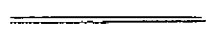


NEW SOUTH WALES.



VOTES

AND

PROCEEDINGS

OF

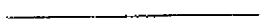
THE LEGISLATIVE ASSEMBLY

DURING THE SESSION

OF

1875,

WITH THE VARIOUS DOCUMENTS CONNECTED THEREWITH.



IN FOUR VOLUMES.
VOL. IV.



SYDNEY:

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1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

VOTES AND PROCEEDINGS.

SESSION 1875.

(IN FOUR VOLUMES)

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1875.

NEW SOUTH WALES.

REPORT

OF THE

COUNCIL OF EDUCATION

UPON THE CONDITION

OF THE

PUBLIC SCHOOLS

FOR

1874.

Presented to both Houses of Parliament, in pursuance of Act 30 Vict. No. 22, sec. 27.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1875.

ERRATA.

In Appendix B, pages 9, 10, 11, and 12: Read the following in place of the figures given in the Table.

Name of School.	Number of Children on Rolls.								Attendance.				
	Boys.	Girls.	Total.	Church of England.	Roman Catholic.	Presbyterians.	Wesleyans.	Others.	Boys.	Girls.	Total.		
Albury	179	153	332	149	24	69	57	33	131	8	101	5	233
Bergalia	25	32	57	16	17	19	5	...					
Berrima	31	30	61	46	7	5	3	...					
Fredericktown	32	19	51	36	6	...	9	...					
Hargraves.....	34	45	79	37	30	10	...	2					
Mulwala	21	18	39	9	30	...	...	...		
Raglan	47	39	86	62	21	3	...	...			
Robertson.....	21	22	43	16	13	4	4	6					
Rylstone	45	37	82	42	12	2	26	...					
Summerland	10	29	39	21	2	...	16	...					
Wallsend	258	208	466	70	19	107	97	173					
Wellington	89	57	146	74	42	21	7	2					

In Appendix D, page 14: Read the following in place of the figures given in the Table.

Name of School.	Number of Children on Rolls.							
	Boys.	Girls.	Total.	Church of England.	Roman Catholic.	Presbyterians.	Wesleyans.	Others.
Beechwood.....	17	13	30	7	5	13	5	.....
Coombing Creek	12	21	33	7	9	6	11	.....
Harwood Island	16	28	44	8	15	15	6	.....

ERRATA.

In Appendix A, pages 4 and 5: Read the following in place of the figures given in the Table.

Name of School.	Number of Children on Rolls.							
	Boys.	Girls.	Total.	Church of England.	Roman Catholic.	Presbyterians.	Wesleyans.	Others.
Cabramatta, C.E.	19	22	41	27	14	.....	.....	.....
Dapto, C.E.	34	26	60	32	9	6	13	.....
Lord's Forest, C.E.	25	22	47	39	1	2	5	.....
Pyraont, C.E.	146	88	234	160	.....	62	5	7
St. James', C.E.....	316	198	514	407	15	18	18	56
Wollongong, C.E.	70	45	115	83	.....	14	13	5
Kurrajong, R.C.....	39	29	68	26	32	.....	10	.....
West Maitland, B.C.	232	187	419	13	405	.....	.....	1
Newtown, R.C.	63	78	141	1	137	.....	.....	3

THE COUNCIL OF EDUCATION TO HIS EXCELLENCY THE GOVERNOR,

SUBMITTING

REPORT UPON THE CONDITION OF THE PUBLIC SCHOOLS FOR 1874.

To His Excellency SIR HERCULES GEORGE ROBERT ROBINSON, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Governor-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

MAY IT PLEASE YOUR EXCELLENCY,

We have the honor, in compliance with the requirements of the Public Schools Act, to submit this our Eighth Annual Report upon the condition of Public Schools, being that for the year 1874.

I.—COUNCIL.

Since the date of our last Report, no change has taken place in the composition of the Council, the Members being:—

Stephen Campbell Brown, Esquire, M.L.A.

William Augustine Duncan, Esquire.

The Honorable Thomas Holt, M.L.C.

The Honorable John Smith, M.D., M.L.C., President.

The Honorable Sir Alfred Stephen, C.B., K.C.M.G., M.L.C.

The Honorable John Smith, President during 1874, was unanimously re-elected to fill that office for the current year.

II.—GENERAL STATISTICS.

Although not less than fifty schools of various kinds were either temporarily suspended or permanently closed in 1874, there was in that year, as may be seen from the subjoined table, a net increase of forty-eight schools. The total number of new schools established in that period was eighty-six, viz.:—twenty-one Public, forty-seven Provisional, sixteen Half-time, and two Certified Denominational (Roman Catholic). The whole number of schools in operation was 990.*

I.—SCHOOLS.

Year.	Public.	Provisional.	Half-time.	Denominational.	Totals.
1867	288	31	6	317	642
1868	318	103	38	289	748
1869	336	146	61	264	807
1870	359	164	82	241	846
1871	378	181	96	223	878
1872	396	194	101	211	902
1873	400	216	117	209	942
1874	420	244	122	204	990

As in former years, so in the one just expired, the difficulty of procuring sites has either delayed for a time or wholly prevented the establishment of schools in some places where they were urgently needed; and the inability of the residents to contribute with sufficient liberality towards the fixed local quota (one-third) of the cost of buildings, has proved another serious hindrance. The Public School at Pyree, for example, mentioned in our last Report as suspended on account of the want of proper buildings, has not yet been re-opened, no schoolroom having up to the present time been erected by the proprietor who, moreover, declines to alienate a site for the necessary school accommodation, so as to justify the legal expenditure of public funds for the purpose. On this important subject the Council has addressed a strong representation to the Government, urging the expediency of an Act of Parliament (a draft of which the Council prepared and transmitted) similar to the "Sites for Schools Acts" passed in England, and to corresponding enactments in our Railway Acts. The Council would earnestly press this measure on the attention of the Government.

An increase of 8,366 in the number of pupils enrolled is shown by the second table, the total being 100,384. The increase has occurred principally in the Public and Certified Denominational Schools, the enrolment in the former being augmented by 4,871, and in the latter by 2,706:—

2.—PUPILS

Year.	Public.	Provisional.	Half-Time.	Denominational.	Totals.
1867	28,434	783	267	35,306	64,740
1868	34,284	3,113	593	35,930	73,920
1869	37,593	4,788	1,242	37,026	80,649
1870	39,731	5,185	1,445	36,460	82,821
1871	43,494	5,633	2,267	35,919	87,313
1872	46,458	6,673	1,792	33,564	88,487
1873	48,831	7,466	2,209	33,512	92,018
1874	53,702	8,002	2,462	36,218	100,384

While

* Since 1st January, 1875, seven Public Schools, nine Provisional, and one Half-Time have been opened.

Appendix A.

While it is gratifying to find that larger numbers of children have been brought under instruction, there is still serious ground for dissatisfaction in the increasing irregularity of the attendance of pupils. The extent of this decline in regular attendance may be seen from the following tabulated statement:—

PROPORTION OF PUPILS IN AVERAGE ATTENDANCE TO THE AVERAGE NUMBER ENROLLED.

Year.	Public Schools.	Certified Denominational Schools.	All Schools.
	Per cent.	Per cent.	Per cent.
1872	69·3	67·5	68·6
1873	67·	65·7	66·
1874	65·7	64·	65·6

It is difficult wholly to account for this falling off, which however may to a considerable extent be attributed to a variety of causes—such as sickness, bad weather, drought, and harvesting operations. These usually operate singly, each, according to the season, being the principal cause of irregular attendance; but it also happens occasionally that two or more will co-exist, as was the case towards the close of the year, when large numbers of pupils were kept from school on account of the harvest and the prevalence of an epidemic (measles) which has spread throughout the Colony.

It is perhaps necessary to state that, in calculating the number of pupils in average attendance, no allowance is made for the absence of children from any cause whatever.

A slight diminution in the number of free scholars, and a marked increase in the amount of school fees paid (Table 3) are facts worthy of note:—

3.—FEES.

Year.	Public.	Provisional.	Half-Time.	Denominational.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1867	14,404 0 10½	162 12 5	18 9 7½	16,134 5 10	30,719 8 9
1868	17,588 8 11	1,099 14 11	77 15 11	15,398 3 9	34,164 3 6
1869	20,658 19 7	1,981 9 9	174 13 8	16,803 10 11	39,618 13 11
1870	21,113 8 10½	2,077 10 6	234 0 10	16,158 3 2½	39,588 3 5
1871	24,824 0 8	2,154 2 3	284 4 3	16,240 14 6	43,503 1 8
1872	27,048 18 11	2,701 4 6	456 9 3	15,787 9 11	45,994 2 7
1873	28,579 15 11½	3,430 15 11	529 16 1	16,406 18 0	48,947 5 11½
1874	31,656 1 7½	3,670 1 11½	769 13 0½	17,440 8 7	53,536 5 2

The number of free scholars was 6,426, being 147 less than in 1873, while the school fees increased by £4,588 19s. 3½d., the gross amount paid being £53,536 5s. 2½d. The improvement in this respect, more marked than in any year since 1871, may be ascribed in some degree to the inquiries carried on through the Council's Inspectors, and to the more systematic manner in which the provisions of section 16 of the Public Schools Act have been carried out. There is, however, undoubtedly still great room for improvement in respect to the payment of school fees,—not as regards the parents who are really unable to pay, but on the part of those who, with no such excuse, nevertheless habitually withhold payment.

III.—PUBLIC SCHOOLS.

Appendix B.

In 1874 the number of Public Schools in operation increased from 400 to 420. This statement however, does not represent the whole number of new Public Schools established in 1874, inasmuch as fifteen of the number open in the previous year were closed, and five others were removed to different classes. Of the forty Public Schools opened in 1874, twenty-one were entirely new institutions, three were old schools re-opened, and sixteen had previously been in operation as Provisional, Half-Time, or Certified Denominational Schools. The shifting of population that continually takes place will probably, for many years to come, render the continuance of several of the smaller Public Schools extremely problematical, and consequently changes such as those above mentioned may be expected to occur with considerable frequency.

Appendix C.

The number of applications for new Public Schools received in 1874 was forty. By these applications, it was sought to provide the means of instruction for 3,749 children, and 747 parents or guardians appended their signatures to a promise to send their children or wards to the schools when established. Twenty-four of these applications were granted, four were declined, and twelve remained under consideration at the end of the year.

IV.—PROVISIONAL SCHOOLS.

Appendix D.

Of the 216 Provisional Schools reported to be in operation in 1873, twenty-one were closed in 1874, twelve were converted into Public Schools, and one into a Half-Time School. To the 182 then remaining must be added forty-seven new schools, eight that were re-opened, and seven transferred from other classes of schools. The total number in operation was consequently 244.

Appendix E.

Applications for aid to seventy-two Provisional Schools were received in 1874. Of these, forty-five were granted, twelve declined, and fifteen stood over for decision in 1875. The number of children for whose instruction provision was to be made by these applications was 1,919, their attendance at the schools being guaranteed by 747 parents or guardians.

V.—HALF-TIME SCHOOLS.

Appendix F.

Appendix G.

Of schools of this class, 122 were in operation in 1874, being a net increase of but five, although the number of new schools was twenty-two. The number of applications for Half-Time Schools was twenty-two, of which fourteen were acceded to, four were declined, and four were not determined at the end of the year.

VI.—INSPECTION.

With the same staff of Inspectors, and generally favourable weather, the number of schools fully inspected in 1874 exceeds but slightly that for 1873, and fewer children were present at the examinations. It is to be observed, however, that in addition to the number of schools or departments reported to have been fully inspected, some others received incidental visits. The appended Table exhibits the number of schools

schools inspected in each District, and the number not visited for the purpose of examining the pupils:—

Districts.	Numbers of Schools or Departments existing.	Number fully inspected.	Number not fully or regularly inspected.
Albury	62	51	11
Armidale	103	63	40
Bathurst	121	58	63
Braidwood	113	111	2
Camden	106	83	23
Cumberland	88	87	1
Goulburn	109	93	16
Maitland	99	82	8
Mudgee	71	59	12
Newcastle	100	87	13
Sydney	110	110	0

VII.—CONDITION OF SCHOOLS INSPECTED.

On this head, very decided improvement is, generally speaking, observable. While the high standard set up in previous years has not been in any respect lowered, the number of schools reaching or surpassing it has sensibly increased. About 34 per cent. of all inspected schools were reported as equal to the standard, and 19 per cent. above it. The Table given below affords information in detail as to the success of the various classes of schools, and also means of comparison with the results achieved in the previous year.

Schools.	Below Standard		Up to Standard.		Above Standard.	
	1873.	1874.	1873.	1874.	1873.	1874.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Public	44.7	33.3	36.8	37.4	18.4	29.3
Provisional	84.1	78.2	9.3	17.6	6.6	4.2
Half-Time	80.4	38.	9.8	42.4	9.8	19.6
Denominational	63.7	46.5	29.1	39.9	7.2	13.6
All Schools	60.4	45.6	27.2	34.8	12.4	19.6

The improvement indicated in the foregoing Table is corroborated by the results of the examination of the pupils, as disclosed in the subjoined Table of the estimated proficiency of the pupils of all schools:—

ESTIMATED PROFICIENCY OF THE PUPILS.

Subjects taught, and number of Children examined therein.					
	Estimated Proficiency.				
	Good	Fair.	Tolerable.	Moderate to Indifferent.	Totals.
<i>Reading—</i>					
Alphabet	1,057	1,491	1,309	1,413	5,270
Monosyllables	3,701	4,816	3,489	2,144	14,180
Easy Narrative	3,703	5,190	3,267	1,175	13,635
Ordinary Prose	3,702	4,429	1,693	580	10,404
Totals	12,253	15,956	9,758	5,612	43,579
<i>Writing—</i>					
On slate	6,104	6,677	3,332	2,259	18,372
In copybooks	9,273	8,804	3,662	1,531	23,270
Totals	15,377	15,481	6,994	3,790	41,642
<i>Arithmetic—</i>					
Simple rules	6,178	6,517	5,576	6,844	24,115
Compound rules	1,401	2,175	1,948	2,078	7,602
Higher rules	1,270	1,197	574	783	4,124
Totals	7,849	9,889	8,398	9,705	35,841
<i>Grammar—</i>					
Elementary	3,171	4,326	2,779	3,019	13,295
Advanced	2,634	3,152	1,989	1,888	9,663
Totals	5,805	7,478	4,768	4,907	22,958
<i>Geography—</i>					
Elementary	3,685	5,026	3,906	3,486	16,103
Advanced	3,289	3,023	1,951	1,867	10,130
Totals	6,974	8,049	5,857	5,353	26,233
<i>Other Subjects—</i>					
Scripture and moral lessons	2,560	3,404	1,675	1,220	8,859
Object lessons	8,985	14,175	9,124	7,505	39,789
Drawing	5,392	7,573	4,384	2,291	19,643
Music	7,391	10,227	6,968	3,472	28,058
Euclid	499	450	514	205	1,668
Algebra	295	292	186	68	841
Mensuration	57	42	50	.....	149
Trigonometry	20	11	10	.....	41
Latin	192	221	93	75	581
Knockwork	4,414	4,764	2,362	814	12,354

While

While it appears from the foregoing statistics that the percentage of pupils satisfying the standard in reading (for example) was 87, as against 85 in 1873, 28 per cent. passed with great credit as against 22. In other subjects also it will be observed that the number of pupils whose proficiency is estimated as "Good" has undergone a considerable increase. This circumstance is the more noteworthy, inasmuch as the greatest numbers of scholars who, during any year, cease to attend school, are as a rule those who have attained the highest degree of advancement in their studies.

VII.—TEACHERS.

The supply of Pupil Teachers continues to be, in general, fully equal to the demand for their services. Applications for appointment in that capacity were received from 193 persons during 1874, and, of that number, 102 succeeded in passing the required examinations as to aptitude for teaching and knowledge of elementary subjects of instruction. The improvement manifested in 1873, as regards the success of pupil teachers actually engaged in schools, was continued last year, the percentage of failures being 16 per cent. only. The corresponding per centages for 1871, 1872, and 1873, were 31, 27, and 21.

The following statistics will give the means of comparison with the results obtained in 1873:—

PUPIL TEACHERS.

	1874.	1873.
Applicants examined	193	179
" successful	102	94
" unsuccessful	91	85
Pupil Teachers promoted from—		
Class IV to Class III	60	76
" III to " II	61	42
" II to " I	48	40
" I to Training School	34	38
Failing to gain promotion	39	56

The work of the Training School was also carried on with great success in 1874. In addition to the 34 First Class Pupil Teachers who were found eligible for admission to the Training School, 41 candidates presented themselves for admission, of which number 8 failed to pass. The course of training was completed by 64 candidates who, after the usual examination, were classified as follows:—

Classification.	Males.	Females.	Total.
CLASS II.			
Section A	8	7	15
" B	6	13	19
CLASS III.			
Section A	8	5	13
" B	7	2	9
" C	4	4	8
Total.....	33	31	64

The examination of Teachers in charge of Schools, prescribed by Article 37 of the Regulations, and of those who applied for promotion, were held as usual, and with results, as may be seen from the following Table, far in advance of those obtained in any previous year:—

EXAMINATIONS UNDER ARTICLE 37.

Probationers advanced to Class III, Section C	33
Teachers advanced to Class III, " B	42
" " " III, " A	49
" " " II, " B	13
" " " II, " A	2
" " " I, " B	1
Total number promoted through examination	145
Number failing to gain promotion	130
Total examined	275

The fact that 145 Teachers (more than half the whole number examined) gained promotion, shows that great efforts towards self-improvement had been general among the whole body during the year. The percentage of failures was 47 only, as against 74 in 1873, and 82 in 1872.

Promotions for good service under Article 39 of the Regulations were granted to the number of 40, as under:—

TEACHERS PROMOTED UNDER ARTICLE 39.

Number advanced from III C to III B	3
" " III B to III A	9
" " III A to II B	20
" " II B to II A	7
" " II A to I B	1
Total of promotions under Article 39	40

The total number of Teachers of all ranks in the service of the Council at the end of the year was 1,464. These were classed as follows:—

Principal Teachers	1,002
Assistant Teachers	158
Pupil Teachers	304

1,464

The

The gross income of Teachers amounted to £146,651 4s. 6¹/₂d., of which the sum of £53,536 5s. 2¹/₂d. was derived from school fees, and the remainder, £92,681 12s. 6d., from salaries paid by the Council. Calculated upon these sums, the average emoluments of Teachers would be £100 3s. 5¹/₂d.

The following table, however, exhibits a much more exact statement of the incomes of Teachers, exclusive of Pupil Teachers:—

Schools.	Salary.	Fees.	Total.
	£ s. d.	£ s. d.	£ s. d.
Public	83 7 2 ¹ / ₂	56 16 8	140 3 10 ¹ / ₂
Provisional	44 6 3 ¹ / ₂	15 0 9 ¹ / ₂	59 7 1 ¹ / ₂
Half-time	63 5 3 ¹ / ₂	12 4 4	75 9 7 ¹ / ₂
Church of England	81 0 5 ¹ / ₂	67 16 11 ¹ / ₂	148 17 4 ¹ / ₂
Roman Catholic	77 0 1 ¹ / ₂	48 11 8 ¹ / ₂	125 11 10
Presbyterian	97 14 4 ¹ / ₂	57 4 6 ¹ / ₂	154 18 11
Wesleyan	91 14 1 ¹ / ₂	71 6 7 ¹ / ₂	163 0 9

IX.—LOCAL SUPERVISION.

Excepting in a few isolated cases, not exceeding three or four in each Inspectoral District, the local supervision still remains the least satisfactory topic connected with the Schools. In the exceptional cases referred to, the Boards discharge their duties with zeal and efficiency; but the general characteristic of the Boards is, that the duty undertaken—where discharged at all—is performed without interest and with little care. Still, signs of improvement in this respect have been noticeable during the past year, giving slight grounds for hope that greater efficiency may be obtained in the future.

X.—FINANCE.

From the appended statement of receipts and disbursements, it will be seen that the following sums were available for the Council's operation in 1874:—

	£	s.	d.
Balance from 1873	12,289	6	10
Parliamentary Vote for 1874	120,000	0	0
Church and School Estates Revenue	1,600	3	4
Total	£133,839	10	2

To this must be added the amount of local contributions in cash (£6,708 18s. 7d.) towards the cost of school buildings, and £53,536 5s. 2¹/₂d. paid as school fees. The whole amount received for Public Instruction was consequently £194,084 13s. 11d.

The principal items of expenditure were the following:—

	£	s.	d.
Salaries and allowances to teachers	94,572	15	11
Buildings and repairs	16,593	2	0
General management	7,681	16	9
Inspection	7,525	10	5
Training	3,457	0	3
Books, printing, and stationery	3,135	15	11
Total	£132,966	1	3

From these details it will be observed that the amount expended exceeds the receipts from the Parliamentary Vote and from the Church and School Estates Revenue. But for the balance brought over from 1873, therefore, the resources at the Council's disposal would have been inadequate to meet the demands arising out of the cost of maintaining existing schools and of establishing new ones. This fact points to the necessity for an increased Vote; and the Council, in anticipation of the need for such augmentation of the Parliamentary grant, has furnished the Government with an estimate of the amount that could be advantageously expended in 1875. This sum, £180,000, would, the Council considers, provide for the higher rate of expenditure for maintenance caused by the increasing numbers of schools, and leave a margin for the additional outlay upon buildings rendered necessary by the numerous applications for new schools, and the increased proportion of the cost of erection which, in certain cases, the Council may deem it expedient to contribute from the public funds.

Summing up the chief points mentioned in the foregoing pages, it may be stated that the number of schools and the number of children brought under instruction have increased, but the attendance is less regular than in preceding years; the payment of school fees has improved; the efficiency of the schools generally, and the proficiency of the pupils in the ordinary school subjects, have been raised; and the various classes of teachers employed by the Council have attained a higher degree of competency, and received a substantial augmentation of their emoluments. Local supervision, with the before-mentioned exceptions, remains in an unsatisfactory state.

We submit this as our Report upon Public Schools for the year ending 31st December, 1874; and in testimony thereof, we have caused our corporate seal to be affixed hereto, this fifth day of April, one thousand eight hundred and seventy-five.

(L.S.) J. SMITH, President.
THOMAS HOLT.
S. C. BROWN.
W. A. DUNCAN.
ALFRED STEPHEN.

W. WILKINS, Secretary.

APPENDIX A.

GENERAL ABSTRACT of Returns from Public, Provisional, and Half-time Schools.

Quarter ending—	Number of Children on the Rolls.									Average attendance.			Amount of School fees paid.
	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.	Boys.	Girls.	Total.	
MARCH, 1874.													£ s. d.
Public Schools	20,147	16,938	37,085	16,827	6,089	4,950	5,410	3,809	37,085	13,220 7	10,522 5	23,743 2	7,248 16 11½
Provisional Schools	3,080	2,996	6,076	2,568	2,434	545	424	105	6,076	2,135 8	2,069 0	4,204 8	813 3 4
Half-time Schools	1,042	995	2,037	1,025	692	174	130	16	2,037	672 2	682 4	1,354 6	206 11 1½
Total	24,269	20,929	45,198	20,420	9,215	5,669	5,964	3,930	45,198	16,028 7	13,273 9	29,302 6	8,268 11 5
JUNE, 1874.													
Public Schools	20,564	17,308	37,872	17,092	6,156	5,118	5,656	3,850	37,872	13,581 7	10,910 2	24,521 9	8,122 3 3½
Provisional Schools	3,118	3,070	6,188	2,647	2,481	538	445	77	6,188	2,130 7	2,106 2	4,236 9	892 9 6½
Half-time Schools	1,028	1,029	2,057	1,048	686	152	149	22	2,057	686 3	709 0	1,395 3	163 13 11
Total	24,710	21,407	46,117	20,787	9,323	5,808	6,250	3,949	46,117	16,398 7	13,725 4	30,154 1	9,178 6 9
SEPTEMBER, 1874.													
Public Schools	20,153	17,000	37,153	16,672	6,073	5,046	5,527	3,835	37,153	13,702 8	11,090 3	24,799 1	7,753 18 8
Provisional Schools	3,148	3,065	6,213	2,612	2,503	549	452	97	6,213	2,219 6	2,164 5	4,384 1	893 18 3½
Half-time Schools	964	965	1,929	1,000	645	118	146	20	1,929	692 5	702 5	1,395 0	195 19 6½
Total	24,265	21,030	45,295	20,284	9,221	5,713	6,125	3,952	45,295	16,614 9	13,963 3	30,578 2	8,843 16 5½
DECEMBER, 1874.													
Public Schools	20,464	17,530	37,994	17,009	6,238	5,117	5,867	3,763	37,994	14,006 4	11,500 4	25,506 8	8,531 2 8½
Provisional Schools	3,061	3,103	6,164	2,608	2,435	574	457	95	6,164	2,175 3	2,171 6	4,346 9	1,070 10 9½
Half-time Schools	900	881	1,781	929	605	109	120	18	1,781	635 3	640 3	1,276 1	203 8 6
Total	24,425	21,514	45,939	20,541	9,278	5,800	6,444	3,876	45,939	16,817 0	14,312 3	31,129 8	9,805 2 0

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APPENDIX B.

ATTENDANCE of Children at the Public Schools, as certified by the Public School Boards, for the Quarter ending the 31st December, 1874, or for the last Quarter of that year during which the Schools were in operation.

Table with columns: Name of School, Number of Children on Rolls (Boys, Girls, Total), Attendance (Boys, Girls, Total), Expenditure from Public Funds (Salaries, Books and Apparatus, Travelling Expenses and Forage, Buildings, Rent Furniture, &c.), Local Contributions (Buildings, Furniture, &c., School Fees), Total. Rows list various schools like Aberdeen, Adorglasslyn, Adelong, etc.

APPENDIX B—continued.

Name of School.	Number of Children on Rolls.						Attendance.			Expenditure from Public Funds.				Local Contributions.		Total.	
	Boys.	Girls.	Total.	Church of England.	Roman Catholic.	Presbyterians.	Weslyans.	Others.	Boys.	Girls.	Total.	Salaries.	Books and Apparatus.	Travelling Expenses and Forage.	Buildings, Furniture, &c.		Buildings, Furniture, &c.	School Fees.
Croki	38	33	71	17	3	3	48	...	27	20	47	£ 5. d.	£ 5. d.	£ 5. d.	£ 5. d.	£ 5. d.	£ 5. d.
Crookwell	66	40	106	65	11	1	39	12	42	22	64	150	0	0	0	0	0
Croom Park	28	34	62	13	1	1	25	18	18	17	35	80	2	4	10	12	11
Crudiue	19	15	34	20	7	7	10	...	10	10	20	71	16	0	18	5	...
Cudgogang	15	13	28	20	2	3	...	...	14	9	23	42	8	4	...	...	...
Cullenbone	18	13	31	23	2	3	...	...	9	9	18	44	2	0	0	0	0
Cundletown	2	3	5	3	...	...	...	...	2	3	5	22	0	0	0	0	0
Cunningar	37	24	61	17	16	11	17	...	27	18	45	130	13	5	...	...	...
Currawang	15	18	33	14	14	5	...	...	12	14	27	74	0	0	0	0	0
Dalton	52	53	105	38	44	3	17	3	36	5	29	138	0	0	1	17	0
Dennis Island	20	31	51	16	16	15	13	...	10	13	23	103	0	0	3	13	7
Devon-hire-street	98	54	152	66	41	11	4	...	71	41	113	188	15	3	7	11	5
Dingo Creek	20	17	37	5	1	1	32	...	15	9	24	84	10	0	1	10	0
Dobroyde	126	73	199	61	23	30	26	59	69	35	105	182	3	9	4	4	7
Dubbo	16	14	30	8	9	12	1	...	11	11	22	63	10	0	2	8	9
Dumaresq Island	24	39	63	9	1	49	2	...	13	18	31	91	18	0	1	19	1
Dundas	99	79	178	92	54	25	7	...	70	45	115	127	6	9	41	16	0
Dungog	19	23	42	12	6	11	8	...	5	5	10	100	17	5	3	9	7
Dunmore	53	46	99	50	14	...	...	...	37	31	68	171	2	4	4	5	2
Dural	28	28	56	29	7	13	10	6	37	5	42	115	10	3	4	10	5
Dunmore	48	38	86	15	23	24	25	...	33	28	61	137	13	5	4	14	4
Eagleton	12	21	33	16	1	...	...	...	8	14	22	67	10	0	7	10	0
Eden	18	22	40	11	14	6	6	3	12	16	28	102	0	0	1	1	7
Edwards-street	26	15	41	17	7	17	...	...	21	19	40	100	0	0	1	14	1
Eglington	14	18	32	23	4	...	...	...	9	14	23	78	10	0	1	0	1
Eling Forest	26	28	54	20	16	11	1	15	26	16	42	93	0	0	0	11	2
Ellalong	8	18	26	16	3	6	1	...	6	14	20	57	13	6	2	1	10
Ennonybarenyah	16	24	40	30	3	4	...	...	11	17	28	65	0	0	1	5	2
Euroka	19	16	35	20	4	11	...	...	10	9	19	72	0	0	4	2	3
Euston	26	27	53	6	4	4	41	2	21	19	40	102	0	0	1	13	6
Erwin's Plains	6	15	21	14	4	3	...	...	5	12	17	33	0	0	...	...	...
Fairy Meadow	14	15	29	10	4	4	11	...	11	12	23	85	3	3	2	16	10
Falbrook	29	33	62	12	15	24	8	2	20	21	41	144	0	0	2	3	11
Falbrook	11	15	26	14	10	2	...	...	7	12	19	66	0	0	0	14	4
Fermondah	18	26	44	32	5	6	...	...	11	16	27	102	0	0	1	0	3
Fishery Creek	28	19	47	6	34	3	4	...	18	12	30	92	0	0	2	15	11
Fish River Creek	17	28	45	30	14	1	...	...	7	13	20	75	0	0	2	10	0
Five Dock	47	28	75	52	12	...	...	...	29	18	47	102	5	4	4	3	0
Five Islands	17	22	39	15	17	4	3	...	9	8	17	66	0	0	1	0	6
Forbes	93	38	131	62	34	4	2	...	64	23	87	150	0	0	3	11	8
Forest Vale				No Return								5	16	9	6	4	11
Fort-street	88	66	154	75	26	205	158	180	574	421	995	1,100	3	1	43	3	4
Fredericktown	39	19	58	35	6	...	...	...	15	8	23	45	10	0	3	5	6
Ghinni Ghinni	18	22	40	3	8	3	26	...	10	18	28	26	5	9	5	0	0
Glebe	230	182	412	227	46	24	49	66	556	416	972	494	6	7	10	15	0
Gladswood	19	12	31	26	3	2	...	...	11	9	20	52	0	0	2	5	0
Glenmore	20	10	30	12	...	...	...	...	16	12	28	52	2	4	1	6	6
Gnap	28	33	61	15	46	...	...	...	21	24	45	66	0	0	5	0	3
Gosford	18	24	42	12	10	...	...	...	14	18	32	78	0	0	2	1	1
Gosforth	23	20	43	10	21	...	...	...	13	14	27	84	18	7	4	1	5
Gosling Creek	25	16	41	18	5	8	...	...	19	14	33	24	8	0	0	13	6
Goulburn	218	185	403	159	11	41	151	41	149	113	263	551	16	6	12	8	11
Grafton	214	194	408	216	14	70	81	17	154	125	280	308	5	0	11	7	3
Gronfell	98	97	195	114	6	46	12	17	66	72	138	275	0	0	2	18	7
Gross Park	30	24	54	36	10	8	...	...	14	11	25	103	9	11	1	19	1
Gulgong	146	120	266	108	33	12	38	3	93	74	173	230	2	11	19	11	6
Gutten	39	39	78	28	12	8	21	...	17	24	41	78	0	0	2	13	11
Guudagui	41	38	79	59	10	8	...	...	30	27	57	168	0	0	5	0	8
Guandaroo	21	18	39	11	12	9	...	...	16	13	29	69	0	0	2	10	0
Gunderimba	29	29	58	18	20	9	7	4	21	21	43	50	10	0	2	5	5
Gunning	62	65	127	65	27	8	27	...	54	50	104	150	11	5	8	15	3
Guntawang	14	33	47	35	12	...	...	...	7	20	27	102	0	0	4	7	2
Guyong	37	26	63	37	8	2	16	...	26	18	44	102	0	0	0	13	6
Hamilton	139	132	271	95	38	58	12	98	79	177	236	3	10	12	18	4	
Hanbury	163	155	318	81	37	30	49	121	103	91	195	272	15	8	7	5	11
Hargraves	34	45	79	37	31	10	...	...	21	24	45	105	7	0	4	15	3
Hartley	19	18	37	26	7	4	...	...	13	10	23	71	10	0	2	0	10
Hartley Vale	25	20	45	23	16	4	2	...	17	14	31	93	4	6	7	1	1
Hastlem's Creek	22	16	38	18	11	3	6	...	14	12	26	38	10	0	2	1	0
Hay	73	64	137	54	35	23	16	11	46	41	87	107	6	6	10	16	0
Hexham	25	22	47	13	2	2	30	...	14	13	27	105	6	0	2	0	4
Hill End	153	148	301	183	13	56	47	2	56	85	142	334	18	7	8	11	4
Hinton	71	49	120	49	25	8	13	28	48	33	80	156	1	1	3	17	6
Hornsby	29	24	53	19	13	...	...	...	18	16	34	96	10	0	2	6	8
Howlong	21	33	54	44	9	1	...	...	13	22	35	71	10	0	1	2	9
Hunter's Hill	67	25	92	31	13	7	41	...	46	16	62	155	10	0	2	8	2
Jeely	45	52	97	19	9	3	66	...	37	39	77	23	17	1	12	16	4
Jifford	28	24	52	17	23	...	...	...	20	15	35	66	0	0	2	10	5
Inverell	60	70	130	55	36	27	8	4	31	43	74	186	0	0	4	11	4
Ironbarks	28	25	53	23	20	5	...	...	18	16	34	102	0	0	1	14	3
Jamberoo	25	20	45	12	20	7	...	...	19	13	32	105	13	11	1	18	10
Jamieson-street	98	79	177	55	15	95	8	2	63	44	107	89	6	3	2	4	1
Jenabaicumbene	26	22	48	4	6	4	...	...	17	10	27	34	3	0	2	3	4
Jerilderie	23	4	27	15	8	4	...	...	18	3	21	57	0	0	11	17	4
Kangaloon	27	22	49	25	1	14	9	...	16	13	29	102	0	0	0	18	10
Kangaloon West	25	19	44	24	2	20	...	...	16	14	30	90	0	0	4	3	1
Kangaroo Valley	24	32	56	39	5	5	2	5	16	25	41	91	12	7	1	1	6
Kelly's Plains	21	20	41	13	14	4	8	2	15	14	29	82	18	8	1	3	11
Kellyville	20	28	48	27	18	1	...	...	14	20	34	67	11	0	1	1	6
Kelso	30	26	56	45	2	2	5	2	17	14	31	93	8	0	2	8	0
Kempsey	30	38	68	27	17	5	15	4	23	28	51	110	4	5	2	5	11
Kilma	151	88	239	104	22	62	51	...	107	64	172	282	10	1	8	4	0
Kinchela Creek	21	21	42	31	19	1	...	...	11	18	29	41	0	0	7	18	7
Kincumber	20	17	37	25	7	10	2	...	12	9	21	32	1	3	8	9	3
Kiort	20	30	50	25	7	18	...	...	13	21	34	77	10	0	10	10	0
Kirkconnell	13	17	30	17	6	7	...	...	6	9	15	90	0	0	3	1	7
Kogarah	17	22	39	20	2	8	...	...	13								

APPENDIX B—continued.

Name of School.	Number of Children on Rolls.							Attendance.			Expenditure from Public Funds.					Local Contributions.		Total.	
	Boys.	Girls.	Total.	Church of England.	Roman Catholic.	Presbyterian.	Wesleyans.	Others.	Boys.	Girls.	Total.	Salaries.	Books and Apparatus.	Travelling Expenses and Forage.	Buildings, Rent, Furniture, &c.	Buildings, Furniture, &c.	School Fees.		
Albionville	23	19	42	30	6	6	...	...	163	159	323	£ 105 4 8	£ 0 9 3	£ 1 10 0	£ 56 0 0	£ 35 19 4	£ 135 2 5	
Lochnivar	31	37	68	49	12	3	...	...	231	228	459	105 0 0	2 5 4	1 10 0	56 0 0	35 19 4	153 14 8	
Lucknow	37	37	74	40	12	17	...	...	258	258	516	106 8 7	3 13 0	...	...	80 10 10	199 12 5	
Luddenham	32	29	61	46	4	6	...	...	191	203	394	105 4 0	5 1 8	...	13 0 0	23 0 0	152 16 5	
McDonald River, Central	15	10	25	13	6	6	...	...	104	73	177	102 13 0	1 14 4	...	...	16 13 0	120 19 4	
McDonald River, Lower	13	8	21	10	2	9	...	...	86	46	133	50 8 6	2 1 6	3 2 0	...	8 2 8	63 14 8	
Macquarie Plains	14	11	25	13	6	6	...	...	136	104	240	109 0 0	2 18 10	...	...	1 9 3	117 8 1	
Maitland East	107	84	191	80	11	55	45	...	856	577	1433	187 18 0	4 1 11	7 18 3	725 0 0	15 0 0	179 3 0		
Maitland West	209	171	380	227	28	38	134	43	2248	1122	3370	285 4 2	71 14 5	8 15 0	675 5 10	466 3 4	290 2 3		
Major's Creek	69	63	132	66	40	7	...	...	424	411	835	154 18 0	4 10 3	...	...	99 0 0	261 8 5	
Mangrove Creek	11	5	16	7	15	...	...	...	91	45	136	9 17 5	...	...	...	1 7 11	11 5 0	
Manly	60	33	93	34	14	15	15	15	427	187	614	107 8 1	2 10 11	1 10 0	22 6 8	11 3 4	112 5 6		
March	24	20	44	27	4	7	7	3	153	129	282	66 0 0	...	...	...	...	32 5 6	
Marango	20	19	39	24	11	1	3	3	119	92	211	102 0 0	1 8 8	...	...	34 14 2	138 2 8	
Markwell	10	22	32	5	25	...	...	...	69	165	233	16 10 0	...	0 17 0	...	...	8 7 2	
Marlee	18	14	32	23	...	...	...	...	137	89	226	58 19 9	...	0 16 0	...	...	3 16 7	
Marriekville	115	87	202	66	16	8	22	90	889	575	1464	222 10 0	8 5 5	350 17 11	174 4 10	192 6 1	948 4 9		
Marshall Mount	22	25	47	4	27	...	...	...	157	20	357	117 17 6	...	...	...	...	33 11 1	
Marulan	10	17	27	9	12	6	...	...	75	135	211	52 0 0	1 16 5 0	...	...	6 12 0	60 8 0	
Menlow Flat	14	13	27	7	9	7	4	...	85	71	156	47 18 8	0 18 6	...	...	11 2 2	60 9 4	
Menangle	23	24	47	35	...	...	...	...	113	152	271	84 17 1	2 2 7	1 15 0	...	16 14 0	105 8 8	
Menindie	15	23	38	23	15	...	...	...	124	177	301	96 0 0	1 1 0	6 5 0	22 14 8	11 7 4	65 14 6	
Membrua	20	16	36	24	4	8	...	...	135	98	233	104 0 0	2 4 0	...	267 14 8	15 2 4	38 15 5	
Merona	17	24	41	5	5	6	25	...	128	155	283	66 0 0	2 5 11	...	...	22 11 0	90 16 11	
Merriwa	38	37	75	26	46	3	...	...	297	276	573	105 12 0	3 16 0	...	...	57 0 6	166 9 4	
Milfield	23	26	49	31	14	4	...	...	144	185	329	92 12 1	1 8 3	1 2 6	25 16 6	9 18 3	158 18 6	
Mimbah	27	15	42	32	4	6	...	...	211	92	302	86 10 0	1 7 10	1 7 0	...	...	21 6 8	110 11 6
Mimmi	33	43	76	9	20	23	4	20	222	231	452	93 6 8	3 1 5	...	...	38 3 3	134 11 4	
Mitchell's Creek	31	30	61	22	2	7	24	6	186	197	383	67 10 0	...	...	18 0 0	15 6 8	27 4 0	
Mitchell's Island	32	42	74	41	16	11	6	...	182	205	387	53 14 6	0 16 4	4 0 0	3 8 3	6 6 8	19 14 9		
Mittagong, Lower	14	8	22	20	2	...	...	...	97	52	149	77 8 8	4 5 0	...	20 0 0	10 0 0	21 2 5	132 19 5
Mittagong, Upper	25	25	50	31	9	6	4	...	149	104	252	66 0 0	1 0 2	2 8 3	...	...	19 5 6	88 10 11
Moania	25	20	45	10	12	4	...	...	157	128	285	56 19 0	...	...	...	...	30 0 6	87 0 3
Moelwah	44	54	98	18	25	...	...	...	211	266	476	10 5 4	...	...	19 9 10	...	7 8 14	37 3 34
Molong	42	25	67	45	11	...	...	...	208	193	401	113 0 0	3 15 4	...	...	35 0 0	85 13 6	237 8 10
Monkral	15	14	29	18	...	...	...	...	10	94	104	61 15 0	1 5 4	0 17 0	...	...	5 14 10	69 12 21
Monkites	20	15	35	12	17	6	...	...	163	101	264	71 10 0	0 14 10	...	...	22 17 0	165 2 8	
Moorowoolen	32	21	53	29	11	13	...	...	243	135	378	90 10 0	3 5 10	1 18 0	2 6 8	46 16 8	148 0 2	
Morpeth	101	80	181	87	18	24	51	1	762	554	1316	212 6 3	5 17 11	293 9 0	108 1 2	146 14 0	766 8 8		
Mosquito Island	25	21	46	34	6	...	...	...	168	139	307	94 8 9	3 3 11	...	33 6 8	16 13 4	29 18 8	177 11 4
Moss Vale	26	25	51	26	7	15	3	...	183	207	390	114 0 0	...	...	...	...	52 7 11	166 7 11
Mount Kela	37	28	65	17	29	10	9	...	237	197	437	60 15 10	3 3 1	3 10 0	...	...	25 9 7	95 18 6
Mount Macquarie	19	22	41	16	7	7	11	...	153	163	316	66 0 0	1 15 11	...	...	28 3 6	92 19 5	
Mount Tarana	16	15	31	11	14	2	4	...	111	127	238	22 10 0	...	...	...	...	6 17 0	29 7 0
Mount Victoria	26	20	46	28	17	1	...	...	207	168	375	85 17 8	0 7 3	...	...	43 0 5	110 5 4	
Mudgee	106	171	337	92	47	94	102	2	1184	1199	2383	337 14 9	14 7 11	4 5 0	28 0 0	360 2 0	764 9 8		
Mungo Forest	24	11	35	16	1	7	11	...	153	62	215	101 0 0	2 3 8	4 15 0	10 0 0	10 6 0	128 4 8		
Mullewandra	12	26	38	14	5	12	7	...	85	213	298	93 8 3	1 7 1	5 0 0	...	...	35 2 9	134 18 1
Mulrawa	21	18	39	9	30	...	...	...	145	146	291	16 10 0	...	...	...	...	37 11 6	54 1 6
Munnah	13	17	30	2	...	...	...	...	116	137	253	70 7 10	1 9 10	1 8 0	...	...	24 17 9	98 3 5
Mummell East	17	15	32	7	22	...	...	...	55	78	133	19 10 0	...	1 5 0	...	...	3 7 5	24 2 5
Murrumbidgee	20	19	39	18	7	14	...	...	148	143	291	83 2 4	...	10 0 0	9 10 0	...	35 14 10	138 7 2
Murrumbidgee	50	48	97	68	7	9	23	...	404	317	721	114 0 0	2 12 8	...	...	64 4 7	180 17 3	
Murrumbidgee	16	10	26	7	5	7	7	...	101	73	174	68 6 0	1 8 8	2 10 0	25 13 0	13 19 10	31 10 2	144 7 0	
Muscle Creek	29	19	47	33	14	...	...	...	157	87	247	60 10 0	2 10 7	...	...	22 13 11	85 14 0	
Mutton's Falls	17	25	43	14	13	1	15	...	127	196	323	50 0 0	...	...	...	...	22 6 9	78 6 9
Myrtleville	12	10	22	...	...	...	...	...	82	86	168	60 0 0	1 5 5	...	3 15 4	1 17 8	15 2 0	82 0 5
Narandera	20	14	34	28	...	...	...	...	177	103	273	104 18 1	...	...	17 6 8	...	49 13 0	171 17 9
Narrabri	27	23	50	39	19	1	...	...	173	155	329	105 13 11	1 16 9	...	...	65 4 0	173 0 2	
Nelligon	19	16	35	17	14	...	...	...	125	92	217	74 19 8	1 6 4	18 7 6	9 18 8	4 19 4	26 17 3	136 8 0
Nelson's Plains	18	19	37	14	9	6	8	...	98	85	183	102 10 0	2 13 2	...	...	...	24 9 4	129 12 0
Nerrigundah	18	17	35	27	2	...	...	...	117	111	223	68 0 0	1 8 0	12 6 0	...	...	13 2 0	94 16 0
Newcastle	255	171	426	189	15	55	39	128	1755	1004	2759	369 6 2	12 6 8	2 5 0	...	...	460 11 6	835 9 4
Newcastle South	190	163	354	175	22	46	31	187	1359	93	299	208 17 9	8 6 2	...	...	...	260 13 0	537 16 11
New Sheffield	37	27	64	30	5	7	14	8	253	181	434	66 0 0	3 2 10	...	...	...	49 6 5	517 16 11
Newtown	147	109	256	161	7	12	40	96	1017	713	2997	70 7 10	5 8 4	...	...	...	203 0 0	175 6 7
North Sydney	36	37	73	37	12	4	11	9	257	246	496	112 0 0	1 14 1	...	...	...	8 16 11	37 5 2
Norwood	22	14	36	19	7	3	7	...	134	96	234	27 5 4	1 2 11	...	...	...	16 15 9	243 9 1
Nowra	52	37	89	17	15	25	24	8	322	206	528	139 15 3	6 18 1	...	...	...	62 9 6	218 15 6
Nundle	40	42	82	22	27	3	4	...	319	324	643	150 0 11	4 17 1	1 8 0	...	...	73 10 3	240 19 11
Omega Retreat	47	34	81	20	7	11	27	16	348	251	599	159 9 4	4 10 4	3 10 0	...	...	56 8 9	198 4 9
Onyrganbah	32	32	64	8	2	38	7	9	258	233	489	105 15 1	4 0 1	...	21 9 10	10 11 0	202 10 9	383 0 10	
Orange	120	85	205	125	6	41	31	2	902	651	1553	171 15 1	5 2 6	3 12 6	...	...	32 10 4	151 0 4
Oswald	33	26	59	7	5	...	...	...	182	157	341	117 12 4	0 17 8	...	...	...	22 0 11	124 0 11
Oxley Island	27	27	54	28	182	216	398	102 0 0	267 7 0	695 13 8
Paddington	390	325	715	278	86	67	148	130	2592	1992	4584	613 8 1	13 14 0	267 7 0	...	...	605 13 8	1590 2 9
Palmer's Island	26	19	45	5	23	17	...	...	155	115	277	39 0 0	2 5 4	134 13 9	20 0 0	...	8 11 2	204 10 3
Panbula	26	31	57	26	23	8	...	...	155	232	387	74 0 0	1 5 4	...	3 15 0	...	22 8 1	102 8 5
Parkes	56	52	108	57	6	5	37	3	296	248	544	78 0 0	4 7 3	...	...	...	99 0 0	181 7 3
Parkesbourne	18	21	39	2															

APPENDIX B—continued.

Name of School.	Number of Children on Rolls.							Attendance.			Expenditure from Public Funds.				Local Contributions.		Total.						
	Boys.	Girls.	Total.	Church of England.	Roman Catholic.	Presbyterians.	Wesleyans.	Others.	Boys.	Girls.	Total.	Salaries.	Books and Apparatus.	Travelling Expenses and Forage.	Buildings, Rent, Furniture, &c.	Buildings, Furniture, &c.		School Fees.					
Richmond North.....	39	42	81	65	4	3	9	...	20	27	47	142	10	0	4	1	6	92	14	6	239	6	0
Robertson.....	27	28	55	43	16	13	14	4	4	6	13	67	29	7	114	10	0	23	1	3	130	12	8
Ruckley.....	33	21	54	16	15	12	12	11	17	8	10	27	0	2	1	5	0	24	5	6	149	18	9
Rocky Mouth.....	37	36	73	4	12	32	25	...	24	5	29	102	0	0	1	15	10	20	1	6	132	17	4
Rocky River.....	32	34	66	24	22	16	4	...	19	3	22	102	0	0	3	5	5	28	5	8	133	11	1
Rose Valley.....	17	21	38	7	5	26	4	...	15	1	16	61	0	0	0	0	0	25	4	6	86	4	6
Roslyn.....	16	13	29	8	3	18	...	...	15	1	16	93	20	9	77	8	0	13	9	9	93	16	0
Roughout.....	37	18	55	18	35	...	...	...	25	2	27	142	0	0	1	15	7	44	11	10	132	7	5
Rydal.....	36	32	68	32	28	7	1	...	25	2	27	142	0	0	1	14	8	43	1	6	154	16	2
Ride.....	85	72	157	66	...	78	13	...	69	3	72	224	51	7	66	0	0	122	16	2	360	11	1
Rlstone.....	45	37	82	...	12	2	26	...	29	3	32	123	5	4	5	5	0	96	17	11	203	0	4
Seaham.....	15	15	30	13	8	...	...	...	9	9	18	65	10	0	2	3	9	11	0	0	149	11	3
Seron Oaks.....	39	24	63	21	1	7	30	4	20	9	29	173	38	2	105	4	2	43	1	6	154	16	2
Shelbarbour.....	36	50	86	38	26	10	8	6	23	7	30	135	0	0	2	17	6	63	7	6	211	12	4
Sungton.....	55	44	99	45	1	14	35	1	37	9	46	66	9	8	4	9	6	79	7	4	276	5	6
Smithfield.....	34	22	56	31	14	...	...	...	22	2	24	112	4	0	1	10	10	48	14	3	160	9	1
Smith's Flat.....	31	35	66	22	16	28	...	...	21	2	23	121	2	2	99	13	10	78	1	6	177	15	4
Spring Flat.....	23	18	41	19	16	...	...	...	13	1	14	119	25	4	69	0	0	29	15	10	100	18	2
Spring Grove.....	32	38	70	45	4	5	16	...	21	4	25	112	10	0	...	...	...	35	17	9	148	7	9
St. Alban's.....	29	14	43	17	9	...	...	...	21	4	25	140	3	7	8	0	0	17	4	8	96	7	1
St. Leonards.....	121	97	218	135	7	54	16	6	78	3	81	357	144	0	0	6	19	29	18	0	355	1	14
St. Mary's, South Creek.....	18	23	41	29	3	4	5	...	11	2	13	152	26	4	88	0	0	20	1	0	111	0	0
Stanhope.....	44	25	69	19	50	...	...	...	29	2	31	166	45	8	88	8	4	35	7	4	126	12	4
Strontian Park.....	23	37	60	20	10	12	18	...	13	4	17	78	0	0	1	7	1	38	4	0	117	11	1
Sugarloaf.....	26	21	47	12	...	11	24	...	18	4	22	113	31	7	102	0	0	5	17	4	143	13	2
Summerland.....	10	20	30	11	...	16	...	...	6	8	14	102	0	0	3	0	2	46	14	1	158	19	3
Sussex-street.....	91	60	151	81	6	15	15	6	43	3	46	363	81	0	175	0	0	25	0	0	468	3	8
Sussex-street South.....	85	63	148	81	26	18	7	21	53	3	56	357	80	7	8	3	8	173	15	0	106	3	44
Swan Creek.....	29	29	58	27	...	29	3	...	21	6	27	126	5	6	3	15	6	39	12	4	147	7	10
Taloumbi.....	25	23	48	25	7	16	...	...	14	9	23	131	22	2	46	16	1	39	19	5	130	6	10
Tanbarooro.....	27	21	48	20	14	2	3	...	21	2	23	156	36	8	92	14	9	33	19	0	180	6	10
Tanworth.....	66	62	128	84	11	9	21	3	40	7	47	306	71	3	102	0	0	84	0	6	190	6	10
Tantawango.....	23	22	45	20	7	7	7	2	13	8	21	137	27	5	89	9	0	25	16	3	117	18	3
Tarago.....	20	10	30	19	1	5	5	...	15	1	16	66	0	0	1	16	8	25	9	3	97	0	1
Taralga.....	25	21	46	22	2	5	14	...	17	5	22	105	9	0	1	5	8	39	11	8	139	17	3
Tarce.....	62	38	100	22	8	43	25	2	45	6	51	159	0	0	2	16	10	48	0	8	496	17	6
Tattalla.....	18	14	32	3	...	23	3	...	12	8	20	87	21	5	8	3	11	23	10	0	47	0	5
Tca-pot Swamp.....	19	21	40	9	...	2	7	...	8	6	14	66	0	0	0	18	2	18	19	3	87	7	0
Telcherry.....	30	27	57	27	5	11	14	...	21	7	28	409	11	0	0	18	3	38	19	6	153	17	9
Tenjo.....	20	33	53	36	2	16	8	...	23	2	25	143	3	3	13	6	10	39	4	1	129	1	1
Tenterfield.....	84	75	159	78	32	48	1	...	57	4	61	104	3	5	4	1	2	120	1	0	347	2	1
Thalaba.....	21	26	47	26	2	2	7	...	11	9	20	102	0	0	0	13	5	13	4	104	16	0	
Thurgoona.....	45	39	84	32	6	3	...	...	35	6	41	163	14	11	0	18	6	7	17	0	215	0	3
Thula.....	21	26	49	9	18	9	9	4	11	9	20	73	3	1	11	0	0	24	9	0	46	0	5
Timonee.....	34	33	67	29	12	23	3	...	27	2	29	129	17	8	3	13	11	38	2	9	132	14	4
Tipperary Gully.....	25	24	49	22	16	10	2	1	16	6	22	80	0	0	0	13	11	32	6	0	112	10	11
Uranna.....	27	21	48	15	11	16	2	4	21	9	30	104	16	4	0	17	5	38	10	7	144	4	4
Tomaco.....	17	10	27	12	8	2	3	2	13	5	18	37	5	0	1	4	11	11	13	5	64	8	4
Tomerong.....	20	3	23	19	...	...	...	...	16	3	19	54	10	0	...	...	...	...	...	...	54	10	0
Tootejonga.....	56	59	115	14	49	4	38	7	41	45	86	164	14	3	3	16	7	63	0	3	231	11	1
Townang.....	19	19	38	17	...	...	...	...	11	9	20	42	16	8	1	15	5	7	16	0	52	8	1
Trunkey.....	18	11	29	17	2	3	4	3	12	4	7	70	10	0	2	6	7	37	5	7	121	14	8
Tumberumba.....	23	24	47	25	17	5	...	...	15	1	16	131	28	2	90	0	0	44	3	0	134	14	2
Tumut.....	65	57	122	84	24	7	...	...	52	1	53	467	92	0	154	0	0	73	7	11	334	1	9
Turon, Upper.....	24	23	47	24	23	...	...	...	16	6	22	67	17	3	5	0	6	35	2	0	108	19	8
Urby.....	20	15	35	25	9	...	...	...	11	2	13	107	4	0	44	0	0	21	4	6	70	11	6
Uradilla.....	23	8	31	11	4	2	9	5	19	9	27	43	0	0	4	11	4	5	8	0	65	15	6
Urarra.....	48	41	89	32	8	33	14	5	33	5	38	93	10	0	4	11	4	29	12	4	143	18	2
Urala.....	47	47	94	33	23	19	13	4	29	7	36	140	18	4	5	0	2	74	4	0	220	2	6
Vacy.....	26	23	49	33	10	16	6	...	16	4	20	32	0	0	1	2	4	22	15	5	112	17	9
Violet Dale.....	39	21	60	28	13	13	...	...	20	5	25	84	0	0	3	1	8	30	1	0	117	2	8
Violet Hill.....	29	30	59	28	14	3	14	...	20	5	25	105	6	0	2	17	9	39	8	0	147	12	3
Wagga Wagga.....	207	177	384	166	42	67	59	...	145	7	152	403	7	11	20	2	1	55	8	0	977	18	0
Walcha.....	31	17	48	38	4	6	...	...	21	7	28	107	0	0	2	17	10	77	6	1	193	3	11
Wallabadah.....	39	32	71	41	26	1	...	...	28	3	31	91	1	5	1	18	4	55	10	2	164	16	7
Wallalong.....	26	25	51	4	10	19	9	10	18	8	26	114	17	8	4	3	9	42	6	10	164	8	3
Wallgrove.....	22	23	45	11	19	14	1	...	16	8	24	93	0	0	1	18	10	39	19	6	169	0	10
Walbundrie.....	42	28	70	36	19	107	97	173	183	1	119	302	15	10	10	1	11	23	12	6	673	0	3
Waratah.....	21	21	42	30	6	...	...	...	20	9	29	102	0	0	2	7	4	34	6	0	73	10	0
Warialda.....	6	15	21	16	5	...	...	...	4	5	9	18	6	0	...	...	...	21	13	6	57	13	6
Wallerawang.....	26	15	41	12	2	24	3	3	19	3	22	33	9	0	1	19	11	47	15	3	139	15	2
Warkworth.....	21	21	42	3	3	3	4	...	14	2	16	135	27	5	0	15	1	49	17	5	148	19	3
Warren.....	23	31	54	30	4	10	...	...	16	1	17	102	0	0	3	6	4	89					

APPENDIX C.

