Government, or from other sources, a contribution of one-third of the whole subsidy; and it was provided that if that contribution could be obtained, the same should be divided *equally* between New South Wales and New Zealand.

The amount, therefore, by which the liability of this Colony would have been reduced if this contribution could have been obtained, would have been £8,333 6s. 8d.; but the Company now offers to reduce our liability by the sum of £5,750 0s. 2d. only, being £2,583 6s. 6d. less than the saving which this Colony would have made if the American contribution could have been obtained.

I am here to point out that, in the case of subsidized mail services, it is unusual for the subsidizing country to allow the contractors to receive from any source any further remuneration than the subsidy agreed upon; but that in the case of the Pacific Mail Company (apparently through some inadvertence or misapprehension) the Company has been allowed to receive from the American Government, on account of mails despatched from Canada and America by this line, certain annual allowances, which the Postmaster-General finds during the year ending June, 1883, amounted to upwards of £2,500, and that being the last date up to which Mr. Norton has obtained full information, it is possible that they may now be receiving even larger sums.

The New South Wales Government regrets that the Company has not succeeded in obtaining from America the expected contribution, because it is anxious to promote friendly and commercial relations with that great country, but it is not prepared to put an end to all further negotiations because the proposed contribution, or rather allowance, now comes from the Company and not from the American Government as stipulated for.

It is thought, however, that the Colony is entitled to some further reduction in the cost of the San Francisco Service than that now offered through you for the consideration of the Government.

The Postmaster-General will therefore be glad if you can see your way to submit some more favourable proposition than that already made; and in the event of the same being what he has every reason to expect it will be, Mr. Norton will be prepared to recommend it for acceptance by his colleagues, who are not at all likely to dissent from whatever may appear to him to be reasonable.

I have, &c.,
S. H. LAMBTON,
Secretary.

No. 17.

Messrs. Gilchrist, Watt, & Co., to The Postmaster-General, Sydney.

Sir, Sydney, 30 September, 1884.

We have the honor to acknowledge receipt of your letter, B 84, of 27th instant, in reply to ours of 11th September, and thank you for the consideration you have kindly given the matter of the Californian Mail Service.

On receipt of your communication we at once advised the Pacific Mail Steamship Company of New York, and urged them to make a further reduction, and thus endeavour to meet your views as far as possible.

We have cable reply, and are now in a position to reduce the amount by £1,250, that is, to ask you to pay £11,750 instead of £13,000, for the unexpired portion of the New Zealand Mail Contract from November, 1884, to November, 1885, and trust this offer will meet with your approval and acceptance.

We would like to communicate your decision as soon as possible to the New Zealand Government, who we presume will not put any difficulties in the way.

We have, &c.,
GILCHRIST, WATT, & CO.,
General Agents, Pacific Mail S.S. Co.

Submitted.—Jas. D., 1/10/84.

No. 18.

The Secretary to the Post Office to Messrs. Gilchrist, Watt, & Co.

Gentlemen, General Post Office, Sydney, 4 October, 1884.

I have the honor, by direction of the Postmaster-General, to acknowledge the receipt of your letter of the 30th September last, agreeing, on behalf of the Pacific Mail Steamship Company, to reduce the subsidy payable by this Colony to the Company on account of the San Francisco Mail Service to the sum of eleven thousand seven hundred and fifty pounds sterling (£11,750) for the second year of the contract.

I am directed by the Postmaster-General to inform you that he will advise the acceptance of your offer, and the withdrawal of the notice to terminate the contract, which was given on the 28th August last, on the understanding that you or the Company will make all necessary arrangements with the Colony of New Zealand.

I have, &c.,
JAS. DALGARNO,
(For Secretary).

No. 19.

Messrs. Gilchrist, Watt, & Co., to The Postmaster-General, Sydney.

Sir, Sydney, 6 October, 1884.

We have the honor to acknowledge receipt of your letter, B. 84–11,376 of 4th instant, and are pleased to learn that you approve of a continuance of the Californian Mail Service for another year from November next, on a subsidy from New South Wales of £11,750 per annum.

We will be glad to receive notification from you of your acceptance of the offer, so that we may be in a position to make any arrangements that may be necessary with the New Zealand Government, and with whom we are now in communication.

It would be very desirable if the new time-table for the mails for the twelve months after November could be prepared in time to forward by outgoing mail on the 9th instant, and we trust you may be able to arrange this.

We will be much obliged if you will kindly send us two copies of the present contract, and a few copies of the new time-table when ready.

We have, &c.,
GILCHRIST, WATT, & CO.
Genl. Agents for the Contrs., San Francisco Mail Service.

I presume Messrs. Gilchrist, Watt, & Co. may be informed at once that their offer is accepted, subject to the concurrence of New Zealand. As to the time-table, so far as we are concerned, it might be continued on the present basis—subject of course to the twenty-four hours acceleration between Sydney and San Francisco, as provided in the contract. The matter of time-table might, however, be entirely left in the hands of the New Zealand Post Office—as that Colony will pay so much larger subsidy than ourselves, and as I apprehend that under the new arrangement we should make use of the service mainly for correspondence between America and this Colony.—S.H.L., 8/10/84.

Approved.—J.N., 9/10/84.

No. 20.

The Secretary to the Post Office, Sydney, to Messrs. Gilchrist, Watt, & Co.

Gentlemen, General Post Office, Sydney, 10 October, 1884.

I am directed to state, in reply to your letter of the 6th instant, that your offer to accept from this Colony a subsidy of £11,750 for the continuance of the San Francisco Mail Service for another year has been accepted, subject to the concurrence of New Zealand, which it is understood you will endeavour to obtain.

As regards the time-table, the Postmaster-General is of opinion that, so far as this Colony is concerned, it might be continued on the present basis, subject of course to the twenty-four hours acceleration for the forthcoming year between Sydney and San Francisco, as provided for in the contract; but Mr. Norton is willing to leave the matter of the arrangement of time-table entirely in the hands of the New Zealand Post Office.

In compliance with your request, I forward two copies of the present contract.

I have, &c.,
S. H. LAMBTON,
Secretary.

No. 21.

The Postmaster-General of New South Wales, to The Postmaster-General of New Zealand.

Sydney, 10 October, 1884.

HAVE agreed with Gilchrist, subject to your concurrence to be obtained by Company, that we contribute £11,750 towards continuance 'Frisco service for another year. If you concur you might issue time-table on present basis, providing of course for the twenty-four hours acceleration, but am willing to leave arrangement of dates with you. Reply.

JAMES NORTON,
Postmaster-General.

No. 22.

Messrs. Gilchrist, Watt, & Co., to The Postmaster-General, Sydney.

Sir, Sydney, 13 October, 1884.

We have the honor to acknowledge receipt of your letter of 10th instant, agreeing to pay £11,750 for the second year's San Francisco Mail Service.

We have communicated with the Postmaster-General of New Zealand regarding a new time-table, and hope soon to be in possession of particulars of it.

We thank you for kindly sending us two copies of the contract, and have the honor to remain, &c.,
GILCHRIST, WATT, & Co.,
General Agents for the Contractors, San Francisco Mail Service.

No. 23.

No. 23.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

Wellington, 13 October, 1884.

'FRISCO contract. We decidedly object to your arranging with contractors. You have withdrawn from the contract, and it is with us you must arrange. Contractors cannot arrange with you; clause 43 of our Post Office Act, 1881, prevents them. We will be willing for the sum you name paid to us to carry your mails if steamers still go to and leave Sydney. It strikes us as unfriendly that you should have thought it right to try and get your subsidy reduced, leaving us full burden.

JULIUS VOGEL.

No. 24.

Telegram from Postmaster-General, Sydney, to Postmaster-General, Wellington, N.Z.

Sydney, 14 October, 1884.

'FRISCO service. You evidently misunderstand our position. After giving notice to terminate contract, Company spontaneously offered to carry out service for second year at reduced rate, and I accepted offer on understanding that they would arrange with you.

JAMES NORTON.

No. 25.

Messrs. Gilchrist, Watt, & Co., to The Postmaster-General, Sydney.

Sir, Sydney, 8 November, 1884.

We have the honor to inform you that we have been in communication with the Honorable the Postmaster-General of New Zealand, and have tried hard to obtain his consent to your cancelling your withdrawal notice, but regret to say without success. The only condition on which New Zealand will give her consent is provided she be allowed by the contractors the same reduction in subsidy as New South Wales, viz., £7,000, and this they are utterly unable to comply with.

Seeing that the contractors cannot get any allowance from the United States Government until after April, 1885, and that therefore five months in the second year must pass before they begin to reap any such benefit, they suggest that under the circumstances, and for the sake of preserving the harmony and good-will hitherto existing between the two Colonies, New South Wales should agree to divide the allowance of £7,000 with New Zealand.

The contractors regret they cannot, without further positive loss to themselves, make any further concession, and hope you will give this proposal your most favourable consideration. In the event of your agreeing to do so, we will endeavour to obtain New Zealand's consent to such an arrangement.

We have, &c.,
GILCHRIST, WATT, & CO.,
General Agents for Pacific Mail S.S. Co.,
New York.

Inform Messrs. G.W. & Co. that I am not aware of any want of harmony between N.Z. and N.S.W., and that I cannot recommend the division of the proposed reduction of £7,000 between N.Z. and N.S.W.—J.N., 17/11/84.

No. 26.

The Secretary, General Post Office, Sydney, to Messrs. Gilchrist, Watt, & Co.

Gentlemen, General Post Office, Sydney, 19 November, 1884.

With reference to your communication of the 8th instant, intimating the result of your negotiations to obtain the concurrence of the Postmaster-General of New Zealand to the withdrawal of the notice of the intention of the Government of this Colony to terminate the San Francisco mail contract, which was given by the Postmaster-General on the 28th August last, in accordance with the provisions of the contract, Mr. Norton desires me to inform you that he is not aware of any want of harmony between this Colony and New Zealand, and cannot recommend that the allowance of £7,000—by which you proposed our liability should be reduced—be divided with New Zealand, as suggested by you.

I have, &c.,
S. H. LAMBTON.

No. 27.

Telegram from Postmaster-General, Wellington, N.Z., to Postmaster-General, Sydney.

Wellington, 13 November, 1884.

CALIFORNIA service. Negotiations with Company failed. We cannot agree to your rejoining, or sending mails without our consent.

JULIUS VOGEL.

Read.—J.N., 13/11/84.

No. 28.

The Postmaster-General, Wellington, N.Z., to The Postmaster-General, Sydney.

28 November, 1884.

WILL you please to give notice to other Colonies to pay us our carriage, San Francisco mails, or would you prefer our giving notice?

JULIUS VOGEL.

As soon as our connection with the contract ceases, notice may be given, as requested by Sir Julius Vogel.—J.N., 28/11/84.

No. 29.

No. 29.

The Postmaster-General, Sydney, to The Postmaster-General, Wellington, N.Z.

2 December, 1884.

THIS Colony's connection with the 'Frisco mail service having ceased, so far as regards mails despatched from Sydney, and not having heard whether the negotiations between the Company and you have resulted in any new arrangement so far as our mails are concerned, we purpose only sending specially marked correspondence for United Kingdom by 'Frisco steamers, but all correspondence for America and intermediate places as heretofore. I presume you will convey this mail matter for same charges as you pay us for Orient line—namely, letters 12s., packets 1s., newspapers 6d. pound.

JAMES NORTON.

No. 30.

The Postmaster-General, Wellington, N.Z., to The Postmaster-General, Sydney.

3 December, 1884.

REPLY to your telegram, you pay no subsidy to Orient steamers; we have to pay heavy subsidy to San Francisco. You get out of payments, leave us full burden, and derive all benefit from terminus of line. We are willing accept payment £7,000 for this year, otherwise decline carry your mails, as we think you have treated us very badly. Reply at once, as prohibition order under Postal Act, 1881, on point of being gazetted.

JULIUS VOGEL.

No. 31.

The Postmaster-General, Sydney, to The Postmaster-General, Wellington, N.Z.

3 December, 1884.

YOU misapprehend our position. Besides postages we pay Orient steamers large subsidy for quick delivery of mails; but as I assume that 'Frisco steamers will come on to Sydney and that we are to retain our own collections and English credits as hitherto, I agree to pay you the £7,000 asked for.

JAMES NORTON.

No. 32.

The Postmaster-General, Wellington, N.Z., to The Postmaster-General, Sydney.

3 December, 1884.

I AGREE to your keeping collections and credits your own mails, but payments of other Colonies to come to us, you making up Victorian payment to original amounts before you agreed to reduce them, or we to claim those amounts from Victoria; in the latter case you to notify same to Victoria; you to pay us seven thousand.

JULIUS VOGEL.

No. 33.

The Postmaster-General, Sydney, to The Postmaster-General, Wellington, N.Z.

4 December, 1884.

HAVE intimated to Victoria that our connection with 'Frisco contract having ceased, we are no longer in a position to provide for carriage of their 'Frisco mails at reduced charges, and that you intend claiming the old rates.

JAMES NORTON.

No. 34.

The Postmaster-General, Sydney, to The Postmaster-General, Wellington, N.Z.

5 December, 1884.

WITH reference to my telegrams, 2nd and 4th instant, will give all Colonies notice to account directly to you in future as regards payments for carriage mails to and from 'Frisco, to take effect with despatch packet from Sydney and from 'Frisco 20th instant. Please advise what time-table you intend to adopt.

JAMES NORTON.

No. 35.

Minute of the Postmaster-General addressed to His Excellency the Governor and the Executive Council.

Recommending that the offer of the New Zealand Government to convey New South Wales mails between Sydney and San Francisco be accepted.

General Post Office, Sydney, 13 December, 1884.

WITH reference to the resolutions (copy herewith) adopted by Parliament in April, 1883, in regard to the renewal of the contract with the Pacific Mail Steamship Company, the contractors not having obtained the contribution alluded to in the first condition attached to such resolutions, it was deemed advisable to give notice on the 28th August last of the withdrawal of this Colony from the contract.

Subsequent negotiations having resulted in an offer being made by the New Zealand Government to convey New South Wales mails between Sydney, Auckland, and San Francisco during another year, *i.e.*, from the 29th November, 1884, to the 29th November, 1885, for the sum of seven thousand pounds (£7,000), I recommend that the offer be accepted.

JAMES NORTON.

The Executive Council advise, under the circumstances herein set forth, that the offer of the New Zealand Government herein specified to carry New South Wales mails between Sydney and San Francisco be accepted.

A. C. BUDGE,
Clerk of the Council.

Minute, 84/57, 23/12/84. Approved.—A.L., 23/12/84. Confirmed, 30/12/84. Submitted with minute for Executive Council, 13 December, 1884.

RESOLUTIONS

RESOLUTIONS adopted by Parliament in April, 1883, in regard to the renewal of the contract with the Pacific Mail Steamship Company.

(1.) That subject to the Imperial Government agreeing to continue to convey the mails to San Francisco as heretofore, the contract between the Colonies of New South Wales and New Zealand with the Pacific Mail Company be extended for a period not exceeding two years from the expiry of the present contract in November next, at an annual subsidy not exceeding £50,000, of which the portion falling upon this Colony shall not exceed £18,750, and subject to the following conditions, viz. :—

That it shall be optional for this Colony to withdraw from such extended contract at the end of twelve months, on giving three months' previous notice, in the event of the Pacific Mail Company not having obtained from the United States Government, or from other sources, a contribution equal to one-third of the total annual subsidy for such extended contract, and in diminution of the contribution payable by the contracting Colonies respectively.

That the service shall be performed with the acceleration upon the present contract time of at least twenty-four hours on each voyage to and from Sydney and San Francisco during the first year, and during the second year at least forty-eight hours, subject to the same terms, conditions, premiums, and penalties as heretofore; with this exception—that the Company be relieved from keeping a fourth steamer, but that such shall not absolve them from the penalties for any failure.

(2.) That the foregoing resolutions be transmitted by address to His Excellency the Governor.

No. 36.

Telegram from Postmaster-General, Sydney, to Postmasters-General, Melbourne, Adelaide, Hobart, Perth (W.A.), and Brisbane.

5 December, 1884.

NEW South Wales having withdrawn from the San Francisco mail contract, I have to request that you will in future account direct to New Zealand Post Office for the carriage of your mails by this route, to take effect with despatch of packet from Sydney on the 4th instant and despatch from San Francisco on 20th instant.

JAMES NORTON.

No. 37.

Messrs. Gilchrist, Watt, & Co. to The Postmaster-General, Sydney.

California Mail Contract.

Sir, Sydney, 14 March, 1885.

Referring to your notice of withdrawal from the contract, and the fact that you have since then continued to receive and despatch the San Francisco mails by our steamers without having, up to the present time, paid us any subsidy thereon, we now enclose statements of account made up for such services, on the basis of £11,750 per annum, being the sum agreed to between us, subject to New Zealand Government giving their consent, but which the latter withholds, and request that you will be good enough to authorize the due payment of same.

The contractors cannot understand on what ground New Zealand expects that they will continue to carry the mails to Sydney and allow *her* to receive the pay from New South Wales therefor. Their obligations to New Zealand are fulfilled, as they understand the contract, at Auckland; and if New Zealand is to reap the benefit of the carriage of the mails between Auckland and Sydney, they will most reluctantly be compelled to decline to handle the Sydney mails at all, for they certainly do not propose to perform that service without being paid for it.

They of course have no desire whatever to be forced into taking this action, but shall assuredly do so if the present arrangement between the two Colonies is persisted in. New York Counsel's opinion is very clear that contractors would be fully justified in declining the Sydney mails, provided contractors properly perform their duty to New Zealand by the carriage of *her* mails under the terms of the contract; that contractors may continue or discontinue their trips from Auckland to Sydney at their own pleasure; that the contractors are at liberty to enter into any new contract with New South Wales, and that that Colony is at liberty to enter into such contract with them, provided the strict and proper performance of this present contract with New Zealand is not interfered with thereby; that whatever compensation New South Wales may pay will inure to the benefit of the Pacific Mail Steamship Company, and that New Zealand will not be entitled to any portion thereof; and that New Zealand has no legal claim for the reduction of the amount stipulated to be paid by her by the contract now in force.

The Pacific Mail Steamship Company still hope that they will receive justice and fair treatment, though they consider the present action of the two Governments is a very poor return for the prompt and satisfactory manner in which the contractors have performed their part of the contract.

We trust you will kindly give this very important matter your favourable consideration, and requesting the favour of a reply at your earliest convenience.

We have, &c.,
GILCHRIST, WATT, & CO.

No. 38.

Minute of the Postmaster-General.

THIS Colony having withdrawn from her contract with the Pacific Mail Company, as she was entitled to do under clause 15, New Zealand offered to convey our mails by the Pacific Company's ships, still under contract with her, for the sum of £7,000 during the last year of the contract; and this offer having been accepted we have continued to forward our mails, though in reduced quantity, and are liable to pay to New Zealand the stipulated amount. I cannot compel the company to carry our mails, and in the event of the company's refusing to do so, can only look to New Zealand to carry out the contract agreed to by her. It is immaterial to this Colony whether we pay New Zealand or the company for carrying our mails, but

but it is evidently useless for us to make any contract with the company without the consent of New Zealand, as that Colony has the power of taking out of any vessel under contract with her all mails shipped without her consent. As we now pay New Zealand for all our mails carried by the company I cannot of course sanction any payments to the company.—J.N., 18/3/85.

Inform accordingly.—J.N., 19/3/85.

No. 39.

The Secretary to the Post Office to Messrs. Gilchrist, Watt, & Co.

Gentlemen, General Post Office, Sydney, 19 March, 1885.

With reference to your communication of the 14th instant, respecting the conveyance of New South Wales mails by the Pacific Mail Steamship Company's vessels since the withdrawal of this Colony from the San Francisco mail contract, I am directed by the Postmaster-General to inform you that an offer was received from the Postmaster-General of New Zealand to convey by the Pacific Mail Steamships under contract to the Government of that Colony mails to and from New South Wales for the sum of £7,000, during the last year of the contract, and accepted. In pursuance of that arrangement this Department has continued to forward and receive mails—although a more limited quantity by way of San Franscisco —and is liable for payment of the stipulated amount to New Zealand, and in the event of the Company declining to receive the mails must only look to the Government of that Colony to fulfil the agreement.

As regards payment for the carriage of these mails, it would be quite immaterial to this Colony whether it were made to the Company or the New Zealand Government, but I am to point out that it would evidently be useless to enter into any contract with the Company without the consent of the New Zealand Government, as mails shipped in any vessels under contract to that Colony, without such consent, could be taken out of such vessels at New Zealand.

In conclusion, I am to state that as payment is now made to the New Zealand Government for all mails conveyed by the Pacific Mail Steamships Mr. Norton cannot sanction any payment to the Company.

I have, &c.,
S. H. LAMBTON,
Secretary.

No. 40.

Messrs. Gilchrist, Watt, & Co. to The Postmaster-General, Sydney.

Sir, Sydney, 25 March, 1885.

We beg to give you notice on behalf of the contractors for the California Mail Service that we protest against the New South Wales mails being put on board California mail steamers unless we are paid the subsidy, £11,750, you agreed to pay us.

We particularly protest against any mail for Auckland, San Fransisco, London, or elsewhere, being put on board the outward-bound California mail steamer "Australia," sailing hence to-morrow, without your paying us for the carriage and conveyance of same, to which we are justly and equitably entitled.

We have, &c.,
GILCHRIST, WATT, & CO.

I have drafted letter in reply to this. Embody all necessary particulars in telegram to P.M.G., New Zealand.—J.N., 25/3/85.

No. 41.

The Postmaster-General, Sydney, to Messrs. Gilchrist, Watt, & Co.

Gentlemen, General Post Office, Sydney, 25 March, 1885.

I have to acknowledge the receipt of your letter of this day's date, protesting against the New South Wales mails being put on board California mail steamers, particularly the "Australia," sailing hence to-morrow, unless you are paid the subsidy of £11,750, and to inquire whether you intend to refuse to carry the mail advertised to be despatched by the "Australia."

If this be the case, I am compelled to inform you that under the postal laws of this Colony I am entitled to place on board any outward-bound vessel any mails which I may think fit to forward, paying a gratuity of one penny for each letter.

As you have thought proper to defer your last communication to so late a period for the apparent purpose of placing my Department under a serious difficulty, in consequence of our having advertised the despatch of a mail by the "Australia" to-morrow, I shall have no alternative but to take advantage of the provision of our law, which I have pointed out.

I may inform you that your action in this matter has entirely destroyed the strong sympathy which I have hitherto felt for your Company under the very difficult circumstances under which it was unexpectedly placed by our withdrawal from the existing contract.

I have, &c.,
JAMES NORTON,
Postmaster-General.

No. 42.

Messrs. Gilchrist, Watt, & Co. to The Postmaster-General, Sydney.

Sir, Sydney, 25 March, 1885.

We have the honor to ackowledge receipt of your letter (B85–3450) of even date, and in reply beg to inform you that we never intended to refuse to carry the mail advertised to be despatched by the "Australia" to-morrow, neither was our last communication sent to you for the apparent purpose of placing your Department under a serious difficulty in consequence of your having advertised the despatch of a mail by the "Australia."

On the contrary, we simply protest against your compelling us to carry a mail free of subsidy, and though we protest against your putting any mails on board we will not refuse to carry such as you may be pleased to put on board.

You

You have evidently misunderstood the meaning of our notice of protest, and we trust you will do us the justice to admit we had no intention whatever of putting your Department in a false position, or in any difficulty, or to any inconvenience, and we further hope that the strong sympathy which you have always felt towards our Company will still continue to be enjoyed by us.

We have, &c.,
GILCHRIST, WATT, & CO.

No. 43.

Minute of the Postmaster-General.

INFORM Gilchrist, Watt, & Co. that we have noted the contents of the above letter, and that I propose to place a mail on board the "Australia" as usual pursuant to the arrangement made with the Postmaster-General, New Zealand. Point out that my offer to pay £11,750 for the remaining year of the contract was only made subject to the concurrence of New Zealand, which they failed to obtain, and that New Zealand having objected to my making any contract with you, I had no other course left open to me than to accept the offer of New Zealand to convey mails by means of the Company's vessels and to pay therefor as in the case of non-contracting colonies. J.N., 26/3/85.

No. 44.

The Secretary to the Post Office to Messrs. Gilchrist, Watt, & Co.

Gentlemen, General Post Office, Sydney, 26 March, 1885.

I am directed to inform you that the Postmaster-General has noted the contents of your letter of yesterday's date, and that it is proposed to place a mail on board the "Australia" as usual, pursuant to the arrangement made with the Postmaster-General, New Zealand.

I am to point out that Mr. Norton's offer to pay £11,750 for the remaining year of the contract was only made subject to the concurrence of New Zealand, which you failed to obtain, and that New Zealand having objected to the Postmaster-General of this Colony making any contract with you, Mr. Norton had no other course left open to him but to accept the offer of New Zealand to convey mails by means of the Company's vessels, and to pay therefor as in the case of non-contracting colonies.

I have, &c.,
S. H. LAMBTON,
Secretary.

No. 45.

Telegram from Postmaster-General of Sydney to The Postmaster-General, Wellington, N.Z.

27 March, 1885.

ON fourteenth, Gilchrist, Watt demanded subsidy of eleven thousand seven fifty per annum as we still used service, and their obligations to you fulfilled at Auckland. If continued they will decline Sydney mails. I replied that we having withdrawn and accepted your offer to convey our mails we would rely on you to carry out agreement. Gilchrist on twenty-fifth protested against taking mails per "Australia" unless paid. I asked whether they intended to refuse, as if so I purposed, under our Act, placing mails on board and paying prescribed gratuity of penny per letter. They replied, did not intend to refuse mails but simply protested. Copy of correspondence will be sent you. I shall be glad to hear your views.

JAMES NORTON.

No. 46.

The Secretary to the Post Office, Sydney, to The Secretary to the Post Office, Wellington, N.Z.

Sir, General Post Office, 28 March, 1885.

With reference to the concluding paragraph of the cablegram of yesterday's date from the Postmaster-General of this Colony to the Postmaster-General of New Zealand respecting the transmission of New South Wales mails by the Pacific Mail Steamship Company's vessels since the withdrawal of this Colony from the contract, I am directed to forward herewith a copy of the correspondence that has taken place between Messrs. Gilchrist, Watt, & Co., the General Agents for the Contractors, and this Department on the subject.

I have, &c.,
S. H. LAMBTON,
Secretary.

[Enclosure: copies of correspondence already printed herein.]

No. 47.

The Postmaster-General, Wellington, N.Z., to The Postmaster-General, Sydney.

30 March, 1885.

Re Gilchrist, Watt's letter. Of course am unable to judge of what your obligations are to the Company, especially as they ask a sum from you not specified in contract, but our view is that ceasing to be a contractor you are one of the Colonies for which under contract we have a right to call on contractors to carry mails.

R. STOUT,
(For Postmaster-General.)

Seen by P.M.G.—S.H.L., 30/3/85. Bring forward about a week before next 'Frisco mail leaves.—S.H.L., 31/3/85. No reply has yet been received from New Zealand to our letter of 28th ultimo, and perhaps no further action need be taken until such reply comes to hand.—S.H.L., 17/4/85. Approved.—J.N., 20/4/85.

No. 48.

The Secretary to the Post Office, Wellington, N.Z., to The Secretary to the Post Office, Sydney.

New Zealand Post and Telegraph Department,
General Post Office, Wellington, 24 April, 1885.

Sir,

I have the honor to acknowledge the receipt of your letter of the 28th ultimo, B. 85–3,466, covering copy of the correspondence exchanged between Messrs. Gilchrist, Watt, & Co., and your Department, on the subject of the transmission of the New South Wales mails by the Pacific Mail Steamship Company's steamers since the withdrawal of your Colony from the San Francisco Mail Service Contract. I am to thank you for the correspondence, which has been perused by the Postmaster-General.

I enclose copy of Mr. Norton's telegram of the 27th ultimo, together with the reply thereto sent by Hon. Mr. Stout on the 30th.

I have, &c.,
W. GRAY,
Secretary.

[Enclosure: copy of telegrams; see Nos. 45 and 47.]

Submitted.—S.H.L., 4/5/85. Read.—J.N., 4/5/85.

No. 49.

Messrs. Gilchrist, Watt, & Co. to The Postmaster-General, Sydney.

Sydney, 1 July, 1885.

Sir,

We are now making an appeal to New Zealand to release New South Wales from her agreement to pay New Zealand for carrying her mails, and allow her to pay to the contractors who do the work the sum of £11,750 agreed on in October last; and in the event of her consenting to do so, we presume New South Wales will then carry out her agreement with the contractors, which New Zealand has hitherto interposed to prevent.

We have, &c.,
GILCHRIST, WATT, & CO.

It will be seen from a statement by the Accountant, submitted herewith, that by the existing arrangements under which we pay £7,000 to New Zealand—retaining our own postages and Imperial credits—the estimated net cost of the San Francisco Service for the current year is only at the rate of about £500 per annum.

If we were to rejoin the contract, as Messrs. Gilchrist, Watt, & Co. propose, on the same terms as formerly—to take effect retrospectively from the date of our withdrawal—the estimated loss would be at the rate of £5,150 a year, though, apparently, there should not be a great difference between paying New Zealand £7,000 and giving up our claim to half the postages of the other Colonies, and paying £11,750 to the contractors—retaining our half of the postages referred to.

Prior to the taking of the Orient contract, our half share of the postages in question amounted to about £3,000 a year; but since the Orient contract was entered into, the other Australian Colonies appear to have made less use of the San Francisco service, and it is estimated that for the current year the half share of the postage from those colonies would not exceed £2,100 a year; and it will moreover be remembered that, in addition to the £11,750, we had, whilst in the contract, to pay half the premiums earned by the Company, and should of course have to do so again if we rejoined.

In 1883, half of these premiums amounted to £2,561; but allowing for the accelerated speed provided for during the remainder of the contract, the half of the premiums to be earned by the Company for the current year, as will be seen by the Accountant's statement, is only estimated at £2,000.—S.H.L., 7/7/85.

MAIL SERVICE *via* SAN FRANCISCO.

Present Arrangement.

	£	s.	d.	£	s.	d.
Dr.						
To Contribution to the Government of New Zealand	...		...	7,000	0	0
Cr.						
By Estimated postages from the United Kingdom	200	0	0			
„ Estimated postages collected in the Colony	6,300	0	0			
				6,500	0	0
Estimated net cost p.a.				£500	0	0

Conditional Arrangement made with Contractors in October last.

	£	s.	d.	£	s.	d.
Dr.						
To Subsidy to the Pacific Mail Steamship Company	11,750	0	0			
„ Half share of premiums and cost of cablegrams (say) ...	2,000	0	0			
				13,750	0	0
Cr.						
By Share of postages from non-contracting Colonies (estimated on last December quarter's returns)	2,100	0	0			
„ Share of postages from the United Kingdom (estimated on correspondence at present sent from thence, namely, specially marked)	200	0	0			
„ Postages collected in the Colony	6,300	0	0			
				8,600	0	0
Estimated net cost p.a.				£5,150	0	0

No. 50.

Messrs. Gilchrist, Watt, & Co. to The Colonial Secretary.

Sir, Sydney, 22 July, 1885.

When we telegraphed to the Pacific Mail Steamship Company, in December last, that New South Wales would not in future pay them any subsidy for conveyance of the mails to and from San Francisco, but would, under pressure of a local Act of New Zealand, pay New Zealand for the work done by the Pacific Mail Steamship Company, they replied, on 10th December:—

> "*Cannot concede right Sydney withdraw this late hour. Will continue service, expecting justice both New Zealand Sydney, according terms agreed.*"

On 3rd June, 1885, we wrote appealing to the sense of justice of New Zealand, and asking the Postmaster-General to release New South Wales from her engagement, made in compliance with New Zealand telegram of 3rd December, and expressing our confidence that on this being done New South Wales would pay the contractors the sum agreed. To this we have no reply; and to an intimation from New York that the Pacific Mail Steamship Company claims the right to submit the matter to arbitration, New Zealand has replied:—

> "*This Colony is fulfilling in terms of its contract with Pacific Mail Steamship Company, and there is therefore nothing about which to arbitrate.*"

Pending an appeal to the sense of justice of New Zealand and to New South Wales, on which the Pacific Mail Steamship Company rely, we have taken no further steps towards arbitration.

We now appeal to you as a party to the contract to endeavour to secure to the contractors what they consider is justly due to them, and we do so with confidence, because your Government arranged the renewal contract in which you yourself took a leading part, and in the resolutions passed through our Assembly in April, 1883; and in these resolutions you and the Parliament had the interests of New Zealand in view as much as those of New South Wales.

The object of the resolutions was threefold:—

1st. A willingness to have for one year the greater proportion of the burden (which, it was supposed, would fall on New Zealand as it had fallen on New South Wales) than the relative value of the service warranted.

2nd. To obtain on behalf of *both Colonies* a contribution from America in relief of their subsidy.

3rd. Failing such contribution being obtained, to re-adjust the subsidy of New South Wales in fairer proportion to the relative value of the service.

New Zealand might if she had chosen made a like stipulation; but the Postmaster-General, in his report for 1883, after quoting at length the New South Wales clause 15 of contract, says, "No such power was sought for by New Zealand."

Your second object was so far attained that Congress, in June, 1884, repealed the Act which compelled foreign-going steamers to carry letters at a nominal rate, and placed a sum of money at the disposal of the Postmaster-General of the United States for distribution among steamers bearing mails.

This was not to come into operation until early in April, when the new Government would be in office; and in the report of the Pacific Mail Steamship Company to their shareholders of 27th May, they say the Postmaster-General has $400,000 at his disposal under this Act, but he had not yet been able to adjust any of the various claims, but they hoped to obtain their fair share, which would be in proportion to the mail matter carried.

This will be considerable as regards New Zealand, but trifling as regards New South Wales, owing to the altered postal arrangements of the two Colonies; but whatever arrangement may be made will not be confined to the present contract, but to any future service; the arrangement, therefore, aided by the New South Wales conditions (in which New Zealand took no part), will permanently benefit New Zealand in a far greater degree than New South Wales.

We need hardly point out to you the very false position in which New South Wales stands in this matter in the eyes of America and England.

New Zealand pays all she agreed to pay under the contract, while New South Wales continues to receive all the benefits of the contract, and then not pay the contractors anything for it. Very few will understand that New South Wales is coerced to pay New Zealand what she had agreed to pay the contractors, and that New Zealand applies the money to reduce her own contribution to the subsidy.

Surely New Zealand will not allow New South Wales to continue in this false position when the matter is clearly understood; for be it remembered all this difficulty has arisen in consequence of a change in the New Zealand Ministry occurring at the very time when it was necessary New South Wales should give her notice, thereby disturbing negotiations at a critical time.

If New Zealand will not do the contractors justice, we are very confident New South Wales will, if you ask Parliament to vote the money; but we would be sorry to see this course rendered necessary, as it would possibly prevent any future co-operation of the two Colonies in similar matters.

The time is drawing very near when the necessary notice to passengers holding lay-over and return tickets must be inserted, unless the contract is to be renewed; and we will be glad to see this question settled and removed from the way of resuming negotiations for a continued service, or for a direct service to this Colony alone, same as New Zealand has lately been in treaty for betwixt New Zealand and San Francisco.

We have, &c.,

GILCHRIST, WATT, & CO.,
General Agents for the Contractors, San Francisco Mail Service.

MEMO. of the present position of claims of the Pacific Mail Steamship Company in respect of contract, furnished by Messrs. Gilchrist, Watt, & Co.

Marginal notes by the Secretary to the Post Office marked "S.H.L.," and by the Postmaster-General marked "J.N."

1. Early in 1883 the question of renewal of contract came to be considered, and negotiations took place with the result that—

2. The Pacific Mail Steamship Company agreed to accept £52,500 for the service to and from Auckland, Sydney, and San Francisco—£32,500 to be paid by New Zealand, and £20,000 by New South Wales.

3. The New Zealand Legislature accordingly authorized the Government to renew the contract for a period not exceeding three years, for £32,500.

4. New South Wales succeeded in obtaining a concession of £2,500 on the sum named, which she shared equally with New Zealand, reducing the contributions to £31,250 and £18,750 respectively.

5. In April, 1883, the New South Wales Parliament accordingly authorized the Government to renew the contract for a period not exceeding two years, for £18,750 per annum. New South Wales to have the option, however, at the end of the first year to withdraw, unless a contribution equal to one-third of the entire subsidy were received from America *or other sources*, such contribution to be divided equally betwixt New Zealand and New South Wales. This condition in favour of New South Wales was duly communicated by New South Wales to New Zealand, and consented to by the latter.

The Postmaster-General of New Zealand, in his report of 1883, after quoting clause 15 of the contract, remarks, "No such power was sought for by New Zealand."

6. In September, 1883, New South Wales prepared a fresh contract containing this condition (clause 15 of the contract), and submitted to the Sydney agents of the Pacific Mail S. S. Company, and they proposed an addition to clause 15, as follows:—

> *Should the Government of New South Wales withdraw from the contract, as before provided, then it shall be optional with the contractors to continue to convey the New Zealand mails alone for such subsidy as may be arranged, terminating the contract at Auckland, but with permission to come on to a port in New South Wales, or to withdraw from the contract altogether.*

New South Wales reserved the clause for the consideration of New Zealand, whom alone it concerned; the draft contract was then submitted to New Zealand. This proviso for the protection of the contractors was struck out by New Zealand, and the proviso as it now stands substituted. The contract so amended *was approved by New Zealand* and ultimately forwarded to New York, where it was signed by the contractors (the Pacific Mail Steamship Company), on the 3rd June, 1884.

And by the Company's representatives in Sydney.—S.H.L.

7. By the contract New Zealand agreed to pay the sum of £31,250 for delivery of the mails at Auckland (clause 11), and to pay immediately on the due delivery of such mail (clause 13); thus the service, so far as New Zealand was concerned (and the contract money only paid for this and no more), began and ended on delivery at Auckland. New Zealand further agreed that New South Wales should pay £18,750 for the service Sydney to San Francisco, calling at Auckland, subject to the reduction or the option reserved by her for the second year.

A comparison of the reports of the Postmasters-General of New Zealand and New South Wales of 1883, the latest which we have received, show that while New South Wales lost £22,276 in that year, New Zealand made a profit of £2,192 9s. 3d. by the contract, excluding the cost of coastal service for the purpose of comparison, as Sydney accounts contain no corresponding debit for cost of distribution of mails on arrival at Sydney.

8. New Zealand made no stipulation on her own behalf for reduction or withdrawal, nor was it necessary, as, in the event of contribution by America, she would receive her full share of the stipulation made by New South Wales, and the contract was yielding her a profit; she had no desire to risk the lapsing of the contract altogether, as would probably have been the case had both Colonies insisted on the option of withdrawal or reduction; had she made such a claim, the addition proposed by the contractors' Sydney agents to clause 15 would have been insisted on, in justice to and for the protection of the contractors.

9. The Pacific Mail Steamship Company therefore considered that the total reduction they might be called upon to make would not exceed proportion of the one-third subsidy, say £8,333 13s. 4d., to New South Wales, and they preferred to take the risk of this for one year rather than disturb the harmonious co-operation of the two Colonies or allow the contract to lapse.

10. The Pacific Mail Steamship Company having refrained from stipulating for the power of abandoning the contract at the end of the first year, because New Zealand had not claimed a similar power to New South Wales, submit that New Zealand was excluded during the remainder of the contract from claiming from the contractors directly any concession on the amount she had agreed to pay, or from seeking indirectly to obtain such a concession at the cost of the contractors.

11. The Pacific Mail Steamship Company were perfectly aware that there were good reasons for the different courses pursued by the two Colonies, as, independently of the financial result of the line to New Zealand, the line had become valueless to New South Wales as a means of communication with Europe, from the establishment of five different mail services every four weeks, while to New Zealand the value of the route was very great (see the Postmaster-General of New Zealand's report of 1883, and repeated speeches in New Zealand *Hansard*.)

12. The contract, when signed in New York, was forwarded to New Zealand by the Pacific Mail Steamship Company, with a request to their agents to ascertain the wishes of the Colonies in regard to the continuation of the service till November, 1885 (see New York telegram, 23rd June, 1884).

13. As regards New Zealand, Mr. Consul Gamble, the Company's Agent at Auckland, in accordance with instructions, advised the Sydney Agents, on the 2nd July, 1884, as follows:—

> "*I referred the matter to the Secretary of the Post Office Department, Wellington, and was able to send you, on the 30th ultimo, the following despatch:—"Have just received copy mail contract. Mail contract renewed by New Zealand to Nov.*, 1885, *expects New South Wales will do the same.*"
>
> "*The new contract has been approved by this Government, and does not leave any option to the Colony of New Zealand nor the Pacific Mail S. S. Company about carrying on the service. It must run until the end of November*, 1885."

This was duly telegraphed to New York.

14. No expression of opinion was received from New South Wales until early in August, when a telegram was sent to New York by the Sydney Agents, the result of a communication with the Postmaster-General, Sydney—

> "*New South Wales Government expects definite substantial subsidy, probably* £16,000"—

being about one-third subsidy referred to in clause 15 of the contract.

15. This concession would have benefited New Zealand equally with New South Wales, and was a friendly attempt on the part of New South Wales to obtain for New Zealand a concession she had not asked for herself (as in the previous case of the concession obtained by New South Wales of £2,500); but it will be noted that such a demand was not warranted by the contract, the evident intent being that the Pacific Mail Steamship Company should receive the full contract money, £50,000, from the Colonies and America, or from the two Colonies, subject only to such reductions as New South Wales, by virtue of clause 15, might be able to induce the contractors to allow her should America not contribute.

16. Before answering this suggestion of New South Wales, the Pacific Mail Company considered it due to New Zealand, as the largest contributor to the subsidy, and in consequence of the conference narrated by Mr. Creichton, 27th April, 1883 (New Zealand Parliamentary paper, 3), to ascertain and consult her wishes should New South Wales give notice; accordingly, on the 8th August, a telegram was sent to the Postmaster-General, Wellington, asking—

> "*Will New Zealand continue 'Frisco Mail Service until November*, 1885, *and on what terms if New South Wales withdraws next November?*"—

to which no reply was received.

Again, on the 22nd August, another telegram was sent to the Postmaster-General, Wellington, as follows:—

> "*Advise us what your Government will pay for direct service ending Auckland*"—

to which no reply has been received.

The message was repeated to the Pacific Mail Company's Agents at Wellington, with a request that they should ascertain the wishes of the Government.

On the 28th August the following reply was received from the Agents (but none from the Postmaster-General to either message):—

> "*No Ministry formed yet. Some time must lapse before anything authoritative ascertainable. Department assumes contractors must continue New Zealand service end November*, 1885, *for her present subsidy, even if Sydney ceases.*"

17. 29th August was the day when New South Wales had to give the notice under clause 15 (or forfeit her right to do so), and she did so on the 25th, in order to preserve her vantage ground in negotiating for a reduction. Prior to this, the Pacific Mail Steamship Company could undoubtedly have arranged with New South Wales, but they let the time go by in courteously waiting an indication of the wishes of New Zealand, whose delay in reply is sufficiently explained by above telegram of 28th August. Even if the Pacific Mail S. S. Company by this delay lost the right to negotiate with New South Wales, should New Zealand in justice to the contractors press against them a delay in arranging under the circumstances named, and aid the notice of *desire to withdraw* as the expected concession from America had not been obtained, put an end to the right to negotiate for a reduction in the subsidy from *other sources.*

It did. See below.—J.N.

The contractors did not consider it did, nor did New South Wales, and to this day New South Wales grants to the contractors all the privileges conceded by clause 25, and, in her telegram of 6th September to New Zealand, advising that she had given notice, the Postmaster-General expressly states this—"*This will not prevent me considering any proposal from contractors.*" And no dissent was expressed by New Zealand until 13th October, after New South Wales had advised that she had arranged with the contractors, subject to the concurrence of New Zealand.

A careful perusal of clause 15, and of the proviso as to notice, at once conveys the idea that the notice of *desire to withdraw* does not necessarily imply withdrawal, but that the desire to withdraw might be met by a concession *from other sources.*

The right of withdrawal is absolute. The question of concession from other sources falls to the ground on N.S.W. withdrawing.—J.N.

The

We cannot refer to the proviso which was struck out.
* This cannot be assumed.—J.N.

The proviso, seeing it was inserted in lieu of an express proviso for the protection of the contractors, must mean that the notice of a desire to withdraw **shall not be conclusive* until the contractors have recognized it by acting on the proviso, which seems designed to leave the matter open for negotiations.

This is a matter between the contractors and their agents.—J.N.
Do J.N.

The proviso was to be acted upon by the contractors, who were entitled to exercise their own discretion in a matter so important, and not by their agents. Notice to the contractors may be left with the agents, but the *contractors* are to send copy, &c.

Do J.N.

When agents are intended to act, they are specially empowered, as in clauses Nos. 13, 33, &c.

The contractors knew of the possibility of withdrawal by N.S.W., and should have instructed their Agents how to act in event of receiving notice of withdrawal.—J.N.

The proviso is not "intimation of the notice of withdrawal shall be given," but "a copy of the notice shall be sent." To make this possible, this notice must first be sent to the contractors in New York, and a copy then sent by them to the Postmaster-General of New Zealand *for his information*, which would entail a lapse of three months ere copy of the notice would reach him, long before which the Pacific Mail S.S. Company had arranged to the satisfaction of New South Wales, so that she no longer had a *desire to withdraw*, and the Postmaster-General of New Zealand had, very soon after the notice was given, viz., on 6th September, received the information from the Postmaster-General of New South Wales.

The proviso was substituted for a provision intended to guard the contractors from being compelled to carry on the service for one portion only of the subsidy.

This is probably correct, but nothing hinges upon it.—J.N.

New Zealand was by no means desirous to allow the contract to come to an end, and was desirous to retain the co-operation of New South Wales in maintaining the contract.

May we not fairly look upon the proviso as a door purposely left open by New Zealand and the contractors (as it indeed proved to be) for the return of New South Wales to the contract.

The Pacific Mail S.S. Company were advised, when New South Wales gave notice of her desire to withdraw, and that, for the reasons stated, no indication of the wishes of New Zealand, in the event of her withdrawal, could be obtained, except that she expected the contract to continue as before, and the contractors then resumed negotiations with New South Wales, suspended while trying to elicit the wishes of New Zealand, in order to induce her to continue in the contract, by a concession from *other sources*, *i.e.*, made by the contractors themselves.

Other sources cannot refer to the contractors.—J.N.

They first offered £5,750, which was declined. On 29th September the Sydney Agents received from Wellington Agents of the Pacific Mail S.S. Company a letter, under date 19th September, thirteen days after the telegram from the Postmaster-General, Sydney, to the Postmaster-General, Wellington, advising his having given the stipulated notice, but plainly intimating his intention of still negotiating with the contractors, from which the following is an extract:—

> "*Referring to our letter of the 28th ultimo, we have now received definite information from the Postmaster-General's Department confirming what was stated in our letter and telegram, that the Government hold that the Company has to continue the New Zealand service at the same subsidy, until it expires in November*, 1885, *notwithstanding the withdrawal of New South Wales*":

This is quite correct.—J.N.

which confirmed the contractors in their opinion that the Postmaster-General of New Zealand concurred in this interpretation of the contract, and that New Zealand only cared that the service should, as regards New Zealand, be carried on efficiently, and that so long as no additional burden was thereby thrown on New Zealand, and that the contractors were perfectly at liberty to arrange with New South Wales for her remaining in the contract, and so avoid the heavy loss her final withdrawal would have caused.

On 30th September, after receipt of the letter referred to, the contractors, by their Sydney Agents, agreed to increase the concessions to New South Wales to £7,000 (something less than she would have received had America contributed one-third); and as they had cause to think this would be acceptable to New South Wales, they wrote on the 2nd October (the first opportunity) to the Wellington Agents requesting them to call on the Postmaster-General and tell him how the negotiations stood and ask his concurrence, which in view of what had passed they never for a moment doubted would be obtained.

On the 10th October the proposal was finally accepted by New South Wales, made with the courtesy usual in official communication, subject to the concurrence of New Zealand* and advised to the Postmaster-General of New Zealand, when for the first time New Zealand expressed her dissent from New South Wales returning to the contract, although no burden of any kind was thereby thrown on New Zealand, and £7,000 was claimed from the contractors as the price of New Zealand's *consent*.

*Messrs. G. W. & Co. omit the following very important words—"which it is understood you will endeavour to obtain."—S.H.L.

These statements are not quite correct.—I know nothing of any claim on contractors by N.Z. for £7,000. N.Z. took up the position that we had withdrawn from contract, and therefore must arrange with them as to the terms on which we could use the service, the £7,000 being the amount subsequently agreed upon.—S.H.L.

The contractors looking upon this demand as contrary to the whole spirit and true intent of the renewed contract, having abstained from reserving to themselves the right of abandoning a contract which for the New Zealand subsidy alone or the subsidy reduced by concessions to both Colonies must be a very unprofitable one, declined to make the concession demanded, and New Zealand thenceforward assumed the exclusive control of the contract, declined to allow Sydney mails to be carried unless New South Wales would pay to New Zealand £7,000, and make over to her the share of payment made by the other Colonies for using the line, amounting in 1883 to £3,459, and by this time from the natural increase in correspondence probably £4,000† or more, thus making together nearly the sum which New South Wales had agreed to pay the contractors, viz., £11,750.

† The increase is very problematical; the quicker service of the Orient Company inducing correspondents to write by that line —J.N.

Former?—J.N.

The

The contractors submit that, however New Zealand might have refused consent to allow New South Wales to resume the premier position in the contract which she had hitherto done, and thus secure the control and the premier position in the contract to herself, she could not in justice refuse consent to the contractors receiving the subsidy which she herself had agreed should be paid for the work done, although reduced under clause fifteen, to which she (New Zealand) was a consenting party.

She could not in common fairness refuse this.—J.N.

New Zealand was enabled to coerce New South Wales by the threatened application of a local Act (see telegrams of 13th October and 3rd December).

The contractors submit that the application of this Act to deprive them of the payment which New Zealand agreed they should receive from New South Wales, although reduced in amount, for doing the work, is unjust as towards the contractors, and that the Act is only made applicable by the course taken by New Zealand herself, in declining to allow New South Wales to contribute to the subsidy payable under the contract by both Colonies, as she had been in the habit of doing, and which had been previously recognized by New Zealand as a compliance with the Act.

American Counsel contend further that the threatened application of the Act implying the power to remove *by force* from an American steamer the sealed mails of the United States would be a violation of international law.

This *may* be right.—J.N.

The contract distinctly limits the power of each of the Postmasters-General of the two Colonies, "so far only as the covenants and agreements hereinafter contained are to be observed as performed by or are applicable to the Governments of the said Colonies respectively," see preamble and throughout the contract.

If, therefore, New South Wales had absolutely withdrawn from the contract, the duty of the contractors ceased at Auckland (clause 11), when immediately on arrival of the mail the money was payable at the Treasury (clause 13), and the steamers might have remained at Auckland had the contractors chosen, or gone to Melbourne or Sydney or wherever else it would pay them to go, until the due date of starting again from Auckland; but the Postmaster-General of New Zealand, by his instructions to the Sydney agents of the contractors, under date 15th January, to the Postmaster-General of Sydney, of same date, to the Secretary of the Post Office, London, of December 15th, and to the Postmaster-General of Victoria and the other Colonies of the 15th December, instructing them to pay New Zealand the sums they had been in the habit of paying New South Wales, and by retaining to her own use contrary to the terms of the contract the one-half of such sums, and by other acts, has exercised the rights of both Governments for which New Zealand agreed by contract that the contractors would be paid £50,000; and as "mutuality is the very essence of a contract," in thus taking on herself all the rights of both Governments, claiming and receiving the profits accruing from work done by the contractors (the Pacific Mail S.S. Company), submit that in justice she has assumed the duties and liabilities of both Governments towards the contractors.

The contract made no provision whatever for what is to be done in the event of New South Wales withdrawing—*evidently such an event was never anticipated*—although the draft contract was a matter of such careful consideration by New Zealand and New South Wales.

Why not? If not anticipated, it would not have been provided for in the contract.—S.H.L.

New Zealand by the mere withdrawal of New South Wales acquired no new rights than she previously possessed, but she has assumed and exercised the rights of both Governments, with the full knowledge of the payments (she had by the contract herself agreed) to be made for the double rights so claimed and exercised.

The contractors have continued the service according to their telegram of 10th December,—"*Cannot concede right Sydney withdraw this late hour; will continue service—expecting justice both New Zealand Sydney according terms agreed.*"

No concession was necessary. Sydney had right to withdraw, and exercised it.—J.N.

The contractors do not claim the full payment of £18,750 which in the absence of any arrangement with New South Wales would have been payable to them, but in justice they limit their claim on New Zealand to the sum they had agreed to accept from New South Wales for the second year, viz., £11,750, nearly the whole of which New Zealand is now, to the prejudice and loss of the contractors, receiving, say £7,000 from New South Wales and about £4,000 from the other Colonies, for work done by the contractors, and retaining it in reduction of the share of the subsidy she had agreed to pay to the contractors, although New Zealand equally with New South Wales had covenanted with the Pacific Mail S.S. Coy., that they should be paid for carrying the New South Wales mails from and to Sydney and San Francisco, as well as for carrying them to and from Auckland and San Francisco, and when arranging for the renewal of the contract "no such power of reduction or withdrawal as New South Wales stipulated for had been sought by New Zealand."

No. 51.

Minute of Colonial Secretary.

THE agents of the Pacific Mail Company have sent me a letter, dated July 22nd, and setting forth certain grievances under which the Company considers it has a right to some relief. Will my honorable colleague the Postmaster-General kindly have the letter and accompanying memorandum of claims investigated or verified and returned, when I will be glad to confer with him on the subject.

23 July, 1885. A.S.

No. 52.

Minute of Secretary to the Post Office, Sydney.

IF the Postmaster-General wishes it, I will deal exhaustively with Mr. Watt's various statements, which, however, contain some inaccuracies—the most material of which I have noted in pencil on the margin of his communication.

It is not clear, however, what purpose would be served by doing this, nor is it by any means clear what Mr. Watt's object is in writing. He can hardly expect us to pay the Company the £11,750, as well as pay New Zealand the £7,000, and the consideration of any proposal for us to pay the former amount must, I apprehend, be preceded by an offer from New Zealand to forego the latter.

The facts of the case are simple, and can be briefly stated. Finding that the San Francisco Service was no longer an absolute necessity to this Colony, and the contractors not having obtained the stipulated contribution of one-third of the total subsidy from other sources, the Government, whilst prepared, as was subsequently shown, to pay a fair amount for the maintenance of communication, did not feel justified in continuing the subsidy of £18,750, and accordingly exercised its undoubted right to withdraw from the service for the final year of the contract. After our notice of withdrawal, the contractors' representative in Sydney strongly urged our continuing the service, and offered to allow £7,000 off our portion of the subsidy for the remaining year, he stating (as was understood from his remarks) that New Zealand's concurrence in this arrangement was certain. The Government accordingly accepted the offer, subject to the concurrence of New Zealand, which the contractors were to endeavour to obtain.

New Zealand did not concur; and on the refusal being notified to this Department negotiations were opened with New Zealand as to the terms on which any American or other mail matter to and from this Colony would be conveyed; the result of these negotiations being that we agreed to pay the sum of £7,000, New Zealand retaining the whole of the postages from other Colonies, instead of half as formerly, we retaining our own postages.

To pay the Company £11,750, as well as pay New Zealand £7,000, would make the service even a more expensive one than formerly, as, whilst *in the contract*, we received one-half of the postages from other Colonies, such half amounting at that time to about £3,000 a year. When parties to the contract we had moreover to pay our share of the premiums earned by the Company, and, it is presumed, that were we, with the concurrence of New Zealand, to pay the Company the £11,750, we should be considered as being again in the contract, and be required again to pay our share of premiums, amounting to about £2,500.

S.H.L.,
27/7/85.

No. 53.

Minute of Postmaster-General, Sydney.

THE object of Messrs. Gilchrist, Watt, and Company in submitting their lengthy memorandum (unsigned and undated) is not apparent on the face of the document.

There are in it some misstatements of no great importance, and a little special pleading.

The contract was a joint one for two years, entered into by New Zealand so far as her mail service was concerned, and by New South Wales so far as affected herself.

New South Wales withdrew, as she had an unquestionable right to do, at the end of the first year, because the United States would not contribute anything towards the service, and after such withdrawal she was out of the contract finally and for ever. The Company might perhaps thereupon have ceased running its vessels beyond New Zealand, but it would not suit it to do this, because (as I understand) the amount of freight and passage-money received by the Company from New South Wales was nearly four times as much as that received from New Zealand. Therefore the vessels still came to Sydney, and the Company proposed to carry our mails for £11,750, to which I agreed, subject to its obtaining the consent of New Zealand. This, however, Sir Julius Vogel refused to give, and complained that our Government had treated him very badly (how I do not know), and threatened that if mails were put on board the Company's vessels he would take them out and land them in New Zealand, which he claimed to have a right to do under some New Zealand statute; but he offered to carry our mails in the Company's vessels for £7,000. I therefore continued to forward the mails as heretofore, for the Company made no objection to carry them. It however afterwards made some demur, but on my pointing out that I had a right, under our Postal Act, to place mails on board any vessel leaving the port, continued to receive and carry them as before.

New South Wales thus by the payment of £7,000 per annum receives all the benefit which she received originally for £18,750, and which she afterwards agreed to pay for at the reduced rate of £11,750. We, however, lose certain contributions amounting to between £3,000 and £4,000 which we used to obtain from other Colonies, and which New Zealand now receives from them.

New South Wales has thus been benefited by this action of New Zealand, but the Company has been compelled to perform for £31,250 the same services which it agreed to perform for £50,000, while at the same time New Zealand, after taking into account the £7,000 received from New South Wales, actually makes a profit out of the service.

The

The New Zealand Parliament has now voted £30,000 for a new service, and tenders have been invited for a four-weekly service of eighteen days between San Francisco and Honolulu and Auckland, and a branch service to an Australian port to be hereafter designated, that is to say, Sydney, if we behave ourselves properly, but otherwise Melbourne.

It is very doubtful whether the Company can afford to undertake the work for the amount voted, but it would be quite willing to make such a contract with us, leaving out New Zealand, for £25,000, towards the payment of which we should probably be able to collect postages to the extent of nearly one half.

In considering this question, it might be advantageous to consider at the same time whether it would not be expedient sooner or later to arrange for a service to Port Moodie, to connect with a railway passing entirely through British territory. Mr. Watt states that this railway being farther north than the present American line must be frequently snowed up; but Mr. Carson Woods, who is very warm on the subject, states that the snow difficulty is entirely imaginary, and that the line is one of the best appointed lines in the world.

J.N.,
14/8/85.

The Principal Under Secretary.—S.H.L., B.C., 14/8/85. Submitted.—17/8/85. The Cabinet.—A.S.

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1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

POSTAL CONTRACT—ORIENT STEAM NAVIGATION COMPANY.

(MESSAGE No. 2.)

Ordered by the Legislative Assembly to be printed, 9 *December*, 1885.

ALFRED STEPHEN, *Message No.* 2.

Lieutenant-Governor.

In accordance with the provisions contained in the 54th section of the Constitution Act, the Lieutenant-Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with the contract with the Orient Steam Navigation Company (Limited), providing for a mail service once a fortnight to and from Sydney and England, sanctioned by this House, on the 25th October, 1883, being extended so as to terminate in February, 1888, concurrently with the contract held by the Government of Victoria with the Peninsular and Oriental Steam Navigation Company.

Government House,
Sydney, 8 *December*, 1885.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

POSTAL CONTRACT WITH THE ORIENT STEAM NAVIGATION COMPANY.

(MESSAGE No. 11.)

Ordered by the Legislative Assembly to be printed, 30 *March*, 1886.

CARRINGTON,
Governor.

Message No. 11.

In accordance with the provisions contained in the 54th section of the Constitution Act, the Governor recommends for the consideration of the Legislative Assembly the expediency of making provision to meet the requisite expenses in connection with the Contract with the Orient Steam Navigation Company (Limited) providing for a Mail Service once a fortnight to and from Sydney and England, sanctioned by this House on the 25th October, 1883, being extended so as to terminate in February, 1888, concurrently with the contract held by the Government of Victoria with the Peninsular and Oriental Steam Navigation Company.

Government House,
Sydney, 27 *March*, 1886.

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MONEY ORDER BRANCHES.

(RETURN OF.)

Ordered by the Legislative Assembly to be printed, 19 *October*, 1886.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 23rd September, 1886, That there be laid upon the Table of this House,—

"A Return showing the non-official Post Offices at which Money Order "Branches are established."

(*Mr. Moore.*)

Adamstown
Berridale
Binda
Black Springs
Blackville
Botany
Bringelly
Bundanoon
Bungonia
Burraga
Cadia
Camden Haven Punt
Canadian Lead
Canterbury
Capertee
Carroll
Charlestown
Clarkson's Crossing
Collector
Colly Blue
Coolac
Coopernook
Corunna
Cow Flat
Cudgegong
Currawang
Dalton
Dandaloo
Dapto
Dundee
Dungaree
East Kempsey
Emu
Eurobodalla
Forest Reefs
Frogmoor
Gerringong
Glebeland
Goonoo Goonoo
Greenhill
Gunbar
Guyong
Hargraves
Harris-street, Pyrmont
Hartley
Hartley Vale
Hawke's Nest
Hexham
Home Rule
Hoskins Town
Hurstville
Ilford
Ironbarks
Jamberoo
Joadja Creek
Jugiong
Kogarah
Lidsdale
Little Hartley
Lochinvar
Lucknow
Luddenham
Macdonaldtown
Mathoura
Meranburn
Michelago
Miller's Forest
Milparinka
Molonglo
Monga
Moonbi
Mount Vincent
Muttama Reef
Nerrigundah
Numba
Oaks
O'Connell
Onebygamba
Peat's Ferry
Prospect Reservoir
Reedy Flat
Shellharbour
Somerton
South Bowenfels
St. Alban's
Stannifer
Summer Island
Tambaroora
Tambar Springs
Tempe
Ten-mile Reef
Tighe's Hill
Tullimbar
Ultimo
Upper Gundaroo
Upper Pyramul
Wallabadah
Wandsworth
Wattle Flat
West Balmain
Willanthry
Willson's Downfall
Wilton
Windeyer
Wollar
Wombat
Woonona
Wyndham

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1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CABLE COMMUNICATION BETWEEN AUSTRALIA AND GREAT BRITAIN.

(REPORT OF SUPERINTENDENT, ELECTRIC TELEGRAPHS, ON REDUCTION OF RATES FOR CABLEGRAMS AND DUPLICATION OF SUBMARINE CABLES.)

Ordered by the Legislative Assembly to be printed, 21 *April,* 1886.

I HAVE carefully considered the proposals made by the Eastern and Eastern Extension Companies for a reduction in cable rates between Great Britain and the Australian Colonies, and have the honor to submit the following report :—

At the Telegraph Conference held at Berlin in August and September, 1885, it was decided, subject to the removal of some slight difficulties, such as a reduction of the transit rates through India, to make a reduction of 2s. per word on cable messages for the public, and 3s. 9d. per word reduction to the Press, also a proportionate rate for the Government, which would have made the rates, from the 1st July next, 8s. 8d. per word to the public and 2s. 8d. per word for the Press, which would have been satisfactory to all concerned; but, in consequence of India refusing to reduce from 7d. to 5d. per word, which even then would be double her own local rate for the conveyance of messages a distance of 650 miles, this was not carried out; and the Eastern Extension Company have from time to time made new proposals to the Colonies, which have been more or less impracticable.

The last proposition appears to me to be the only feasible one they have made—*i.e.*, if the payment of the present subsidy of £32,400 per annum (New South Wales proportion being £12,617) be extended for a period of 6¼ years, they will reduce the rates for public messages to 8s. per word to Adelaide—this would be about 25 per cent. on the present tariff—to secure which I think the contributing Colonies, Victoria, New South Wales, South Australia, and Western Australia, should accept.

There are several proposals for duplicate cables, but they are vague and unsatisfactory. Sir Julius Vogel suggests a cable from Queensland to England, by what route he does not say; another from Perth to Ceylon, and another *via* Mauritius, Natal, and the Cape. Every one of these lines would run into the Eastern Company's systems; for instance, if a line were taken from Cape York or Normanton to Java, Singapore, or Manilla, the whole of the business would be conducted from there by the Eastern and Eastern Extension Companies; and even if it were extended to Hongkong and Shanghai, the messages would be carried from there by the Great Northern Company through Russia, which has a joint purse agreement with the Eastern Company, so the public would fare no better.

A cable from Perth to Ceylon, 3,500 miles, would be a very long lead, and would require an expensive cable, with enormous copper conductivity, to work at anything like speed, and no object would be gained, as the line would only work into the Eastern or Indo-European cables *via* the Persian Gulf, which also work on the joint purse system with the Great Northern, so again the Australian traffic would be entirely at the mercy of the existing Companies.

A line from Western Australia to Mauritius and the Cape is almost too ridiculous to be spoken of, and, even if carried out, the business would share the same fate, as the Eastern Company have the lines on the East Coast of Africa, from the Cape to Natal, Mozambique, Zanzibar, and Aden, also the new line on the West Coast, which, I believe, is to be extended to join the Brazilian cables either at Pernambuco or St. Vincent, so that there is no prospect for an opposition duplication to the existing cables by either of these routes, unless an entirely through course to England could be selected; even then Egypt could not grant a land line from the Red Sea to the Mediterranean, as she receives a subsidy of £7,000 per annum from the Cable Company for exclusive right of transit through that territory.

The only possible way out of the difficulty would be to construct a series of cables from New Zealand to San Francisco or Vancouver's Island. This would necessarily be very expensive and very risky, as the whole of the sections would terminate on coral reefs, which are most destructive to cables. The first section would be from New Zealand to Levuka, Fiji, a distance of 1,239 knots, with an unsurveyed depth of water; the next section would be to Apia, Samoa, 680 knots, also coral formation; thence to Honolulu, 2,404 knots, the only landing being through coral reefs; from Honolulu to San Francisco, 2,197 knots.

 The

The only soundings throughout the route are a few taken by the United States frigate "Tuscarora," which in some places were over 5 miles in depth, so that a cable for these seas must necessarily be an expensive one (and the price quoted in the Agent-General's letter, dated 29th January, 1886, would be quite under my estimates), as it would be impossible to pick up a starved cable in such depths, considering that it would not support its own weight in water while being hauled to the surface.