APPLICATIONS for the establishment of Public Schools received during the year 1874.

Name of Place.	Distance of nearest School	Children residing in the locality.								Children promised to attend.								Parents or Guardians undertaking to send Children.						Council's decision.		
		Boys	Girls	Total	C.E.	R.C.	Pres.	Wes.	Others	Boys	Girls	Total	C.E.	R.C.	Pres.	Wes.	Others	C.E.	R.C.	Pres.	Wes.	Others	Total			
Blowering	Miles. 10	19	17	36	18	18	...	...	...	26	22	48	24	24	...	...	...	7	7	...	...	...	14	Agreed to.
Bowra	...	19	16	35	8	24	3	...	...	8	27	35	11	24	...	...	...	5	6	...	...	...	11	Do.
Brodie's Plains	6	28	30	58	26	14	11	7	...	22	26	48	25	7	9	7	...	9	2	3	2	...	16	Do.		
Campbelltown	...	100	150	250	110	80	40	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Do.
Carangara	4	16	22	38	14	...	...	24	...	9	10	19	6	13	...	...	3	3	...	...	...	6	Do.	
City View, Ryde	2½	50	50	100	61	15	...	18	6	42	44	86	53	11	...	16	6	15	6	...	4	1	26	Do.		
Coogee	...	80	80	160	70	40	20	10	20	32	17	49	33	10	2	14	...	10	3	1	2	...	16	Under consideration.		
Coolac	12	22	23	45	24	20	1	...	...	22	23	45	24	20	1	...	...	7	4	1	...	...	12	Agreed to.
Coolah	12	18	16	34	23	7	4	...	...	17	17	34	23	7	4	...	...	6	5	3	...	...	14	Under consideration.
Doughboy Hollow	4	27	31	58	38	14	...	6	...	27	31	58	38	14	...	6	...	13	6	...	1	...	20	Do.		
Falbrook Upper	10	19	24	43	28	15	...	...	...	12	18	30	22	8	...	...	8	2	...	...	...	10	Do.	
Forest Lodge	2½	14	21	35	14	11	3	7	...	13	22	35	11	11	3	10	...	4	3	1	3	...	11	Declined.		
Glebe Island	...	700	300	1,000	550	200	80	120	50	30	26	56	17	31	5	1	2	10	16	3	1	1	...	31	Do.	
Goodrich	5	32	38	70	30	15	1	20	4	17	22	39	17	7	15	...	...	9	3	5	...	...	17	Agreed to.
Greigamstown	4	27	23	50	17	14	4	6	9	28	22	50	17	14	4	6	9	11	2	1	2	2	...	18	Under consideration.	
Haslem's Creek	...	28	17	45	25	11	8	1	...	30	15	45	19	11	1	14	...	11	2	1	5	...	19	Agreed to.		
Iccley	4	46	66	112	25	14	7	64	2	22	32	54	9	9	7	29	...	4	3	3	12	...	22	Do.		
Jindera	6	54	53	107	21	14	...	...	72	21	15	36	19	10	...	1	6	8	3	...	1	2	14	Do.
Markwell	3½	18	32	50	7	40	...	3	...	26	32	58	11	43	...	5	...	3	12	...	1	...	16	Do.		
Mobella	6	150	170	320	100	100	50	70	...	83	60	143	69	54	20	...	...	27	65	51	...	...	143	Do.
Morebringer	...	31	24	55	17	12	9	4	13	24	20	44	21	9	5	...	9	10	4	4	...	3	21	Do.		
Mulwala	25	21	16	37	10	27	...	...	...	20	17	37	25	12	...	...	...	3	6	...	...	...	9	Do.
Mummell	4	23	28	51	11	19	2	19	...	23	26	49	11	18	19	1	...	4	2	1	6	1	14	Do.		
Narellan	2½	27	37	64	35	25	...	4	...	15	25	40	33	2	5	...	...	12	1	...	1	...	14	Under consideration.
Parkes	Information not given.								15	10	25	10	2	3	10	...	3	1	1	2	...	7	Agreed to.
Parramatta Junction	...	48	63	111	58	24	3	18	8	42	9	51	23	10	...	6	12	8	4	2	...	4	18	Under consideration.		
Peelwood	16	54	47	101	58	30	2	11	...	19	15	34	29	5	...	...	11	1	...	...	...	12	12	Agreed to.
Ponto	12	24	30	54	12	28	14	...	...	...	...	...	...	...	...	...	Information not given.	...	...	...	...	...	...	Do.
Pyramul, Upper	9	23	26	49	31	18	...	...	...	21	23	44	27	17	...	...	...	11	8	...	...	...	19	Do.
Raglan	3	65	47	112	62	28	8	14	...	11	13	24	24	...	...	...	...	10	...	...	...	...	16	Do.
Regentville	3	13	32	45	22	6	9	8	...	8	27	35	19	6	3	7	...	5	3	3	2	...	13	Do.		
Shaw's Creek	6	27	22	49	14	21	...	14	...	27	22	49	14	21	...	14	...	12	13	...	11	...	36	Under consideration.		
Solferino	60	14	30	44	12	16	16	...	...	14	30	44	12	16	...	...	...	5	6	4	...	...	15	Do.
Spring Vale	4	25	25	50	24	19	...	7	...	20	15	35	17	11	...	7	...	5	4	...	2	...	11	Declined.		
Uarbry	18	14	17	31	19	12	...	...	...	18	13	31	18	13	...	...	...	8	5	...	...	...	13	Agreed to.
Urana	56	30	26	56	31	25	...	...	...	26	28	54	25	29	...	...	...	16	6	...	...	...	22	Under consideration.
Wagga Wagga North	...	48	27	75	42	21	9	3	...	52	23	75	40	21	9	5	...	16	6	4	1	...	27	Do.		
Wilberforce	5	...	...	...	...	...	...	...	...	37	24	61	50	...	11	...	...	20	...	...	4	...	24	Declined.
Woodburn	10	12	22	34	13	4	17	...	...	12	22	34	16	4	14	...	...	5	1	4	...	...	10	Agreed to.
Yarramundi	2½	42	43	85	62	8	10	...	5	21	22	43	40	2	...	1	...	14	1	...	1	...	16	Under consideration.		
		2,008	1,741	3,749	1,742	1,009	331	478	189	912	865	1,777	902	525	145	161	44	348	225	06	64	14	747			

APPENDIX D—continued.

Name of School.	Number of Children on Rolls.							Attendance.			Expenditure from Public Funds.					Local Contributions.				
	Boys.	Girls.	Total.	Church of England.	Roman Catholic.	Presbyterians.	Wesleyans.	Others.	Boys.	Girls.	Total.	Salaries.	Books and Apparatus.	Travelling Expenses and Forage.	Buildings, Rent, Furniture, &c.	Buildings, Furniture, &c.	School Fees.	Total.		
High Range	16	8	24	15	9				106	69	175	36	0	0	0	0	0	49	1	9
Hillas Creek	15	5	20	18	2				103	47	152	16	0	0	0	0	0	7	10	6
Hoskington	16	17	33	16	17				115	123	238	66	0	0	0	0	0	4	6	6
Hovell's Creek	11	13	24	24					77	112	189	66	0	0	0	0	0	21	17	83
Hove's Valley	15	16	31	14	17				123	95	218	55	0	0	0	0	0	15	19	78
Huon	16	15	31	6	25				117	76	193	42	0	0	0	0	0	25	17	68
Jacquin	16	13	29	9	20				129	108	237	55	0	0	0	0	0	19	3	77
Jannung	14	15	29	7	22				111	109	222	66	0	0	0	0	0	7	14	68
Jaugarrah	16	10	26	2	24				152	83	235	40	0	0	0	0	0	9	14	49
Jembacumbene	7	4	11	11					7	4	11	2	5	1				3	12	25
Kanimbla	12	11	23	8	15				94	67	161	39	0	0	0	0	0	26	18	65
Kayna	12	19	31	18	13				73	127	207	61	17	10	1	2	6	21	12	84
Kelvin Grove	21	19	40	17	23				139	57	196	8	0	0	0	0	0			12
Kemp's Creek	15	12	27	15	12				117	115	232	59	0	0	0	0	0	13	10	73
Kentucky	11	12	23	5	18				89	133	222	55	0	0	0	0	0	10	3	75
Kiandra	17	10	27	21	6				151	89	244	60	0	0	0	0	0	45	9	107
Kimbrick	8	16	24	4	20				49	108	157	54	0	0	0	0	0	15	16	70
Kimo	9	9	18	8	10				52	6	112	25	0	0	0	0	0	6	13	32
Kirkdale	17	10	27	17	10				153	77	233	58	0	0	0	0	0	14	18	73
Knoeklin	15	16	31	4	27				75	87	162	37	0	0	0	0	0	13	14	73
Kurralong	19	22	41	37	4				121	15	271	38	5	4	2	0	0	19	18	55
Lacinae	10	9	19	9	10				9	9	18	34	0	0	0	0	0	9	7	66
Lagan	13	18	31	14	17				98	109	207	55	0	0	0	0	0	9	17	69
Lawrence	8	19	27	17	10				59	145	204	60	0	0	0	0	0	9	1	69
Lagoon	11	23	34	23	11				83	137	19	66	0	0	0	0	0	13	7	73
Limstone Plat	12	13	25	5	20				83	95	178	42	2	10	2	3	3	16	6	64
McDonald River	14	14	28	2	26				114	105	219	60	10	11				13	0	73
McMahon Reef	15	3	18	7	11				116	23	139	2	0	0	0	0	0	3	0	5
Macquarie Plains	23	19	42	4	38				142	104	246	57	10	11				17	8	74
Major's Plains	10	12	22	14	8				54	86	14	42	0	0	0	0	0	42	12	85
Majura	7	16	23	14	9				64	123	187	10	11	7	4	1	4	3	16	23
Mainsbury	14	12	26	17	9				106	115	221	60	0	0	0	0	0	25	5	88
Mandagry Creek	18	15	33	21	12				85	106	191	53	6	8	7	0	8	17	17	78
Mangrove, Lower	15	9	24	11	13				109	7	179	51	0	0	0	0	0	5	1	59
Manton's Creek	24	33	57	22	35				168	17	338	35	0	0	0	0	0	29	15	111
Markdale	15	10	25	25					125	87	212	60	0	0	0	0	0	20	1	80
Merredoo	22	15	37	23	14				161	83	249	60	0	0	0	0	0	40	5	101
Michalogo	23	10	33	4	29				17	77	247	53	0	0	0	0	0	24	5	77
Middle Arm	15	9	24	15	9				132	88	22	47	3	4	1	9	2	13	2	62
Middle Creek	22	15	37	13	24				149	103	252	60	0	0	0	0	0	22	15	77
Millsburn	21	17	38	6	32				147	123	27	53	0	0	0	0	0	24	9	80
Mogo	15	8	23	13	10				121	62	183	44	0	0	0	0	0	11	7	55
Moona Brook	19	13	32	16	16				171	108	279	48	0	0	0	0	0	15	2	73
Moorefields	27	14	41	16	25				18	87	267	65	0	0	0	0	0	46	10	112
Moree	14	13	27	25	2				109	135	244	60	0	0	0	0	0	26	15	59
Mount Adrah	9	7	16	9	7				36	44	8	32	0	0	0	0	0	6	8	42
Mountain Run	10	15	25	8	17				63	12	183	36	0	0	0	0	0	6	8	42
Mount George								No return.												
Mount Patrick	13	9	22	15	7				5	35	85	8	0	0	0	0	0	6	4	18
Mount Thorley	11	20	31	23	8				45	131	177	48	0	0	0	0	0	14	11	62
Mount Wills	10	16	26	18	8				67	115	182	43	0	0	0	0	0	15	4	59
Mudmelong	22	22	44	20	24				14	122	262	60	0	0	0	0	0	27	1	92
Mulgoa	17	17	34	26	8				144	13	274	62	5	0	0	0	0	26	10	89
Mulgoa Forest Mountain	11	14	25	14	11				54	91	145	55	0	0	0	0	0	1	5	40
Mummell	18	13	31	10	21				122	93	215	45	0	0	0	0	0	10	12	65
Mundoranna	7	14	21	12	9				46	104	15	35	0	0	0	0	0	12	14	49
Narrango	10	8	18	16	2				6	51	111	20	0	0	0	0	0	23	1	45
Nerriga	16	21	37	3	34				114	123	237	60	0	0	0	0	0	17	16	77
Newington	26	18	44	25	19				158	109	267	25	0	0	0	0	0	8	10	35
New Line	16	3	19	1	18				154	28	182	35	0	0	0	0	0	9	19	47
Newport	13	14	27	20	7				97	98	195	49	0	0	0	0	0	9	12	59
Newra	4	7	11	3	8				33	5	83	4	0	0	0	0	0	0	3	4
New Run	18	9	27	9	18				72	62	134	34	15	8				8	10	43
Newstead	12	10	22	4	18				97	7	167	52	11	7	1	8	11	15	14	69
Nimbybelle	17	12	29	4	25				67	77	144	45	0	0	0	0	0	29	1	97
Nowendoc	8	9	17	12	5				84	68	152	2	0	0	0	0	0	2	7	11
North Rocks	8	8	16	20	8				66	157	223	13	0	0	0	0	0	5	2	29
Nubba	7	19	26	4	22				47	105	146	26	0	0	0	0	0	5	4	34
Oakdale	11	12	23	10	13				92	85	177	48	0	0	0	0	0	10	13	69
Oakendale	12	9	21	19	2				107	41	148	53	0	0	0	0	0	4	13	60
Obley	8	9	17	16	1				49	115	164	2	0	0	0	0	0	4	7	18
Palmer's Oakley	11	15	26	23	3				74	107	181	12	0	0	0	0	0	7	15	36
Park	10	12	22	3	19				77	106	183	20	0	0	0	0	0	6	14	36
Parkwood	13	16	29	12	17				72	96	168	48	0	0	0	0	0	12	14	73
Pejar	9	15	24	20	4				54	128	162	60	10	0				7	11	57
Pleasant Valley	10	11	21	13	8				66	83	149	50	0	0	0	0	0	7	11	39
Portland Head	13	13	26	20	6				105	104	209	60	0	0	0	0	0	27	4	89
Quipolly	18	12	30	22	8				117	93	21	48	15	7	6	0	2	16	2	75
Quirindi Creek	15	15	30	8	22				94	125	219	60	0	0	0	0	0	20	11	76
Quirrobolong	14	7	21	10	11				133	64	197	16	0	0	0	0	0	13	1	23
Raleigh	16	15	31	3	28				135	94	229	60	0	0	0	0	0	5	1	75
Redground	20	8	28	6	22				168	4	208	60	0	0	0	0	0	29	6	93
Rockvale	11	10	21	13	8				7	14	21	56	0	0	0	0	0	10	0	66
Rosebrook	10	16	26	1	25				71	131	202	29	0	0	0	0	0	4	16	38
Rossi	7	10	17	9	8				6	83	143	8	0	0	0	0	0	0	8	8
Runnymede	22	6	28	19	9				12	5	17	60	0	0	0	0	0	11	17	73
Saskville Beach	13	16	29	9	20				68	106	174	60	0	0	0	0	0	11	14	73
Sagart Field	12	19	31	31					7	121	191									

APPENDIX E.

APPLICATIONS for aid to Provisional Schools, received during the year 1874.

Name of Place.	Distance of nearest School.	Number of Children residing in the Locality.									Number of Children promised to attend.									Number of Parents or Guardians undertaking to send Children.						Council's Decision.
		Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.	
Burrangarry	4	27	26	53	22	22	3	3	3	53	25	18	43	22	21	...	...	...	43	6	7	...	...	...	13	Agreed to.
Barwang	4	15	14	29	...	29	...	...	...	29	10	14	24	...	24	...	...	...	24	...	8	...	...	...	8	Under consideration.
Beechwood	4½	17	16	33	7	5	16	5	...	33	17	16	33	6	5	12	10	...	33	3	3	2	1	...	9	Agreed to.
Belltrees	10	12	10	22	19	3	...	...	...	22	12	10	22	19	3	...	...	...	22	7	1	...	...	...	8	Do.
Bellawongrah	2	12	11	23	2	...	5	10	6	23	16	7	23	2	...	5	10	6	23	2	...	5	10	6	23	Do.
Berebanglo	6	15	9	24	10	3	4	7	...	24	15	9	24	10	3	4	7	...	24	3	1	2	3	...	9	Do.
Bettowind	5	16	14	30	3	11	5	11	...	30	16	14	30	3	11	5	11	...	30	2	3	2	2	...	9	Do.
Biloela	...	14	13	27	15	7	3	...	2	27	15	10	25	15	6	3	1	...	25	6	4	1	1	...	12	Under consideration.
Bobra	9	8	11	19	...	19	...	...	...	19	8	11	19	...	19	...	...	...	19	...	8	...	...	...	8	Do.
Boolgal	50	22	19	41	17	8	14	2	...	41	14	7	21	11	3	6	1	...	21	4	2	4	1	...	11	Agreed to.
Broughton Vale	4	7	20	27	6	...	4	17	...	27	12	14	26	15	1	10	...	...	26	5	1	4	...	...	10	Under consideration.
Box Ridge	7	32	22	54	22	24	8	...	...	54	18	8	26	9	12	5	...	...	26	5	7	...	...	...	12	Agreed to.
Bunnaby	9	21	25	46	...	...	...	...	...	46	13	16	29	11	18	...	...	...	29	2	9	...	...	...	11	Do.
Burrawa Flats	10	14	18	32	...	32	...	...	...	32	15	17	32	...	32	...	...	...	32	...	10	...	...	...	10	Do.
Camdenmulla	5	...	...	...	...	...	...	...	...	...	11	9	20	9	11	...	...	...	20	2	4	...	...	...	6	Do.
Camden Haven	11	22	21	43	22	13	8	...	...	43	22	21	43	19	13	11	...	...	43	4	4	5	...	...	13	Declined.
Comber	4½	22	12	34	18	12	...	4	...	34	14	11	25	14	11	...	...	...	25	4	3	...	...	...	7	Agreed to.
Congola	4	23	11	34	...	34	...	...	...	34	17	9	26	...	26	...	...	...	26	...	8	...	...	...	8	Do.
Cooba Creek	7	20	12	32	5	27	...	...	...	32	22	10	32	5	27	...	...	...	32	1	7	...	...	...	8	Do.
Comberoy Road	3	16	17	33	20	9	...	4	...	33	15	18	33	20	9	...	4	...	33	8	4	...	1	...	13	Declined.
Crawford River	5	10	13	23	4	12	7	...	...	23	10	13	23	4	13	6	...	...	23	4	12	7	...	...	23	Agreed to.
Dartbrook, Upper	6	12	16	27	23	4	...	...	...	27	12	10	22	19	3	...	...	...	22	6	1	...	...	...	7	Under consideration.
Dogtrap Road	2	23	24	47	23	24	...	...	...	47	9	18	27	13	14	...	...	...	27	4	6	...	...	...	10	Declined.
Dundee	16	14	9	23	...	23	...	...	...	23	12	6	18	18	...	...	...	...	18	8	...	...	...	...	8	Under consideration.
Dungowan	12	10	10	20	10	3	4	3	...	20	10	10	20	10	3	4	3	...	20	4	1	1	1	...	7	Agreed to.
Duke's Springs	7	10	16	26	7	3	16	...	...	26	10	16	26	7	3	14	2	...	26	2	1	4	...	...	7	Under consideration.
Elsmore	5	27	21	48	20	12	13	3	...	48	16	8	24	12	2	8	2	...	24	4	1	2	1	...	8	Agreed to.
Frankfield	4	25	25	50	30	15	2	3	...	50	16	17	33	11	2	2	18	...	33	5	1	1	1	...	8	Do.
Gunnary Creek	10	17	10	27	...	27	...	...	...	27	19	11	20	...	30	...	...	...	20	...	6	...	...	...	6	Do.
Gundy	16	8	12	20	...	20	...	...	...	20	8	12	20	...	20	...	...	...	20	...	6	...	...	...	6	Do.
Gundagai South	2½	33	47	80	63	12	3	2	...	80	24	29	53	41	11	...	1	...	53	16	6	1	...	...	23	Declined.
Gunnambene	5	20	9	29	3	26	...	...	...	29	20	6	26	3	23	...	...	...	26	2	10	...	...	...	12	Under consideration.
Hillas Creek	4	20	9	29	23	6	...	...	...	29	18	11	29	22	7	...	...	...	29	7	3	...	...	...	10	Agreed to.
Harden	7	25	22	47	22	21	...	...	4	47	15	11	26	13	10	...	3	...	26	2	2	...	1	...	5	Do.
Hazel Bank	4	13	19	32	7	10	14	31	11	13	24	3	9	12	24	1	6	4	11	Declined.
Janugarrah	7	15	10	25	6	5	...	13	1	25	14	10	24	3	5	...	15	1	24	1	2	...	3	1	7	Agreed to.

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APPENDIX E—continued.

Name of Place.	Distance of nearest School.	Number of Children residing in the Locality.									Number of Children promised to attend.									Number of Parents or Guardians undertaking to send Children.						Council's Decision.
		Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.	
Kelvin Grove	5	21	8	29	17	...	10	2	...	29	21	8	29	23	...	2	4	...	29	5	...	2	1	...	8	Agreed to.
Little Forest	3	6	11	17	...	17	...	...	...	17	6	11	17	...	17	...	...	...	17	...	17	...	...	...	17	Declined.
Majura	5	8	14	17	...	17	...	...	...	17	4	11	15	...	15	...	...	...	15	...	7	...	...	...	7	Agreed to.
Manton's Creek	8	22	25	47	27	18	2	...	...	47	22	25	47	27	18	2	...	...	47	11	10	1	...	...	22	Do.
Miller's Creek	25	10	5	15	15	...	...	...	...	15	6	7	13	13	...	...	...	...	13	5	...	...	...	...	5	Declined.
Mountain View	2½	18	12	30	27	3	...	...	...	30	27	3	30	27	3	...	...	...	30	9	1	...	...	...	10	Do.
Mount George	4	13	18	26	...	20	...	6	...	26	13	13	26	...	20	...	6	...	26	...	8	...	...	...	8	Agreed to.
Mutbilly	4	24	26	50	20	23	4	3	...	50	13	13	26	15	2	2	4	3	26	8	1	1	1	...	11	Under consideration.
Myall Upper	4	13	14	27	2	18	5	...	2	27	13	12	25	2	18	5	...	...	25	1	6	2	...	...	9	Agreed to.
Nambucca River	14	18	15	33	16	6	11	...	...	33	13	13	26	15	9	2	...	...	26	5	2	1	...	...	8	Under consideration.
Narrango	10	13	11	24	16	1	2	5	...	24	10	7	17	11	...	2	4	...	17	4	...	1	1	...	6	Agreed to.
Palmer's Oakley Creek	5	14	19	33	18	6	9	...	...	33	13	20	33	15	3	12	3	...	33	6	2	...	...	...	8	Do.
Park	5	...	...	...	16	2	...	...	...	18	9	9	18	16	2	...	...	...	18	10	2	...	...	...	12	Do.
Portland Head	3½	15	14	29	17	...	12	...	...	29	11	12	23	11	...	12	...	...	23	4	...	7	...	...	11	Do.
Raleigh	4	20	18	38	28	10	...	...	...	38	12	8	20	11	9	...	...	...	20	5	3	...	...	...	8	Do.
Rob Roy Gully	7	23	14	37	22	4	8	...	3	37	12	7	19	14	...	2	...	3	19	5	...	1	1	...	7	Under consideration.
Rossi	5	9	17	26	4	22	...	...	...	26	9	17	26	4	22	...	...	...	26	3	6	...	...	...	9	Agreed to.
Rouchel	12	12	16	28	6	3	19	...	...	28	14	17	31	8	3	20	...	...	31	3	1	6	...	...	10	Do.
St. Millier's Brook	10	14	10	24	2	22	...	...	...	24	12	10	22	2	19	1	...	...	22	1	5	1	...	...	7	Declined.
Shark Creek	3½	13	40	53	8	40	5	...	...	53	25	18	43	8	35	...	...	...	43	11	2	...	...	...	13	Do.
Six-mile Swamp	6	28	24	52	18	25	...	9	...	52	16	14	30	13	17	...	...	...	30	3	4	...	...	...	7	Agreed to.
Sofferino	60	14	30	44	9	20	15	...	...	44	10	27	37	8	16	13	...	...	37	8	16	13	...	...	37	Under consideration.
Spring Flat	6	17	15	32	10	22	...	...	...	32	13	10	23	6	17	...	...	...	23	1	4	...	...	...	5	Agreed to.
Spring Creek	3½	30	22	52	33	14	...	2	3	52	17	14	31	26	5	...	...	...	31	9	1	...	...	...	10	Do.
Spring Side	5	13	19	32	3	21	2	5	1	32	13	19	32	3	22	2	5	...	32	4	10	1	4	1	20	Declined.
Stockyard Creek	8	9	11	20	14	6	...	...	...	20	10	10	20	14	6	...	...	...	20	4	2	...	...	...	6	Agreed to.
Sugarloaf	...	26	24	50	17	24	5	...	4	50	19	14	33	15	8	4	...	4	31	5	4	2	...	1	12	Do.
Toogong	14	19	17	36	26	10	...	...	...	36	26	10	36	18	18	...	...	...	36	16	6	1	...	...	23	Under consideration.
Torrens	3	...	...	...	...	...	...	...	...	14	11	25	20	5	...	...	...	...	25	9	1	...	...	...	10	Do.
Tweed Junction	7	12	8	20	17	1	2	...	...	20	12	8	20	17	1	2	...	...	20	5	1	1	...	...	7	Agreed to.
Wandook	8	13	8	21	3	3	15	...	...	21	13	8	21	7	3	11	...	...	21	4	1	3	...	...	8	Do.
Waverley	8	14	16	30	29	1	...	...	...	30	13	17	30	29	1	...	...	...	30	9	1	...	...	...	10	Do.
Woolar	20	9	11	20	5	15	...	...	...	20	8	12	20	5	15	...	...	...	20	3	2	...	...	...	5	Do.
Wolongbar	8	17	11	28	12	...	8	8	...	28	6	7	13	5	...	8	...	...	13	2	...	3	...	...	5	Do.
Woodhill	3	9	8	17	...	6	...	10	1	17	6	11	17	3	...	7	7	...	17	1	...	2	3	...	6	Under consideration.
Yass River	7	23	23	46	7	13	...	26	...	46	23	23	46	8	13	...	25	...	46	3	3	...	5	...	11	Declined.
		1,151	1,121	2,272	916	851	283	157	36	2,243	1,015	906	1,921	788	732	236	137	26	1,919	312	282	102	40	11	747	

APPENDIX F.

ATTENDANCE of Children at the Half-time Schools, as certified by the Local Committees, for the Quarter ending 31st December, 1874, or for the last Quarter of that year during which the Schools were in operation.

Table with columns: Name of School, Number of Children on Rolls (Boys, Girls, Total), Attendance (Boys, Girls, Total), Expenditure from Public Funds (Salaries, Books and Apparatus, Travelling Expenses and Forage, Buildings, Rent, Furniture, &c.), Local Contributions (Buildings, Furniture, &c., School Fees), Total. Rows list various schools like Adaminaby, Australian Farm, Back Creek, etc.

APPENDIX F—continued.

Name of School.	Number of Children on Rolls.							Attendance.			Expenditure from Public Funds.				Local Contributions.			
	Boys	Girls	Total	Church of England.	Roman Catholic.	Presbyterians.	Wesleyans	Others.	Boys.	Girls.	Total.	Salaries.	Books and Apparatus.	Travelling Expenses and Forage.	Buildings, Rent, Furniture, &c.	Buildings, Furniture, &c.	School Fees.	Total.
Tatham	6	10	16	5	8	3	..	..	56	8	136	£ 8 d.	2 2 d.	2 8 d.	£ 7 d.	..	£ 14 0	£ 14 0
Tomboys	3	3	6	3	7	..	..	..	28	48	76	27 10 0	0 15 0	4 3 4	..	..	5 0 0	37 8 4
Tonnulii	12	8	20	..	20	..	..	..	64	58	122	31 10 4	0 13 6	1 6 8	..	..	5 0 0	38 10 6
Towamba	10	6	16	12	4	..	..	..	69	35	104	40 0 10	0 13 8	6 3 4	..	..	5 3 6	51 18 4
Trendon Grange	..	..	..	..	..	..	..	No return.	..	..	..	7 15 10	1 13 1	..	..	..	..	..
Tucki Tucki	1	6	9	..	1	30	..	..	18	7	68	8 5 0	..	0 13 6	..	..	0 17 0	9 14 6
Underbank	10	11	21	16	..	2	3	..	51	7	121	43 19 5	0 10 0	5 0 0	..	..	7 2 9	56 12 5
Victoria Creek	13	8	21	15	5	..	..	..	103	65	168	7 15 10	1 12 0	..	..	..	1 13 9	10 18 7
Wallamba River	7	10	17	9	4	4	..	..	44	79	123	33 0 0	1 0 0	5 13 6	..	..	6 10 9	45 4 9
Wandella	12	9	21	21	..	..	..	..	65	69	134	46 2 6	..	5 0 0	..	..	4 19 0	56 1 6
Warragubra	17	11	28	21	..	4	3	..	113	84	197	33 10 0	..	5 0 0	..	..	8 13 6	47 3 6
Ward's River	7	7	14	15	..	..	..	..	51	63	114	34 0 0	1 9 2	5 0 0	..	..	5 0 4	45 9 6
Walagon Creek	7	7	14	8	7	..	..	..	57	66	123	32 15 0	1 9 10	..	..	..	2 5 6	36 6 4
Whooey Creek	7	7	14	9	1	..	4	..	45	42	87	47 0 0	0 19 5	5 11 6	..	..	8 14 3	62 5 2
Whoo	15	4	19	..	19	..	..	..	99	27	126	11 0 0	1 19 6	3 5 0	..	..	3 19 9	18 12 5
Wilow Point	10	3	13	10	3	..	7	..	61	16	77	11 0 0	1 13 3	1 13 4	..	..	3 18 9	46 13 0
Windellama	8	7	15	4	4	..	7	..	4	31	31	20 2 8	..	..	..	..	2 17 7	18 1 4
Wiseman's Ferry	6	10	16	12	4	4	..	..	35	68	123	33 0 0	0 17 11	5 10 0	20 0 0	..	5 7 7	64 15 5
Wyndham	7	12	19	5	6	1	7	..	42	88	130	39 10 0	1 4 10	0 10 0	..	..	5 3 6	45 7 4
Woodburn	8	6	14	7	..	..	..	..	46	4	86	26 11 3	0 19 5	5 4 0	..	..	4 17 2	37 11 10

APPENDIX G.

APPLICATIONS for the Establishment of Half-Time Schools, received during the Year 1874.

Name of Place.	Distance of nearest School.	Children residing in the Locality.							Children promised to attend.							Parents or Guardians undertaking to send Children.						Council's decision.		
		Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	C.E.	R.C.	Pres.	Wes.		Others.	Total.
Australian Farm	6	19	10	29	3	4	..	22	..	19	10	29	3	4	..	22	..	1	1	..	6	..	8	} Agreed to.
Wiseman's Ferry	3	8	8	16	8	..	..	8	..	8	8	16	8	..	..	8	..	2	..	..	2	..	4	
Back Creek	5	15	9	24	11	..	..	8	5	14	10	24	11	..	..	8	5	5	..	..	5	2	12	} Agreed to.
Charleyong	..	9	14	23	15	..	..	8	..	9	14	23	15	..	..	8	..	6	..	..	3	..	9	
Coolamatong	..	6	17	13	3	7	3	..	..	6	7	13	3	7	3	..	..	2	3	1	..	..	6	} Declined.
Gegedrick	15	9	4	13	5	4	4	..	..	9	4	13	5	4	4	..	..	1	4	2	..	..	7	
Larhart	7	14	5	19	19	..	..	..	..	14	5	19	19	..	..	..	..	4	..	..	..	..	4	} Agreed to.
Lime Kiln Creek	..	11	5	16	15	1	..	..	..	11	5	16	15	1	..	..	..	3	1	..	..	..	4	
Nangus	7	2	12	14	8	6	..	..	..	3	11	14	8	..	6	..	..	3	..	3	..	..	6	} Under consideration.
Native Dog Creek	..	7	8	15	15	..	..	..	..	7	8	15	15	..	..	..	..	6	..	..	..	..	6	
Nubrygyn Creek	8	9	6	15	9	6	..	..	..	9	6	15	15	..	..	..	..	6	..	..	..	..	6	} Agreed to.
Beri Creek	8	10	5	15	10	5	..	..	..	10	5	15	9	6	..	..	..	3	2	..	..	..	5	
Parlwood	..	3	5	8	..	..	..	8	..	4	6	10	..	..	2	8	..	..	1	2	..	..	3	} Under consideration.
Weetangera	..	12	13	25	7	2	7	9	..	17	9	26	8	..	5	13	..	4	..	2	6	..	12	
Pelican Creek	7	6	9	15	..	15	..	..	..	4	9	13	..	13	..	..	..	4	..	..	..	..	4	} Agreed to.
Tatham	3½	5	8	13	5	4	4	..	..	3	10	13	5	8	..	..	..	2	2	..	..	..	4	
Victoria Creek	4½	14	12	26	15	11	..	..	..	14	12	26	14	12	..	..	..	4	2	..	..	..	6	} Agreed to.
Tendon Grange	6	11	7	18	18	..	..	..	..	11	7	18	18	..	..	..	..	7	..	..	..	..	7	
Whoo	6	25	13	38	..	38	..	..	..	14	5	19	..	19	..	..	..	4	..	..	..	..	4	} Agreed to.
Winduella	..	11	9	20	..	20	..	..	..	6	7	13	..	13	..	..	..	4	..	..	..	..	4	
Wianga	7	8	5	13	3	10	..	..	..	11	4	15	3	12	..	..	..	2	4	..	..	..	6	} Declined.
Fell Timber	7	7	6	13	..	13	..	..	..	7	5	12	..	12	..	..	..	3	..	..	..	..	3	
		221	180	401	169	145	18	63	5	210	167	377	174	111	20	57	5	61	34	9	24	2	130	

APPENDIX H.

REPORTS of Inspectors upon Schools in the—

Albury District.
Armidale ..
Braidwood ..
Camden ..
Cumberland ..
Goulburn ..
Maitland ..
Mudgee ..
Newcastle ..
Sydney ..

ALBURY DISTRICT.

INSPECTOR'S GENERAL REPORT FOR 1874.

I HAVE the honor to submit for the information of the Council of Education this General Report upon the condition of the Public, Provisional, Half-time, and Certified Denominational Schools in the Albury District for the year 1874.

Supply of Schools.—During the year Public Schools were brought into operation at Black Range, Coolac, Forest Vale, Mulwala, Tattalia, and Wilcannia; the necessary arrangements made for the establishment of Public Schools at Bungowannah, Hopetield, Jindera, Morebringer, Sandy Creek, and Urana; the Public Schools at Euston and Upper Adelong were re-opened, and Provisional Schools established at Booligal, Cooba Creek, Ferndale, Hillas Creek, and Wandook. Owing to decrease of population the Provisional Schools at Kimo Reef and Mount Patrick were closed; and, in accordance with the provisions of section 28 of the Public Schools Act, the certificate of the Church of England School at South Gundagai was cancelled, on 31st January, 1874.

In reviewing the distribution of schools in this district, and noting the degree to which they supply its educational wants, it may be stated that there were but few localities having a population capable of maintaining an average daily attendance of fifteen pupils, in which, at the close of the year, a Public or a Provisional School was not either in operation or being established. Wherever it could be made known to the people that the number of children of the school ages (four to fourteen years) was sufficient to warrant the establishment of a school of either class, they manifested a commendable readiness in fulfilling the necessary conditions; and the liberality with which, in most instances, the local quota of the cost of school buildings was subscribed may be accepted as practical and satisfactory evidence of the growing desire for education evinced by the residents of even the most outlying and isolated portions of the Colony. In numerous instances indeed the subscriptions of the settlers appeared to be largely in excess of their pecuniary means, and it would be well if, to meet the requirements of newly settled and sparsely populated localities, a larger proportion of the cost of school premises vested in the Council of Education were defrayed from the public treasury.

With respect to Half-time Schools it has to be reported that, notwithstanding their proved usefulness, they are not popular in this district. Parents think that at best children can be only *half* educated in such schools; it is well nigh impossible to disabuse them upon this point, and they necessarily take but little interest in their establishment.

Organization.—The material state of existing schools admits of favourable report. Substantial vested buildings have within the year been erected at Tattalia and Wilcannia; new premises have been provided for the Provisional Schools at Ferndale, Wagra, and Welaregang; and considerable improvements effected in the premises of several Public Schools, chiefly those at Menindie, Tumut, and Wagga Wagga. Several rural schools, however, are still unprovided with residences.

Ninety per cent. of the schools visited were found duly supplied with the necessary educational appliances, but many complaints as to the *quality* of the material supplied by the Council's agent were made by the teachers. In a few schools also, much inconvenience resulted from an edition of some of the school books differing in many details from that previously supplied, having been included in the grants for 1874. The state of repair, equipment, and general organization of the schools in operation for the year may be summarized as follows:—

	Good.	Fair.	Tolerable.	Indifferent.
Public Schools	19	9	4	5
Provisional Schools	1	8	4	4
Half-time Schools .....	.....	1	.....	1
Certified Denominational Schools	2	2	2	.....
Totals	22	20	10	10

Discipline.—In my general report for 1872, attention is drawn to the fact that, from returns furnished by the teachers, it appeared there were from six to seven hundred children of the school ages residing within a reasonable distance of schools aided or maintained by the State, but who were not in attendance at these schools nor otherwise under instruction. I regret having to report that but little improvement has taken place in this respect within the past two years.

From statistics collected in 1874, it has been found that the number of children similarly circumstanced amounts to 670—equal to 15 per cent. of the aggregate number enrolled for the year in all the schools of the district. There are no doubt several children included in this number who had been under instruction in previous years, and others whose absence was due to the want of decent clothing; nevertheless, it may be confidently asserted that nine-tenths of those included in the return were absent because of the indifference, the ignorance, or the cupidity of their parents. Referring to the condition of such children in a previous report (1871), I gave it as my opinion that the only effectual way by which they could be rescued from the state of barbarism in which they were being brought up was by the enactment of a law making the education of all children residing within a given distance of established schools compulsory. Subsequent experience has served only to strengthen my convictions as to the necessity for such a measure.

But whatever difference may exist as to the merits of a compulsory enactment, public opinion must at the least be unanimous in desiring that no impediments to the progress of primary education be offered by the existing laws of the Colony; and yet it has to be stated that, what is popularly known as the *residence clause* of the *Crown Lands Alienation Act*, has indirectly at least interfered with the instruction of many of the children in country districts. A large proportion of these are conditional purchasers, the "*selections*" in many instances being made at considerable distances from their parents' homes

homes and the nearest schools, with a view to the protection of "grass rights" or other interests. In former years this arrangement made but little difference in the attendance at rural schools, but early in 1874 it was generally believed that the conditions of residence would be enforced more stringently than heretofore. The result was that many children were withdrawn from school that they might be "on their selections" when the Surveyor or other Land Officer visited for inquiry and report.

Having thus briefly referred to the more prominent impediments to the successful working of the Public Schools Act, it is pleasing to add that, as regards the pupils enrolled for the year, the degree of regularity and punctuality noted in former reports has been fully sustained. This is all the more gratifying, as owing to the prevalence of juvenile sickness during the latter part of the year, the attendance at many of the schools in the south-western portion of the district was unusually low.

Viewed as a whole, the government and moral condition of the schools show progressive improvement. The requirements of order, attention, and prompt obedience, have been more generally met than in any former year; complaints of undue or injudicious punishment are rarely heard; and the every-day working of the schools is characterized by an absence of corporal punishment.

• Annex A.

Instruction.—In estimating the pupils' attainments, and appraising the general efficiency of the schools, the standard prescribed by the Council has been uniformly applied. A detailed statement showing the condition of each school is annexed, and may be summarized as follows:—In 19 per cent. the general proficiency ranged from very fair to good; in 39 per cent. it was estimated as fair; and in 42 per cent. it fell below the requirements of the standard. Compared with the results of the previous year, it follows that the percentage of schools in which the requirements of the standard were either exceeded or fairly met has advanced from 40 to 68 of the total number examined, while the proportion below the standard has receded from 60 to 42 per cent. of the whole. The satisfactory measure of progress here indicated is due partly to the increase in the number of trained teachers employed, and to the higher results produced in new schools of two and three years' standing; but chiefly to the diligence and sustained industry evinced by the teaching staff generally. There may indeed be found a few apparently indifferent as to the results of their labours so long as they escape official censure, and others who appear incapable of realizing the moral responsibilities of their office; but the number of either is too small to seriously diminish the measure of praise and commendation due to the teachers as a body for the zeal with which they discharge their very onerous duties.

I would here point out, that much difficulty was experienced during the past year in filling up vacancies caused by the removal or resignation of teachers in rural schools. This, no doubt, was in some measure due to the unattractive surroundings of bush life; but the chief and primary cause was, in my opinion, the small income generally derived by the teachers, and the want of suitable accommodation in the way of residence. In 30 per cent. of the Public Schools in this district, the average income of the teacher is less than £100 per annum; and in the Provisional Schools it does not exceed £65 per annum. Having regard to the high rates of wages or salary ruling in other fields of employment, and to the corresponding increase in the cost of the necessaries of life, it can scarcely be expected that the supply of teachers willing and competent to take charge of rural schools will be found equal to the demand, unless greater inducements in the shape of salary and accommodation can be offered by the Council.

After a careful review, and due consideration of the data afforded by the educational circumstances of this district, I venture to state that a considerable impetus would be given to the working of the Public Schools Act, and the realization of its objects would be greatly expedited, if the administrative powers of the Council were strengthened and sustained by the Legislature in the directions here specified, viz. :—

1. By augmenting the annual parliamentary vote for primary education, so as to provide funds for the erection of public school buildings and teachers' residences where needed.
2. By voting a special sum to supplement the classification salaries of teachers in charge of rural schools, and
3. By amending the Public Schools Act of 1866 so as to make the education of all children of certain ages, and residing within a prescribed distance of any school aided by the state, compulsory.

EDMUND H. FLANNERY,
Inspector, Albury District.

ANNEX A.

SUMMARY of Reports upon condition of Public, Provisional, and Half-time Schools, inspected during the year 1874.

I.—PUBLIC SCHOOLS.

ADELONG :—Visited, 22nd and 23rd June.

Present at examination :—Boys, 57; girls, 47; total, 104.

This school is held temporarily in the hospital buildings. The accommodation is very inadequate, and the out-buildings insufficient, but the material equipment is otherwise liberal, and the organization good. 90 per cent. of the children of school ages in the locality, and not in attendance at other schools, are enrolled; the majority are regular, but many are unpunctual. In its remaining features the moral aspect of the school is pleasing; the instruction is well regulated, and the teaching thorough. The average proficiency is very fair.

ADELONG CROSSING :—Visited, 26th May.

Present at examination :—Boys, 21; girls, 12; total, 33.

The school buildings are in fair repair, but need painting; a weather-shed is also required; viewed as a whole, the organization is reasonably good, but the grounds have lost the neat appearance presented in former years. The attendance is general and fairly punctual, and the requirements of order and attention are tolerably met. The average proficiency is moderate. At date of examination the present teacher had been only four months in charge.

ADELONG, UPPER :—Visited, 18th June.

Present at examination :—Boys, 9; girls, 9; total, 18.

The material state of the school is reasonably good, the supply of working materials adequate, and the general appearance of the premises neat. With one exception, all the children of school ages in the locality are enrolled, and the moral condition is, on the whole, healthy. The average proficiency is moderate.

ALBURY (Primary) :—Visited, 4th, 5th, 6th, 7th August.

Present at examination :—Boys, 67; girls, 52; total, 119.

The school-buildings are much in need of repair, otherwise the organization is reasonably good, and the stock of educational appliances suitable and sufficient. The discipline is healthy and fairly effective; the instruction is carefully regulated, and the average proficiency ranges from fair to very fair.

ALBURY

ALBURY (Infants):—Visited, 5th August.

Present at examination :—Boys, 64 ; girls, 56 ; total, 120.

The gallery accommodation is rather limited for the present attendance, and the interior of school-room needs painting and colouring. In other respects the equipment is complete and the organization appropriate. The attendance is general and well sustained ; the order excellent, and an air of happy contentment pervades the school ; measured by the prescribed standard of proficiency, the pupils' attainments average good.

BALRANALD:—Visited, 27th October.

Present at examination :—Boys, 31 ; girls, 31 ; total, 62.

The schoolhouse is a weatherboard building, in fair repair, but much too small for the present attendance. The general organization is tolerable, and the disciplinary arrangements are fairly effective. The instruction is painstaking, and the average proficiency approaches fair.

BATLOW:—Visited, 17th June.

Present at examination :—Boys, 25 ; girls, 20 ; total, 45.

The schoolhouse is a weatherboard building, in fair repair, but needs painting. Fencing, a weather-shed, and lavatory are also required. The attendance includes 80 per cent. of the children of school ages in the locality. The discipline is fairly effective, the teaching painstaking, and the average proficiency fairly satisfactory.

BLACK RANGE:—Visited, 14th August.

Present at examination :—Boys, 14 ; girls, 16 ; total, 30.

This school is held in a small church building recently erected. It is scantily furnished, the premises are unfenced, and the out-buildings incomplete. The general organization is reasonably good, and the supply of working materials adequate. About sixty-five per cent. of the children of school ages in the locality are enrolled ; the majority are regular in attendance ; and the requirements of order and attention are fairly met. For the time the school has been in operation, tolerable progress has been made by the pupils generally.

BOVNA:—Visited, 20th August.

Present at examination :—Boys, 12 ; girls, 13 ; total, 25.

A slab building, in tolerable repair, fairly furnished, and liberally provided with working materials. Three-fourths of the children in the locality are enrolled, but not more than half of these are regular in attendance. The results of examination indicate a satisfactory degree of progress since last inspection, and the average proficiency approaches fair.

BRUCEDALE:—Visited, 22nd July.

Present at examination :—Boys, 12 ; girls, 11 ; total, 23.

This school is still held in the Wesleyan Chapel, a slab building,—scantily furnished, and unprovided with out-offices. Suitable premises are about being built in a more central position. Not more than half the children of the locality are enrolled ; but in many instances the absentees were fulfilling the conditions of the residence clause of the Crown Lands Alienation Act. The moral condition of the school is otherwise healthy, and the pupils' attainments may be estimated as tolerable.

COOLAC:—Visited, 3rd June.

Present at examination :—Boys, 15 ; girls, 17 ; total, 32.

The schoolhouse is a slab building, roofed with shingles, of rather frail construction, but liberally furnished, and well organized. About 80 per cent. of the children attend regularly, and the general discipline is judicious. Fair proficiency was evinced in the several subjects of instruction.

DENILQUIN:—Visited, 1st and 2nd October.

Present at the examination :—Boys, 70 ; girls, 39 ; total, 109.

The accommodation is limited, and the ventilation of the schoolhouse defective ; otherwise the general equipment is complete, and the whole premises are tastefully kept. About 80 per cent. of the children in the locality are enrolled, and the attendance is regular ; the requirements of order and attendance are fairly met, and the moral tone of the school is pleasing. The general proficiency is up to standard, and fair progress has been made since last inspection. The teacher's residence needs repair.

EDWARDSTOWN:—Visited, 27th May.

Present at examination :—Boys, 19 ; girls, 25 ; total, 44.

The schoolhouse is a substantial slab building, amply provided with furniture and working materials. Fencing, a weather-shed, and lavatory are needed to complete the general equipment. About 70 per cent. of the children in locality are enrolled, but the attendance is irregular. This, in the absence of a more reasonable cause, may be ascribed to the indifference of the parents. The average proficiency is moderate, and but little progress has been made since last inspection, more especially in the senior classes.

EUNONIHAREENYAH:—Visited, 20th July.

Present at examination :—Boys, 11 ; girls, 14 ; total, 25.

Since last inspection the teacher's residence has been completed, and the schoolhouse ceiled. There is an ample supply of educational appliances, and the whole premises are excellently well kept. Many of the children formerly in attendance have been recently withdrawn to comply with the provisions of the residence clause of the Crown Lands Alienation Act. The moral condition of the school is good, the work of instruction is diligently conducted, and the results are fully up to standard.

EUSTON:—Visited, 30th October.

Present at examination :—Boys, 6 ; girls, 13 ; total, 19.

This school was re-opened in June, 1874, and is now held in premises the property of a member of the Local Board. There is a tolerable supply of furniture and working materials, and the organization is as good as circumstances permit. All the children of school ages in the locality are enrolled, the attendance is regular, and the general discipline healthy. Fair progress appears to have been made since the school came into operation.

GOCTP:—Visited, 12th June.

Present at examination :—Boys, 26 ; girls, 32 ; total, 58.

The schoolhouse is commodious, in good repair, and well equipped. A teacher's residence, out-buildings, and fencing are yet needed. 90 per cent. of the children in the locality are enrolled, the attendance is very regular, and the moral tone of the school is healthy. The instruction is duly regulated, the teaching painstaking, and the average proficiency fair. Substantial progress has been made since last inspection.

GUNDAGAI:—

GUNDAGAI:—Visited, 28th May.

Present at examination :—Boys, 25 ; girls, 20 ; total, 45.

The school buildings are old, but in fair repair ; there is an ample supply of educational appliances, and the general organization is good. Owing to the recent opening of two private schools, one of which is held in the Roman Catholic church, and under the patronage of the clergyman, the attendance at date of inspection was comparatively small. The moral tone of the school is healthy, and the results of instruction are fully up to standard.

HAY :—Visited, 22nd and 23rd October.

Present at examination :—Boys, 48 ; girls, 50 ; total, 98.

The school buildings are commodious, but need some minor repairs. A weather-shed and additional accommodation for boarders are also required. The general organization is appropriate, and the premises present a neat appearance. The attendance has been more than doubled since the present teacher took charge, in November, 1873, and is both regular and punctual. Good order obtains, and the moral condition of the school is pleasing. All the prescribed subjects are included in the course of instruction, and the average proficiency ranges from fair to very fair.

HOWLONG :—Visited, 18th September.

Present at examination :—Boys, 11 ; girls, 19 ; total, 30.

The schoolhouse is in good repair, well furnished, and fairly provided with working materials. The general organization evidences a want of neatness and due care. About 60 per cent. of the children in the locality are enrolled ; the discipline is very weak, and the moral tone of the school low. The average proficiency is moderate, and little progress has been made since last inspection. The teacher was removed at the close of the year.

LAKE ALBERT :—Visited, 30th November.

Present at examination :—Boys, 5 ; girls, 6 ; total, 11.

The material state of the school is good, and its organization appropriate. Owing to special causes the attendance was unusually low on date of visit, but, so far as could be judged from the conduct and intelligence of the pupils present, the general management may be regarded as fairly effective.

MOAMA :—Visited, 7th October.

Present at examination :—Boys, 15 ; girls, 14 ; total, 29.

This school is held in a wooden building, vested in Trustees for Sunday School purposes ; it is in poor repair, the premises are unfenced, there are no out-buildings, and the supply of furniture is scanty. The attendance includes 70 per cent. of the children of school ages in the locality, and the general efficiency of the school may be estimated as moderate. The present teacher has been only a fortnight in charge. An effort has been made to raise, by local subscription, the prescribed portion of the cost of vested premises, but the amount realised is insufficient.

MENINDIE :—Visited, 10th November.

Present at examination :—Boys, 13 ; girls, 14 ; total, 27.

A neat and comfortable school-house, fully furnished, and amply provided with working materials. About 80 per cent. of the children of school ages in the locality are enrolled, and the majority are regular in attendance. The general discipline savours of harshness, and the results of instruction may be estimated at tolerable.

MULLENJANDRA :—Visited, 16th December.

Present at examination :—Boys, 11 ; girls, 21 ; total, 32.

The premises are unfenced, the teacher's residence is a mere make-shift, and the supply of school furniture is scanty. The general organization is as good as circumstances permit, the government is judicious and effective, and the average proficiency of the pupils ranges from fair to very fair. 90 per cent. of children present at examination had been promoted since previous visit, and, viewed as a whole, the school, so far as the teacher can be held responsible, takes rank among the most useful in the district. At the close of the year the teacher was promoted to a more important school.

MULWALA :—Visited, 24th September.

Present at examination :—Boys, 12 ; girls, 13 ; total, 25.

This school is held in the English church, a wooden building in tolerable repair, and fairly suitable. The attendance includes all the children of the locality, and is passably regular. Good order prevails, and the moral condition is otherwise healthy. The teaching is painstaking, and the results show a tolerable approach to the requirements of the standard.

NARANDERA :—Visited, 24th November.

Present at examination :—Boys, 20 ; girls, 11 ; total, 31.

A suitable and commodious schoolhouse, in good repair and duly equipped, but needs to be more neatly and carefully kept. About three-fourths of the children of school ages in locality are enrolled, and the attendance is reasonably regular ; in other respects the discipline is weak. But little progress has been made in the several subjects of instruction since last inspection, and the actual proficiency is only moderate.

TATTALLA :—Visited, 8th October.

Present at examination :—Boys, 17 ; girls, 12 ; total, 29.

The school buildings are new, suitable, and well furnished ; but the premises are unfenced and unprovided with lavatory and weather-shed. All the children in the locality attend, and the disciplinary arrangements are passably appropriate ; but the instruction is wanting in intelligent method, and productive of only moderate results.

THURGOONA :—Visited, 13th August.

Present at examination :—Boys, 42 ; girls, 30 ; total, 72.

Apart from the fact that the grounds are losing the exceedingly neat and well ordered appearance presented in former years, the material state and general equipment of the school are all that could be desired, but the residence needs enlargement. The attendance is general, regular, and punctual ; and, in its remaining features, the moral aspect of the school is very pleasing. All the prescribed subjects are included in the course of instruction ; the methods of teaching are skilful ; and the results satisfactory. The average proficiency ranges from very fair to good.

TUMUT :—

TUMUT :—Visited, 9th and 10th June.

Present at examination :—Boys, 60 ; girls, 42 ; total, 102.

The schoolhouse is in good repair, fairly furnished, and amply found in the necessary educational appliances. A weather-shed, lavatory, and residence for the teacher are being built, and when finished the material equipment of the school will be complete. About 80 per cent. of the children not in attendance at other schools in the locality are enrolled, and in all its features the moral aspect of the school is very pleasing. The average proficiency of the pupils ranges from very fair to good.

WAGGA WAGGA (Boys) :—Visited, 15th and 16th July.

Present at examination :—168.

The accommodation is inadequate to the wants of the present attendance, otherwise the organization and general condition of the premises are all that could be desired, and the disciplinary arrangements are judicious and effective. The work of instruction is conducted with zeal, industry, and intelligence ; in the upper classes the course of studies is much higher than the requirements of the standard, and the average proficiency ranges from very fair in the lower grades, to very good in the senior division.

WAGGA WAGGA (Girls) :—Visited, 13th and 14th July.

Present at examination :—95.