The cost of this line would be £2,000,000 sterling.

The expenses per annum for working this line properly would be—

Five stations, at £2,000 each	£10,000
Two cable steamers, crew, coal, and repairs	20,000
Sinking fund for renewals and replacing cables within twenty years, at per annum, say	80,000
Interest on capital, at 5 per cent. per annum	100,000
	£210,000

Taking 300,000 words per annum as the probable traffic, at 5s. per word to San Francisco, and 2s. from San Francisco to London, or 7s. per word, and including the cable to New Zealand, making 7s. 6d. per word from Australia to England, 300,000 words at 5s. = £75,000, which would not be sufficient to provide a sinking fund for renewals, without heavy Government subsidies from the Colonies.

Vide Appendix marked A.

Take the probable traffic at 400,000 words per annum, at 5s. per word to San Francisco, £100,000, which is not sufficient to cover working expenses and renewals.

I believe Mr. Audley Coote's proposal at one time was to convey messages from Australia to London for 5s. per word, *via* San Francisco; this would leave 3s. per word for the Pacific cables, and allow 2s. for transit from San Francisco to London.

The whole traffic for the year 1885 from and to Australia was 556,660 words, which at 3s. per word would give a return of only £83,499 per annum, which would not provide sufficient for renewals and replacing cables in twenty years.

The routes suggested by Sir Julius Vogel are scarcely worth further analysis; but to show how impracticable they are, even as regards tariffs, and how impossible it would be to reduce the rates by adopting either of them, I will quote the rates now charged from the terminals of these proposed cables.

A cable from Queensland would have to connect with the Eastern Extension Company's system either at Manilla or Singapore.

The present rate per word.

	s.	d.	
Manilla to London	10	0	per word.
Singapore to London...	6	5	,,
or if extended to Shanghai to connect the Great Northern lines, through Siberia, the rate from Shanghai is ...	8	4	,,
From Queensland to Point de Galle—the rate from Point de Galle to London	4	10	,,
From Queensland to Java—Batavia to London	6	10	,,
From Perth to Ceylon—Ceylon to London...	4	10	,,
Western Australia to Mauritius, thence to Natal—Tariff, Natal to London	8	9	,,
and even if this line were extended along the west coast of Africa to Pernambuco—Pernambuco to London ...	9	0	,,
St. Vincent to London	4	0	,,

So that if these lines were constructed as proposed by Sir Julius Vogel there could be no possible reduction in rates on the Australian business.

I am sure the public will be better served by accepting the proposal for an extension of the subsidy, than by paying a syndicate a large sum annually for procuring nothing more than the Colonial Governments interested can secure by negotiating direct with the Cable Companies, with the additional advantage that they (the Governments) can raise the money necessary at a less rate than the syndicates; but I do not advise this Government to undertake the working or management of any submarine cable, neither would the gentlemen offering their services take any risk or responsibility after they have raised the money, laid the cables, and taken their proportion of the profits.

This Colony is now paying an annual subsidy of £12,617 for cables, which will extend over a period of thirteen and three-quarter years yet to run, and I do not consider that it is necessary or wise to increase our expenditure in that direction—the Colonies are very well served; and, without very considerable additional subsidies, as I have already shown, no sweeping reduction of rates can be secured. If the non-contributing Colonies, New Zealand and Queensland, are so anxious for new routes and new cables, why do they not take up the offers of the syndicates themselves?

Queensland has been offered a duplicate cable from Normanton to the Roper, free of expense and without extra tariff, and South Australia, I have been informed, is willing to construct a land line to connect the Roper River with Port Darwin, so that a complete duplication of the international system would be ensured; but, for some unexplained reason, the Government of the former Colony has refused this gift, which would cost the Company £70,000, although their cablegrams would come to them direct, instead of going round by Adelaide and Sydney, which must cause them very great inconvenience and delay, and debars the southern Colonies the advantage they would otherwise gain by having an alternative route in the event of interruptions on the overland line to Port Darwin. I am sure that this matter could not have been seriously considered by the Queensland Government, or they would have allowed the end of a cable to be landed on their shores in the Gulf of Carpentaria, for the benefit of their own commerce and that of their neighbours.

I quite concur in the Agent-General's remarks, in his despatch dated 29th January, 1886, *re* the extension of the term for the payment of the subsidy, and do not consider that any better course can be adopted to ensure the maximum reduction in rates at the minimum expense to the Colony. We are now bound

bound to an annual subsidy for thirteen and three-quarter years, and we should certainly not increase our liabilities by encouraging syndicates to undertake new works, with doubtful results, and which are not absolutely required.

In reference to the Agent-General's despatch, dated 12th February last, I do not think the reduction of 1s. 4d. per word to the public from 1st July is worth consideration, as it will be too small a concession to make any visible increase in the number of words sent, and will not be appreciated by the mercantile community.

It is also clear that the whole of the Colonies will not agree to contribute anything to the duplication subsidy on the Darwin-Singapore cables, Queensland and New Zealand having already refused to join.

As regards the 2s. 8d. per word for the Press, which is to take effect at once, if the Colonies agree that the non-contributing Colonies should share in the concession, there can be no objection to this, as neither Queensland nor New Zealand get their Press messages direct; they are either compiled in Sydney or Melbourne.

Sydney, New South Wales, 31/3/86.

E. C. CRACKNELL,
Superintendent, Electric Telegraphs.

A.

STATEMENT showing the proportions payable per annum by the Australasian Colonies in order to recoup, so as to cover the following expenses, viz. :—

Maintenance of five stations, at £2,000 each per annum	£10,000
Do two cable steamers, at £10,000 each per annum ...	20,000
Sinking fund for renewals and replacing cables	80,000
Interest on cost of cable (£2,000,000), at 5 per cent.	100,000
Total	£210,000

Calculated on basis of Population at 3rd April, 1881.

Colony.	Population at 3rd April, 1881.	Proportion payable on business—300,000 words at 5s. Deficiency, £135,000.	Proportion payable on business—400,000 words at 5s. Deficiency, £110,000.	Proportion payable on business—556,660 words at 3s. Deficiency, £126,501.
		£ s. d.	£ s. d.	£ s. d.
Victoria	882,232	42,031 13 9	34,248 0 10	39,385 11 2
New South Wales	781,265	37,221 7 5	30,328 10 6	34,878 1 7
South Australia	293,297	13,973 7 8	11,385 14 5	13,093 13 8
Western Australia	30,013	1,429 17 10	1,165 1 11	1,339 17 6
New Zealand	500,910	23,864 11 6	19,445 4 2	22,362 3 4
Queensland	226,968	10,813 6 2	8,810 16 11	10,132 11 0
Tasmania	118,923	5,665 15 8	4,616 11 3	5,309 1 9
	2,833,608	135,000 0 0	110,000 0 0	126,501 0 0

B.

STATEMENT showing the proportion payable per annum by the undermentioned Colonies in order to recoup, so as to cover the following expenses :—

Maintenance of five stations, at £2,000 each per annum	£10,000
Maintenance of two cable steamers, at £10,000 each per annum ...	20,000
Sinking fund for renewals and replacing cables	80,000
Interest on cost of cable (£2,000,000) at 5 per cent.	100,000
Total	£210,000

Calculated on basis of Population at 3rd April, 1881.

Colony.	Population at 3rd April, 1881.	Proportion payable on business—300,000 words at 5s.—gives £75,000. Deficiency, £135,000.	Proportion payable on business—400,000 words at 5s.—gives £100,000. Deficiency, £110,000.	Proportion payable on business—556,660 words at 3s.—gives £83,499. Deficiency, £126,501.
		£ s. d.	£ s. d.	£ s. d.
New Zealand	500,910	79,856 16 9	65,068 10 8	74,829 8 1
Queensland	226,968	36,184 0 9	29,483 5 10	33,906 1 1
Tasmania	118,923	18,959 2 6	15,448 3 6	17,765 10 10
	846,801	135,000 0 0	110,000 0 0	126,501 0 0

[3d.]

Sydney: Thomas Richards, Government Printer.—1886.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

GOVERNMENT CABLEGRAMS.

(AMOUNTS PAID FOR, IN EACH YEAR, FROM 1880 TO 1885 INCLUSIVE.)

Ordered by the Legislative Assembly to be printed, 8 *June*, 1886.

RETURN to an *Order* of the Legislative Assembly, dated 25 March, 1886, That there be laid upon the Table of this House, a Return showing,—

"The amounts paid in each year for the transmission of cablegrams to and "from the Government and the Agent-General, from 1880 to 1885, "inclusive."

(Mr. Neild.)

RETURN showing the Amounts paid in each year for the transmission of Cablegrams to and from the Government and the Agent-General, from 1880 to 1885, inclusive.

	From the Government to the Agent-General.			From the Agent-General to the Government.		
	£	s.	d.	£	s.	d.
1880	398	3	4	1,144	0	0
1881	801	15	5	1,295	6	10
1882	304	19	2	1,063	3	2
1883	1,558	4	8	1,718	15	0
1884	1,077	7	6	1,539	15	2
1885	867	19	7	3,847	18	6

The Treasury, Account Branch,
5th June, 1886.

J. PEARSON,
Accountant.

[3*d*.] 559—

[905 copies—Approximate Cost of Printing (labour and material), £1 7s. 0d.]

1885-6.

NEW SOUTH WALES.

ELECTRIC TELEGRAPHS.

(AMENDED RULES AND REGULATIONS.)

Presented to Parliament, pursuant to Act 20 Vic. No. 41, sec. 6.

General Post Office,
Sydney, 4th January, 1886.

In accordance with the provisions of the 6th section of the Electric Telegraph Act, His Excellency the Governor, with the advice of the Executive Council, has approved of the following amended Rules and Regulations for the observance of Officers and others engaged in conducting and working the Lines of Electric Telegraph in New South Wales.

DANIEL O'CONNOR.

Each Station-master or Operator in charge of an Office will be held responsible for the efficient performance of the several duties, in conformity with the following Regulations :—

2. Every Officer and Messenger must be in attendance not later than 8·30 A.M., or he will be fined for every fifteen (15) minutes he is absent after this time.

3. No contention for circuit to be tolerated, nor will any Operator be allowed to break circuit when any two Stations are communicating, unless intelligence of the utmost importance is to be transmitted, when the signal 8 will be given, and circuit immediately allowed the station so signalling; but any Operator signalling 8 without having urgent business to transmit will be fined for interrupting the business of the Line.

4. Calling—The call for the Station required must be given three times, followed by the signature of the Station calling. No Station will be called more than twelve times, after which it will be passed, as not in attendance, and noted in the Line Journal.

5. Great care must be exercised in making use of the abbreviation signal "1," or "wait," not to allow the key to remain "open" on that or any other ground, for at farthest a longer period than *half-a-minute*. This rule it is expected will be strictly adhered to, in order to avoid retarding business on the Line.

6. Officers are requested to observe the utmost civility towards each other. Quarrelling, obscene language, or asperity of temper is strictly prohibited. Complaints of this nature to be forwarded by post to Superintendent, with tape, time, and date.

7. The utmost celerity must be used in the transmission and receipt of Messages; also, the delivery of the same. All Messages to be carefully acknowledged by Receiver, stating number of each lot received. Conciseness must be observed in all communications passing between Operators, and every effort used to economise time. No gossiping or idle conversation will be tolerated during business hours.

8. The greatest care must be used to ensure correctness of all Messages passing through the instrument. Marks, quotation of prices, should be sent both in letters and in figures, and the Operator receiving must transfer the Message in his own handwriting.

9. The attention of Officers is particularly directed to the Telegraph Act, clause No. 9:—"Every Officer, Clerk, or other person employed in working any Line, who shall divulge the contents or substance of any private or secret despatch, message, or other communication, transmitted or intended to be transmitted by any such Line, shall, on conviction before any two Justices, be liable for every such offence to a fine not exceeding one hundred pounds (£100), or be imprisoned, with or without hard labour, for any period not exceeding six (6) months," and all Officers upon entering the service must make a statutory declaration in terms of Appendix "A."

10. Station-masters, during business hours, to watch their instruments closely, and to be in constant attendance, and ready at any moment to answer their call. Should circuit cease for more than ten minutes, the Station-master's duty is to report the same to Stations on the other side of him, to test and examine all Office connections (see fig. 1), and, in thirty minutes, to send out the Line Repairer, with instructions to examine the Line with care, to remove all scrub, cobwebs, or any other impediment to its efficient working—not merely to repair the break, but to perform all necessary details as he returns, after giving circuit.

11. Daniels' local batteries to be properly cleaned and renewed every Monday morning. Main batteries to be made up afresh, according to directions in Appendix "B." The battery can be renewed by cutting out five cells at the time with a piece of gutta-percha wire, and can be done without interrupting the Line for a moment.

12. All Office connections to be kept bright and clean, and all joints in wire to be well *soldered*. All these connections should, when possible, be in sight, so that any fault can be detected at a glance. The batteries for two or more wires must be separated as much as possible, and insulated from the ground.

13. As considerable delay has occurred to cross messages, received in Sydney, at 8 p.m., for Stations on Lines not in the same circuit, it will be necessary for all Station-masters to remain in their Offices till 8·15 p.m., so that all business can be transmitted the same night, and no Station will be considered closed until Sydney has received the signal S.F.N., and replied by the signal G.N., Sy.

14. No person is to be allowed access to the instruments, or to be admitted into the Telegraph Offices, who is not actually on telegraph duty, without the special permission of the Superintendent of Telegraphs. Inattention to this rule will insure the dismissal of the officer disregarding it.

15. Time signals to be sent from the Chief Office, Sydney, daily (Sundays excepted), at 1 p.m., when all country stations will carefully adjust their office clocks to agree with the time signal.

16. All telegrams with obliterated stamps attached and statement of business properly checked and certified by Station-master, to be posted at the close of each day to Continental Clerk, Chief Telegraph Office, Sydney. Cash collections for International Cablegrams are to be remitted (when practicable), by bank draft, or money order in favour of Superintendent of Telegraphs as early as possible.

17. Application for stamps must be made to the Superintendent, accompanied by bank draft, money order, or other remittance in full for quantity required, Such application to be made in time so that the stamps may be received before reserve is exhausted.

Stamp System.

1. The charges on telegrams *are to be prepaid by stamps*, and the public will be required to affix them to the message form just as they are required to affix them to letters. No "collect" messages will be accepted unless in answer to a "reply paid" or press.

2. Stamps are to be sold by the officers who may receive the telegrams, and are to be cancelled with an obliterating stamp. Combined offices will use their P.O. date stamp for this purpose.

3. The telegrams are to be numbered *consecutively* when received fordespatch.

4. All telegrams are to be entered when received on the Daily Statement, which statement, signed by the officer in charge, and the *original telegrams*, are to be forwarded to the Continental Clerk, Chief Office, *at the close of each day's business.*

5. In cases of prepaid messages, the issuing station must be advised of the amount deposited, thus : "Reply paid, 1s." Such reply must not exceed the amount deposited unless the deficiency is paid by the person sending the reply.

6. In cases of telegrams payable on delivery, the original telegrams are also to be forwarded, as a check on the receiving office, but the value in stamps is to be affixed by the office collecting the charge to a message form, with a reference to the original message, thus :—

"Collect Message."

"Brown, Goulburn, to Jones, Wagga Wagga, 1s."

In large offices such collect messages may be entered on a Daily Statement, headed "Collect Messages," and the total value in stamps *affixed to the statement.*

7. Telegrams, after transmission, are to be initialled by the Operator and returned to the Receiving Clerk, who will examine them to see that the despatch has been noted and tick them off with his list.

In small offices where there may be no officers whose special duty it may be to receive telegrams, the Station-masters (or officers in charge) are enjoined to exercise great care in the despatch of telegrams. In every instance the Operator despatching a telegram must initial the form, and the officer in charge will be held personally responsible for its despatch.

8. Telegrams will be available for inspection by the sender or receiver, or a copy thereof made during a period of two years from the date of transmission, on payment of a search fee of 2s. 6d.

Station-masters (or officers in charge) are to forward requests for production, &c., of such telegrams to the Chief Office, with a reference to the date of transmission, and the name and address of the sender.

All business to be entered in station-book as hitherto.

Duties of Line Repairers.

There is no division of the service more important than the proper inspection and repair of the Line. Unless thoroughly restored when out of repair, defective working will necessarily result, which may take months to discover ; and no Line Repairer should be retained a day in the service if found careless in the performance of his duties and inattentive to the instructions for his guidance. Line Repairers should possess a knowledge of the science of electric currents, conductors, non-conductors, &c., to enable them to detect a fault which otherwise might escape them ; but, as a rule, nothing should be in contact with the line, whether conductor or non-conductor, which can by any possibility convey the current to the earth, either directly or by touching the poles ; pieces of string, rag, kite-tails, and paper, which are perfectly harmless in dry weather will, during rain, convey so much of the current to earth that it will seriously interfere with the effective working of the telegraph ; in addition to this the wire should never be allowed to touch a pole, nor a broken insulator to remain unrepaired. The duties of Line Repairers may be summed up under the following heads :—

1st.—To maintain a continuous metallic conductor.

2nd.—To remove from the wire all foreign conductors, whether metallic or otherwise.

3rd.—To preserve thorough insulation of the wire.

4th.—To secure the permanency of poles, and to have them replaced before an actual interruption occurs.

Instructions to Line Repairers.

Line Repairers will be under the immediate direction of the Station-master, who will instruct them when to inspect their sections and to perform other necessary work on the Line.

Each Line Repairer in receipt of forage allowance will keep a suitable horse, for the speedy inspection of the Line. He will also keep his saddle-bags, furnished with the following tools, always in readiness : Blocks complete, stirrups for climbing, hand-vyce, pliers, files, binding wire, main wire, splicer, tomahawk with belt, small hammer, few nails, spare insulators, pins, and any other little matter he may find requisite for the particular requirements of his section.

On receipt of the order from the Station-master to start, not a moment must be lost, and a speed *not less* than from 6 to 7 miles an hour should be maintained till the cause of interruption is discovered ; a temporary joint then should be made with as little delay as possible, and the Repairer will then continue to the end of his section. On his return he must *thoroughly and faithfully* put the Line in complete working order, by replacing broken insulators, lifting those which are resting on the poles, cutting down the underwood and scrub, tightening the wires where too great a deflection, and removing all impediments likely to carry off the current or in any way interfere with the perfect working of the Line. On his return, he will report to the Station-master, for the information of the Superintendent.

Previous to despatching a Line Repairer to effect repairs the officer in charge of the station must first make a special examination of all the wires, batteries, instruments, metallic contacts, &c., within his office, and thoroughly test the same for insulation and continuity, or for a fault of any description. Neglect of this precaution will render him liable for the amount of the lineman's expenses, in the event or the fault subsequently appearing to have been within the precincts of the station. It is, therefore, to be clearly understood that in any instance where an officer in charge of a station may, through neglect or oversight in failing to thoroughly examine and test all the connections, earth contacts, &c., in his office, at the time of an apparent interruption to the communication, cause expenditure to be incurred by the Department through despatching a Line Repairer along the line, the officer guilty of such negligence or oversight will be held fully responsible for all expenses on account of the same, and the amount will be deducted from the first payment next thereafter made to him for salary.

Reports of interruption to any portion of the communication are to be forwarded by telegraph to the Superintendent by officers in charge of stations adjacent to and on both sides of the break ; where necessary, detailed reports with reference to the cause of interruption or delay in effecting repairs, conveying full information on the subject generally, are to be conveyed by post to the Superintendent.

In cases where an interruption may have been occasioned through carelessness or wilful negligence on the part of any one, it will be the duty of the officer in charge of the section immediately to notify the police.

Instructions for making joints.

Should the wire be broken between two poles in such a manner that it cannot be tightened sufficiently, it should be lifted off two or more poles on either side of the break and pulled up as tight as possible with the tackle ; when the ends are brought together the end of the fall should be made fast, the hand-vyce screwed diagonally on the two ends of the wire, which must be brought close together and parallel to each other ; one end is then taken and bent at right angles to the line—the splicer is then applied, the end of the wire being fixed into a hole for that purpose, and a twisted joint is then made, care being taken that the twists or turns are close together (See fig 2.) One end being finished, the hand-vyce is placed in the opposite direction, and the other end is twisted in the same manner. The ends are then filed and broken off, the blocks slacked out, and the joint is finished, and all that remains is to replace the line on the poles. It is better to brighten the wire a little before making this kind of joint. When two or more wires are on the same poles the wire should be strained extra tight.

Instructions for fixing Wires in Hollows.

It frequently happens that the insulators and pins are lifted from the poles and brackets when the poles are placed in hollows, or where the surface is uneven. This can be overcome by splitting the pin, say an inch at the top and bottom, and inserting a small wedge, say three-quarters of an inch; the insulators should then be driven on with a little cement; the wedge is then driven home; the split part of the pin is thereby expanded, and the insulator is firmly secured. The same plan answers very well for keeping the pins in the brackets and tops of the poles.

Care must also be taken when two or more wires are arranged on the same poles, that they are both of equal tension, and not less than a foot apart. If in any place they are so loose that by any chance they can be made to touch each other, they must be tightened. All rusty or imperfect joints must be cut out and perfect twisted ones made in their stead,

All leading-in wires should be brought neatly into a station, and in parallel lines, and all joints properly soldered and carried quite free from walls. In fact the wires, although coated with gutta-percha, should touch nothing but an insulated body, as the surface of the gutta-percha when wet is a conductor. In addition to the foregoing it will also be the duty of Line Repairers when not actually engaged inspecting the Lines, to assist the Station-master in the office, to renew the Batteries, and where no messengers are provided, to keep the Office in Order, and deliver Messages.

An Inspector from the Chief Office will at intervals visit portions of Lines not found to work satisfactorily, and if faults are discovered which are due to the negligence of the Repairers on that particular section, the expenses of such special inspection will be charged to the Officer or Officers entrusted with its supervision.

Messengers.

Care must be taken to ascertain that the Messengers employed perform their several duties in a trustworthy and satisfactory manner; and in the event of repeated carelessness or inattention, a report of the circumstances to be at once forwarded to the Superintendent for immediate action, as so much depends upon the faithfulness and activity of Messengers, in connection with the business of the Telegraph, that any dereliction of duty on their part is apt to bring discredit upon the whole.

Messengers are not, under any circumstances, to collect charges on a telegram, unless the amount to be collected may first have been plainly written on the envelope, and initialled by the despatching clerk; no more than the amount so written is to be collected, nor are messengers to alter or make additions to endorsements on telegrams entrusted to them for delivery. Entries of the particulars relating to such expenditure and collection are to be made in the delivery books.

General Rules.

Lightning arresters must be *frequently* examined, particularly during the summer season (between the months of October and March inclusively) in each year. The discharge plates should be kept evenly adjusted, the space between the "earthplate" to be no wider than will allow of a piece of thin writing paper being passed freely through.

Old zinc, copper, and "copper deposit" must be preserved, and when a quantity of about 50 lbs. weight may have accumulated it is to be forwarded to the Chief Office, Sydney.

At stations where two or more operators are engaged, the meal hours *must* be so arranged that no more than half the force of the office shall be absent therefrom at any one time.

Managers and Operators in charge of offices are not to allow blank "receiving forms" or "telegram envelopes" to be removed from or taken out of the office *under any pretence whatever*. The only blank forms to be issued from the office for the use of the public are the ordinary "tranmission forms."

Managers, Operators in charge of offices, and others engaged in the department are requested to become familiar with these instructions and rules, and to observe them strictly; marked or repeated disregard thereof will certainly result in the removal of the person so offending from this service.

It is hoped that every manager, assistant, operator, bookkeeper, receiving clerk, lineman, messenger, or other servant of this department will perceive the necessity for united and cordial action in the performance of all the duties devolving upon him as the active agent of a responsible and confidential branch of the Public Service, and that every exertion should be used by them in their respective capacities for its general advancement.

Instructions for Charging and Maintaining Sulphate of Copper Local Battery.

Amalgamate the zincs. Place the porous cup in copper cell, zinc in porous cup. Fill the little cell attached to the copper with sulphate of copper (or blue vitriol) not pounded. Fill porous cups with hot water to within half an inch of top, and the outer cell to within an inch of top of porous cup; then add ten drops of sulphuric acid to water in outer cell, and as the sulphate of copper dissolves put in fresh. As soon as the solution is saturated with the sulphate (*i.e.*, will not dissolve any more sulphate) the battery will work; but if it is slow or weak, pour ten drops sulphuric acid into porous cups, but this is not to be done unless absolutely necessary.

In making up batteries no vitriol solution or blue salt is to be allowed to get into the porous cup; if the vitriol solution should rise so as to threaten such a result, draw off enough to prevent it. To form connection in the battery, screw the brass clamp attached to the copper of one battery to the zinc of the next, and do not let the brass touch anything but the zinc. The third zinc has an independent screw-clamp to fasten it. To renew the battery when weak, wash the porous cups out clean, scrape off the thick scales adhering to the zincs, thoroughly wash them, and replace the porous cups and zincs filled, as before, with clean water mixed with some of the old solution (the upper half being retained for this purpose).

After the first charge use neither acid nor mercury.

Keep the porous cells quite clear of the sides of the copper cylinder and as much as possible in the centre, otherwise the former will soon be destroyed by the copper depositing on them. Since only that part of the zinc plate that dips in the solution needs brushing, keep the other part of the plate dry.

APPENDIX A.

Electric Telegraph Declaration, 20 Victoria No. 41, sec. IX.

I, , do solemnly and sincerely declare that I will not willingly or knowingly divulge the contents or substance of any private or secret despatch, message, or other communication, transmitted or intended to be transmitted by any line of Telegraph; and I shall adhere to the rules and regulations now or hereafter to be in force relating to the Electric Telegraph Department, or any regulation made in pursuance of the Electric Telegraph Act.

Declared before me, one of Her Majesty's Justices of the Peace, in and for the

day of

APPENDIX B.

Instructions for charging and maintaining the main Meidinger battery:—

Place the zinc in outer glass cell and the copper or lead plate in the small inner cup. Make a solution of magnesia sulphate of the strength of two and a half inner cupsfull of the salt to five outer cellsfull of water. Fill each cell with this solution to such a height, that when the balloon, which is to be filled with copper sulphate crystals, is placed in position, the liquid in each cell will reach to about 1 inch from the top. This battery should be renewed at least every three months. Five cells should then be cut out at a time, the zincs cleaned, the coppers stripped of deposited copper, and the balloons refilled with copper sulphate. Fresh solution having been added, the cells can be restored to their places. If any of the zincs are much corroded new ones should be substituted.

Cautions.—The clamps, brasses, screws of all batteries must be kept thoroughly dry. They will remain bright and clean if handled carefully, but when requisite they must be scraped and brightened. Do not allow any pieces of metal, or any kind of salt, or any other acid than sulphuric, to get into the solution. Do not put up the battery where it will be exposed to the fumes of Grove's battery or nitric acid.

Keep the battery stand and everything connected with it thoroughly clean and dry; re-varnish the wood-work when necessary. Do not allow salt deposit to collect on the zinc plates, outer cell, or battery stand.

Regulations.—New South Wales Department.

1. Messages must be written with ink in a clear and legible manner on the forms provided for that purpose, and must bear a proper date and address, the signature of the sender in each case being required in authentication of the Message, and as subscribing to the conditions imposed. All figures must be written in words.

2. The charges on telegrams *are to be prepaid by stamps*, and the public will be required to affix them to the message form just as they are required to affix them to letters. No "Collect" messages will be accepted unless in answer to a "reply paid" or press. Stamps are to be sold by the officers who may receive the telegrams. No charge will be made for date, address, or signature of the message.

3. Messages will be delivered free within one mile of the office; over that distance porterage or cab-hire will be charged, and boat-hire on messages to be delivered on ship-board. Telegrams requiring to be delivered by special messenger will only be accepted subject to the Department being able to procure such messenger; and in all cases telegrams will be forwarded at the sender's risk.

4. Where an immediate reply to a message is required, the sender of such message is requested to append the words "Reply by Telegraph."

5. Messages can be transmitted in cypher at the ordinary rate of charges.

6. In order to provide against mistakes in the transmission of messages by the electric telegraph, every message of consequence ought to be REPEATED by being sent back from the station at which it is to be received to the station from which it is originally sent. Half the usual price for transmission will be charged for repeating the message. The Government will not be responsible for mistakes in the transmission of unrepeated messages, from whatever cause they may arise; nor will the Government be responsible for mistakes in the transmission of a repeated message, nor for any delay in the transmission or delivery, nor for non-transmission or non-delivery of any message, whether repeated or unrepeated, to any extent above £5.

7. Except in cases of emergency, illness, &c., or messages on the service of the state, messages will be transmitted in the order in which they are received; and all messages will be held strictly confidential.

8. If from any circumstances a message is not sent within a reasonable time sufficient to destroy the value of the despatch, the clerk is instructed to give the person sending the message information of the fact, with the reason of the delay; it will then be optional with the person to withdraw such message, and receive back the amount paid.

9. Telegrams will be available for inspection by the sender or receiver, or a copy thereof made, during a period of two years from the date of transmission, on payment of a search fee of 2s. 6d.

10. Messages will be kept in the strict charge of the Superintendent for the space of TWO YEARS, after which they will be burned in the presence of the Superintendent or other authorized officer.

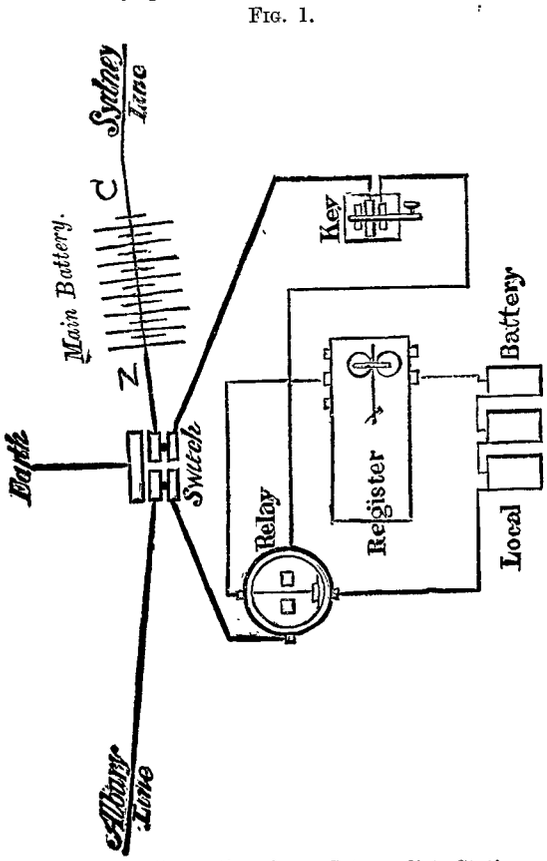
11. Offices will be kept open for the transmission of messages from 9 a.m. to 8 p.m., Sundays excepted.

12. Inquiries respecting messages cannot be entertained unless copies are produced.

PUBLIC HOLIDAYS.

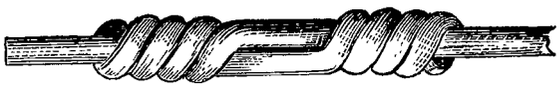
The Electric Telegraph Offices throughout the colony, on Public Holidays, are OPEN from 9 a.m. to 10 a.m., and between the hours of 6 p.m. and 8 p.m., except offices marked thus †, which are only open from 9 to 10 a.m.

FIG. 1.



Instrument Connections for an Intermediate Station.

FIG. 2.



Twisted Joint.

TELEGRAPH STATIONS AND BRANCH OFFICES IN NEW SOUTH WALES.

(*R.T.S.*) denotes Railway Telegraph Stations; (*B.O.*), Branch Office; S. cks on "paid" messages addressed to Branch Offices.