An excellent schoolroom, amply furnished and fairly organized. In the lower classes the discipline is comparatively weak, in the higher grades it is effective, and the average results of instruction may be estimated as fair. Geometry is taught to the pupils of the 4th class, and the progress made is very encouraging.

WENTWORTH :—Visited, 2nd November.

Present at examination :—Boys, 21 ; girls, 20 ; total, 41.

The teacher's residence needs enlargement, and the material equipment of the premises is defective as regards fencing and a weather-shed. Owing to the prevalence of measles only half the pupils on rolls could attend the examination, and of these the majority had suffered from this epidemic within the previous month. There was nevertheless sufficient evidence as to the pupils' proficiency to show that the skilful and painstaking teaching noted in previous reports upon the school is still maintained.

WILCANNIA :—Visited, 12th November.

Present at examination :—Boys, 17 ; girls, 13 ; total, 30.

The premises in which the school is at present conducted are very unsuitable for educational purposes, but the necessary buildings are being erected, and will be ready for occupation in January, 1875. Owing to this want of accommodation, and the prevalence of juvenile sickness, the attendance of pupils is relatively small, including not more than 40 per cent. of the children in the locality. The general discipline is ineffective, and the average proficiency barely moderate.

WOOMARGAMA :—Visited, 16th December.

Present at examination :—Boys, 14 ; girls, 15 ; total, 29.

The schoolhouse is a substantial brick building, in good repair, duly furnished, and having a fair supply of working materials. Nearly all the children of the school ages in the locality are enrolled, but many are unpunctual, and the general discipline is weak. Fair progress has been made in reading and writing ; as regards the other subjects of instruction the results are less satisfactory, and the mental powers of the pupils are but partially developed.

II.—PROVISIONAL SCHOOLS.

FERNDALE :—Visited, 16th June.

Present at examination :—Boys 9 ; girls, 13 ; total, 22.

Out-buildings and fencing have yet to be provided, otherwise the material equipment is reasonably good. All the children of the locality are enrolled, and attend very regularly ; in other respects the moral condition of the school is pleasing. Good progress has been made in the more important subjects of instruction, and the average proficiency approaches fair.

KIMO REEF :—Visited, 6th June.

Present at examination :—Boys, 8 ; girls, 9 ; total, 17.

The schoolhouse is suitable, well furnished, and neatly kept. The attendance is general, regular, and fairly punctual ; the discipline is firm, and the moral tone of the school pleasing ; the instruction is productive of moderate results. Owing to the failure of the principal gold mines in the locality the attendance fell off considerably ; and on 1st September the teacher resigned ; since then the school has not been re-opened.

LACMALAC :—Visited, 11th June.

Present at examination :—Boys, 9 ; girls, 12 ; total, 21.

The schoolhouse is in passable repair, but too small for the ordinary attendance ; the general organization is fair, the discipline reasonably effective, and the results of instruction exceed tolerable.

MAJOR'S PLAINS :—Visited, 16th September.

Present at examination :—Boys, 9 ; girls, 7 ; total, 16.

The school is fairly found in furniture and working materials, and its organization is passable. Two-thirds of the children of school ages in the locality are enrolled, but the attendance is fitful and unpunctual. The instruction is fairly regulated and productive of tolerable results.

MOUNT ADRAH :—Visited, 7th December.

Present at examination :—Boys, 2 ; girls, 4 ; total, 6.

The schoolhouse is in reasonable repair, fairly furnished, and neatly kept. Owing to the unpopularity of the teacher the attendance for some time has been exceedingly low, and the attainments of the few present at examination were very limited. The teacher resigned at the close of the year.

TEN-MILE CREEK :—Visited, 15th December.

Present at examination :—Boys, 8 ; girls, 16 ; total, 24.

The want of more suitable school premises is urgent, and steps are being taken to provide them. Nearly all the children of school ages in the locality are enrolled, and the attendance is fairly regular. The moral condition of the school is healthy, and the instruction is productive of tolerable results.

URANA :—

URANA:—Visited, 26th November.

Present at examination:—Boys, 12; girls, 12; total, 24.

This school is held in the English church, a wooden building in fair repair but scantily furnished. The pupils are neat in dress, fairly regular and punctual in attendance, and orderly under instruction. The teaching is painstaking, and the average proficiency moderate.

WAGRA:—Visited, 18th December.

Present at examination:—Boys, 10; girls, 7; total, 17.

A new schoolroom, but scantily furnished and having a limited supply of working materials. The organization is indifferent, and evidences negligence or want of taste; the discipline is feeble, and the results of instruction show only a very moderate approach to the requirements of the standard.

WANDOOK:—Visited, 16th October.

Present at examination:—Boys, 8; girls, 5; total, 13.

The schoolhouse is suitable, in good repair, and fairly furnished; but out-buildings have yet to be provided. The general organization is judicious and tasteful; the discipline is good; and, having regard to the time the school has been in operation, the average proficiency of the pupils is fair.

WANGANELLA:—Visited, 19th October.

Present at examination:—Boys, 7; girls, 12; total, 19.

The schoolhouse is in good repair, suitably furnished, and very neatly kept. Nearly all the children in the locality are enrolled, but the attendance has, during the past six months, been very irregular, owing to many of the pupils being "free selectors," and having to fulfil the provisions of the *residence clause* of the Land Act. The moral aspect of the school is pleasing, the instruction painstaking, and the results range from tolerable to fair.

WONDALGA:—Visited, 19th June.

Present at examination:—Boys, 10; girls, 8; total, 18.

The schoolhouse is a slab building, in tolerable repair, and passably equipped. Two-thirds of the children of school age in the locality are enrolled, and the majority of these attend regularly. The general discipline is fairly effective, and the teaching is tolerably profitable.

III.—HALF-TIME SCHOOLS.

TARCUTTA LOWER:—Visited, 22nd May.

Present at examination:—Boys, 4; girls, 6; total, 10.

The schoolhouse is commodious and in good repair, suitably furnished and well kept. With one exception all the children in the locality are enrolled, the discipline is judicious, and the instruction is marked by fair practical skill. A very fair degree of progress has been made since last inspection.

TARCUTTA, UPPER:—Visited, 21st May.

Present at examination:—Boys, 8; girls, 4; total, 12.

The schoolroom is a mere hut, very poorly furnished, but well provided with working materials. Nearly all the children in the locality are enrolled, and attend regularly. The teaching is skilful, and the results are fairly up to standard.

EDMUND H. FLANNERY,
Inspector, Albury District.

ARMIDALE DISTRICT.

INSPECTOR'S General Report for the year 1874.

DURING the year, twenty (20) new schools have been established in this district, viz., five (5) Public, thirteen (13) Provisional, and two (2) Half-Time; and one hundred and three (103) schools and departments have been in operation for the whole, or part, of the year. Seventy-three (73) of these schools have been working for the whole period; and sixty-four (64) full inspections have been made.

All portions of the district—the Tweed River excepted—have been visited; and careful inquiry has been made of teachers and others, with the view of ascertaining localities where no means of education were provided. As the result of my observations and inquiries, I may state that, except in the case of South Grafton, no large centre of population is to be found unprovided with a school; but in this instance, active measures are now being taken to remedy the want. The railway extension beyond Murrurundi will probably necessitate the establishment of some small schools in various parts along the line, and steps have already been taken for the establishment of a Public School at Doughboy Hollow, where some fifty children of railway workmen and others are to be found. The principal localities in the other portions of the district where Provisional or Half-Time Schools are, or may be, required are:—

<i>Coast District:</i>	
North Creek	Etonswill
Tweed River Junction.	
<i>Table Land:</i>	
Oban	Dural
Duncan's Creek	Chandler
Brian's Gap	Moore Creek
Salisbury	Moonbi.
Mancy's Creek	
<i>Plains:</i>	
Attunga	Stanborough
Currabubula	Table Top
Middle Creek	Rob Roy Gully
Kimberley	Abingdon.

The above localities contain an available school population varying from fifteen to thirty children, and will in most instances require the personal visit of an Inspector before the establishment of schools may be expected. Scattered among the numerous pastoral areas of the district, and on remote "free selections," are to be found groups of children outside the reach of the provisions of the Public Schools Act, and for whose case it appears almost impossible to legislate, unless by a liberal extension of the system of itinerant teaching. In a few instances, very few unfortunately, the children of the station hands receive instruction with those of the squatter; but by far the greater number are, without doubt, growing up in the most utter ignorance.

The

The gross enrolment of pupils in the district for the year was 6,806; for 1873 it was 6,186, showing an increase for the past year of 620. A proportionate increase in the average daily attendance is also observable. These facts afford some ground for satisfaction, as indicating an increased appreciation of the advantages of education; but there still remains an amount of indifference in the minds of parents, the ill effects of which it appears impossible to overcome but by enforcing the school attendance of their children. From information carefully collated by teachers, it is found that there are in the Armidale District nearly 3,000 children of the prescribed school age, and living within reasonable access of the Council's schools, who do not attend thereat. At the most, some 500 of these may receive private instruction; the remainder, as far as their parents are concerned, are growing up in the most wilful and culpable ignorance; and the influence of so unhealthy a leaven on the future of the Colony is anything but encouraging to contemplate. While this state of things points directly to the necessity for compulsory education, it seems to me desirable, in the event of such a consummation, that the number of days fixed for school attendance should be so high as not to appear to give official sanction to a less degree of regularity than is secured at present.

During the past year new vested Public School buildings have been completed at Barraba, Cowper, Gundurimba, and Kitchella Creek; Provisional School buildings at Camden Haven, Dungowan, and Quirindi Creek; and Half-time schoolhouses, though of an inferior description, at Pelican Creek and Tatham. Important repairs and additions have also been made to the following Public School premises:—Alumny Creek, Coraki, Grafton, Kelly's Plains, Rainbow Reach, Rocky Mouth, Ummarra, and Violet Dale. Speaking generally, the condition of the schools of the district, as regards the character of the buildings, state of repair, and accommodation afforded, may be thus estimated:—Public Schools, fair to very fair; Provisional and Half-time Schools, moderate to tolerable; Denominational Schools, tolerable. As a rule, the various classes of schools are fairly equipped, and reasonable care and economy are exercised in the use of the materials supplied.

In their educational aspect the condition of the schools inspected may be regarded as tolerably satisfactory, and improved results of the teaching are perceptible. Sixty-four schools were examined; and of these, eighteen exceeded the requirements of the "Standard," thirty-five fell below, and eleven met those requirements. The remarks made in my last report on the character of the government of schools apply with equal force now:—"While in very many schools the discipline to which the children are subjected is of a healthy character and secures much that is highly important as regards their moral training, it is to be regretted that in comparatively few instances is the order really good. School drill—one of the most effective aids to discipline—is either neglected or not understood, and the marching and various simultaneous class movements are not performed with the necessary uniformity, quietness, and precision." There are fortunately but few teachers against whom even the suspicion of indolence can be raised, while very many have shown themselves earnest and industrious in a large degree; but the success of their teaching is, in the majority of cases, by no means commensurate with the labour bestowed. Until teachers make it their primary aim to secure thorough order and *active, intelligent attention* on the part of the pupils, their instruction will, to a greater or less extent, be wasted.

The experience of the past year strengthens the favourable opinion of the teachers expressed in my previous report; and it is gratifying to note the comparatively large measure of success that has attended the examination of those liable under Article 37 of the Regulations, and of others who voluntarily submitted to examination. During the year 1873, of 21 examinees, only 4 succeeded in obtaining promotion, while 17 failed. During the past year, of 30 teachers examined, 17 passed for a higher classification, and 13 failed. Thus, in 1873, only *nineteen per cent.* of the number examined were promoted, while in 1874 *fifty-seven per cent.* succeeded. All the pupil-teachers examined gained promotion.

In a few instances the character of the local supervision has improved, but in no case is it as thorough as is desirable. Very fair provision is made for effecting necessary repairs and additions to the school premises, but beyond this little is done. The most efficient Boards in the district are those of the Public Schools at Alumny Creek, Euroka, Swan Creek, Ummarra, and Uralla.

Reviewing the foregoing remarks, there is ground for satisfaction as regards the extension of the means of education effected; the improved efficiency of the schools; the generally good character of the teachers and their efforts for self-improvement, as manifested in the comparatively successful examinations passed. On the other hand, it is to be regretted that, owing to the ignorance, persistent selfishness, and indifference of a large number of parents, not more than two-thirds of the available school population of the district receive the advantages of an education placed within their reach. Compulsion may be desirable; but in the meantime much good would be accomplished were the various School Boards and Committees diligently and earnestly to perform the duties assigned them.

J. D. BRADLEY,
Inspector of Schools,
Armidale District.

ARMIDALE DISTRICT.

SUMMARY of Reports upon Public, Provisional, and Half-Time Schools, examined during the year 1874.

I.—PUBLIC SCHOOLS.

ALDAVILLA (P.—V.) :—Regular inspection, 6th August.

Numbers enrolled :—Boys, 37; girls, 21; total, 58.

Numbers present :—Boys, 32; girls, 20; total, 52.

1. No improvement in the material condition of the premises has been effected since last inspection. The schoolroom is much too small for the attendance, and the organization and order are necessarily defective. There is a very fair stock of all requisite working appliances. 2. The attendance is, on the whole, regular and punctual; and, making allowance for the crowded state of the schoolroom, the effects of the discipline may be regarded as very fair. Drill requires greater attention. 3. An improved classification has been made during the year. The methods, as far as observed, appear suitable; but the teaching is not penetrative, from the absence of thorough recapitulation and examination. The average proficiency of the pupils exceeds *tolerable*.

ALUMNY CREEK (P.—V.) :—Regular inspection, 16th October.

Numbers enrolled :—Boys, 26; girls, 17; total, 43.

Numbers present :—Boys, 23; girls, 13; total, 36.

1. Since last inspection, the playground has been fenced in, and a garden has been formed by the teacher. The buildings are in good condition and neatly kept, and the stock of books and apparatus is ample and in very fair preservation. As a whole, the organization may be considered good. 2. The attendance has improved of late, and is marked by a very fair degree of regularity and punctuality. The discipline is effective, and the order and moral tone good. 3. The course of instruction is complete and well regulated, the methods of very fair quality and intelligently applied, and the teaching apparently earnest and energetic. The pupils are very attentive under examination, and, except in 3rd class, work with fair spirit. Their average proficiency is from *fair to very fair*.

BALLINA

BALLINA (P.—V.):—Regular inspection, 3rd November.

Numbers enrolled:—Boys, 27; girls, 25; total, 52.

Numbers present:—Boys, 26; girls, 21; total, 47.

1. The premises generally are in very fair condition, but the desks need fastening securely to the floor. There is a sufficiency of all necessary working appliances, and, otherwise, the organization is fair. 2. The attendance is in general regular, but many of the pupils are unpunctual. The discipline and order, though still defective, have improved since last inspection, and now rate at fair. 3. The teaching has proved more successful than formerly, and greater mental activity is displayed by the pupils. The average proficiency is *tolerable to fair*.

BELLENGER (P.—V.):—General inspection, 25th August.

Numbers enrolled:—Boys, 27; girls, 24; total, 51.

Numbers present:—Boys, 22; girls, 20; total, 42.

1. The premises generally are in very fair condition and carefully kept, but the schoolroom is much too small. There is a sufficiency of working appliances, and, in other respects, the material part of the organization is satisfactory. 2. The pupils, as a whole, are punctual; but only about 60 per cent. of the number enrolled are regular in their attendance, owing, in a great measure, to the bad state of the roads and river crossings. The other features of the discipline are creditable, the government being firm and the moral tone good. 3. The course of instruction is complete, and regulated with very fair judgment. The classification of the pupils, however, is too minute. The methods, as far as observed, are of fair quality; and the teaching appears to have been marked by reasonable zeal and energy. The pupils are attentive under examination, and give evidence of fair mental training. The average proficiency is *tolerable to fair*.

BELMORE RIVER (P.—V.):—Regular inspection, 18th August.

Numbers enrolled:—Boys, 35; girls, 25; total, 60.

Numbers present:—Boys, 31; girls, 22; total, 53.

1. A few repairs of a minor character are needed; but, generally speaking, the premises are in very fair condition and neatly kept. There is a good supply of furniture and apparatus, and otherwise the organization is satisfactory. 2. The attendance is good for the locality, and very fair regularity and punctuality are secured. The government is judicious, and the order and moral tone rate from very fair to good. 3. The course of instruction is complete and fairly regulated, and the classification tolerably judicious. In some subjects, however, the teaching has been too discursive; and, as a rule, the mental training of the pupils has not received a proper degree of attention. The average proficiency exceeds tolerable.

BENDEMERR (P.—V.):—General inspection, 28th April.

Numbers enrolled:—Boys, 26; girls, 17; total, 43.

Numbers present:—Boys, 24; girls, 13; total, 37.

1. The schoolhouse and residence are in very fair repair, but the fences are broken down in places, and the closets dilapidated and too much exposed. The schoolroom is too small, and its shape prevents an advantageous arrangement of the furniture. There is a fair stock of apparatus, but an additional supply of books is needed. 2. Under the present teacher the attendance has increased, and is now permanently above thirty, and the degree of regularity and punctuality appear to be very fair. School drill is not properly carried out, but the other disciplinary arrangements are satisfactory and secure a healthy moral tone. 3. Except that needlework is not taught, the course of instruction is complete, and the documents regulating it are fairly appropriate. The teaching appears energetic and painstaking, and the methods are of fair quality. The average proficiency is tolerable.

BENDEMEER (P.—V.):—Regular inspection, 17th September.

Numbers enrolled:—Boys, 24; girls, 15; total, 39.

Numbers present:—Boys, 18; girls, 12; total, 30.

1. The material condition and organization remain the same as reported above. A want of neatness is observable in the preparation of the lesson documents. The general proficiency of the pupils has improved, and now approaches fair.

BOWLING ALLEY POINT (P.—V.):—Regular inspection, 5th May.

Numbers enrolled:—Boys, 32; girls, 36; total, 68.

Numbers present:—Boys, 17; girls, 24; total, 41.

1. The general condition of the premises is good, and the internal equipment of the school complete. The organization is satisfactory. 2. The attendance is decreasing, owing to the withdrawal of families consequent upon the altered prospects of the mines; but, of the number enrolled, a very fair percentage attend regularly and are punctual. Sensible improvement in the discipline is perceptible, and the moral tone of the school is now good. 3. All the prescribed subjects are taught, and the lesson documents are compiled with very fair judgment. The methods are of fair merit, and the teaching appears painstaking; but the instruction in grammar, arithmetic, and object lessons has not been penetrative. The pupils are very attentive under examination and show reasonable self-reliance—the more satisfactory results being produced in the 1st class. The average proficiency is nearly fair.

BUNDARRA (P.—V.):—General inspection, 12th March.

Numbers enrolled:—Boys, 18; girls, 25; total, 43.

Numbers present:—Boys, 13; girls, 18; total, 31.

1. The premises are suitable and in good repair; and the school is well supplied with furniture, apparatus, and books. The general organization is very fair. 2. The attendance has fluctuated very much of late, but is now steadier and slowly improving. The discipline appears healthy and effective, but the introduction of drill is desirable. 3. The course of instruction is complete and very fairly regulated, and the teaching seems marked by care and industry and fair skill. The average proficiency of the pupils exceeds fair.

CASINO (P.—V.):—Regular inspection, 12th November.

Numbers enrolled:—Boys, 31; girls, 30; total, 61.

Numbers present:—Boys, 15; girls, 21; total, 36.

1. Since last inspection no alteration but for the worse has taken place in the material condition of the premises; and, unless immediate repairs are effected, they will be absolutely unfit for occupation. There is a full supply of furniture, apparatus, and books; otherwise the organization is moderate. 2. The attendance is low for the locality, but those enrolled attend with fair regularity. The discipline appears to have improved somewhat, but the order is still very defective, and the various movements are conducted in a loose and irregular manner. 3. Singing is not taught, but otherwise the prescribed course is followed. The teaching, as far as observed, and judged by results, is mechanical, and does little to develop the mental faculties of the pupils. In most subjects where real teaching is required the results are far from satisfactory. Under examination the pupils yield a passive attention, but are indisposed to work; and in the 3rd class the answering on the subject matter of the reading lesson betrays the most lamentable ignorance. The results in arithmetic throughout the school are but little better. The average proficiency is moderate.

CHATSWORTH

CHATSWORTH ISLAND (P.—V.):—Regular inspection, 3rd December.

Numbers enrolled :—Boys, 35 ; girls, 36 ; total, 71.
Numbers present :—Boys, 26 ; girls, 29 ; total, 55.

1. The buildings are in very fair repair, but need painting, and water-tanks are required. The stock of working appliances is ample, and the general organization very fair. 2. A steady attendance is maintained, and, as a rule, the pupils are regular and punctual. The minutiae of order do not receive sufficient attention, but in the main points there is little room for complaint, and the moral tone of the school is good. 3. The course of instruction is complete and properly regulated, the classification correct, and the teaching marked by industry and fair skill. In the 1st class the results are not satisfactory in reading and arithmetic ; and, in all the classes, indistinct enunciation prevails. The average proficiency approaches *fair*.

CORAKI (P.—V.):—General inspection, 6th November.

Numbers enrolled :—Boys, 20 ; girls, 26 ; total, 46.
Numbers present :—Boys, 19 ; girls, 20 ; total, 39.

1. The schoolroom is new, commodious, and suitable ; and the supply of furniture, apparatus, and books adequate, and, generally speaking, in good condition. The organization is good. 2. The attendance has increased since last inspection, and is satisfactorily regular and punctual. The government is firm and consistent, and the order and moral tone are good. 3. All the prescribed subjects are taught, and the classification of the pupils and compilation of the lesson documents are judiciously made. The teaching is energetic, and the methods, as far as noted, are of very fair quality. The pupils yield a steady attention under examination, and show fair mental training. The average proficiency exceeds *fair*.

COWPER (P.—V.):—General inspection, 25th November.

Numbers enrolled :—Boys, 36 ; girls, 30 ; total, 66.
Numbers present :—Boys, 20 ; girls, 17 ; total, 37.

1. The buildings are new and fairly commodious. The schoolroom is suitably furnished, and its equipment otherwise leaves little to be desired. 2. The attendance is very fairly satisfactory as regards numbers, regularity, and punctuality. The discipline is salutary, but greater vigilance is necessary in the supervision of the pupils. The moral tone of the school is very fair. 3. Singing and needlework are not taught ; in other respects the course of instruction is in accordance with the Council's requirements. The methods, as far as observed, are of fair quality ; and, for the time the school has been in operation, the results of the teaching are reasonably good. The average proficiency approaches *fair*.

EUROKA (P.—V.):—Regular inspection, 3rd August.

Numbers enrolled :—Boys, 22 ; girls, 26 ; total, 48.
Numbers present :—Boys, 20 ; girls, 24 ; total, 44.

1. The premises generally are in good condition and neatly kept. There is a full supply of all requisites, and otherwise the organization is satisfactory. 2. About seven-eighths of the pupils enrolled attend regularly, and the degree of punctuality secured is very good. The discipline is mild but firm and consistent, and the moral tone good. 3. The classification of the pupils and other teaching arrangements are judiciously made, and the methods are in general appropriate, and marked by earnestness and industry in their application. Under examination, the attention of the pupils is well sustained, and in other respects there is evidence of very fair mental training. The average proficiency rates from *fair* to *very fair*.

FEENMOUNT (P.—V.):—General inspection, 24th August.

Numbers enrolled :—Boys, 21 ; girls, 32 ; total, 53.
Numbers present :—Boys, 16 ; girls, 23 ; total, 39.

1. Both schoolhouse and teacher's residence are neat and substantial buildings, and in good repair. Except that another group of desks and some diagrams are needed, the material equipment is good. 2. About three-fifths of the numbers enrolled attend regularly, and very fair punctuality is secured. The order is very fair on the whole, and the pupils are quiet, obedient, and respectful, but they are not made to work with sufficient animation and energy. 3. Singing and needlework are not taught ; otherwise, the course of instruction is complete. The programmes and time-table are fairly arranged, but the methods are of but moderate suitability and efficacy. The average proficiency of the pupils rates at *moderate to tolerable*.

GRAFTON (P.—Primary—V.):—Regular inspection, 2nd, 5th, 6th, and 13th October.

Numbers enrolled :—Boys, 143 ; girls, 97 ; total, 240.
Numbers present :—Boys, 98 ; girls, 74 ; total, 172.

1. Since last inspection the playground has been fenced in, the back playground subdivided, and the space in front of the teacher's residence enclosed and formed into a neat garden. A large weather-shed has also been erected and partitioned off for the separate use of the boys and girls ; shrubs and trees have been planted in the grounds, which will in time improve the appearance of the premises very considerably, and afford shade and shelter from the sun and wind. Except that the wood-work needs re-painting, and that a few minor repairs are required, the material condition of the school is very good. For the present attendance, however, the accommodation is insufficient. The stock of books is at present barely adequate, but in other respects the supply of working appliances is ample. 2. The attendance has steadily increased and is marked by very fair regularity, but many of the pupils are unpunctual. Drill is rather loosely performed, and the various points of order dependent thereon are defective ; as a whole the discipline appears to have retrograded since last inspection. 3. The course of instruction is complete and well regulated, the classification is in general correct, and the lesson documents are carefully and judiciously compiled. The teaching is marked by very fair energy, and, as far as noted, the methods are suitable and fairly applied. The degree of attention shown by the pupils when under instruction is not as satisfactory as it should be, and in many instances a distaste for work is shown. The general proficiency exceeds *fair*.

GRAFTON (P.—Infants) :—Regular inspection, 1st October.

Numbers enrolled :—Boys, 78 ; girls, 89 ; total, 167.
Numbers present :—Boys, 58 ; girls, 59 ; total, 117.

The playground has been fenced in and a weather-shed provided since last inspection. The material condition and organization of the school are now very good. 2. The remarks made on the primary department in reference to regularity and punctuality apply here. The discipline needs to be more vigorous, and greater vigilance should be exercised in the supervision of the children to prevent whispering and other disorderly practices now prevalent. 3. All the subjects prescribed for infant schools are taught, and the classification is judicious. The lesson documents are framed with fair skill, and appear to be duly observed. The teaching is animated and energetic, and with a more perfect discipline would produce very satisfactory results. The average attainments, however, are only *fair*, and the degree of mental training *tolerable*.

GUNDURIMBA (P.—V.) :—General inspection, 9th November.

Numbers enrolled :—Boys, 27 ; girls, 28 ; total, 55.

Numbers present :—Boys, 18 ; girls, 21 ; total, 39.

1. The buildings are new, but too small both as regards the schoolroom and teacher's residence. There is a full supply of apparatus and books, but the furniture is insufficient for the accommodation of the pupils ; the general organization, otherwise, is fair. 2. A very fair attendance of pupils is secured, and the degree of regularity and punctuality is also satisfactory. The discipline is fairly effective, but school drill is not practised. 3. All the prescribed subjects but singing are taught, and the lesson documents are compiled with neatness and tolerable judgment. The teaching seems assiduous, but the pupils are not subjected to searching examination, nor are they compelled to exert themselves sufficiently. The average proficiency approaches *tolerable*.

INVERELL (P.—V.) :—General inspection, 17th and 18th March.

Numbers enrolled :—Boys, 65 ; girls, 85 ; total, 150.

Numbers present :—Boys, 47 ; girls, 60 ; total, 107.

1. The premises generally are in very fair repair and carefully kept, but the schoolroom is much too small for either present or prospective requirements ; steps are being taken, however, to raise funds for the erection of a larger building. There is an ample supply of furniture and apparatus, as far as the capacity of the schoolroom extends, but insufficient for the comfortable accommodation of the children and the effective working of the school. The stock of books is at present low. 2. The attendance of the pupils is not fully satisfactory, but the river and bad roads are hindrances to regularity and punctuality that may fairly be taken into account. The children are clean in appearance, well behaved, and in very fair order. Drill is understood by the assistant teacher, but hitherto has not received sufficient attention. 3. The course of instruction is complete and very fairly regulated. The absence of a 4th class, in view of the importance of the school and the teaching staff, is not a creditable feature. As far as observed, the teaching is energetic, and the methods rate at about very fair. The general proficiency, however, is barely *fair*.

KELLY'S PLAINS (P.—V.) :—Regular inspection, 11th June.

Numbers enrolled :—Boys, 18 ; girls, 19 ; total, 37.

Numbers present :—Boys, 16 ; girls, 18 ; total, 34.

1. Since last inspection the playground—about 11 acres—has been fenced in, and a bell provided. The material condition of the premises in all essential points may now be considered good. There is a good supply of working materials, and otherwise the organization is satisfactory. 2. Seventy-three per cent. of the pupils enrolled attend regularly, and about 90 per cent. are punctual ; but, from no fault of the teacher as far as I can ascertain, about one-third of the children in the locality, of the school age, do not attend. The government is mild, but characterised by greater firmness than formerly, and the order and general tone of the school are good. 3. Needlework is not taught, otherwise the course of instruction is complete, and the documents regulating it are carefully compiled and duly observed. The methods are of fair merit and applied with zeal and industry ; and the results show that considerable improvement has been effected since last inspection. The average proficiency rates at *fair to very fair*.

KEMPSEY (P.—V.) :—Regular inspection, 28th and 31st July.

Numbers enrolled :—Boys, 29 ; girls, 35 ; total, 64.

Numbers present :—Boys, 28 ; girls, 35 ; total, 63.

1. The premises generally are in very fair condition, and afford evidence of care and neatness on the part of the teacher. There is an adequate supply of working materials, and generally speaking the organization is otherwise good. 2. The attendance is steady, and marked by very fair regularity and punctuality. In other respects the results of the discipline are, as a whole, satisfactory, and the moral tone is good. 3. The course of instruction is complete, and regulated with very fair judgment. The classification however is low, and the attainments of the pupils and length of time spent in the several classes call for very general promotion. The methods seem appropriate in the main, and the teaching is marked by earnestness and careful industry. The average proficiency is *fair to very fair*.

LISMORE (P.—V.) :—Regular inspection, 28th October.

Numbers enrolled :—Boys, 27 ; girls, 12 ; total, 39.

Numbers present :—Boys, 22 ; girls, 10 ; total, 32.

1. The material condition of the premises remains the same as reported at the last inspection. A weather-shed and lavatory are much needed. The school is well found in all necessary working appliances, and otherwise the organization is fair. 2. Owing to the unpopularity of the teacher and other causes, not more than half the children of the school age in the locality are enrolled ; and a private school, started some time back, receives as large a share of patronage as the Public School. The discipline appears fair, and the pupils are in general quiet and obedient ; but the various class movements are performed without the necessary uniformity and precision. 3. The instruction is regulated by the usual documents. The teaching is, I believe, painstaking, but to a great extent mechanical. The intelligence of the pupils is not sufficiently trained, and in the more important subjects the results are far from satisfactory. Some of the pupils in 3rd class are altogether unfit for it. The average proficiency is a little above *moderate*.

NUNDLE (P.—V.) :—Regular inspection, 6th May.

Numbers enrolled :—Boys, 42 ; girls, 33 ; total, 75.

Numbers present :—Boys, 25 ; girls, 27 ; total, 52.

1. The buildings are in general in good condition and carefully kept, but need spouting. There is a good supply of all necessary working appliances, and otherwise the organization, as effected by the teacher, is satisfactory. 2. The attendance, which on account of rain was lower than usual on the day of examination, is good for the place, and marked by regularity and punctuality. The discipline is judicious, and the moral tone very satisfactory. 3. The course of instruction is complete and well regulated, and the methods as a whole are of very fair merit. The teaching is earnest, painstaking, and effective. The pupils are attentive and self-reliant under examination ; and their proficiency in reading and grammar is equal to that of any school in the district ; indeed the success with which the former subject has been taught deserves special commendation. The average proficiency of the pupils approaches *very fair*.

PORT MACQUARIE (P.—V.) :—General inspection, 8th and 9th July.

Numbers enrolled :—Boys, 50 ; girls, 38 ; total, 88.

Numbers present :—Boys, 50 ; girls, 38 ; total, 88.

1. The main building is in general in good condition, but the kitchen and out-offices are in need of roof and other repairs. The fencing, also, is very dilapidated. The school is well found in all requisite appliances, and the organization otherwise is good. 2. About 80 per cent. of the school population in the district are enrolled, and of these, about the same percentage are regular attendants. The pupils appear to be punctual, and the order and moral tone are good. 3. All the prescribed subjects are taught, but the classification at present is very defective. The lesson documents are, in general, suitable, but a more judicious arrangement of the oral lessons is necessary. The methods, as far as noted, are of very fair merit, and the teaching seems vigorous and earnest. The average proficiency of the pupils exceeds *fair*.

Note.—For some time prior to the examination, the management of the school has devolved on the assistant teacher, to whom credit is largely due for the present general condition and results.

RAINBOW

RAINBOW REACH (P.—V.):—General inspection, 12th August.

Numbers enrolled:—Boys, 29; girls, 41; total, 70.
Numbers present:—Boys, 14; girls, 17; total, 31.

1. Since last inspection the playground has been cleared and partially fenced, and the premises present a much more inviting appearance than formerly. Except as regards First Books, the stock of working appliances is sufficient and in very fair condition; otherwise, the organization is tolerably satisfactory. 2. Under the present teacher the attendance has almost doubled, and ordinarily a very fair percentage of the pupils are regular. Sickness, however, has made a temporary diminution in the numbers. The order, though still imperfect, shows very sensible improvement on the state of things that obtained under the former teacher; and drill has been introduced with fair results. 3. Nominally, all the prescribed subjects are taught. The lesson documents are tolerably suitable, and appear to have been observed. The methods, in themselves, are not of much account, but there is probability of improvement. The average proficiency of the pupils reaches *tolerable* nearly.

ROCKY MOUTH (P.—V.):—General inspection, 2nd December.

Numbers enrolled:—Boys, 37; girls, 36; total, 73.
Numbers present:—Boys, 26; girls, 23; total, 49.

1. A new schoolhouse has been erected since last inspection. The furniture, however, is insufficient—another group of desks and a book-press being much needed. The other features of the organization are very fairly satisfactory. 2. The attendance, as regards numbers, is not as good as it should be, nor are the pupils satisfactorily regular and punctual. The government is not sufficiently firm and vigorous, and the supervision of the children is rather lax. The moral tone of the school may be regarded as fair. 3. The lesson documents are in general suitable, but the classification is rather low. The teaching seems earnest, but too much is done for the pupils; and too much ground is gone over to admit of thoroughness in the instruction. The attention of the pupils under examination is very fair, their mental training tolerable, and average proficiency nearly *fair*.

SEVEN OAKS (P.—V.):—General inspection, 14th August.

Numbers enrolled:—Boys, 39; girls, 23; total, 62.
Numbers present:—Boys, 24; girls, 17; total, 41.

1. The school-ground has been cleared of weeds and in part brought under cultivation by the present teacher; and he has also repaired most of the fencing, which, at the last inspection, was in a very dilapidated state. Some minor repairs to the buildings and out-offices are still required, and a boat will have to be obtained. The stock of books and apparatus is sufficient, and on the whole in fair condition. The schoolroom, however, wears an untidy appearance from the dusty condition of the maps and diagrams, and the disorderly manner in which the apparatus is left about after use. 2. The attendance has increased, and the pupils, as a whole, are regular and punctual. The government is not sufficiently exacting, and disorderly attitudes and irregular answering are very common faults. 3. The course of instruction is complete and fairly regulated, and the classification is in general judicious. The teaching is marked by industry, and the methods are of tolerable merit. The laxity of the discipline, however, is an obstacle to successful teaching. The average proficiency is *tolerable to fair*.

STRONTIAN PARK (P.—N.—V.):—Regular inspection, 22nd October.

Numbers enrolled:—Boys, 17; girls, 32; total, 49.
Numbers present:—Boys, 16; girls, 28; total, 44.

1. The premises are old and unsuitable, and the furniture of but moderate quality; but steps are being taken for the erection of new buildings on a site recently obtained by the Council. There is a fair supply of books and apparatus, and the organization is as good as can be expected under the circumstances. 2. The pupils as a rule are regular, and the punctuality is good. The government is effective and secures good order, willing and steady attention, and a healthy moral tone. 3. The classification of the pupils and compilation of the lesson documents are fairly judicious. The methods of instruction are fair in themselves, and the teaching is animated and earnest. The pupils show very fair mental training and substantial improvement in their attainments—the average proficiency being *fair to very fair*.

SUMNERLAND (P.—V.):—Regular inspection, 11th August.

Numbers enrolled:—Boys, 21; girls, 34; total, 55.
Numbers present:—Boys, 14; girls, 27; total, 41.

1. Some repairs have been effected since last inspection, and the premises as a whole are in fair condition. There is a sufficiency of working material, and the organization is fair. 2. The government is too indulgent, and the order only tolerable. The habit of whispering is very general, and a few of the younger children are restless to an extent sufficient to disturb the whole school. The attention of the pupils is very weak, being distracted by the most trivial occurrences; and as a rule but little disposition to work is shown. 3. The prescribed course of instruction is followed, and the lesson guides are of fair merit. The teaching seems painstaking, and the methods, as far as observed, are tolerably appropriate; but the defective discipline prevents satisfactory results. The average proficiency is *moderate to tolerable*.

SWAN CREEK (P.—V.):—General inspection, 10th December.

Numbers enrolled:—Boys, 29; girls, 29; total, 58.
Numbers present:—Boys, 28; girls, 26; total, 54.

1. The school is, of its class, one of the best appointed in this district; a kitchen, however, is much needed for the convenience of the teacher. 2. The pupils are very regular and punctual, orderly, obedient, and respectful; and the discipline is satisfactory in all points except drill. 3. All the prescribed subjects are taught, and the lesson documents are compiled with care and neatness. The teaching is earnest and very fairly effective, and the pupils work with greater vigour than is usually found. The average proficiency rates at *fair to very fair*.

TAMWORTH (P.—V.):—Regular inspection, 30th April.

Numbers enrolled:—Boys, 44; girls, 44; total, 88.
Numbers present:—Boys, 32; girls, 30; total, 62.

1. The premises generally are in a very indifferent state of repair, and the schoolroom is much too small for the requirements of the town. There is a very fair supply of furniture, apparatus, and books; in other respects the organization is tolerable. 2. The attendance is decreasing, and many of the pupils appear to be unpunctual. Although some slight improvement in the order is perceptible, the effects of the discipline are still very far from satisfactory. 3. The prescribed course of instruction is followed, and the lesson documents are compiled with fair judgment. The teacher is industrious, but his defects as a disciplinarian render successful teaching impossible. The average proficiency is *indifferent to moderate*, and altogether the school is in a very unsatisfactory condition.

ULMARRA (P.—V.):—General inspection, 11th December.

Numbers enrolled:—Boys, 48; girls, 44; total, 92.
Numbers present:—Boys, 37; girls, 31; total, 68.

1. Since last inspection the schoolroom has been enlarged, but it is still too small for the attendance of pupils. A tank and lavatory have also been supplied, and some general repairs to the residence and out-offices effected. The supply of working materials is very fairly sufficient, but many of the books
are

are much worn. The organization, as a whole, is very fair. 2. The attendance has increased, and the services of a pupil-teacher or assistant are indispensable to the successful working of the school. The discipline is firm and, generally speaking, effective, and the moral tone is good. 3. All the prescribed subjects are taught, and in addition the advanced pupils of 3rd class receive instruction in elementary algebra, Euclid, and Latin. The methods as far as observed are suitable, but in the 3rd class the teaching in some of the more important subjects has not been thorough. The pupils are attentive under examination, and show fair mental training. The average proficiency is *fair*.

URALLA (P.—V.) :—Regular inspection, 21st and 22nd May.

Numbers enrolled :—Boys, 46 ; girls, 42 ; total, 88.
Numbers present :—Boys, 44 ; girls, 38 ; total, 82.

1. The premises are of a superior description, in good repair, and well kept. The schoolroom, however, is not large enough, but the necessary additions will in all probability be effected shortly. In its interior equipment and organization little is left to be desired. 2. About 70 per cent of the number of pupils enrolled are regular in their attendance, and the degree of punctuality is good. The government is mild but firm and effective, and the moral tone is good. 3. All the prescribed subjects are taught, elementary algebra, Euclid, and Latin being added in the case of a few of the more advanced pupils. The lesson documents are judiciously compiled and apparently observed, and the teaching is marked by intelligence and earnestness. The pupils are attentive under instruction, and work with very fair energy. The average proficiency is *fair to very fair*.

VIOLET DALE (P.—V.) :—Regular inspection, 12th June.

Numbers enrolled :—Boys, 35 ; girls, 23 ; total, 58.
Numbers present :—Boys, 25 ; girls, 16 ; total, 41.

1. The playground has been fenced in, and some minor repairs to teacher's residence have been effected since last inspection. The schoolroom is old and too small for the present attendance of pupils ; but the opening of the Public School at Saumarez will lead to the withdrawal of a large number. The furniture is sufficient and fairly suitable, but the desks need securing to the floor. In other respects the organization is fair. 2. About 65 per cent of the number of pupils enrolled attend regularly, and 75 per cent are punctual. In these respects the effects of discipline are not fully satisfactory, nor is the order as good as could be desired—whispering and restlessness being prevalent in 1st and 2nd classes. 3. All the prescribed subjects are taught, and the lesson documents are framed with care and tolerable judgment. The teaching is earnest but not penetrative, and the mental training of the pupils is defective. The average proficiency approaches *tolerable*.

WALCHA (P.—V.) :—General inspection, 24th June.

Numbers enrolled :—Boys, 36 ; girls, 24 ; total, 60.
Numbers present :—Boys, 27 ; girls, 19 ; total, 46.

1. The buildings are suitable, and a bell has been erected since last inspection, but new fencing is much needed. Desks are required for 1st class, and most of the maps are old and unsuitable. In other respects the supply of furniture, apparatus, and books is sufficient and suitable, and the organization is very fair. 2. A steady increase in the attendance has taken place under the present teacher. 75 per cent of the number enrolled attend regularly, but the degree of punctuality is not satisfactory. The government is mild but firm and consistent, and the moral tone of the school is good. 3. The course of instruction is complete and well regulated, and instruction in elementary Latin and Euclid is given to a few of the more advanced pupils. The methods are of very fair merit, and applied with zeal and industry. Under examination the pupils yield a steady attention, and show very fair mental training. The average proficiency is nearly *very fair*.

WALLABADAH (P.—V.) :—General inspection, 8th May.

Numbers enrolled :—Boys, 40 ; girls, 28 ; total, 68.
Numbers present :—Boys, 36 ; girls, 22 ; total, 58.

1. The schoolroom has been enlarged since last inspection and now affords sufficient accommodation for the pupils ; but new and more suitable premises are required. The general organization is very fair. 2. The pupils are regular and punctual. Drill is practised, and its beneficial effects are apparent in a marked degree. The government is firm and judicious, and the moral tone good. 3. All the prescribed subjects are taught, and the instruction is judiciously regulated. The methods, as far as observed, are appropriate ; and, although the average proficiency of the pupils is as yet comparatively low, satisfactory work has been done during the time the present teacher has been in charge. The average proficiency exceeds *tolerable*.

WAMALDA (P.—V.)—General inspection, 23rd March.

Numbers enrolled :—Boys, 9 ; girls, 17 ; total, 26.
Numbers present :—Boys, 8 ; girls, 17 ; total, 25.

1. The buildings are in fair repair. The schoolroom is small, and the furniture rough and not very suitable. The books and apparatus do not appear to have been well cared for, and the stock is low. 2. Fair regularity and punctuality of attendance seem to be secured, but in other respects the results of the discipline are of a low order. 3. Nominally all subjects but singing are taught, and the instruction is regulated by the usual documents, which however are so framed as to be of doubtful utility. Little acquaintance with appropriate methods is shown, and the pupils have received very moderate mental training. The average proficiency is about *moderate*.

WOODFORD DALE (P.—V.)—General inspection, 4th December.

Numbers enrolled :—Boys, 21 ; girls, 17 ; total, 38.
Numbers present :—Boys, 21 ; girls, 15 ; total, 36.

1. The buildings need painting and some minor repairs, but the general condition and organization may be regarded as very fair. 2. The pupils attend with very fair regularity, and are punctual. The discipline is salutary, and the moral tone good. A few of the elder girls, however, are indisposed to work. 3. The course of instruction is complete and well regulated, the teaching painstaking and earnest, and the methods as far as observed fair. The average proficiency approaches *fair*.

WOODFORDLEIGH (P.—V.)—Regular inspection, 18th November.

Numbers enrolled :—Boys, 29 ; girls, 36 ; total, 65.
Numbers present :—Boys, 20 ; girls, 17 ; total, 37.

1. Except that the buildings need painting, the material condition is good. Some additional desks and forms are required, otherwise the organization is very fair. 2. The attendance was lower than usual on the day of examination. Ordinarily it is good, both as regards regularity and punctuality. The discipline is effective, and the moral tone good. 3. The course of instruction comprises all subjects but singing. The lesson documents are suitable, and the teaching is earnest and effective. The pupils are steadily attentive and show very fair mental training. The average proficiency approaches *very fair*.

WYBALLAH

WYRALLAH (P.—V.)—Regular inspection, 10th November.

Numbers enrolled:—Boys, 20; girls, 34; total, 54.
Numbers present:—Boys, 15; girls, 24; total, 39.

1. The premises are still unfenced, and a weather-shed is much needed; the clock also is out of repair. In other respects the material condition is reasonably good and the organization fair. 2. The discipline has improved since last inspection, and the order and moral tone are now fair. 3. All the prescribed subjects but singing are taught. The methods appear of tolerable merit, and the average proficiency of the pupils reaches the same mark. The reading and general answering of most of the pupils are painfully low and indistinct.

II.—PROVISIONAL SCHOOLS.

BRODIE'S PLAINS (Prov.—N.-V.)—General inspection, 19th March.

Numbers enrolled:—Boys, 21; girls, 24; total, 45.
Numbers present:—Boys, 17; girls, 22; total, 39.

1. Both schoolroom and residence are rather small, but may suffice for some time. The furniture is unsuitable, and prevents good organization. 2. The attendance of pupils seems good, both as regards regularity and punctuality. Drill is imperfect, but in general the order leaves little to be desired. The behaviour of the pupils is very satisfactory, and, in essential points, the moral tone is good. 3. The prescribed course of instruction is carried out, but the lesson register is not satisfactorily kept. The teaching seems energetic and painstaking, and, on the whole, produces satisfactory results. The average proficiency is *tolerable to fair*.

CAPE HARROW HILL (Prov.—N.-V.)—General inspection, 21st August.

Numbers enrolled:—Boys, 23; girls, 3; total, 26.
Numbers present:—Boys, 22; girls, 3; total, 25.

1. The building, a slab one, is in tolerable repair; but the furniture is rough, and but moderately suitable. There is a fair supply of apparatus and books, and the organization otherwise is fair. 2. As a whole the pupils attend regularly and with fair punctuality. The order is in some points unsatisfactory; but, generally speaking, the appearance and demeanour of the pupils are pleasing, and the moral tone of the school is fair. 3. Instruction is given in all the prescribed subjects, and the lesson documents are framed with tolerable judgment. The methods are of a passable kind, and the average proficiency of the pupils rates from *tolerable to fair*.

COCKBURN RIVER (Prov.—N.-V.)—Regular inspection, 29th April.

Numbers enrolled:—Boys, 14; girls, 15; total, 29.
Numbers present:—Boys, 13; girls, 15; total, 28.

1. The building is in good repair and suitably furnished, and, in other respects the material part of the organization is satisfactory. 2. The attendance is fairly regular and punctual. The order has very sensibly improved, and the moral tone is now good. 3. The prescribed course of instruction is followed, and the lesson guides are of fair quality. The teaching seems earnest and painstaking rather than skilful, and the average proficiency is *tolerable to fair*.

ENNIS (Prov.—N.-V.)—General inspection, 13th July.

Numbers enrolled:—Boys, 14; girls, 16; total, 30.
Numbers present:—Boys, 13; girls, 16; total, 29.

1. The measures initiated last year for providing more suitable premises with the view of establishing a Public School have been allowed to fall through. There is a sufficiency of books and apparatus, and the organization is fair, under existing circumstances. 2. The attendance of pupils is but moderate for the locality. The government is not vigorous enough, but, on the whole, the order and moral tone are fair. 3. The teaching seems careful, and the methods are of moderate quality, but the pupils are not made to exert themselves sufficiently. The average proficiency is *tolerable*.

GLEN MORRISON (Prov.—V.)—General inspection, 26th June.

Numbers enrolled:—Boys, 17; girls, 23; total, 40.
Numbers present:—Boys, 5; girls, 5; total, 10.

1. The building is fairly suitable, and in good repair, except that some of the window-panes are broken. The furniture is insufficient and unsuitable; the organization moderate. 2. The pupils are irregular and unpunctual, rough and awkward in their demeanour, and otherwise give evidence of the absence of proper discipline. 3. Time-table and lesson programmes, of a kind, are compiled, but are of little use; and the teaching appears to be mainly mechanical. The average proficiency is *moderate to tolerable*.

GOSTWICK (Prov.—N.-V.)—General inspection, 22nd June.

Numbers enrolled:—Boys, 14; girls, 17; total, 31.
Numbers present:—Boys, 6; girls, 13; total, 21.

1. The buildings, which comprise schoolroom and teacher's residence, are of brick, well constructed, and conveniently arranged. There is a good supply of furniture and books, and the apparatus is fairly sufficient for present wants. 2. Ninety per cent. of the children in the district attend the school, and the pupils are, with few exceptions, regular and punctual. The order is very fair in most respects, but marching and other simultaneous movements are not practised. 3. The lesson documents are fairly constructed; and the teaching, though not based on very appropriate methods, is painstaking and moderately effective.

KENTUCKY (Prov.—N.-V.)—General inspection, 19th May.

Numbers enrolled:—Boys, 11; girls, 19; total, 30.
Numbers present:—Boys, 9; girls, 13; total, 22.

1. Since last inspection, suitable out-offices have been provided, and various repairs to school-house and residence have been made. The general condition and organization may now be regarded as fair. 2. Only about fifty per cent. of the available children in the district attend the school; and, from inquiries made, it would appear that this very unsatisfactory state of things is almost entirely due to the indifference of the parents. The pupils are punctual, and the general results of the discipline are satisfactory for the class of school. 3. The time-table and lesson programmes are fairly appropriate, and appear to be adhered to; and the teaching seems intelligent and painstaking. The average proficiency is *tolerable to fair*.

LAWRENCE (Prov.—N.-V.)—Regular inspection, 17th November.

Numbers enrolled:—Boys, 7; girls, 19; total, 26.
Numbers present:—Boys, 6; girls, 14; total, 20.

1. The building is old and, exteriorly, presents a mean and dilapidated appearance; but the cleanliness and neatness of the internal arrangements are in pleasing contrast. There is a sufficiency of all necessary working appliances, and otherwise the organization is fair. 2. The character of the attendance

attendance has improved, both as regards regularity and punctuality. The discipline is fair, and the children are attentive, obedient, and respectful. 3. The lesson documents are compiled with tolerable judgment, the teaching seems painstaking, and the pupils work with better spirit than formerly. The average proficiency rates at *tolerable to fair*.

MORBE (Prov.—N.-V.) :—General inspection, 26th March.

Numbers enrolled :—Boys, 14 ; girls, 19 ; total, 33.
Numbers present :—Boys, 10 ; girls, 15 ; total, 25.

1. The building itself is fairly suitable, but the presence of church furniture prevents a proper organization. Another desk is needed, and a black-board. 2. The pupils appear to be regular in attendance, but unpunctual. They are obedient, and quiet in demeanour, but beyond this the discipline is of poor effect. Drill is not practised, and the general movements are irregular and noisy. 3. Object lessons, singing, and drawing, are omitted from the course of instruction. The time-table is badly compiled and of little service ; no lesson programmes have been prepared, and the principles of classification are not understood. The teaching, though doubtless painstaking, is mainly mechanical, and the average proficiency is *indifferent*.

QUIPOLLY (Prov.—N.-V.) :—Regular inspection, 12th May.

Numbers enrolled :—Boys, 17 ; girls, 10 ; total, 27.
Numbers present :—Boys, 7 ; girls, 8 ; total, 15.

1. The building is hardly large enough, and additional furniture is required. No closets are provided, and the playground remains unfenced. There is a fair supply of apparatus and books, but beyond this the organization is indifferent. Entries in the class roll have not been made with accuracy. 2. A large number of the pupils appear to be unpunctual. The discipline is weak, and the order and moral tone but very moderately satisfactory. 3. The time-table and programmes, though prepared, were not suspended, and are of doubtful utility. The teaching is mainly mechanical, and the amount of mental training exhibited by the pupils small. The average proficiency is *indifferent*.

QUIRINDI CREEK (Prov.—V.) :—General inspection, 11th May.

Numbers enrolled :—Boys, 17 ; girls, 13 ; total, 30.
Numbers present :—Boys, 13 ; girls, 9 ; total, 22.

1. The schoolroom is a substantial building, and sufficient for existing wants. The furniture is sufficient, but the desks are much too high, and are greatly disfigured by ink-stains. The organization is indifferent. 2. Very fair regularity and punctuality are secured. The teacher is a poor disciplinarian, and the order is indifferent. 3. The time-table is imperfect, and no lesson programmes are prepared, and the classification is altogether too minute. The teaching is mechanical, but appears painstaking, and produces *moderate* results.

SOUTH ARM (Prov.—N.-V.) :—Regular inspection, 26th November.

Numbers enrolled :—Boys, 27 ; girls, 22 ; total, 49.
Numbers present :—Boys, 18 ; girls, 15 ; total, 33.

1. Some minor repairs have been effected since last inspection ; but the premises are too small, and in other respects unsuitable for school purposes. There is a fair supply of all requisite appliances, and the organization is satisfactory under existing circumstances. 2. The attendance has increased beyond the limits for a Provisional School. The pupils attend with very fair regularity and punctuality, and are well-behaved and obedient. The order, however, in some minor points admits of improvement. 3. All the prescribed subjects are taught, and the lesson documents are carefully prepared and observed. The teaching is painstaking and earnest, and tolerably skilful ; and the average proficiency of the pupils rates at *tolerable to fair*.

WANDSWORTH (Prov.—V.) :—Regular inspection, 10th March.

Numbers enrolled :—Boys, 9 ; girls, 14 ; total, 23.
Numbers present :—Boys, 4 ; girls, 10 ; total, 14.

1. The premises are in fair repair, and carefully kept. There is a reasonably good supply of furniture, apparatus, and books, and the organization is fair. 2. The attendance is small, but regular and punctual. The pupils are obedient and well-behaved, and, in other respects, the moral tone is satisfactory, though many points of order admit of improvement. 3. All the prescribed subjects, but singing and drawing, are taught, but no proper lesson programmes are prepared. The teaching is intelligent and earnest, and the average proficiency of the pupils *fair*.

WARDELL (Prov.—V.) :—General inspection, 4th November.

Numbers enrolled :—Boys, 17 ; girls, 25 ; total, 42.
Numbers present :—Boys, 15 ; girls, 21 ; total, 36.

1. The building is fair for the place, but not large enough for present requirements, and the furniture is rather rough and unsuitable. 2. The attendance is large enough for a Public School. Six-sevenths of the number-enrolled are regular, and the degree of punctuality secured is good. The discipline is, in general, judicious, and secures very fair order. 3. All the prescribed subjects are taught, and the lesson documents are of tolerable merit, and appear to be observed. The teaching is energetic, and, for the time the school has been in operation, the results are not unsatisfactory. The average proficiency is nearly *tolerable*.

III.—HALF-TIME SCHOOLS.

DONDINGALONG (H.-T.—N.-V.) :—Regular inspection, 4th August.

Numbers enrolled :—Boys, 6 ; girls, 6 ; total, 12.
Numbers present :—Boys, 6 ; girls, 5 ; total, 11.

1. The material condition of the school continues fair, and the organization, as far as the teacher is accountable for it, is good. 2. About four-fifths of the pupils are regular in their attendance, and the degree of punctuality is good. In other respects the discipline is not less satisfactory—the children being very attentive and obedient, and trained to habits of self-reliance and industry. 3. All the prescribed subjects but singing are taught. The classification is appropriate, and the lesson documents carefully compiled and observed. The teaching is earnest, practical, and thorough ; and the average proficiency of the pupils is nearly *very fair*.

SHERWOOD (H.-T.—V.) :—Regular inspection, 4th August.

Numbers enrolled :—Boys, 8 ; girls, 8 ; total, 16.
Numbers present :—Boys, 7 ; girls, 8 ; total, 15.

Since last inspection closets have been provided, and an improved arrangement of the furniture made. The material condition and organization may now be regarded as very fair. 2 and 3. This school is worked in conjunction with Dondingalong, and the remarks on the discipline and instruction made in the report on that school apply here.

J. D. BRADLEY,
Inspector of Schools, Armidale District.

BRAIDWOOD

BRAIDWOOD DISTRICT.

INSPECTOR'S General Report upon Public, Provisional, Half-time, and Denominational Schools, for the year 1874.

1. During the year, 27 Public, 26 Provisional, 46 Half-time, 3 Church of England, and 11 Roman Catholic, in all 113 Schools, have been in operation in this district. With the exception of two that were not in existence when their localities were visited, all the schools were inspected. Wherever an average attendance of from 15 to 20 pupils can be maintained, full-time schools have been established; but thinly peopled places can only be reached and effectively dealt with by itinerant teachers. There are at present 26 of these employed. Their work is arranged so that each group of scholars may obtain an amount of time equal to two and a half hours per day throughout the year. Character of country, distance, and other local circumstances, determine whether the instruction shall be given on alternate days, half-days, weeks, or half-weeks; but experience proves that it is of little practical good to give less time to each group than the amount above indicated. Having but few pupils to manage, a good teacher of a half-time school should, and often does, produce results equal to those obtained in an ordinary public school. Under existing arrangements, the services of an itinerant teacher may be had by any parents if 10 or 12 children can be collected who are unable to reach schools already in operation. Except in the case of individual families that have completely isolated themselves, there is no difficulty, under the provisions, of bringing the means of education to all persons who desire instruction for their children.

2. In townships and places where children's labour cannot be turned to much advantage, the attendance on the whole has been more regular this year than hitherto. Owing, however, to the advance in price of labour, and to the impossibility, in some cases, of obtaining it on any terms, there has been throughout the agricultural and pastoral portions of the district a larger demand than usual for children's assistance. Under this pressure a few parents have detained their children at home for long periods at a time, but the majority have contrived to manage their affairs without serious interruption to school studies. It is not at all an uncommon thing to find pupils in school, from eight years of age and upwards, who have done men's work at milking or other farm labour between 5 and 9 o'clock in the morning, and who have to hurry home after 4 to complete the day's duties. Without their aid in busy times many a farmer would be obliged to sacrifice the fruits of his industry, or to confine his operations within very narrow limits. Looking at this usefulness to the Colony, there is not a more promising and valuable class of children in the community than this large body of boys and girls who, while receiving school instruction, are at the same time being educated in the use of their own hands and in the practical management of dairies, cattle, and crops.

3. At the various examinations there were present 3,212 scholars. These were rigidly tested in accordance with the prescribed standard, and their proficiency in each subject was noted.

In *reading* and *spelling* 888 did well, 1,843 fully met all requirements of the standard, and only 491 fell below. Two years ago I had to report most unfavourably of the progress made in these subjects. More attention seems to have been given to them since, and the results are now reasonably satisfactory. Taking age for age, the girls read and spell much better than the boys.

In *writing*, 454, the majority of whom are girls, have acquired a good formed hand that needs no improvement; 2,311 write legible careful copies; and 447 are not as proficient as they should be.

In *arithmetic*, 535 did good work, 1,557 fully came up to the standard, but 1,120 fell below it. These results show that arithmetic is still a weak subject in many schools. Of the pupils who can be relied on to perform ordinary operations in proportion, practice, vulgar and decimal fractions, interest, and problems involving miscellaneous processes, 18 or 20 of the best are girls, but on the whole the boys are much stronger than the girls in arithmetic. It is uniformly noticeable that the successful teachers of arithmetic are the men who give a great number and variety of examples.

In *grammar*, 122 passed a good examination, 1,237 a fair examination, and 493 did badly. In most schools this subject is taught in an unpractical and aimless way that strips it of all value, either as a mental training or as a check upon ungrammatical speaking and writing.

In *geography* 375 did well, 1,079 answered fairly, and 432 knew very little. The amount of geography required by the standard is so extremely limited that there is no excuse for inaccuracy in this subject.

In Scripture, object-lessons, drawing, singing, Euclid, and algebra, ordinary proficiency was shown.

Summarizing all results, the 111 schools inspected show that, of the fixed maximum of 10,000 marks, 9 Public, 1 Provisional, 5 Half-time, 1 Church of England, and 3 Roman Catholic Schools succeeded in taking the high total of 7,000, or over; that 17 Public, 8 Provisional, 26 Half-time, 2 Church of England, and 6 Roman Catholic Schools obtained between 5,000 and 7,000; and that 1 Public, 15 Provisional, 15 Half-time, and 2 Roman Catholic Schools obtained less than 5,000. On the whole these are satisfactory results, and represent a vast amount of steady, useful teaching throughout the district.

4. There are 95 teachers and 9 pupil-teachers employed. The pupil-teachers have performed their duties faithfully, no complaints of any kind have been made respecting them, and not one has failed to pass the prescribed examination. The regulations issued last year, for providing teachers for small schools, are working well. Young men and women, specially adapted for the isolated and peculiar positions that teachers in remote localities must necessarily occupy, are gradually being selected and drafted off into the bush. Accustomed to the life they must lead there, the solitude, hardships, and privations that make a town-bred teacher dissatisfied, miserable, and useless, have no effect whatever upon them; and, for this reason, when they are put through a course of instruction and technical training, they make, for Provisional and Half-time Schools, the best teachers that have yet come under my notice. As a considerable number of young people are working hard in the upper classes of various schools to qualify themselves ultimately for these positions, the difficulty of obtaining teachers for small schools will gradually become less, and in time will probably altogether disappear.

A statement of the condition of each school inspected is appended hereto.

Braidwood, 28th December, 1874.

J. C. MAYNARD,
Inspector, Braidwood District.

ANNEX A.

SUMMARIES of Reports furnished, during the year 1874, on Public, Provisional, and Half-Time Schools.

Throughout these summaries the technical words used to indicate general or average proficiency have the following relative values:—

- | | |
|---------------|-----------------|
| 1. Excellent. | 6. Tolerable. |
| 2. Very good. | 7. Moderate. |
| 3. Good. | 8. Indifferent. |
| 4. Very fair. | 9. Bad. |
| 5. Fair. | 10. Failure. |

I.—PUBLIC SCHOOLS.

ARALURN (Boys.—V.) :—Inspected, 3rd June, 1874.

Enrolled, 84; present, 72.

1. The material condition is good in all respects. 2. Two-thirds of the pupils are regular. The discipline on the whole is satisfactory. 3. All the prescribed subjects are taught except singing. The attainments of the pupils in Class IV are good in all subjects. For the whole school the mark for reading, grammar, geography, object-lessons, geometry, and Scripture is above the average; the mark for writing, dictation, and arithmetic is well up to the average, that for drawing is below. The general proficiency is *very fair*.

ARALURN

ARALUEN (Girls.—V.) :—Inspected, 4th June, 1874.

Enrolled, 48; present, 38.

1. The material condition is good. 2. Not more than half the pupils are regular. The discipline is satisfactory in all respects. The mark for reading and object-lessons is above the average; the mark for writing, dictation, grammar, geography, singing, and Scripture is up to the average, that for arithmetic and drawing is below. The general proficiency is slightly beyond *fair*.

ARALUEN (Infants.—V.) :—Inspected, 5th June, 1874.

Enrolled :—Boys, 22; girls, 23; total, 45.

Present :—Boys, 18; girls, 17; total, 35.

1. The room is too small, otherwise the material condition is satisfactory. 2. About half the pupils are regular. When not under direct tuition the younger children talk too much, but in other respects the discipline is fair. All the prescribed subjects are taught, and all with average success. The general proficiency is a little beyond *fair*.

ARALUEN WEST (V.) :—Inspected, 11th June, 1874.

Enrolled :—Boys, 74; girls, 75; total, 149.

Present :—Boys, 58; girls, 53; total, 111.

1. Since last inspection a new schoolroom has been built. It is well supplied with furniture, apparatus, and materials. 2. Five-sixths of the pupils are regular, and the discipline is satisfactory. 3. The children have made great progress since last inspection, the reading throughout the school being particularly good. The young scholars have much attention paid to them. The mark for reading, writing, dictation, geography, and object lessons is above the average, and that for arithmetic and grammar well up to the average. The general proficiency is between *very fair* and *good*.

ARALUEN, UPPER (N.-V.) :—Inspected, 12th June, 1874.

Enrolled :—Boys, 19; girls, 24; total, 43.

Present :—Boys, 17; girls, 13; total, 30.

1. The building is in a fair state of repair, and sufficiently well provided with furniture, apparatus, and working stock. 2. Three-fifths of the pupils are regular. They are orderly, fairly attentive, and kindly but firmly governed. 3. All the prescribed subjects are taught except drawing. The mark for reading and dictation is above the average, that for writing, arithmetic, grammar, geography, and Scripture, well up to the average, and that for object-lessons and singing below. The general proficiency is between *fair* and *very fair*.

BATEMAN'S BAY (V.) :—Inspected, 16th July, 1874.

Enrolled :—Boys, 28; girls, 17; total, 45.

Present :—Boys, 23; girls, 15; total, 38.

1. This is a new building, well put up, and well adapted for school purposes. When suitable desks have been provided, and the grounds have been fenced, the material condition will be satisfactory. 2. At present three-fourths of the pupils are regular, and great improvement is shown in punctual morning attendance. The government is firm and consistent, and the discipline fair. 3. Since last inspection very little progress has been made, but under the new teacher the prospects for the future are better. The average proficiency is *tolerable*, a mark for which the teacher now in charge is not responsible.

BEGA (V.) :—Inspected, 24th August, 1874.

Enrolled :—Boys, 52; girls, 48; total, 100.

Present :—Boys, 35; girls, 40; total, 75.

1. The material condition is satisfactory. 2. About two-thirds of the pupils are regular. 3. All the prescribed subjects are taught except drawing. The mark for reading, dictation, grammar, Scripture, geography, and object lessons, is above the average, that for writing and arithmetic up to the average. The general proficiency is *very fair*.

BERGALIA (V.) :—Inspected, 5th August, 1874.

Enrolled :—Boys, 21; girls, 28; total, 49.

Present :—Boys, 13; girls, 22; total, 40.

1. The material condition is good, and the organization and general cleanliness are excellent. 2. Not more than one-third of the pupils are regular. In wet weather it is impossible for the children to attend. The discipline is satisfactory. 3. The spelling in this school is particularly good. The mark for that subject, reading, writing, and dictation is much above the average; that for Scripture and object lessons is up to the average; that for arithmetic, grammar, geography, and drawing, is below. The general proficiency is between *fair* and *very fair*.

BOMRALA (V.) :—Inspected, 16th March, 1874.

Enrolled :—Boys, 78; girls, 55; total, 133.

Present :—Boys, 65; girls, 47; total, 112.

1. The schoolroom is too small for the present attendance. It is well adapted for 70 pupils, and is, for that number, sufficiently supplied with requisite furniture and apparatus. The Local Board have taken steps to erect a new school. 2. About two-thirds of the pupils are regular, and punctual attendance in the morning is now insisted on. The discipline is satisfactory, the government being firm and effective. 3. Judged by age and length of time at school, the pupils are backward. The general proficiency is reduced by the number of new scholars, and by the return of old ones who, under the late teacher, had ceased to attend. The mark for dictation and geometry is up to the average, but that for all other subjects is below. The condition of Class I is *fair*, that of Classes II and III *moderate to tolerable*, that of Class IV *tolerable to fair*. The teacher now in charge is not responsible for these results.

BRAIDWOOD (Boys.—V.) :—Inspected, 19th and 20th October, 1874.

Enrolled, 70; present, 61.

1. Since last inspection the schoolroom has been whitewashed, and the roof repaired. The fences are still in a bad condition, and a pump is needed. 2. About two-thirds of the pupils are regular. The discipline is satisfactory. 3. All the prescribed subjects are taught. The mark for reading, writing, and dictation is above the average; that for arithmetic, object-lessons, singing, grammar, and Scripture, up to the average; and that for drawing and geography below. The general proficiency is between *fair* and *very fair*.

BRAIDWOOD (Girls.—V.) :—Inspected, 20th and 21st October, 1874.

Enrolled, 48; present, 34.

1. Except that the desks are awkward, the material condition is satisfactory. 2. The pupils are orderly and attentive, and the discipline on the whole has improved. 3. All the prescribed subjects are taught. The mark for reading, spelling, and dictation is much beyond the average; that for writing, arithmetic, grammar, geography, object-lessons, singing, and Scripture is up to the average; and that for drawing is below. The general proficiency is between *fair* and *very fair*.

CANDELLO (V.) :—Inspected, 18th August, 1874.

Enrolled :—Boys, 32; girls, 17; total, 49.

Present :—Boys, 24; girls, 13; total, 37.

1. The building and the premises are in good order, and there is an abundant supply of furniture, apparatus, and working materials. 2. Not more than half the pupils are regular; and, owing to distance and to the nature of the country, no better attendance than this can reasonably be expected. The discipline and general management are satisfactory. 3. All the prescribed subjects are taught. The mark for reading, spelling, writing, dictation, and singing, is above the average; that for object-lessons, grammar, Scripture, and geography, up to the average; and that for arithmetic and drawing below. The general proficiency is nearly *very fair*.

COOMA (V.) :—Inspected, 27th February, 1874.

Enrolled :—Boys, 37; girls, 18; total, 55.

Present :—Boys, 34; girls, 18; total, 52.

1. The school is undergoing thorough repair, and extensive additions are being made. When these are complete, the material condition will be good. 2. Five-eighths of the pupils are regular, and punctual attendance in the morning is more insisted on than it was. The discipline has considerably improved. 3. All the prescribed subjects are taught. The mark for reading, spelling, writing, dictation, object-lessons, and Scripture, is up to the average; and that for arithmetic, grammar, geography, singing, and drawing, below. The general proficiency is between *tolerable* and *fair*; but the present teacher has not been long enough in charge to be responsible for these results.

EDEN (V.) :—Inspected, 10th September, 1874.

Enrolled :—Boys, 30; girls, 13; total, 43.

Present :—Boys, 24; girls, 10; total, 34.

1. The school buildings have been repaired and much improved since last inspection; and, except that the residence is too small, the material condition is satisfactory. 2. The discipline is in all respects good. 3. All the prescribed subjects are taught. The mark for reading, spelling, writing, dictation, arithmetic, grammar, object-lessons, singing, Scripture, and geography, is far beyond the average, that for drawing is up to the average, and no subject is below. The general proficiency is *good*.

JEMBAICUMBENE (V.) :—Inspected, 19th May, 1874.

Enrolled :—Boys, 23; girls, 23; total, 46.

Present :—Boys, 19; girls, 21; total, 40.

1. The material condition is reasonably good in all respects. 2. Scarcely half the pupils are regular, and many get late in the morning. Most of the children are very young. The discipline has improved, but there is still room for greater strictness. 3. All the prescribed subjects are taught. The attainments are not high, but ordinary progress has been made since last inspection. The average proficiency is between *tolerable* and *fair*.

KIORA (N.-V.) :—Inspected, 30th July, 1874.

Enrolled :—Boys, 14; girls, 24; total, 38.

Present :—Boys, 8; girls, 16; total, 24.

1. The residence is of a very inferior kind, and there is no water supply; in other respects the material condition of the school is satisfactory. 2. The school was reopened under a new teacher on the day of inspection. The mark obtained for dictation was above the average, that for writing up to the average, and that for all other subjects below. The general proficiency is slightly beyond *tolerable*.

LITTLE RIVER (V.) :—Inspected, 20th May, 1874.

Enrolled :—Boys, 32; girls, 45; total, 77.

Present :—Boys, 24; girls, 32; total, 56.

1. The material condition and the discipline are satisfactory. 2. All the prescribed subjects are taught. The mark obtained for reading, writing, dictation, grammar, object-lessons, drawing, and Scripture, is well up to the average, that for arithmetic, geography, and singing is slightly below. The general proficiency is *fair*.

MAJOR'S CREEK (V.) :—Inspected, 19th November, 1874.

Enrolled :—Boys, 59; girls, 63; total, 122.

Present :—Boys, 44; girls, 49; total, 93.

1. The room is too small for the numbers now attending. Altogether the room is badly designed, lighted, and warmed. 2. Only about half the pupils are regular. No satisfactory reason can be given for this low proportion of regular attendants. The discipline has improved during the year, and the children are under much better control than they were. 3. The mark for reading and writing is above the average, and that for all other subjects well up to the average. The general proficiency is between *fair* and *very fair*.

MERIMBULA (N.-V.) :—Inspected, 7th September, 1874.

Enrolled :—Boys, 20; girls, 18; total, 38.

Present :—Boys, 16; girls, 15; total, 31.

1. The new school is not finished, and the material condition remains as it was last year. 2. The discipline is satisfactory in all respects. 3. All the prescribed subjects are taught except drawing. The mark for reading, spelling, dictation, arithmetic, grammar, geography, object-lessons, and Scripture is much above the average, that for writing and singing is well up to the average, and no subject is below. The general proficiency is *good*.

MONKITTEE (N.-V.) :—Inspected, 11th May, 1874.

Enrolled :—Boys, 20; girls, 15; total, 35.

Present :—Boys, 16; girls, 7; total, 23.

1. The residence has been somewhat enlarged, the building is in a fair state of repair, and there is a sufficient supply of furniture, apparatus, and materials. 2. The irregularity is excessive, and a considerable number of children in the neighbourhood attend no school. 3. All the prescribed subjects are taught except singing. Under examination, the pupils are dull, and answer with but little intelligence. The mark for grammar, object-lessons, and geography is up to the average, but that for reading, spelling, dictation, arithmetic, and drawing, is considerably below. The general proficiency is between *moderate* and *tolerable*.

NELIGEN (V.) :—Inspected, 15th July, 1874.

Enrolled :—Boys, 16; girls, 14; total, 30.

Present :—Boys, 15; girls, 13; total, 28.

1. This is a good building, capable of comfortably accommodating fifty pupils. The outfit is satisfactory. 2. Under the new teacher the pupils are regular, and they attend with greater punctuality in the morning. The discipline is improving, and the school is now in fair order. 3. The attainments in this school have always been low. The work done during the past year has not produced satisfactory results. The mark for reading, writing, and object-lessons is up to the average, but that for all other subjects is below. The general proficiency is slightly beyond *tolerable*. The teacher now in charge is not responsible for this poor mark.

NERRIGUNDAH

NERRIGUNDAM (N.-V.) :—Inspected, 7th August, 1874.

Enrolled :—Boys, 18 ; girls, 16 ; total, 34.
Present :—Boys, 17 ; girls, 15 ; total, 32.

1. The building is in the same condition that it was last year. There is improved punctuality, and the discipline is better in every way than it was. 3. All the prescribed subjects are taught, but none of them are handled with much effectiveness. The mark for Scripture is above the average, but that for all other subjects below. The general proficiency is tolerable.

PANBULA (V.) :—Inspected, 8th September, 1874.

Enrolled :—Boys, 17 ; girls, 29 ; total, 46.
Present :—Boys, 14 ; girls, 25 ; total, 39.

1. Hat-peg and a book-press are much needed, but in other respects the material condition is satisfactory. 2. The discipline has much improved during the year, but increased firmness and consistency in the government would still be advisable. 3. All the prescribed subjects are taught. The mark for dictation is above the average, that for reading, writing, spelling, and singing well up to the average, and that for arithmetic, grammar, geography, object-lessons, and drawing, below. The general proficiency is fair.

QUEANBEYAN (N.-V.) :—Inspected, 20th February, 1874.

Enrolled :—Boys, 43 ; girls, 44 ; total, 92.
Present :—Boys, 43 ; girls, 38 ; total, 81.

1. No improvement has been made in the material condition. 2. The discipline has somewhat fallen off since last inspection, but with the small supply of desks and forms and the defective organization, it is impossible to rule the school properly. 3. All the prescribed subjects are taught except singing. The mark for reading, writing, and geography, is above the average, that for dictation, grammar, object-lessons, and Scripture, well up to the average, and that for arithmetic and drawing below. The general proficiency is between fair and very fair.

TANTAWANGLO (V.) :—Inspected, 19th August, 1874.

Enrolled :—Boys, 17 ; girls, 19 ; total, 36.
Present :—Boys, 17 ; girls, 17 ; total, 34.

1. The material condition is good and the discipline is satisfactory. 2. All the prescribed subjects are taught except singing. Since last inspection, this school has fallen off in attainments. From being one of the best schools in the locality, it has in one year sunk to be below the average. A new teacher is now in charge, and of course he is not responsible for existing defects. The general proficiency is tolerable.

WOLUMLA NORTH (V.) :—Inspected, 17th August, 1874.

Enrolled :—Boys, 17 ; girls, 10 ; total, 27.
Present :—Boys, 15 ; girls, 9 ; total, 24.

1. The material condition is good, and the discipline is satisfactory. 2. The school has recently been placed under a new teacher, and more vigour is observable in the management. 3. All the prescribed subjects are taught. The mark for reading, spelling, writing, and dictation is above the average, and that for all other subjects below. The general proficiency is between tolerable and fair, but the present teacher has not been sufficiently long in charge to be held responsible for this mark.

WOLUMLA SOUTH (V.) :—Inspected, 2nd September, 1874.

Enrolled :—Boys, 29 ; girls, 19 ; total, 48.
Present :—Boys, 28 ; girls, 19 ; total, 47.

1. The building is in a good state of repair, and there is an ample supply of furniture, apparatus, and materials. 2. Several children are irregular in attendance. The discipline is satisfactory. 3. Last year the school passed a very creditable examination; this year it did even better. The mark for reading, spelling, geography, dictation, writing, and object-lessons is much above the average; that for arithmetic, singing, and Scripture, is up to the average, and that for drawing below. The general proficiency is between very fair and good.

II.—PROVISIONAL SCHOOLS.

BELL'S CREEK (N.-V.) :—Inspected, 1st June, 1874.

Enrolled :—Boys, 19 ; girls, 16 ; total, 35.
Present :—Boys, 15 ; girls, 12 ; total, 27.

1. A new building is much needed; the present one is too small and dilapidated. There is a sufficient supply of all necessaries. 2. Two-thirds of the pupils are regular. There is a want of firmness and determination in the government. 3. The attainments on the whole are satisfactory, and the 1st class is particularly well taught. The mark for reading, spelling, writing, dictation, and arithmetic, is much above the average, that for grammar, geography, object-lessons, and drawing, is below. The general proficiency is between fair and very fair.

BETTOWIND (N.-V.) :—Inspected, 8th June, 1874.

Enrolled :—Boys, 17 ; girls, 11 ; total, 28.
Present :—Boys, 11 ; girls, 11 ; total, 22.

1. This is a new building, well put together, and supplied with plenty of furniture and materials. 2. Two-thirds of the pupils are regular, their behaviour is good, and the government is firm and effective. 3. When examined the school had only been opened a few weeks. The attainments of the children are necessarily low at present.

BODALLA (N.-V.) :—Inspected, 6th August, 1874.

Enrolled :—Boys, 9 ; girls, 10 ; total, 19.
Present :—Boys, 7 ; girls, 10 ; total, 17.

1. The building is in a satisfactory state of repair, and is well supplied with necessaries. 2. Not more than half the pupils are regular, and several in the neighbourhood do not attend at all. The discipline is bad. 3. Of seven compulsory subjects only five are attempted. None of the usual lesson documents are kept, and the instruction is not regulated by the Council's standard. The general proficiency is very low, giving an average not beyond indifferent.

BROWN MOUNTAIN (N.-V.) :—Inspected, 20th August, 1874.

Enrolled :—Boys, 15 ; girls, 9 ; total, 24.
Present :—Boys, 12 ; girls, 9 ; total, 21.

1. The building is large and in good repair, and there is a sufficient quantity of furniture and working stock. 2. The discipline is satisfactory. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading, spelling, and dictation, is above the average; that for writing and geography, up to the average; and that for arithmetic, grammar, and object lessons, below. The general proficiency is fair.

BUNGENDORA

BUNGENDORE (N.-V.) :—Inspected, 20th April, 1874.

Enrolled :—Boys, 12 ; girls, 8 ; total, 20.
Present :—Boys, 12 ; girls, 8 ; total, 20.

1. Except that the small reading-books are much worn, the material condition is good in all respects. 2. About two-thirds of the pupils are regular, but a great number get late in the morning. The discipline is fair. 3. Under examination the children are bright and anxious to answer. Steady progress has been made during the year. The average proficiency is tolerable.

CORROWONG (N.-V.) :—Inspected, 12th March, 1874.

Enrolled :—Boys, 10 ; girls, 19 ; total, 29.
Present :—Boys, 8 ; girls, 16 ; total, 24.

1. The building is in a good state of repair, and there is a sufficient supply of requisites. 2. Half the pupils are regular ; they are clean, fairly attentive, and in tolerably good order. There is a want of vigour and determination in the government. 3. The children are well classed, and the work is honestly and industriously performed. The mark for reading and writing is up to the average, that for all other subjects below. The general proficiency is between small and indifferent.

DANGELONG (V.) :—Inspected, 2nd March, 1874.

Enrolled :—Boys, 17 ; girls, 8 ; total, 25.
Present :—Boys, 13 ; girls, 6 ; total, 19.

1. This is a substantial building, put up by the residents on land vested in the Council. The rooms need flooring, otherwise the material condition is satisfactory in all respects. 2. Two-thirds are regular. The general order is tolerable, and the government is as firm and judicious as can reasonably be expected. 3. At present the attainments of the children are low, giving an average proficiency of moderate.

GINNABROTHERS (N.-V.) :—Inspected, 6th March, 1874.

Enrolled :—Boys, 16 ; girls, 9 ; total, 25.
Present :—Boys, 7 ; girls, 6 ; total, 13.

1. The desks are awkward and badly arranged, and there is but a limited supply of apparatus. In other respects the building and outfit are sufficiently good. 2. Not more than one-third of the pupils are regular. They are talkative and inattentive. 3. The classification is defective. The attainments are unusually low, giving an average between bad and small.

GINNINDERRA (N.-V.) :—Inspected, 17th April, 1874.

Enrolled :—Boys, 5 ; girls, 17 ; total, 22.
Present :—Boys, 5 ; girls, 12 ; total, 17.

1. The room is large, but there is no fireplace, and more sitting and writing accommodation is needed. The school was only incidentally inspected, as the teacher in charge had not been recognized.

HOSKINSTOWN (N.-V.) :—Inspected, 9th February, 1874.

Enrolled :—Boys, 14 ; girls, 17 ; total, 31.
Present :—Boys, 13 ; girls, 14 ; total, 27.

1. The building is in a satisfactory condition, and there is a satisfactory supply of all requisites. 2. The irregularity of the children is excessive, not more than two out of thirty-one pupils attending as they should do. The discipline is fair, but the general tone of the school is calculated to create an impression of unreality and want of business-like earnestness. 3. Some of the prescribed subjects are not included in the course of instruction. The attainments are low, but to a great extent the parents are responsible for this, as children are frequently kept at home for most frivolous reasons. The general proficiency is small.

JEMBAICUMBENE (N.-V.) :—Inspected, 29th May, 1874.

Enrolled :—Boys, 10 ; girls, 14 ; total, 24.
Present :—Boys, 4 ; girls, 11 ; total, 15.

1. The building is in a good state of repair, and, except that there is no apparatus, is sufficiently well fitted out with furniture and materials. 2. Fifteen are very regular. The discipline is satisfactory. 3. The pupils have been admirably taught. Considering age and time at school, the attainments are beyond the average, and the progress made has been sound and unusually rapid. The general proficiency is between fair and very fair.

KIANDRA (N.-V.) :—Inspected, 23rd March, 1874.

Enrolled :—Boys, 20 ; girls, 11 ; total, 31.
Present :—Boys, 18 ; girls, 10 ; total, 28.

1. The building is old and inconvenient, but there is a sufficient supply of furniture and apparatus. 2. About two-thirds are regular, but many get late in the morning. They are somewhat disorderly, and too much talking and restlessness are permitted. 3. Reading, spelling, writing, dictation, and Scripture are taught with tolerable success ; the mark for other subjects is much below the average. The general proficiency is between indifferent and moderate.

MICHELAGO (N.-V.) :—Inspected, 24th February, 1874.

Enrolled :—Boys, 20 ; girls, 8 ; total, 28.
Present :—Boys, 19 ; girls, 8 ; total, 27.

1. The material condition and the organization are satisfactory. 2. Four-fifths are regular. They are quiet, attentive, and orderly. 3. All the prescribed subjects are taught. The mark for spelling, dictation, and geography is above the average ; that for reading, writing, arithmetic, grammar, object lessons, and Scripture well up to the average ; and that for drawing below. The general proficiency is between fair and very fair.

MOOO (N.-V.) :—Inspected, 17th July, 1874.

Enrolled :—Boys, 10 ; girls, 8 ; total, 18.
Present :—Boys, 9 ; girls, 7 ; total, 16.

1. The material condition is fairly satisfactory. 2. Not more than half the pupils are regular, and the attendance in the morning is unpunctual. In most respects the discipline is tolerable. 3. The mark for reading, spelling, writing, and dictation is up to the average ; and that for all other subjects below. The general proficiency is between moderate and tolerable.

MUDMELONG (N.-V.) :—Inspected, 10th June, 1874.

Enrolled :—Boys, 16 ; girls, 16 ; total, 32.
Present :—Boys, 13 ; girls, 14 ; total, 27.

1. There was no fireplace when the school was inspected, but one has been put up since. The material condition is now satisfactory. 2. The discipline is good. 3. The school has only been opened five months, but the progress made during that time has been unusually sound and rapid. The mark for reading, spelling, writing, dictation, and arithmetic is much above the average ; that for grammar and object lessons is up to the average ; and that for geography below. The general proficiency is very fair.

NARRIGA (V.) :—Inspected, 30th April, 1874.

Enrolled :—Boys, 14 ; girls, 20 ; total, 34.

Present :—Boys, 12 ; girls, 15 ; total, 27.

1. The building is in a good state of repair, and there is a sufficient supply of all requisites. 2. Two-thirds of the pupils are regular. They are clean, orderly, and well under control. 3. The attainments are reasonably satisfactory. The progress of the children has been retarded by unnecessary subdivision of classes. The average proficiency is tolerable.

NEW LINE (N.-V.) :—Inspected, 23rd April, 1874.

Enrolled :—Boys, 13 ; girls, 14 ; total, 27.

Present :—Boys, 11 ; girls, 8 ; total, 19.

1. Two new desks and forms are needed, otherwise the building is suitable and well fitted up. This school was visited a few days after it was opened. A few of the children can read a little, but they know nothing else.

NEWSTEAD (V.) :—Inspected, 22nd July, 1874.

Enrolled :—Boys, 13 ; girls, 8 ; total, 21.

Present :—Boys, 10 ; girls, 6 ; total, 16.

1. The building is in a fair state of repair, but the books are worn out, and the schoolroom is untidy and filthy. 2. None of the ordinary lesson documents are kept, and the records are wrong. There is no attempt made to secure order or to enforce discipline of any kind. 3. The attainments are wretched, giving an average between small and indifferent. A new teacher has been placed in charge since the inspection.

NIMITYBELLE (N.-V.) :—Inspected, 3rd March, 1874.

Enrolled :—Boys, 21 ; girls, 16 ; total, 37.

Present :—Boys, 18 ; girls, 10 ; total, 28.

1. The building is reasonably good, and there is a sufficient supply of furniture and apparatus. 2. Less than half the pupils are regular ; the organization is defective ; the pupils are insubordinate, apathetic, and noisy. There is no system in the government, and the general tone is low. 3. Under examination the children show a great want of mental training, and their attainments are very poor. The average proficiency is between small and indifferent. A new teacher has been sent.

PARKWOOD (N.-V.) :—Inspected, 17th February, 1874.

Enrolled :—Boys, 8 ; girls, 11 ; total, 19.

Present :—Boys, 6 ; girls, 10 ; total, 16.

1. The building and outfit are rough, but sufficiently good for existing requirements. 2. About half the pupils are regular ; they are quiet and orderly, but apathetic. 3. The mark for dictation is up to the average, but that for every other subject is below. The general proficiency is between moderate and tolerable.

ROSSI (N.-V.) :—Inspected, 24th September, 1874.

Enrolled :—Boys, 11 ; girls, 16 ; total, 27.

Present :—Boys, 8 ; girls, 14 ; total, 22.

1. This is a newly established school. The building is substantial, and well provided with all necessaries. 2. The children are orderly, attentive, and obedient. 3. During the short time the school has been in existence the children have made good progress. The mark for grammar is beyond the average ; that for reading, spelling, writing, and dictation, well up to the average, and that for arithmetic and geography below. The general proficiency is between fair and very fair.

STONE HUT (N.-V.) :—Inspected, 17th February, 1874.

Enrolled :—Boys, 8 ; girls, 10 ; total, 18.

Present :—Boys, 8 ; girls, 8 ; total, 16.

1. School is held in a comfortable little hut, given for the purpose by the Local Board. There is a sufficient supply of furniture, apparatus, and working stock. Owing to a little care bestowed on his school by the teacher, the inside is not so desolate and comfortless as bush schools are generally found to be. 2. Of 18 enrolled, 14 are regular. The children are orderly, well-behaved, respectful to their teacher, and well under control. The government is firm, but at the same time kind and judicious. 3. The school has been open but a short time, and all the children therefore are in the first class. Their progress, especially in reading, spelling, and writing, has been very rapid. The average proficiency is between fair and very fair.

TUGGRANONG (N.-V.) :—Inspected, 13th February, 1874.

Enrolled :—Boys, 8 ; girls, 10 ; total, 18.

Present :—Boys, 6 ; girls, 7 ; total, 13.

1. The building is in fair repair, and there is a sufficient stock of requisites. 2. The discipline is fair. 3. More than ordinary progress is made in reading, and the mark for writing fully reaches the average for larger schools. The general proficiency is indifferent.

WIANGA (N.-V.) :—Inspected, 22nd April, 1874.

Enrolled :—Boys, 9 ; girls, 7 ; total, 16.

Present :—Boys, 9 ; girls, 5 ; total, 14.

1. The small books are much worn, and a new supply of writing materials is needed, but in other respects the condition of the school, both in regard to building and outfit, is satisfactory. 2. The discipline is tolerable, but more firmness is needed. 3. Under examination the children answer with average intelligence. In reading, writing, arithmetic, and dictation, the attainments are well up to the average, but the mark for grammar and geography is below. The general proficiency is between moderate and tolerable.

III.—HALF-TIME SCHOOLS.

ADAMINIBY (N.-V.) :—Inspected, 24th March, 1874.

Enrolled :—Boys, 11 ; girls, 8 ; total, 19.

Present :—Boys, 4 ; girls, 6 ; total, 10.

1. The building is in a satisfactory condition, and there is a sufficient supply of furniture, apparatus, and materials. 2. The children at Adaminiby are exceptionally irregular. The behaviour in school is good. 3. All the prescribed subjects are taught, except singing and drawing. The attainments of those who have attended with ordinary regularity are satisfactory, and reasonable progress has been made since last inspection. The average proficiency is between tolerable and fair.

BACK

BACK CREEK (N.-V.) :—Inspected, 27th November, 1874.

Enrolled :—Boys, 12 ; girls, 3 ; total, 15.
Present :—Boys, 9 ; girls, 2 ; total, 11.

1. This is a newly established school. The building is sufficiently good for present requirements, and is provided with requisite furniture, apparatus, and materials. 2. About half the pupils are regular. The discipline is satisfactory. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading is above the average, and that for all other subjects well up to the average. The general proficiency is *fair*.

BEMBOOKA (N.-V.) :—Inspected, 21st August, 1874.

Enrolled :—Boys, 9 ; girls, 6 ; total, 15.
Present :—Boys, 8 ; girls, 6 ; total, 14.

1. The building is good enough for existing wants ; there are sufficient desks and forms, but a supply of apparatus and books is needed. 2. The pupils are very irregular, but the discipline on the whole is better than it was last year. 3. There is also a slight improvement in the attainments of the children, but in every subject the mark obtained was below the average. The general proficiency is between *moderate* and *tolerable*.

BIBBENLUKE (N.-V.) :—Inspected, 18th March, 1874.

Enrolled :—Boys, 10 ; girls, 11 ; total, 21.
Present :—Boys, 8 ; girls, 9 ; total, 17.

1. The building is suitable, and there is a sufficient supply of requisites. 2. Three fifths of the pupils are regular. The discipline is fair. 3. In no subject have the children done as much during the year as might reasonably have been required of them. The attainments are very unsatisfactory, the average proficiency being but *indifferent*.

BOCONNOC (N.-V.) :—Inspected, 25th March, 1874.

Enrolled :—Boys, 8 ; girls, 5 ; total, 13.
Present :—Boys, 3 ; girls, 2 ; total, 5.

1. Proper desks and forms have been provided since last inspection, and the material condition is now satisfactory. 2. Nine out of thirteen attend regularly, but the day of inspection being wet, very few were able to reach school. 3. Those present were regular attendants, and their attainments were reasonably good. The mark for reading and writing was above the average ; that for dictation and arithmetic well up to the average, and that for grammar, object lessons, and geography, below. The general proficiency is slightly beyond *fair*.

BOMBAY (N.-V.) : Inspected, 21st May, 1874.

Enrolled :—Boys, 6 ; girls, 10 ; total, 16.
Present :—Boys, 5 ; girls, 7 ; total, 12.

1. This is a rough little hut, but it answers all purposes reasonably well. 2. Three-fourths are regular. The discipline is fair. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading, spelling, writing, and dictation is up to the average ; that for arithmetic, grammar, geography, and object-lessons is below. The general proficiency is between *tolerable* and *fair*.

BORO, UPPER (N.-V.) :—Inspected, 25th April, 1874.

Enrolled :—Boys, 10 ; girls, 6 ; total, 16.
Present :—Boys, 10 ; girls, 6 ; total, 16.

1. The material condition is satisfactory, and the room is neat, clean, and well looked after. 2. Three-fourths are regular ; they are attentive, obedient, and well-behaved in all respects. 3. The mark for reading and spelling is above the average ; that for writing, dictation, and grammar, well up to the average, and that for arithmetic and geography, below. The general proficiency is between *tolerable* and *fair*.

BORO, LOWER (N.-V.) :—Inspected, 27th April, 1874.

Enrolled :—Boys, 5 ; girls, 7 ; total, 12.
Present :—Boys, 5 ; girls, 5 ; total, 10.

1. The material condition is satisfactory, and the place is clean and tidy. 2. Nearly all are regular, and their behaviour in school is good. 3. The mark for reading, spelling, and dictation is above the average ; that for writing well up to the average, and that for arithmetic, grammar, and geography, below. The general proficiency is between *tolerable* and *fair*.

BURRA (N.-V.) :—Inspected, 23rd February, 1874.

Enrolled :—Boys, 7 ; girls, 11 ; total, 18.
Present :—Boys, 7 ; girls, 11 ; total, 18.

1. The building and the outfit are sufficiently good for present requirements. 2. Except in harvest time two-thirds of the pupils are regular ; they are quiet, attentive, respectful to their teacher, and in all respects well-behaved. The government is judicious, and the general spirit of the school good. 3. The attainments, considering length of time at school, are very satisfactory, and great progress has been made since last inspection. The average proficiency is *very fair*.

BURRAGATE (V.) :—Inspected, 14th September, 1874.

Enrolled :—Boys, 6 ; girls, 5 ; total, 11.
Present :—Boys, 6 ; girls, 4 ; total, 10.

1. The building is in the same condition that it was last year. 2. The discipline is loose, and the attainments are very unsatisfactory. The mark for every subject is below the average. The general proficiency is between *indifferent* and *moderate*.

CARWOOLA (N.-V.) :—Inspected, 10th February, 1874.

Enrolled :—Boys, 8 ; girls, 4 ; total, 12.
Present :—Boys, 8 ; girls, 4 ; total, 12.

1. The room is rather small, and the desks are unsteady, but in other respects the material condition both in regard to the building and the outfit is reasonably satisfactory. 2. The attendance is very fluctuating ; the discipline is fair. 3. The attainments of the pupils are low. The mark for every subject is below the average. The general proficiency is between *moderate* and *tolerable*.

CATHEART (N.-V.) :—Inspected, 18th March, 1874.

Enrolled :—Boys, 7 ; girls, 7 ; total, 14.
Present :—Boys, 7 ; girls, 6 ; total, 13.

1. The position of the school is not central, but in other respects the material condition is satisfactory. 2. Only half the pupils are regular, and the majority of children in the neighbourhood do not attend at all. If the people were united, a good full-time school might be maintained at Cathcart. 3. The attainments are unsatisfactory. The mark for spelling is up to the average, but that for all other subjects is much below. The general proficiency is *moderate*.

COBARGO

COBARGO (V.) :—Inspected, 12th August, 1874.

Enrolled :—Boys, 13; girls, 15; total, 28.

Present :—Boys, 11; girls, 14; total, 25.

1. The schoolroom is small, but comfortable and sufficiently well provided with requisites. 2. Owing to crooks and distance many pupils are very irregular. The children are attentive and well-behaved, and the work is carried on with patience and carefulness. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading, spelling, and dictation is above the average, that for writing is well up to the average, and that for arithmetic, grammar, geography, and object lessons below. The general proficiency is *fair*.

COCHRANE'S FLAT (V.) :—Inspected, 11th September, 1874.

Enrolled :—Boys, 6; girls, 5; total, 11.

Present :—Boys, 5; girls, 3; total, 8.

1. The material condition is good in all respects, and the discipline is satisfactory. 2. The population here is not numerous enough to maintain the minimum average, but if the school were closed the few children living in the neighbourhood would have no opportunity of obtaining education. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading and dictation is up to the average, but that for all other subjects is below. The general proficiency is between *moderate* and *tolerable*. The present teacher, who has but recently taken charge is not responsible for these results.

COLUMBO (N.-V.) :—Inspected, 21st May, 1874.

Enrolled :—Boys, 4; girls, 11; total, 15.

Present :—Boys, 2; girls, 9; total, 11.

1. The desks are somewhat rough and unsteady; otherwise, the material condition is satisfactory. 2. When not hindered by floods, two-thirds are regular. The pupils are orderly and the discipline is satisfactory. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading, spelling, writing, and dictation is considerably above the average, and that for arithmetic, grammar, geography, and object lessons is well up to the average. The general proficiency approaches *very fair*.

CHARLEYONG (N.-V.) :—Inspected, 27th November, 1874.

Enrolled :—Boys, 8; girls, 13; total, 21.

Present :—Boys, 6; girls, 11; total, 17.

1. The material condition is satisfactory. 2. Rather more than half the pupils are regular. The discipline is sound. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading, spelling, writing, and dictation is above the average; that for grammar, object lessons, geography, and arithmetic well up to the average. The general proficiency is nearly *very fair*.

CUARY FLAT (N.-V.) :—Inspected, 5th March, 1874.

Enrolled :—Boys, 7; girls, 2; total, 9.

Present :—Boys, 4; girl, 1; total, 5.

1. The building and outfit are good. 2. Half the pupils are regular; they are quiet, obedient, and attentive, and the government is firm and effective. 3. Considering the short time the children have been under instruction, the progress made has been rapid and sound. The average proficiency is between *fair* and *very fair*.

DELEGATE (N.-V.) :—Inspected, 13th March, 1874.

Enrolled :—Boys, 22; girls, 7; total, 29.

Present :—Boys, 15; girls, 6; total, 21.

1. Except that maps are needed, the material condition is satisfactory. 2. About one-third of the pupils are regular. They are quiet, obedient, and well under control. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading, spelling, and writing is up to the average; that for all other subjects is below. The general proficiency is between *moderate* and *tolerable*.

DENNIS' FLAT (N.-V.) :—Inspected, 1st May, 1874.

Enrolled :—Boys, 4; girls, 9; total, 13.

Present :—Boys, 3; girls, 9; total, 12.

1. The school-building is dingy and uninviting, but it has been put in a tolerable state of repair, and is supplied with all requisites. 2. Ten are regular, and all the children living in the neighbourhood are enrolled. The discipline is good. 3. The pupils have been but a short time under instruction, but their progress is satisfactory. The general proficiency is *fair*.

DURRAN DURRAH (N.-V.) :—Inspected, 18th May, 1874.

Enrolled :—Boys, 8; girls, 12; total, 20.

Present :—Boys, 4; girls, 10; total, 14.

1. The roof leaks, but in other respects the school is in a fair state of repair. The supply of apparatus and furniture is sufficient. 2. There has been an improvement since last inspection in the discipline and general management. 3. The progress made has been reasonably satisfactory. The average proficiency is between *tolerable* and *fair*.

FARRINGTON (N.-V.) :—Inspected, 16th November, 1874.

Enrolled :—Boys, 16; girls, 10; total, 26.

Present :—Boys, 14; girls, 9; total, 23.

1. New desks and forms have been supplied; the outfit of the school is now satisfactory. 2. About half the pupils are regular. The attendance this year is larger than it has hitherto been. The discipline is fair. 3. All the prescribed subjects are taught, except singing and drawing. The mark for spelling and dictation is above the average, that for reading and writing well up to the average, and that for arithmetic, geography, grammar, and object-lessons below. The general proficiency is between *tolerable* and *fair*.

FOXLOW (N.-V.) :—Inspected, 10th February, 1874.

Enrolled :—Boys, 5; girls, 11; total, 16.

Present :—Boys, 5; girls, 9; total, 14.

1. School is held in a comfortable room. There is a sufficient supply of all requisites. 2. Only five out of sixteen are regular. The discipline is fair. 3. All the prescribed subjects are taught, but none of them with great success. The irregularity has been of such a kind as to make it impossible for the teacher to influence more than five or six of his pupils. Judging the school, however, by the few that are regular, the attainments must be called unsatisfactory. The mark for every subject is below the average. The general proficiency is between *moderate* and *tolerable*.

GUNDILLION (N.-V.) :—Inspected, 18th November, 1874.

Enrolled :—Boys, 6 ; girls, 6 ; total, 12.

Present :—Boys, 6 ; girls, 5 ; total, 11.

1. The building is in a good state of repair, and is well fitted out with furniture and apparatus. 2. Most of the pupils are regular, and the discipline is good. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading, spelling, and mental arithmetic is above the average, and that for all other subjects up to the average. The general proficiency is *fair*.

HAROLD'S CROSS (N.-V.) :—Inspected, 16th November, 1874.

Enrolled :—Boys, 5 ; girls, 7 ; total, 12.

Present :—Boys, 4 ; girls, 7 ; total, 11.

1. This is a very rough little hut, but it meets all existing requirements. There are plenty of working materials. 2. All the pupils are regular, and the discipline is fair. 3. The mark for reading and writing is above the average, that for dictation up to the average, and that for other subjects below. The general proficiency is *fair*.

INGLEWOOD FOREST (N.-V.) :—Inspected, 15th April, 1874.

Enrolled :—Boys, 10 ; girls, 10 ; total, 20.

Present :—Boys, 7 ; girls, 10 ; total, 17.

1. The building is small and not central. Steps are being taken to put one up in a better position. The school is fairly well supplied with requisites. 2. About two-thirds of the pupils are regular. Greater firmness is needed in the government. 3. All the prescribed subjects are taught, except singing and drawing. The attainments are low ; in no subject does the mark approach the average. The general proficiency is between *indifferent* and *moderate*.

JELLAT-JELLAT (N.-V.) :—Inspected, 18th September, 1874.

Enrolled :—Boys, 5 ; girls, 17 ; total, 22.

Present :—Boys, 4 ; girls, 13 ; total, 17.

1. The material condition is satisfactory. 2. The discipline is tolerable in most respects. 3. The mark for every subject is below the average. The general proficiency is between *moderate* and *tolerable*.

JERRADAT GULLY (N.-V.) :—Inspected, 17th November, 1874.

Enrolled :—Boys, 8 ; girls, 8 ; total, 16.

Present :—Boys, 4 ; girls, 7 ; total, 11.

1. The building is in a fair state of repair, and there is a sufficient supply of requisites. 2. About half the pupils are regular. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading and geography is above the average ; that for writing and grammar well up to the average, and that for object-lessons, dictation, and arithmetic, below. The general proficiency is between *tolerable* and *fair*.

LARBERT (N.-V.) :—Inspected, 11th November, 1874.

Enrolled :—Boys, 16 ; girls, 8 ; total, 24.

Present :—Boys, 11 ; girls, 7 ; total, 18.

1. School is held in a comfortable stone cottage. There is an ample supply of all requisites. 2. About two-thirds of the pupils are regular. The discipline is fair. 3. All the prescribed subjects are taught, except singing and drawing. This school was only opened during the present year, and, considering the short time the children have been under instruction, the attainments are satisfactory. The average proficiency is *fair*.

LARRY'S POINT (N.-V.) :—Inspected, 28th July, 1874.

Enrolled :—Boys, 5 ; girls, 8 ; total, 13.

Present :—Boys, 4 ; girls, 7 ; total, 11.

1. This is a little hut, put up by two or three families, living on the west of Dewa River, to accommodate twelve children residing there. There is sufficient furniture to provide for sitting and writing, and there are plenty of books and other working materials. 2. The attendance is very regular, and reflects great credit upon the parents. Neither work nor rain stops the children, and it is, without exception, the best attended school in the district. 3. The progress made in reading and spelling has been rapid and sound, and the mark for these subjects is beyond the average ; the mark for dictation and arithmetic is up to the average, and that for other subjects below. The general proficiency is between *tolerable* and *fair*.

LIMERILNS (N.-V.) :—Inspected, 11th November, 1874.

Enrolled :—Boys, 13 ; girls, 5 ; total, 18.

Present :—Boys, 6 ; girls, 4 ; total, 10.

1. School is held in a substantial stone hut that answers well all existing requirements. There is a satisfactory supply of furniture, apparatus, and materials. 2. The pupils are regular, and the discipline is sound. 3. This school is worked with that at Larbert, and, in regard to efficiency, is in about the same condition.

M'DONALD'S FLAT (N.-V.) :—Inspected, 23rd February, 1874.

Enrolled :—Boys, 10 ; girls, 7 ; total, 17.

Present :—Boys, 7 ; girls, 5 ; total, 12.

1. The material condition is satisfactory. 2. Eleven pupils are regular. The discipline is good. 3. This school is worked with that at Burra, and is in the same creditable condition. The average proficiency is *very fair*.

MRRINGLO (N.-V.) :—Inspected, 21st August, 1874.

Enrolled :—Boys, 8 ; girls, 6 ; total, 14.

Present :—Boys, 5 ; girls, 6 ; total, 11.

1. This is a neat little school, well fitted up in all respects. 2. It is worked with that at Bembooka, and here, as there, the attainments are considerably below the average in all subjects. The general proficiency is between *indifferent* and *moderate*.

MOUNT ITALY (N.-V.) :—Inspected, 18th November, 1874.

Enrolled :—Boys, 4 ; girls, 7 ; total, 11.

Present :—Boys, 4 ; girls, 7 ; total, 11.

1. This is a large, draughty place, badly provided with furniture, but with a sufficient supply of apparatus and materials. 2. All the pupils are regular, and the discipline is good. 3. The attainments are reasonably satisfactory. The mark for reading, arithmetic, writing, and grammar is well up to the average ; that for dictation, object lessons, and geography is below. The general proficiency is between *tolerable* and *fair*.

MYALLA (N.-V.) :—Inspected, 5th March, 1874.

Enrolled :—Boys, 8 ; girls, 7 ; total, 15.
Present :—Boys, 6 ; girls, 3 ; total, 9.

1. This is a neat, compact, little building, well furnished and fitted up in all respects. 2. Not more than half the children are regular. The discipline is good and the government firm, even to sternness. 3. All the prescribed subjects are taught. Considering the short time the children have been under instruction, the progress made is very creditable to the teacher. The average proficiency is between *fair* and *very fair*.

ORANMEIB (N.-V.) :—Inspected, 17th November, 1874.

Enrolled :—Boys, 11 ; girls, 11 ; total, 22.
Present :—Boys, 8 ; girls, 8 ; total, 16.

1. The building is in a fair state of repair, but there are not sufficient desks. There is a reasonably good supply of apparatus and materials. 2. About half the pupils are regular. They copy and prompt a great deal, and require to be more firmly ruled. 3. All the prescribed subjects are taught, except singing and drawing. The mark for writing and geography is up to the average; but that for reading, spelling, dictation, arithmetic, grammar, and object lessons is below. The general proficiency is between *moderate* and *tolerable*.

POWER'S CORNER (N.-V.) :—Inspected, 13th March, 1874.

Enrolled :—Boys, 16 ; girls, 8 ; total, 24.
Present :—Boys, 6 ; girls, 5 ; total, 11.

1. Judged by the outside, this is an unprepossessing hut, but the inside is lined, and the furniture, though rough, is sufficient for existing wants. 2. Owing to distance and the demand for children's labour, only one-third of the pupils are regular. They are quiet, obedient, and well under control. Considering the short time this school has been opened the attainments are fairly satisfactory. The average proficiency is between *tolerable* and *fair*.

ROSSNEATH (V.) :—Inspected, 15th April, 1874.

Enrolled :—Boys, 11 ; girls, 7 ; total, 18.
Present :—Boys, 11 ; girls, 6 ; total, 17.

1. The school is in a fair state of repair, and is provided with sufficient furniture, apparatus, and materials. 2. Two-thirds of the pupils are regular. There is a want of firmness in the government. 3. This school is worked with that at Inglewood Forest, and is in about the same condition. The average proficiency is *moderate*.

SIX-MILE FLAT (V.) :—Inspected, 18th May, 1874.

Enrolled :—Boys, 10 ; girls, 12 ; total, 22.
Present :—Boys, 5 ; girls, 10 ; total, 15.

1. The school is much out of repair, and is altogether a dingy and comfortless place. There is a sufficient quantity of furniture, apparatus, and materials. 2. Only three pupils can be called regular. The discipline is loose. 3. All the prescribed subjects are taught, except singing and drawing. The mark for writing approaches the average, but that for all other subjects is much below the average. The general proficiency is between *indifferent* and *moderate*.

SNAPHOOK (N.-V.) :—Inspected, 27th July, 1874.

Enrolled :—Boys, 8 ; girls, 15 ; total, 23.
Present :—Boys, 8 ; girls, 14 ; total, 22.

1. This is a rough slab hut, fitted up inside in a very primitive style. 2. The children are somewhat noisy, but they are attentive and respectful to their teacher. 3. The mark for reading and spelling is above the average ; that for other subjects below. The general proficiency is *tolerable*.

STONY CREEK (V.) :—Inspected, 31st August, 1874.

Enrolled :—Boys, 7 ; girls, 7 ; total, 14.
Present :—Boys, 3 ; girls, 6 ; total, 9.

1. This is a good building, well supplied with all requisites. 2. The discipline is satisfactory. 3. The mark for reading is up to the average, but that for all other subjects is below. The general proficiency is between *tolerable* and *fair*.

TARRAGANDAH (N.-V.) :—Inspected, 31st August, 1874.

Enrolled :—Boys, 6 ; girls, 5 ; total, 11.
Present :—Boys, 6 ; girls, 4 ; total, 10.

1. The building and the outfit are satisfactory. 2. The discipline is good. 3. The mark for reading and writing is up to the average ; that for dictation, arithmetic, grammar, geography, and object-lessons is below. The general proficiency is between *tolerable* and *fair*.

TUMBOYE (N.-V.) :—Inspected, 1st May, 1874.

Enrolled :—Boys, 4 ; girls, 9 ; total, 13.
Present :—Boys, 4 ; girls, 8 ; total, 12.

1. This is a comfortable school, containing all necessary furniture and materials. 2. Two-thirds of the pupils are regular. The discipline is good. 3. The spelling and writing are admirable, the reading is good, and the mark for other subjects is beyond the average. The general proficiency is *very fair*.

TOWAMBA (V.) :—Inspected, 14th September, 1874.

Enrolled :—Boys, 7 ; girls, 7 ; total, 14.
Present :—Boys, 4 ; girls, 3 ; total, 7.

1. The building is in good order, and there is an ample supply of all requisites. 2. The discipline is satisfactory. 3. All the prescribed subjects are taught, except singing and drawing. The mark for reading, writing, arithmetic, and grammar is up to the average ; that for dictation, geography, and object-lessons is below. The general proficiency is *tolerable*.

WANDELLA (N.-V.) :—Inspected, 11th August, 1874.

Enrolled :—Boys, 10 ; girls, 9 ; total, 19.
Present :—Boys, 9 ; girls, 9 ; total, 18.