Aberdeen (*R.T.S.*)	A.X.
Adaminiby	B.Y.
Adelong	D.G.
Albury‡	A.Y.
Anvil Creek	A.K.
Angledool	N.J.
Appin	A.P.
Araluen	A.U.
Arakoon (*Trial Bay*)	T.D.
Armidale	A.D.
Armidale Railway Station (*R.T.S.*)	A.T.
Ashfield (*B.O.*)	F.D.
A.S.N. Co.	A.S.
Ballina	A.B.
Balmain (*B.O.*)	B.M.
Balranald	N.R.
Baradine	B.X.
Barmedman	A.O.
Barraba	G.B.
Barranjoey	B.J.
Barringun (Rutherford's)	D.S.
Bateman's Bay	B.T.
Bathurst‡	B.A.
Bega	B.G.
Belmont	L.T.
Bellbrook (Nulla Nulla)	N.L.
Bendemeer	B.N.
Berrima	B.
Bethungra (*R.T.S*)	B.V.
Binalong (*R.T.S.*)	I.B.
Bingera	A.G.
Blandford (*R.T.S.*)	D.F.
Blacktown (*R.T.S.*)	K.N.
Blackheath (*R.T.S.*)	L.E.
Blackwall	L.K.
Blayney (*R.T.S.*)	B.L.
Boat Harbour	O.H.
Boggabri	Y.R.
Bombala	B.O.
Bodalla	D.A.
Bolivia	O.I
Booligal	I.L.
Botany (*B.O.*)	Y.B.
Bourke‡	B.U.
Bowenfels (*R.T.S.*)	B.F.
Bowning (*R.T.S.*)	B.Q.
Bowna	O.D.
Bowrall (*R.T.S.*)	O.B.
Bowraville	O.U.
Braidwood‡	B.D.
Branxton	X.N.
Brewarrina	B.I.
Breadalbane (*R.T.S.*)	B.Z.
Breeza	E.A.
Brewongle (late Macquarie Plains) (*R.T.S.*)	M.P.
Broadwater	R.T.
Broke (Fordwich)	R.O.
Broughton's Creek	B.C.
Brush Grove	O.V.
Brunswick River Heads	U.K.
Bulahdelah	B.H.
Bulli	B.S.
Bundanoon (late Jordan's Crossing) (*R.T.S.*)	J.S.
Bundarra	D.R.
Bungendore	G.E.
Bungwall Flat	F.G.
Burrowa	B.R.
Burrawang	A.W.
Burwood (*B.O.*)	B.W.
Byrock	Y.K.
Cambewarra	A.I.
Camden	C.J.
Campbelltown	C.T.
Camperdown (*B.O.*)	A.J.
Candelo	C.F.
Canowindra	A.N.
Cannonbar	C.V.
Canterbury	C.L.
Carathool (*R.T.S.*)	C.Z.
Carcoar	C.R.
Cargo	K.F.
Capertee (*R.T.S.*)	A.
Casino	H.N.
Cassilis	C.A.
Chatsworth Island	C.C.
Clarence Town	C.N.
Cobar	O.A.
Cobargo	C.G.
Cobbora	O.F.
Condobolin	C.U.
Coolah	C.H.
Coolaman (*R.T.S.*)	A.Z.
Cooma	C.O.
Coonabarabran	C.B.
Coonamble	C.D
Cooranbong	C.P.
Cootamundra	C.M.
Copeland N. (late Barrington)	A.C.
Coraki	C.I.
Corowa	C.W.
Copmanhurst	C.Y.
Croki	O.
Crookwell	C.Q.
Croydon	F.I.
Cowra	K.R.
Cundletown	C.X.
Culcairn (*R.T.S.*)	D.C.
Cudal	U.Q.
Dapto	D.O.
Darlington Point	K.B.
Darlington† (*B.O.*)	D.J.
Darlington Railway Station (*R.T.S.*)	D.Z.
Deepwater	D.P.
Delegate	D.T.
Deniliquin‡	D.N.
Denman	D.M.
Douglas Park (*R.T.S*)	D.K.
Dubbo	D.B.
Dungog	D.U.
Eauabalong	E.B.
Eden	W.N.
Edgecliff (*Woollahra*) (*B.O.*)	E.D.
Emmaville (late Vegetable Creek)	V.C.
Enngonia	E.J.
Euston*	E.U.
Eugowra	E.G.
Exchange† (*B.O.*)	S.X.
Emu Plains (*R.T.S.*)	E.M.
Fairfield Railway Station (*R.T.S.*)	
Fernmount	F.C.
Forbes	F.B.
Forster	F.O.
Frederickton	F.T.
Gabo Island	G.O
Gerringong	G.J.
George's Plains (*R.T.S.*)	G.Q
George-st. West (late Parramatta - street) (B.O.)	P.S.
Germanton	T.C.
Gerogery (*R.T.S.*)	G.X.
Gilgandra	G.V.

Gininderra	G.H.
Girilambone	I.E.
Gladstone	G.A.
Gladesville† (*B.O.*)	G.L.
Glebe† (*B.O.*)	G.P.
Glebe Island† (*B.O.*)	K.G.
Glen Innes‡	G.F.
Gloucester	G.C.
Goodooga	G.D.
Gongolgon	U.F.
Gosford	G.S.
Goulburn‡	G.
Grafton‡	G.N.
Granville (late Parramatta Junction)	J.
Greenwell Point (Shoalhaven)	G.K.
Grenfell	F.N.
Gulargambone	U.E.
Gulgong	G.U.
Gundagai	G.I.
Gunnedah	D.H
Gunning	U.G.
Gundaroo Lower	U.O.
Guyra (*R.T.S.*)	G.Z.
Harrington (late Manning R. Heads)	
Harwood Island	H.D.
Harden (*R.T.S.*)	H.F.
Hamilton (*R.T.S.*)	H.A.
Hay	H.
Haydonton (*R.T.S.*)	H.O.
Haymarket (*B.O.*)	H.Y.
Hexham	H.M.
Hill End	H.E.
Hillston	H.S.
Hinton (Telephone)	H.H.
Homebush (*B.O.*)	H.B.
Howlong	H.W.
Hunter's Hill (*B.O.*)	H.I.
Ivanhoe	I.O.
Inverell	V.R.
Ironbarks (*R.T.S.*)	I.R.
Jamberoo	J.A.
Jerry's Plains	J.P.
Jervis Bay	J.B.
Jereelderie	J.D.
Junee Railway Stn. (*R.T.S.*)	J.N.
Jindera	J.I.
Kangaroo Valley (Telephone)	K.V.
Katoomba (*R.T.S.*)	K.C.
Kelso	K.O.
Kempsey	K.E.
Kiama‡	K.I.
Kiandra	K.A.
King-street† (*B.O.*)	K.S.
Kyamba	K.
Kynnumboon (Murrwillimbah)	M.C.
Kurrajong (late Wheeny Creek)	E.I.
Lake Cudgellico	L.C.
Laurieton	L.B.
La Perouse (*B.O.*)	B.P.
Lambton	L.A.
Lawrence	C.E.
Lawson (late Blue Mountain) (*R.T.S.*)	B.E.
Legislative Assembly (during Session (*B.O.*)	M.S.
Leichhardt (*B.O.*)	L.H.
Lismore	M.O.
Lithgow	L.G.
Liverpool	I.V.
Lochinvar (*R.T.S.*)	A.V.
Louth	L.U.
Lucknow	L.W.
Maitland, East	F.
Maitland, West‡	W.A.
Major's Creek	A.Q.
Manilla	M.X.
Manly‡ (*B.O.*)	M.Y.
Marulan (*R.T.S.*)	R.N.
Marsden's	M.J.
Marengo	M.W.
Maryvale (*R.T.S.*)	V.I.
Marrickville† (*B.O.*)	M.L.
Mathoura	M.M.
Menindie	M.F.
Menangle (*R.T.S.*)	M.Q.
Merriwa	A.R.
Merimbula	C.
Michelago	M.K.
Millthorpe (late Spring Grove) (*R.T.S.*)	S.P.
Milton	U.A.
Miller's Point† (*B.O.*)	M.T.
Millie	A.M.
Minmi	M.
Mitchell	U.X.
Mittagong (*R.T.S.*)	N.I.
Moama	M.A.
Mogo	O.X.
Mogil Mogil	O.G.
Molong	M.G.
Molonglo	M.I.
Morangarell	M.E.
Moree	R.M.
Morpeth	P.H.
Moruya	M.U.
Mossgiel	O.E.
Moss Vale	M.V.
Moulamein	M.N.
Mount M'Donald	O.M.
Mount Victoria*	V.A.
Mount Hope	H.K.
Moonbi	N.F.
Mudgee	N.Y.
Murrurundi	R.I.
Murrumburrah	M.R.
Muswellbrook	B.K.
Mulwala	U.W.
Mullion Creek (*R.T.S.*)	U.L.
Mundooran	U.D.
Mungindie	U.C.
Nambucca Heads	Q.
Nambucca	N.U.
Narrabri	N.A.
Narrabri Railway Station (*R.T.S.*)	N.Q.
Narrandera	N.
Nelligen	N.E.
Nelson's Bay	N.B.
Nevertire (*R.T.S.*)	N.V.
Newbridge (*R.T.S.*)	C.K.
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Oberon	O.C.
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Parkes	P.K.
Park-street† (*B.O.*)	P.B.
Parramatta‡	P.
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Pilliga	P.G.
Pooncarie	P.O.
Port Macquarie	P.M.
Port Stephens	L.
Pyrmont (*B.O.*)	P.Y.
Queanbeyan	Q.N.
Quirindi	Q.I.
Raglan (*R.T.S.*)	R.G.
Ravensworth (*R.T.S.*)	V.
Randwick (*B.O.*)	R.K.
Raymond Terrace	T.
Redfern (*B.O.*)	R.E.
Redfern Railway Station (*B.O.*) (*R.T.S.*)	S.R.
Richmond	R.D.
Robertson	R.H.
Rocky Mouth	R.
Rockley	R.L.
Rookwood† (*B.O.*)	R.Q.
Royal Hotel† (*B.O.*)	Y.O.
Rylstone	R.S.
Rydal (*R.T.S.*)	D.L.
Ryde (*B.O.*)	D.E.
Salt Creek	S.I.
Scone	S.N.
Seal Rocks	S.K.
Seven Hills (*R.T.S.*)	S.E.
Shellharbour	S.B.
Singleton‡	N.G.
Singleton Railway Station (*R.T.S.*)	S.Z.
Smithtown	S.T.
Sofala	F.A.
South Woodburn	O.Q.
South Grafton	S.G.
South Head (*B.O.*)	S.H.
Springwood (*R.T.S.*)	S.W.
Spring Hill (*R.T.S.*)	S.V.
St. Albans	S.A.
Stannifer (late Middle Creek)	I.F.
St. Leonards (*B.O.*)	N.S.
St. Mary's, South Ck.	S.C.
St. Peter's† (*B.O.*)	S.M.
Stewart Point	S.Q.
Stroud	S.U.
Sutton Forest	S.J.
Surry Hills (*B.O.*) Crown-street	C.S.
Summer Hill	U.M.
Sydney (*Chief Office*)	S.
Tattersall's Rooms† (*B.O.*)	S.T.
Tathra	T.H.
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Tamworth‡	A.H.
Tamworth West	T.W.
Tarago	T.J.
Taralga	T.A.
Tarana (*R.T.S.*)	T.R.
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Taree	T.O.
Tenterfield	N.W
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Tilpa	T.I.
Tinonee	T.N.
Tingha	T.G.
Tocumwall	T.F.
Tomakin	T.Q.
Trunkey Creek	T.K.
Tumberumba	U.B.
Tumbulgum	T.L.
Tumut	U.N.
Tuena	T.U.
Tweed River Heads	T.X.
Ulladulla	U.H.
Ulmarra	U.
Urana*	U.R.
Uralla	R.U.
Wagga Wagga‡	W.G.
Wagga Railway Station (North Wagga) (*R.T.S.*)	W.T.
Walcha	W.C.
Wallerawang (*R.T.S.*)	R.Y.
Walgett	G.T.
Wallsend	W.J.
Wallendbeen (*R.T.S.*)	A.L.
Waratah	W.L.
Warialda	N.D.
Warkworth	W.P.
Warren	R.W.
Wardell	D.W.
Waterloo (*B.O.*)	F.S.
Waverley (*B.O.*)	W.O.
Wee Waa	W.
Wellington	O.N.
Wentworth‡	W.R.
Werris Creek	W.Q.
West Kempsey	W.K.
Whitton (late Hulong) (*R.T.S.*)	H.U.
Wickham	I.C.
Wilcannia	W.B.
William-street (*O.B.*)	W.S.
Willow Tree	F.W.
Windsor	W.D.
Wingham	W.M.
Wingen (*R.T.S.*)	W.I.
Wiseman's Ferry*	W.F.
Wollombi*	W.Y.
Wollongong‡	D.Y.
Wolumla	W.U.
Woodburn	W.V.
Woodburn South	O.Q.
Woollahra (*B.O.*)	O.S.
Yamba (late Clarence River Heads)	D.
Yarrahapinni (late Macleay Heads	M.H.
Yass	Y.A.
Yass Railway Station (*R.T.S.*)	Y.D.
Yetman	Y.T.
Yerong Creek (*R.T.S.*)	Y.E.
Young‡	Y.N.

Messages cannot be received for Stations marked thus * when the Stationmasters are absent in the performance of their line-repairing duties

Messages for Stations described as "Railway Telegraph Stations" (*R.T.S.*) can only be accepted subject to possible delay consequent upon the absence of officers on other duties, or other causes.

Offices are open for the transaction of business from 9 a.m. till 8 p.m., except those marked † which close at 6 p.m., and those marked ‡ which close at 10 p.m.

Sydney: Thomas Richards, Government Printer.—1886.

1885–6.

NEW SOUTH WALES.

ELECTRIC TELEGRAPHS.

(PREPAYMENT OF TELEGRAMS BY POSTAGE STAMPS.)

Presented to Parliament, pursuant to Act 20 Vict. No. 41, sec. 6.

General Post Office, 30 September, 1885.

In accordance with the provisions of the 6th section of the Electric Telegraph Act, His Excellency the Governor, with the advice of the Executive Council, has approved of the following regulations in regard to the prepayment of telegrams by postage stamps, viz. :—

1. The charges on telegrams *are to be prepaid by stamps*, and the public will be required to affix them to the message form just as they are required to affix them to letters. No "collect" messages will be accepted unless in answer to a "reply paid" or Press.

2. Stamps are to be sold by the officers who may receive the telegrams, and are to be cancelled with an obliterating stamp. Combined offices will use their Post Office date stamp for this purpose.

3. The telegrams are to be numbered *consecutively* when received for despatch.

4. All telegrams are to be entered when received on the Daily Statement, which statement, signed by the officer in charge, and the *original telegrams* are to be forwarded to the Continental Clerk, Chief Office, *at the close of each day's business.*

5. In cases of prepaid messages the issuing station must be advised of the amount deposited thus: "Reply paid, 1s." Such reply must not exceed the amount deposited unless the deficiency is paid by the person sending the reply.

6. In cases of telegrams payable on delivery, the original telegrams are also to be forwarded, as a check on the receiving office, but the value in stamps is to be affixed by the office collecting the charge to a message form, with a reference to the original message, thus :—

"Collect Message."

"Brown, Goulburn, to Jones, Wagga Wagga, 1s."

In large offices such collect messages may be entered on a Daily Statement, headed "Collect Messages," and the total value in stamps *affixed to the statement.*

7. Telegrams, after transmission, are to be initialled by the operator and returned to the receiving clerk, who will examine them to see that the despatch has been noted and tick them off with his list.

In small offices where there may be no officers whose special duty it may be to receive telegrams, the station-masters (or officers in charge) are enjoined to exercise great care in the despatch of telegrams. In every instance the operator despatching a telegram must initial the form, and the officer in charge will be held personally responsible for its despatch.

8. Telegrams will be available for inspection by the sender or receiver, or a copy thereof made during a period of two years from the date of transmission, on payment of a search fee of 2s. 6d.

Station-masters (or officers in charge) are to forward requests for production, &c., of such telegrams to the chief office, with a reference to the date of transmission, and the name and address of the sender.

To date from the 1st October next.

JAMES NORTON,
Postmaster-General.

1885-6.

NEW SOUTH WALES.

ELECTRIC TELEGRAPHS.

(PREPAYMENT OF TELEGRAMS BY CASH.)

Presented to Parliament, pursuant to Act 20 Vict. No. 41, sec. 6.

General Post Office, Sydney, 3 March, 1886.

In accordance with the provisions of the 6th section of the Electric Telegraph Act, His Excellency the Governor, with the advice of the Executive Council, has approved of the system of prepayment of Telegrams by postage stamps being abolished and of the cash system being reverted to,—to date from the 1st April next.

F. B. SUTTOR.

1885–6.

NEW SOUTH WALES.

ELECTRIC TELEGRAPHS.

(REGULATION REGARDING "COLLECT" TELEGRAMS.)

Presented to Parliament, pursuant to Act 20 Vic. No. 41, sec. 6.

General Post Office,
Sydney, 12 April, 1886.

In accordance with the provisions of the 6th section of the Electric Telegraph Act, His Excellency the Governor, with the advice of the Executive Council, has approved of the following Regulation in regard to "Collect" Telegrams,—to date from the 1st May next.

Payment of charges in advance will be required, except for replies to interrogatory messages on which the sender has written "Reply paid here."

In cases of emergency or distress, however, persons may be allowed to send messages to be paid for by the receiver.

The senders of "Collect" Telegrams will be required to guarantee the charge in case of non-payment by the addressees.

No charge will be made for the date, address, or signature on any telegram lodged for transmission within the Colonies.

F. B. SUTTOR.

1885–6.

NEW SOUTH WALES.

ELECTRIC TELEGRAPHS.

(REDUCTION IN RATES BETWEEN NARRABRI AND NARRABRI RAILWAY STATION AND BETWEEN NEW SOUTH WALES BORDER TELEGRAPH STATIONS AND VICTORIA.)

Presented to Parliament, pursuant to Act 20 Vic. No. 41, sec. 6.

General Post Office, Sydney, 11th January, 1886.

It is hereby notified, for general information, that in accordance with the provisions of the 6th section of the Electric Telegraph Act, 20 Victoriæ, No. 41, His Excellency the Governor, with the advice of the Executive Council, has been pleased to approve of the charge for transmission of Telegraphic Messages between Narrabri and Narrabri Railway Station being reduced from one shilling (1s.) to sixpence (6d.) for ten words and under, the charge for every additional word to remain as at present, viz., 1d.—to date from the 1st instant.

DANIEL O'CONNOR.

General Post Office, Sydney, 15th January, 1886.

In accordance with the provisions of the 6th section of the Electric Telegraph Act, His Excellency the Governor, with the advice of the Executive Council, has approved of a charge of one shilling (1s.) for the first ten words and one penny (1d.) for each additional word being levied on telegrams transmitted from New South Wales Stations on the Victorian Border to any part of Victoria—the Victorian Government having agreed to the same arrangement as regards telegrams passing between Border Stations in that Colony and New South Wales,—to date from the 1st instant.

The Border Stations in each Colony are as under :—

In New South Wales.	*In Victoria.*
Albury.	Echuca.
Corowa.	Koondrook.
Euston.	Swan Hill.
Howlong.	Wahgunyah.
Moama.	Wodonga.
Mulwala.	Yarrawonga.
Tocumwall.	
Wentworth.	

DANIEL O'CONNOR.

1885-6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

IRON COLUMNS FOR TELEGRAPH LINES.

(ERECTION OF, IN GEORGE STREET.)

Ordered by the Legislative Assembly to be printed, 29 *June,* 1886.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 11th May, 1886, That there be laid upon the Table of this House,—

"Copies of all papers, minutes, letters, and tenders, having reference to the "erection of iron columns and lattice-work in George-street for the carriage "of Telegraph Lines."

(*Mr. Davies.*)

SCHEDULE.

NO.		PAGE.
1.	The Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 23 October, 1883	3
2.	The Secretary to the Post Office to The Town Clerk, Sydney. 31 October, 1883	3
3.	The Town Clerk, Sydney, to The Secretary to the Post Office. 20 November, 1883	3
4.	The Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 13 March, 1884	5
5.	The Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 9 April, 1884	6
6.	Mr. Leonard Goodday, Sydney, to The Superintendent of Telegraphs. 4 April, 1884	6
7.	Mr. Leonard Goodday, Sydney, to The Postmaster-General. 17 April, 1884	6
8.	The Secretary to The Post Office to the Superintendent of Telegraphs, Sydney. 7 May, 1884	6
9.	The Superintendent of Telegraphs to The Crown Solicitor, Sydney. 16 May, 1884	7
10.	The Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 16 May, 1884	7
11.	The Superintendent of Telegraphs to Messrs. D. & W. Robertson, Sydney. 22 May, 1884	8
12.	The Superintendent of Telegraphs to Messrs. D. & W. Robertson, Sydney. 12 June, 1884	8
13.	Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs. 13 June, 1884	8
14.	The Crown Solicitor, Sydney, to The Superintendent of Telegraphs. 24 June, 1884	8
15.	Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs, 25 June, 1884	8
16.	Messrs. D. & W. Robertson, to The Postmaster-General. 15 July, 1884	8
17.	The Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 1 September, 1884	9
18.	The Crown Solicitor to The Superintendent of Telegraphs, Sydney. 25 August, 1884	9
19.	Messrs. D. & W. Robertson, Sydney, to The Postmaster-General. 5 September, 1884	10
20.	The Secretary to the Post Office to Messrs. D. & W. Robertson, Sydney. 13 September, 1884	10
21.	The Secretary to the Post Office to The Under Secretary for Finance and Trade, Sydney, 13 September, 1884	10
22.	The Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 30 September, 1884	11
23.	The Secretary to the Post Office to Messrs. D. & W. Robertson, Sydney. 3 November, 1884	11
24.	Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs. 4 November, 1884	12
25.	Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs. 28 November, 1884	12
26.	Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs. 7 January, 1885	12
27.	The Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 16 January, 1885	12
28.	Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs, Sydney. 2 May, 1885	13
29.	Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs, Sydney. 5 May, 1885	13
30.	The Acting Superintendent of Telegraphs to Messrs. D. & W. Robertson, Sydney. 7 May, 1885	13
31.	Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs. 13 May, 1885	13
32.	Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs. 21 May, 1885	14
33.	The Acting Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 23 May, 1885	14
34.	The Secretary to the Post Office to The Under Secretary for Finance and Trade, Sydney. 6 June, 1885	14
35.	The Secretary to the Post Office to the Under Secretary for Public Works, Sydney. 6 June, 1885	15

633—A

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NO. PAGE.

36. Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs. 4 June, 1885 15
37. Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs. 6 June, 1885 15
38. Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs. 30 June, 1885 18
39. The Acting Superintendent of Telegraphs to Messrs D. & W. Robertson, Sydney. 1 July, 1885 18
40. Mr. James Orr, Sydney, to The Acting Superintendent of Telegraphs. 21 July, 1885 19
41. The Acting Superintendent of Telegraphs to Messrs. D. & W. Robertson, Sydney. 27 July, 1885 19
42. The Acting Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 29 July, 1885 19
43. Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs. 29 July, 1885 20
44. Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs. 29 July, 1885 20
45. Messrs. D. & W. Robertson, Sydney, to The Postmaster-General. 3 August, 1885 20
46. The Secretary to the Post Office to The Under Secretary for Finance and Trade, Sydney. 6 August, 1885 21
47. The Under Secretary for Finance and Trade to The Secretary to the Post Office, Sydney. 12 August, 1885 21
48. The Secretary to the Post Office to The Under Secretary for Finance and Trade. 20 August, 1885 21
49. Mr. Wm. Humphreys, Sydney, to The Superintendent of Telegraphs. 19 January, 1886 22
50. The Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 19 January, 1886 22
51. The Clerk in Charge, Telegraph Stores, to The Accountant, Telegraph Department, Sydney. 15 February, 1886 22
52. The Superintendent of Telegraphs to The Town Clerk, Sydney. 15 February, 1886 22
53. The Town Clerk, Sydney, to The Superintendent of Telegraphs. 17 February, 1886 23
54. The Superintendent of Telegraphs to Messrs. D. & W. Robertson, Sydney. 22 February, 1886 23
55. Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs. 22 February, 1886 23
56. The Superintendent of Telegraphs to The Secretary to the Post Office, Sydney. 23 February, 1886 23
57. Messrs. Neave & Co., Sydney, to The Superintendent of Telegraphs. 25 February, 1886 23
58. The Superintendent of Telegraphs to The Secretary Australian Gas Light Company, Sydney. 1 March, 1886 24
59. Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs. 8 March, 1886 24
60. Circular-letter from The Superintendent of Telegraphs to the property owners and others, George-st., Sydney 24
61. Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs. 25 March, 1886 24
62. Messrs. Robertson, Fisher, & Ralfe, Sydney, to The Postmaster-General. 26 March, 1886 25
63. The General Manager of the Australian Joint Stock Bank, Sydney, to The Postmaster-General. 16 April, 1886 25
64. The Secretary to the Post Office to The General Manager Australian Joint Stock Bank, Sydney. 10 May, 1886 25
65. The Town Clerk, Sydney, to The Superintendent of Telegraphs. 29 March, 1886 26
66. The Superintendent of Telegraphs to The Town Clerk, Sydney. 10 April, 1886 26
67. Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs. 12 April, 1886 26
68. Messrs. W. Hamilton & Co., Sydney, to The Superintendent of Telegraphs. 29 April, 1886 27
69. The Superintendent of Telegraphs to Messrs. W. Hamilton & Co., Sydney. 30 April, 1886 27
70. Messrs. W. Hamilton & Co., Sydney, to The Superintendent of Telegraphs. 3 May, 1886 27
71. The Superintendent of Telegraphs to Messrs. W. Hamilton & Co., Sydney. 5 May, 1886 27
72. Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs. 3 May, 1886 27
73. Minute—The Secretary to the Post Office to the Postmaster-General, Sydney. 3 May, 1886 28
74. Mr. F. Abigail, M.P., Sydney, to The Postmaster-General. 6 May, 1886 28
75. The Superintendent of Telegraphs to Mr. W. Humphreys, Sydney. 18 May, 1886 28
76. Mr. Edward Hordern, Sydney, to The Superintendent of Telegraphs. 5 May, 1886 28
77. The Superintendent of Telegraphs to Mr. Edward Hordern, Sydney. 5 May, 1886 28
78. Mr. Robert Guy, Sydney, to The Superintendent of Telegraphs. 7 May, 1886 29
79. Mr. Robert Guy, Sydney, to The Postmaster-General. 7 May, 1886 29
80. M. J. Austin, Enfield, to The Superintendent of Telegraphs. 10 May, 1886 29
81. The Superintendent of Telegraphs to M. J. Austin, Enfield. 14 May, 1886 29
82. Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs. 10 June, 1886 30
83. Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs. 8 May, 1886 30
84. Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs. 11 May, 1886 30
85. Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs. 5 June, 1886 31
86. Mr. Chas. Binnie, Sydney, to The Superintendent of Telegraphs. 7 June, 1886 32
87. The Superintendent of Telegraphs to Mr. Chas. Binnie, Sydney. 10 June, 1886 32
88. Mr. Chas. Binnie, Sydney, to The Superintendent of Telegraphs. 14 June, 1886 32
89. The Superintendent of Telegraphs to Mr. Chas. Binnie, Sydney. 16 June, 1886 32

IRON COLUMNS FOR TELEGRAPH LINES.

No. 1.

The Superintendent of Telegraphs to the Secretary to the Post Office.

I BEG to submit, for the information of the Postmaster-General, a drawing of an improved method arranged by me, for supporting telegraph and telephone wires in thickly populated towns, to take the place of the overhead wires now in use; the plan is to erect suitable cast-iron standards, supporting an ornamental cast-iron frieze, behind which cables will be suspended on racks to receive them; at the intersections of the streets the cables can be supported from steel wires, on the suspension-bridge principle, or can be carried underground in split iron pipes, the cables being protected by vulcanized tubing. The occupiers of houses and shops can, if they think proper, roof over the footway to form verandahs, but the roofing should be of a uniform pattern and approved of by the City Architect.

The estimated cost for the ironwork, and the erection of same, will be £4,600 per mile, and £575 per mile for each cable containing 50 wires.

I would recommend that a trial of the contrivance be made between the General Post Office and the Railway Station, on the west side of George-street and along Pitt-street, from the Sydney Exchange to the Railway Station.

E. C. CRACKNELL.
23/10/83.

Minute of the Postmastor-General.

The proposal above contained, has to-day engaged the consideration of the Government, and in view of the present and future difficulties occasioned by the increase of telegraph and telephone wires, it is thought that the plan proposed by Mr. Cracknell should have a trial; the wires at the intersection of streets not to go overhead, but under the roadway. As the matter is one of experiment, it can be tried in George-street first. The Corporation to be written to, and their consent to be obtained, in the first instance.—W.J.T., 24/10/83.

No. 2.

The Secretary to The Post Office to The Town Clerk, Sydney.

Sir, 31 October, 1883.

I am directed by the Postmaster-General to request that you will bring under the notice of the Worshipful the Mayor the enclosed copy of a suggestion made by the Superintendent of Telegraphs—with accompanying sketch and specimen of cable—with the view of obtaining an early consent to a trial of the plan proposed for supporting telegraph and telephone wires in this city. 3 enclosures.

Mr. Trickett thinks that, in view of the present and future difficulties occasioned by the increase in the number of these wires, an experiment might be made by fixing the wires between this office and the Railway Station, Redfern, on the west side of George-street; the wires at the intersections of streets not to go overhead, but to be carried under the roadway.

I am to request that the sketch may be returned with your reply.

I have, &c.,
S. H. LAMBTON,
Secretary.

No. 3.

The Town Clerk, Sydney, to the Secretary to the Post Office.

Sir, Town Clerk's Office, Sydney, 20 November, 1883.

Referring to your letter of the 21st ultimo, submitting for the consideration of the City Council a design for the erection of cast-iron standards supporting an ornamental frieze, for carrying telegraph and telephone cables, on the west side of George-street, betwen the General Post Office and the Railway Station, Redfern, I have the honor, by direction of the Right Worshipful the Mayor, to inform you that the Council have approved of the proposed arrangement being carried out by the Government.

I have, &c.,
CHAS. H. WOOLCOTT,
Town Clerk.

Submitted.—S.H.L., 21/11/83. Seen. The next step will be to have plans and specifications prepared for the standards and subways prior to tenders being invited.—W.J.T., 22/11/83. Superintendent Telegraphs for further action, B.C., 22/11/83.—S.H.L. Plans and specification herewith. I recommend that tenders be called in accordance with the accompanying notice.—E.C.C., 12/3/84. Approved.—W.J.T., 17/3/84.

SPECIFICATION OF E. C. CRACKNELL'S DESIGN FOR CARRYING TELEGRAPH AND TELEPHONE WIRES THROUGH CITIES.

THIS specification comprises the supply of all ironwork at Sydney as herein described, for the New South Wales Government, in accordance with specification and accompanying plans.

GENERAL.

This Contract comprises the supply of cast-iron verandah fronts, with racks at the back for carrying overhead cables, which are to be erected on the west side of George-street, between Barrack and Parramatta streets.

Drawings.—There are two drawings accompanying this specification. Drawing No. 1 shows a twin post for leading the cables underground at the street corners, also single post, frieze, brackets, with a full-sized detail of arch-rack, and the top of spandril shaft. Drawing No. 2 shows a full-sized detail of the frieze, spandril shaft, hook-rack, &c.

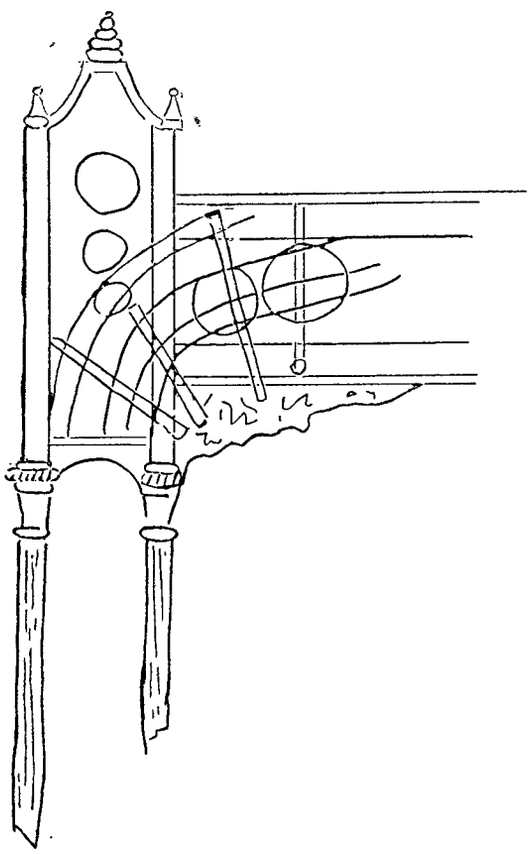
Posts.—

Posts.—Single posts are to be similar in design and equal in quality to Walter M'Farlane's, No. 115 column, as supplied from the Saracen Foundry, Glasgow.

There are to be 316 single posts, 4 inches in diameter, cast with spandril shafts and bases, as shown in drawings, which must be of the dimensions and length shown.

Provide two posts of similar design and height, but 5 inches in diameter, having bases and spandril shafts enlarged in proportion. All posts are to be good sound castings, the metal is to be not less than half an inch in thickness.

Double Posts.—There are to be (18) eighteen double posts, 4½ inches in diameter. They are to be cast as shown in drawing No. 1, each post singly and bolted to the base, as shown in sections 4 and 5. They are to be cast with provision for fitting panels between, as shown in sections 1, 2, and 3. These panels are to be made as shown, and fitted between the posts with ½-inch screw bolts, spaced 8 inches from centre to centre. Provision must be made for fixing (4) four bridge racks, as shown in the accompanying sketch, in order to lead the cables down the double posts.



The pedestal or base, to be made as shown in drawing, No. 1, having a hole cast where shown in front and side with a light cover fixed by four ½-inch bolts; the bottom of this casting is to be flanged out, as shown, having eight ¾ inch bolts for attaching the underground pipes; these holes are to be spaced the same in each casting; there are to be eighteen complete double posts and pedestals—nine right- and nine left-hand.