1. This is a small school, put up by the residents, and well supplied with all necessaries. Everything about the place is clean and in order. 2. The government is kind, but wanting in determination. 3. The school has only been established a short time. The children are making average progress.

WARRAGUBBA

WARRAGUBRA (N.-V.) :—Inspected, 1st September, 1874.

Enrolled :—Boys, 14 ; girls, 9 ; total, 23.
Present :—Boys, 14 ; girls, 9 ; total, 23.

1. The building is in good order, and there is a sufficient supply of furniture, apparatus, and materials. 2. The discipline has improved. 3. The mark for reading and writing is up to the average ; that for dictation, object lessons, grammar, geography, and arithmetic, below. The general proficiency is *tolerable*.

WYNDHAM (V.) :—Inspected, 15th September, 1874.

Enrolled :—Boys, 4 ; girls, 13 ; total, 17.
Present :—Boys, 2 ; girls, 10 ; total, 12.

1. Since last inspection a residence has been put up for the teacher. The material condition of the school is in all respects satisfactory. 2. The discipline is very lax ; the children appear to talk at pleasure. 3. The mark for reading is up to the average ; that for all other subjects is below. The general proficiency is *moderate*.

J. C. MAYNARD,
Inspector, Braidwood District.

CAMDEN DISTRICT.

INSPECTOR'S Annual Report for 1874.

I HAVE the honor to submit my annual report for the year 1874. The information contained therein relates to the adequacy of the means of education in the district as regards amount and distribution, the efficiency of the schools inspected, their material condition, organization, and general discipline, the subjects of instruction, moral training, progress of the pupils in learning, and prospects as to future usefulness.

SCHOOLS IN THE DISTRICT.

There are 106 schools in the Camden District, attended during the year by 7,339 scholars, being an increase of ninety pupils since last year. The following statement shows the number of each class of schools on 31st December, and the attendance of scholars :—

45 Public Schools, attended by 2,780 pupils ; average for each school 61.			
21 Provisional	577	"	27.
8 Half-time	127	"	15.
14 Church of England	954	"	68.
14 Roman Catholic	817	"	58.
3 Presbyterian	138	"	46.
1 Wesleyan	56	"	56.

Applications were received and entertained by the Council for the establishment of Public Schools at Gerringong and Campbelltown, and the erection of the buildings will shortly be commenced. Provisional Schools were opened at Sugarloaf Hill, Barrengarry, and Bellawongarah. An application for aid to a Public School at Forest Lodge, near Cambewarra, was not entertained, being too near other schools, and two others, for Provisional Schools, at Woodhill and Broughton Vale, are under consideration. At the close of the year the certificates were withdrawn from the Church of England School at Narellan and the Presbyterian School at Dapto, in accordance with the 28th section of the Public Schools Act, the average attendance of pupils being less than thirty. As regards the amount and distribution of the means of education in the district, I am of opinion that, with the exception of a few very sparsely settled localities, the schools are fairly distributed among the settlers, but in several places the number is in excess of the wants of the people. At Camden, Liverpool, Koggerah, Wollongong, and Jamberoo, there are three schools at each place, and at Appin, Dapto, Bulli, Bankstown, Wilton, Monangle, Brownlow Hill, and Charcoal Creek, there are two schools at each place. One school in each of these localities would be sufficient, and therefore thirteen schools centrally situated would supply the means of education now afforded by thirty-one schools under present arrangements. At Campbelltown there are three schools ; but two of them will be closed when the Public School buildings are completed. In most cases the Council of Education has no power to reduce the number of schools, because the Public Schools Act provides for the support of two, three, or four existing schools in the same locality, so long as the required average number of thirty scholars is maintained at each.

CONDITION OF THE SCHOOLS INSPECTED.

I inspected eighty-eight of the schools in the district during the year, viz. :—

40 Public,
16 Provisional,
2 Half-time,
13 Church of England,
13 Roman Catholic,
3 Presbyterian, and
1 Wesleyan.

As regards the actual condition of the schools, taking into consideration all matters of organization, discipline, and instruction, for which the teachers are responsible, the following statement shows the efficiency of the schools inspected :—

1 school is very good,
2 schools are good,
26 " very fair,
26 " fair,
32 " tolerable, and
1 school is moderate.

From this statement it can be easily shown that the average proficiency is fair for all the schools inspected, and one grade above the results for last year. The average proficiency for the schools inspected last year was only tolerable ; but for this year the results are fair. In looking over the summaries of the reports in the detailed statement appended, it may be observed that the condition of nearly all the Public and Denominational Schools is fair, or very fair, and tolerable for the Provisional and Half-time Schools. With two or three exceptions, all the schools inspected have been managed with more success than last year. The scholars give evidences that intellectual culture is in progress, and generally speaking they are more alive than formerly, quicker to perceive, more inquiring, and in the better schools full of vigorous mental effort. The Council's rules relative to punctuality, cleanliness, and order, receive a considerable amount of attention. In nearly all the schools the cleanliness is satisfactory, but in some cases the late pupils are not inspected before taking their seats. The order is generally creditable, and the punctuality has been much improved. The scholars are obedient, attentive to their lessons, and respectful in their manners. The irregularity in the attendance continues to be a source of complaint among teachers ; but on the whole, the attendance for the year was very fair, being 70 per cent. of the number of pupils enrolled. No allowance is made for sickness or wet weather, and nothing counts as attendance but the actual presence of the pupil. By reckoning the averages in this strictly correct and proper manner, they

they do not show the usual attendance of the pupils in fine weather, wet weather, or when the children are suffering from any epidemic. The object of all statistics is to put facts before the public, from which useful information may be gathered. There are many causes which reduce the attendance of children at school, but in calculating the averages there would perhaps be some advantage in giving the attendance under three phases. In the coast district and table lands of New South Wales, there are not less than eighty wet school days, which reduce the attendance of scholars very considerably, and children are frequently suffering in one part or another from some epidemic. It would perhaps be interesting if the averages were given separately for the dry days, the wet days, and the days when sickness prevails among the scholars. From these results the average for every school day could easily be found.

Of the forty Public Schools inspected, twenty-nine are vested, and eleven non-vested. Five of the vested buildings are constructed of stone, seven of brick, and seventeen of wood. With very few exceptions, the buildings are in good repair. In almost every instance there are suitable playgrounds, out-buildings, and a comfortable residence for the teacher; but for many of the schools lavatories and weathersheds have not been provided. The school grounds, with two exceptions, are all fenced, and the furniture, apparatus, and books are in almost every instance quite sufficient. The vested school buildings are generally sufficient in size, well furnished, and properly ventilated. During the year improvements and important repairs have been made to the schools at Kiama, Toolejoona, Albion Park, Camden, Bulli, Broughton Village, Cumbewarra, Glenmore, Liverpool, Violet Hill, and Wollongong, and the material condition of these schools has been much improved. Of the sixteen Provisional Schools inspected only one is held in a church; two of the schoolhouses are built of brick and fourteen of wood. The buildings are all in passable repair, and the supplies of apparatus and books are generally sufficient; but the furniture is in several cases of an unsuitable kind. The playgrounds are often not enclosed, closets are sometimes wanting, and generally there is no residence for the teacher. The material condition however of the Provisional Schools is improving. As regards the thirty Denominational Schools visited, eight are held in churches. With very few exceptions the buildings are all in fair repair, but in eight cases there is no residence for the teacher. Five of the schoolhouses are of stone, nine of brick, and sixteen of wood. The school-grounds are all fenced, with three exceptions. During the year a Church of England school was erected at Liverpool, and repairs and improvements made to the Church of England schools at Camden, Canterbury, and Macquarie River; and to the Roman Catholic schools at Dapto, Camden, Irishtown, and Menangle; and the Presbyterian school at Charcoal Creek. The supplies of furniture, apparatus, and books are sufficient, and the material condition of all the Denominational Schools is fairly satisfactory.

QUALIFICATIONS OF THE TEACHERS.

There were employed in the Schools of the district at the close of the year:—

102 Teachers,
6 Assistants,
15 Pupil teachers, and
2 Sewing mistresses,
83 are males and
42 females,
62 employed in Public and
38 in Denominational Schools,
21 in Provisional, and
4 in Half-time schools,
64 teachers are married, and in
60 schools their wives teach needlework.

A considerable number of promotions and removals of teachers were made during the year, the result of which has been an improvement in the management of the schools. The teachers are, as a body, exemplary in their conduct, anxious for improvement, patient, industrious, and painstaking in the performance of their important and arduous duties. The following statement shows their classification:—

1 First-class,
20 Second-class,
55 Third-class, and
26 Probationers.

The probationary teachers are all, with two exceptions, employed in the Provisional and Half-time Schools; and in the Public and Denominational Schools there are only twenty-four teachers liable to be examined under Article 37 of the Regulations.

There is scarcely any position under the Government which tends more directly to improve the social well-being of the community than that of the teacher. A good school prevents crime, adds to the security of property, and forms the manners and character of the people. A teacher has much in his power for good or evil, and a great deal of the respect given to his office depends upon himself. "A good schoolmaster," said a Minister of Public Instruction in France, "is a man who ought to know a great deal more than he teaches, in order to teach with intelligence and taste. He must have an elevated mind, to enable him to preserve that dignity of sentiment and manners without which he will never obtain the respect and confidence of parents. He must possess a rare mixture of mildness and firmness, and aware of his rights, he thinks more of his duty, and sets a good example to all."

THE PUBLIC SCHOOL SYSTEM.

The education of the people is so important to the community at large that we cannot devote too much attention to the subject. Civilization and progress demand that every child should acquire the knowledge which is indispensable in social life, and without which intelligence languishes and degenerates. Liberty is certain and steadfast only among people sufficiently enlightened to listen to the voice of reason. A good system of public instruction is one of the best guarantees of order, morality, and social stability. The Public School system of New South Wales has much to recommend it to educationists. One cannot help observing the comprehensiveness of its leading features, and their adaptability to the circumstances of the country. The system is moral, for it inculcates daily a love of truth, honor, justice, and moderation. It is social, for it brings persons of all classes, persuasions, and politics together, to trade together, to legislate together, and sustain one another. It is national, for it prepares the children who attend the schools to be good citizens, obedient to the laws, and loyal to the Sovereign. It is utilitarian, for it encourages economy and industry; rational, for it teaches youth to look for what is true in science and art, and opens the wide universe for contemplation. It is religious, inasmuch as it inculcates a love and fear of God, and a reverence for His name and works, and affords ample opportunities to all children for obtaining separate special religious instruction to make them acquainted with the doctrines and discipline of the Church to which they belong. Such are the principles and the scope of the Public School system, and it only requires the co-operation of all parties to make them permanently effective. The education of a country is usually said to be conducted upon a certain system, and we read and hear of different systems, as the Prussian system, the Dutch system, the English system, the Irish system, the French and American systems. In nearly all such cases the appellation system refers to different objects in the principles of education. Most people when they speak of the word system, instead of referring to a combination of parts, generally apply it to some one idea or characteristic. The peculiar feature of the Prussian system is the compulsory attendance of children at school; of the Dutch system, an elaborate plan of school inspection; of the French system, the great University of France with its Imperial Council of Public Instruction; and to speak of the Irish system is to bring to mind the principle that no child should be compelled to receive any religious instruction of which its parents or guardians disapprove.

No

No doubt every system of school instruction has its characteristic; but the characteristic ought not to be regarded as the system. The Public School system of New South Wales is perhaps more systematic in its parts and working than any other scheme of public instruction. The course of secular teaching, the class-books in use, the classification of the pupils, the organization, the discipline, the inspection, the methods of tuition, the examination of the teachers, their classification and promotion, and the plans of the school buildings, are carried out with the same uniformity of principle in all schools as far as practicable.

FREE SCHOLARS.

It has been frequently remarked that free education is not so much appreciated as that which is paid for, and that if education were paid for wholly by the State it would lessen the self-reliance and independence of the people, and foster a spirit of pauperism. At the present time two-thirds of the education of the people are paid from the public revenue, and no such results have followed. These ideas arise in the minds of those who associate free education with pauperism, the children of the poor being usually educated free; but as each person would pay his quota of the educational expense, he would soon see that the abolition of school fees would not make education free, but merely alter the mode of payment. The fees would be paid as taxes, and the Government would pay the schoolmaster. In schools where half, and in some cases more than half, the pupils are taught free, it is a heavy loss to the teacher, and a loss he has no right to sustain. The people of the Colony have accepted free education to a large extent many years ago, and as it does not appear in any way objectionable to make roads and railways, erect bridges, build gaols and court houses, and do many other works wholly at the public expense, I can see no good reason why the cost of public instruction, the most important and useful of all public works, should not be wholly paid by the State. Education cannot be free—it must be paid for by the people; but the mode of payment in this case is of vital importance. Society has rights, and one is that all children should be educated, to enable them to be intelligent, peaceful, honest, and useful colonists; but before education can be universally diffused, or the teacher raised to his proper position, I am of opinion that the payment of school fees must be discontinued and the salaries of teachers paid wholly from the public funds. At the close of the year there were 908 free scholars attending the schools in the Camden District, but it is not quite correct to call these children free scholars, because their parents pay two-thirds of the cost of their education in the shape of taxation.

The following statement shows the number of scholars who pay no school fees at each class of schools:—

Public Schools	444 scholars.
Provisional.....	193 "
Half-time	38 "
Church of England	91 "
Roman Catholic	123 "
Presbyterian	12 "
Wesleyan	7 "

If these pupils had paid the usual school fee of sixpence each per week during the year, it would have, allowing a month for holidays, augmented the income of the teachers by £1,080 12s. The teachers also suffer considerable loss by some parents not paying the school fees promised.

CHILDREN NOT ATTENDING SCHOOL.

When I inspected each school I made careful inquiry as to the number of children of the educable ages in each locality not receiving school instruction, and I found that there were about 1,100 children in the Camden District not attending school. The average attendance of the scholars enrolled is 70 days per cent. It appears, therefore, that one-sixth of the children of the educable ages in the district are not attending school, and the scholars enrolled are absent about one-third of the school days. This non-attendance and irregularity are very injurious in many ways. The progress of the regular scholars is retarded, the public funds are largely wasted, the work of education is hindered, the discipline is injuriously affected, and the teachers are discouraged and embarrassed in their efforts. The irregular scholars make little or no progress, the country pays two-thirds of the cost of their education, and they get but little or no education. Non-attendance and irregularity should be prevented to a certain extent. No doubt parents have control over their children, but this control is limited. No parent has a right to poison his child, nor to deprive him of food or clothing, and he should not be permitted to allow his child to grow up without school education. It is apparently a hardship for the poor to be compelled to lose the services of their children for a portion of the year; but it is also a hardship for the rich to pay for schoolhouses and teachers, and after all their money is not accomplishing the object for which it was exacted. Although ability to read and write is said to add 25 per cent. to the wages of the working classes, no man ought to keep any one in ignorance for the sake of cheap labour. Martin Luther's opinion on this subject is worthy of notice:—"If a State, in time of war, can oblige its citizens to take up the sword and musket, has it not still more the power, and is it not its duty, to compel them to instruct their children, since we are all engaged in a most serious warfare, waged with the spirit of evil, which rages in our midst? It is my desire, above all things, that every child should go to school or be sent there by a magistrate."

Cousin, in his "Account of German Schools," says,—

"Those who argue against the expediency of universal education are not deserving of an answer. Those who, admitting this, maintain that the supply of education should, like other articles of industry, be left to follow the demand, forget that here demand and supply are necessarily coexistent and coextensive; that it is education which creates the want which education alone can satisfy. Those, again, who, conceding all this, contend that the creation and supply of this demand should be abandoned by the State to private intelligence and philanthropy, are contradicted both by reasoning and fact. All experience demonstrates this. No countries present a more remarkable contrast in this respect than England and Germany.

"In the former, the State has done nothing for the education of the people, and private benevolence more than has been attempted elsewhere; in the latter, the Government has done everything, and has left to private benevolence almost nothing to effect. The English however are the lowest, and the German people the highest, in the scale of knowledge. All that Scotland enjoys of popular education above the other kingdoms of the British Empire she owes to the State; and among the principalities of Germany, from Prussia down to Hesse-Cassel, education is uniformly found to prosper exactly in proportion to the unremitting watchfulness of the Government."

The first feeling that generally arises in the mind of a British subject when he is told that "education should be compulsory" is, that it deprives him of the right and freedom he ought to enjoy under the Constitution, to educate his children as he pleases, a little, or not at all, so that to compel him to educate them appears to be a grievance. There is no doubt but this feeling arises from ignorance of the importance of the question at issue. He does not see that education is protection; it does not appear to him that crime costs more than education; he does not know that education is economy in the public expenditure, not to speak of the social advantages that a good education confers on the community. The United States Commissioner of Education reports that barely one-fifth of 1 per cent. of the crime committed in the country is committed by those who are educated; on the other hand, he says that at least 80 per cent. of all the crime is committed by those who have received no education, or so little that it is valueless for the purposes of life. Compulsory education has enabled Germany and Prussia to disseminate intelligence among the whole people, which we are told is the secret of the recent brilliant victories over France. It is generally admitted that knowledge is power, and that the candidates for prisons and poor-houses are diminishing in proportion as education is diffused among the people.

Dr.

Dr. Fraser, the Bishop of Manchester, in his address at the opening of the new schools at Eccleston, near Preston, in August, 1874, is reported to have said,—“That the state of education was most unsatisfactory and discreditable, and until they could get a more regular uninterrupted attendance from the children, he was afraid they would not be able to wipe away the disgrace that existed among them. If parents would not make the sacrifice voluntarily, he really thought the State ought to step in, *in loco parentis*, and bring to a higher level the present inadequate and miserable amount of culture and education.”

I think most persons who have studied this question carefully will admit that compulsory education is necessary to a certain extent. Many persons cherish the opinion that compulsory education would prevent all the irregularities in the attendance of children at school, and bring all children of the educable ages under instruction, but this is more than could be accomplished. It would be very useful no doubt in compelling some children to attend school, who receive no education under present arrangements, and it could secure a more regular attendance of the scholars enrolled, but it is evident no law could compel children to attend school when they are suffering from sickness, in times of floods, or where there were no schools within a reasonable distance to attend.

Compulsory laws are powerless to secure the attendance at school of children destitute, or limited in the means of subsistence.

School-houses, apparatus, books, teachers, and a compulsory enactment may all be provided; but the pauper and the large family with small means are excluded by necessity from a share in the privileges offered. Germany does not overlook this phase of the case. Means are provided for transforming poor children from their condition of misery and degradation to a condition of neatness and wholesome respectability.

In his description of a visit to a German school, Mr. Kay says,—“The teacher made the children stand up one after another and tell me who their parents were. From them I learned that two were the sons of counts, one of a physician, one of an officer of the royal household, one of a porter, and others of mechanics, artisans, and labourers, who were too poor to pay for their children's education, and whose children were clothed and educated at the expense of the town. In their manners, dress, cleanliness, and appearance, I could discern no striking difference.”

If a practical enactment were passed by the Legislature to the effect that all children of the educable ages, say from six to fourteen years, within 3 miles of a school, should attend school not less than eighty days in each half-year until ten years of age, and sixty days from ten to fourteen years, under a penalty, or the parents to satisfy the authorities that the children were receiving education at home, I think it would increase the number of scholars attending the schools under the Council of Education about 10,000. There would then be perhaps about 7,000 or 8,000 children to whom compulsion could not be applied.

The children not attending school could be easily ascertained by the police officer of the district inspecting the roll books of the schools. The law would require to be carried out in a kind and considerate spirit. The late Prince Consort said,—“This is a delicate question, and it will require the nicest care in handling.”

General Hazen says,—“In Saxony the number of years of compulsory instruction is eight, and for each day missed a day is added, which must be made up before the parent can have control over his child's time. This seems to have worked better than the system of fines.”

An enactment of the Legislature making education compulsory, even if it were not applied with strictness for a time, would be productive of much good.

COST OF EDUCATION.

The total number of scholars who attended the schools in the district in the year was 7,339; and the total annual salaries of the teachers, and cost of inspection and school materials amount to £10,395. Now, if the grants made by the Council for permanent improvements and the erection of school buildings are not taken into account, it will then follow that each pupil who attended the schools in 1874 cost the Council £1 8s. 4d. The total amount of school fees paid during the year was £3,598 11s. 10d., and it follows that the average fee paid by each scholar was 9s. 9½d. Total cost for each pupil, £1 18s. 1½d. From this statement it appears that the Council pays about three-fourths of the cost of each child's education, and the people about one-fourth.

CONCLUDING REMARKS.

The material condition of many of the schools has been improved, and new buildings, repairs, and improvements are in progress. The organization, discipline, and instruction of the schools generally are more satisfactory. The instruction is better arranged, more efficient and progressive in its character. The local supervision of a number of the schools is beneficial; but with regard to many, very little active interest is taken in school matters. Additional schools have been opened, some of the small Denominational Schools have been closed, and the number of pupils has been increased. The demand for well qualified teachers is on the increase; and the total abolition of school fees would, I think, be received by teachers and people as a great boon. Compulsory education would be very beneficial, but it could not be universally applied in this Colony, owing to the sparse nature of the population. There are very few places in the district where schools are required. A summary of my reports upon schools inspected is hereunto appended.

W. MINTYRE,
Inspector, Camden District.

CAMDEN DISTRICT.

SUMMARY of Reports for 1874.

THE following remarks are abridged statements of my detailed reports upon the condition of the Public, Provisional, and Half-time Schools inspected by me during the year 1874. The remarks chiefly relate to the material condition and organization of the schools, the general discipline and moral training, the subjects and methods of instruction, and the progress of the pupils in learning:—

PUBLIC SCHOOLS.

APPEL (V.) :—Visited, 22nd July.

Pupils enrolled :—Boys, 25; girls, 18; total, 43.
At examination :—Boys, 25; girls, 16; total, 41.

A bell and lavatories are still required, and the walls of the closets are in need of repairs, but otherwise the material condition of the school is good. The pupils are not all sufficiently punctual, but in other respects the discipline is passable. The classification of the children is more appropriate than formerly, and the instruction is now systematically arranged. The average attendance of the pupils enrolled is about 62 days per cent. There are no free scholars. The teacher states that he is not aware of any educable children in the neighbourhood not attending school. The management is fairly satisfactory in most respects. The pupils answered 58 per cent. of the questions asked at the examination.

ASHFIELD (N.-V.) :—Visited, 17th December.

Pupils enrolled :—Boys, 40; girls, 23; total, 63.
At examination :—Boys, 27; girls, 11; total, 38.

The material condition of this school is bad, but the Local Board is making arrangements for the erection of suitable school buildings. The instruction and general discipline are satisfactory. The average attendance

attendance of the children enrolled is about 66 days per cent. There are four free pupils. It appears there are not over ten children of the educable ages in the neighbourhood not attending school. So far as examined, the pupils answered about 70 per cent. of the questions asked, and the attainments are very fair.

AVONDALE (V.) :—Visited, 21st October.

Pupils enrolled :—Boys, 28 ; girls, 25 ; total, 53.
At examination :—Boys, 23 ; girls, 18 ; total, 41.

Lavatories, weather-sheds, and repairs to the buildings are required. The general discipline has been improved since last inspection. All the ordinary subjects of instruction are taught except singing, and the teaching is conducted with industry and care. The average attendance of the children enrolled is about 66 days per cent. There are sixteen free pupils. It appears that twenty children of the educable ages in the neighbourhood are not attending school. About 70 per cent. of the questions asked at the examination were answered. The attainments of the pupils are very fair.

ARBION PARK (V.) :—Visited, 23rd October.

Pupils enrolled :—Boys, 50 ; girls, 44 ; total, 94.
At examination :—Boys, 41 ; girls, 36 ; total, 77.

A weather-shed is required, and some small repairs to the roof of the residence ; but in all other respects the material condition of the school is good. The general discipline is satisfactory, and the progress of the pupils in learning for the time under instruction is very creditable to the teacher. The average attendance of the children enrolled is about 68 days per cent. There are fifteen free pupils. It appears upon inquiry that all the educable children in the place are under instruction. About 73 per cent. of the questions asked at the examination were answered. The attainments of the pupils are above very fair.

BURKELEY (V.) :—Visited, 16th October.

Pupils enrolled :—Boys, 23 ; girls, 14 ; total, 37.
At examination :—Boys, 16 ; girls, 11 ; total, 27.

A weather-shed, lavatories, and repairs to the buildings and fencing are required. The general discipline and instruction have been considerably improved during the year. Singing is not taught. There are five free pupils. It appears upon inquiry that there are seven children of the educable ages in the neighbourhood not under school instruction. The average attendance of the children enrolled is about 62 days per cent. 70 per cent. of the questions asked at the examination were answered, and the progress of the pupils in learning is very fair.

BOOLONG (N.V.) :—Visited, 19th March.

Pupils enrolled :—Boys, 34 ; girls, 30 ; total, 64.
At examination :—Boys, 23 ; girls, 23 ; total, 56.

Lavatories, weather-sheds, a book-press, and fencing are required. The residence is too small, but in other respects the material condition of the school is passable. The general discipline is satisfactory, and the instruction is well regulated. Singing is not taught. The average attendance of the children enrolled is 66 days per cent. There are no free pupils. It appears, upon inquiry, that there are nine children of the educable ages in the neighbourhood not receiving school instruction. 70 per cent. of the questions asked at the examination were answered, and the attainments of the scholars are very fair.

BRANDON HILL (V.) :—Visited, 3rd December.

Pupils enrolled :—Boys, 32 ; girls, 22 ; total, 54.
At examination :—Boys, 32 ; girls, 19 ; total, 51.

The buildings are new, substantial, and good ; but a weather-shed, lavatories, and a supply of water are required. The general discipline is satisfactory, and the instruction is well regulated. Singing is not taught. There are six free pupils. It appears, upon inquiry, that all the children of the educable ages in the neighbourhood are under instruction. The average attendance of the children enrolled is 66 days per cent. 70 per cent. of the questions asked at the examination were answered, and the progress of the pupils in learning is very fair.

BROUGHTON CREEK (N.V.) :—Visited, 12th March.

Pupils enrolled :—Boys, 58 ; girls, 58 ; total, 116.
At examination :—Boys, 52 ; girls, 53 ; total, 105.

Lavatories, weather-sheds, and a class-room are required, and the schoolroom needs painting. The general discipline is satisfactory, and the instruction is well regulated. All the subjects prescribed by the Council are taught. The average attendance of the children enrolled is 66 days per cent. There are six free pupils. It appears, upon inquiry, that there are seven children of the educable ages in the neighbourhood not under instruction. 70 per cent. of the questions asked at the examination were answered, and the progress in learning is very fair.

BULLI (V.) :—Visited, 5th August.

Pupils enrolled :—Boys, 44 ; girls, 53 ; total, 97.
At examination :—Boys, 38 ; girls, 45 ; total, 83.

Weather-sheds, a lavatory for the girls, the painting of the buildings, and some small repairs to the plastering of the residence are required. The discipline is effective, and the instruction is well regulated. Singing is not taught. The average attendance of the children enrolled is 67 days per cent. There are four free pupils. It appears there are twenty-one children of the educable ages in the neighbourhood not under instruction. About 80 per cent. of the questions asked at the examination were answered. The attainments of the pupils are good.

BROUGHTON VILLAGE (V.) :—Visited, 6th March.

Pupils enrolled :—Boys, 28 ; girls, 27 ; total, 55.
At examination :—Boys, 24 ; girls, 23 ; total, 47.

The material condition of the school is good, and the general discipline is satisfactory. Singing is not taught. The average attendance of the scholars enrolled is 75 days per cent. There are seven free pupils, and about nineteen children of the educable ages in the locality not receiving school instruction. The pupils answered, so far as examined, about 70 per cent. of the questions asked, and the attainments are very fair.

NORTH BULLI (V.) :—Visited, 7th August.

Pupils enrolled :—Boys, 9 ; girls, 9 ; total, 18.
At examination :—Boys, 9 ; girls, 8 ; total, 17.

Lavatories and a weather-shed are required, but in all other respects the material condition of the school is good. The population has not increased since last year. There are no free pupils. The general discipline is fairly satisfactory. All the subjects of instruction prescribed are taught except singing. The average attendance of pupils is 66 days per cent. It appears there are seven children of the educable ages in the neighbourhood not attending school. About 65 per cent. of the questions asked at the examination were answered, and the attainments are above fair.

BUNDYWALLA (V.) :—Visited, 10th March.

Pupils enrolled :—Boys, 16 ; girls, 17 ; total, 33.
At examination :—Boys, 16 ; girls, 17 ; total, 33.

Lavatories and a weather-shed are wanting, the rooms of the residence require ceiling, and the schoolroom needs a fireplace. The discipline is satisfactory. Singing is not taught. The average attendance of the children enrolled is 75 days per cent. There are no free pupils. I find there are seven children of the educable ages in the neighbourhood not under school instruction. 60 per cent. of the questions asked at the examination were answered, and the progress of the scholars is fair.

CAMDEN (V.) :—Visited, 1st May.

Pupils enrolled :—Boys, 25 ; girls, 21 ; total, 46.
At examination :—Boys, 22 ; girls, 20 ; total, 42.

The buildings have been recently repaired, and the material condition of the school is reasonably good. The children are clean and orderly, attentive to their work, and nearly all punctual. The average attendance of the pupils enrolled is 68 days per cent. There are no free pupils. It appears there are seven children of the educable ages in the neighbourhood not attending school. 70 per cent. of the questions asked at the examination were answered, and the attainments of the scholars are very fair.

CAMDEWARRA (V.) :—Visited, 17th March.

Pupils enrolled :—Boys, 38 ; girls, 35 ; total, 73.
At examination :—Boys, 34 ; girls, 29 ; total, 63.

Lavatories, weather-sheds, and two additional rooms to the teacher's residence are required, but otherwise the material condition of the school is reasonably good. The general discipline is effective, and the instruction is properly regulated. The average attendance of the pupils enrolled is 70 days per cent. It appears that twelve children of the educable ages in the neighbourhood are not attending school. There are six free scholars. About 67 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are nearly very fair.

CAWDOR (N.-V.) :—Visited, 8th June.

Pupils enrolled :—Boys, 35 ; girls, 34 ; total, 69.
At examination :—Boys, 24 ; girls, 28 ; total, 52.

Hat-pegs, lavatories, and a weather-shed are required, but in all other respects the material condition of the school is good. The general discipline is satisfactory. Singing is not taught. The average attendance of the children enrolled is 66 days per cent. There are thirty-two free pupils. I find there are twenty-five children of the educable ages in the neighbourhood not under school instruction. 70 per cent. of the questions asked at the examination were answered, and the proficiency of the scholars is very fair.

COOLANGATTA (N.-V.) :—Visited, 20th March.

Pupils enrolled :—Boys, 27 ; girls, 23 ; total, 50.
At examination :—Boys, 19 ; girls, 20 ; total, 39.

The schoolroom is rather small, and lavatories and weather-sheds are required ; but otherwise the material condition is passable. The general discipline is fairly satisfactory. Singing is not taught. The average attendance of the pupils enrolled is 75 days per cent. There are no free pupils, but it appears that seven children of the educable ages in the neighbourhood are not attending school. 63 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are above fair.

FAIRY MEADOW (V.) :—Visited, 18th September.

Pupils enrolled :—Boys, 32 ; girls, 33 ; total, 65.
At examination :—Boys, 21 ; girls, 21 ; total, 42.

Another desk, lavatories, a weather-shed, and new closets are still required. The general discipline is satisfactory, and the school exhibits progressive improvement. The average attendance of the children enrolled is 60 days per cent. There are six free pupils. It appears that twenty-two children of the educable ages in the neighbourhood are not under instruction. About 70 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is very fair.

GLENMORE (V.) :—Visited, 5th February.

Pupils enrolled :—Boys, 21 ; girls, 20 ; total, 41.
At examination :—Boys, 17 ; girls, 15 ; total, 32.

Lavatories and a weather-shed are required, but in all other respects the material condition of the school is good. The general discipline is still lax. The average attendance of the children enrolled is 67 days per cent. It appears there are only three children of the educable ages in the neighbourhood not attending school. There are ten free scholars. About 50 per cent. of the questions asked at the examination were answered, and the proficiency of the scholars is tolerable.

GLEDSDWOOD (V.) :—Visited, 6th May.

Pupils enrolled :—Boys, 13 ; girls, 9 ; total, 22.
At examination :—Boys, 11 ; girls, 9 ; total, 20.

Some small repairs to the buildings are required. The general discipline has been much improved during the year. Singing and drawing are not taught. The average attendance of the children enrolled is 66 days per cent. There are three free pupils. It appears that seven children of the educable ages in the neighbourhood are not under instruction. 57 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are nearly fair.

JAMBEROO (V.) :—Visited, 24th November.

Pupils enrolled :—Boys, 25 ; girls, 20 ; total, 45.
At examination :—Boys, 18 ; girls, 14 ; total, 32.

The residence is small, lavatories and weather-sheds are required, and the inside walls of the schoolroom are in much need of colouring. The roof of the classroom is leaky, and all the buildings require painting. The general discipline is satisfactory. All the subjects prescribed by the Council are taught. The average attendance of the children enrolled is 77 days per cent. There are no free pupils. It appears that there are seven children of the educable ages in the neighbourhood not attending school. 70 per cent. of the questions asked at the examination were answered. The proficiency of the pupils is very fair.

KIAMA (V.) :—Visited, 30th November, and 1st and 2nd December.

Pupils enrolled :—Boys, 150 ; girls, 88 ; total, 238.
At examination :—Boys, 129 ; girls, 79 ; total, 208.

Owing to the increased attendance of pupils the schoolroom is too small. A weather-shed for the boys, a lavatory for the girls, and a separate schoolroom for the younger children are much needed. The general discipline is satisfactory. In addition to the ordinary subjects, the elder boys are well advanced in Latin, algebra, and geometry. The teachers are very industrious, skilful, and most energetic in the performance of their duties. The school is managed with much success and efficiency, and it is highly beneficial to the district. There are four free pupils. The average attendance of the children enrolled is 66 days per cent. Upon inquiry, it appears there are about twenty children of the educable ages in the town and vicinity not under school instruction. 90 per cent. of the questions asked at the examination were answered, the writing and needlework are excellent ; a number of the elder boys and girls have passed the University Public Examinations, and the attainments of the pupils are very good.

KANGAROO

KANGAROO VALLEY (V.) :—Visited, 3rd March.

Pupils enrolled :—Boys, 21 ; girls, 19 ; total, 40.

At examination :—Boys, 9 ; girls, 6 ; total, 15.

A lavatory and a weather-shed are required, but in all other respects the material condition of the school is good. About one-third of the scholars are not sufficiently punctual, and the want of a bridge on the Kangaroo River causes the attendance to be very irregular ; but the order, cleanliness, and attention are passable. Singing and drawing are not taught. The small number of pupils present was caused by the recent rains and floods. The average attendance of the pupils enrolled is about 55 days per cent. There are six free pupils, and about forty children of the educable ages in the neighbourhood not under school instruction. Since my inspection a Provisional School has been opened in the locality, about four miles distant from the Public School, where thirty-one of the children hereinbefore mentioned as not under tuition now attend. About 50 per cent. of the questions asked at the examination were answered. The management of the school is unsatisfactory. The teacher has been indiscreet in taking an active part in local matters which he should have avoided. He has since been removed.

MARSHALL MOUNT (V.) :—Visited, 22nd May.

Pupils enrolled :—Boys, 23 ; girls, 27 ; total, 50.

At examination :—Boys, 18 ; girls, 19 ; total, 37.

Lavatories, a weather-shed, and a bell are required. The working materials are sufficient. All the subjects prescribed are taught except singing, and the general discipline is satisfactory. The average attendance of the scholars enrolled is 75 per cent. There are no free pupils, but the teacher states that about fifty children of the educable ages in the neighbourhood do not attend school ; 70 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is very fair.

MEROO (N.-V.) :—Visited, 27th March.

Pupils enrolled :—Boys, 20 ; girls, 26 ; total, 46.

At examination :—Boys, 18 ; girls, 24 ; total, 42.

Lavatories and weather-sheds are required, and the residence is rather small. Singing and drawing are not taught. The pupils are clean, orderly, attentive, and respectful in their manners. The average attendance of the scholars enrolled is 75 days per cent. There are no free pupils, but ten children of the educable ages in the neighbourhood do not attend school ; 53 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are tolerable.

MOUNT KEIRA (N.-V.) :—Visited, 17th September.

Pupils enrolled :—Boys, 43 ; girls, 30 ; total, 73.

At examination :—Boys, 16 ; girls, 16 ; total, 32.

Weather-sheds, closets, lavatories, and a book-press are required ; but the working materials are sufficient. The general discipline is satisfactory. The small number of pupils present was caused by mumps, colds, and sickness, afflicting the children. The average attendance of the pupils enrolled is about 60 days per cent. There are four free pupils, but the teacher is not aware of any children of the educable ages in the neighbourhood not under school instruction. All the subjects prescribed are taught with industry, intelligence, and skill. 65 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is above fair.

MULGOA FOREST (N.-V.) :—Visited, 17th June.

Pupils enrolled :—Boys, 30 ; girls, 14 ; total, 44.

At examination :—Boys, 24 ; girls, 9 ; total, 33.

Lavatories, a bell, and better closets are needed, and the supply of working materials is barely sufficient. All the subjects of instruction prescribed by the Council are taught, and the general discipline is passable. There are thirty-one free pupils and six children of the educable ages not attending school. The average attendance of the pupils enrolled is about 70 days per cent. About 55 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are tolerable.

KOGARAH (N.-V.) :—Visited, 17th April.

Pupils enrolled :—Boys, 26 ; girls, 26 ; total, 52.

At examination :—Boys, 22 ; girls, 24 ; total, 46.

There is no residence for the teacher ; and lavatories, a supply of water, and some additional fencing are required. All the subjects of instruction prescribed by the Council are taught, and the general discipline is fairly effective. The average attendance of the scholars enrolled is 66 days per cent. There are four free pupils, and about forty children of the educable ages in the neighbourhood not under school instruction. 60 per cent. of the questions asked at the examination were answered, and the progress in learning is fairly satisfactory.

LIVERPOOL (V.) :—Visited, 16th July.

Pupils enrolled :—Boys, 48 ; girls, 36 ; total, 84.

At examination :—Boys, 42 ; girls, 25 ; total, 67.

A residence for the teacher, lavatories, and a weather-shed, are still required. The working materials are sufficient. The general discipline is satisfactory. All the subjects of instruction prescribed by the Council are taught. There are no free pupils. About ten children of the educable ages in the locality are not under school instruction. The average attendance of the scholars enrolled is 65 days per cent. About 70 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is very fair.

MERNANGLE (V.) :—Visited, 11th May.

Pupils enrolled :—Boys, 18 ; girls, 20 ; total, 38.

At examination :—Boys, 14 ; girls, 11 ; total, 25.

A clock, lavatories, and a weather-shed are required, but in all other respects the material condition of the school is good. All the subjects of instruction prescribed are taught except singing ; but the methods of tuition are not sufficiently efficacious in their character. The pupils are clean, and tolerably orderly and attentive to their lessons. There are about twelve children of the school ages in the neighbourhood not under instruction. The average attendance of the pupils enrolled is about 66 days per cent., and they are nearly all punctual. There are eight free pupils, whose parents are unable to pay fees. 50 per cent. of the questions asked at the examination were answered, and the attainments of the scholars are tolerable.

PEAKEHURST (N.-V.) :—Visited, 23rd April.

Pupils enrolled :—Boys, 19 ; girls, 23 ; total, 42.

At examination :—Boys, 19 ; girls, 23 ; total, 42.

There is no residence for the teacher, but otherwise the material condition of the school and general discipline are fairly satisfactory. The subjects of instruction are those prescribed by the Council, except singing and drawing. There are two free pupils, and the teacher states that about forty children

children of the educable ages in the neighbourhood are not under school instruction. The average attendance of the children enrolled is 60 days per cent., and nearly all punctual. About 60 per cent. of the questions asked at the examination were answered, and the attainments of the scholars are fair.

PICTON, UPPER (V.) :—Visited, 19th August.

Pupils enrolled :—Boys, 24 ; girls, 17 ; total, 41.
At examination :—Boys, 23 ; girls, 16 ; total, 39.

Lavatories and weather-sheds are required, but otherwise the material condition of the school and general discipline are fairly satisfactory. The working materials are sufficient. All the subjects of instruction prescribed are taught. There are seventeen free pupils, and the teacher states that five children of the educable ages in the neighbourhood are not under school instruction. The average attendance of the scholars enrolled is 75 days per cent. 60 per cent. of the questions asked at the examination were answered. The proficiency of the pupils is fair.

LOWER PICTON (V.) :—Visited, 20th August.

Pupils enrolled :—Boys, 60 ; girls, 53 ; total, 113.
At examination :—Boys, 50 ; girls, 49 ; total, 99.

A lavatory, a weather-shed, and some additional fencing are required. All the woodwork of the exterior of the building needs painting. The boys are well advanced in squad drill, and the general discipline is satisfactory. All the subjects prescribed are taught, and the methods of tuition are intelligent, and applied with zeal and industry. There are twenty-eight free pupils, and about ten children of the educable ages in the neighbourhood not under school instruction. 80 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is good.

TOOLEBOOA (N.V.) :—Visited, 6th March.

Pupils enrolled :—Boys, 61 ; girls, 53 ; total, 114.
At examination :—Boys, 41 ; girls, 44 ; total, 85.

Lavatories, a weather-shed, and a bell are required, but otherwise the material condition of the school is reasonably good. There is a comfortable residence for the teacher, and the supply of school materials is sufficient. The pupils are clean and orderly, attentive to their work, and nearly all punctual. All the subjects of instruction prescribed by the Council are taught except singing. There are only four free pupils. The average attendance of the scholars enrolled is 75 days per cent. There are about twenty children of the educable ages in the neighbourhood not under school instruction. About 58 per cent. of the questions asked at the examination were answered, and the progress of the pupils in learning is nearly fair.

VIOLET HILL (V.) :—Visited, 13th October.

Pupils enrolled :—Boys, 27 ; girls, 29 ; total, 56.
At examination :—Boys, 25 ; girls, 27 ; total, 52.

Lavatories, a bell, a weather-shed, and a water-tank are required. A contract has been made for the erection of a verandah, painting the buildings, and supplying additional desks and forms. The apparatus and books are sufficient, and the general discipline is fairly satisfactory. Singing and drawing are not taught. There are fifteen free pupils, and the average attendance of the scholars enrolled is 77 days per cent. There are fourteen children of the educable ages in the neighbourhood not under school instruction. 63 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are above fair.

WESTBROOK (V.) :—Visited, 4th February.

Pupils enrolled :—Boys, 16 ; girls, 22 ; total, 38.
At examination :—Boys, 11 ; girls, 20 ; total, 31.

The buildings are in fair repair, and there is an adequate supply of working materials, but a weather-shed is required. The pupils are clean, orderly, and attentive to their work. All the subjects prescribed by the Council are taught, and the instruction is well regulated. There are five free pupils, and the average attendance of the scholars enrolled is 75 days per cent. Six children of the educable ages in the neighbourhood are not under school instruction. 70 per cent. of the questions asked at the examination were answered, and the progress of the pupils in learning is very fair.

WOLLONGONG (Boys—V.) :—Visited, 9th December.

Pupils enrolled :—Boys, 42.
At examination :—Boys, 36.

A lavatory is still wanting ; the inside walls of the schoolroom require colouring, and the windows need some repairs. The children are clean, orderly, and attentive to their lessons, and the elder boys are well advanced in squad drill. All the subjects prescribed by the Council are taught. There are only two free pupils, but seven boys of the educable ages in the town and its vicinity are not attending school. The average attendance of the scholars enrolled is 77 days per cent. 67 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is nearly very fair.

WOLLONGONG (Girls—V.) :—Visited, 8th December.

Pupils enrolled :—Girls, 60.
At examination :—Girls, 39.

A lavatory is still wanting ; the inside walls of the schoolroom require colouring, and the windows need some repairs. The working materials are sufficient, and the general discipline is satisfactory. All the subjects of instruction prescribed by the Council are taught. There are seven free pupils, but the teacher is not aware of any girls of the educable ages in the town or its vicinity not under school instruction. The average attendance of the children enrolled is 66 days per cent. 60 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are fair. The small number of children present was caused by sickness.

WOLLONGONG (Infants—V.) :—Visited, 3rd November.

Pupils enrolled :—Boys, 23 ; girls, 24 ; total, 47.
At examination :—Boys, 23 ; girls, 19 ; total, 42.

The inside walls of the schoolroom need colouring, and a lavatory and a weather-shed are much required. The ventilation has been improved since last year, and new out-buildings erected. The general discipline is satisfactory, and all the subjects prescribed by the Council are taught. There are six free pupils, and a considerable number of infant children not attending school in consequence of sickness. The average attendance of the pupils enrolled is about 50 days per cent. About 60 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils so far as examined was fair.

WILTON (V.) :—Visited, 28th July.

Pupils enrolled :—Boys, 29 ; girls, 19 ; total, 48.
At examination :—Boys, 26 ; girls, 18 ; total, 44.

A gate, a weather-shed, a lavatory, a book-press, and a supply of water are required. There is a comfortable residence for the teacher, and the stock of apparatus and books is sufficient. The general discipline is fairly satisfactory in most respects, and all the subjects of instruction prescribed by the Council

Council are taught except singing. There are thirty-five free pupils, but no children of the educable ages in the locality not under school instruction. The average attendance of the pupils enrolled is 60 days per cent. About 60 per cent. of the questions asked at the examination were answered, and the progress of the pupils in learning is fair.

WOODSTOCK (N.-V.) :—Visited, 23rd November.

Pupils enrolled :—Boys, 35; girls, 35; total, 70.

At examination :—Boys, 26; girls, 31; total, 57.

Lavatories, a weather-shed, and some small repairs to the roof of the residence are required. The working materials are sufficient, and the general discipline is satisfactory. All the subjects prescribed by the Council are taught, and the instruction is well regulated. There are ten free pupils, and about thirty children of the educable ages in the neighbourhood not under school instruction. The average attendance of the children enrolled is 74 days per cent. 76 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is considerably above very fair.

PROVISIONAL SCHOOLS.

BARGO :—Visited, 11th February.

Pupils enrolled :—Boys, 11; girls, 10; total, 21.

At examination :—Boys, 9; girls, 9; total, 18.

The school is held in a small wooden building in fair repair. The supply of furniture, apparatus, and books is barely sufficient, but the discipline is passable. Drawing is not taught. There are eight free pupils, and seven children of the educable ages in the locality not under school instruction. The average attendance of the pupils enrolled is 66 days per cent. About 50 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is tolerable.

BARRENGARRY :—Visited, 14th August.

Pupils enrolled :—Boys, 12; girls, 14; total, 26.

At examination :—Boys, 9; girls, 8; total, 17.

This school is held in a small wooden building. A lavatory, closets, a weather-shed, and additional school furniture will shortly be supplied. The general discipline is passable. The school has been only a few weeks in operation, and the children are learning the mere elements of reading, writing, and arithmetic. There are no free pupils, but seven children of the educable ages in the neighbourhood are not receiving school instruction. The average attendance of the pupils enrolled is 66 days per cent. About 50 per cent. of the questions asked at the examination were answered, and the progress of the scholars in learning for the short time under tuition may be estimated as tolerable.

BOMADERRY :—Visited, 18th March.

Pupils enrolled :—Boys, 22; girls, 31; total, 53.

At examination :—Boys, 18; girls, 16; total, 34.

There is no residence for the teacher, lavatory nor weather-shed for the children, and the school furniture is of a bad description. The scholars are clean and orderly, and attentive to their work. All the subjects prescribed are taught except singing. There are three free pupils, and seven children of the educable ages in the locality are not receiving school instruction. The average attendance of the pupils enrolled is 71 days per cent. About 60 per cent. of the questions asked at the examination were answered, and the proficiency of the scholars is fair.

BROWNSLOW HILL :—Visited, 10th June.

Pupils enrolled :—Boys, 11; girls, 16; total, 27.

At examination :—Boys, 10; girls, 14; total, 24.

Fencing, closets, repairs to the schoolroom, hat-pegs, and a book-press are required, but the supply of apparatus and books is sufficient. The discipline is satisfactory. Singing and drawing are not taught. There are twelve free pupils, and ten children of the educable ages in the neighbourhood are not receiving school instruction. The average attendance of the scholars enrolled is 75 days per cent. The pupils answered 60 per cent. of the questions asked at the examination, and the progress in learning is fair.

BULLI MOUNTAIN :—Visited, 7th August.

Pupils enrolled :—Boys, 16; girls, 13; total, 29.

At examination :—Boys, 14; girls, 13; total, 27.

Fencing, closets, a weather shed, a lavatory, a book-press, hat-pegs, a bell, and a fire-place in the schoolroom are required. There is no residence for the teacher, but the supply of books is sufficient. The pupils are unpunctual, but they are clean and orderly. Singing is not taught. There are five free scholars, and seven children of the educable ages in the neighbourhood are not receiving school instruction. The average attendance of the pupils enrolled is 66 days per cent. About 50 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is tolerable.

BROOKS POINT :—Visited, 25th July.

Pupils enrolled :—Boys, 13; girls, 7; total, 20.

At examination :—Boys, 13; girls, 5; total, 18.

Fencing, closets, a lavatory, hat-pegs, and a weather-shed are required. There is no residence for the teacher; but the supply of desks, forms, and working materials is sufficient. The children are clean and orderly, and attentive to their lessons. Drawing is not taught. There are eleven free pupils, and only three children of the educable ages in the place not receiving school instruction. The average attendance of the children enrolled is 75 days per cent. About 50 per cent. of the questions asked at the examination were answered, and the progress of the pupils is tolerable.

CORDEAUX RIVER :—Visited, 14th October.

Pupils enrolled :—Boys, 12; girls, 20; total, 32.

At examination :—Boys, 12; girls, 20; total, 32.

Fencing, a kitchen, closets, a bell, a weather-shed, lavatories, and a book-press are required, but the apparatus and books are sufficient. The discipline admits of considerable improvement. Drawing and singing are not taught. There are fifteen free pupils, and eight children of the educable ages in the locality not receiving school instruction. The average attendance of the scholars enrolled is 70 days per cent. About 45 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils ranges from moderate to tolerable.

MOORTIELDS :—Visited, 22nd April.

Pupils enrolled :—Boys, 26; girls, 13; total, 39.

At examination :—Boys, 26; girls, 12; total, 38.

The schoolroom is built of brick and shingles, and in good repair; but there is no residence for the teacher. The working materials are sufficient, and the general discipline is passable. Needlework and singing are not taught. There are eleven free pupils, and all the educable children in the neighbourhood attend

attend the school. The average attendance of the scholars enrolled is 60 days per cent. About 50 per cent. of the questions asked at the examination were answered, and the proficiency of the scholars is tolerable.

SAGGART FIELD:—Visited, 17th July.

Pupils enrolled :—Boys, 10; girls, 11; total, 21.
At examination :—Boys, 9; girls, 11; total, 20.

A lavatory, a weather-shed, a map of New South Wales, and a supply of Scripture lessons are required. The pupils are clean, orderly, attentive, and nearly all punctual. Drawing is not taught. There are nine free pupils, and about fifteen children of the educable ages in the neighbourhood not receiving school instruction. The average attendance of the pupils enrolled is 66 days per cent. The scholars answered about 50 per cent. of the questions asked at the examination, and their attainments are tolerable.

SUGARLOAF HILL:—Visited, 10th July.

Pupils enrolled :—Boys, 15; girls, 12; total, 27.
At examination :—Boys, 11; girls, 6; total, 17.

The schoolroom is built of weather-boards and shingles, sufficient in size and in good repair. There is a comfortable residence for the teacher. The pupils are clean, orderly, and attentive to their lessons. All the subjects prescribed are taught except singing and drawing. There is only one free pupil; but seven children of the educable ages in the locality are not receiving school instruction. The average attendance of the scholars is 58 days per cent. The children are learning the mere elements of reading, writing, and arithmetic. About 50 per cent. of the questions asked at the examination were answered, and the progress in learning is tolerable.

THERESA PARK:—Visited, 11th June.

Pupils enrolled :—Boys, 12; girls, 23; total, 35.
At examination :—Boys, 11; girls, 18; total, 29.

There is no residence for the teacher. The school-building is constructed of wooden slabs and shingles, and in fair repair; but fencing is still required. The supply of furniture, apparatus, and books is sufficient. Singing and drawing are not taught. There are twenty-eight free pupils, and five children of the educable ages in the neighbourhood not receiving school instruction. The children are clean and orderly, and attentive to their lessons. The average attendance of the scholars enrolled is 66 days per cent. About 50 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is tolerable.

THE DAIRY:—Visited, 16th June.

Pupils enrolled :—Boys, 14; girls, 11; total, 25.
At examination :—Boys, 11; girls, 9; total, 20.

There is no residence for the teacher; hat-pegs, a blackboard, a book-press, and windows for the schoolroom are still required. Singing and drawing are not taught. The average attendance of the pupils enrolled is 60 days per cent. There are fifteen free pupils. All the children of the educable ages in the locality are receiving school instruction, excepting a deaf and dumb boy. The pupils are clean, orderly, and attentive to their lessons. About 50 per cent. of the questions asked at the examination were answered, and the progress in learning is tolerable.

TONGARRA:—Visited, 21st May.

Pupils enrolled :—Boys, 13; girls, 21; total, 34.
At examination :—Boys, 10; girls, 20; total, 30.

There is no residence for the teacher. The schoolroom is built of wood, and in fair repair. The supply of furniture, apparatus, and books is sufficient. Singing is not taught. The cleanliness, order, attention, and manners of the children are satisfactory. The average attendance of the scholars enrolled is 66 days per cent. There are fourteen free pupils, and about twenty children of the educable ages in the locality not receiving school instruction. About 50 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is tolerable.

WATTAMALLA:—Visited, 11th March.

Pupils enrolled :—Boys, 15; girls, 14; total, 29.
At examination :—Boys, 12; girls, 12; total, 24.

Lavatories and a weather-shed are required, and the inside walls of the schoolroom need colouring. Singing and drawing are not taught. The average attendance of the scholars enrolled is 66 days per cent. There are only two free pupils, but twenty children of the educable ages in the locality are not receiving school instruction. The general discipline is passable. About 50 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are tolerable.

WEROMBI:—Visited, 15th June.

Pupils enrolled :—Boys, 9; girls, 20; total, 29.
At examination :—Boys, 7; girls, 17; total, 24.

Hat-pegs, a lavatory, a book press, and fencing are required. There is no residence for the teacher. The schoolroom is built of wooden slabs and shingles, and in good repair. Singing and drawing are not taught. The average attendance of the scholars enrolled is 66 days per cent. The pupils are clean, orderly, attentive to their lessons, and respectful in their manners. There are nineteen free pupils, and only three children of the educable ages in the neighbourhood not receiving school instruction. The pupils answered 50 per cent. of the questions asked at the examination, and their progress is tolerable.

WERRIBEBBI:—Visited, 14th May.

Pupils enrolled :—Boys, 9; girls, 12; total, 21.
At examination :—Boys, 7; girls, 9; total, 16.

The schoolroom is new, constructed of wooden slabs and shingles, and in good repair. There is no residence for the teacher, and lavatories are required. The supply of furniture, apparatus, and books is sufficient. The children are clean, orderly, attentive, and respectful in their manners. There are two free pupils, but no children of the educable ages in the locality growing up without school instruction. Singing, drawing, and object lessons are not taught. The average attendance of the pupils enrolled is 66 days per cent. About 45 per cent. of the questions asked at the examination were answered, and the proficiency ranges from moderate to tolerable.

HALF-TIME SCHOOLS.

BELMORE:—Visited, 24th April.

Pupils enrolled:—Boys, 14; girls, 12; total, 26.
At examination:—Boys, 9; girls, 7; total, 16.

Lavatories, a weather-shed, and a book-press are required, but the schoolroom is in good repair. There is no residence for the teacher, but the working materials are sufficient. The discipline is satisfactory, but singing is not taught. The average attendance of the pupils enrolled is 44 days per cent. There are four free pupils, and eight children of the educable ages in the locality not attending school. 60 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is fair.

ESSEX HILL:—Visited, 24th April.

Pupils enrolled:—Boys, 9; girls, 13; total, 22.
At examination:—Boys, 7; girls, 10; total, 17.