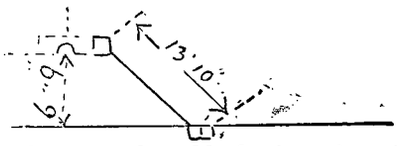
Frieze or Girder.—There is to be a frieze or girder between each post as shown, consisting of cast-iron panels with wrought-iron top, and bottom attached by bolts. The cast-iron frieze must have one face, and be made as shown in drawing No. 2, having holes cast at top and bottom for bolts, which must be spaced 6 inches from centre to centre. The friezes must be in the following lengths, which are the clear openings between the spandril shafts :—

No.	Length.	No.	Length.
60	14 feet 8 inches	6	14 feet 4 inches
39	14 ,, 11 ,,	6	13 ,, 9 ,,
31	15 ,, 5 ,,	6	14 ,, 2 ,,
24	14 ,,	5	13 ,,
21	15 ,, 4 ,,	5	13 ,, 4 ,,
20	14 ,, 7 ,,	4	13 ,, 8 ,,
15	14 ,, 3 ,,	4	13 ,, 2 ,,
14	15 ,, 3 ,,	5	13 ,, 5 ,,
14	15 ,, 2 ,,	4	16 ,,
13	15 ,, 1 ,,	4	15 ,, 11 ,,
10	13 ,, 10 ,,	1	18 ,, 7 ,,
8	14 ,, 5 ,,	1	12 ,, 6 ,,
7	13 ,, 11 ,,		

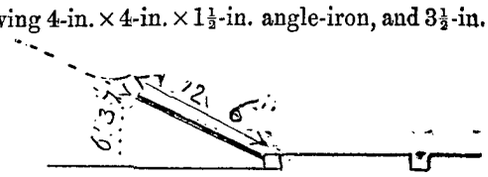
The two outer bars must be cut one inch shorter than the lengths given above, and they are to be of 2½-in. × ⅜-in. bar iron, punched to suit holes in castings, and rolled perfectly straight. The upper angle-iron is to be 3½-in. × 3½-in. × ½-in., cut (8) eight inches longer than the dimensions given for the friezes, and having holes punched to suit holes in castings and front plate, so spaced as to allow the angle-iron to project 4 inches beyond the cast-iron frieze at each end. All these holes are to be of sufficient size to allow plenty of clearance for the ½-in. bolts. There must also be a ⅞-in. hole punched 2 inches from each end of the angle-iron. The lower bar is to be 3 ft. × ½-in. bar-iron, punched as described for angle-iron, and rolled perfectly straight. The cast-iron work for each frieze is to be in three pieces, bolted together between the wrought-iron bars, as shown, with ½-inch cup-headed bolts, having hexagon nuts inside. The castings must be carefully joined, so that the pattern will run uniformly. The end pieces are to be prepared for fitting to the spandril shafts, as shown in drawing No. 2.

One

One of the girders marked thus ⊙, must be cast to suit an angle in the street, as shown in sketch:—



The girder marked thus * is to be strengthened by having 4-in. × 4-in. × 1½-in. angle-iron, and 3½-in. × ½-in. bar-iron, which must be punched and fitted as described for the other girders, but must be 10 inches longer than the cast-iron frieze, and project 5 inches on each end, having the large end holes punched 2½ inches from the end to suit the 5-inch posts. All friezes must be delivered bolted together, complete, as specified and shown.



Brackets.—There are to be 656 brackets, 328 right-hand and 328 left. They are to be similar in quality to Messrs. W. M'Farlane's No. 49 brackets, 1 ft. 7½ in. × 3 ft. 1½ in., with single face, but prepared for fixing to the spandril shaft and underside of frieze, and supplied with screwbolts for same.

Terminals.—There are to be eighteen terminals similar to Messrs. W. M'Farlane's No. 329, 7½ inches high, cast or fitted to top of panel in twin or double post, and 352 similar terminals, having ends to fit into the holes at the top of the spandril shafts.

Racks.—There are to be seventy-two bridge racks, as shown in drawing No. 1, which must be made of malleable cast-iron, and provided with screw-bolts of sufficient length to attach them, as shown in sketch, for leading the cables down between the double posts.

Provide 1,000 hook-racks, as shown in drawing No. 2. These must be of malleable cast-iron, and each provided with (3) three ½-inch screw-bolts of sufficient length to pass through hook-racks and screw into angle-iron and bar of frieze.

Bolts.—Provide all necessary bolts for fixing friezes to posts, brackets, &c. Bolts for posts to have heads similar to knobs on spandril shafts, and of sufficient length for passing through, so that when this work is being erected it may be stepped by cutting off knobs and drilling holes to suit the level of the ground.

Conditions.—The whole of the cast-iron work shall be delivered on the site for erection, and shall be passed by any competent engineer who may be appointed by the Government for such duty; and he shall have power to reject any and all work that, in his opinion, is not in strict accordance with this specification; and such work or material so condemned shall be made good by the contractor, or the engineer shall have power to replace such work at the expense of the contractor.

A separate tender to be submitted for the erection of the cast-iron work, and the whole of the fittings on the west side of George-street, Sydney, from the corner of Barrack-street to the railway bridge, George-street west, to be completed and handed over to the Government in two months after the ironwork is delivered in Sydney.

No. 4.

The Superintendent of Telegraphs to The Secretary to the Post Office.

Sir, 13 March, 1884.

I have the honor to enclose herewith, for publication in the Government Gazette, a copy of notice inviting tenders from persons desirous of contracting for the supply and erection of ironwork to carry telegraph and telephone wires along George-street, and I shall be glad if you will cause the matter to receive early attention.

I have, &c.,
E. C. CRACKNELL.

[*Enclosure.*]

General Post Office, Sydney, 1884.

TENDERS will be received at this Office up to noon on Wednesday, the 7th day of May, 1884, from persons desirous of contracting for the supply and erection of ironwork for Telegraph lines along the west side of George-street, Sydney, from the corner of Barrack-street, to the Railway Bridge, George-street West, in accordance with the plans and specification to be seen at the office of the Superintendent of Electric Telegraphs, George-street, Sydney.

Tenders to be submitted in two parts, viz.:—

1. Supply and delivery along the route of all Ironwork and Fittings.
2. For the erection complete of all Ironwork and Fittings.

GENERAL CONDITIONS.

Payments will be made in instalments to the extent of £90 per cent. on the value of the work certified for by the officer appointed to inspect the work as having been completed, and the remaining £10 per cent. when the entire Contract is completed to the satisfaction of the Superintendent of Electric Telegraphs or other authorized officer.

At the foot of every Tender there must be a memorandum signed by the party tendering, and two approved sureties, agreeing to be responsible for the due performance of the Contract, in the event of the Tender being accepted, and undertaking in that event that they will execute and deliver within fourteen days from the usual notification of acceptance a bond to Her Majesty for securing such performance, otherwise the tender need not be taken into consideration.

Should the bond not be executed and delivered within the said term of fourteen days from date of notification of acceptance, the Government reserves the right to advertise the contract anew or to accept another tender.

The tenders to contain the names of the tenderers and their sureties and places of residence at length.

It is to be distinctly understood that the Government will not necessarily accept the lowest or any tender.

The cost of the necessary duty stamps must be borne by the contractor.

N.B.—The accepted tender will be notified in the Government Gazette, and such notice will be considered as an intimation to unsuccessful tenderers that their tenders have been declined.

Tenders to be addressed to the Secretary, General Post Office, Sydney, and endorsed "Tender for Supply or Erection of Ironwork for carrying Telegraph Wires and Cables."

MEMO.—The above was approved by P.M.G., and notice dated 18th March, 1884, was published in Government Gazette.

No. 5.

The Superintendent of Telegraphs to The Secretary to the Post Office.

Sir,

I attach amended notice for insertion in the Government Gazette, respecting supply of ironwork for carrying telegraph wires, and beg to request that the advertisement be altered accordingly.

Urgent.

E. C. CRACKNELL,
9/4/84.

Submitted.—S.H.L., 10/4/84. Approved.—W.J.T., 10/4/84.

[*Enclosure.*]

General Post Office, Sydney, 1884.

TENDERS will be received at this Office up to noon on Wednesday, the 7th day of May, 1884, from persons desirous of contracting for the supply and erection of ironwork for Telegraph lines along the west side of George-street, Sydney, from the corner of Barrack-street to the Railway Bridge, George-street West, in accordance with the plans and specification to be seen at the Office of the Superintendent of Electric Telegraphs, George-street, Sydney.

Tenders to be submitted in two parts, viz.:—

1. Supply and delivery along the route of all ironwork and fittings.
2. For the erection complete of all ironwork and fittings.

(The period within which the whole work can be completed must be stated.)

GENERAL CONDITIONS.

Payments will be made in instalments to the extent of £90 per cent. on the value of the work certified for by the officer appointed to inspect the work as having been completed, and the remaining £10 per cent. when the entire contract is completed to the satisfaction of the Superintendent of Electric Telegraphs or other authorized officer.

At the foot of every tender there must be a memorandum signed by the party tendering, and two approved sureties, agreeing to be responsible for the due performance of the contract, in the event of the tender being accepted, and undertaking in that event that they will execute and deliver within fourteen days from the usual notification of acceptance a bond to Her Majesty for securing such performance, otherwise the tender need not be taken into consideration.

Should the bond not be executed and delivered within the said term of fourteen days from date of notification of acceptance, the Government reserves the right to advertise the contract anew or to accept another tender.

The tenders to contain the names of the tenderers and their sureties and places of residence at length.

It is to be distinctly understood that the Government will not necessarily accept the lowest or any tender.

The cost of the necessary duty stamps must be borne by the contractor.

N.B.—The accepted tender will be notified in the Government Gazette, and such notice will be considered as an intimation to unsuccessful tenderers that their tenders have been declined.

Tenders to be addressed to the Secretary, General Post Office, Sydney, and endorsed "Tender for supply or erection of ironwork for carrying Telegraph wires and cables."

MEMO.—The above notice was dated the 15th April, and inserted in Government Gazette.

No. 6.

Mr. Leonard Goodday, Sydney, to The Superintendent of Telegraphs.

Dear Sir, *Re* Telegraph Posts, &c. 4 April, 1884.

Will you kindly let me know when the tenders for the above are to be sent in, and also the time allowed for the completion of the work; and, if made in England, whether the work cannot be inspected by the Government's engineer?

And, lastly, can I take the tracing away to copy if necessary?

Yours, truly,
LEONARD GOODDAY,
Engineer and Contractor.

The specification gives all the information, I think.—E.C.C., 7/4/84. Mr. L. Goodday informed.—T.S., 10/4/84.

No. 7.

Mr. Leonard Goodday, Sydney, to The Postmaster-General.

Dear Sir, 17 April, 1884.

Received your letter, with enclosed information *re* telegraph-posts, and am sorry I could not hear from you sooner, as I have now no time to communicate with my people at home.

Yours truly,
LEONARD GOODDAY.

No. 8.

The Secretary to the Post Office to The Superintendent of Telegraphs.

THE accompanying tenders (four) for the supply or erection of ironwork for carrying telegraph wires and cables are forwarded to the Superintendent of Telegraphs.—S.H.L., B.C., 7/5/84.

Place in Schedule.—E.C.C., 8/5/84. Schedule herewith.—T.S., 9/5/84.

Schedule of Tenders.

	Tenderers.	Price complete. £	s.	d.	Remarks.
1 ...	D. & W. Robertson	4,000	0	0	To be of M'Farlane's castings, or any other high-class maker; delivered within twelve months.
2 ...	Hudson Bros., Limited	4,953	0	0	According to specification; no period stated.
3 ...	James Dunn & Co.	5,750	0	0	M'Farlane's castings.
		4,990	0	0	Other manufacturers'.
4 ...	John Sutton & Sons	8,500	0	0	Supply and erection; no period stated.

Messrs.

Messrs. D. & W. Robertson to The Secretary to the Post Office.

Sir, Central Exchange Buildings, York-street, Sydney, 7 May, 1884.

We have the honor to tender for the ironwork for supporting telegraph lines, as per specifications and conditions, for the slump sum of £4,000 (four thousand pounds stg.); delivered in about twelve months from date of order; made in England either by M'Farlane, Saracen Foundry's Coalbrookdale Iron Co., or other high-class makers.

Yours truly,
D. & W. ROBERTSON.

Messrs. Hudson Bros. (Limited) to The Secretary to the Post Office.

Sir, Redfern Works, Sydney, 7 May, 1884.

I hereby propose to supply the whole of the ironwork (delivered along the route on which it is to be erected) required for the telegraph and telephone wires, according to the true intent and meaning of the plans and specifications, and to the satisfaction of the engineer appointed to inspect same, for the sum of four thousand nine hundred and fifty-three pounds (£4,953).

I have, &c.,
For Hudson Bros. (Ltd.),
HENRY HUDSON,
Managing Director.

I hereby propose as sureties for the due completion of the work—S. W. Gray, Esq., of Edgecliffe Road; W. A. Hutchinson, Esq., Balmain.

For Hudson Bros (Limited),
HENRY HUDSON,
Managing Director.

Messrs. J. Dunn & Co. to The Secretary to the Post Office.

5 & 6, Custom-house Buildings, Circular Quay, Sydney, 7 May, 1884.

Tender for the supply of the Ironwork required for the construction and erection of a verandah in George-street.

We hereby offer and undertake to supply the cast-iron, wrought-iron, and bolts required for the telegraph verandah, all in accordance with the plans and specifications, delivered on site, for the slump sum of five thousand seven hundred and fifty pounds sterling (say £5,750).

This price is for M'Farlane's castings; but if we have the option of supplying the castings of any other maker, the price would be considerably reduced. We would supply all the ironwork, as above mentioned, to plans and specifications, delivered on the site for the slump sum of four thousand nine hundred and ninety pounds sterling (say, £4,990).

We name as our sureties—Alex. Kethel, Market Wharf, and John Taylor, Sussex-street.

Delivery of one-fourth within four months, the whole within six months.

JAMES DUNN & CO.

Messrs. J. Sutton & Sons to The Secretary to the Post Office.

Dear Sir, Phœnix Foundry, Hay-street, Sydney, 7 May, 1884.

We, the undersigned, do hereby offer or agree to supply and erect ironwork for telegraph lines along the west side of George-street, Sydney, from the corner of Barrack-street to the Railway bridge, George-street West, in accordance with the plans and specification to be seen at the office of the Superintendent of Electric Telegraphs.

Supplying and erection of all the ironwork required for the above, according to plans and specification, for the sum of eight thousand five hundred pounds sterling (£8,500).

We remain, &c.,
JOHN SUTTON & SONS,
Engineers and ironfounders.

Minute of Tender Board.

We recommend that Messrs. D. & W. Robertson's tender be accepted, it being the lowest, provided that M'Farlane's castings be alone supplied, and the time to be eight months.

E. C. CRACKNELL.
F. W. HILL.
S. H. LAMBTON.
9/5/84.

Approved, 14/5/84.—J.N.

No. 9.

The Superintendent of Telegraphs to The Crown Solicitor.

Sir, 16 May, 1884.

I have the honor to inform you that Messrs. D. & W. Robertson's tender for supply of ironwork for carrying telegraph wires along George-street, has been accepted, and they have been referred to you for the purpose of signing the necessary bond for the due observance of their contract.

For supply of the whole of the ironwork, £4,000.

Penal sum, £400.

Their tender and a copy of the specification are attached.

I have, &c.,
E. C. CRACKNELL.

No. 10.

The Superintendent of Telegraphs to the Secretary to the Post Office.

Sir, 16 May, 1884.

I have the honor to enclose herewith a copy of notice for insertion in the Government Gazette, giving the particulars as to the successful tenderer for the supply of ironwork for carrying the telegraph wires along George street.

I have, &c.,
P. B. WALKER,
pro Superintendent of Telegraphs.

[*Enclosure.*]

General Post Office, Sydney, 1884.

It is hereby notified, for public information, that the tender of Messrs. D. & W. Robertson, for the supply of Ironwork to carry Telegraph Wires along George-street, at £4,000 for the whole, has been accepted.

To be delivered within twelve months from date.

Is

Is the wording of the notice "to be delivered" correct? Should it not be "to be completed?"—S.H.L., 19/5/84. This is for supply and delivery only, *vide* schedule of tenders attached.—P.B.W., 20/5/84. Notice signed by P.M.-G., and attached for publication in Gazette, 23/5/84. Superintendent of Telegraphs, B.C., 23/5/84.—S.H.L.

No. 11.

The Superintendent of Telegraphs to Messrs. D. & W. Robertson, Sydney.

Gentlemen, 22 May, 1884.

I have to inform you that the Postmaster-General has approved of the acceptance of your tender for ironwork, M'Farlane's castings, to carry telegraph wires along George-street, as per plans and specification, for the sum of four thousand pounds sterling (£4,000), to be delivered as required within (8) months, and I therefore beg to refer you to the Crown Solicitor for the purpose of signing the necessary bond for the due observance of your contract.

I have, &c.,
E. C. CRACKNELL.

No. 12.

The Superintendent of Telegraphs to Messrs. D. & W. Robertson, Sydney.

Gentlemen, 12 June, 1884.

In reference to your contract for supply of ironwork to the Government to carry telegraph wires in this city, I have the honor to inform you that the castings must be of Macfarlane's manufacture only, and be approved by the Agent-General for New South Wales before being shipped.

I have, &c,
E. C CRACKNELL.

No. 13.

Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs.

Dear Sir, Order for Telegraph Material. 13 June, 1884.

We have the honor to acknowledge receipt of yours of 12th instant, relative to above, and in reply beg to say that we are quite aware M'Farlane's castings only are to be supplied against this contract.

We notice in acceptance of tender you have reduced the time for delivery to eight months. This is rather too short, we think; but we will do our best to get M'Farlane to be up to time with delivery, although we feel confident they will want a longer time, and trust if they do so due allowance will be made us in extended time.

We have, &c.,
D. & W. ROBERTSON.

Read. No further notice need be taken of this.—E.C.C., 16/6/84.

No. 14.

The Crown Solicitor, Sydney, to The Superintendent of Telegraphs.

Sir, 24 June, 1884.

I have the honor to return herewith the tender and other papers relating to Messrs. D. & W. Robertson's contract for supply of ironwork for telegraph lines, George-street, and to state that the bond herein cannot be prepared until the names of the sureties are furnished.

I have, &c.,
J. WILLIAMS.

No. 15.

Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs.

Dear Sir, Central Exchange Buildings, York-street, Sydney, 25 June, 1884.

We beg to propose our sureties as under for contract for Ironwork:—

(1) Alexander Dean, builder, Elizabeth-street.
(2) A. R. Miller, accountant, York-street.

Yours truly,
D. & W. BOBERTSON.

No. 16.

Messrs. D. & W. Robertson, Sydney, to The Postmaster General.

Sir, Central Exchange Buildings, York-street, Sydney, 15 June, 1884.

We have the honour to advise you that we have advice from England by cable, that the ironwork for carrying telegraph wires has been placed with M'Farlane & Co., Saracen Foundry, as per your letter of 12th June, and we will do our best to faciliate delivery.

We beg to bring under your notice the fact, that, in tendering for this contract at the price, £4,000, we kept to ourselves the option of several makers, which was allowed us by the specification against which all tendered; but that subsequently, after our tender had been accepted, we received notification, that we must supply this ironwork of M'Farlane's manufacture only. We

We now find that, in consequence of being so bound, we have had to pay in England an advance of £500 above what we would have had to do had we been able to bring other makers into competition with the original manufacturers. Under these circumstances, we think the Government should give us an advance on our contract price, as we have been asked to do more than we stipulated for, or was required from the other tenderers who had the specification to go upon—that they could get it made by any good manufacturer, and not therefore have to pay any price which might be asked,—the makers, in this case knowing we were bound to their manufacture only.

As we also notice, from communication of 12th June, that it is to be inspected by the Agent-General, we hope there will be no objections to paying us this £4,500 in London, against B.L. and other shipping documents being handed over after inspection. Trusting to be favoured by your favourable reply.

We have, &c.,
D. & W. ROBERTSON.

Submitted.—S.H.L., 17/7/84.

Minute of the Postmaster-General.

The specification and advertisement for tenders do not stipulate for M'Farlane & Co.'s ironwork, and I suppose that Robertson's tender does not mention the name of this firm. (The tender is not with the papers), but a letter from Robertson, of 13th June, admits that the castings are to be M'Farlane's. Robertsons, therefore, can have no claim to the £500 extra now asked for, though they were apparently unaware of the higher price they would have to pay M'Farlane & Co.—J.N., 21/7/84.

M'Farlane & Co.'s name ought to have been inserted in the specification and advertisement, if it was necessary to have their work in preference to that of others.—J.N., 21/7/84. B.C., 21/7/84.—S.H.L.

No. 17.

The Superintendent of Telegraphs to The Secretary to the Post Office.

Messrs. D. & W. Robertson have signed the bond for the supply of McFarlane's castings, and as they made no objection at the time their tender was accepted, they have no claim against the Government.

I insisted on M'Farlane's work, as it is the most reliable, and will give no trouble on arrival.

Messrs. D. & W. Robertson ask that payment may be made in London for these castings. I see no objection to this, and when they are passed the Agent-General might be directed to pay the amount, which will save them exchange.

E. C. CRACKNELL,
1/9/84.

Submitted.—S.H.L., 2/9/84. Approved.—J.N., 9/9/84.

No. 18.

The Crown Solicitor to The Superintendent of Telegraphs.

Sir,

25 August, 1884.

In compliance with the instructions contained in your letter (number as in margin), I have prepared, and forward herewith, the bond for supply of ironwork for carrying telegraph wires along George-street, Sydney, duly signed by the contractors and sureties, and stamped.

16 May, 1884. No., nil. Messrs. D. & W. Robertson.

The tender and all other papers herein are returned herewith.

I have, &c.,
J. WILLIAMS.

Know all men by these presents, that we, William Fleming Robertson, of London, England, and James Stewart Robertson, of Sydney, in the Colony of New South Wales, carrying on business together under the style and firm of "D. & W. Robertson," Alexander Ross Miller, of Paddington, in the Colony aforesaid, accountant, and Alexander Dean, of Sydney, in the Colony aforesaid, builder, are jointly and severally held and firmly bound unto Her most gracious Majesty Queen Victoria in the penal sum of four hundred pounds sterling, to be paid to Her said Majesty, her heirs or successors, for which payment, well and truly to be made, we bind ourselves, and each of us, our and each and every of our heirs, executors, and administrators, jointly and severally, firmly by these presents.

Sealed with our seals. Dated the eighteenth day of August, in the year of our Lord one thousand eight hundred and eighty-four.

Whereas the above-bounden William Fleming Robertson and James Stewart Robertson made the tender hereunto annexed, under the terms and conditions of a notice dated the fifteenth day of April now last past, and published in the New South Wales Government Gazette of the eighteenth day of April last past (of which notice a copy, signed by the said William Fleming Robertson, James Stewart Robertson, Alexander Ross Miller, and Alexander Dean, is also hereunto annexed) to find, provide, deliver, and supply all the ironwork for telegraph lines along the west side of George-street, Sydney, aforesaid, from the corner of Barrack-street to the Railway Bridge, George-street West, Sydney aforesaid, McFarlane's castings to be supplied in accordance in all things with the general conditions hereunto annexed marked "A," and for the price or sum of four thousand pounds, and to complete and deliver the whole of the said works within twelve months from the date of acceptance of the said tender: And whereas the above-bounden Alexander Ross Miller and Alexander Dean have severally offered to become and be bound to Her Majesty, her heirs and successors, for the due performance and fulfilment of the said tender within the time mentioned in that behalf, according to the terms and conditions of the said notice: And whereas the said tender has been duly accepted by the Postmaster-General on behalf of the Government of the said Colony, on condition that this bond should be entered into by them the said William Fleming Robertson, James Stewart Robertson, Alexander Ross Miller, and Alexander Dean:

Now the condition of the above-written bond and obligation is such, that if the said William Fleming Robertson and James Stewart Robertson do and shall well and truly perform and fulfil the said tender, and the contract arising out of such tender, and the acceptance thereof as aforesaid, and all and every the terms, conditions, and stipulations thereof, within the time hereinbefore in that behalf mentioned, then this obligation will be void and of none effect; otherwise to remain in full force and virtue.

Signed, sealed, and delivered, by the above-named William Fleming Robertson, in the presence of,— W. S. Harte.	WILLIAM FLEMING ROBERTSON, by his attorney, J. S. Robertson.
Signed, sealed, and delivered, by the above-named James Stewart Robertson, in the presence of,— W. S. Harte.	JAMES STEWART ROBINSON.
Signed, sealed, and delivered, by the above-named Alexander Ross Miller, in the presence of,— W. S. Harte.	A. R. MILLER.
Signed, sealed, and delivered, by the above-named Alexander Dean, in the presence of,— W. S. Harte.	ALEX. DEAN.

No. 19.

Messrs. D. & W. Robertson, Sydney, to The Postmaster-General.

Dear Sir, Central Exchange Buildings, Sydney, 5 September, 1884.

Referring to our letter of 15th July, we shall be pleased to hear whether the Government intend to pay us in London for the columns and verandah material for telegraph wires. The material will soon be ready for shipment, and we should esteem it a favour by your informing us on the matter above referred to.

Yours respectfully,
D. & W. ROBERTSON.

Referred to Supt. Telegraphs.—S.H.L., 6/9/84.

I have already reported on the matter. When the castings are passed here, the amount could be paid in London by the Agent-General, who could be directed by telegraph by the Treasury to do so. Will the Secretary inform Messrs. D. & W. Robertson?—E.C.C., 10/9/84.

Prepare draft letters to Robertson & Co. and the Treasury.—JAS. D., 10/9/84.

No. 20.

The Secretary to the Post Office to Messrs. D. and W. Robertson, Sydney.

Gentlemen, 13 September, 1884.

With reference to your letter of the 15th July last, stating that, in tendering for the supply and erection of ironwork for telegraph lines along the west side of George-street, Sydney, at £4,000, you kept to yourselves the option of several makers allowed you by the specification; but subsequently, after your tender had been accepted, you received notification that you must supply ironwork of M'Farlane's manufacture only, and in consequence of being so bound you have had to pay in England an extra sum of £500, and requesting therefore that an advance may be allowed you; also referring to your letter dated the 5th instant, inquiring whether the Government intend to pay you in London for the telegraph material in question, I am directed to point out that the letter from the Telegraph Department of the 22nd May, accepting your tender, distinctly stated that M'Farlane's castings should be used. It appears you were again informed by the Superintendent of Telegraphs on the 12th June, "that castings must be of M'Farlane's manufacture only," and you replied on the following day as under:—

"Order for Telegraph Material.—We have the honor to acknowledge receipt of yours of the 12th instant relative to above, and in reply beg to say that we are quite aware M'Farlane's castings only are to be supplied against the contract."

I am to call attention to the fact that you signed the bond for M'Farlane's castings, and to state that under these circumstances the Postmaster-General is unable to entertain your application for an increased payment.

With regard to your request that payment for the material may be made in London, I am to inform you that the Agent-General will be instructed by cablegram to pay your London firm immediately after the castings have been passed at Sydney.

I have, &c.,
S. H. LAMBTON.

No. 21.

The Secretary to the Post Office to The Under Secretary for Finance and Trade.

Sir, 13 September, 1884.

I am directed to inform you that the tender of Messrs. D. & W. Robertson was accepted in May last, for the supply of ironwork, M'Farlane's castings, to carry telegraph wires along George-street from Barrack-street to the Railway Bridge for the sum of £4,000; and in accordance with a request from the tenderers, it has since been decided that payment shall be made to them in London, through the Agent-General, as soon as the castings are passed at Sydney. I am therefore to request that you will be so good as to cause the sum of £4,000, from the vote of £100,000 for the extension of telegraph lines generally, to be placed at Sir Saul Samuel's disposal; so that he may be able to promptly pay the amount when he is advised by cablegram that he may do so. The Postmaster-General will be glad if you will advise this department when you have taken this action.

I have, &c.,
S. H. LAMBTON.

Minute of the Colonial Treasurer.

I SHOULD be glad if my hon. colleague would adhere strictly to the terms of the tender, which I understand was for payment to be made here on delivery and approval. We have funds in London, but the proposal of Messrs. Robertson in other contracts of a similar nature and for a similar concession was declined by the Secretary for Public Works at my suggestion.

Besides, any departure from the strict wording of the tender may lead to questions being asked and adverse criticism, that preference has been given to one tenderer which was not formally announced to others.—G.R.D., 22/9/84.

The Secretary, General Post Office.—G.E., B.C., 22/9/84. Superintendent Telegraphs, for former papers.—S.H.L., B.C., 24/9/84. Papers herewith. I suppose that the Hon. the Treasurer's minute must be considered final.—E.C.C., 25/9/84. Before submitting this matter to the P.M.-G., I think it would be as well if Mr. Cracknell would state whether the Treasurer has been correctly informed, that Messrs. Robertson tendered on the understanding that payment was to be made in Sydney. I can see nothing to this effect amongst the papers herewith.—S.H.L., 26/9/84.

No. 22.

The Superintendent of Telegraphs to The Secretary to General Post Office.

30 September, 1884.

It is usual to pay amounts due to Contractors at the place where the contract is made and the goods approved of or finally passed after inspection, unless a special arrangement is stipulated. In this case the contract was accepted in the usual way, and no concession was asked for until the 15th July, and again on the 5th instant.

I cannot see by the accompanying letter to the Treasury, dated 13th September, that anything was said about payment in Sydney. The question is, that by paying the amount in London it will save Messrs. D. & W. Robertson exchange; but as the Treasurer does not approve of this, there is no alternative but to pay here, except it be pointed out that Messrs. Robertson have been informed that there is no objection to their request being complied with.

E. C. CRACKNELL.

Submitted copy of letter from the Department to D. & W. Robertson, attached.—Jas.D., 3/10/84. (Note—See letter to Messrs. D. & W. Robertson, dated 13/9/84. Is it as the Treasurer supposes a condition of tender that payment will be made in Sydney? If so, please submit such condition.—S.H.L. Mr. Cracknell. There is no such condition, and there never has been that I am aware of; if contracts are accepted here, as I have already pointed out, they are paid for here on delivery.—E.C.C., 6/10/84. Submitted.—S.H.L., 9/10/84.

Minute of the Postmaster-General.

Messrs. Robertson's contract contains no provision that payment of the moneys payable to them is to be made in Sydney; but as the contract was made in Sydney, and the goods were to be supplied here, then Messrs. Robertson could not enforce payment except in New South Wales.

The tender of these gentlemen was nearly £1,000 lower than that of any other tender, and there can be no reasonable doubt that their price was fixed at £4,000 on the assumption that M'Farlane's work could be obtained at the same price as the work of other high-class makers; but they now state that they have had to pay M'Farlane £500 more than they would have had to pay other makers; and the fact that Dunn & Co. tendered at the rate of £5,750 for supplying M'Farlane's work, and only £4,990 for the same work if obtained from any other manufacturer, satisfies me that their statement is correct. The Colony has therefore benefited at Messrs. Robertson's expense to the extent of at least £500.

Under these circumstances I sanctioned the payment of the contract price in London, and Contractors were written to to that effect. It will cost the Government little if anything to make the payment in London instead of in Sydney, but will save something to the Contractors.

I trust therefore that my honorable colleague the Colonial Treasurer will be able to see his way to arrange for the payment for the £4,000 in London.

J.N.,
13/10/84.

The Under Secretary for Finance and Trade, B.C., 14/10/84,—S.H.L.

Minute to the Colonial Treasurer.

As my hon. colleague has promised that payment be made in London, and that such promise is a pledge of the Government, the payment may be so made, but it will be more convenient in future not to depart from actual terms of contract, or to make any stipulations for payment outside the Colony without reference to the Treasury. In this instance Messrs. Robertson benefit to the extent of 3½ per cent. at least.

I observe in copy of Mr. Lambton's letter to Robertson & Co., that he informs those gentlemen that the Agent-General will be called to pay certain money on certain conditions. This power to cable the Agent-General to pay in London is of no value except issued from the Treasury.

G.R.D.,
15/10/84.

The Secretary, General Post Office, 17/10/84.—G.E.

Submitted. Papers might now be referred to Superintendent of Telegraphs for information and future guidance. It may be as well to inform Messrs. Robertson that the promised cablegram to the Agent-General can only be transmitted by the Treasury, and at their (D.W.R. & Co.'s) expense.—S.H.L., 20/10/84. Approved, J.N., 30/10/84. The Superintendent of Telegraphs, B.C., 5/11/84.—S.H.L. Read.—P.B.W., 6/11/84.

No. 23.

The Secretary to the Post Office to Messrs. D. & W. Robertson, Sydney.

Gentlemen, 3 November, 1884.

Adverting to the last paragraph of my letter dated the 13th Sept., stating with regard to payment for certain telegraph material that "the Agent-General will be instructed by cablegram to pay your London firm immediately after the castings have been passed in Sydney," I am directed to add, that it is found that the cablegram in question can only be transmitted by the Treasury Department, and it will have to be sent at your expense.

I have, &c.,
J. DALGARNO,
For Secretary.

No. 24.

Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs.

Central Exchange Buildings, York-street, Sydney, 4 Nov., 1884.

Dear Sir, *Re* Cast Iron Work.

We beg to enclose you letter received from our London firm from the Saracen Foundry, from which you will see that the whole will likely be shipped by the end of December. The intention being to ship it by the October, November, and December vessels from Glasgow.

Yours truly,
D. & W. ROBERTSON.

[*Enclosure.*]

To Messrs. D. and W. Robertson, London.

Telephone Verandah.

Gentlemen, Saracen Foundry, Glasgow, 20 Sept., 1884.