Lavatories, a weather-shed, a bell, a book-press, hat-pegs, and some fencing are required. There is no residence for the teacher, but the supply of apparatus and books is sufficient. The discipline is satisfactory, but singing is not taught. There are four free pupils, and seven children of the educable ages in the neighbourhood not attending school. 50 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are tolerable.

W. M'INTYRE,
Inspector, Camden District.

CUMBERLAND DISTRICT.

INSPECTOR'S General Report for 1874.

SEVERAL changes have taken place during the year in the character of the schools in operation, but there has been no increase in the actual number of schools that have been open for the whole or part of 1874 as compared with that of 1873, the number in each case having been 88. Some schools that have been closed for longer or shorter periods—in certain instances for years—have been re-opened, and others have developed from Provisional to Public, while one has declined, after lingering for years with a small attendance, from a Denominational to a Provisional School. The following, opened during the year, are all examples of schools that were formerly under the supervision of the Council, viz.:—Baulkham Hills, Public (formerly Provisional); McDonald Lower, Public; North Rocks, Provisional; Australian Farm, Half-time; and Wiseman's Ferry, Half-time; the Newington and Haslem's Creek Provisional Schools had aid withdrawn from them, and were replaced by the present Haslem's Creek Public School, and the Regentville Provisional became a Public one, while the Portland Head Presbyterian, after having had the certificate withdrawn from it, received aid immediately on the footing of a Provisional School. A new Public School was built and ready for opening, at the close of the year at Rooty Hill, near which a half-caste population resides, for whose behoof mainly the school has been erected, on special representation of its necessity by gentlemen who take an interest in these people. Steps had also been taken for the conversion of the Parramatta Junction Presbyterian School (the only one in the district) into a Public one, but the establishment had not been effected by the end of the year. The following is a list of the schools that have been in operation during 1874, viz.:—

Public	37
Provisional	15
Half-Time	4
Church of England	18
Roman Catholic	12
Wesleyan	1
Presbyterian	1
Total	88

It may be remarked, however, that the foregoing enumeration does not represent all the schools actually under supervision in the district. At the request of the Minister of Instruction, the Parramatta Orphan Schools, consisting of six departments, were added to the above for inspection *twice* in the year, so that, in reality, there were practically a *hundred* schools requiring examination. In fact, ninety-nine reports on inspections of schools in connection with the district were sent in to the Council for the year.

New and suitable brick schoolrooms have been built during the year for the Richmond and Ryde Church of England Schools. An infant school-room and an additional class-room have been added to the Burwood Public School premises, and there were in course of erection at the end of the year a substantial stone schoolroom and residence for the Lower Portland Public School. The material condition of various schools has been rendered more satisfactory by repairs or additions to the premises, or a more complete or suitable supply of furniture being obtained for the use of the pupils. Among these may be mentioned the Hornsby, Leichhardt, Luddenham, Parramatta, Penrith, and Wallgrove Public Schools, the Richmond Roman Catholic, and the South Creek Church of England Schools.

From the difficulty of obtaining an arrangement for the conveyance of a suitable site, the movement for the rebuilding of the Freeman's Reach Public School is still in abeyance, and no definite action has yet been taken for the erection of suitable premises for the Parramatta South Public, although they are urgently required, as the present accommodation is not merely bad, but of a temporary character. Suitable vested buildings are required at the following places, viz.:—Baulkham Hills, Castlereagh, Five Dock, Grono Park, Haslem's Creek, Kellyville, Lane Cove, St. Albans, and St. Mary's. At the latter place a sum of money has been collected as a local contribution, but not sufficient to meet the requirements of Article 2 of the Regulations, and there have been various vexatious delays, which have hitherto prevented the movement from coming to a conclusion. On the whole, progress has been made in the improvement of buildings and the internal fittings of schoolrooms. Generally speaking, however, there is a marked distinction between the material aspect of Non-vested and Vested Public School premises, the former being of a much less satisfactory character than the latter. Nor is this to be wondered at, seeing that such buildings are provided at the entire cost of the people of the locality, whose first aim is naturally to erect a schoolroom of the cheapest and rudest materials, and at the least possible cost to themselves. In some cases too the structure is built to furnish accommodation for religious service in connection with some denomination, in consequence of which the school, although strictly conducted as a Public one, wears a sectarian look, which militates against its success, and tends to give a false conception of Public School principles to many minds in the community. The only effectual cure for these drawbacks in regard to Public Schools would be to cease to establish any Public Schools but those of a vested kind, in future, and gradually make provision for the conversion of those that are now of the Non-vested class. Some slight improvements have been effected in the material condition of a few of the Provisional Schools, but, taken as a whole, they are only moderately satisfactory in this respect.

The absence of lavatories and weather-sheds in connection with many schools calls for remark. It is very desirable that the latter should be provided, to shelter the children from the heat or inclemency of the weather. For various reasons, it is objectionable that the schoolroom should be used for such purposes during play-hours, and it is to be hoped that the members of School Boards will exert themselves to provide the necessary accommodation by the erection of sheds in the play-ground.

Passing

Passing from these general remarks on the material provision made for education, the distribution of the schools in relation to the educational requirements of the district may next come under notice. On the whole, there are but few localities without a school, or which are not so situated as to be within convenient reach of one. There is no considerable centre of population entirely without the means of education, and it is only in a few places—especially on the Hawkesbury or its affluents—where, on account of the sparseness of the population, small schools are required of the Provisional or Half-time kind. This district, from the comparatively fixed character of its population and its early settlement after the establishment of the Colony, affords little scope now for the extension of the means of education, so far as the establishment of *new* schools is concerned; but educational reform or improvement might be effected in various places by the consolidation of rival schools, which are at present competing with each other to the manifest detriment of education. The advantages of large schools over small ones are, or should be, so apparent to any one who thinks on the subject without bias or sectarian prejudice, that it seems almost superfluous to enumerate them. Few persons will doubt but that such schools are more economical in the matter of salaries, and the cost of apparatus and materials; but this may not be considered a matter of much moment. On other grounds, however, large schools are a gain to the community, as they secure the services of abler men as masters, and afford scope for the formation of higher classes, and the giving of a more thorough and complete English education. As a rule, too, the work of teaching is carried on more effectively with large numbers. There is a spirit in *large* schools, not merely of emulation, but of intense mental activity, which rarely exists in *small* schools. The "sympathy of numbers," to adopt the name given by Mr. Stowe to his famous leading principle, is a potent auxiliary in the work of teaching. There will always be, from the nature of the Colony, a large number of *necessarily* small schools; but it seems a pity, from a purely educational point of view, that these should not be reduced to the minimum that is dictated by necessity, and the general good of the country, consulted irrespective of denominational interests. The following are the names of the places or localities in which amalgamations of existing schools would be productive of the beneficial effects indicated in the above remarks, viz.:—Burwood, Kurrajong, Lane Cove, Parramatta, Penrith, Petersham, Richmond, Rouse Hill, Ryde, South Creek, and Windsor.

The average attendance at three out of the four schools in and around Burwood is as follows, for the last quarter of the year:—Burwood Public, 206; Burwood Church of England, 38; and Concord Roman Catholic, 35; the total averages being 279, with an enrolment of 403. The first-mentioned school could accommodate the whole of the pupils attending the three. On the fourth school no remark is offered, as it lies in the Camden district. At Kurrajong one good school is required in lieu of the two Denominational ones there existing. The attendances at these schools for the December quarter were:—Kurrajong Church of England roll, 46—average, 30.8; and Kurrajong Roman Catholic roll, 68—average, 45.6. One school, therefore, capable of accommodating over 100 pupils, would meet the requirements, and prove a great boon to the community. One noticeable feature in the attendance at the Roman Catholic School of this locality is the fact that 36 of the 68 pupils do not belong to the denomination with which the school is connected. At Lane Cove two schools exist, with an aggregate enrolment of 89, and an average of 62.85. One Vested Public School erected between the two would suffice for the wants of the locality.

Petersham is another place with a plethora of competing schools, there being no less than four in and around that locality, with an aggregate enrolment of 353, and an average of 223, for the last quarter of the year. The education of the locality would be much better effected by *one good Public School in a central situation*.

At or near Rouse Hill are the Rouse Hill Church of England and Nelson Roman Catholic Schools, with an aggregate enrolment of 88, and an average of 66, for the last quarter. One school would be more effective and satisfactory. At all the other places named, with perhaps the exception of Parramatta, the educational requirements would be met by one large school.

The following table will exhibit, in a succinct form, the enrolments and averages for the last two years:—

Quarters.	1874.			1873.		
	Enrolment.	Averages.	Percentage.	Enrolment.	Averages.	Percentage.
March	5,806	3,764.58	64.8	5,516	3,731.5	67.6
June	5,806	3,895.29	67.0	5,554	3,642.02	65.6
September	5,794	3,906.0	67.4	5,510	3,845.03	69.78
December	5,821	4,001.46	68.7	5,585	3,884.37	69.5

From this table it will be seen that there has been an absolute increase of enrolment of from 200 to 300 during the year, but that the percentage of attendance has been lower than that of 1873, the mean average for 1874 being 66.9, and for 1873, 68 per cent.

It appears, therefore, that not more than two-thirds of the pupils enrolled attend with regularity; in fact, considerably less than two-thirds of the pupils do so, for the attendances of the irregular pupils go towards making up the average of two-thirds. The annual returns give the aggregate enrolment of children who attended the schools during any part of the year as 7,903, against 7,495 for 1873. As however a certain number of those children probably attended two or more schools during the year, and no means have yet been adopted to ascertain the precise number, it is evident that the aggregate enrolment above given is only an approximation to a correct statement of the fact. The difference between the highest enrolment during any quarter, and the aggregate number is 2,082. It is clear, therefore, that a large number of the pupils must attend with very great irregularity. Allowing a deduction of one-fourth for double or treble entries, there would still be 1,500 children left whose education must be of an exceedingly irregular and therefore imperfect character.

This prevalent and seemingly increasing irregularity of attendance cannot but give rise to grave consideration on the part of all well-wishers to the Colony. The liberality of the Legislature, and the earnest efforts of the Council to promote and secure the education of all children in the country, are equally frustrated to a large extent by this barrier to success. In my previous reports I have alluded to the matter, and pointed out the necessity for the enactment of a compulsory clause as the only effective remedy, and I would now add that further experience and recent discussions have only deepened my conviction on the subject. It will scarcely be denied that the State has a right to interfere with the liberty of the subject when the public good demands it. Law implies limitation, and it becomes necessary, whenever a community suffers detriment from any cause within the scope of law, to interfere with individual liberty or license. This scarcely needs illustration. If the State can step in to prevent a parent from starving his child, surely it has an equal right to see to it that no parent is allowed to rear his children in ignorance, to become drags on progress, if not pests to society. It is the fact that irregularity of attendance is the great obstacle to the complete education of the people, and experience shows that nothing short of legislative interference is likely to effect a remedy.

The right and desirability of interference being conceded, there seems no insuperable difficulty in the way of the application of compulsion. Many so-called difficulties would probably vanish before the touch of practical legislation on the subject; but even if the first steps taken should be of a tentative character, experience would in the course of time show defects and indicate improvements for future legislation on the subject. Compulsion could not operate unless where State-planted schools existed, but it would surely not be unreasonable for the Government to demand that, within a fixed radius of every

every school, all children of a certain age (say, from five to twelve years) should either receive education privately, or at least attend for a period of ten months in the year, unless prevented by illness or some insuperable natural obstacle. The operation of such an enactment would not affect those who already send their children to school with reasonable regularity, but it would serve to secure a tolerable amount of education for many who at present grow up without any, or with so little as to be almost entirely useless. It seems to me that the *practical law-makers* of the Colony should not become *law-breakers* through ignorance, so far as the State can prevent such a result.

The fees for 1874 amounted to £4,615 19s. 3½d., being an increase of £425 over the amount for 1873. This is owing in part to the increased numbers, but more to the fixing of scales throughout the district, and the consequent greater attention being given to the matter. The following table will furnish information on various points indicated by the headings:—

Schools.	No. of Teachers.	Amount of fees for year.	Average share of each teacher.	Lowest amount of fees received by any teacher of a school.	Highest amount of fees received by any teacher.
Public	45	£ s. d. 2,676 5 2	£ s. d. 59 0 4	£ s. d. 8 2 8	£ s. d. 253 16 0
Provisional	15	173 10 4	11 11 4½	1 5 0	26 10 3
Half-Time	2	32 10 8	16 5 4	7 3 7	25 7 1
Church of England	22	1,134 11 3½	51 6 4½	22 11 6	99 1 0
Roman Catholic	14	551 3 4	39 7 4½	14 4 0	60 15 2
Presbyterian	1	39 19 6	39 19 6	.....	.....
Wesleyan	1	36 19 0	36 19 0	.....	.....
Mean average share of each teacher in the district				£46 9s. 2½d.	

In addition to the information contained in this table, it may be stated that 40 per cent. of all schools furnish an income from fees of less than £30 per annum each, that from eight schools are obtained one-third of the total amount of fees, and from one-fourth of all the schools are received over 60 per cent. of the entire sum. From the preceding statements it may be seen that the majority of teachers derive but a small portion of their incomes from fees. This question of fees and their collection by the teacher is a constant source of worry and annoyance to him, and his partial dependence upon them destroys to a large extent his independence. To country teachers, the abolition of fees and payment by a fixed salary would be a great boon, and to those persons who have now to sue *in forma pauperis* for education to their children, it would remove a source of humiliation which is distressing to many persons in necessitous circumstances. There is a novel idea current in the minds of many, that to abolish fees would pauperize the community, and lower the scale of morality throughout the Colony. It is hard to see how this could be, when every parent would receive education for his children as a right, and when each would simply be receiving back, as he is now doing to a large extent, in the form of education from the State, an equivalent for the money which he has contributed to the general funds. Police protection is obtained in the same way; and, on principle, the holders of this opinion, to protect themselves from degradation, should regularly dole out to the policemen on their beat a small sum weekly, to preserve their independence intact.

The following statement will exhibit the position of all schools in the district in relation to the "standard of proficiency," which serves equally as a guide to the teacher in his work and to the inspector in his examination and estimate of the results obtained in each school. Thirty-seven schools, or 42 per cent. were up to the standard, leaving fifty schools, or 58 per cent. below the standard. In 1873 there were only 26 per cent. of all schools that reached "up to the standard," so that, as regards the estimated proficiency of the pupils, there has been decided progress during the past, as compared with the former year. This increased efficiency is in part attributable to certain changes that occurred in the teaching staff of the district, but more to decidedly earnest efforts on the part of many teachers to attain higher results. The annexed statement is given for the purpose of comparison with a similar one in the previous report.

About 42 per cent. reached an average of fair and over. About 23 per cent. reached an average of from tolerable to fair. About 12 per cent. reached an average of from moderate to tolerable. About 23 per cent. reached an average of moderate and under.

As regards the various kinds of schools it may be interesting to note that two out of the four Half-Time Schools, nearly 33 per cent. of the Denominational Schools, and 68 per cent. of the Public Schools, were up to the standard, while none of the Provisional Schools quite reached that mark, although a few of them made creditably close approaches to it.

With respect to the comparative results obtained in the five leading subjects, it may be stated in a word that writing, geography, and reading take rank, in the order named, as affording the most satisfactory results, while grammar takes the next place, and arithmetic the lowest. In fact, of all subjects taught, the last named gives the poorest results.

In conclusion, the condition of the schools and their results may be thus summarized:—The material condition has been improved in various ways, and may be considered on the whole fairly satisfactory; the regularity of the pupils has decreased during the year, having been only 66.9 per cent. instead of 68 per cent. for the previous year; and the average progress has been higher than during 1873; the number of schools in a fairly satisfactory state having increased from 26 to 42 per cent. But, while expressing comparative satisfaction with the proficiency, it must nevertheless be stated that, with greater regularity of attendance, more effective teaching in a considerable number of schools, and the consolidation of existing rival schools in various places, much higher results would be reached than are attained at present in the district.

Hereto are appended the usual summaries of schools inspected during the year.

J. M'CREDIE,
Inspector, Cumberland District.

PUBLIC SCHOOLS.

BADKHAM HILLS (N.-V.): Visited, 20th August.

Numbers present:—Boys, 16; girls, 17; total, 33.

The schoolroom is tolerably suitable, but there is no residence. The present arrangement is intended to be only temporary, until vested premises can be erected, when a suitable site can be obtained. The supply of teaching requisites was somewhat scanty at the date of inspection, but this defect has since been remedied. About two-thirds of the pupils are regular and punctual. They are clean, orderly, and fairly attentive. They exhibit fair self-reliance and accuracy, and the government seems firm and watchful. The prescribed subjects are taught with industry and care; the classification is judicious, and the methods are suitable. Greater animation in the teaching is desirable, but, as a whole, for the time, the results are fairly up to the standard.

BURWOOD

BURWOOD (V.) :—Visited, 17th and 18th September.

Numbers present :—Boys, 132 ; girls, 83 ; total, 215.

The school premises are of excellent character ; they are suitably furnished, and are well kept. When the additions now in progress are completed, the accommodation will meet present requirements. The school is in all respects well organized ; the order and discipline are excellent, and the moral tone is healthy. The course of instruction accords with that prescribed, and the condition of the several classes testifies to the earnestness of the teachers and the thoroughness of their work. The average proficiency exhibited by the pupils of the first and second classes reached very fair, and in the third and fourth classes good. This school is favoured in being under the superintendence of an intelligent, active, and liberal School Board.

CASTLEREAGH (N.V.) :—Visited, 30th April.

Numbers present :—Boys, 20 ; girls, 19 ; total, 39.

The material condition, as respects the premises, is very bad, and there is urgent need for the erection of vested premises, on a suitable site. The furniture is now suitable and sufficient, and the supply of working materials is fairly satisfactory. About two-thirds of the pupils are regular and punctual ; they are fairly orderly and attentive, as well as self-reliant and accurate. The government is firm and watchful, and the school is, generally speaking, in healthy working order, notwithstanding its material drawbacks. The instruction includes all subjects prescribed, the teaching is careful and industrious, and the average proficiency is fair.

COLYTON (V.) :—Visited, 31st March.

Numbers present :—Boys, 14 ; girls, 11 ; total, 25.

Repairs have been effected to the roof since last inspection, but there is still need for further improvements. There is a fair supply of working materials. The pupils are very irregular, and only tolerably orderly, while the attention is of an indifferent character. The government is slack, and the mental power of the pupils is weak. The subjects do not comprise singing ; the instruction is moderately regulated ; and the teaching is defective in energy and thoroughness. The attainments are far from satisfactory, and, as a whole, the school is not in a healthy condition. *The amount of fees for the year was under nine pounds.*

DOBROYDE (N.V.) :—Visited, 21st July.

Numbers present :—Boys, 12 ; girls, 13 ; total, 25.

There is no residence, but otherwise the material condition is fairly satisfactory. The school is badly situated as regards the population of the locality. The condition of the records shows gross carelessness and neglect. The pupils are irregular, and only tolerably orderly or attentive. Their mental effort and self-reliance are feeble, and they do not answer with promptness. The instruction is moderately regulated ; the teaching wants vigour and penetrative force ; and the average proficiency is only about moderate.

DUNDAS (V.) :—Visited, 27th August.

Numbers present :—Boys, 40 ; girls, 37 ; total, 77.

Some slight repairs are necessary, but on the whole the condition of the premises is good. The school is well supplied with furniture and teaching appliances. The pupils are fairly regular and orderly, and the attention is from tolerable to fair. The government is mild, but wanting in energy, and the moral tone is fair. The instruction embraces all prescribed subjects, which are properly regulated, and the teaching is careful, but defective in vigour and penetrative force. The average proficiency is from tolerable to fair. Higher results might reasonably be expected from this school.

DURAL (N.V.) :—Visited, 4th December.

Numbers present :—Boys, 11 ; girls, 21 ; total, 32.

The material condition is, on the whole, fairly satisfactory. The regularity—formerly indifferent—has improved under the present teacher. The pupils are tolerably orderly and attentive. They are slow in answering, and evince but moderate mental power. The subjects embrace all prescribed but singing. The instruction is tolerably regulated, and the methods are of modern kind. The average proficiency is about moderate. The school has been only a short time under the charge of the present teacher.

FIVE DOCK (N.V.) :—Visited, 7th August.

Numbers present :—Boys, 21 ; girls, 16 ; total, 37.

There is no residence, and the closets and wood-work of the school are in need of repair. The furniture is clumsy, and a book-press and suitable provision for water are necessary. The pupils are fairly regular ; they are orderly and attentive, and fairly self-reliant and accurate. The government is vigilant and strict. The instruction includes all prescribed subjects but singing. The methods are suitable ; the teaching is careful and intelligent, and the average proficiency is from fair to very fair.

GRONO PARK (N.V.) :—Visited, 23rd June.

Numbers present :—Boys, 26 ; girls, 18 ; total, 44.

The schoolroom is constructed of slab and bark, and there is no residence. Some additional furniture is required, a book-press especially being necessary ; otherwise there is a tolerable supply of teaching appliances, and the records are correct. The regularity of the pupils is not good. They are orderly and attentive, and show very fair self-reliance and vigour of application. The government is prompt and vigilant ; the instruction is properly regulated ; the methods are suitable, and the teaching is marked by industry and energy. The attainments reach an average of very fair.

HORNSBY (V.) :—Visited, 2nd September.

Numbers present :—Boys, 17 ; girls, 21 ; total, 38.

The residence is too small, but steps have been taken for its enlargement, and for other improvements ; otherwise, the material aspect of the school is satisfactory. The pupils are fairly orderly and attentive, and tolerably self-reliant and accurate. They need greater promptness, however, and more vigorous mental effort. The government is mild, but lacking in energy. The instruction includes all prescribed subjects, and is fairly regulated by the usual guides. The teaching is careful, but wanting in animation and point ; and the average attainments range from tolerable to fair.

HUNTER'S HILL (V.) :—Visited, 14th and 15th August.

Numbers present :—Boys, 46 ; girls, 14 ; total, 62.

The material condition continues very satisfactory. The pupils are clean, orderly, and fairly attentive, as well as self-reliant and accurate. The government is mild. The instructional documents are carefully drawn up, the methods are appropriate, and the teaching is earnest and industrious. The average proficiency is about fair.

KELLYVILLE

KELLYVILLE (N.-V.) :—Visited, 26th June.

Numbers present :—Boys, 18 ; girls, 21 ; total, 39.

There is no residence, and some improvements in connection with the chimney and the lighting of the room are desirable. Some additional furniture is also necessary. About two-thirds of the pupils are regular and punctual. They are clean, and fairly orderly and attentive, as well as self-reliant and accurate in answering. The government seems mild, but fairly effective. The subjects comprise all prescribed. The instruction is tolerably regulated ; the methods are appropriate ; and the teaching is industrious and tolerably effective. The average proficiency is fully tolerable.

LANE COVE (N.-V.) :—Visited, 3rd September.

Numbers present :—Boys, 16 ; girls, 18 ; total, 34.

The school is fairly supplied with apparatus and the usual teaching appliances. The organization is injuriously affected by the circumstances mentioned in the previous report. The pupils are very fairly orderly, attentive, and regular. They are prompt in answering, and manifest a healthy working spirit. The government is mild, but firm and vigilant. The subjects are those prescribed, the methods are suitable, and the teaching is careful and industrious. The average attainments range from fair to very fair.

LEICHHARDT (V.) :—Visited, 26th July.

Numbers present :—Boys, 43 ; girls, 3 ; total, 79.

The school is not centrally situated for the population of the locality. Steps had been taken for the erection of a class-room and other improvements, but they had not been effected at the date of inspection. On the whole the material condition is otherwise satisfactory. About seven-tenths of the pupils are regular, and they are orderly and very fairly attentive. They are fairly self-reliant and accurate, and the government is judicious. The subjects embrace all prescribed, and the instruction is carefully regulated. The teaching is industrious and intelligent, and the average attainments are satisfactory.

LLANDERLO (N.-V.) :—Visited, 7th May.

Numbers present :—Boys, 18 ; girls, 17 ; total, 35.

Additional furniture is required, and the residence needs lining. The school is fairly supplied with teaching materials, and the records are correct. About three-fourths of the pupils are regular. They are fairly orderly and attentive, and answer with fair accuracy and readiness. The government is fairly effective, and the prevailing spirit of the school is pleasing. Singing is omitted from the subjects of instruction, which is judiciously regulated. The teaching is careful and industrious, and the average proficiency is about fair.

LOWER PORTLAND (N.-V.) :—Visited, 10th December.

Numbers present :—Boys, 15 ; girls, 18 ; total, 33.

The material condition is very bad, but new stone vested premises are in course of construction. The proposed residence is quite too small. The pupils are clean, and the general spirit of the school is pleasing. The answering is reasonably prompt in most subjects, and they manifest fair power of application. The government is effective. The teaching is careful and industrious, and the attainments are about fair.

LUDDENHAM, (V.) :—Visited, 21st September.

Numbers present :—Boys, 20 ; girls, 20 ; total, 40.

The school has been supplied with a book-press and suitable desks and forms since last inspection. Some slight repairs are needed, but on the whole the material condition is reasonably satisfactory. The pupils are fairly orderly and attentive, as well as self-reliant and accurate in answering. The government is firm, but needs greater energy and promptness. The subjects embrace those prescribed for a Third Class. Fair skill is shown in the regulation of the instruction, and the teaching is careful and systematic, but weak in animation. The average proficiency is, in most respects, fairly satisfactory.

M'DONALD, CENTRAL (V.) :—Visited, 8th December.

Numbers present :—Boys, 14 ; girls, 9 ; total, 23.

The premises are in fair condition. The school is fairly supplied with teaching requisites, but a book-press and table are needed. About three-fourths of the pupils are regular, but they are only moderately orderly and tolerably attentive. The government is too slack, greater vigilance being requisite. Singing and drawing are omitted from the subjects of instruction. The teaching is industrious, but lacking in point and force. The average proficiency is below the standard, and the pupils possess but little mental power and readiness.

M'DONALD, LOWER (V.) :—Visited, 8th December.

Numbers present :—Boys, 10 ; girls, 7 ; total, 17.

The schoolroom needs plastering, and the hut, called a residence, needs thorough repair and flooring. Otherwise the material condition is fair. About two-thirds of the pupils are regular and punctual. They are clean, orderly, and attentive, and answer with promptness and fair accuracy. The government seems firm and vigorous. The instruction embraces all the subjects prescribed ; the teaching is industrious ; and the results average fair.

NORTH RICHMOND (V.) :—Visited, 28th and 29th May.

Numbers present :—Boys, 33 ; girls, 33 ; total, 66.

In its material aspect this school is on the whole good, but a detached kitchen is necessary for the residence. About two-thirds of the pupils are regular, and they are fairly orderly and attentive, but do not answer with such promptness and accuracy as are desirable. The government is not prompt or vigorous enough. The subjects do not embrace drawing or geometry. The teaching is industrious, but, from lack of animation and energy, not productive of high results. The average attainments range from tolerable to fair.

PARRAMATTA (V.—Infants) :—Visited, 11th November.

Numbers present :—Boys, 70 ; girls, 63 ; total, 133.

The playshed having been converted into a class-room, the accommodation is now more satisfactory. A new playshed and some additional furniture are necessary. The pupils are clean, orderly, and attentive, and more than usually prompt and accurate. The prevailing spirit of the school is pleasing, and the attendance is considerably on the increase. The subjects are those prescribed for infant schools ; the teaching is intelligent and energetic ; and the average proficiency ranges from very fair to good.

PARRAMATTA

PARRAMATTA (V.—Primary) :—Visited, 12th and 13th November.

Numbers present :—Boys, 110 ; girls, 59 ; total, 169.

A lavatory and weather-shed are required for the girls, and the closets need enlarging. There is no teacher's residence, and no proper playground for the boys. Otherwise, the material condition of the school is good, and it is well organized. About three-fourths of the pupils are regular, and they are very fairly orderly. The attention is good, and the general mental effort under examination is very fair. The government is judicious, but needs greater vigilance and promptness in enforcing minor points of order. The subjects embrace all prescribed for a fourth class. The teaching is conducted with energy, and the results show industry and earnestness on the part of the teachers. They may be thus stated :—Lower second class, fair ; upper second, third, and fourth classes, very fair.

PARRAMATTA SOUTH (N.-V.) :—Visited, 29th and 30th October.

Numbers present :—Boys, 55 ; girls, 41 ; total, 96.

The material condition is very bad, and urgent steps are necessary for the erection of suitable vested premises. The pupils are orderly and attentive, and about seven-tenths are regular. They are very fairly self-reliant and accurate, and manifest a healthy working spirit. The discipline is good. The subjects are those prescribed ; the teaching is intelligent and energetic ; and the average proficiency of the first, second, and third class is about fair, that of the fourth being very fair.

PENNANT HILLS (V.) :—Visited, 1st September.

Numbers present :—Boys, 34 ; girls, 27 ; total, 61.

The ravages of the white ant necessitate some repairs to the premises, but otherwise they are in good condition. About three-fifths of the pupils are regular. They are fairly orderly and attentive, but they do not answer with promptness, and their mental effort is not vigorous. The government is mild, but lacks energy. Singing is omitted from the prescribed subjects. The instruction is fairly regulated, and the teaching is industrious, but wanting in force. The results are from tolerable to fair.

PENBITH (V.) :—Visited, 22nd and 23rd April.

Numbers present :—Boys, 68 ; girls, 53 ; total, 121.

A book-press, a table, and some desks and forms are desirable ; otherwise the condition of the schoolroom is satisfactory. The residence is unfit for occupation. About seven-tenths are regular, and they are orderly, and, while under examination, fairly attentive as well as accurate in answering. The government is firm and watchful. All the prescribed subjects are taught, and the instruction is properly regulated. The teaching is conducted with care and energy, and the average proficiency is from tolerable to fair. The present teacher has not been long in charge. A new residence has been built since the inspection took place.

PROSPECT (V.) :—Visited, 19th March.

Numbers present :—Boys, 22 ; girls, 18 ; total, 40.

The addition of a detached kitchen to the residence is necessary, but otherwise the material condition is satisfactory. About two-thirds of the pupils are regular, and they are orderly and fairly attentive. The general spirit of the school is healthy, and the discipline is effective. All prescribed subjects are taught, and the instruction is fairly regulated. The teaching is industrious and zealous, and the average results are satisfactory.

REGENTVILLE (N.-V.) :—Visited, 28th April.

Numbers present :—Boys, 8 ; girls, 22 ; total, 30.

The material condition has been improved by the lengthening of the schoolroom. The pupils are moderately orderly and tolerably attentive. Their mental power is, however, weak, and they do not answer with promptness or much accuracy. The discipline needs greater vigour. The subjects embrace all prescribed but drawing, and the instruction is moderately regulated. The teaching is defective in energy and intelligence, and the average proficiency is about moderate. This school, formerly Provisional, was converted into a Public one during the year.

RICHMOND (N.-V.) :—Visited, 21st and 22nd May.

Numbers present :—Boys, 69 ; girls, 70 ; total, 139.

Since last inspection the desks have been raised on platforms, and an excellent book-press has been furnished, while the out-offices have been improved. The erection of a residence, weather-shed, and lavatory are necessary to complete the equipment of the school, but otherwise the condition is very good. The pupils are clean, orderly, and attentive, and their mental effort is more than usually vigorous. The discipline is good. The subjects embrace all prescribed for the instruction, which is properly regulated. The teaching is marked by energy and industry, and the average proficiency is very fair.

RYDE :—(Infants—V.) :—Visited, 26th November.

Numbers present :—Boys, 32 ; girls, 22 ; total, 54.

The school is fairly supplied with necessary working materials, and otherwise properly equipped for teaching purposes. About seven-tenths of the pupils are regular, and they are orderly and very fairly attentive. The government is effective, and the school is in a healthy working condition. The subjects comprise all prescribed for such schools. The classification is judicious, the teaching is marked by energy, and the average proficiency is very fair.

RYDE (Primary.—V.) :—Visited, 27th November.

Numbers present :—Boys, 39 ; girls, 33 ; total, 72.

The schoolroom is properly furnished and supplied with requisites, but not having been originally built for school purposes, it is not so suitable as is desirable. The residence needs some additions and improvements. About two-thirds of the pupils are regular, and they are very fairly orderly and attentive. They are fairly accurate in answering, and the government seems fairly effective. The instruction includes all prescribed subjects, and is suitably regulated. The teaching is earnest and industrious, and the attainments are fairly satisfactory.

SMITHFIELD (V.) :—Visited, 6th August.

Numbers present :—Boys, 20 ; girls, 14 ; total, 34.

The school has been improved materially by the removal of the partition. The closets urgently need repair, and the erection of weather-sheds is desirable ; otherwise the condition is fairly satisfactory. About two-thirds of the pupils are regular, and they are orderly and fairly attentive, as well as self-reliant under examination. The government is firm and watchful. The subjects are those prescribed ; the teaching is methodical, and marked by earnestness and energy ; and the results are fairly satisfactory.

ST. ALBANS

ST. ALBANS (N.-V.) :—Visited, 7th December.

Numbers present :—Boys, 18 ; girls, 10 ; total, 28.

The material condition is bad, and the erection of new premises is urgently necessary. The school stock is fairly sufficient. About three-fifths of the pupils are regular. They are fairly orderly and attentive, and manifest fair intelligence under examination. The government is mild, but fairly effective, and the prevailing spirit is pleasing. The subjects include all but singing, and the instruction is fairly regulated. The teaching is painstaking and industrious, and the average proficiency is about fair.

ST. MARY'S (N.-V.) :—Visited, 5th May.

Numbers present :—Boys, 16 ; girls, 15 ; total, 31.

No change has yet taken place in the unsatisfactory material condition of this school, although such change is urgently requisite. About two-thirds of the pupils are regular, and they are fairly orderly and attentive. They are tolerably accurate in their answers, and the government is mild, but firm and vigilant. Singing is not taught, but otherwise the subjects accord with the classification. The teaching is careful, the methods are suitable, and the attainments are about tolerable.

WALLGROVE (V.) :—Visited, 26th March.

Numbers present :—Boys, 13 ; girls, 16 ; total, 29.

Various improvements have been effected on the premises since last inspection, but the erection of a kitchen is still desirable. About three-fifths of the pupils are regular. They are clean, orderly, and very fairly attentive, and their answering is spirited and fairly accurate. The discipline is genial and effective, and the prevailing spirit of the school is pleasing. The instruction embraces all the subjects prescribed ; the classification is appropriate, and the teaching is conducted with sustained energy. The average proficiency exceeds fair.

WINDSOR (Infants—V.) :—Visited, 16th June.

Numbers present :—Boys, 30 ; girls, 37 ; total, 67.

Except for the smallness of the room, the material condition might be pronounced good. About three-fourths of the pupils are regular, and they are orderly and very fairly attentive. They answer with reasonable promptness, and manifest fair mental effort. The government is effective. The subjects accord with the standard requirements for infant schools ; the teaching is earnest and methodical, and the results are from very fair to good.

WINDSOR (Primary—V.) :—Visited, 16th, 17th, and 22nd June.

Numbers present :—Boys, 46 ; girls, 45 ; total, 91.

The school is well furnished and supplied with necessary working materials. The premises are good, and in good repair. About three-fourths of the pupils are regular. They are clean, orderly, and very fairly attentive ; and, with the exception of one class, exhibit fair self-reliance and accuracy under examination. The government seems firm and vigilant. The instruction embraces all prescribed subjects. The classification is now appropriate. The teaching is industrious, but needs greater animation and energy to make it thoroughly impressive. The average proficiency somewhat exceeds fair.

PROVISIONAL SCHOOLS.

BLACKTOWN :—Visited, 13th February.

Numbers present :—Boys, 5 ; girls, 13 ; total, 18.

A room of the teacher's residence serves as the schoolroom, which is tolerably suitable, and is moderately supplied with furniture and teaching appliances. The records are tolerably correct. The pupils are clean, and moderately orderly and attentive. They are weak in self-reliance, and do not answer with much accuracy or promptness. The teaching is industrious, but not sufficiently searching or thorough, and the lesson guides are of an indifferent character. The average proficiency is moderate. Owing to the broken weather, the attendance was smaller than usual.

GREENDALE :—Visited, 22nd September.

Numbers present :—Boys, 18 ; girls, 9 ; total, 27.

The material condition of the schoolroom is moderately satisfactory, but it is desirable that the site should be removed further towards Shancamore, so that it may be made to supply, as far as practicable, the place of the school formerly existing there. The records are neatly and correctly kept. The pupils are tolerably orderly and attentive, and exhibit moderate application to work, as well as accuracy in their answers. The government is tolerably effective. The subjects embrace all prescribed for a third class. The teaching is industrious, and the average attainments range from moderate to tolerable.

GUILDFORD :—Visited, 5th August.

Numbers present :—Boys, 11 ; girls, 7 ; total, 18.

The schoolroom, the property of the teacher, is moderately furnished, and fairly supplied with school requisites. The records are correct. The pupils are moderately orderly and tolerably attentive. They are slow in answering, and their power of sustained mental effort is weak. The discipline is mild, but weak. The instruction includes all subjects prescribed for a third class. The teaching is careful, but wants point and vigour, and the results are about moderate.

HASLEM'S CREEK :—Visited, 12th February.

Numbers present :—Boys, 7 ; girls, 9 ; total, 16.

The schoolroom is suitable, but it is not properly furnished, and there are no out-houses. The records are very badly kept. The order is bad, and the attention of the pupils is only moderate. Their answering is neither prompt nor accurate, and they are evidently little accustomed to mental exertion. The classification is erroneous, and the government is slack. The instruction is not properly regulated, the subjects are only partially taught, and the teaching is of a mechanical type. The attainments are very meagre, the average proficiency being small. Aid has since been withdrawn from the school, on account of its proximity to a public one.

KEMP'S CREEK :—Visited, 16th September.

Numbers present :—Boys, 10 ; girls, 8 ; total, 18.

Improvements effected since last inspection render the material condition moderately satisfactory. The returns give a high per centage of regularity. The pupils are fairly orderly and attentive. The government is firm, and the prevailing spirit is fairly pleasing. The instruction is regulated with tolerable skill ; the teaching is marked by care and industry ; and the attainments range from tolerable to fair. On the whole, this school is superior to the majority of schools of its class.

KURAJONG

KURRAJONG SOUTH :—Visited, 28th May.

Numbers present :—Boys, 14 ; girls, 11 ; total, 25.

The material condition, as regards the schoolroom, is fairly satisfactory. The records are incomplete, and incorrect in some respects. The pupils are moderately orderly and attentive, as well as self-reliant and accurate. The government is mild. The instruction is not regulated by the usual documents, and several subjects have been omitted. The teaching seems industrious, but wanting in force and intelligence. The results are barely "moderate." The school was closed for some months, until just before its inspection.

LOWER HAWKESBURY :—Visited, 9th December.

Numbers present :—Boys, 12 ; girls, 15 ; total, 27.

On the whole, the school is tolerably satisfactory as regards the room occupied, and its fittings and teaching stock. The pupils are fairly orderly and attentive, and show tolerable self-reliance, accuracy, and mental effort, under examination. The government is quiet but firm, and the general spirit of the school is pleasing. The subjects embrace all prescribed but singing; the teaching is earnest and painstaking; and the average proficiency exceeds tolerable. This is one of the best of the *Provisional Schools* in the district.

M'DONALD RIVER :—Visited, 7th December.

Numbers present :—Boys, 11 ; girls, 12 ; total, 23.

The roof has been shingled, but the floor needs repair, and there is no closet. Suitable furniture is needed, and the supply of books is scanty, and they are not in good condition. The order is bad, and the attention is poor. The government is feeble. The pupils do not answer with promptness or accuracy, and their power of thought and capacity of expression are feeble. The instruction is badly regulated, and the teaching is marked by little force or intelligence. The attainments are low.

MULGOA :—Visited, 24th September.

Numbers present :—Boys, 14 ; girls, 12 ; total, 26.

The material condition is fairly satisfactory in most respects, and the records are correctly kept. About seven-tenths of the pupils are regular and punctual; they are clean, and fairly orderly and attentive, and they evince fair promptness and mental activity under examination. The government is genial and firm. The subjects embrace all prescribed, and the instruction is tolerably regulated, while the teaching is marked by painstaking earnestness. The average proficiency is from tolerable to fair. This is one of the few *Provisional Schools* that closely approach satisfying the standard. Action is now being taken for its establishment as a Public School.

MULGOA FOREST MOUNTAIN :—Visited, 23rd September.

Numbers present :—Boys, 8 ; girls, 14 ; total, 22.

In its material aspect this school needs considerable improvement: the schoolroom is too small, the furniture is rude, and there are no closets. The pupils are tolerably orderly and attentive, but under examination they evince only moderate accuracy, and their power of thought and expression is feeble. The government is mild. The instruction is moderately regulated, and the teaching is industrious, but wanting in intelligence and vigour. The attainments are low. *The total fees paid in this school for 1874 were 25s.*

NEWINGTON :—Visited, 20th March.

Numbers present :—Boys, 22 ; girls, 15 ; total, 37.

This school has now merged into Haslem's Creek Public School, which is conducted in a more suitable building, and is fitted up with proper furniture. The pupils are tolerably orderly and fairly attentive, but greater vigour is required in the discipline to make the teaching thoroughly effective. The instruction is regulated, and the teaching is marked by industry. The average proficiency is about tolerable.

NORTH ROCKS :—Visited, 18th December.

Numbers present :—Boys, 5 ; girls, 18 ; total, 23.

The schoolroom—constructed of slab and plastered—is tolerably suitable, and is fairly supplied with necessary teaching requisites. The pupils are tolerably orderly and attentive. The government seems firm and watchful, and the tone of the school is promising. The instruction is regulated, the methods are of modern cast, and the teaching is careful and industrious. The average proficiency is about tolerable. The school was only a short time in operation after being closed for some years.

PORTLAND HEAD :—Visited, 14th December.

Numbers present :—Boys, 7 ; girls, 8 ; total, 15.

The supply of furniture and general teaching appliances is fairly sufficient, and the records are correct. The pupils are tolerably orderly and attentive, but only moderately self-reliant and accurate. The government lacks vigour, and there is but little mental life in the school. Singing and drawing are omitted from the subjects of instruction, which is moderately regulated, and the teaching is defective in vigour and intelligence. The average proficiency is nearly moderate.

SACKVILLE REACH :—Visited, 14th December.

Numbers present :—Boys, 14 ; girls, 4 ; total, 18.

In its material aspect this school is fairly satisfactory. The pupils are tolerably orderly and attentive, and moderately accurate. The government is too slack. The subjects of instruction do not embrace singing or drawing. The instruction is moderately regulated, the methods are only partially modern, and the teaching is defective in point and intelligence. The average proficiency is moderate.

THE VINEYARD :—Visited, 10th June.

Numbers present :—Boys, 13 ; girls, 8 ; total, 21.

The material condition is moderate, as regards the schoolroom. There is a tolerable supply of furniture and necessary working materials. The pupils rank low in point of regularity and punctuality; they are neither orderly nor attentive, and make but little effort to answer. The government is slack. The subjects do not embrace singing or drawing, and geography is a failure. The lesson-guides are indifferent, and the teaching is feeble. The attainments are meagre, and but little progress appears to be made. The teacher soon after tendered his resignation.

HALF-TIME SCHOOLS.

AUSTRALIAN FARM :—Visited, 11th December.

Numbers present :—Boys, 14 ; girls, 5 ; total, 19.

THE building is not quite finished, and some more furniture is requisite; otherwise, the material condition is tolerable. About three-fourths of the pupils are regular and punctual. They are fairly orderly and attentive, and are tolerably self-reliant and accurate in answering. The subjects comprise all prescribed but singing; the instruction is regulated with tolerable skill; and the teaching is industrious, and productive on the whole of tolerable results.

UPPER COLO :—Visited, 3rd June.

Numbers present :—Boys, 11 ; girls, 9 ; total, 20.

The school is conducted in a building belonging to the Church of England. Part of the roof needs repair, but otherwise it is in fair condition. About two-thirds of the pupils are regular and punctual. They are clean, orderly, and attentive; the government is firm and prompt; and the prevailing spirit of the school is pleasing. The instruction is properly regulated, the teaching is conducted with energy and zeal, and the attainments are satisfactory.

WHEENEY CREEK :—Visited, 3rd June.

Numbers present :—Boys, 7 ; girls, 10 ; total, 17.

The school is conducted in the room of a private residence occupied by Mr. Geo. It is fairly suitable, but needs more furniture. The records are neatly and correctly kept. The pupils are fairly self-reliant and accurate in answering. The order and discipline are effective, producing animation and heartiness in the school work. The subjects embrace those prescribed for Half-Time Schools, and the instruction is judiciously regulated by suitable programmes. The methods are intelligent, and the teaching is marked by energy. The results give an average of about fair.

WISEMAN'S FERRY :—Visited, 5th December.

Numbers present :—Boys, 5 ; girls, 7 ; total, 12.

The school is conducted in the room of a cottage belonging to Mr. Black; it is fairly suitable and tolerably furnished, and supplied with necessary requisites. About three-fifths of the pupils are regular. They are fairly orderly and attentive, and evince tolerable self-reliance and accuracy. The discipline is fairly effective. The subjects are appropriate, and the instruction is regulated with tolerable skill. The teaching is industrious and tolerably effective, and the average results range from tolerable to fair.

GOULBURN DISTRICT.

INSPECTOR'S General Report for 1874.

I.—MEANS OF EDUCATION.

The whole number of schools or departments comprise 43 Public Schools, 36 Provisional, 15 Half-time, and 15 Denominational; total, 109. Of these, 35 Public, 27 Provisional, 12 Half-time, and 13 Denominational Schools—total, 87—were in operation during the whole of the year; leaving 22 schools, viz. :—8 Public, 9 Provisional, 3 Half-time, and 2 Denominational that were in operation during a portion of the year only. At the end of the year there were 105 schools in operation. Of the 22 schools that were in operation during only a part of the year, 9 were opened during the year; from one (Provisional) aid was withdrawn; in the case of another (Provisional) the Local Committee delayed to take the action necessary to secure the services of a teacher; and the remainder were closed for longer or shorter periods in consequence of the difficulty of securing without delay the services of successors to teachers removed.

Eight (8) schools not in operation during 1873 have been opened, viz. :—

Crookwell, Public—Established.	
Worragele, Public—Re-opened.	
Congola, Provisional	} Established.
Frankfield, Provisional	
Jaugarrab, Provisional	} Re-opened.
Laggan, Provisional	
Manton's Creek, Provisional	} Established.
Tallagandra, Provisional	

This number corresponds with the number of schools that were in operation during 1873, but not during 1874, leaving the total number the same for both years, viz., 109.

The following conversions of schools have taken place :—

Peelwood Provisional, to Public.

Killenamella Provisional, to Wheeo Half-time, to be worked in conjunction with Winducilla Half-time.

The Public Schools formerly in existence at Bangalore and Tucua still remain closed, no proper premises having been provided. Steps have been taken, however, towards the re-establishment of a Public School at Tucua, and also of a Provisional School at Bolong.

Of the places enumerated in my report for 1873 as being educationally destitute, Manton's Creek, Laggan, and Crookwell, may now be struck out, as they have been provided with schools. Of the remainder there is some prospect of providing means of education for Muttbilly, the basin of the Yass River; Berebangalo, the upper course of the Lachlan, and Nowra Hill, Shoalhaven, during 1875, as preliminary measures to that end are now in progress. To the localities still left on the list others might now be added, which have either been taken up by residents since 1873, or of which I could gain no information during that year. Murrumbah, Narrangullen and Cavan, Currucala, Catherine Creek, Gundaroo West, Yarralaw, and Bunnaby may be cited. At Bunnaby indeed, funds were raised many months ago by public subscription, and a schoolhouse built, but the premises have now been vested in a Denominational Committee, and the conditions necessary to obtaining a school under the Council of Education have not been satisfied. A school unconnected with the Council was brought into existence however. Inquiries regarding the other places are in progress. One great obstacle at present in the way of the establishment of schools in such places is the difficulty of providing suitable school premises. As a rule, the residents are few, and are struggling selectors. They can neither muster nor guarantee more than sufficient children for a Provisional School, and are thus compelled to provide school premises and furniture entirely at their own cost. While this deficiency of the means of education is to be found, no change has been made in the economical distribution of existing agency, of which an unnecessary amount still exists in Goulburn, Yass, Berrima, Nuttai, and Taralga.

At

At Burrawang, Numba (Shoalhaven), Terrara, Sutton Forest, and to a less extent at Yass (there being two Denominational Schools there—C.E. and R.C.), parents of various religious denominations still have but one of two alternatives—either to keep their children from a State-aided School altogether, or to send them to a school belonging to a different religious denomination. In some cases the difficulty is partially overcome by a change being made in the management of the school inconsistent with its designation and professed character, viz., the omission of denominational religious instruction. In others the children of parents who, from their appreciation of the value of education, are compelled to adapt the latter of the two alternatives, are obliged to lose a period of instruction varying from half-an-hour to one hour daily, while their schoolfellows of the denomination to which the school belongs are getting "religious instruction." In all such cases the benefits derivable from a properly organized school are lost, and the locality is deprived of that share of expenditure from the public funds on school premises to which it is lawfully entitled in common with other localities.

The number of children enrolled at the end of 1874 (4,898) exceeds the number enrolled at the end of 1873 (4,712) by 186. The exact relation in which this increase stands to the increase in the whole number of children of school age in the district no reliable statistics can be obtained to determine. I estimate, however, that there are in round numbers at least 6,000 children who ought to be under instruction. Three hundred (300) of these may be set down as attending private schools, so that there are still between 800 and 900 children of school age growing up to a greater or less degree in ignorance. A considerable number of these are so circumstanced that they can see their young neighbours go regularly to receive a blessing which it is the State's self-acknowledged duty and intention to bestow upon all, but of which they are deprived by the exercise of that "anti-British" and "tyrannical" power compulsion—victims of persons who either do not understand or else disregard their duties and obligations both as parents and as citizens, and most, if not all, of whom are either short-sighted as not to see, or so foolish as to forget, that they help to pay for the very boon which they *compel* their children to go without. The others are unconsciously *compelled* to submit to this heavy dragweight from the very outset of life, because the means of education have not been provided for them—a state of things which is the result sometimes of the ignorance or indifference of those with whom now rests the duty of taking the initiative in establishing the necessary schools, sometimes of the inability of those persons to provide the premises and furniture required of them under existing Regulations, and sometimes of their isolated position.

II.—SCHOOL FEES.

The increase in the amount of school fees paid is marked, and more than corresponds with the increase of pupils. The total amounts received from this source were—

	£	s.	d.
In 1873	2,940	18	9½
In 1874	3,226	6	11½

The principal increase during 1874 took place in the last quarter of the year. The total amount of school fees for that quarter was £929 6s. 3½d., while the largest quarterly amount ever received before that was £802 0s. 10½d. The amount paid during the last quarter of 1874 was at the rate of £1 1s. 8d. per annum for each pupil in average attendance. This increase has been the result of the introduction by the Council during the latter half of the year of the subjoined uniform scale of fees, and proves that the great majority of the parents appreciate primary education highly enough to be willing to pay at an increased rate for it:—

Scale of school fees.

	s.	d.	s.	d.
For one child from a family, 0 9 weekly, or 8 0 quarterly, in advance.				
For two children	1	3	"	12 0
For three "	1	6	"	15 0
For each additional child ...	0	3	"	2 6

The new scale of fees has then largely subverted one at least of its proper and intended ends—the augmentation of the remuneration of teachers. Still, it has not been productive of unmixed good. Before the introduction of the scale, the arrangements for paying school fees were, as a rule, made by the teachers and the parents, with the occasional interrention of the School Board or Committee. They thus partook of the nature of a private contract. In fixing the sum to be paid as school fees, the scale has imparted to it something of the nature of a special education tax, of which the teachers as public servants are the collectors and recipients. As such a tax the fees are now very commonly looked upon, and in the case of several schools have been objected to as being too high. In most of these cases, and in others in which no formal protest was made, it has happened either that there has been an evasion of the impost or that children have been withdrawn from the school. In either case the teacher suffers pecuniarily. The latter result has been strikingly exemplified in the case of one school (Provisional). At the time of the introduction of the new scale of fees the numbers were so high that a formal application for the conversion of the school into a vested Public School was under consideration. The people and Local Committee protested against the new scale of fees, and rather than, to use their own words, *make themselves and their children paupers* by getting permission for the admission of their children as *free* pupils, they withdrew them from the school, the numbers at which have since been and still are so low that it is questionable whether it will not have to be closed. As a rule, persons, especially those in the country parts, who profess to be unable to pay fees, will not and do not apply to the Local School Board or Committee for a "free order." If they send their children to school at all, they do so in open disregard of the scale of fees, building upon the well-known disinclination of teachers to recover fees under section 18 of the Public Schools Act, or upon their equally well-known desire to *keep up a good average*. It is not at all an uncommon occurrence for a parent to threaten a teacher that if she will not teach his children for less than the authorized fee, he will withdraw them from the school, and so take £1 a month off her salary. Persons of this class are quite as well able to pay, in accordance with the scale, as labourers and others in towns, from whom no word of complaint is heard. Under these circumstances, it is too much to expect that the scale of fees will be strictly or equitably enforced as required in the majority of small country schools, at least for some time to come.

III.—INSPECTION.—CONDITION OF THE SCHOOLS INSPECTED.

Fourteen of the schools were not inspected; seven in consequence of want of time, six because they were not in operation at the time of my visit to the locality, and one because it was not brought formally under the Council when I visited it. The number of schools inspected therefore is ninety-five—ninety-three being *fully* inspected. In these ninety-five schools, 4,378 children were enrolled, and 3,328 were present on the days of inspection. It follows that about sixty-seven out of every 100 of the children enrolled at the schools of the District, but only fifty-five out of every 100 of the children of school age (estimated) in the district were reached by examination. In its bearing on the efficiency of the schools, the inspection was of the same searching character described in my report for 1873. The standard by which the schools were judged was quite as high, and it is gratifying to note that decided improvement has been effected. In 1874, 20 Public Schools, 8 Provisional, 4 Half-time, and 8 Denominational—total, 40, or 43 per cent. of the schools examined—met the test to which they were submitted. The corresponding numbers for 1873 were—17 Public Schools, 5 Provisional Schools, 4 Half-time Schools, and

4 Denominational Schools—total, 30, or 31 per cent. of the schools examined. It will thus be seen that in 1874 the number of schools that were able to satisfy the standard was 12 per cent. more than in 1873. Two causes have been mainly instrumental in effecting this improvement :—

1. *The increasing practical skill and knowledge of their duty and relations possessed by Teachers.*

With regard to the last two particulars, improvement has been effected chiefly in the case of teachers of Provisional Schools, some of whom were formerly even led to believe that a power outside of the Council of Education could dismiss them, and who were consequently over-awed and fettered in the performance of their duties.

2. *The filling of vacancies in small schools by the appointment of Teachers of improved qualifications.*

This has been effected mainly by the carrying out of the scheme commenced last year of training applicants for small schools for a period not exceeding three months. Great care has been exercised in the selection of candidates. For so far nearly all the applicants have been young persons, and the majority of them females. The results produced by those who have been placed in charge of schools are decidedly encouraging. Seventeen persons have been trained in the district during the year—nine at Goulburn Public School, four at Berrima Public School, and three at Gunning Public School; and there is generally no lack of applicants. Still, as a means for providing teachers for small schools, and for keeping such schools in continuous operation, the scheme cannot at all times be worked with the success that is desirable, and for the following reasons :—

- (a.) Applicants cannot well be admitted to training until there is at least a prospect of vacancies for them, and the prospect of vacancies does not, as a rule, occur until about a month before the vacancies themselves, while the applicant's training generally extends over three months.
- (b.) In the case of opening new schools the promoters frequently do not complete the necessary arrangements until months after the time originally promised. Applicants trained with a view to meet the prospective want have in the meantime to be appointed to some other vacancies; and when such schools actually become ready for opening there are probably no candidates immediately available.
- (c.) Under existing arrangements the appointment of a teacher to a Provisional School lies with the Local Committee, and there is no certainty that the Committee will not appoint a teacher of their own selection. Even where Provisional School Committees make application for a teacher, it sometimes happens that there are no eligible candidates of the sex and religious denomination desired by the Committee, immediately available.

The course and standard of instruction prescribed for the schools have not been changed. The great bulk of the pupils have acquired some proficiency in reading, writing, arithmetic, and object lessons; subjects which are required for all the classes. Arithmetic is the weakest subject, less than one-third of the pupils examined in it having exceeded the mark *tolerable*. Vocal music is also prescribed for all the classes, but only a portion of the teachers are able to give instruction in it. In several schools the pupils have been taught to sing with pleasing effect, but in not one instance was a satisfactory knowledge of the theory of music, or ability to read music with fluency, to be found. The consequences of these circumstances are that little better than half the children examined can be regarded as having attained to any positive proficiency in vocal music, and that none properly reached the mark *good*. Grammar, geography, and drawing are prescribed for the classes from the second upwards. Some few teachers omit the last-mentioned subject in consequence of a professed inability to draw. Neglect of grammar and geography has occurred in a few isolated instances; this is inexcusable. Scripture lessons are prescribed for the third and higher classes, and mathematics and Latin for the higher ones. Hence only a comparatively small number of pupils have acquired proficiency in these subjects. In connection with the Scripture lessons, however, the following circumstances have also operated :—

1. In Denominational Schools advantage has been taken of the part of Article 62 of the Council's Regulations providing that "In Denominational Schools it shall not be necessary to use the Scripture Lessons published under the sanction of the Board of National Education in Ireland."
2. In some of the Public and Provisional Schools some of the parents have requested the teachers not to allow the Scripture Lessons to be read by their children nor to be read by others in their presence. Such children have, of course, been exempted from reading the Scripture Lessons, and were not examined in them.

As connected with this matter, it is to be reported that in some of the Denominational Schools the "hour allotted to special religious instruction" is devoted to "ordinary instruction"; it follows therefore that in those schools no religious instruction is given.

On the whole, the discipline of the schools has improved. While undiminished attention has been devoted to cultivating in the pupils right motives and feelings, increased care has been bestowed on those details which, thoroughly and systematically carried out, lose all their apparent irksomeness, and conduce greatly to the economy of time and energy, and to the harmonious and orderly working of the school. The want of a complete and uniform system of school drill is, however, a great want still.

As regards the material condition of the school premises, it is to be remarked that while the energy of some of the local school Boards and Committees has effected considerable improvement, much still remains to be done. Of the localities mentioned in my last report, at which the material provisions were seriously defective, measures towards remedying the defects have been taken at the following :—Collector, Croobyar (Ulladulla), Ulladulla (Boat Harbour), Eling Forest, and Kirkdale; and material improvements have been or are being effected at the following schools also :—Bowral, Goulburn, Gundaroo, Gunning, Kangaloon West, Peelwood, Robertson, and Warragee, Public; Bamarang, Burrageowang, Cottawalla, Cuttycuttygang, Gurrundah, High Range, Kirkdale, Shaw's Creek, Spring Creek (Yass River), Provisional; Springfield, H.T.; Goulburn North, C.E., Sutton Forest, C.E., Terrara, C.E., Yass, C.E., Goulburn Boys, R.C., Taralga, R.C., and Ulladulla, R.C., Denominational. Excellent new vested premises have been opened at Crookwell and Parkesbourne. The material provisions in connection with the following schools are unsatisfactory :—Barrier, Marulan, New Sheffield (Nattai), Public; Bungonia, Tarlo, Provisional; Windellama, Quintego, Richlands, and Yelbraith, Half-time; Goulburn, C.E., Mittagong, R.C., and Shoalhaven, Pres., Denominational.

The small country schoolhouses, Provisional and Half-time mostly, are generally slab and bark buildings, without external appointments; but considering that in the majority of instances they have been provided without any aid from the Council, they are as good as can be reasonably expected.

In the case of a few schools the teachers have contributed by their industry and ingenuity to the ornament or the usefulness of the material provisions. The following may be mentioned :—Crookwell, Bowral, Taralga, and Tarranna, Public; Jannung and Junagarrah, Provisional; and Burrawang, C.E., Sutton Forest, C.E., and Goulburn, R.C., Girls and Infants, Denominational.

Of the local supervision of the schools it is so far satisfactory to be able to report that several of the School Boards and Committees have been re-organized and increased, and that these changes have in several instances effected a revival of energy. One result of this is the improvements to school premises in several localities already referred to. Some of the members of the Crookwell and Goulburn Public School Boards deserve special mention for the public spirit, zeal, and liberality with which they have performed their duties. The supervision of Provisional Schools has been rigidly restricted to the officially recognized Local Committees, and an amount of self-reliance and effort has been developed in consequence. The local supervision of Denominational Schools is still mainly clerical.

SUMMARY—PROSPECTS.

1. The number of children left educationally destitute has not been diminished in any sensible degree, and the distribution of educational agency is so far inequitable that the towns and more densely populated localities are supplied to excess at the expense of the more remote and sparsely populated localities. These defects it would seem not to be possible to remove effectually by any power that can be exercised under existing educational arrangements.

2. Considerable improvements and additions have been made to school property; the schools themselves have made decided advance in point of efficiency; the remuneration of teachers has been slightly increased, and some amount of additional interest and energy has been developed on the part of those entrusted with the local supervision of the schools. On these points, existing conditions are favourable to a future progress corresponding to that of the past.

Summaries of my reports on the schools inspected are subjoined.

Inspector's Office, Goulburn,
23rd January, 1875.

D. S. HICKS,
Inspector.

GOULBURN DISTRICT.

SUMMARIES of Reports on Schools inspected during the year 1874.

I.—PUBLIC SCHOOLS.

BERRIMA (V.) :—Visited, 21st, 22nd, and 25th September.

Numbers enrolled :—Boys, 37 ; girls, 27 ; total, 64.

Numbers present :—Boys, 26 ; girls, 18 ; total, 44.

A pump has been provided. As far as the teacher can be held accountable the general organization is *very good*. The numbers are about stationary. In all main features the discipline is *very fair*. Suitable arrangements have been made for regulating and imparting the instruction, which is of full range, and includes algebra, Euclid, and mensuration, in addition to the subjects required. The general proficiency is *fair* in the first, second, and third classes, and exceeds *good* in the fourth.

BOWNING (V.) :—Visited, 4th May.

Numbers enrolled :—Boys, 18 ; girls, 15 ; total, 33.

Numbers present :—Boys, 13 ; girls, 14 ; total, 27.

Since last inspection the teacher has made some improvements in the material condition. The schoolhouse is uncomfortably small. The numbers are declining. The children enrolled, about three-fifths of those in the locality, are *fairly* regular and *tolerably* punctual in attendance; they are also clean; but they are addicted to many loose and disorderly habits while in school, copying, talking, and prompting being particularly conspicuous. The classification is injudicious and informal. All required subjects except singing are professedly taught, although not duly provided for on the time-table. In most branches the pupils have been prematurely advanced, and almost throughout the teaching has been ineffective. The average proficiency is below *indifferent*.

BOWBALL (V.) :—Visited, 18th September.

Numbers enrolled :—Boys, 27 ; girls, 32 ; total, 59.

Numbers present :—Boys, 20 ; girls, 23 ; total, 43.

The walls have been repaired and recoloured since last inspection, and steps have been taken to make other improvements. Not more than three-fourths of the children of school age in the locality attend. These are *tolerably* punctual and regular. In other respects the discipline has been much improved, and is now *very fair*. Radical changes for the better have been made in the classification, which is now appropriate. All subjects required for the three classes are taught, and with *fair* results. The school has considerably improved.

BURRIER (N.-V.) :—Visited, 4th August.

Numbers enrolled :—Boys, 25 ; girls, 15 ; total, 40.

Numbers present :—Boys, 23 ; girls, 15 ; total, 38.

The building is much out of repair, is most untidily kept, and presents anything but a pleasing appearance. The wall documents are old, defaced, and in some instances incorrect. All children in the locality are enrolled; but as some of them live on the opposite side of the Shoalhaven River, or of some of its tributaries, all of which are rapidly flooded, it is impossible for them to attend constantly. When in school they are given to various disorderly habits, and are not at all well drilled. Singing is not taught, and Scripture lessons have been neglected. The methods are of modern cast, but are practised with only partial effect, the proficiency of the pupils being below *tolerable*.

CHATEBURY (V.) :—Visited, 18th May.

Numbers enrolled :—Boys, 12 ; girls, 13 ; total, 25.

Numbers present :—Boys, 10 ; girls, 13 ; total, 23.

Recent improvements have rendered the material condition *good*. The records are now properly kept. The removal of families from the locality has affected the numbers. Excepting as regards regularity of attendance, which is affected by a variety of causes, but principally by the pupils being kept away to work, the general discipline is *very fair*. The classification is *tolerably* appropriate. The course of instruction includes all required subjects except singing. The range of instruction is proportionate to the age and time of enrolment of the pupils; and the proficiency averages nearly *tolerable*. The second class is very weak.

COLLECTOR (N.-V.) :—Visited, 2nd November.

Numbers enrolled :—Boys, 27 ; girls, 21 ; total, 48.

Numbers present :—Boys, 23 ; girls, 16 ; total, 39.

The school is still conducted in temporary premises, but new vested buildings are in course of erection. Some defects occur in the keeping of the records. Nearly all the children in the locality are enrolled, but the attendance is, from various causes, only *tolerably* regular and punctual. In other respects also the discipline is far from satisfactory. The government still tolerates many loose and disorderly habits on the part of the pupils. Little exception can be taken to the classification or the construction of the instructional documents. The Scripture lessons are read irregularly, but all other required subjects are duly taught. The methods want thoroughness in their application, and the matter of instruction is poor in quality. The proficiency is about *moderate* in each of the three classes. Object lessons, geography, and needlework are exceedingly weak branches.

CROBYAR (N.-V.) :—Visited, 17th and 18th August.

Numbers enrolled :—Boys, 66 ; girls, 36 ; total, 102.

Numbers present :—Boys, 63 ; girls, 35 ; total, 98.

Measures for the transfer of the property to the Council, and the establishment of a properly organized vested school, are in progress. The attendance is about stationary, and is considerably beyond the accommodation provided. The general discipline is *good*, and would be higher but for the absence of a thorough system of drill. The school is appropriately divided into four classes, for which the course of instruction is complete. The range of attainments is reasonably high for the present organization. The methods are modern and developmental, and are practised with care and *very fair* skill. In the third class the proficiency lies between *tolerable* and *fair*, in the second between *fair* and *very fair*, in the fourth it reaches *very fair*, and in the first approaches *good*.

CROOKWELL (V.) :—Visited, 1st December.

Numbers enrolled :—Boys, 28 ; girls, 33 ; total, 61.

Numbers present :—Boys, 23 ; girls, 17 ; total, 40.

Excellent and well-organized premises have been provided. The internal organization is *very good* throughout. The numbers have gradually risen since the opening of the school in May last, and now include about five-sixths of the children of school age in the immediate locality. Difficulties arising from the peculiar circumstances and character of the district affect regularity of attendance ; but as far as the teacher can be held responsible the discipline is *very good*. For upwards of two years there was no proper school in the locality prior to the opening of this one. As a consequence, the teacher has not been able for so far to form any class higher than a second. The course of instruction is complete. The teaching is thorough and educative, and has produced *very fair* results.

CURRAWANG (V.) :—Visited, 13th and 14th October.

Numbers enrolled :—Boys, 43 ; girls, 37 ; total, 80.

Numbers present :—Boys, 38 ; girls, 28 ; total, 66.

The material condition remains as last reported. The records are incomplete in several particulars, and the school stock is short in several items. The cleanliness and tidiness of the room might well be seen to more closely. The teaching power is sufficient, but is still inequitably distributed—too many pupils being left under charge of the assistant. Slackness of work at the mine, the severity of the winter, and prevalent sickness have affected the enrolment and regularity of attendance for some time past. Taken as a whole the general discipline may be considered *good*. A fourth class has been formed—a step warranted by the age and attainments of the pupils. Singing is the only omission from the prescribed course, and elementary Latin and algebra are added. The proficiency is *moderate* in the first and second classes, and *very fair* in the third and fourth.

DALTON (N.-V.) :—Visited, 23rd March.

Numbers enrolled :—Boys, 26 ; girls, 34 ; total, 62.

Numbers present :—Boys, 14 ; girls, 16 ; total, 30.

Two new desks have been provided, but no arrangements for the provision of suitable and properly organized premises have been made. In consequence of the inadequate last supply sent to the school, the stock of materials is very scanty, and the teacher has been put to expense and inconvenience. The classification is unnecessarily minute, and has entailed a loss of time and power. About four-fifths of the children in the locality are enrolled. On the day of inspection the attendance was low from fortuitous causes. The general discipline is *very good*, and the moral tone high. *Fair* progress has been made in drill. Singing is not taught. The pupils' proficiency averages from *fair* to *very fair*.

ELING FOREST (V.) :—Visited, 19th November.

Numbers enrolled :—Boys, 8 ; girls, 18 ; total, 26.

Numbers present :—Boys, 8 ; girls, 15 ; total, 23.

General repairs have been effected, and the material condition is now reasonably satisfactory. The schoolroom is not kept sufficiently clean and tidy. Prevalent sickness and other causes have affected the numbers. The pupils are addicted to loose habits. The discipline as a whole is *very moderate*. The classification (three-class) is suitable in the main, and all subjects required for it are provided for, but the results are almost nothing in some branches, and are below *moderate* on the average. The pupils' mental effort and culture are very low. A change of teachers has taken place since last inspection.

GOULBURN (Boys.—V.) :—Visited, 14th, 15th, 16th, 17th, and 18th December.

Numbers enrolled :—115.

Numbers present :—84.

Since last inspection the rooms have been put in good order and repair. The fencing is broken in several places, and the drainage is defective. The general aspect is somewhat naked. More shade is badly wanted on the play-ground. The government is quiet, vigilant, and firm. In all main features the discipline is *very good*. The instruction is properly regulated, and is imparted with system and skill. Geometry to Euclid Book III, algebra to quadratics, mensuration of superficies, and elementary Latin, are added to the subjects required for a school of four classes. The range of instruction, though not quite so high in some branches as last year, is fully commensurate with the age and time of enrolment of the present pupils. The general proficiency approaches *very fair* in the second class, reaches *very fair* in the first class, and exceeds *very fair* and *good* in the third and fourth respectively. The pupils are attentive, and answer with spirit and intelligence.

GOULBURN (Girls.—V.) :—Visited, 9th, 10th, and 11th December.

Number enrolled :—95.

Number present :—67.

General repairs have rendered the material condition satisfactory. The playground fence is out of repair. Some omissions occur in the records. The numbers have declined somewhat. The pupils are clean, mannerly, and in *very good* order. Punctuality of attendance, however, is decidedly unsatisfactory. Suitable instructional arrangements are in force, and are properly represented. The matter of instruction is in some branches wanting in substance, and in the more intellectual branches greater care needs to be taken that the pupils acquire a thorough knowledge of principles. The proficiency slightly exceeds *fair* on the average. Arithmetic is very weak.

GOULBURN (Infants.—V.) :—Visited, 7th and 8th December.

Numbers enrolled :—Boys, 103 ; girls, 90 ; total, 193.

Numbers present :—Boys, 77 ; girls, 62 ; total, 139.

The rooms have undergone general repairs, and are now in satisfactory material condition. The available space is insufficient for the large and increasing attendance. The internal organization has been much improved, and is now satisfactory. Unpunctuality and other defects are observable in the discipline, which, as a whole, may be rated *fair*. Scripture lessons have been added to the course. The instruction is suitable in kind and quality, and is imparted on approved methods, with results ranging from below *fair* in the first class to *good* in the fourth. The department is managed with attention and zeal, and is in a progressive state.

GULLEN (V.) :—Visited, 5th June

Numbers enrolled :—Boys, 19; girls, 41; total, 60.
Numbers present :—Boys, 11; girls, 21; total, 32.

New vested premises have been opened. Teacher's residence, weather-shed, and lavatory would complete the material provisions. The premises might well be kept with more cleanliness and taste. About four fifths of the children in the locality are enrolled, and only one-half of these attend regularly. Punctuality is also very defective. The government is feeble and ineffective. The division of the school is nominally three-class, but the classes are split up in a systemless and unnecessary way. All required subjects are professedly taught, but the proficiency is only from *indifferent* to *moderate*. The methods are of no definite character.

GUNDAROO (V.) :—Visited, 3rd November.

Numbers enrolled :—Boys, 20; girls, 14; total, 34.
Numbers present :—Boys, 16; girls, 13; total, 29.

A small room has been added to the teacher's residence. The discipline has been improved, and is now *tolerably* satisfactory. The attendance is rather low for the locality. The classification of the pupils, and the regulation of the instruction may be regarded as satisfactory. Singing is not taught. In the other branches the proficiency averages *moderate*. Geography is particularly weak, and the attainments generally are of very limited range.

GUNNING (V.) :—Visited, 18th and 19th March.

Numbers enrolled :—Boys, 49; girls, 59; total, 108.
Numbers present :—Boys, 46; girls, 48; total, 93.

In view of the increasing numbers additional accommodation is urgently needed, the present building being already over-crowded. A lavatory, a porch, shade on the playground, and verandah to the residence are also badly wanted. The general internal aspect of the premises is very pleasing. The over-crowded state of the building militates somewhat against the attendance. The discipline is *good* throughout. Suitable instructional arrangements are in force, and the school business is carried on with energy, care, and skill. The proficiency of the pupils ranges from *fair* to *very fair*. A change of teachers has taken place since last inspection, and two pupil teachers have been added to the staff.

KANGALOOON (N.-V.) :—Visited, 5th March.

Numbers enrolled :—Boys, 24; girls, 19; total, 43.
Numbers present :—Boys, 19; girls, 14; total, 33.

Hot-pegs, a lavatory, and the inscription, "Public School," are wanted. The records are defective in several particulars. Excepting as regards punctuality of attendance, which is affected by the peculiar character and circumstances of the locality, the general discipline is *good*. The classification is appropriate. The instruction is properly regulated and imparted, and produces *fair* results.

KANGALOOON WEST (V.) :—Visited, 4th March.

Numbers enrolled :—Boys, 25; girls, 16; total, 41.
Numbers present :—Boys, 16; girls, 15; total, 31.

Since last inspection a good detached kitchen has been erected; but the stable has been destroyed by fire. The schoolroom wants recolouring. From various causes, most of which are beyond the teacher's control, the attendance has been very irregular. The pupils are clean and in *very fair* order. Singing has been omitted of late, and the oral subjects generally are weak and of narrow range. On the whole the proficiency of the pupils is from *moderate* to *tolerable*. The classification has been corrected. The revival of a more vigorous tone in the general management is greatly to be desired.

MARULAN (N.-V.) :—Visited, 9th September.

Numbers enrolled :—Boys, 10; girls, 19; total, 29.
Numbers present :—Boys, 4; girls, 15; total, 19.

The premises are in a very dilapidated condition. The records are in a defective state. The numbers fluctuate, and at the time of inspection were low. The pupils are neither regular nor punctual in attendance, and are inclined to be talkative and unsteady. An appropriate classification obtains. Singing, drawing, and analysis of sentences are omitted. In the other branches the proficiency averages *over moderate*.

MITTAGONG, LOWER (V.) :—Visited, 15th September.

Numbers enrolled :—Boys, 15; girls, 12; total, 27.
Numbers present :—Boys, 12; girls, 7; total, 19.

Recent improvements have rendered the material condition well nigh complete. The garden formed by the former teacher is not now well looked after. The school stock is not neatly arranged. The removal of families from the locality has affected the numbers. The government is weak and vacillating. School drill has been neglected, and the discipline is now but *indifferent*. The time-table is not properly followed, and the pupils are not kept well employed. The instruction is wanting in thoroughness and substance. The actual proficiency is only *moderate*.

MITTAGONG, UPPER (V.) :—Visited, 3rd March.

Numbers enrolled :—Boys, 33; girls, 22; total, 55.
Numbers present :—Boys, 10; girls, 8; total, 18.

The property is now better looked after than formerly, but more attention is still required to the cleanliness of the schoolroom. The records are defective in some particulars. Owing to the peculiar character and the circumstances of the locality, the attendance is easily affected by bad weather. As a consequence the numbers fluctuate, and the punctuality of attendance and the general progress of the school are considerably interfered with. As regards order, cleanliness, and moral tone, the discipline is *very fair*. The classification is now *fairly* appropriate. Drawing is not provided for, and the oral lessons are very weak. The average proficiency is barely *moderate*. To render the instruction effective, educative modes of explaining, illustrating, and questioning on it, would need to be studied and practised.

MOOROOWOOLEN (V.) :—Visited, 10th September.

Numbers enrolled :—Boys, 32; girls, 19; total, 51.
Numbers present :—Boys, 23; girls, 12; total, 35.

Since last inspection the ground has been paled in, and other minor improvements to the premises have been made. The school stock is short in several items. A few minor omissions occur in the records. The removal of families from the locality has lowered the numbers. The pupils are addicted to some loose habits; the discipline requires to be firmer and stricter. Singing is the only prescribed subject not taught. *Fair* results have been achieved in the other branches.

MOSS VALE (V.) :—Visited, 2nd March.

Numbers enrolled :—Boys, 31 ; girls, 29 ; total, 60.
Numbers present :—Boys, 28 ; girls, 24 ; total, 52.

The residence is inconveniently small, and the schoolroom requires to be recoloured and protected from damp. The general internal organization is *good*. The enrolment keeps up, but the attendance has been affected by bad weather for some time past. In all main features the discipline is *good*. Singing is omitted, and in the other branches the range is limited by the standard. The average proficiency approaches *fair*. The low average age of the first class, recent promotions, unavoidable irregularity of attendance, and recent removals of several of the oldest pupils, have unfavourably affected the attainments.

MUMMEL (V.) :—Visited, 12th June.

Numbers enrolled :—Boys, 14 ; girls, 18 ; total, 32.
Numbers present :—Boys, 14 ; girls, 16 ; total, 30.

The fences are broken down in places. The school buildings are in the condition last reported, and are well furnished and stocked. With one exception, the records are properly kept. All children in the locality are enrolled. The discipline is *good* throughout. Under the present teacher a system of elementary drill has been introduced with beneficial results. The course of instruction has been completed by the addition of singing. The arrangements for ensuring systematic and progressive instruction are satisfactory, and are intelligently set forth in the required documents. The methods are modern, and are applied with care and attention to details. The pupils are attentive, industrious, and thoughtful, and their proficiency averages *very fair*.

MURRUMBATMAN (V.) :—Visited, 6th May.

Numbers enrolled :—Boys, 18 ; girls, 19 ; total, 37.
Numbers present :—Boys, 6 ; girls, 9 ; total, 15.

A weather-shed has been erected since last inspection ; but a tank, a bell, and the inscription "Public School" are wanted. Five-sixths of the children in the locality are enrolled. On the day of inspection the attendance was affected by the inclemency of the weather ; but ordinarily it is marked by *very fair* regularity and punctuality. The pupils are clean, mannerly, and, although still rather slow, in *good* order. A third class is now in existence, and the course of instruction has been correspondingly extended. A subdivision of the second class is a defect in the classification, and has caused a loss of time and power, and thus unfavourably affected the results of examination. Singing and drawing are not taught. In the other branches the proficiency is *tolerable*.

MYRTLEVILLE (V.) :—Visited, 18th May.

Numbers enrolled :—Boys, 9 ; girls, 10 ; total, 19.
Numbers present :—Boys, 7 ; girls, 9 ; total, 16.

A well has been recently sunk. The admission register is not properly kept. So many families have left the locality that there are not now more than sufficient children for a good half-time school. Punctuality is only *moderately* satisfactory. The other features of the discipline are *tolerable*. The course of instruction has been extended to include Scripture lessons, but singing and drawing are still omitted. The time-table has been remodelled, and is now *tolerably* suitable, as also are the programmes of lessons. The methods still tend to be individual and mechanical. They have done but little in the way of developing emulation, sympathetic effort, or mental power. The general proficiency averages *moderate*. Arithmetic, grammar, and object lessons are very weak branches. The teacher has had to work under discouraging circumstances for some time past.

NEW SHEFFIELD (N.-V.) :—Visited, 16th September.

Numbers enrolled :—Boys, 39 ; girls, 28 ; total, 67.
Numbers present :—Boys, 30 ; girls, 21 ; total, 51.

Since last inspection the teacher has had to vacate the residence attached to the schoolhouse, which is a Wesleyan church, and in the same material condition last reported. The records are not kept regularly posted up. Three-fifths of the school-going children in the locality are enrolled. Regularity of attendance is *fairly* satisfactory, but several of the pupils are unpunctual. The government continues weak, and but partially effective. The discipline as a whole is but *moderately* satisfactory. The classification is appropriate, and the instructional documents are now *tolerably* well calculated to subserve their intended ends. All required subjects up to a third-class standard are taught, but the matter of instruction is wanting in substance and comprehensiveness. The attainments are of easy range. The general proficiency ranges from *moderate* in the first class to over *tolerable* in the third. The general provisions are far below the requirements of the place, and the local action necessary, in order to obtain a suitably organized school, yet remains to be taken.

NORWOOD (N.-V.) :—Visited, 25th November.

Numbers enrolled :—Boys, 21 ; girls, 14 ; total, 35.
Numbers present :—Boys, 10 ; girls, 6 ; total, 16.

A portion of the wall of the porch has fallen in, and the defects in the material condition previously pointed out still exist. The inscription "Public School" is wanted. More care and neatness are required in the keeping of the premises. All children in the locality are enrolled, and ordinarily attend regularly. At the time of inspection the attendance was affected by the prevalence of eye-blight. As a whole the discipline is *tolerable*. Satisfactory instructional arrangements are in force. All required subjects are taught. The proficiency is *tolerable* in the first and third classes, but exceeds *fair* in the second. There has been a change of teachers since last inspection, which necessitated the closing of the school for some time.

NOWRA (V.) :—Visited, 21st and 22nd July.

Numbers enrolled :—Boys, 51 ; girls, 34 ; total, 85.
Numbers present :—Boys, 42 ; girls, 29 ; total, 71.

Minor improvements have been made in the premises. The internal organization is *good* generally. A good attendance is maintained. Increased attention is given to the details of discipline, which is now *very fair*. The pupils are judiciously divided into four classes. Singing by ear and all other required subjects are taught by modern methods. Geometry is a weak branch, but on the average the proficiency is from *fair* to *very fair*.

PARKESBOURNE (V.) :—Visited, 28th October.

Numbers enrolled :—Boys, 18 ; girls, 21 ; total, 39.
Numbers present :—Boys, 17 ; girls, 17 ; total, 34.

The school buildings are neat rubble stone structures, comprising schoolhouse and a detached two-roomed teacher's residence. A classroom, school bell, weather-shed, and lavatory, would complete the material organization. The whole premises are neatly and carefully kept. The enrolment comprises nine-tenths of the children in the locality. The discipline is *very good*. The pupils are judiciously classified, and carefully taught all required subjects. The proficiency is *very fair* in both classes. The pupils are very attentive, and are trained to exert themselves and think.

ROBERTSON

ROBERTSON (V.) :—Visited, 9th March.

Numbers enrolled :—Boys, 22 ; girls, 26 ; total, 48.
Numbers present :—Boys, 16 ; girls, 19 ; total, 35.

The interior aspect of the school has been greatly improved by a proper arrangement of the school apparatus. A few minor defects occur in some of the records ; otherwise, the internal organization is satisfactory. Continuous wet weather and other causes have unfavourably affected the numbers. A system of drill is carried out, and the general discipline is *good*. The classification has been remodelled on proper principles. The instruction is regulated with *fair* judgment, and is imparted with diligence and care. The proficiency is *fair* in all three classes. Radical changes for the better have been effected, and the school is now in a *very fair* state of efficiency.

ROSLYN (V.) :—Visited, 26th November.

Numbers enrolled :—Boys, 16 ; girls, 12 ; total, 28.
Numbers present :—Boys, 16 ; girls, 12 ; total, 28.

The ground has been enclosed. The only material want is a water supply. The internal organization is *good*. All available children are enrolled. They are regular and punctual in attendance, clean, mannerly, and in *fair* order. The instruction includes all required subjects, is of satisfactory range, well chosen, and carefully imparted. The proficiency is *fair* in the first and second classes, and *very fair* in the third. There have been changes of teachers since last inspection.

TARAGO (N.-V.) :—Visited, 15th October.

Numbers enrolled :—Boys, 18 ; girls, 8 ; total, 26.
Numbers present :—Boys, 13 ; girls, 9 ; total, 22.

Several improvements have been made in the furniture and in its arrangement since last inspection. The enrolment includes nine-tenths of the children in the locality. From various causes beyond the teacher's control the regularity of attendance has been unfavourably affected for some time past. The discipline is *good*, and the moral tone high. Singing and drawing are omitted. The attainments are of easy range, but are commensurate with the pupils' age and time of enrolment in the several classes. The results are *fair*, and have been achieved by earnest and careful work.

TARALGA (V.) :—Visited, 20th May.

Numbers enrolled :—Boys, 25 ; girls, 25 ; total, 50.
Numbers present :—Boys, 12 ; girls, 13 ; total, 25.

The material condition remains as last reported. The internal organization is *good* throughout. About half the children in the locality belong to the school, and, except during harvest time, they attend regularly. On the day of inspection the attendance was low on account of bad weather. The pupils are clean and mannerly, and have been taught elementary drill. The general discipline has improved, and is now *very fair*. The instructional arrangements are satisfactory on the whole, and are set forth in the required documents, which are compiled with exemplary neatness and tolerable judgment. Singing by ear is taught to the second and third classes, and all the other required subjects to the whole. Modern methods are practised, but the instruction is still lacking in substance. The average proficiency slightly exceeds *tolerable*.

TERRANNA (N.-V.) :—Visited, 16th October.

Numbers enrolled :—Boys, 23 ; girls, 18 ; total, 43.
Numbers present :—Boys, 24 ; girls, 18 ; total, 42.

A lavatory and weather-shed are badly wanted. The school stock wants renewing in some items. All children in the locality are enrolled, but severe weather, sickness, and other causes have lately unfavourably affected the regularity of attendance. In some respects the discipline might well be more exacting ; it is *tolerable* on the whole. The classification has been corrected, and is now fairly appropriate. The instruction includes all required subjects, but is wanting in thoroughness in some branches. Too much is taken for granted, and too much has been attempted. The general proficiency is between *tolerable* and *fair*.

TOMERONG (N.-V.) :—Visited, 10th August.

Numbers enrolled :—Boys, 22 ; girls, 8 ; total, 30.
Numbers present :—Boys, 21 ; girls, 7 ; total, 28.

No alteration in the premises. The records are in a very backward and defective state. There are no programmes of lessons. The pupils include nearly all the children of the locality, but are irregular and unpunctual in attendance. The government is very feeble, and the general discipline and the moral tone are consequently unsatisfactory. The classification is informal and unnecessarily minute. For some time past the school has been conducted with but very little regularity or system—the result mainly of the teacher's ill health. The attainments of the pupils are of very limited range ; their proficiency averages only *moderate*. Singing is not taught.

TOWRANG (N.-V.) :—Visited, 11th November.

Numbers enrolled :—Boys, 19 ; girls, 16 ; total, 35.
Numbers present :—Boys, 11 ; girls, 8 ; total, 19.

The material condition is unchanged. In several minor particulars the records are defectively kept. Some of the required wall documents are wanting. Punctuality is defective. The discipline as a whole is *tolerable*. The numbers include all available children, but the new scale of fees has recently lowered the attendance. The instruction is suitable in kind, and is imparted in such a way as to produce *tolerable* results. The temporary closing of the school for a portion of the year prior to the present teacher's entry on duty has affected the standard of attainments as well as the actual proficiency. Singing is not taught.

WARRAGEE (N.-V.) :—Visited, 28th July.

Numbers enrolled :—Boys, 18 ; girls, 18 ; total, 36.
Numbers present :—Boys, 15 ; girls, 14 ; total, 29.

Under an arrangement to hold for twelve months, this school has recently been reconstituted after the lapse of a considerable period, and is now conducted in premises which may be regarded as suitable for a temporary provision. With one exception the records are in a satisfactory state. At the time of inspection only about one-half of the children in the locality were enrolled, and some of these were very young. This is mainly the result of the existence of a competing private school. For so far the attendance has been punctual and regular. The general discipline is promising. The pupils have been judiciously classified, and suitable arrangements have been made for the regulation of the instruction. All required subjects are taught. Modern methods are intelligently practised, but there has not been sufficient time for the teaching to have borne much fruit. The average proficiency in the work gone over is about *fair*.

II.—PROVISIONAL SCHOOLS.

BAMARANG (V.) :—Visited, 3rd August.

Numbers enrolled :—Boys, 15 ; girls, 9 ; total, 24.
Numbers present :—Boys, 15 ; girls, 7 ; total, 22

Two acres of Crown land have been secured for school purposes, and the people have erected a suitable schoolroom. The furniture is barely sufficient. A few defects occur in the records. All the children in the locality are enrolled, but late wet weather and farming operations have materially interfered with the regularity and punctuality of attendance. Some of the pupils are given to whispering, but generally they are obedient, quiet, mannerly, and orderly. An appropriate two-class division of the pupils is made, and all required subjects are taught except singing. Methods of modern type are practised. They are fairly suitable, and produce *tolerably* satisfactory results.

BERELLAN (N.-V.) :—Visited, 28th July.

Numbers enrolled :—Boys, 12 ; girls, 18 ; total, 30.
Numbers present :—Boys, 11 ; girls, 15 ; total, 26.

The windows are in need of repair, and the school stock requires renewing in some items. In several of the minor particulars the records are incomplete. The locality cannot be regarded as a "remote and thinly-populated" one in the meaning of the Public Schools Act. The numbers are about stationary. The obedience of the pupils should be prompter. In other respects the discipline is *fair*. The school is properly divided into three classes. Singing and Scripture lessons are omitted from the prescribed course. Teaching is carried on more systematically than formerly, and the average proficiency of the pupils has risen to nearly *fair*.

BUNDANOON (N.-V.) :—Visited, 17th November.

Numbers enrolled :—Boys, 20 ; girls, 20 ; total, 40.
Numbers present :—Boys, 17 ; girls, 16 ; total, 33.

Blinds for the windows and two new desks have been provided, but hat-pegs are still badly wanted. There are some minor defects in the records. Objections to the new scale of fees have affected the attendance of late. There are sufficient children permanently settled in the locality for a Public School, and nearly all belong to the school. The government, though mild and cheerful, is insufficiently firm and exacting. A third class has been formed within the year, and the course of instruction has been correspondingly extended excepting that analysis of sentences is not taught. The results of examination average *tolerable*.

BUNGONIA (N.-V.) :—Visited, 11th September.

Numbers enrolled :—Boys, 14 ; girls, 9 ; total, 23.
Numbers present :—Boys, 7 ; girls, 4 ; total, 11.

The school buildings are in very bad repair, and also in a very untidy state. There has not been sufficient care taken to keep up a proper stock of requisites. Nearly all children in the locality are enrolled, and of these one-half are regular in attendance. Sickness affected the attendance at the time of inspection. The discipline is only *moderate*. Special religious instruction is still given in a manner contrary to the Council's regulations. Scripture lessons, analysis of sentences, singing and drawing, are omitted from the course. The proficiency of the pupils averages *moderate* in the first class and *tolerable* in the second. The teaching lacks thoroughness.

BURRAGOWANG (V.) :—Visited, 18th November.

Numbers enrolled :—Boys, 16 ; girls, 14 ; total, 30.
Numbers present :—Boys, 13 ; girls, 13 ; total, 26.

Necessary furniture has been added. The schoolroom is inconveniently small. A few defects occur in the records. All available children are enrolled, and attend with *tolerable* regularity and punctuality. Several of them give too little attention to cleanliness and tidiness, and speaking generally they are slow and awkward in their manner, and are not at all well drilled to proper school habits. The time-table is unsuitable, and there are no programmes of lessons. Developmental methods are not well understood, and as a consequence the mental culture and proficiency of the pupils are low. The latter is below *moderate*. Drawing is not taught.

CARRICK (V.) :—Visited, 12th November.

Numbers enrolled :—Boys, 14 ; girls, 17 ; total, 31.
Numbers present :—Boys, 12 ; girls, 17 ; total, 29.

A two-acre site of Crown land has been secured for school purposes, and the people have erected on it a good slab and bark building, which is divided into a schoolroom and a teacher's residence of two apartments. The furniture is suitable, nearly sufficient, and in good order. The school is sufficiently stocked. Five-sixths of the children in the locality are enrolled ; they are regular and punctual in attendance, clean, mannerly, and in *good* order. The regulation of the instruction is provided for on the required documents with fair judgment. The pupils are properly classified. Modern methods are practised ; all required subjects except singing are taught, and the results of instruction approach *fair* on the average. In some subjects the range of attainments is low, but this is the result of the school having been closed for some months prior to the present teacher's taking charge of it in May last.

CHAIN OF PONDS (V.) :—Visited, 25th March.

Numbers enrolled :—Boys, 17 ; girls, 15 ; total, 32.
Numbers present :—Boys, 6 ; girls, 4 ; total, 10.

The material condition remains as last reported. The day of inspection was wet, hence the low attendance. Cleanliness, order, and tone are secured, indicating firmness, vigour, and vigilance in the government. Singing and drawing are omitted, but in the other branches the attainments are *fair*. The standard in the third class for reading and geography is low, and the oral subjects are relatively weak throughout.

COTTAWALLA (V.) :—Visited, 30th November.

Numbers enrolled :—Boys, 22 ; girls, 17 ; total, 39.
Numbers present :—Boys, 13 ; girls, 13 ; total, 26.

The material organization has been rendered satisfactory for present requirements. About four-fifths of the children in the locality are enrolled, and these are very irregular in attendance. The pupils are still given to several objectionable habits. A suitable three-class division of the pupils obtains. The instruction is not well regulated, and the pupils' attainments are uneven. Singing and drawing are omitted. Results ranging from *moderate* in the first and second classes to upwards of *tolerable* in the third are produced.

CUTTYCUTTYGANG :—

CUTTYCUTTYGANG :—Visited, 28th May.

Numbers enrolled :—Boys, 17 ; girls, 15 ; total, 32.

Numbers present :—Boys, 16 ; girls, 14 ; total, 30.

A slab and bark unfloored building has been erected by the people on a piece of Crown land, suitably situated. The furniture is barely sufficient, only *moderately* suitable, and not well arranged. Some of the records are incorrectly kept. The pupils include about three-fourths of the children in the locality. Nearly all of them are punctual, and three-fourths of them attend regularly under ordinary circumstances. They have not been drilled, and are sometimes inclined to be unsteady and talkative, but they are clean, tidy, tractable, and mannerly. Except singing and drawing, all required subjects up to a third class standard are duly provided for. Speaking generally, the matter of instruction is suitable, but owing partly to the classification being too low, and partly to the adoption of individual and rote methods, the instruction fails of results commensurate with the amount of care and labour bestowed on it. The general proficiency is *moderate* in all the classes.

FRANKFIELD (N.-V.) :—Visited, 29th October.

Numbers enrolled :—Boys, 25 ; girls, 17 ; total, 42.

Numbers present :—Boys, 23 ; girls, 16 ; total, 39.

The school premises are private property. The schoolhouse is a good slab and bark building, and is suitably furnished. Various defects occur in the keeping of the records. All children of school age in the locality attend, and most of them regularly. The government is cheerful and *very fairly* effective. The division of the school (two-class) is appropriate, and all required subjects are taught. Methods of modern cast are practised, and with *fair* results.

GARRETT'S FLAT :—Visited, 6th March.

Numbers enrolled :—Boys, 12 ; girls, 22 ; total, 34.

Numbers present :—Boys, 10 ; girls, 20 ; total, 30.

Additional lighting and book-shelves have been provided. The records are incomplete in several particulars. All children of school age in the locality are enrolled. The discipline is *fairly* satisfactory. A second class now exists, and the classification may be considered suitable. The instruction is not properly regulated, there being neither time-table nor programmes of lessons. Object lessons, singing, and drawing, have been omitted by the present teacher. In the other branches the proficiency averages something over *tolerable*. The present teacher took charge but a short time before the inspection. The defects are mainly the result of his inexperience.

GRABBER GULLEN (N.-V.) :—Visited, 9th June.

Numbers enrolled :—Boys, 16 ; girls, 15 ; total, 31.

Numbers present :—Boys, 6 ; girls, 11 ; total, 17.

The building has been re-whitewashed. The property generally is neatly kept. With the exception of the daily report book and quarterly return none of the records can be said to be complete. The leaf of the observation book containing my last report has been torn out. The class-roll has been incorrectly marked. Both the enrolment and the attendance have been seriously affected by the prevalence of whooping-cough. The pupils are very unpunctual, but they are generally clean, and in *tolerable* order. The actual classification is *tolerably* appropriate, but it is not properly represented on the records. There are no programmes of lessons, and the time-table is very defective. Scripture lessons are omitted from the course of instruction. The attainments are very low throughout ; in some branches a mere blank. A change of teachers has been made since last inspection.

GREENWELL POINT (N.-V.) :—Visited, 29th July.

Numbers enrolled :—Boys, 17 ; girls, 13 ; total, 30.

Numbers present :—Boys, 12 ; girls, 10 ; total, 22.

The schoolroom is in the condition last reported, and is sufficiently furnished and stocked. In all main features the discipline is *fairly* satisfactory. Excepting that the first class is unnecessarily divided, the classification is appropriate. All required subjects are taught on modern methods, and with results averaging *fair*. A change of teachers has been made since last inspection.

GURRUNDAR (N.-V.) :—Visited, 11th June.

Numbers enrolled :—Boys, 14 ; girls, 18 ; total, 32.

Numbers present :—Boys, 8 ; girls, 15 ; total, 23.

A teacher's residence has recently been erected, and new and suitable desks and forms have been provided. The records are defectively kept, and some of them are in arrear. The enrolment includes all children in the locality, but the attendance is very fluctuating. The discipline as a whole ranks about *tolerable*. The classification is now appropriate, and the general instructional arrangements are *tolerably* suitable. Singing, drawing, and Scripture lessons are omitted. In the other branches the proficiency ranges from *small* in the second class to between *indifferent* and *moderate* in the first. Average, *below indifferent*.

HIGH RANGE :—Visited, 24th September.

Numbers enrolled :—Boys, 14 ; girls, 8 ; total, 22.

Numbers present :—Boys, 12 ; girls, 8 ; total, 20.

The general organization and discipline are *fairly* satisfactory. The school is appropriately divided into three classes, which are taught all required subjects except singing and analysis of sentences. Explanatory methods are practised. The results of examination are between *tolerable* and *fair*. Attention has been carefully directed to the remedy of defects disclosed last year.

JACQUA (N.-V.) :—Visited, 23rd October.

Numbers enrolled :—Boys, 16 ; girls, 13 ; total, 29.

Numbers present :—Boys, 15 ; girls, 12 ; total, 27.

The premises are rented by the committee. They are fairly suitable, and comprise a room for the teacher's use as well as a schoolroom. The latter is sufficiently and suitably furnished, but the desks were badly arranged. The stock of apparatus is rather scanty. With one exception the records are properly kept. All children of school age within reach are enrolled. Two-thirds of them attend regularly, and nearly all are punctual. They are also clean and generally mannerly and tractable, but they are not well drilled to school movements, and to habits of prompt and sustained attention and obedience, self-reliance and order. There are minute and unnecessary divisions of the classes, and the classification does not hold for all subjects. The teaching is mainly individual, and rote work is largely practised. Except in mere mechanical and pure memory work, the proficiency is very low, and the average is only *indifferent* on the whole. The actual attainments of the pupils are considerably below the standard.

JANNUNG (V.) :—Visited, 13th August.

Numbers enrolled :—Boys, 13 ; girls, 11 ; total, 24.

Numbers present :—Boys, 13 ; girls, 11 ; total, 24.

Hat-pegs have been provided since last inspection. The internal organization is as good as circumstances will permit, and in fact good judgment as well as ingenuity. Two families in the neighbourhood are kept away from the school. The discipline is *very fair*, and the moral tone healthy. The instruction is properly regulated, and includes all required subjects up to a third class standard. It is imparted with system, care, and thoroughness, and produces *very fair* results.

JANUGARRAH (N.-V.) :—Visited, 19th August.

Numbers enrolled :—Boys, 14 ; girls, 10 ; total, 24.

Numbers present :—Boys, 14 ; girls, 10 ; total, 24.

A neat, well-built, suitably furnished schoolhouse, on an eastern spur from the Currcobilly Range, attended by the families of several selectors. Aid has but recently been granted. The general discipline and moral tone are promising. An appropriate two-class division of the pupils has been made, and all required subjects are taught. For the time the school has been opened satisfactory progress has been made. The actual proficiency of the pupils is *tolerable* on the average.

KIRKDALE (N.-V.) :—Visited, 30th October.

Numbers enrolled :—Boys, 16 ; girls, 9 ; total, 25.

Numbers present :—Boys, 13 ; girls, 7 ; total, 20.

No change has been made in the premises, which are quite unsuitable. Some of the school records and the programmes of lessons are incomplete. The time-table requires remodelling. The enrolment includes all available children, who attend very regularly, and are generally punctual. In all other respects the discipline is *fair*. The classification is still too minute. No provision is made on the time-table for teaching drawing or Scripture lessons. In the remaining branches the average proficiency exceeds *tolerable*.

LAGGAN (N.-V.) :—Visited, 2nd December.

Numbers enrolled :—Boys, 13 ; girls, 18 ; total, 31.

Numbers present :—Boys, 8 ; girls, 11 ; total, 19.

The schoolroom is inconveniently small, but otherwise tolerably suitable. Another desk, bookshelves, and hat-pegs are badly wanted. There are no external appointments. The stock of records is incomplete. At the time of inspection the attendance was affected by farming operations, and in some cases the teacher's best efforts have proved insufficient to overcome the ordinary negligence of the parents in the matter. All available children are enrolled however. As regards order, obedience, and attention, the discipline is *very fair*. All required subjects up to a third-class standard, except drawing, are provided for with fair judgment. The average proficiency exceeds *tolerable*.

MIDDLE ARM (V.) :—Visited, 3rd December.

Numbers enrolled :—Boys, 14 ; girls, 9 ; total, 23.

Numbers present :—Boys, 11 ; girls, 6 ; total, 17.

At the time of inspection the present teacher had been only two weeks in charge of the school, and had made no changes in the organization. The school remains in the material condition last reported. The time-table requires remodelling, to adapt it to a required amended classification. Programmes of lessons and other required wall documents are wanting. The stock of records is incomplete. The school stock requires to be more neatly arranged. Four-fifths of the children in the locality are enrolled, and the remainder are promised. On the day of inspection the attendance was low, from an accidental cause, but ordinarily is regular and punctual. The government is cheerful and vigilant, and the general discipline *very fair*. The pupils were not examined.

MUMMELL (N.-V.) :—Visited, 3rd June.

Numbers enrolled :—Boys, 20 ; girls, 14 ; total, 34.

Numbers present :—Boys, 7 ; girls, 6 ; total, 13.

The material condition remains as last reported. The school stock is short in several items ; the records are very incomplete ; and neither programmes nor other wall documents are provided. All children in the locality are enrolled, and, during the greater part of the year, would seem to attend with *fair* regularity. At the time of inspection the majority were said to be away picking corn. The pupils are addicted to whispering, and some of them to copying, but they are generally mannerly and subservient to command. Singing, drawing, and Scripture lessons are omitted. The oral lessons are extremely weak, and in arithmetic the pupils have been prematurely advanced. The average proficiency falls below *moderate*. Rote work is largely resorted to, and the teaching has been, to a considerable extent, individual. As a consequence, the mental effort and culture of the pupils are both low. The defects pointed out at last inspection remain, and the school has deteriorated. The teacher's illness and absence from duty, and the consequent interruption to the school work, are the excuse advanced, and may be accepted to some extent.

PEELWOOD (N.-V.) :—Visited, 29th May.

Numbers enrolled :—Boys, 33 ; girls, 29 ; total, 62.

Numbers present :—Boys, 26 ; girls, 19 ; total, 45.

The building is falling into disrepair, but measures are in progress for the establishment of a vested Public School. The schoolroom is not kept clean ; the furniture is badly arranged ; and the school stock is very scanty, has been abused, and is scattered about the room. The records are incomplete in various particulars. Nearly all children in the locality attend. Punctuality and regularity of attendance are, on the whole, *fairly* satisfactory, but the pupils are very boisterous and noisy, and, in some instances, not sufficiently clean. Order, too, is lax. There are only two classes ; there should be three. The programmes of lessons are mere transcripts from the Standard of Proficiency. Object lessons and geography have been very much neglected, and singing and drawing are not taught at all. The proficiency in the other branches is below *moderate*. Considerable energy is infused into the general management, but it is erratic, and much of it is wasted in mere bustle.

Note.—Since the inspection the school has been converted into a Public School.

PRJAB (N.-V.) :—Visited, 27th November.

Numbers enrolled :—Boys, 11 ; girls, 16 ; total, 27.

Numbers present :—Boys, 7 ; girls, 12 ; total, 19.

Another desk is badly wanted. Internally, the school is fairly well organized. All available children are enrolled. Much more life and energy have been thrown into the government and general management. In all main features, the discipline is now *fairly* satisfactory. The pupils are appropriately divided into three classes, and are taught all required subjects, except singing and drawing. Rote work is still mixed up with the teaching to an undue extent. The results of examination are below *tolerable*.

REDGROUND :—

REDGROUND :—Visited, 2nd December.

Numbers enrolled :—Boys, 16; girls, 15; total, 31.
Numbers present :—Boys, 15; girls, 10; total, 25.

The material condition remains as last reported. Omissions occur in the keeping of the records. All available children are enrolled, and ordinarily attend with very *fair* regularity. They are also punctual and clean. When in school, however, they are much given to talking and copying. The classification is much too high, and is far from judicious. The Scripture lessons, singing, and drawing, are omitted. Rote work is still mixed up to an unnecessary extent with explanatory teaching. The pupils are very dull over their work, and low in mental power. Their attainments are considerably below the requirements of the standard and the entries in the lesson register. The general proficiency is below *indifferent*.

SHAW'S CREEK :—Visited, 8th September.

Numbers enrolled :—Boys, 14; girls, 20; total, 34.
Numbers present :—Boys, 6; girls, 14; total, 20.

The schoolhouse has been floored. Additional desk accommodation is badly wanted. In various minor particulars the records are imperfect. In consequence of the severity of the weather and prevalent sickness, and from various minor causes, both the enrolment and the attendance have been rather low for some time past. The government is vigilant, cheerful, and fairly effective. The late irregularity of attendance has been allowed to interrupt, in some matters to an unnecessary extent, the regularity of the instruction. Object lessons and geography have suffered most from this cause. In each of the two classes the general proficiency is *tolerable*.

SPRING CREEK (Yass River—N.-V.) :—Visited, 5th May.

Numbers enrolled :—Boys, 13; girls, 14; total, 27.
Numbers present :—Boys, 11; girls, 13; total, 24.

The people have erected on private property a slab and bark house of two rooms—a schoolroom and teacher's residence. The ground is unenclosed, and there are no external appointments. The pupils include all children in the locality except one family, and are regular and punctual in attendance, clean, and in *good* order. They are appropriately classified, and are taught all required subjects except singing and drawing. For the time the school has been in operation, the instruction is of satisfactory range. The proficiency is *fair* in arithmetic, grammar, and geography; *tolerable* in reading, writing, and dictation; and *small* in object lessons; average, *tolerable*. Of late the teacher has not shrunk from his duty in the mode of conducting the school, which is now worked as a Public School.

SPRING FLAT (Tallagandra—N.-V.) :—Visited, 5th November.

Numbers enrolled :—Boys, 17; girls, 15; total, 32.
Numbers present :—Boys, 14; girls, 15; total, 29.

The school has but recently been established. A good schoolhouse and a hut for the teacher's use have been erected, and the ground has been enclosed. The necessary funds were raised by public subscription "*towards the erection of a Provisional School at Tallagandra, Gundaroo,*" but the whole premises have now been vested in Denominational Trustees, not one of whom belongs to the recognized School Committee. The residents and locality are thus deprived of the advantage of the Council's supplementing the local contributions. At the time of inspection the school stock had not been received, so that the internal organization was very imperfect. The teacher had, however, made *tolerably* suitable temporary arrangements. The pupils enrolled include eight-ninths of the children of school age in the locality. Three-fourths of them are regular in attendance, and they are clean, mannerly, and obedient. The general discipline is promising. In consequence of the want of the necessary books and other appliances, the pupils were not examined.

TARLO (N.-V.) :—Visited, 15th May.

Numbers enrolled :—Boys, 13; girls, 14; total, 27.
Numbers present :—Boys, 10; girls, 12; total, 22.

The material condition is bad; the building is positively unsafe. Many inaccuracies of detail occur in the keeping of the records. The discipline has improved, and is, on the whole *fair*. Punctuality is still a defective point. The existing division of the pupils (two class) is appropriate. The pupils are attentive; but for so far only little has been done in the way of a proper development of their mental faculties. The results of examination are *moderate*.

WATERLAND (Run of Water—N.-V.) :—Visited, 23rd April.

Numbers enrolled :—Boys, 8; girls, 10; total, 18.
Numbers present :—Boys, 5; girls, 7; total, 12.

School is held in a Primitive Methodist chapel, and the church furniture is utilized for school purposes. Book-shelves and hat-pegs are badly wanted. The stock of apparatus is scanty and untidily arranged. Of the records, the admission register is the only one in a satisfactory state. The others give clear evidence of carelessness and neglect. Under ordinary circumstances all the children in the locality are enrolled, but at the time of inspection several families were kept away by whooping-cough. The pupils are slow, but in other respects the discipline is *tolerably* satisfactory. The arrangements for regulating the course of, and the mode of imparting, the instruction, are all seriously defective. The time-table is next to useless, and there are no programmes of lessons. Object lessons, singing, and drawing, are entirely omitted, and the teaching in grammar and geography is all but worthless. The teaching consists mainly of rote work, and neither secures real effort on the part of the pupils nor leaves sufficient positive impress on their minds and habits. The average proficiency is little above *indifferent*.

YARRUNGA :—Visited, 11th March.

Numbers enrolled :—Boys, 15; girls, 14; total, 29.
Numbers present :—Boys, 14; girls, 14; total, 28.

Hat-pegs and a table have been provided since last inspection. Nearly all the children in the locality are enrolled. They are still trained to habits of order, cleanliness, obedience, and attention. Object lessons are omitted for the first class, and singing and drawing altogether. A second class has been formed, and the general proficiency ranges from *fair* in it to *very fair* in the first. With few exceptions, the pupils still work industriously and thoughtfully. A change of teachers has taken place since last inspection.

III.—HALF-TIME SCHOOLS.

UPPER GUNDAROO (N.-V.) :—Visited, 4th November.

Numbers enrolled :—Boys, 11; girls, 10; total, 21.
Numbers present :—Boys, 7; girls, 9; total, 16.

The school is worked in conjunction with Sutton H.-T. Some minor defects occur in the records. There are still no programmes of lessons, and others of the required wall documents are wanting. The enrolment includes nearly all available children, and the several features of the discipline are *tolerably* satisfactory. The classification is adapted to the attainments of the pupils. Object lessons and drawing are omitted. The proficiency is *moderate* in each of the two classes.

SUTTON

SUTTON (N.V.) :—Visited, 4th November.

Numbers enrolled :—Boys, 7 ; girls, 5 ; total, 12.
Numbers present :—Boys, 6 ; girls, 5 ; total, 11.

Hut-pegs and book-shelves are badly wanted. The records are defective in several of the less important particulars. The furniture and apparatus are not suitably arranged, and the latter is very scanty. An unsanctioned reading-book has been in use. Nearly all available children are enrolled, and regularity of attendance is *fairly* satisfactory. The other features of the discipline are *tolerable*. The pupils are appropriately divided into two classes. Of the subjects required for these, object lessons are omitted in the first class and drawing in the second. The general attainments of the pupils are *tolerable* in the first class, and *moderate* in the second.

MULLENGULLENGA (N.V.) :—Visited, 22nd October.

Numbers enrolled :—Boys, 7 ; girls, 4 ; total, 11.
Numbers present :—Boys, 6 ; girls, 4 ; total, 10.

This school is worked in conjunction with Windellama H.-T. The Bronte Church of England building is still used, and is in the condition last reported. Some defects occur in the records. Nearly all available children are enrolled. In all main features the discipline is *fair*. The classification is too high, and individual instances of mis-classification occur. The pupils' attainments are of limited range ; the average proficiency is about *moderate* ; the pupils are slow and dull.

WINDELLAMA (N.V.) :—Visited, 22nd October.

Numbers enrolled :—Boys, 10 ; girls, 3 ; total, 13.
Numbers present :—Boys, 9 ; girls, 3 ; total, 12.