In reply to your valued inquiry of 17th concerning delivery of this work, we reckon all going well, being able to ship about the half of the work by the 25th October, certainly sufficient to warrant you making arrangements for the vessel you refer to as sailing then. The remainder we calculate upon for the beginning of December.

We are, &c.,
WALTER M'FARLANE & CO.,

No. 25.

Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs.

Dear Sir, Central Exchange Buildings, Sydney, 28 Nov., 1884

Enclosed are press copies of letters from M'Farlane & Co., which explain themselves. Our people are doing all they can to push the work on.

Yours truly,
D. & W. ROBERTSON.

[*Enclosures.*]

To Messrs. D. & W. Robertson, London.

Telephone Verandah.

Gentlemen, Glasgow, 9 October, 1884.

With regret we must inform you that our promise of 20th ultimo cannot possibly be adhered to. What of the columns are ready will be of little service without the frieze, and with this work we cannot proceeed until the engineer has been satisfied. Mr. How advises us of his coming here immediately his inspector reports upon a complete bay of the work being ready in accordance with suggestions of theirs we are following. We expect the inspector here to-morrow, but until the inspection is completed so as to let us work continuously, no progress towards delivery can be effected. We shall not fail to advise you of what can be ready by date already mentioned.

We are, &c.,
WALTER M'FARLANE & CO.

To Messrs. D and W. Robertson, London.

Telephone Verandah.

Gentlemen, Glasgow, 16 October, 1884.

We are just in possession of instructions from Mr. Bradshaw, the local inspector appointed for this work, which cancel all promises of delivery already given. Already we have said that we are pushing forward the single columns; but the main portion of the work lies with the double columns, for without them your Sydney friends could do nothing to the erection at site. We are now required to have ready another set of double columns against the chief inspector's visit, and until the first set of these columns is finally satisfactory, all progress with this part of the work is debarred. Mr. How does not name any day for his coming, but of course his coming could serve no end before we are ready, when we will advise him. Our desire is to have you informed of our position.

We are, &c.
WALTER M'FARLANE & CO.

No. 26.

Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs.

Dear Sir, Sydney, 7 January, 1885.

We beg to advise that we have advice from England, that about 120 tons of the ironwork for verandah, has been shipped by "Derwent," now about 30 days out, and the balance of this contract is being proceeded with with all despatch.

We have, &c.,
D. & W. ROBERTSON.

Read. Mr. Rutherford to see.—E.C.C., 12/1/85. Seen.—R. Rutherford, 15/1/85.

No. 27.

The Superintendent of Telegraphs to the Secretary to the Post Office.

16 January, 1885.

One hundred and twenty tons of the ironwork for carrying the telephone wires along George-street will arrive shortly. I propose that it should be erected by Mr. Rutherford's town repairing-gang; but, as it is a matter requiring the supervision of a competent person, I recommend that it be placed in the hands of Mr. W. Humphreys, of Bond-street Chambers, who would be paid the usual commission of 5 per cent.

He will of course inspect and pass the ironwork before a certificate is handed to the contractors, Messrs. D. & W. Robertson.

E. C. CRACKNELL.

Submitted.—S.H.L., 17/1/85.

No. 28.

Messrs. D. & W. Robertson, Sydney, to The Acting-Superintendent of Telegraphs.

Contract for Ironwork to carry Telegraph Wires.

Dear Sir, Sydney, 2 May, 1885.

We have the honour to hand you herewith, voucher for telephone and telegraph verandah material, and will feel obliged if you will instruct the Treasury Department, as per your letter, B. 84-11,408, of 3 November, 1884, to cable £3,000 through the Agent-General to our London office, "D. & W. Robertson, 31 Lombard-street." The remaining £1,000 can be paid to us here.

We have, &c.,
Pro D. & W. ROBERTSON,
A. K. MILLER.

NEW SOUTH WALES.

[Contingent Expenses.]

Department of Telegraphs

Dr to D. &. W. Robertson, York-street, Sydney.

Date or period of supply.	Articles.	Amount.
May 1st, 1885.	Contract for Ironwork to carry Telegraph Wires. To Ironwork per contract, Walter M'Farlane's specification attached *	£ s. d. 4,000 0 0

* For M'Farlane's specification, see No. 37.

Accountant.—P.B.W., 4/5/85. There does not appear to be any certificate as to receipt of material; records state previous papers marked off to Superintendent.—C.S.G., 5/5/85.

To the Clerk in charge of Stores:—Please say whether the whole of the material contracted for has been received, and is according to specifications.—C.S.G., 7/5/85.

Two columns and one box base-piece have not been delivered, all the packages angle iron and flat iron have been delivered. The columns and base-pieces delivered and the angle and flat iron are in good order and condition. The packages were all in good order excepting one, which I had unpacked and found contents correct and in good order. The cases containing the bolts and nuts I had unpacked and weighed, and found them to be correct. I have not had the other packages unpacked, but will do so if required.—F.V.H., 15/5/85.

No. 29.

Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs.

Telephone Verandah.

Dear Sir, 5 May, 1885.

We find (2) two of the cast-iron columns ex "Derwent" have got broken. We can repair them so as to make them quite as strong as before, and can do it in such a way that the break need not be visible. Kindly say if you will accept columns repaired, or if we must get other (2) two cast.

Yours faithfully,
D. & W. ROBERTSON.

P.S.—The two (2) broken columns are lying at our Blackwattle Iron Works.

I am afraid it will be necessary for fresh columns to be cast, as I cannot accept delivery of a damaged article.—P.B.W., 6/5/85.

No. 30.

The Acting Superintendent of Telegraphs to Messrs. D. and W. Robertson, Sydney.

Gentlemen, 7 May, 1885.

In reply to your communication of the 5th instant, respecting columns (2) belonging to iron-work for carrying telegraph wires, which have been broken, I have the honor to inform you that the Government will not accept delivery of any damaged pieces, and it will therefore be necessary for you to supply new columns in place of those mentioned.

I have, &c.,
P. B. WALKER.

No. 31.

Messrs. D. and W. Robertson, Sydney, to The Acting Superintendent of Telegraphs.

Dear Sir, Telephone Verandah. Sydney, 13 May, 1885.

Enclosed we beg to hand you certificate of inspection from New South Wales Government Inspecting Engineer, in London, for above castings of M'Farlane's manufacture, which we trust you will find in order.

Yours, faithfully,
D. & W. ROBERTSON.

[*Enclosure.*]

[*Enclosure.*]

Messrs. D. & W. Robertson, London.

2 Queen Square Place, Westminster, S.W., December 11, 1884.

Dear Sirs,

I have received further particulars respecting the work at M'Farlane's as follows :—

"I was at M'Farlane's works yesterday, and found nearly all the casting for the 'Telephone Verandah' finished; 397 lengths of friezes are packed. The double posts and their fittings of panels are the only parts that are behind hand. I am going there again on Friday the 12th to inspect them, and I do not see why all M'Farlane's work should not be finished and shipped by the 20th."

You will therefore perceive there is every probability of their being ready by the time you require, and I think it would be well to instruct them to ship so soon as the several parts have passed our inspection.

Yours truly,
J. D. BALDRY.

No. 32.

Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs.

Dear Sir,

Sydney, 21 May, 1885.

Referring to ours of the 2nd, we shall be glad to know if the Agent-General has been instructed by cable to pay the £3,000 therein referred to to our London Office.

If instructions have not yet been sent, we would be greatly obliged if you would give the necessary instructions, as our London people want some money this week.

Yours faithfully,
D. &. W. ROBERTSON.

The certificate furnished is not sufficient, and it will be necessary to obtain one from a competent engineer before the ironwork is taken over.—P.B.W., 21/5/85.

No. 33.

The Acting Superintendent of Telegraphs to The Secretary to the Post Office.

23 May, 1885.

I HAVE to report for the information of the Postmaster General that the ironwork for carrying telegraph and telephone wires along George-street, for which Messrs. D. and W. Robertson are the contractors, has arrived, and Messrs. Robertson have applied for a sum of £3,000 to be paid to them on account of their contract, submitting a certificate from the New South Wales Government Inspecting Engineer in London as to the manufacture of the iron; but I do not consider this sufficient, and as the recorded papers referring to the acceptance of the tender were handed to Mr. Cracknell, some time previous to his departure for Europe, and cannot now be found, I am unable to state what arrangements were entered into in regard to the inspection of this material.

Bond also.

As it is necessary that an Engineer should be employed for the purpose of checking and certifying to the completeness of the ironwork to hand, I would suggest that Mr. Moriarty (the Engineer-in-Chief for Harbours and Rivers) be requested to nominate an officer of his Department for this purpose, and that the amount asked for by the contractors be not paid over until such certificate is furnished. I have made temporary arrangements for storage of the material, and as there is likely to be some considerable difficulty experienced with the shop proprietors *en route*, in respect to existing verandahs, I deem it desirable to postpone the erection of the ironwork until Mr. Cracknell's return, as it is a matter which he himself understands, and there is no need to hurry on the work. Messrs. Robertson ask that the £3,000 on account of their contract be cabled to London; but, as this would lead to expense, and I cannot find the papers showing what arrangements were made for payment, I am unable to furnish any information in respect thereto. I would, however, point out that the specification for Messrs. D. and W. Robertson's contract provides for the supply and delivery of the ironwork and fittings along the route, which has not yet been carried out; but I think if a satisfactory certificate is received from the Engineer appointed to inspect the material, the amount asked for, £3,000, might be paid, and the balance retained until the contract so far as delivery is concerned is completed.

Copies of letters addressed to Messrs. Robertson together with specification are attached. Also tracings and manuscript copy specification.

P. B. WALKER.

Submitted.—S.H.L., 23/5/85.

Minute of the Postmaster-General.

Approved. Inform Messrs. Robertson that the £3,000 (or a less sum if less should be found payable under their contract) will be paid in Sydney as soon as we have obtained a certificate of the engineer appointed to inspect the material, Messrs. Robertson undertaking to deliver the material along the line, as stipulated by the specification, and to make such delivery at such time as we may arrange. It had better be ascertained from the Treasury whether there will be any difficulty (which I do not apprehend) as to making this payment.—J.N., 5/6/85.

No. 34.

The Secretary to the Post Office to The Under Secretary for Finance and Trade.

Sir,

6 June, 1885.

I am directed to inform you that an urgent request has been made by Messrs. D. & W. Robertson for payment of a sum of £3,000, on account of their contract, for iron-work just arrived in Sydney, intended for carrying telegraph and telephone wires along George-street; and to request that you will be so good as to move the Colonial Treasurer to authorize the payment of the amount from the balance of £100,000 for the extensions of telegraph lines generally (which now stands at £13,000), as the amount is urgently required, and the items for other works will not exhaust the vote during the current year.

I have, &c.,
S. H. LAMBTON.

No. 35.

The Secretary to the Post Office to The Under Secretary for Public Works.

Sir, 6 June, 1885.

I am directed to inform you that the ironwork for carrying telegraph and telephone wires along George-street, for which a tender of Messrs. D. & W. Robertson was accepted some time ago, has now arrived in Sydney, and the Acting Superintendent of Telegraphs has recommended that an engineer should be employed to check and certify to the completeness of the ironwork in question.

I am, therefore, to state that the Postmaster-General will be glad if you will move the Honorable the Minister for Works to cause Mr. Moriarty to appoint some officer, as proposed, and if the latter will wait upon Mr. Walker, the Acting Superintendent of Telegraphs, all necessary particulars to enable him to inspect and report upon ironwork will be furnished. I have, &c.,

S. H. LAMBTON.

No. 36.

Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs.

Dear Sir, Central Exchange Buildings, York-street, Sydney, 4 June, 1886.

The "Barrenman" from Glasgow, with the balance of telephone verandah material, has now arrived, and we will deliver the material to the Telegraph Store as soon as it is landed.

Yours faithfully,

Storekeeper to attend to this.—P.B.W., 4/6/85. D. & W. ROBERTSON.

No. 37.

Messrs. D. and W. Robertson, Sydney, to The Acting Superintendent of Telegraphs.

Dear Sir, 6 June, 1885.

We herewith enclose, according to your request, original specification of goods for your Department ex "Barrenman." Yours truly,

D. & W. ROBERTSON.

Shipping Memorandum from Walter M'Farlane & Co., Saracen Foundry, Possil Park, Glasgow.

14 January, 1885.

PARTICULARS of nine boxes, &c., marked DWR within diamond, Sydney, consigned to Sydney, per vessel "Barrenman," on account of Messrs. D. & W. Robertson, merchants, 31 Lombard-street, London, E.C. :—

Description of package.	No.	Dimensions.	Contents.	Gross weight.	Net weight.
				cwt. qr. lb.	cwt. qr. lb.
Spar box	236	4′ 4″ x 2′ 0″ x 1′ 8″...	7 close panels for double cols. 3′ 6″ x 1′ 6″ ...	5 3 7	4 3 21
,, ...	237	3′ 10″ x 2′ 0″ x 1′ 6″..	5 panels for double columns 3′ 4″ x 1′ 6″ ...	3 0 7	2 1 7
,, ...	238	5′ 6″ x 2′ 0″ x 1′ 6″	5 ,, ,, 5′ 0″ x 1′ 6″ 2 ,, ,, 4′ 9¼″ x 1′ 6″	5 3 0	4 3 0
,, ...	239	5′ 4″ x 2′ 0″ x 1′ 6″	3 ,, ,, 4′ 9¼″ x 1′ 6″ 3 close ,, ,, 3′ 6¼″ x 1′ 6″	5 0 7	4 0 7
,, ...	240	4′ 4″ x 3′ 7″ x 1′ 8″ ...	60 racks, No. 2.....	8 0 7	6 3 21
Close box	241	5′ 1″ x 4′ 0″ x 10″ ...	60 ,, ...	8 0 0	6 2 14
,, ...	242	4′ 8″ x 4′ 2″ x 11″ ...	60 ,, ...	8 0 0	6 2 14
,, ...	243	6′ 0″ x 2′ 8″ x 1′ 0″...	60 ,, ...	7 3 7	6 2 7
,, ...	244	4′ 9″ x 4′ 2″ x 11″	48 racks, No. 2..... 15 terminals for top of columns.....	8 2 7	7 0 21
....	...	.....	10 No. 115 columns	55 0 0	53 0 0
....	..	.....	5 bases	26 2 7	26 2 7
				141 2 21	129 2 7
					Tare weight.
Spar Box	1	5′ 6″ x 2′ 3″ x 1′ 6″ ...	6 centre panels frieze rail, 5′ 0″ x 1′ 8¾″	5 3 14	1 0 0
,, ...	2	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	3	,, ..	6 ,, ,, ...	5 3 14	1 0 0
,, ...	4	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	5	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	6	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	7	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	8	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	9	,, ...	6 ,, ,, ...	5 3 11	1 0 0
,, ...	10	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	11	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	12	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	13	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	14	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	15	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	16	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	17	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	18	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	19	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	20	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	21	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	22	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	23	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	24	5′ 9″ x 2′ 3″ x 1′ 6″ ...	6 end panels frieze rail, 5′ 0¾″ x 1′ 8¾″, L.H...	6 0 14	1 0 0
,, ...	25	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	26	,, ..	6 ,, ,, ...	6 0 14	1 0 0
,, ...	27	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	28	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	29	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	30	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	31	,, ...	6 ,, ,, ...	6 0 14	1 0 0

Description of Package.	No.	Dimensions.	Contents.	Gross Weight.	Tare Weight.
				cwt. qr. lb.	cwt. qr. lb.
Spar Box	32	5′ 9″ x 2′ 3″ x 1′ 6″...	6 end panels frieze rail, 5′ 0¾″ x 1′ 8¾″, L.H.	6 0 14	1 0 0
,, ...	33	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	34	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	35	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	36	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	37	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	38	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	39	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	40	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	41	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	42	,, ...	6 ,, ,, ...	6 0 14	1 0 0
,, ...	43	,, ...	.....	6 0 14	1 0 0
,, ...	44	.....	.....	6 0 14	1 0 0
,, ...	45	.....	.....	6 0 14	1 0 0
,, ...	46	.....	.....	6 0 14	1 0 0
,, ...	47	5′ 4″ x 2′ 3″ x 1′ 6″ ...	6 do 4′ 7½″ x 1′ 8¾″, mkd. 14′ 8″ on ends, R.H.	5 2 7	0 3 21
,, ...	48	,, ...	6 ,, ,, ...	5 2 7	0 3 21
,, ...	49	,, ...	6 ,, ,, ...	5 2 7	0 3 21
,, ...	50	,, ...	6 ,, ,, ...	5 2 7	0 3 21
,, ...	51	,, ...	6 ,, ,, ...	5 2 7	0 3 21
,, ...	52	,, ...	6 ,, ,, ...	5 2 7	0 3 21
,, ...	53	,, ...	6 ,, ,, ...	5 2 7	0 3 21
,, ...	54	,, ...	6 ,, ,, ...	5 2 7	0 3 21
,, ...	55	,, ...	6 ,, ,, ...	5 2 7	0 3 21
,, ...	56	,, ...	6 ,, ,, ...	5 2 7	0 3 21
,, ...	57	5′ 3″ x 2′ 3″ x 1′ 6″ ...	6 do 4′ 6½″ x 1′ 8¾″, mkd. 14′ 7″ on ends, R.H.	4 1 7	0 3 21
,, ...	58	,, ...	6 ,, ,, ...	4 1 7	0 3 21
,, ...	59	,, ...	6 ,, ,, ...	4 0 14	0 3 21
,, ...	60	5′ 1″ x 2′ 3″ x 1′ 6″ ...	6 do 4′ 4½″ x 1′ 8¾″, mkd. 14′ 5″ on ends, R.H.	5 2 7	0 3 21
,, ...	61	5′ 0″ x 2′ 3″ x 1′ 6″ ...	6 do 4′ 3½″ x 1′ 8¾″, mkd. 14′ 4″ on ends, R.H.	5 3 14	0 3 21
,, ...	62	4′ 11″ x 2′ 3″ x 1′ 6″...	6 do 4′ 2½″ x 1′ 8¾″, mkd. 14′ 3″ on ends, R.H.	4 3 14	0 3 21
,, ...	63	,, ...	6 do 4′ 3½″ x 1″ 8¾″, mkd. 14′ 3″ on ends, R.H.	5 1 0	0 3 21
,, ...	64	4′ 10″ x 2′ 3″ x 1′ 6″...	6 do 4′ 1½″ x 1′ 8¾″, mkd. 14′ 2″ on ends, R.H.	5 3 14	0 3 21
,, ...	65	4′ 8″ x 2′ 3″ x 1′ 6″ ...	6 do 3′ 11½″ x 1′ 8¾″ mkd. 14′ 0″ on ends, R.H.	4 3 14	0 3 14
,, ...	66	,, ...	6 ,, ,, ...	4 3 14	0 3 14
,, ...	67	,, ...	6 ,, ,, ...	4 3 14	0 3 14
,, ...	68	,, ...	6 ,, ,, ...	5 3 14	0 3 14
,, ...	69	3′ 8″ x 2′ 3″ x 1′ 6″	6 do 2′ 11½″ x 1′ 8¾″, mkd. 13′ 0″ on ends, R.H. 2 do 2′ 5″ x 1′ 8¾″ mkd. 12′ 6″ on ends levd....	5 3 14 5 3 14	0 3 0 1 0 0
,, ...	70	5′ 6″ x 2′ 3″ x 1′ 6″ ...	6 centre panels frieze rail, 5′ 0″ x 1′ 8¾.....	5 3 14	1 0 0
,, ...	71	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	72	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	73	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	74	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	75	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	76	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	77	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	78	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	79	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	80	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	81	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	82	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	83	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	84	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	85	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	86	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	87	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	88	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	89	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	90	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	91	,, ...	,, ,, ...	5 3 14	1 0 0
,, ...	92	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	93	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	94	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	95	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	96	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	97	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	98	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	99	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	100	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	101	5′ 9″ x 2′ 3″ x 1′ 6″ ...	6 end panels frieze rail, 5′ 0¾″ x 1′ 8¾″, L.H.	6 0 21	1 0 0
,, ...	102	,, ...	6 ,, ,, ...	6 0 21	1 0 0
,, ...	103	,, ...	6 ,, ,, ...	6 0 21	1 0 0
,, ...	104	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	105	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	106	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	107	,, ...	6 ,, ,, ...	5 3 14	1 0 0
,, ...	108	,, ...	7 ,, mkd. 1, 12′; 6, 13′ 10″ levd.	5 3 14	1 0 0
,, ...	109	5′ 11″ x 2′ 3″ x 1′ 6″...	6 do 5′ 2½″ x 1′ 8¾″, mkd. 15′ 5″, R. H.	6 1 14	1 0 14
,, ...	110	,, ...	6 ,, ,, ...	5 3 14	1 0 14
,, ...	111	,, ...	6 ,, ,, ...	5 3 14	1 0 14
,, ...	112	,, ...	6 ,, ,, ...	5 3 14	1 0 14
,, ...	113	,, ...	6 ,, ,, L.H.	6 1 14	1 0 14
,, ...	114	,, ...	6 ,, ,, ...	6 1 14	1 0 14
,, ...	115	,, ...	6 ,, ,, ...	6 1 14	1 0 14
,, ...	116	,, ...	6 ,, ,, ...	6 1 14	1 0 14
,, ...	117	,, ...	6 ,, ,, ..	6 1 14	1 0 14
,, ...	118	,, ...	6 ,, 14′ 11″ on ends, LH.	6 1 14	1 0 14
,, ...	119	,, ...	6 ,, ,, ...	6 1 14	1 0 14
,, ...	120	,, ...	6 ,, ,, ...	6 1 14	1 0 14
,, ...	121	,, ...	6 ,, 15′ 5″ ...	6 1 14	1 0 14

Description of package.	No.	Dimensions.	Contents.	Gross Weight.	Tare Weight.
				cwt. qr. lb.	cwt. qr. lb.
Spar box	122	5′ 11″ x 2′ 3″ x 1′ 6″...	6 end panels 5′ 2½″ x 1′ 8¾″ marked 14′ 5″ R.H.	6 1 14	1 0 14
,, ...	123	,, ...	6 ,, ,, ,, 14′ 11″ L.H.	4 1 14	1 0 14
,, ...	124	,, ...	6 ,, ,, ,, 14′ 11″ ,,	6 1 14	1 0 14
,, ...	125	,, ...	6 ,, 5′ 2″ ,, 15′ 4″ RH	6 1 14	1 0 14
,, ...	126	,, ...	6 ,, ,, ,, 15′ 4″ ,,	6 1 14	1 0 14
,, ...	127	,, ...	6 ,, ,, ,, 15′ 4″ ,,	6 1 14	1 0 14
,, ...	128	,, ...	6 ,, ,, ,, 15′ 4″ L.H.	6 1 14	1 0 14
,, ...	129	,, ...	6 ,, ,, ,, 15′ 4″ ,,	6 1 14	1 0 14
,, ...	130	,, ..	6 ,, ,, ,, 15′ 4″ ,,	6 1 14	1 0 14
,, ...	131	,, ...	6 ,, ,, ,, 15′ 4″ $\frac{3}{L}$ $\frac{3}{R}$	6 1 14	1 0 14
,, ...	132	6′ 3″ x 2′ 3″ x 1′ 6″ ...	6 ,, 5′ 6¾″ x 1′ 8¾″ marked 15′ 1″ L.H.	7 0 0	1 0 21
,, ...	133	,, ...	6 ,, ,, ,, 15′ 1″ ,,	7 0 0	1 0 21
,, ...	134	,, ...	6 ,, ,, ,, 15′ 2″ ,,	7 0 0	1 0 21
,, ...	135	,, ...	6 ,, ,, ,, 15′ 2″ ,,	7 0 0	1 0 21
,, ...	136	,, ...	6 ,, ,, ,, 15′ 3″ ,,	7 0 0	1 0 21
,, ...	137	,, ...	6 ,, ,, ,, 15′ 3″ ,,	7 0 0	1 0 21
,, ...	138	,, ...	6 ,, ,, $\frac{4}{16'0''}$ $\frac{1}{18'7''}$ $\frac{1}{15'1''}$,,	6 3 7	1 0 21
,, ...	139	,, ...	6 ,, ,, $\frac{3}{15'2''}$ $\frac{3}{15'11''}$,,	7 0 0	1 0 21
,, ...	140	,,	4 ,, 3′ 7½″ x 1′ 8¾″ marked 13′ 8″ R.H. 2 ,, 3′ 4½″ x 1′ 8¾″ ,, 13′ 5″ ,,	4 2 0	0 3 14
,, ...	141	,,	4 ,, 3′ 4½″ x 1′ 8¾″ ,, 13′ 2″ ,, 2 ,, 3′ 3½″ x 1′ 8¾″ ,, 13′ 4″ ,,	4 0 7	0 3 7
,, ...	142	,,	3 ,, 3′ 3½″ x 1′ 8¾″ ,, 13′ 4″ ,, 3 ,, 3′ 4½″ x 1′ 8¾″ ,, 13′ 5″ ,,	4 0 7	0 3 7
,, ...	143	4′ 5″ x 2′ 3″ x 1′ 6″ ...	6 end panels frieze rail 3′ 8½ x 1′ 8¾″, marked 13′ 9″ R.H.	5 2 21	0 3 14
,, ...	144	4′ 7″ x 2′ 3″ x 1′ 6″ ...	6 ,, 3′ 10½″ x 1′ 8¾″ marked 13′ 11″ R.H.	5 0 0	0 3 14
,, ...	145	,, ...	6 ,, 3′ 9½″ x 1′ 8¾″ ,, 13′ 10″ ,,	5 0 0	0 3 14
,, ...	146	,,	4 ,, 3′ 9½″ x 1′ 8¾″ ,, $\frac{3}{13'}$ 10″ $\frac{1}{13'}$ 10″ levd. 1 ,, 3′ 10½″ x 1′ 8¾″ marked 13′ 11″ ... 1 ,, 3′ 0½″ x 1′ 8¾″ ,, 18′ 7″ ...	5 3 14 5 0 0	0 3 14 0 3 14
,, ...	147	5′ 3″ x 2′ 3″ x 1′ 6″ ...	6 ,, 4′ 6½″ x 1′ 8¾″ ,, 15′ 1″ R.H.	5 3 7	0 3 21
,, ...	148	,, ...	6 ,, ,, ,, 15′ 1″	5 3 7	0 3 21
,, ...	149	.....	3 ,, 4′ 6½″ x 1′ 8¾″ ,, 15′ 1″ R.H. 3 ,, 4′ 2½″ x 1′ 8¾″ ,, 14′ 3″ ,,	5 3 7	0 3 21
,, ...	150	5′ 4″ x 2′ 3″ x 1′ 6″ ...	6 ,, 4′ 7½″ x 1′ 8¾″ ,, 15′ 2″ ,,	5 3 14	1 0 0
,, ...	151	,, ...	6 ,, ,, ,, 15′ 2″	5 3 14	1 0 0
,, ...	152	5′ 5″ x 2′ 3″ x 1′ 6″ ...	6 ,, 4′ 8½″ x 1′ 8¾″ ,, 14′ 11″ ,,	5 3 14	1 0 0
,, ...	153	,, ...	6 ,, ,, ,, ,, ,,	5 3 14	1 0 0
,, ...	154	,, ...	6 ,, ,, ,, ,, ,,	5 3 14	1 0 0
,, ...	155	,, ...	6 ,, ,, ,, ,, ,,	4 1 14	1 0 0
,, ...	156	,, ...	6 ,, ,, ,, ,, ,,	4 1 14	1 0 0
,, ...	157	,, ...	6 ,, ,, ,, 15′ 3″ ,,	4 1 14	1 0 0
,, ...	158	,, ...	6 ,, ,, ,, ,, ,,	6 1 14	1 0 0
,, ...	159	,, ...	6 ,, ,, ,, 14′ 11″ ,,	6 1 14	1 0 0
,, ...	160	6′ 1″ x 2′ 3″ x 1′ 6″	4 ,, 5′ 4½″ x 1′ 8¾″ ,, 15′ 11″ ,, 2 ,, 4′ 7½″ x 1′ 8¾″ ,, 15′ 2″ ,,	7 0 0	1 0 21
,, ...	161	6′ 3″ x 2′ 3″ x 1′ 6″	4 ,, 5′ 5½″ x 1′ 8¾″ ,, 16′ 0″ ,, 2 ,, 5′ 6¾″ x 1′ 8¾″ ,, 15′ 3″ ,,	6 3 14	1 0 21
,, ...	162	5′ 6″ x 2′ 3″ x 1′ 6″	2 ,, 4′ 4½″ x 1′ 8¾″ ,, 14′ 5″ ,, 4 centre panels 5′ 0″ x 1′ 8¾″ .... ,,	5 3 7	1 0 0
,, ...	163	5′ 11″ x 2′ 3″ x 1′ 6″...	6 end panels 5′ 2½″ x 1′ 8¾″, $\frac{2}{15'}$ $\frac{R}{5''}$, $\frac{3}{14'}$ 11″, $\frac{1}{12'}$ $\frac{R}{6''}$	5 3 0	1 0 14
,, ...	164	5′ 5″ x 2′ 3″ x 1′ 6″ ...	5 ,, 4′ 8½″ x 1′ 8¾″, $\frac{2}{15'}$ 3″ $\frac{3}{14'}$ 11″ R.H.	6 0 0	1 0 0
,, ...	165	3′ 10″ x 2′ 0″ x 1′ 6″...	6 panels for double columns 3′ 4″ x 1′ 6″ ...	4 2 21	0 3 0
,, ...	166	,, ...	7 ,, ,, ...	5 0 0	0 3 0
Close box	167	5′ 7″ x 3′ 7″ x 1′ 1″ ...	10 bags bolts	11 1 21	1 1 14
Spar box	168	5′ 6″ x 2′ 0″ x 1′ 6″ ...	6 panels for double columns 5′ 0″ x 1′ 6″	4 2 0	1 0 0
,, ...	169	,, ...	7 ,, ,, ...	5 3 0	1 0 0
,, ...	170	,, ...	18 No., 49 brackets 1′ 7½″ x 3′ 1½″ L.H.	5 2 7	1 0 7
,, ...	171	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	172	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	173	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	154	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	175	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	176	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	177	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	178	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	179	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	180	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	181	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	182	3′ 7″ x 2′ 8″ x 2′ 4″ ...	18 ,, ...	5 2 7	1 0 7
,, ...	183	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	184	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	185	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	186	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	187	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	188	,, ...	18 ,, R.H.	5 2 7	1 0 7
,, ...	189	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	190	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	191	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	192	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	193	,, ...	18 ,, ...	5 2 7	1 0 7
,, ...	194	,, ...	18 ,, ...	5 2 7	1 0 7

Description of Packages.	No.	Dimensions.	Contents.	Gross Weight.	Tare Weight.
				cwt. qr. lb.	cwt. qr. lb.
Spar Box	195	3′ 7″ x 2′ 8″ x 2′ 4″ ...	18 No., 49 brackets 1′ 7½″ x 3′ 1½″ R.H.	5 2 7	1 0 7
,, ...	196	,, ...	18 ,, ,, ...	5 2 7	1 0 7
,, ...	197	,, ...	18 ,, ,, ...	5 2 7	1 0 7
,, ...	198	,, ...	18 ,, ,, ...	5 2 7	1 0 7
,, ...	199	,, ...	18 ,, ,, ...	5 2 7	1 0 7
,, ...	200	,, ...	18 ,, ,, ...	5 2 7	1 0 7
,, ...	201	,, ...	18 ,, ,, ...	5 2 7	1 0 7
,, ...	202	,, ...	18 ,, ,, ...	5 2 7	1 0 7
,, ...	203	,, ...	18 ,, ,, ...	5 2 7	1 0 7
,, ...	204	,, ...	18 ,, ,, ...	5 2 7	1 0 7
,, ...	205	,, ...	18 ,, ,, ...	5 2 7	1 0 7
,, ...	206	4′ 10″ x 2′ 7″ x 1′ 8″	12 ,, ,, 6/R 6/L	4 0 0	1 0 7
Close Box	207	6′ 8″ x 1′ 10″ x 1′ 8″	12 bags bolts and nuts	12 2 7	1 1 7
Spar Box	208	5′ 4″ x 2′ 0″ x 1′ 6″ ...	6 panels for double columns 4′ 9¼″ x 1′ 6″ ...	5 0 21	0 3 21
,, ...	209	,, ..	7 ,, ,, ...	5 3 0	0 3 21
Close Box	210	6′ 7″ x 2′ 8″ x 1′ 6″ ...	11 bags bolts and nuts	11 3 0	1 1 0
Spar Box	211	4′ 4″ x 2′ 0″ x 1′ 8″ ...	6 close panels for double columns 3′ 6″ x 1′ 6″	5 0 21	0 3 7
,, ...	212	,, ...	6 ,, ,,	5 0 21	0 3 7
,, ...	213	,, ...	7 ,, ,,	6 3 0	0 3 7
,, ...	214	.....	7 ,, ,,	6 3 0	0 3 7
Hogshead	215	41″ x 46″	12 bags bolts and nuts	14 3 0	2 3 0
,, ...	216	40″ x 45″	12 ,, ...	13 1 14	2 3 0
Spar Box	217	4′ 10″ x 7″ x 8″	53 terminals for columns.....	8 2 7	1 0 7
,, ...	218	4′ 10″ x 2′ 7″ x 1′ 8″	53 ,, ...	8 2 7	1 0 7
,, ...	219	,, ...	53 ,, ...	8 2 7	1 0 7
,, ...	220	,, ...	53 ,, ...	8 2 7	1 0 7
,, ...	221	,, ...	53 ,, ...	7 3 21	1 0 7
,, ...	222	4′ 4″ x 2′ 6″ x 2′ 0″ ...	53 ,, ...	8 2 7	1 0 7
,, ...	223	4′ 4″ x 2′ 0″ x 1′ 0″	26 ,, ... / 13 double terminals for columns ..... / 27 racks, small size	6 3 0	1 0 0
,, ...	224	4′ 11″ x 2′ 11″ x 1′ 10″	60 racks, large size	8 0 7	1 0 14
,, ...	225	,, ...	60 ,, ...	7 0 0	1 0 14
,, ...	226	,, ...	60 ,, ...	8 3 21	1 0 14
,, ...	227	,, ...	60 ,, ...	8 0 7	1 0 14
,, ...	228	,, ...	60 ,, ...	8 2 7	1 0 14
,, ...	229	,, ...	60 ,, ...	8 2 7	1 0 14
,, ...	230	,, ...	60 ,, ...	8 0 7	1 0 14
,, ...	231	4′ 10″ x 2′ 7″ x 1′ 10″	60 ,, ...	7 3 7	1 0 7
,, ...	232	4′ 6″ x 2′ 7″ x 2′ 7″	60 racks, large size ..... / 11 racks, small size	8 3 21	1 1 0
,, ...	233	,, ...	,, ...	8 3 21	1 1 0
,, ...	234	.....	,, ...	8 0 14	1 0 0
,, ...	235	4′ 5″ x 2′ 6″ x 1′ 10″	52 racks, large size ..... / 14 racks, small size	7 2 7	1 0 0
		.....	344 No. 115 columns	1,816 3 0	
		.....	13 box-base pieces for columns	65 0 0	
		.....	327 pieces L iron ..... / 981 pieces F ,, tied in 245 bundles	910 0 14	
			Total.....tons 211	17 0 14	244 0 0

No. 38.

Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs.

Telephone Verandah Material.

Dear Sir, Sydney, 30 June, 1885.

Referring to our letters of 2nd, and 21st May, and 6th June. As columns, &c., per "Barrenman" have now been delivered, and the whole material for above contract completed, we beg respectfully to request that you will give the Treasury Department instructions to cable the Agent-General to pay our London office the full amount of contract price, viz., £4,000, instead of £3,000 as we formerly requested on account.

If any castings require to be replaced on account of being damaged, we bind ourselves to do so free of cost to your Department.

We trust the abovenamed sum will be cabled this week, as our London House require the money, and it will simplify matters to cable the full amount in one sum. We have, &c.,

D. & W. ROBERTSON.

There is nothing in the agreement, that I can see, which provides for the payment of the money in London, and as the ironwork has not yet been passed by the Engineer, I am unable to make any payment on account until it is. The specification also provides for the delivery of material along George-street, and until this is done, the full amount of the contract cannot be paid.—P.B.W., 1/7/85.

No. 39.

The Acting Superintendent of Telegraphs to Messrs. D. & W. Robertson, Sydney.

Gentlemen, 1 July, 1885.

In acknowledging the receipt of your communication of the 30th ultimo, in reference to Ironworks for conveying telegraph wires along George-street, and requesting payment in London of the whole amount of contract, £4,000, I have the honour to inform you that the material has not yet been passed

passed by the Government Engineer, and I am unable to make any payment at present. I have also to remind you that the specification provides for delivery of the Ironwork along the line of route; but that portion of the contract has not been carried out, and until it is so completed, the full amount cannot be passed for payment.

I have, &c.,
P. B. WALKER.

No. 40.

Mr. James Orr, Sydney, to The Acting Superintendent of Telegraphs.

Sir, 21 July, 1885.

With reference to the Ironwork for carrying Telephone and Telegraph Wires recently imported by Messrs. D. & W. Robertson for the Telegraph Department, I have the honour to submit the following:—

Three of the double column bases cracked, and all of them (18 in number) cast so rough on the bottom bolt-flanges, that they had to be chipped.

Two single columns broken. Fifty-four single columns had each one, and four had each two ornamental knobs broken off on the upper back of spandril shaft.

Racks for carrying the cables too long, which necessitated $\frac{1}{4}$ of an inch being cut off the bottoms of 213.

Eighteen double-post panels, terminals had to be secured with wrought-iron rectangular washers. All this work, excepting one single column, has been satisfactorily rectified by the contractors.

The whole of the material has been delivered, and the work carried out in conformity with the plans and specification, excepting the annexed list of pieces condemned on account of being broken and otherwise damaged, and must be replaced by the contractors at their own expense; and I would suggest that a sum of two hundred pounds (£200) be withheld from the amount to be paid them until the remainder of the material is complete, and the whole delivered along the line of route.

I have, &c.,
JAMES ORR.

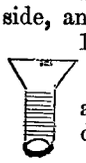
P.S.—I have to mention that two single columns, 4-inch diameter, were accidentally broken during the operation of stacking. These will require to be re-ordered at the expense of the Department.

List of Pieces condemned.

3	R.H.	panels,	length	4′ 2$\frac{5}{16}$″	for 14	feet 3-inch	bays.	
1	,,	,,	,,	5′ 2″	,, 15	,, 4	,,	,,
1	,,	,,	,,	3′ 7$\frac{5}{16}$″	,, 13	,, 8	,,	,,
1	,,	,,	,,	3′ 4$\frac{5}{16}$″	,, 13	,, 5	,,	,,
1	L.H.	,,	,,	5′ 2$\frac{1}{2}$″	,, 14	,, 11	,,	,,
12	Centre,	,,	,,	5′ 0″				
3	R.H. brackets							
1	L.H.	,,						

1 Top panel for double column B5.—This panel must be cast $\frac{1}{4}$ of an inch wider on the left-hand side, and the holes should not be bored until it is being fitted in place.

1 Terminal for double column, top panel A2.



One single column 4 inches diameter, thirty counter-sunk set screws, similar to those already supplied for securing panels to double columns, with same pitch of thread, but $\frac{7}{16}$″ diameter.—J.O., 21/7/85.

No. 41.

The Acting Superintendent of Telegraphs to Messrs. D. & W. Robertson, Sydney.

Gentlemen, 27 July, 1885.

In reference to your contract for supply and delivery, along the route, of ironwork for carrying telegraph and telephone wires along George-street, I have to inform you that the whole of the material has been inspected by the Government engineer, and, with the exception of the pieces named in enclosed list, has been found in good order; and in accordance with the specification I shall be glad if you will furnish me with a guarantee for supply of the condemned pieces, when I shall recommend the payment of £3,500, the balance of £500 to be held by the Government until the castings are delivered as specified.

I have, &c.
P. B. WALKER.

Note.—See No. 40 for list of pieces condemned.

No. 42.

The Acting Superintendent of Telegraphs to The Secretary to the Post Office.

29 July, 1885.

Mr. Orr, the engineer appointed by the Harbours and Rivers Department, has reported upon the ironwork for telephone lines along George-street, and the defects he pointed out have been rectified with the exception of about £20 worth of iron pieces, which Messrs. D. & W. Robertson agree to replace by ordering fresh pieces from the manufacturers at home. Mr. Orr thinks that £200 will cover all expenses of laying out along that street. I would therefore advise that £3,700 be paid at once, and the balance of contract, £300, can be retained until work is completed.

P.B.W.

Approved.—

Approved.—J.N., 30/7/85. B.C., 30/7/85.—S.H.L. Accountant to see about getting this money paid.—P.B.W., 31/7/85.

On inquiry at the Treasury I find that it will be necessary for a similar letter to be written to that of 6th June, advising that the former letter be cancelled, and a sum of £3,700 be paid to the firm of Messrs. D. & W. Robertson, in London, in terms of Secretary's letter of 3rd November, 1884. The cost of sending the money to be charged against Messrs. Robertson, and deducted from the balance of contract (£300) in hand.—P.B.W., 3/8/85. The Secretary to the Post Office, B.C.

No. 43.

Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs.

Dear Sir, 29 July, 1885.

As requested, we have pleasure in handing you copies of letters received from the Post Office Department in connection with payment in London of proceeds of contracts for supply of Telegraph material.

Yours truly,
D. & W. ROBERTSON,
Per A. R. MILLAR.

Note.—For copies referred to, see letters from the Secretary to the Post Office to Messrs. D. & W. Robertson, dated 13th September and 3rd November, 1884.

No. 44.

Messrs. D. & W. Robertson, Sydney, to The Acting Superintendent of Telegraphs.

Dear Sir, 29 July, 1885.

We beg to acknowledge receipt of your letter of 27th July. We will order the material you specify (value £15 from England) without delay, and will herewith guarantee that they will fit when they arrive.

We note that you only propose to cable £3,500 to England. We would respectfully point out that the value of the cartage of the material from where it now is to the site it is to be erected on would only be a matter of another £20.

As we have already had a loss of interest by not receiving payment on delivery of this ironwork, we would respectfully point out that if a sum which would more nearly approximate the value of the material were retained, it would be fairer to us under the circumstances of the case, and we trust you will kindly agree to a larger sum than that proposed being paid us.

This contract was taken very fine, and we did not anticipate that we would be called upon to lie out of such a sum of money as proposed.

We have, &c.,
D. & W. ROBERTSON.

P.S.—A quantity of the centre panels referred to are now ready for inspection, having been rectified. They were slightly rusty. Please ask Inspector to call.—D. & W.R.

£3,700 recommended and approved by Postmaster-General.—P.B.W., 4/8/85. This has been paid. Put with other papers.—P.B.W., 8/8/85.

No. 45.

Messrs. D. & W. Robertson, Sydney, to The Postmaster-General.

Dear Sir, Central Exchange Buildings, Sydney, 3 August, 1885.

Referring to our interview with you and Mr. Dalgarno to-day, regarding the payment of £3,700 or more in London, as per your letter of the 13th September, No. 84/10,386, and 3rd November, 84/11,408, in which you agree to pay us for ironwork in England, we beg to say that we will take payment in Sydney, provided that the 2½ per cent. that we will have to pay for cabling it home ourselves is added to the voucher here. In the present case this would amount to £92 10s.

Your letter of 3rd November distinctly says that the cost of the cablegram will be debited to us if the money is remitted to England, and this we are quite agreeable to, so that there appears to be no obstacle whatever to have this money transmitted to London. We would respectfully remind you that we have been kept out of this £4,000 for over three months, since it was delivered according to contract; and having arranged with our London Firm to get this money there, we hope the matter can be arranged without further delay.

We have seen the Treasury about the matter, and they have no objection whatever to cable the money for us, *being part of our contract* with you when it was accepted and tendered for, as we, after acceptance, were restricted to supply the goods of one manufacturer, whereas the specification left it optional.

Yours truly,
D. & W. ROBERTSON.

Urgent.—Acting Superintendent of Telegraphs. B.C., 4/8/85.—S.H.L.

Mr. S. H. Lambton to the Postmaster-General.

My dear Sir, Sydney, 5 August, 1885.

The contractors (D. & W. Robertson) still press for payment of the £3,700 to be paid in London, and are willing to pay the cost of a message to the Agent-General.

We have twice promised (see letters) this should be done, and I am informed that the Treasury has no objection. Please see Mr. Walker's minute of 3rd instant.

I send the case to you as Mr. Robertson has called several times, and I forgot to mention this to you this morning.

Yours faithfully,
S. H. LAMBTON.

Approved.—J.N., 5/8/85. Acting Superintendent of Telegraphs, for information, B.C., 6/8/85.—S.H.L. Read. Accountant to note.—P.B.W., 6/8/85. Noted.—C.S.G., 10/8/85.

No. 46.

The Secretary to the Post Office to The Under Secretary for Finance and Trade.

Sir, 6 August, 1885.

Referring to my letter of the 6th June last, concerning a request made by Messrs. D. & W. Robertson for payment of a sum of £300, on account of their contract for £4,000 for ironwork, which has arrived in Sydney, intended for carrying telephone and telegraph wires along George-street, and asking that you would be good enough to move the Colonial Treasurer to authorize payment of the amount from the balance of £100,000 for the extension of telegraph lines generally, as the money was urgently required, I am directed to state that, it having since been arranged to examine the material by Mr. Orr, an engineer appointed specially by the Harbours and Rivers Department, a report has been received that, with the exception of about £25 worth of iron pieces, which Messrs. Robertson agree to replace by ordering fresh pieces from the manufacturers at home, Mr. Orr thinks that £200 will cover all expenses of laying out along the street.

On the recommendation of the Acting Superintendent of Telegraphs, the Postmaster-General has approved of the sum of £3,700 being paid at once, and the balance, £300, will be retained until the work is completed.

I am to request, therefore, that you will now be good enough to move the Treasurer to cause a cablegram to be sent to the Agent-general, instructing him to pay this sum of £3,700 to the firm of Messrs. D. & W. Robertson in London, the cost of sending the money to be charged against these gentlemen, and deducted from the balance of the contract, £300, before referred to.

I have, &c.,
S. H. LAMBTON.

No. 47.

The Under Secretary for Finance and Trade to the Secretary to the Post Office.

Sir, 12 August, 1885.

I am directed by the Minister acting for the Colonial Treasurer to acknowledge receipt of your letter of 6th instant, B 85/6,408, and to inform you that, in terms of the request made therein, a sum of £3,700 has been remitted to the Agent-General by cable, for payment to Messrs. D. & W. Robertson in London.

The cost of remitting the money is as follows, namely:—

Exchange on £3,700, at 35s. per cent., being current rate for sight draft on London	£64	15	0
Cablegram	11	4	0
Total charge against Messrs. D. & W. Robertson	£75	19	0

I have &c.,
G. EAGAR.

Referred to Acting Superintendent of Telegraphs. Messrs. Robertson will no doubt object to pay the £64 15s. 0d.

Our letter to Treasury was not so clear as it should have been. It is in strict accord with Mr. Walker's minute of 3rd inst., on which it was written, but, as will be remembered, held over until the Postmaster-General had again approved of payment being made in London, the Treasury having previously refused to do this. On such approval being obtained, the letter of 3rd was merely re-dated 6th and sent on; but it is evident that the word "money" in last sentence should have been "telegram."—S.H.L., 13/8/85.

When I wrote my minute of 3/8/85, I was not aware of the existence of the Secretary's letter to Messrs. D. & W. Robertson in reference to the cablegram home. It would appear that the intention was merely to charge for the cable, and, as Mr. Lambton points out, the word "money" should have been "telegram." I do not, however, think that there will be any difficulty in reference to the exchange, as we have agreed to remit the money by telegram, and, no doubt, the Treasury will write it off as against Messrs. D. & W. Robertson, if instructed in terms of the agreement as to payment in London.—P.B.W., 13/8/85.

Draft letter to Treasury accordingly.—S.H.L., 20/8/85. The Acting Superintendent of Telegraphs. B.C., 21/8/85.—S.H.L. Read.—P.B.W., 22/8/85.

No. 48.

The Secretary to the Post Office to the Under Secretary, for Finance and Trade.

Sir, 20 August, 1885.

With reference to your letter of the 12th instant, informing me that the sum of £3,700 had been remitted to the Agent-General by cable, for payment to Messrs. D. & W. Robertson in London, and that the expense of remitting the money was £54 15s. 0d., cost of draft, and £11 4s. 0d., cost of cablegram, I am directed to request that, as the Postmaster-General had in this case specially promised that the money should be paid in London, you will be good enough to arrange that Messrs. Robertson shall only be charged for the cost of the cablegram, namely, £11 4s. 0d.

I have, &c.,
S. H. LAMBTON.

No. 49.

Mr. Humphreys, Sydney, to The Superintendent of Telegraphs.

Dear Sir, 19 January, 1886.

In reference to the erection of the verandah for carrying out your system of telegraph and telephone wires, I have estimated the quantity of special and other pipe castings that may be required, as follows:—The special castings for jointing on to main street-corner columns will weigh about 15 tons, &c.; these can be made in the Colony at 18s. per cwt., delivered on the several sites required, viz.:—King, Market, Druitt, Bathurst, Liverpool, Goulburn, Hay, and Engine streets. The crossing from George, street to Redfern Station, if such has to be carried underground, will require about 10 tons extra piping, besides terminal column on station platform. This is a detail which will have to be considered during the progress of erection. I propose to use 12-inch cast-iron spigot and faucet pipes to cross all streets between the special casting on end of columns; these can be obtained and landed on site for erection at £7 per ton, and there will be about 30 tons required. Some of the columns (3) have been broken, and portions of the frieze will require repairing. Yet, taking the whole of the shipment, I consider they have been landed in fair order.

In reference to my charge for plans, specifications, and superintending the erection, I am willing to charge a lump sum of £300 for such work. I shall be glad, previous to commencing the work, to have an interview with the foreman under whose orders the necessary works are to be carried out, and shall be glad at any time to meet you and confer as to the several details that may be required.

I am, &c.,
WM. HUMPHREYS.

No. 50.

The Superintendent of Telegraphs to The Secretary to the Post Office.

19 January, 1886.

The ironwork for the telephone verandah having arrived during my absence from the Colony, and is now ready for erection along George-street, I have to request authority for the same to be placed in position by the Sydney line-repairing gang, and as this is a matter requiring the supervision and constant attention of a skilled engineer, that Mr. A. Humphreys be entrusted with the erection of the work, and that he be paid the sum of £300 for this purpose.

The Sydney Municipal Council should be informed of the intention of the Government to erect this ironwork, and their co-operation and assistance requested. Notice should also be given to the shopkeepers, who have already erected verandahs, that it will be necessary for the Government to remove the same and erect a uniform verandah front instead, but where the present verandahs are roofed over a similar roof will be placed in position.

Iron tubes will be placed under the street-crossings for the cables, which work will be performed without interfering more than necessary with the street traffic. The total expense will amount to not more than £1,500, including supervision, as the existing galvanized iron will be available for the new roofing where required.

This work can be carried out and made compulsory if necessary, under the 4th clause of the Electric Telegraph Act, 20 Vict. No. 41.

This will be an immense public convenience, and a great improvement to the appearance of the city, and will remove the present unsightly, overhead wires which are so much in the way of firemen, builders, and others, who have to use ladders in front of the buildings.

The whole system has already been approved of by the Government and the City Corporation, and it only remains now to carry it out.

E. C. CRACKNELL.

Submitted.—S.H.L., 20/1/86. For Cabinet, D.O'C., 23/1/86. Approved.—D.O'C., 9/2/86.

No. 51.

The Clerk in Charge of Telegraph Stores, to The Accountant, Telegraph Department.

15 February, 1886.

The gross weight of the telephone verandah material as per invoices, is 218 tons 17 cwt. 3 qr. 7 lb. (*i.e.* including packages), and the net weight, 206 tons 1 cwt. 2 qr. 21 lb.

The contract price for cartage by weight, is 2s. 5d. per ton; by time, 2s. 5d. per horse per hour.

The above weight for cartage by weight only applies to cases where one delivery is made of the goods; where two or more deliveries are made, the goods are charged for at package-rates. In laying out material through the city and suburbs it is the practice to adopt the time-rates.

F. V. HEDGER.

219 tons, at 2s. 5d.=£26 5s. 3d.—C.S.G.—17/2/86. The Superintendent.

No. 52.

The Superintendent of Telegraphs to the Town Clerk, Sydney.

Sir, 15 February, 1886.

Adverting to my interview with his Worship the Mayor, on Wednesday last, with reference to the removal of gas lamps on the west side of George-street, between the Post Office and the Railway Station, and the substitution for them of other lamps, to be placed upon the ironwork intended to be erected for the purpose of carrying the telegraph wires between those points, I shall be glad if you will be good enough to intimate to the Directors of the Gas Company at your earliest convenience the acquiescence of his Worship in the proposed alteration.

I have, &c.,
E. C. CRACKNELL.

No. 53.

The Town Clerk, Sydney, to The Superintendent of Telegraphs.

Sir, 17 February, 1886.

Referring to your letter of the 15th instant respecting a proposed alteration to the public lamps along George-street, from the Post Office to the Railway Station, in connection with intended alterations of the telegraph lines, I have the honor, by direction of the Right Worshipful the Mayor, to state that the Gas Light Company have been apprised of the willingness of the City Council to the proposed alterations being made.

I have, &c.,
CHAS. H. WOOLCOTT.

Read.—E.C.C., 18/2/86.

No. 54.

The Superintendent of Telegraphs to Messrs. D. & W. Robertson, Sydney.

Gentlemen, 22 February, 1886.

I have the honor to inform you that the ironwork for carrying the telegraph wires along George-street is now ready for delivery, and, as the Department can make arrangements for laying it down on the route as required, I have to request that you will allow the Government to do this, as the delivery of the material can be made with greater expedition at a cost of about £26. The balance due to you after deducting the abovenamed amount can be paid immediately after completion of delivery.

I shall be glad if you will advise me as early as possible whether my request is acceded to.

I have, &c.,
E. C. CRACKNELL.

No. 55.

Messrs. D. & W. Robertson, Sydney, to The Superintendent of Telegraphs.

Central Exchange Buildings, York-street, Sydney, 22 February, 1886.

Dear Sir, Telephone Verandah Material.

We have the honor to acknowledge receipt of yours of even date regarding delivery of above. In reply, we would respectfully submit, that when this material arrived we intimated to your Department that we were then prepared to deliver the material, in accordance with the specification; but were instructed that, as the work was not to be then proceeded with, we had to deliver at Russell's Wharf; and, in terms of contract, we consider in all fairness, we had completed our portion of the contract. We paid 3s. per ton on 206 tons for carting it to its present site; it would not have cost us a penny more to deliver it along the track in George-street.

From the facts that have already been communicated to you regarding the manner M'Farlane & Company treated us over this order, knowing that you bound us to their manufacture, and the contract having been a very unprofitable one on that account, we are sure you have only to have this matter put before you, when you will see that, as far as our delivery is concerned, we have fulfilled the contract.

With reference to the £300 kept off our account, we should feel exceedingly obliged by your passing this on for payment, as we have been kept out of the money a very long time, and the small pieces to replace are only valued at £10; the latter are in the "King Malcolm," 64 days out. We guarantee that they will fit when delivered, or you can deduct the value till delivered.

We have, &c.,
Pro. D. & W. ROBERTSON,
A. R. MILLER.

Mr. Gregory will please look into this matter, and let me know whether this statement is correct. —E.C.C., 23/2/86. Accountant.

No. 56.

The Superintendent of Telegraphs to The Secretary to the Post Office.

23 February, 1886.

THE material for the telegraph and telephone verandah, to be erected along George-street, arrived in Sydney in May last, and was delivered by the contractors (Messrs. D. & W. Robertson) at the Department's premises, Russell's Wharf, the contract stating that it was to be delivered along the line. As, however, the Department was not prepared to accept delivery as specified, it now remains a question whether the contractors should be called upon to deliver the material, or whether it should be done by the Department, I now submit the case for the decision of the Postmaster-General. It is only a matter of £26, and I think that, as the contractors have already delivered the material to our store, we cannot enforce delivery along George-street.

I have, &c.,
E. C. CRACKNELL.

Submitted.—S.H.L., 25/3/86. Approved.—D.O'C., 26/2/86. The Superintendent Electric Telegraphs, B.C., 26/2/86.—S.H.L. per J.D., Voucher for £300 balance forwarded for payment.—C.S.G., 25/3/86.

No. 57.

Messrs. Neave and Co., Sydney, to The Superintendent of Telegraphs.

Dear Sir, 6 Canada Buildings, Underwood-street, Sydney, 25 Feb., 1886.

With reference to your esteemed inquiry for (12) twelve cast-iron pipes and bends, we beg to quote you £7 7s. 6d. per ton for the pipes, but are extremely sorry that we cannot quote for the bends, as we have none in stock and have been unable as yet to find any in Sydney.

Yours truly,
NEAVE, & CO.

Read.—E.C.C., 26/2/86.

No. 58.

The Superintendent of Telegraphs to the Secretary Australian Gas-Light Company.

Sir, 1 March, 1886.

With reference to the erection of the ironwork along George-street, for carrying telegraph and telephone wires, which is now being proceeded with, I have the honor to request that you will kindly acquaint your directors, that the Department is desirous of carrying out the work with all despatch, and that I would feel obliged if they will cause every assistance to be given in connection with the removal and re-erection of the gas lamps *en route*.

I beg also to suggest that globular lamps might be used in place of those of present pattern, which will not only distribute the light but will have a much better appearance, and I think they could be substituted at little extra expense.

I have, &c.,
E. C. CRACKNELL.

No. 59.

Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs.

Sir, 8 March, 1886.

I have the honor to attach you a list of names and addresses of parties having verandahs in front of their shops in George-street.

These verandahs will obstruct the erection of the ironwork for cable-racks, now being carried out. I shall, therefore, be glad if you will give notice in writing to the parties here named, that such alterations as are necessary will require to be executed.

I have, &c.,
R. Rutherford.

Name.	Address.	Obstruction.
Sydney Cohen	375 George-street	Lamp
R. T. Carter	379 do	Verandah.
W. Maddock	381 do	do
W. Simpson	385 do	do
E. C. Fuller	387 do	do
J. T. Fitzmons	399 do	do
C. L. Carter	401 do	do
John Brush	403 do	do
C. Cowle	411 do	do
Wesleyan Book Depôt	413 do	do
Campbell, Mitchell, & Co.	413 do	do

Mr. Kidman's building, corner of George and Market Streets :—Four lamps and gas-fittings require to be removed.—
R. R.,
8/3/86.

No. 60.

Circular letter from The Superintendent of Telegraphs to the Property Owners and Others,—George-street, Sydney.

Sir,

The erection, along the west side of George-street, of a cast-iron verandah front on iron columns, of an ornamental pattern, for carrying the telegraph wires, renders it necessary that all obstructions in the shape of awnings and gas-lamps be removed as the work proceeds. I beg, therefore, to inform you that the awnings or verandahs will be removed by the Department, and where a roof exists it will be re-erected, all gas-lamps, of course, being attended to by the proprietors as required ; and I have to request that you will cause the same to be seen to without delay, so that the work of erecting the verandah front will not be interfered with.

Enclosed is a copy of the fourth section of the Telegraph Act for your information.

I have, &c.,
E. C. CRACKNELL.

Section IV, Electric Telegraph Act.

4. It shall be lawful for such Superintending Officer to cause to be set up or laid down and maintained any works necessary for the purposes of this Act upon or under and through any land whatsoever or any shore of the sea or any road or water and to break excavate and remove any soil to any extent and depth required for placing or removing such works Provided that every wire or cord crossing any road or water above the surface shall be at least eighteen feet from such surface and that the free use of any such land shore road or water shall not be obstructed more than is absolutely necessary for some purpose of this Act.

No. 61.

Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs.

Sir, 25 March, 1886.

I have the honor to bring under notice the danger the iron columns would be subjected to, if erected on the outer face of the kerbing. If any dray, or vehicle of any description, should come in sudden contact with one of them, it would be most undoubtedly broken; and from the extra strain thrown on those columns adjacent to it, there is no doubt but that at least a half-dozen on either side would be broken also, or otherwise seriously damaged.

By placing the columns on the outer face of the kerbing, it will interfere with the watercourse and the formation of the street, as the holes have to be put down from 4 ft. 6in. to 5 ft.; neither can they be put down so securely as they are in the manner now adopted. If

If 7 inches from the face of the kerbing cannot be granted, perhaps 3 or 4 inches may be obtained, which would be a great support and security to the columns. The whole of the column would then stand inside the kerbing, and what the footpath lost would be gained by the roadway, and greater security would be afforded to the public from the lesser liability to accident.

I may here state that some weeks ago I saw a dray come in contact with the column of a verandah in King-street, which it broke, and the whole structure fell to the ground. Should such an accident occur in a busy thoroughfare like George-street, the consequences would be most serious, and very probably fatal.

Trusting that some concessions may be made in the interests of the public safety,

I have, &c.,
R. RUTHERFORD.

Read.—E.C.C., 26/3/86.

No. 62.

Messrs. Robertson, Fisher, & Ralfe, Sydney, to The Postmaster-General.

Sir, Pitt-st., Sydney, 26 March, 1886.

We are instructed by the Australian Joint Stock Bank to inform you that they object to the ironwork erection which has been placed in front of the buildings for the purpose of carrying the telegraph wires, which the Bank allege has the effect of cutting up the design of the Bank, and completely destroying the *tout ensemble* of the structure, and we are requested to say that the Bank protest strongly against what they consider an eyesore and a disfigurement to their property; and they have also desired us to draw your attention to the matter, they entertaining very great doubts as to whether the Electric Telegraph Department have obtained from you authority to erect the same, or that anyone can legally grant permission to the Electric Telegraph Department to so disfigure the city.

We have, &c.,
ROBERTSON, FISHER, & RALFE.

Submitted.—S.H.L., 29/3/86. Supt. of Telegraphs for report. Under what authority was the work alluded to erected in the streets.—F.B.S., 30/3/86. Supt. of Telegraphs, B.C., 31/3/86.—S.H.L, *per* J.D.

No. 63.

The General Manager of the Australian Joint Stock Bank, Sydney, to The Postmaster-General.

Sir, The Australian Joint Stock Bank, Sydney, 16 April, 1886.

I have the honor to call your attention to a letter dated 26th March last, addressed to you by this Bank's solicitors, Messrs. Robertson, Fisher, & Ralfe, on the subject of the iron pillars and lattice-work erected by the Government in front of the Bank premises, corner of George and King streets, and to remind you of a conversation which the chairman, the Hon. J. B. Rundle, M.L.C., had with you recently, when you promised to look into the matter. I am to mention that the Bank has had the opinion of Mr. Darley, Q.C., respecting the erection of the iron pillars and lattice-work, and he states that such erection is quite illegal. The Bank, however, has no desire to take any extreme measures, and it is hoped you will see your way to have the unsightly erection in question removed with as little delay as possible.

The Bank contemplates the extension of the present handsome building along the whole of the frontage, 146 feet, in George-street, and you will readily understand why the removal of the iron pillars and lattice-work is desired by the Bank.

I have, &c.,
F. ADAMS.

Supt. of Telegraphs for report.—F.B.S., 17/4/86. B.C., 17/4/86.—S.H.L.

Minute of the Attorney-General.

I SEE no reason for questioning the Department's right to carry out these works. Sections 4 and 5 clearly give the power to do so. While regretting that any annoyance should be caused to the Bank proprietors, I must advise, as a matter of law, that no notice should be taken of their protest.—J.H.W., 3/5/86.

A copy of the opinion of the A.-G. should now be forwarded to the manager of the A.J.S. Bank, who should also be informed that the ironwork for carrying the street-wires has become a public necessity, and must be erected as originally designed.—E.C.C., 6/5/86.

The Secretary to the Post Office,—Inform as suggested.—F.B.S., 7/5/86.

No. 64.

The Secretary to the Post Office to the General Manager, Australian Joint Stock Bank, Sydney.

Sir, 10 May, 1886.

Adverting to your letter of the 16th ultimo, drawing attention to the communication dated 26th March last, from Messrs. Robertson, Fisher, and Ralfe, on the subject of the erection, in front of the Australian Joint Stock premises, George and King streets, of iron pillars and lattice-work for telegraph purposes, I am directed by the Postmaster-General to inform you that the papers in the case were referred to the Attorney-General who advises as follows:— "I

"I see no reason for questioning the Department's right to carry out these works. Sections 4 and 5 (20 Victoriæ No. 41) clearly give the power to do so. While regretting that any annoyance should be caused to the Bank proprietors, I must advise, as a matter of law, that no notice should be taken of their protest."

I am further to state that the Superintendent of Telegraphs reports that the ironwork for carrying the street-wires, referred to, has become a public necessity and must be erected as originally designed.

I have, &c.,
S. H. LAMBTON.

No. 65.

The Town Clerk, Sydney, to The Superintendent of Telegraphs.

Sir, 29 March, 1886.

I have the honor, by direction by the Right Worshipful the Mayor, to inform you that during the erection of the new telegraph posts along the west side of George-street, and the consequent removal of several awning posts, the bluestone kerbing has been left with gaps which will require to be immediately repaired, and I beg to inquire whether you will instruct your contractor to effect the repairs or leave them to be carried out by the corporation at the cost of your Department.

I have, &c.,
CHAS. A. WOOLCOTT.

Mr. Rutherford to see me about this.—E.C.C., 30/3/86.

Stone kerbing required, where awning post has been removed, from between King and Market-streets.

	ft.	in.
Stone 3 ...	1	3
„ 1 ...	1	2
„ 1 ...	2	6
„ 1 ...	1	7
„ 1 ...	1	1½
„ 1 ...	1	10

There are (5) five other holes that can be made good with cement.—R.R., 31/3/86. I have seen Mr. Mountain, and he says the Corporation will make good any repairs that are necessary, at the most reasonable price, by instructing the Town Clerk to that effect.—R. RUTHERFORD, 31/3/86. Superintendent Electric Telegraphs.

No. 66.

The Superintendent of Telegraphs to The Town Clerk, Sydney.

Sir, 10 April, 1886.

In acknowledging the receipt of your communication of the 29th ultimo, respecting the state in which the stone kerbing in George-street has been left, consequent upon the removal of the old awning-posts, I have the honor to request that you will be so good as to cause me to be advised of the probable cost of repairs, if carried out by the officers of the Corporation, as suggested by you.

I have, &c.,
E. C. CRACKNELL.

No. 67.

Mr. R. Rutherford, Telegraph Inspector, Sydney, to the Superintendent of Telegraphs.

Sir, 12 April, 1886.

I have the honour to request that the attached list of names of parties between Bathurst and Liverpool streets, be served with a notice, that it will be necessary to take down verandahs and sign-boards for the erection of ironwork for telegraph cables in George-street.

R. RUTHERFORD.

Verandahs, Lamps, &c., betwixt Bathurst and Liverpool Streets.

Name.	Address.	Obstruction.
W. Titford	487 and 489 George-street	Verandah and signboard.
W. Ayton	491 do	do
G. Guyatt	495 do	do
T. Stephens & Co.	497 and 499 do	do lamps, &c.
J. Pearson	501 do	do do
Biddell Brothers	505, 5[illegible] & 509 do	do
The Foochoo & Calcutta Tea Co.	509 do	do
Mdlle. Lusi	511 do	do
L. Harris	511 do	do
J. B. Shaw	513 do	do do
W. Walker	515 do	do do
B. Phillips & Co.	515 do	do
D. Behan	517 do	do do
Joseph Thomas	519, 521, & 523 do	do gas-fittings, &c.
The Globe Furniture Arcade	525 do	do
Mr. Wright	527 do	do
M. Fisher	533 do	do
Imperial Studio	533½ do	do
G. Phillips	535 do	do
G. W. Page	537 do	2 posts, &c., 2 cross-bars for awning
J. Sullivan	541 do	Verandah, gas-fittings, &c.
John Graham	531 do	do do
George Cusack	549 do	2 posts &c., 1 cross-bar for awning.
William Palmer	551 do	Verandahs, and gas-fittings.
E. Goldring	553 do	do do.

Give notice to all these people.—E.C.C., 12/4/86.
Note:—For copy of Notice see No. 60.

No. 68.

Messrs. W. Hamilton & Co., Sydney, to the Superintendent of Telegraphs.

Globe Furniture Arcade, 525 George-street, 29 April, 1886.

Dear Sir,

In reply to your circular letter of 14th instant *re* removal of awnings, we desire to call your attention to the fact that our awning, erected by Messrs. Bradford & Son, iron-founders, by permission from the City Council within the last three months, and for which Bradford obtained his cheque, (£24) twenty-four pounds, on the day we received your notice, and we therefore throw ourselves upon your consideration for compensation.

Trusting that you will take a favourable view of our case,

We are, &c.,
W. HAMILTON & CO.

No. 69.

The Superintendent of Telegraphs to Messrs. W. Hamilton & Co., Sydney.

30 April, 1886.

In reply to your communication of the 29th instant, respecting the removal of the awning in front of your premises, I have the honor to inform you that the Government will re-erect the roof, on completion of the new front, which must be put up to be uniform with that already placed in position by the Department.

I have, &c.,
E. C. CRACKNELL.

No. 70.

Messrs. W. Hamilton & Co., Sydney, to The Superintendent of Telegraphs.

Dear Sir, Globe Furniture Arcade, 3 May, 1886.

In reply to yours of 30th ultimo, we beg to inform you that we were aware that the Government would re-erect roof. We require information as to what compensation we are to receive for our ironwork that is rendered useless by the erection of friezework.

We are, &c.,
W. HAMILTON & CO.

No. 71.

The Superintendent of Telegraphs to Messrs. W. Hamilton & Co., Sydney.

Gentlemen, 5 May, 1886.

In reply to your communication of the 3rd instant, I have the honour to inform you that the Government cannot entertain any claim for compensation in respect to the removal of ironwork in front of your premises in George-st.

I have, &c.,
E. C. CRACKNELL.

No. 72.

Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs.

Removal of Verandahs, Lamps, &c., between Liverpool and Goulburn streets.

Names.	Address.	Obstruction.
W. C. Donald	563 George-street	Verandah and signboard
J. Barton	569 ,,	do do and gas-fittings
C. J. Christie	571 ,,	do do and 2 lamps
T. B. Linley	573 ,,	do do and gas-fittings
M'Clelland & Roach	577 ,,	do do do
J. Emery	579 ,,	do do do
John Watson	581 ,,	do do lamp
W. Hogan	583 ,,	do do do
William Weir	585 ,,	do do and gas-fittings
Frost and Shipham	587 ,,	do do
Francis Abigail	589 ,,	do do
Do	591 ,,	do do
A. Morris	597 ,,	do do
The "Acme"	599 ,,	do do
E. Hodgson	601 ,,	do do
Mrs. Taylor	603 ,,	do do
Molong Bros.	605 ,,	do do
Henry Brown	607 ,,	do do and gas-fittings.

Sir,

The verandahs and other fittings here mentioned will require to be removed for the erection of ironwork for cables in about ten days.

R. RUTHERFORD,
3/5/86.

Let these people be notified in the usual way to-day.—E.C.C., 4/5/86.

NOTE.—For copy of notice see No. 60.

No. 73.

Minute of The Secretary to the Post Office.

Mr. Abigail, M.P., and a number of persons in business on Brickfield Hill, wish to point out to the Postmaster-General the great hardship they will experience by the removal of their awnings, some of which have been erected quite recently and at great expense, and many of which include signboards stating their names and the nature of their business. What is desired now is that the Government shall re-erect these signboards on the new telegraph-posts, either placing them over or below the frieze.

Mr. Abigail purposes seeing the Postmaster-General in the matter; in the meantime, perhaps, Mr. Cracknell's report should be obtained.—S.H.L., 3/5/86.

No. 74.

Mr. F. Abigail, M.P., Sydney, to The Postmaster-General.

6 May, 1886.

Sir,

I have just received notice that my verandah is to be removed to enable the Department to erect the new telegraph arrangements, and on behalf of others as well as self I beg to ask, Is the Department going to place the names of the shopkeepers on the frieze facing the street? I point out this has been done by Mr. Bar, Haymarket Arcade, where the frieze is somewhat like that being erected by the Department, and it looks very nice. It is under a narrow strip of glass, and does not mar the effect of the friezework.

I would further point out that Mr. Darley has given an opinion that the action in this case is illegal, and that being so the Department should do all they can to prevent any litigation. I may say, so important is this question of the name being placed on the front that, unless some arrangements are made by the Department to have it done, the question of the right of the Government will be tested by law. This is not made by way of threat, but only to keep you informed of what is likely to be done.

Awaiting your reply,

I have, &c.,

F. ABIGAIL.

The Superintendent of Telegraphs for report. It seems to me that the best way would be to allow the names of tradesmen to be painted on boards suspended from the frieze.—F.B.S., 6/5/86.
Superintendent Electric Telegraphs, B.C., 7/5/86.—S.H.L. *per* J.D.

I have seen Mr. Abigail and he agrees with me that the best place to put the signboards is below the frieze.—F.B.S., 7/5/86. Superintendent Telegraphs, B.C., 14/5/86.—S.H.L., per J.D.

No. 75.

The Superintendent of Telegraphs to Mr. W. Humphreys, Sydney.

18 May, 1886.

Sir,

A number of the shopkeepers in George-street are desirous of affixing signboards to the iron frieze, and I have therefore to request that you will be good enough to furnish me with a sketch of the best mode of suspending such boards to secure uniformity.

I have, &c.,

E. C. CRACKNELL.

No. 76.

Mr. Edward Hordern, Sydney, to The Superintendent of Telegraphs.

5 May, 1886.

Dear Sir,

Re removing of balconies on west side of George-street. The verandahs in front of properties belonging to me I have only just had new galvanized sheets of iron erected, and naturally I resent their being removed. They are curved down from shop fronts to facia boards; and if you would give permission that the galvanized sheets remain with the iron fronts that you are erecting, you would oblige

Yours respectfully,

EDWARD HORDERN.

P.S.—Are the sheets of iron when taken—does your contractor claim them, or do we?—

E.H.

No. 77.

The Superintendent of Telegraphs to Mr. Edward Hordern, Sydney.

5 May, 1886.

Sir,

In reply to your memorandum of this date, I have the honor to inform you that the Government will re-erect any roof removed to admit of the iron columns being placed in position. In cases where the iron is useless, of course the owners of the premises are allowed to take possession of it.

I have, &c.,

E. C. CRACKNELL.

No. 78.

Mr. Robert Guy, Sydney, to The Superintendent of Telegraphs.

Sir, 128 Victoria-street, Sydney, 7 May, 1886.

I am advised that your action in demolishing the awnings along the west side of George-street in this city without the consent of the owners of same is entirely illegal. I therefore give you notice not to interfere with the awnings fronting my property, 585 and 587 George-street.

I have, &c.,
ROBERT GUY.

I would like to have the opinion of the Crown Solicitor as to the proper course to adopt in reference to this notice.—E. C. CRACKNELL, 10/5/86.

No. 79.

Mr. Robert Guy, Sydney, to The Postmaster General.

Hon. Sir, 128 Victoria-street, Sydney, 7 May, 1886.

I am advised that the action of Mr. Cracknell in demolishing our street-awnings along the west side of George-street without consulting the wishes of the owners of same is entirely "illegal." I have therefore respectfully to request that you will at once exercise your power to put a stop to these most arbitrary, cruel, and unwarrantable proceedings.

The Hon. the Colonial Secretary has suggested that I should bring this matter under your notice, with a view to same being considered by the Cabinet at its next meeting.

I have, &c.,
ROBERT GUY.

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128 Victoria-street, Sydney, 7 May, 1886.

Notice—To whom it may concern.

I HEREBY give you notice not to molest or interfere in any way with the awnings fronting my property, 585 and 587 George-street, as it is my intention to take legal proceedings against anyone so offending.

ROBERT GUY.

Submitted.—S.H.L., 11/5/86. Supt. of Telegraphs, for report.—F.B.S. 13/5/86. B.C., 14/5/86.—S.H.L.

To Mr. Rutherford, Telegraph Department,— 2 June, 1886.

I, THE undersigned, on behalf of Mr. Guy, give you permission to remove the awning of No. 585 and 587 George-street.

JAMES WEIR.

Read.—E.C.C., 7/6/86.

No. 80.

Mrs. M. J. Austin, Enfield, to The Superintendent of Telegraphs.

Dear Sir, Austinlee, Enfield, 10 May, 1886.

My tenants residing in Nos. 797, 799, 801, and 803, George-street, have been to me regarding the frieze which the Government are about to erect in front of these shops. Some time ago I erected an expensive awning suited to their requirements, and now they tell me this is to be pulled down to make way for the frieze; but their complaint is this: The frieze you have erected all along George-street is so high that it will be far above where the present awning goes into the walls, and they do not see how the top is to be arranged. I called at your office to-day, but you were not in; and I now write to put this matter before you so that it may be considered, and shall feel greatly obliged to you if you will inquire into it before the frieze is commenced at the buildings referred to above. You will no doubt notice that very few of the buildings down near the Railway Station are as high as those up town.

Trusting to your kind attention to this matter,

I remain, &c.,
M. J. AUSTIN.

No. 81.

The Superintendent of Telegraphs to Mrs. M. J. Austin, Enfield.

Madam, 14 May, 1886.

I have the honor to acknowledge the receipt of your communication of the 10th instant, referring to the removal of awnings in front of your premises, George-street, to enable the Government to erect the iron columns and frieze for carrying telegraph wires, and beg to inform you that the matter has been referred to the superintending officer for report.

I have, &c.,
E. C. CRACKNELL.

No. 82.

Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs.

Sir, 10 June, 1886.

Referring to Mrs. Austin's verandahs, I have seen these, and there is no doubt that the new verandah system would cross the windows of the second story of the buildings; but if there be any objection to that, our work can be carried over the present awnings without any alterations to them.

I have, &c.,
R. RUTHERFORD.

Mr. Scott, 81 Pitt-street, informed on Mrs. Austin's behalf.—W.W., 12/6/86.

No. 83.

Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs.

Removal of Verandahs, &c., George-street, betwixt Goulburn and Hay-streets.

Name.	Address.	Obstruction.
H. Zions	613 George-street	Verandah, Gasfittings, & Signboards
Mr. Kaiser	615 ,,	,, ,, ,,
A. Carter	617 ,,	,, ,, ,,
George Wells	619 ,,	Lamp
J. Steenson	621 ,,	Verandah, Gasfittings, & Signboard
S. U. Caines	625 ,,	,, ,, ,,
Norrie & Mayer	627 ,,	,, ,, ,,
C. Simmatt	631 ,,	,, and Lamp
Haymarket Arcade	— ,,	,,
Carrington Galleries	635 ,,	,,
George Barr & Co.	633 ,,	,, Gasfittings, & Signboard
Edward Lewis	635 ,,	,, Lamp ,,
P. Paoletti	636 ,,	,, and Signboard
J. Thomas	637 ,,	,, Gasfittings ,,
C. Loughnan	639 ,,	,, ,, ,,
E. Mariette	651 ,,	,, 2 Lamps ,,
Isaac Harris	661 ,,	,, Gasfittings ,,
J. Steenson, junior	663 ,,	,, ,, ,,
Marks & Co.	667 ,,	,, Lamp ,,
M'Carthy & Co.	669 ,,	,, ,, ,,
Schroeder & Co.	671 ,,	,, and Signboard
C. B. Stabb	671 ,,	,, ,,
T. M. Alcock	673 ,,	,, 2 Lamps ,,

Sir,

The verandahs and other fittings here mentioned will require to be removed for the erection of ironwork for telephone cables.—R.R., 8/5/86.

Messrs. H. Zion and others informed.—H.F., 19/5/86.
NOTE.—For copy of notice, See No. 60.

No. 84.

Mr. R. Rutherford, Telegraph Inspector, Sydney, to the Superintendent of Telegraphs.

Removal of Verandahs, &c., George-street, betwixt Valentine-lane and Bridge.

Name.	Address.	Obstruction.
P. Smith	767 George-street	Verandah and gasfittings.
Do	767½ ,,	,, ,,
Mr. Horton	769 ,,	,, lamp and signboard.
Antonia G. Rosario	771 ,,	,, gasfittings, and signboard.
C. W. Rogers	773 ,,	,, ,, ,,
A. J. Selig	775 ,,	,, ,, ,,
Quong Tart & Co.	777 ,,	,, 2 lamps and glass ,,
T. Morris	779 ,,	,, 2 lamps, and signboard.
J. Clamp	781 ,,	,, lamp, &c., ,,
John Waddell	785 ,,	,, ,,
Walter Lance & Co.	787 ,,	,, gasfittings ,,
Kerr & Todd	793 ,,	,, and lamp.
J. Hill	795 ,,	,, ,,
J. Thomas & Son	797 ,,	,, ,,
J. Herford	799 ,,	,, gasfittings, and signboard.
R. Heggie	801 ,,	,, and signboard.
A. F. Brown & Co.	803 ,,	,, gasfittings, and signboard.
A. Lomer & Co.	805 ,,	,, and signboard.
R. F. Wood & Co.	807 ,,	,, lamp, and signboard.
Alexander Borthwick	809 ,,	,, and signboard.
F. Maidment & Co.	811 ,,	,, gasfittings, and signboard.
A. Saunders	813 ,,	,, lamp ,,
Henry Reynolds	821 ,,	,, ,, ,,
Mr. Lorenzo	823 ,,	,, and signboard.
William Webb	825 ,,	,, and 3 lamps.

Removal

Removal of Verandahs, &c., George-street, betwixt Engine-street and Valentine-lane.

Name.	Address.	Obstruction.
Charles Saunders	703 George-street	Lamp.
Mr. Poconowski	705 ,,	2 awning posts and signboard.
Wm. O'Neil	707 ,,	Verandah, lamp, and signboard.
Geelong Tailoring Co.	708 ,,	,, 3 lamps ,,
The Orange Butter Co.	711 ,,	,, gasfittings ,,
George A. Bramston	718 ,,	,, lamp ,,
J. J. Gleeson	719 ,,	,,
Dent & Perry	721 ,,	,,
J. W. Smith	723 ,,	,,
Sidney Cropley	729 ,,	,, and signboard.
Edward R. Roberts	731 ,,	,, lamp, and signboard.
Warner Bros.	753 ,,	,, gasfittings, and signboard.
P. Bulbert	755 ,,	,, ,, ,,
J. Sheldon	757 ,,	,, ,, ,,
M. R. Cranney	759 ,,	,, and signboard.
H. Roberts	761 ,,	,, and gasfittings.
Thos. Harris	763 ,,	,, ,, ,,
W. & H. Kinsela	765 ,,	,, gasfittings, and signboard.

REMOVAL of Verandahs, &c., George-street, between Hay and Engine Streets.

Name.	Address.	Obstruction.
L. Uhde & Co.	679 George-street	Verandah and 3 lamps.
Dale's Dining-rooms	681 ,,	,, and 1 lamp and signboard.
L. Barnett	683 ,,	,, and 2 lamps ,,
J. Ollerenshaw	685 ,,	,, Gasfittings ,,
W. Smith, &. Co.	687 ,,	,, ,,
Thos. K. Smith	687½ ,,	,, ,,
C. Hunt	689 ,,	,, gasfittings and signboard.
Jeremiah M'Grath	691 ,,	,, lamp, ,,
Simon Lazarus	693 ,,	,, gasfittings, ,,
W. Allerton	695 ,,	,, ,, ,,
N. Schachtel	697 ,,	,, ,, ,,

The persons here named have verandahs or other obstructions that will require to be removed as the iron verandah-work proceeds.—R. Rutherford, 11/5/86. Give the usual notices.—E.C.C., 11/5/86.

Note.—For copy of notice, see No. 60.

No. 85.

Mr. R. Rutherford, Telegraph Inspector, Sydney, to The Superintendent of Telegraphs.

Names and addresses of property owners *re* the removal of Verandahs, &c., George-street.

Name.	Address.	Obstruction.
L. Uhde & Co.	679 George-street	679.
W. Woodcock	Agent, Fitzsimmons, Chas., Castlereagh-street	681.
Mr. M'Donald	Moore Park	683, 685, 687, 687½, 689.
Mrs. Adams	Newtown Road	691, 693.
Mr. Sherbin	Newtown	695, 697.
J. W. Flanagan	105 Engine-street	703, 705.
James Bates	Bondi	707.
Mr. Linsley	care of Geelong Tailoring Co.	708.
Mr. Yeoman	Solicitor	711.
Mr. M'Namara	care of G. A. Bramston, 718	718, 719, 721, 723.
Mr. Hopkins	Tattersall's-rooms, Pitt-street	729.
Mr. Richardson	Devonshire-street	731, 753, 755.
Mrs. M'Carthy	Newtown Road	757, 759.
Mr. Vaughan (Trustee)	Auctioneer, King-street	761, 763, 765.
Mr. Daniell	Cook's River	767, 767½.
Mr. J. Waddell	785 George-street	769, 781, and 785.
Mr. Dalley	care of Mr. Rosario	771.
C. W. Rogers	773 George-street	773.
Mr. H. Kinsela	765 ,,	775, 777, 779.
Mr. Curley	Bourke-street, Surry Hills	787, and 821.
Mr. Rankine	care of Kerr & Todd	793.
Mrs. Farrell	2 Cambridge Terrace, Newtown Road	795.
Mrs. Austin	Austinlee, Enfield	797, 799, 801, 803.
A. Lomer & Co.	805 George-street	805, 807, 809, 811, 813.
Wm. Webb	825 ,,	823, 825.

Messrs. Uhde and others advised.—T.S., 5/6/86.

Note.—For copy of notice, see No. 60.

No. 86.

Mr. Chas. Binnie, Sydney, to The Superintendent of Telegraphs.

Dear Sir, 276, George-street, 7 June, 1886.

A few lines to ask if, as head of the above Department, you can show cause why I should not take proceedings against you for wilfully disfiguring the ornamental stone fronts of buildings Nos. 543 and 541, George-street.

Not only have holes been pierced in the stonework for the supports for the awning, but, through carelessness, one has been pierced in the cornice, for which there was no requirement.

I remain, &c.,
CHAS. BINNIE.

No. 87.

The Superintendent of Telegraphs to Mr. Chas. Binnie, Sydney.

Sir, 10 June, 1886.

In acknowledging the receipt of your communication of the 7th instant, complaining of the disfigurement of the stone fronts of your premises, Nos. 541 and 543, George-street, through holes being pierced in same for the awning supports in connection with the iron frieze for carrying the telegraph wires, and requesting that cause should be shown why proceedings should not be taken against the Government for damages, I have the honor to inform you that, under the 5th section of the Electric Telegraph Act, the Department is empowered to cause any wires to be supported by affixing or annexing the same to any building in any city or other place in the Colony; and, therefore, you have no case against the Government.

I have, &c.,
E. C. CRACKNELL.

No. 88.

Mr. Chas. Binnie, Sydney, to The Superintendent of Telegraphs.

Dear Sir, 276, George-street, 14 June, 1886.

In reply to yours of the 10th instant, I am sorry to state that you have not answered the question of my former letter.

You refer me to the 5th section of the Act, which deals with the power of the Department to erect supports for the wires; but this is not the point, as the damage done to the property in question is by the supports for the awning—not the wires.

Your Act in regard to the awnings gives you power to pull down all awnings within the line of work and to erect in their place others according to regulations; but it does not empower you to disfigure or destroy private property.

Awaiting your pleasure,

I remain, &c.,
CHAS. BINNIE.

No. 89.

The Superintendent of Telegraphs to Mr. Chas. Binnie, Sydney.

Sir, 16 June, 1886.

In acknowledging the receipt of your communication of the 14th instant, in reply to mine of the 10th idem, respecting the erection of supports for frieze to carry telegraph-lines along George-street, I have the honor to inform you that the Electric Telegraph Act provides for wires being supported by affixing supports to any building whatsoever; and I am therefore unable to recognise any claim you may deem yourself to have against the Government.

I have, &c.,
E. C. CRACKNELL.

Sydney: Thomas Richards Government Printer.—1886.

[1*s.* 6*d.*]

1885–6.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MR. METCALFE, ENGINEER IN THE ELECTRIC TELEGRAPH DEPARTMENT.

(DISMISSAL OF.)

Ordered by the Legislative Assembly to be printed, 19 *August,* 1886.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 7th July, 1886, That there be laid upon the Table of this House,—

"Copies of all minutes, letters, papers, and other documents in connection "with the appointment, suspension, and dismissal of Mr. Metcalfe, Engineer "in the Electric Telegraph Department."

(*Mr. Garrard.*)

SCHEDULE.

NO.		PAGE.
1.	Superintendent of Telegraphs to Secretary, General Post Office. 31 January, 1884	1
2.	Minute of the Postmaster-General. 2 February, 1884	2
3.	Superintendent of Telegraphs to Secretary, General Post Office. 5 February, 1884	2
4.	Same to the same. 2 March, 1886	2
5.	Minute of the Postmaster-General. 10 March, 1886	2
6.	Minute of the Superintendent of Telegraphs. 9 April, 1886	2
7.	The Town Clerk, Sydney, to the Secretary, General Post Office. 10 June, 1886	2
8.	Superintendent of Telegraphs to the same. 11 June, 1886	2
9.	Minute of the Postmaster-General. 16 June, 1886	2
10.	Memorandum of Superintendent of Telegraphs to Mr. J. Metcalfe. 14 June, 1886	3
11.	Superintendent of Telegraphs to same. 17 June, 1886	3
12.	Same to the Secretary, General Post Office. 17 June, 1886	3
13.	Memorandum of Superintendent of Telegraphs. 18 June, 1886	3
14.	Superintendent of Telegraphs to Mr. J. Metcalfe. 21 June, 1886	3
15.	Mr. J. Metcalfe to the Superintendent of Telegraphs. 23 June, 1886	3
16.	The Superintendent of Telegraphs to Mr. J. Metcalfe. 1 July, 1886	4
17.	Mr. J. Metcalfe to the Superintendent of Telegraphs. 2 July, 1886	4
18.	The Superintendent of Telegraphs to the Secretary, General Post Office. 2 July, 1886	4
19.	Same to Mr. J. Metcalfe. 2 July, 1886	4

No. 1.

The Superintendent of Electric Telegraphs to The Secretary, General Post Office.

31 January, 1884.

I BEG to recommend for the approval of the Postmaster-General that Mr. J. Metcalfe, who has been in charge of the electric lights with wages of £3 per week, be appointed Engineer-in-charge of Parliament House Light and the Electric Lights of this Department generally, with a salary of £208 per annum.

Provision is made on the 1884 Estimates to meet the expenditure.

To date from the 1st instant.

E. C. CRACKNELL.

Submitted.—S.H.L., 1/2/84.

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No. 2.

Minute of Postmaster-General.

2 February, 1884.

Is Metcalfe thoroughly competent to perform the duties, and is not the proposed pay, £208 per annum, very high?

W.J.T.

No. 3.

The Superintendent of Telegraphs to The Secretary General Post Office.

5 February, 1884.

METCALFE is the best man we have for the general supervision of the electric lights, and quite competent for the position. He will only be on the same rate as the Engineer for the Circular Quay Lights, and I do not think it is too high.

E.C.C.

Approved.—W.J.T., 6/2/84.

No. 4.

The Superintendent of Telegraphs to The Secretary General Post Office.

2 March, 1886.

I BEG to recommend, for the approval of the Postmaster-General, that the salary of Mr. J. Metcalfe, engineer, Electric Light Branch of this Department, be increased from £208 to £221 per annum for the year 1884, and from £221 to £226 per annum for 1885.

These amounts are voted on the Estimates, and Mr. Metcalfe, who is a very deserving officer, is entitled to the increases.

E. C. CRACKNELL.

Submitted.—S.H.L., 4/3/86.

No. 5.

Minute of Postmaster-General.

10 March, 1886.

WHY are these increases now being recommended after so long a lapse of time.

F.B.S.

No. 6.

Minute of Superintendent of Telegraphs to Secretary, General Post Office.

9 April, 1886.

THE amounts proposed to be paid are voted for the years named. I cannot say why Mr. Metcalfe's salary has not been paid as voted. He cannot be paid without the Minister's authority.

E. C. CRACKNELL.

Increase may be paid.—F.B.S., 27/5/86.

No. 7.

The Town Clerk, Sydney, to The Secretary General Post Office.

Sir,

Town Clerk's Office, Sydney, 10 June, 1886.

I have the honor, by direction of the Right Worshipful the Mayor, to state that the City Council have determined upon illuminating and otherwise decorating the Town Hall on the 21st instant, in celebration of the commencement of the fiftieth year of Her Majesty's reign, and as it is proposed to use electric lighting on the occasion, I am desired by His Worship respectfully to apply to the Postmaster-General for his assistance by allowing the Superintendent of Telegraphs to co-operate with the Council in carrying out all necessary arrangements, and that the use of such electric apparatus as can be conveniently spared by the Department may be placed at the service of the Council.

I have, &c.,
CHAS. H. WOOLCOTT,
Town Clerk.

The Superintendent of Telegraphs for report.—S.H.L., 10/6/86.

No. 8.

The Superintendent of Telegraphs to The Secretary General Post Office.

11 June, 1886.

WE can spare three dynamo machines and six arc lamps if the Postmaster-General approves.

E.C.C.

No. 9.

Minute of Postmaster-General.

16 June, 1886.

APPROVED, and the Superintendent of Telegraphs may give what assistance he can.

F.B.S.

No. 10.

Memorandum from Superintendent of Telegraphs to Mr. J. Metcalfe.

Sydney, 14 June, 1886.

You will have quite enough to do to get the outside work and the tower ready in time. I have arranged to have the inside work done entirely by Mr. Kingsbury's firm, and you had better leave that part with them.

No. 11.

The Superintendent of Telegraphs to Mr. J. Metcalfe.

Sydney, 17 June, 1886.

I have to inform you that, in consequence of your insubordinate conduct, I have decided to suspend you from duty, and your case will be brought under the notice of the Postmaster-General, with a view to your removal from the Service.

You will be good enough to hand over at once any papers or documents you may have in your possession belonging to the Department.

E. C. CRACKNELL.

No. 12.

The Superintendent of Telegraphs to The Secretary General Post Office.

17 June, 1886.

I beg to bring under the notice of the Postmaster-General the conduct of Mr. J. Metcalfe, Engineer Electric Light Branch of this Department, who has refused to obey my instructions in respect to some work he was directed to carry out at the Town Hall, and has been very insubordinate to myself when being spoken to on the subject.

I have suspended him, and now recommend that he be called upon to show cause why he should not be dismissed the Service.

E. C. CRACKNELL.

Submitted.—Jas. D., 18/6/86. Approved.—F.B.S., 18/6/86.

No. 13.

Memorandum of Superintendent of Telegraphs.

18 June, 1886.

Arrangements have been made for carrying out this work. J. Metcalfe, who has charge of the Electric Light Stores, refused to carry out my instructions to look after the outside work, such as fixing the dynamos, running leads, and placing the arc lamps in position; has been called upon to show cause why he should not be dismissed for insubordination.

E. C. CRACKNELL.

No. 14.

The Superintendent of Telegraphs to Mr. J. Metcalfe.

Sydney, 21 June, 1886.

With reference to my letter of the 17th instant, advising you of your suspension from duty in consequence of your misconduct, I have now to request that you will be good enough to furnish me with an explanation of your conduct, and that you will show cause why you should not be dismissed the Service.

E. C. CRACKNELL.

No. 15.

Mr. J. Metcalfe to The Superintendent of Telegraphs.

Sir, Sydney, 23 June, 1886.

In reply to your memo. of the 21st instant, I beg to state that I do not consider I have been guilty of any misconduct, as I am not aware that I have done anything to either disgrace myself or the Service; what I did was simply to resent the interference of Mr. Kingsbury, which I am sorry to say I have put up with too long.

I was told, previous to this occurring, by his brother, that you had asked him, Mr. Kingsbury, to take charge of this work at the Town Hall, also of the decorations; and had you told me of this arrangement in the first place I should most certainly have objected to go near the work, and would have explained to you my reason for so doing, which would have saved this misunderstanding.

You are well aware that I applied to you for a removal both before and after you left, and after your return from Europe; this I did so that I might get away from his annoyance, which at times was almost unbearable, especially after I found fault with his work at Parliament House, and refused to certify to his vouchers for the same. But what led directly to this was his coming to the Town Hall and interfering, in fact stopping the men in their work after they had been ordered to work under my instructions. I am not aware who or what Mr. Kinsbury is, but this I know, he appears to do as he likes; for instance, in this case you told our men distinctly that the brackets I had fixed in front of the building were to remain, but he said he would take them down, and did so in spite of your orders to the contrary.

Yours, &c.,
J. METCALFE.

No. 16.

The Superintendent of Telegraphs to Mr. J. Metcalfe.

Sydney, 1 July, 1886.

I HAVE to inform you that you will be paid salary up to the 30th ultimo, from which date it will be discontinued; and at the same time I have to request that you will at once forward your resignation.

E. C. CRACKNELL.

No. 17.

Mr. J. Metcalfe to The Superintendent of Telegraphs.

Sir, 2 July, 1886.

In reply to your memo. dated July 1st, I beg respectfully to refer you to my memo. dated June 23rd, in which I have shown cause against my removal from the Service. I herewith return you the above-mentioned memo. of the 23rd ultimo, as it was returned to me without any reply attached.

I remain, &c.,

J. METCALFE.

No. 18.

The Superintendent of Telegraphs to The Secretary, General Post Office.

THE Postmaster-General having acceded to the request of the City Council to afford all the assistance which could be given by the Electric Telegraph Department in illuminating the Town Hall with the electric light, I immediately issued instructions to the engineer-in-charge of the Electric Light Branch to at once proceed with the work. He, however, stated that as he had very little time to spare it would be impossible for him to give the necessary attention which such an elaborate installation required. I, feeling that there might be some reason for this, had a personal interview with the Town Clerk, and suggested that under the circumstances, Messrs. H. H. Kingsbury & Co. had better be entrusted with the portion of the work inside the vestibule to be paid for by the City Council. The Town Clerk agreed to the proposal, and Mr. Kingsbury was at once employed. Instructions were issued to Mr. Metcalfe that he was to attend to the outside work, and that the remainder would be carried out by Mr. Kingsbury. Mr. Metcalfe immediately afterwards came to me in a very boisterous manner, and stated that if Mr. Kingsbury was to have anything to do with the arrangement he declined to do anything in connection with the work, or assist in any way, and marched himself off. I drew his attention to the fact that this was an act of insubordination, and that such conduct could not be countenanced, whereupon he behaved himself in a most insubordinate manner, and I deemed it my duty to recommend his suspension, and brought the matter under the notice of the Postmaster-General, with a view to his removal from the Service. Mr. Metcalfe is not appointed by the Executive Council, and, as he has failed to give any satisfactory reason for his conduct, I recommend that his dismissal be confirmed.

2/7/86. E. C. CRACKNELL.

Approved.—F.B.S., 2/7/86.

No. 19.

The Superintendent of Telegraphs to Mr. J. Metcalfe.

Sydney, 2 July, 1886.

I HAVE to inform you that in consequence of your insubordinate conduct, and your refusal to obey instructions given by the head of the Department in connection with the electric lighting of the Town Hall, the Postmaster-General has directed that you be dismissed the Service.

E. C. CRACKNELL.

Sydney: Thomas Richards Government Printer.—1886.

[3d.]