The material condition is still seriously defective. The records and instructional documents are in a very incomplete state. The premises are not neatly kept. Nine-tenths of the children in the locality are enrolled, and attend with *fair* regularity and *tolerable* punctuality. In other respects the discipline is *fair*. Singing and drawing are omitted. Rote work has given place to some extent to explanatory methods, which, however, are not well understood or effectively practised. The attainments are very uneven. The best results are produced in the more mechanical branches. The pupils' mental culture is low. The average proficiency approaches *fair*.

NEW BRISTOL :—Visited, 12th August.

Numbers enrolled :—Boys, 6 ; girls, 10 ; total, 16.
Numbers present :—Boys, 6 ; girls, 9 ; total, 15.

No change in the school premises. All children of school age in the locality are enrolled, and attend regularly and punctually. They are generally willing and mannerly, but are wanting in self-control, and require to be thoroughly drilled. There are two classes, an arrangement adapted to the attainments of the scholars. The instruction is properly regulated and carefully imparted. The average proficiency of the pupils is between *tolerable* and *fair*.

NORTH HUSKISSON :—Visited, 11th August.

Numbers enrolled :—Boys, 8 ; girls, 10 ; total, 18.
Numbers present :—Boys, 6 ; girls, 10 ; total, 16.

The premises are in the condition last reported. The stock of working materials is hardly sufficient. Nearly all children in the locality are enrolled. They are reasonably regular, and generally punctual in attendance. When in school the pupils are inclined to talk, and have not yet been drilled to act in concert in obedience to understood orders, yet they manifest a willing and obedient spirit, and are mannerly. Suitable instructional arrangements are in force. Teaching is conducted with system, diligence, and care. The pupils' general proficiency rises from *tolerable* in the second class to upwards of *fair* in the third. Singing is the only prescribed subject not taught. The school is worked in conjunction with New Bristol H.-T., 12 miles distant. The road between the two is difficult, dreary, and frequently dangerous. The regularity with which the teacher has discharged his duties under these circumstances, and in the face of all weathers, is deserving of special notice.

QUIALEGO (N.V.) :—Visited, 21st October.

Numbers enrolled :—Boys, 4 ; girls, 10 ; total, 14.
Numbers present :—Boys, 2 ; girls, 8 ; total, 10.

A wooden floor and hat-pegs are badly wanted. All children in the locality are enrolled, and they attend regularly and with *fair* punctuality. In point of order and general demeanour they have improved. The general discipline is now *fairly* satisfactory. Suitable instructional arrangements are in force. Results varying from *tolerable* in the first class to *moderate* in the second have been achieved.

SPRINGFIELD (N.V.) :—Visited, 12th October.

Numbers enrolled :—Boys, 7 ; girls, 6 ; total, 13.
Numbers present :—Boys, 4 ; girls, 3 ; total, 7.

The school is taught in conjunction with Quialego H.-T. The building now occupied is a substantial structure, fairly well organized and furnished. All the children of school age in the locality are enrolled, and are tolerably regular and punctual. In its main features the discipline has improved, and is now *fair*. The pupils are appropriately classified, and are taught all required subjects except singing and drawing. The average proficiency is *tolerable*. Grammar, geography, and object lessons are weak branches.

RICHLANDS (N.V.) :—Visited, 27th May.

Numbers enrolled :—Boys, 6 ; girls, 9 ; total, 15.
Numbers present :—Boys, 4 ; girls, 6 ; total, 10.

This school is worked in conjunction with Yelbraith H.-T. The condition of the schoolroom remains as last reported, and is quite unsatisfactory. Some defects occur in the keeping of the records. All children within reach of the school are enrolled, and two-thirds attend regularly. The details of discipline are properly attended to, and elementary drill is taught. Singing and drawing excepted, all subjects required for the classification (three-class) are taught. The methods are of approved kind, and the proficiency of the pupils reaches *fair* in the first class, and exceeds it in the second and third. The teaching has been systematic and continuous, although no programmes have been constructed. A change of teachers has taken place since last inspection.

YELBRAITH (N.V.) :—Visited, 27th May.

Numbers enrolled :—Boys, 7 ; girls, 10 ; total, 17.
Numbers present :—Boys, 5 ; girls, 7 ; total, 12.

The building is in the state last reported. Some defects occur in the keeping of the records. Nearly all children in the locality attend. The discipline is *very fair* throughout. The pupils are judiciously divided into two classes, all subjects required for which are taught except singing and drawing. The general character and arrangements for carrying on the instruction are the same as at Richlands. The mental culture and general proficiency of the pupils are *fair*.

D. S. HICKS,
Inspector.
MATTLAND

MAITLAND DISTRICT.

INSPECTOR'S General Report upon Schools for 1874.

THE number of schools in this district at the close of 1873 was eighty-three (83), comprising eighty-seven (87) departments, since when the following additions and reductions have been effected. A superior Public School of three departments has been established in West Maitland; the proposed Public School at Greta will be opened in a week or two; and another at Scone is in course of erection. Provisional Schools have also been established at Park, Stockyard Creek, Waverley, Belltrees, and Rouchell Brook, but those of the three latter places and Vera are temporarily closed for lack of teachers. In consequence also of diminutions in their attendance, the Blandford P. has lapsed; the Singleton P., Morpeth C.E., and East Maitland R.C., have been reduced to the rank of schools of one department; and the certificates of the Bishop's Bridge C.E., Hinton C.E., Paterson C.E., and West Maitland Pres., have been withdrawn. The Wesleyan School of West Maitland has also been voluntarily closed in favour of the local Public School. To guard against misapprehension, however, it should be stated that except in one case, that of Paterson C.E., such reductions have been made only in places where schools were in excess; and it may be confidently affirmed that they have been fraught with beneficial results, educational and economical.

The number of schools now (December, 1874) enrolled in this district is seventy-eight (78) consisting of eighty-two (82) departments, classed as follows:—Public, thirty-two; Provisional, twenty-two; Half-time, six; Church of England, twelve; and Roman Catholic, ten. These are widely distributed among the first and the second class centres of the population; and they afford the means of education to a large proportion of the children of school age. Further school extension, however, is needed, and efforts have been made to promote such extension, but with only partial success, the chief bar to progress being the difficulty of getting the small, isolated, and newly settled communities of free selectors to erect and furnish suitable schoolhouses at their own expense. Another difficulty also is that of deciding as to the permanent settlement of such communities; otherwise they might reasonably be accorded the same pecuniary advantages as are given to those applying for Public Schools. Notwithstanding such hindrances, however, the steady progress which school extension has made during the year affords ground for satisfaction and hope; for not only have six schools been established and four others provided for, but applications also for the formation of schools at Paterson, Upper Falbrook, and Dartbrook have been favourably considered, and inquiries instituted as to the establishment of small schools at Murray's Run, Giant's Creek, Sandy Creek, First Creek, Owen's Gap, Elliston, Goorangoola Creek, Lostock, and Peshurst. It is also gratifying to remark that, when the educational claims of these last-named places have been satisfied, there will be very little scope for further school extension in the district.

The year has been favourable to the work of inspection. All the schools in the district have been visited, except those of Stanhope, Knockfin, Webber's Creek, and Stockyard Creek, the numbers and kinds of the inspections being as follows:—Nineteen general, sixty-three regular, six ordinary, and ninety-three incidental, which last were confined to forty-one schools only. These general and regular have involved investigations into the material, moral, and intellectual condition of the schools, and the results of such have been measured by the usual high standards.

The total number of schools or departments that have existed in the district during the whole or part of the year is ninety (90), of which eighty-two have been in operation the whole year, and eight (8) a part thereof.

The material condition of the schools continues to improve; but, owing in some measure to the non-vested character of three-fourths of the school properties, and to the difficulties of raising funds to defray the cost of effecting necessary repairs and additions, the improvement is not so speedy and complete as could be desired. There is much to be done, however, in matters of detail before the material organization of the schools can be pronounced satisfactory. Many of the schools are without water-tanks, washing appliances, and bells; and in sixteen instances the out-office accommodation is either inadequate or absolutely wanting. In no instance is provision made for the physical training of the scholars, and in three only (Singleton P., Wollombi P., and St. Paul's C.E.) are weather-sheds erected for their health and comfort. It is gratifying to report, however, that there are but few schools that do not afford more than adequate accommodation for the available attendances, and whose interior appointments are not in keeping with existing requirements; the highest type, as yet, of material organization being that of the West Maitland Public School—the style, design, and structure of whose buildings are of superior merit. Good buildings have also been erected for the West Maitland R. C. (Boys), and Greta P. Schools; and others are in course of erection for the Scone Public School. In addition to these improvements, twelve school buildings have undergone important repairs and alterations, and steps have been taken to re-organize the Public Schools of Millfield, Ellalong, and Muswell Creek. New and larger buildings are needed for the Public Schools of Bishop's Bridge, Cessnock, Lochinvar, Oswald, and Murrurundi; but there is at present little prospect of funds being locally raised towards the cost of their erection, owing in great measure to the growing popular feeling that it is the office of the State to effect such improvements by the agency of indirect taxation; and whatever may be the moral worth of such a feeling, it obviously originates from the indisposition of some people to give subscriptions, and the repugnance of others to collect them. Classifying the schools according to the character of their material organization, forty-four (44) rank from fair to very good, and the rest (38) from moderate to tolerable.

The character of the attendance is neither satisfactory nor encouraging, and is very little better than that described in last year's report. During this year 6,432 scholars have been enrolled, and the average quarterly enrolments and daily attendance have been only 5,140 and 3,347 respectively. These latter numbers however would have been respectively $1\frac{1}{2}$ and $3\frac{1}{2}$ per cent. higher had it not been for the epidemic among children in the months of February and March. It thus appears that, exclusive of the known 500 or 600 children for whom schools are not yet provided, and of those who go to no school at all, there are not fewer than 3,085 others deriving little permanent benefit from the schools around them. Comparing the daily attendances with the annual and quarterly enrolments, the rates of regularity are 52 and 65 per cent. respectively, rates that would disentitle schools to the receipt of State aid under the Revised Code in England. The significance of these facts, moreover, is heightened by two others; first, that in the 1st, 2nd, 3rd, and 4th (or highest) classes, the percentages of pupils are 44, 31, 21, and 4, respectively; and secondly, that the respective average ages of such classes are 7, $9\frac{1}{2}$, 11, and 13 years. As to the value of such averages of attendance and of ages may be quoted the following forcible remarks of the Rev. James Frazer:—"It appears to me that a fundamental fallacy lies at the root of any inferences drawn either from averages of attendance or averages of age. You get your average, but it is not a true representation of the facts of the case. The result of one boy's having attended school 200 days in the year, while another has only attended 50, is not the same, nor anything like the same as if each had attended 125 days. Two girls leave school, one at seven the other at thirteen years of age; the average is ten; but will any one tell me that the same effect, socially and intellectually, is the same as if each child had stayed at school till she was ten? In the latter case a good school being given, both girls would have been decently educated, sufficiently so perhaps (?) for their station in life."

The state of the attendance, as exhibited on the days of inspections, and as compared with last year's results, is as follows:—

	1873.	1874.
Number of Public Schools inspected	40	60; increase, 50 per cent.
Number of Denominational Schools inspected.....	28	22; decrease, 11·4 per cent.
Number of Public School children examined.....	1,458	2,139; increase, 46 per cent.
Number of Denominational School children examined	1,722	1,381; decrease, 20 per cent.

The disciplinary condition of the schools continues to improve, pleasing evidence of which is afforded by the promotions of seventeen teachers to higher grades of classification, two of whom were highly deserving of special recommendation. In this particular and in their order of merit, the different classes of schools stand thus:—(1) Public, (2) Denominational, (3) Provisional and Half-time. In fifty-one (51) schools, eleven (11) of which are Public Schools distinguished for their high moral character, the discipline ranks from fair to very good; in the rest (31) from moderate to tolerable, which latter marks are applied to results below the standard requirements. There are very few schools, however, in which the discipline is not in fair accordance with the teachers' grades of classification; and but very few in which moral defects result from the teachers' unpardonable negligences. Some of the schools are in a sleepy condition, and are managed by persons who have either not been trained to their work or who are feebly constituted for governing and educating children,—feeble in tact, energy, and enthusiasm, in firmness of purpose, and in promptness of attention; or in that spirit which is sternly intolerant of disorder, waste of time, or laxities in speech and in manners. In connection with this matter of discipline should be mentioned that an instructor has been appointed to give lessons in military drill in the schools of Maitland, Morpeth, and Hinton; and that the good effects of such lessons are gradually manifesting themselves in the conduct and bearing of the pupils. It is hoped also that the benefits of such instruction will be gradually extended to the schools of Singleton, Muswellbrook, and other like populous townships.

In five-sixths of the schools the prescribed course of instruction is complete, and is regulated with fair average skill; in the rest, however, it is marked by the entire or partial absence of object lessons, singing, drawing, and sewing, in consequence of the untrained or unmarried condition of the teachers. The classification of the scholars is in most instances of very fair merit, but the promotions of pupils to the higher divisions is not as rapid as could be wished, because of the irregularity of attendance, or of feebleness in the discipline and the teaching. There are only eight schools with fourth classes, to which are given lessons in geometry, algebra, mensuration, or Latin; and in fourteen others, chiefly small Provisional Schools, third classes have not yet been formed. The methods of instruction are of different degrees of merit, ranging from moderate to good; and are applied with similar degrees of zeal, painstaking, and efficiency, the average of which is on the whole fair. In several instances the teaching is not sufficiently instructive and educative: it appeals too little to the understanding of the pupils, and leaves them too frequently with inadequate power to do what is of paramount importance—to teach themselves. In others, however, the empirical character of the teaching is more or less counterbalanced by the earnestness and the steady perseverance of the teachers. Speaking generally, the intellectual character of the schools has improved, and would certainly have shown to better advantage had the teachers spent more time in the examination of their classes on the matter of their past lessons. Last year, the percentage of the schools in which the average proficiency was up to and above the prescribed standard was 21; this year it is 32.

During the year there have been five examinations of teachers, and it is gratifying to report that most of them have succeeded in gaining higher grades of classification. Four teachers have gained promotion for continued good service, and three others for the improved condition of their schools. There has been, however, but one instance of a teacher voluntarily presenting himself for examination, which does not speak well for the studiousness or ambition of his brethren. Considering them as a whole, the teachers of this district are respectable and trustworthy, and among them are men of considerable energy and ability.

The local supervision of the schools is of much the same defective character as that described in former reports. There are still very few instances of Local Boards either visiting their respective schools in a regular and official manner, or of voluntarily exerting themselves to effect material improvements, to increase the attendance of scholars, or to make the teachers comfortable and contribute to their happiness. The Local Boards of Denominational Schools have in general but a nominal existence, the powers and duties of such bodies being almost exclusively confined to the clergymen, some of whom manifest a pleasing interest in their work, more particularly that relating to the attendance of the scholars.

Summing up, the material condition of the schools in general is fair and progressive; the moral tone of them is healthy, improved, and promising; and the character and results of the instruction are tolerably satisfactory and improved. The district is very fairly well provided with the means of education; but the character of the attendance is unsatisfactory and unimproved, and requires to be effectually dealt with.

East Maitland, 18/1/75.

J. S. JONES,
Inspector.

MAITLAND DISTRICT.

SUMMARY of Reports upon Public Schools inspected in 1874.

ABERDEEN (N.-V.) :—Visited, 29th October, 1874.

Numbers enrolled :—Boys, 24; girls, 28; total, 52.
Numbers present :—Boys, 23; girls, 25; total, 48.

1. This school is held in a church, and its material organization is but moderate. Water-tank, lavatory, weather-shed, and additional desks are needed. 2. Two-thirds of the pupils are regular and punctual; fair order is maintained, and the government is healthy, fair, and improved. 3. The prescribed subjects are taught, except sewing; the instruction is appropriately regulated, and the teaching is earnest, animated, and tolerably skilful. 4. The attainments are improved, tolerable, and promising.

ABERGLASSLYN (V.) :—Visited, 27th July, 1874.

Numbers enrolled :—Boys, 30; girls, 15; total, 45.
Numbers present :—Boys, 28; girls, 10; total, 38.

1. The material organization is moderate; book-press, hut-pegs, additional apparatus, and bell needed. 2. The attendance is irregular, unpunctual; the government is feeble; and the prevailing tone is but moderately satisfactory. The school fees are low and precarious, and carelessly exacted. 3. The course of instruction is very elementary, and ill-regulated; the teaching is mechanical and feeble, and the intellectual progress of the pupils is unsatisfactory. 4. The attainments are indifferent.

BISHOP'S BRIDGE (N.-V.) :—Visited, 16th June.

Numbers enrolled :—Boys, 30; girls, 19; total, 49.
Numbers present :—Boys, 20; girls, 15; total, 35.

1. The material condition and organization are moderate; the supply of furniture is improved; and that of apparatus tolerably adequate; and the school records are pretty well kept. 2. The discipline is healthy, improved, and fair. 3. The instruction is earnest, fairly well regulated, and tolerably intelligent, but not adequately vivid and impressive. 4. The attainments are tolerable and improved.

BLANDFORD (P.—N.-V.)

Closed at the date of my visit.

BRANXTON

BRANXTON (V.) :—Visited, 16th and 19th October.

Numbers enrolled :—Boys, 37 ; girls, 35 ; total, 72.
Numbers present :—Boys, 30 ; girls, 30 ; total, 66.

1. Lavatory and weather-shed are greatly needed ; otherwise the material aspect and organization are satisfactory. 2. The attendance is punctual and tolerably regular, the discipline healthy and effectual, and the moral tone pleasing. 3. The course of instruction is complete, and well regulated, and the teaching is zealous, painstaking, and skilful. 4. The attainments are, on the whole, very fair and promising.

BROKENBACK (V.) :—Visited, 24th June.

Numbers enrolled :—Boys, 27 ; girls, 25 ; total, 52.
Numbers present :—Boys, 11 ; girls, 21 ; total, 32.

1. Weather-shed, water-tank, and lavatory are needed ; otherwise, the material organization is satisfactory. 2. One-half of the attendance is regular and very fairly punctual ; the general aspect is neat and clean ; and the discipline is of very fair merit. 3. The prescribed subjects are taught except singing ; the occupation of the pupils is appropriately regulated, and the teaching is diligent, painstaking, and very fairly intelligent. 4. The attainments are improved, and from fair to very fair.

CAMTSIE (V.) :—Visited, 5th June.

Numbers enrolled :—Boys, 18 ; girls, 24 ; total, 42.
Numbers present :—Boys, 10 ; girls, 15 ; total, 25.

1. Bell, water-tank, and lavatory are needed ; otherwise the material organization is improved and satisfactory. 2. The attendance is low and irregular, but reasonably punctual ; the government is intelligent ; and the disciplinary aspect of the school very fair. 3. The course of instruction is complete and appropriately regulated, and the teaching is zealous and painstaking. 4. The attainments are from tolerable to fair. 5. The school fees are low and badly paid.

CRESSNOCK (N.V.) :—Visited, 17th June.

Numbers enrolled :—Boys, 13 ; girls, 16 ; total, 29.
Numbers present :—Boys, 9 ; girls, 13 ; total, 22.

1. New school buildings are greatly needed, the present schoolhouse being uncentral, too small, and inadequately appointed. 2. The attendance is low, irregular, and tolerably punctual ; the government is sound and intelligent ; and the moral tone is fair. 3. The prescribed subjects are taught, except sewing ; and the instruction is painstaking, fairly skilful, and well regulated. 4. The attainments are improved, and nearly fair.

DUNMORE (V.) :—Visited, 23rd April.

Numbers enrolled :—Boys, 39 ; girls, 30 ; total, 69.
Numbers present :—Boys, 36 ; girls, 23 ; total, 59.

1. Water-tank, lavatory, weather-shed, and fencing of play-ground are greatly needed ; otherwise the organization is satisfactory. 2. Three-fifths of the attendants are regular and punctual, and a steady increase in the numbers has necessitated the appointment of a pupil teacher. The government is firm and intelligent ; the pupils are clean, orderly, and well-behaved, but wanting in zeal and self-possession. The moral tone is very fair. 3. The course of instruction is complete, and appropriately regulated. The methods are of fair merit, and the teaching is diligent and painstaking. 4. The attainments range from tolerable to fair. General results about "very fair," as far as the teacher is responsible.

ELLALONG (N.V.) :—Visited, 12th February.

Numbers enrolled :—Boys, 21 ; girls, 17 ; total, 38.
Numbers present :—Boys, 19 ; girls, 15 ; total, 34.

1. The material condition is neglected and unsatisfactory, the roof leaky, the supply of furniture inadequate, and the playground without bell, lavatory, or weather-shed. 2. The attendance is low and unpunctual, but fairly regular ; and the discipline is healthy, tolerable, and promising. 3. The prescribed subjects are taught, except singing. The instruction is tolerably well regulated, but the classification is low in point of age ; and the teaching, though diligent and promising, is stiff and mechanical. 4. The attainments are moderate.

FALBROOK (V.) :—Visited, 24th March.

Numbers enrolled :—Boys, 13 ; girls, 13 ; total, 26.
Numbers present :—Boys, 6 ; girls, 7 ; total, 13.

1. The material condition is unsatisfactory ; repairs to schoolhouse, teacher's residence, and out-offices greatly needed. There is neither bell, lavatory, weather-shed, nor book-press. 2. The discipline is healthy and fair. 3. The prescribed subjects are taught, except singing, but drawing and object-lessons are neglected. The occupation of the pupils is fairly well regulated, and the teaching is earnest and tolerably intelligent. 4. The attainments are tolerable.

FISHERY CREEK (V.) :—Visited, 21st April.

Numbers enrolled :—Boys, 28 ; girls, 14 ; total, 42.
Numbers present :—Boys, 27 ; girls, 12 ; total, 39.

1. The material condition has been much improved by additions and repairs, and is now of fair merit. Sufficient care is not bestowed upon the books, slates, and school records—the condition of the latter being unsatisfactory. 2. The government is feeble, the conduct of the scholars partially satisfactory, and the character of the school-work languishing. The moral tone is barely tolerable. 3. The prescribed subjects are taught, the classification is defective, the programmes of lessons are in abeyance, and the teaching is feeble and but moderately skilful. 4. The attainments are moderate.

GOSFORTH (V.) :—Visited, 28th July.

Numbers enrolled :—Boys, 17 ; girls, 17 ; total, 34.
Numbers present :—Boys, 15 ; girls, 17 ; total, 32.

1. The material condition and organization are improved and fair. Additional furniture has been provided, and a water-tank is in course of construction. 2. The attendance is fairly punctual, but low and irregular. The government is sound ; very fair order is maintained ; and the pupils are clean and well-behaved. 3. The course of instruction is complete and well-regulated ; and the teaching is painstaking and tolerably skilful. 4. The attainments are tolerable.

HINTON (V.) :—Visited, 28th and 29th May.

Numbers enrolled :—Boys, 57 ; girls, 42 ; total, 99.
Numbers present :—Boys, 32 ; girls, 16 ; total, 48.

1. The material condition and organization have been greatly improved ; class-room, lavatory, and additional out-offices needed. 2. The disciplinary condition of the school is good and promising. 3. The prescribed subjects are taught, except singing ; the methods are of very fair merit ; and the teaching is zealous and painstaking. 4. The attainments are only tolerable, for which the present teacher is not responsible.

LAGUNA (V.) :—Visited, 18th February.

Numbers enrolled :—Boys, 12 ; girls, 19 ; total, 31.

Numbers present :—Boys, 10 ; girls, 13 ; total, 23.

1. Material defects have been in great measure remedied. Bell, water-tank, and weather-shed are still needed. The organization is fair. 2. Seven-ninths of the attendance are regular and punctual ; the pupils are clean and orderly ; and the moral tone is very fair. 3. The course of instruction is complete and well-regulated, and the teaching is earnest, painstaking, and fairly skilful. 4. The average proficiency of the pupils is nearly fair.

LOOHINTAR (N.-V.) :—Visited, 13th and 16th July.

Numbers enrolled :—Boys, 21 ; girls, 14 ; total, 35.

Numbers present :—Boys, 13 ; girls, 14 ; total, 27.

1. New school buildings are needed ; the present site is unsuitable, and the character of the playground unsatisfactory. The supply of apparatus and furniture is very fair. 2. The attendance is low, unpunctual, and irregular. The school work is not performed with the requisite vigour and regularity ; the condition of the school records is very unsatisfactory, and the disciplinary condition of the school is little better than moderate. 3. The prescribed subjects are taught, but sewing is neglected ; the classification is ill-defined, and the instruction carelessly regulated. The teaching is tolerably intelligent, but is otherwise unsatisfactory. 4. The attainments range from moderate to tolerable, and the general condition of the school is low and unsatisfactory.

EAST MAITLAND (V.) :—3rd, 4th, 5th, 6th, and 10th November.

Numbers enrolled :—Boys, 106 ; girls, 80 ; total, 186.

Numbers present :—Boys, 86 ; girls, 61 ; total, 147.

1. Lavatory, drainage of playground, and repairs to fence and schoolroom windows, are needed to render the material condition and organization satisfactory. 2. The attendance is punctual and fairly regular, and has increased 40 per cent. since the last inspection. The government is mild, firm, and intelligent ; the school work is performed with pleasing quietness, cheerfulness, and vigour ; military-drill is steadily progressing ; and the general disciplinary condition of the school is very good. Latin, algebra, and geometry are taught in addition to the prescribed subjects ; the instruction is well regulated ; the classification is high and judicious, and the teaching is zealous, painstaking, and intelligent, and much improved in animation and vigour. 4. The average proficiency is good.

WEST MAITLAND (Boys.—V.) :—Visited, 8th, 9th, 10th, and 11th December.

Numbers enrolled :—Boys, 213.

Numbers present :—Boys, 182.

1. The school building is a superior, well-ventilated structure ; and the schoolroom is well appointed, but somewhat defectively planned and lighted. A weather-shed is urgently needed ; otherwise the playground is well appointed. 2. The attendance is rapidly increasing, and is very near the maximum ; the punctuality is very good, and the coefficient of regularity three-fourths. The aspect of the pupils is clean, cheerful, and respectable ; and the disciplinary character of the school is very good. 3. Latin, geometry and algebra are extra subjects ; the instruction is well regulated, and of high range and intelligence. 4. The average proficiency of the pupils is good ; and the general condition of the school is highly satisfactory.

WEST MAITLAND—(Girls.—V.) :—Visited, 14th and 15th December.

Numbers enrolled :—Girls, 117.

Numbers present :—Girls, 78.

1. The material condition and organization are of first-class character, and the schoolroom is better planned and lighted than the boys'. The absence of a weather-shed injuriously affects the attendance. 2. The government is intelligent and firm ; very good order obtains ; the pupils are clean, cheerful, and respectable in appearance, and the moral tone is on the whole good. 3. The course of instruction is complete and well regulated ; the profitable occupation of the pupils is vigorously sustained ; and the teaching is animated, painstaking, and intelligent. 4. The average proficiency ranges from fair to very fair. Considering that the school has been but recently established, and that many of the scholars are from private schools, the general condition of the school is satisfactory and promising.

WEST MAITLAND (Infants.—V.) :—Visited, 16th and 17th December.

Numbers enrolled :—Boys, 85 ; girls, 55 ; total, 140.

Numbers present :—Boys, 61 ; girls, 34 ; total, 95.

1. The schoolroom is defectively planned, and too small for the attendance. Book-press, desks, and weather-shed are greatly needed ; otherwise the organization is good. 2. The attendance is punctual, and steadily increasing ; the government is mild and judicious ; good order obtains, and the pupils are on the whole clean, decently attired, cheerful and well-behaved. 3. The instruction is appropriate and well regulated and the teaching is zealous, industrious, and intelligent. 4. The average proficiency is nearly very fair.

MILLFIELD (N.-V.) :—Visited, 18th June.

Numbers enrolled :—Boys, 23 ; girls, 29 ; total, 52.

Numbers present :—Boys, 13 ; girls, 23 ; total, 36.

1. New school buildings and furniture urgently needed ; the present material condition and organization being very unsatisfactory. 2. The attendance is irregular and unpunctual, and the school-work is feebly performed ; otherwise, the disciplinary condition is fair. The school fees are low and badly paid. 3. The prescribed subjects are taught except singing, and the instruction is fairly well regulated, but the classification is low, and the teaching feeble and unimproved. 4. The average proficiency is a little over moderate.

MORPETH (V.) :—Visited, 20th, 21st, and 22nd October.

Numbers enrolled :—Boys, 91 ; girls, 73 ; total, 164.

Numbers present :—Boys, 80 ; girls, 61 ; total, 141.

1. Weather-sheds, lavatory, and better out-offices needed ; material organization otherwise highly satisfactory. 2. The attendance is very punctual and considerably increased. The appearance and general conduct of the pupils is highly satisfactory, the government is mild and firm, and the disciplinary character of the school is excellent. 3. The course of instruction is complete, well regulated, and of high range, Latin, algebra, and geometry being included. The classification is high ; and the teaching is superior in point of zeal, tact, painstaking, and intelligence. 4. The average proficiency approaches very good.

MURRUBUNDI

MURRUMUNDI (V.) :—Visited, 10th and 11th September.

Numbers enrolled :—Boys, 45 ; girls, 39 ; total, 84.
Numbers present :—Boys, 38 ; girls, 31 ; total, 69.

1. The material condition, aspect, and organization are very unsatisfactory and neglected. The supply of working materials is tolerably adequate. 2. The attendance has increased, but is neither satisfactorily regular nor punctual ; and the teaching staff is inadequate. Considering material deficiencies, the disciplinary condition is fair in the upper classes and moderate in the lower. 3. The prescribed subjects are taught except singing, and the teaching is earnest, painstaking, and tolerably intelligent. Geography, arithmetic, object lessons, and sewing, are feeble subjects. 4. The average proficiency is tolerable.

MUSWELL CREEK (N.-V.) :—Visited, 26th October.

Numbers enrolled :—Boys, 28 ; girls, 15 ; total, 43.
Numbers present :—Boys, 21 ; girls, 14 ; total, 35.

1. New buildings urgently needed—present site central, but otherwise unsuitable. School requisites fair in quality and quantity. 2. The disciplinary condition of the school is tolerable. 3. Course of instruction complete ; lesson documents of moderate merit ; methods mechanical, and the teaching earnest, but stiff and feeble. 4. Average proficiency of the pupils moderate.

OSWALD (N.-V.) :—Visited, 26th August.

Numbers enrolled :—Boys, 25 ; girls, 23 ; total, 48.
Numbers present :—Boys, 22 ; girls, 17 ; total, 39.

1. Schoolhouse old, small, ill-ventilated, and unsuitable. New buildings and larger playgrounds greatly needed. Supply of school requisites fair. 2. Attendance irregular and unpunctual, order and cleanliness fair, conduct of pupils improved, school work feebly performed ; moral tone tolerable. 3. Course of instruction complete, but of low range ; lesson documents very fair ; classification low and injudicious ; teaching apparently earnest, but feeble, and not satisfactorily profitable. 4. Average proficiency moderate, arithmetic, grammar, and geography, indifferent.

ROUGHIT (V.) :—Visited, 8th September.

Numbers enrolled :—Boys, 40 ; girls, 17 ; total, 57.
Numbers present :—Boys, 36 ; girls, 12 ; total, 48.

1. Material condition and organization good ; schoolroom too small for three classes ; playground improved. 2. Attendance well maintained and punctual ; government healthy and intelligent ; order very fair ; appearance and conduct of children fair. 3. Course of instruction complete and appropriately regulated ; teaching earnest and tolerably intelligent. 4. Average proficiency approaching fair.

SINGLETON (Primary-V.) :—Visited, 11th, 12th, and 13th August.

Numbers enrolled :—Boys, 47 ; girls, 32 ; total, 79.
Numbers present :—Boys, 37 ; girls, 29 ; total, 66.

1. Schoolroom too small ; lavatory needed ; material condition and organization good ; school records not kept with requisite precision and accuracy. 2. Attendance comparatively low ; punctuality very fair ; school work feebly performed ; disciplinary condition otherwise very fair. 3. Course of instruction complete except in singing ; standards of proficiency laxly observed ; classification somewhat low and ill-defined ; lesson documents not strictly observed. Teaching fairly intelligent, but not satisfactorily stimulating, impressive, and profitable. 4. Attainments low and unsatisfactory.

SINGLETON (Infants.—V.)

Temporarily closed.

STANHOPE (V.)

Not inspected for want of opportunity.

SUGARLOAF (V.) :—Visited, 25th June.

Numbers enrolled :—Boys, 30 ; girls, 22 ; total, 52.
Numbers present :—Boys, 16 ; girls, 15 ; total, 31.

1. Material condition and organization fair and improved ; supply of furniture and apparatus very fair. 2. Attendance tolerably regular, and reasonably punctual. School work somewhat feebly performed. Disciplinary condition otherwise very fair. 3. Course of instruction complete ; lesson documents very fair, but not strictly followed. Teaching fairly intelligent, but not adequately thorough and profitable. 4. Average proficiency tolerable and inadequate.

VAGY (N.-V.) :—Visited, 2nd and 3rd June.

Numbers enrolled :—Boys, 30 ; girls, 24 ; total, 54.
Numbers present :—Boys, 23 ; girls, 20 ; total, 43.

1. Material condition and organization improved and tolerable. Additional furniture needed. 2. Attendance very fairly punctual, but irregular. School fees low, and badly paid. Appearance and conduct of pupils very fair. School work somewhat feebly performed. 3. Course of instruction complete and fairly well regulated, but of low range. Teaching earnest and tolerably intelligent, but not sufficiently rigorous and impressive. 4. Average proficiency nearly tolerable.

WAILALONG (V.) :—Visited, 13th May.

Numbers enrolled :—Boys, 29 ; girls, 29 ; total, 58.
Numbers present :—Boys, 21 ; girls, 25 ; total, 46.

1. The material condition and organization are improved, and very fair. Aspect neat and clean. 2. Attendance punctual and tolerably regular ; government healthy and intelligent ; pupils clean, orderly, and well-behaved. Moral tone good. 3. Course of instruction complete and well regulated ; methods of very fair merit ; and teaching zealous and painstaking. 4. Attainments of pupils from fair to very fair.

WAREWORTH (V.) :—Visited, 22nd September.

Numbers enrolled :—Boys, 30 ; girls, 23 ; total, 53.
Numbers present :—Boys, 16 ; girls, 18 ; total, 34.

1. Material condition and organization superior ; weather-shed and water-tank needed. 2. Attendance punctual, but irregular and decreasing. Government firm and judicious ; pupils clean and orderly, but wanting in vigour and zeal. Disciplinary condition good. 3. Course of instruction complete, singing excepted ; classification and lesson documents appropriate, and teaching zealous and painstaking. 4. Average proficiency of pupils nearly fair.

WOLLOMBI

WOLLOMBI (V.) :—Visited, 19th, 20th, and 22nd June.

Numbers enrolled :—Boys, 41 ; girls, 39 ; total, 80.

Numbers present :—Boys, 29 ; girls, 30 ; total, 59.

1. The material condition is very fair, the supply of school requisites adequate, and the organization good. 2. Attendance punctual and tolerably regular ; government mild and judicious ; general appearance and conduct of pupils pleasing ; and disciplinary condition very good. 3. Course of instruction complete and well regulated ; teaching intelligent, zealous, and painstaking. 4. Average proficiency of the pupils good in general.

SUMMARY of Reports upon Provisional Schools inspected in 1874.**BARRAMIE CREEK (N.-V.) :—Visited, 13th March.**

Numbers enrolled :—Boys, 17 ; girls, 5 ; total, 22.

Numbers present :—Boys, 13 ; girls, 4 ; total, 17.

1. Schoolhouse tolerably suitable but inadequately furnished. Supply of apparatus moderate. 2. Attendance fairly regular and punctual ; government tolerably intelligent ; appearance and conduct fair ; moral tone promising and tolerable. 3. Course of instruction complete except in sewing, of inferior range, and not properly regulated. Teaching earnest and diligent. 4. Average proficiency of the pupils tolerable.

BELLEVUE (N.-V.) :—Visited, 23rd November.

Numbers enrolled :—Boys, 13 ; girls, 11 ; total, 24.

Numbers present :—Boys, 9 ; girls, 9 ; total, 18.

1. Schoolhouse commodious and suitable ; supply of furniture inadequate ; school records better kept. 2. Attendance very punctual but irregular ; government improved and fair, and disciplinary condition of the school improved and fair. 3. Course of instruction complete, fairly well regulated, and of second class range. Teaching earnest and painstaking, improved, and tolerably effective. 4. Average proficiency tolerable and improved.

BULGA (N.-V.) :—Visited, 23rd September.

Numbers enrolled :—Boys, 14 ; girls, 14 ; total, 28.

Numbers present :—Boys, 11 ; girls, 11 ; total, 22.

1. Schoolhouse commodious and suitable ; supply of furniture adequate, but clumsy and inferior, and interior aspect somewhat dingy and untidy. Organization reasonably tolerable. 2. Attendance tolerably regular and punctual, and disciplinary character of the school fair and improved. School fees low and laxly exacted. 3. Course of instruction complete, except in singing and drawing. Lesson documents not satisfactorily complete or well observed. Teaching earnest, painstaking, and tolerably skilful, but low in range. 4. Average proficiency tolerable.

CAERGWELLE (N.-V.) :—Visited, 4th June.

Numbers enrolled :—Boys, 11 ; girls, 21 ; total, 32.

Numbers present :—Boys, 8 ; girls, 20 ; total, 28.

1. Schoolhouse commodious and suitable, and stock of furniture and apparatus tolerably sufficient, but desks badly arranged. Record of attendance not reliable. 2. Discipline empirical and barely tolerable in efficiency. 3. Course of instruction very elementary ; classification inappropriate, and teaching feeble and indifferently skilful. 4. Average proficiency small.

CUAN (N.-V.) :—Visited, 20th November.

Numbers enrolled :—Boys, 21 ; girls, 13 ; total, 34.

Numbers present :—Boys, 16 ; girls, 12 ; total, 28.

1. Schoolhouse far too small, and stock of furniture insufficient. 2. Attendance fairly regular but unpunctual ; order moderate, government empirical and lax ; and general moral tone unsatisfactory. 3. Instruction very elementary and ill regulated ; classification confused, and teaching very feeble and unskilful. 4. Average proficiency small.

DOYLE'S CREEK (N.-V.) :—Visited, 11th March.

Numbers enrolled :—Boys, 8 ; girls, 19 ; total, 27.

Numbers present :—Boys, 7 ; girls, 12 ; total, 19.

1. Schoolhouse commodious and suitable, but ill-ventilated. Additional furniture needed. Supply of working materials adequate. 2. Attendance tolerably punctual, but low and irregular. Pupils clean and tidy in appearance, docile and well behaved, but shy and awkward. Discipline tolerable and promising. 3. Course of instruction intelligently regulated and complete except in singing and drawing. Teaching painstaking. 4. Average proficiency tolerable but only of second class range.

GREENFORD (N.-V.) :—Visited, 3rd June.

Numbers enrolled :—Boys, 18 ; girls, 19 ; total, 37.

Numbers present :—Boys, 15 ; girls, 16 ; total, 31.

1. Schoolhouse commodious and suitable, residence comfortable, and supply of furniture and other requisites fair. Arrangement of desks objectionable. Aspect clean and comfortable. 2. Two-thirds of attendance regular, but not satisfactorily punctual. Pupils clean and well behaved ; government mild and effective ; class movements somewhat irregular. 3. Prescribed subjects taught except singing ; lesson documents of fair merit, but not strictly observed, and classification low in point of age. Teaching earnest, but feeble and moderately skilful. 4. Average proficiency moderate.

HOWE'S VALLEY (N.-V.) :—Visited, 16th February.

Numbers enrolled :—Boys, 15 ; girls, 12 ; total, 27.

Numbers present :—Boys, 11 ; girls, 8 ; total, 19.

1. Schoolroom too short, and book-press and lat-pegs needed ; material condition and organization otherwise tolerable. 2. Attendance tolerably regular and punctual ; appearances neat and clean ; conduct and character of pupils tolerable ; moral tone promising. 3. Course of instruction complete, except in singing and drawing ; very elementary and defectively regulated. Teaching earnest and diligent, but feeble and empirical. 4. Average proficiency moderate.

KAYUGA (N.-V.) :—Visited, 25th March.

Numbers enrolled :—Boys, 16 ; girls, 21 ; total, 37.

Numbers present :—Boys, 5 ; girls, 10 ; total, 15.

1. Schoolhouse commodious but ill-ventilated ; playground too small ; water-tank, lavatory, and additional furniture needed. Organization moderate. School materials carelessly arranged. 2. Two-thirds of attendance regular and tolerably punctual ; appearances clean but untidy ; conduct and character of pupils moderately satisfactory ; school-work feebly performed, and details of discipline overlooked. 3. Prescribed subjects professedly taught except singing and drawing. Instruction very elementary, and lesson documents laxly observed. Teaching apparently earnest, but feeble and empirical. 4. Average proficiency indifferent.

KNOCKFYN

KNOCKFYK (N.-V.) :—Visited, ———

Not inspected, for want of opportunity.

MIDDLE CREEK (N.-V.) :—Visited, 18th November.

Numbers enrolled :—Boys, 22; girls, 16; total, 38.

Numbers present :—Boys, 15; girls, 10; total, 25.

1. Schoolhouse central and superior, and stock of material appliances fair and improved. Water-tank and washing appliances needed. 2. Attendance well maintained, fairly regular, and punctual; appearances clean and cheerful; government mild and judicious; moral tone fair. 3. Prescribed subjects taught except singing, and of third-class range. Occupations of pupils tolerably well regulated, and teaching zealous and painstaking and moderately skilful. 4. Average proficiency from moderate to tolerable.

MOONAN BROOK (N.-V.) :—Visited, 21th November.

Numbers enrolled :—Boys, 19; girls, 13; total, 32.

Numbers present :—Boys, 13; girls, 13; total, 31.

1. Schoolhouse commodious and suitable, and supply of furniture tolerable but badly arranged and inferior. Schoolroom walls disfigured with miscellaneous newspaper prints. 2. Attendance of fair merit; government healthy and empirical; pupils clean and well-behaved, but school-work feeble and class arrangements inappropriate. 3. Instruction very elementary and ill-regulated. 4. Average proficiency indifferent.

MOUNT THORLEY (N.-V.) :—Visited, 25th February.

Numbers enrolled :—Boys, 13; girls, 21; total, 34.

Numbers present :—Boys, 9; girls, 14; total, 23.

1. Material condition and organization fair; aspect clean and comfortable. Book-press, hat-pegs, and water-tank, needed. 2. Attendance tolerably regular, but unpunctual; appearances neat and clean; government mild and tolerably intelligent; conduct and character of pupils tolerable; and order fair. 3. Prescribed subjects taught except singing and drawing; instruction of second-class range, and teaching earnest and painstaking. 4. Average proficiency moderate.

MOUNT WILLS (N.-V.) :—Visited, 17th June.

Numbers enrolled :—Boys, 12; girls, 18; total, 30.

Numbers present :—Boys, 7; girls, 13; total, 20.

1. Schoolhouse suitable and improved, and supply of working materials fair. Additional furniture, water-tank, and out-offices needed. 2. Discipline healthy and fair. 3. Course of instruction complete, except in singing, and tolerably well-regulated. Teaching animated and improved. 4. Average proficiency tolerable.

PARK (N.-V.) :—Visited, 17th November.

Numbers enrolled :—Boys, 11; girls, 15; total, 26.

Numbers present :—Boys, 7; girls, 9; total, 16.

1. Schoolhouse suitable and supply of furniture and apparatus tolerably sufficient. Desks not properly arranged. Organization reasonably tolerable. 2. Attendance fairly regular and punctual; appearances clean and comfortable; discipline empirical but promising; and general moral tone tolerable. 3. Instruction very elementary, but tolerably well regulated; teaching earnest and promising. 4. Average proficiency somewhat beyond indifferent.

QUORROBOLONG (N.-V.) :—Visited, 23rd June.

Numbers enrolled :—Boys, 16; girls, 14; total, 30.

Numbers present :—Boys, 8; girls, 8; total, 16.

1. Material condition and organization reasonably tolerable. Schoolroom windows in need of glazing. 2. Attendance tolerably regular but not satisfactorily punctual. Appearances neat and clean; pupils docile and well-behaved, but wanting in animation and vigour. Moral tone healthy and tolerable. School fees poorly paid. 3. Prescribed subjects taught; and instruction tolerably well regulated, but elementary and of second class range. Teaching empirical, but zealous and painstaking. 4. Average proficiency barely tolerable.

ROSEBROOK (N.-V.) :—Visited, 22nd May.

Numbers enrolled :—Boys, 10; girls, 19; total, 29.

Numbers present :—Boys, 4; girls, 12; total, 16.

1. Schoolhouse small, old, and dilapidated; supply of furniture and other school requisites tolerable, but schoolroom encumbered with extraneous furniture. Class roll entries unsatisfactory. 2. Attendance irregular and unpunctual; appearances fairly neat and clean; disciplinary condition of the school otherwise moderate. 3. Instruction very elementary; classification low and ill-defined, and teaching feeble and mechanical. 4. Average proficiency small.

STOCKYARD CREEK (N.-V.) :—Visited, ———

Not inspected for want of opportunity.

SUMMERHILL (N.-V.) :—Visited, 6th June.

Numbers enrolled :—Boys, 16; girls, 19; total, 35.

Numbers present :—Boys, 11; girls, 11; total, 22.

1. Material condition and organization improved and tolerable. Water-tank needed. School records better kept. 2. Attendance tolerably regular but not satisfactorily punctual. Appearances neat and clean; government mild and tolerably effective; school work wanting in vigour. Moral tone improved and tolerable. School fees low and poorly paid. 3. Course of instruction complete except in Scripture lessons, since included. Programmes of lessons almost useless. Teaching earnest but feeble, and moderately intelligent. 4. Average proficiency moderate. Arithmetic and geography, small.

VERE (N.-V.) :—Visited, 10th March.

Numbers enrolled :—Boys, 18; girls, 10; total, 28.

Numbers present :—Boys, 13; girls, 7; total, 20.

1. Schoolhouse commodious and tolerably suitable, but somewhat uncentral. Supply of furniture and other requisites moderate. Water-tank greatly needed. 2. Attendance tolerably regular but unpunctual. Discipline tolerably effective. School fees low and poorly paid. 3. Instruction very elementary and feebly regulated. Classification low in point of age. Teaching earnest but feeble and empirical. 4. Average proficiency indifferent.

WEBBER'S CREEK (N.-V.) :—Visited, ———

Not inspected for want of opportunity.

WINGEN (N.-V.) :—Visited, 17th November.

Numbers enrolled :—Boys, 13; girls, 13; total, 26.

Numbers present :—Boys, 9; girls, 11; total, 20.

1. Material condition and organization improved and tolerable. External aspect inferior. 2. Attendance tolerably regular and punctual; government judicious; order fair. Moral tone healthy. 3. Prescribed subjects taught; classification appropriate; lesson documents tolerable, and teaching painstaking and moderately skilful. 4. Average proficiency somewhat over moderate.

WYBONG (N.-V.) :—Visited, 18th March.

Numbers enrolled :—Boys, 15 ; girls, 18 ; total, 33.
Numbers present :—Boys, 10 ; girls, 6 ; total, 16.

1. Schoolhouse superior and commodious, and residence comfortable. Supply of furniture and apparatus adequate, and school records apparently well kept. Water-tank needed. 2. Attendance tolerably regular and punctual, appearances very neat and clean ; government mild and judicious ; and disciplinary aspect of the school very fair. 3. Prescribed subjects taught except singing, sewing, and drawing ; occupation fairly well regulated ; and the teaching painstaking and diligent, but only moderately skilful. 4. Average proficiency from moderate to tolerable.

III.—HALF-TIME SCHOOLS.

DAIRY ARM (N.-V.) :—Visited, 19th February.

Numbers enrolled :—Boys, 12 ; girls, 8 ; total, 20.
Numbers present :—Boys, 6 ; girls, 4 ; total, 10.

1. Schoolhouse tolerably suitable, but supply of furniture and apparatus inadequate ; water-tank and out-offices needed ; organization indifferent. 2. Attendance irregular and tolerably punctual ; discipline feeble and moral tone moderate. 3. Instruction elementary and ill-regulated ; teaching feeble and moderately skilful. 4. Average proficiency moderate.

WATAGON CREEK (N.-V.) :—Visited, 19th February.

Numbers enrolled :—Boys, 8 ; girls, 9 ; total, 17.
Numbers present :—Boys, 6 ; girls, 4 ; total, 10.

1. Material condition and organization moderate ; additional apparatus needed. 2. Attendance irregular and unpunctual ; appearances tolerably neat and clean ; pupils tolerably orderly and well-behaved, but wanting in vigour and animation ; moral tone tolerable ; school fees poorly paid. 3. Instruction elementary and of second class range ; programmes of lessons not in use ; home lessons neglected ; teaching feeble and but moderately skilful. 4. Average proficiency low and unsatisfactory ; teacher not long in charge of the school.

JUNCTION CREEK (N.-V.) :—Visited, 19th November.

Numbers enrolled :—Boys, 4 ; girls, 9 ; total, 13.
Numbers present :—Boys, 4 ; girls, 9 ; total, 13.

1. Schoolhouse too small and stock of furniture inadequate ; organization otherwise tolerable. 2. Attendance of very fair merit ; appearances neat and clean ; fair order and diligence maintained ; conduct and character of pupils fair ; moral tone fair and promising. 3. Prescribed subjects taught ; instruction tolerably well regulated ; home lessons neglected ; teaching zealous and moderately skilful. 4. Average proficiency from moderate to tolerable.

SPARKES CREEK (N.-V.) :—Visited, 19th November.

Numbers enrolled :—Boys, 7 ; girls, 5 ; total, 12.
Numbers present :—Boys, 6 ; girls, 4 ; total, 10.

1. Material condition and organization tolerable. 2. Attendance reasonably regular and punctual ; appearances neat and clean ; pupils docile and well-behaved ; government judicious ; moral tone fair. 3. Instruction complete and well regulated ; home lessons neglected ; teaching zealous and moderately skilful. 4. Average proficiency from moderate to tolerable.

MERANNIE CREEK (N.-V.) :—Visited, 9th September.

Numbers enrolled :—Boys, 11 ; girls, 10 ; total, 21.
Numbers present :—Boys, 9 ; girls, 9 ; total, 18.

1. Out-offices and water-tank needed ; organization otherwise tolerable. 2. Attendance of pretty fair merit, and disciplinary condition of the school tolerable. 3. Prescribed subjects taught ; instruction fairly well regulated ; home lessons neglected ; teaching earnest and tolerably intelligent, but somewhat feeble in secondary subjects. 4. Average proficiency from moderate to tolerable.

WOODBURN (N.-V.) :—Visited, 9th September.

Numbers enrolled :—Boys, 7 ; girls, 9 ; total, 16.
Numbers present :—Boys, 4 ; girls, 6 ; total, 10.

1. Material condition and organization tolerable. 2. Attendance tolerably regular ; appearances fairly neat and clean ; character and conduct of pupils fair ; disciplinary condition of the school pretty fair. 3. Prescribed subjects taught ; instruction appropriately regulated, and teaching tolerably skilful. 4. Average proficiency tolerable.

MUDGEES DISTRICT.

INSPECTOR'S Report for the year 1874.

I HAVE the honor to submit, for the information of the Council of Education, my report on the general condition and prospects of primary education in the Mudgees District during the year 1874.

The number of schools on my district list at the end of the year was seventy-one. Of these, forty were Public, twenty Provisional, four Half-time, three Church of England, and four Roman Catholic Schools. Three of the Provisional Schools may be considered as permanently closed. Of the seventy-one schools in the district, sixty-six were in operation in December. All the schools were visited in course of the year, and most of them two, three, and four times. The schools at Bourke, Breeza, Dandaloo, Gongolgon, Mobellah, Sally's Flat, Lower Thron, and Newrea, were not "regularly inspected," as they were not in operation when I visited their respective neighbourhoods. The Cullenbore Public School was not examined, because the teacher declined to submit to the examination prescribed by the Council. It was, however, open during the year as a private school. The following new Public Schools were opened during the year, viz. :—Gulgong—boys, girls, and infants ; Wilbertree ; and Mobellah or Home Rule. Provisional Schools were opened at Coomber, Gundy, Narrango, Wollar, and Newrea, and Half-time Schools at Nubryglyn and Beri Creek. Schools had been in operation some years ago at Nubryglyn and Newrea but had been long closed for want of sufficient attendance. There is now a fair prospect that these schools will be kept in permanent operation. The Provisional Schools at Pyramul, Ponto, and Urbry were, on application of the inhabitants, converted into Public Schools. A similar application has been made by the residents of Coolah, but the matter has not yet been finally dealt with. It nearly always occurs that expense, inconvenience, and delay arise in having these transfers completed ; and for this reason, as well as for those pointed out in previous reports, I would again urge the desirableness of having Provisional Schools erected when possible on Crown lands. No delay in changing them from one class of school to the other need

need then take place. In most parts of the district good school sites are available, and if the people would only make use of the advantages they now have, much future inconvenience might be avoided. It may not be amiss to refer here to the causes that often retard the opening of schools in places occupied by free selectors. Disputes as to the best position are of constant occurrence. Frequently one or two of the more active and pushing residents endeavour to have the school placed so as to suit their own convenience, paying little regard to the wants of others. The regulation requiring a part of the cost to be subscribed locally operated as a kind of check on this abuse; all the inhabitants being expected to subscribe, the interests of all have generally to be considered in the final decision. As it is probable the local quota will be dispensed with in future, I can plainly foresee the Council will require to use much caution in building rural schools. Attempts no doubt will be made to induce the Council to build where the general interests of the locality have not been recognized, and in places where the number of children will not warrant the outlay. It is evident that the proposed alteration will give a new impulse to the extension of schools, but at the same time it must of necessity largely increase the cost of the Education Department. To guard against putting schools in unnecessary competition with each other, and to prevent wasteful expenditure, I think the District Surveyors ought to have general directions, as they proceed with their work, to mark off suitable school sites, six or eight miles apart, and in positions likely to become centres of population. These gentlemen have very good opportunities of knowing the localities likely to attract a population, and can better determine the distance between proposed schools than an Inspector. A good deal of a country Inspector's time is taken up in inquiries of this kind, and after all he is not in the best position to advise the Council as to the most eligible sites. Should the Council determine to pay the whole cost of building and repairing schools, it will bring us one step nearer to the adoption of compulsory education in some form or other. I have no desire to offer any extended remarks on a question about which the public mind appears so much divided, and which at present belongs so much to the realm of politics. It cannot, however, be out of place for me to say, that from personal observation of the carelessness and apathy which parents manifest with regard to the education of their children, that some legislative enactment to enforce attendance appears necessary.

The Provisional Schools at Dandaloo and Breeza were closed about the middle of the year, in consequence of low attendance. This reduction of the numbers was brought about by some of the families going out to select land for themselves or for others. The great desire for the acquisition of land which marked the course of the year 1874 tended a good deal to scatter the population, and I have no doubt prevented the establishment of schools in some of the small townships in this district. Were it not for this cause, I believe schools would have been established at Cobborah, Demison Town, Baradine, and some other places. However, I have reasonable grounds to hope that the wants of these places will be provided for before the close of the year now entered on. Active steps have been taken towards establishing schools at Camboon and Gunnebene. The movement towards getting a school at Wallgett seems at a standstill. New schools have been built at Wilbertree, Gunnedah, and Brewarrina. The former was opened in August last, and the latter two are now ready for occupation. No schools under the supervision of the Council existed at these places. The schools at Dubbo, Guntawang, and Wee Waa have been removed from the old dilapidated buildings to new and suitable ones. Important additions have been made to the Wellington Public School, and the necessary local exertion has been made to effect some important repairs and improvements to the schools at Warren, Molong, and Narrabri.

Applications for aid to Provisional Schools at Jew's Creek and Taleumbah were declined in consequence of no suitable buildings being provided.

With regard to the adequacy of the means of education in this district, it may be stated that existing schools fairly meet the wants of the people in towns, on the diggings, and in most of the farming localities where the population is tolerably well concentrated. There are several places where Half-time Schools might be opened with advantage, but I am sorry to say that, as a rule, the people do not favour these schools much. The coldness evinced towards Half-time Schools is, I believe, more the result of prejudice, and an attachment to old modes of doing things, than to any reasonable or well-founded conviction of their inefficiency. The fewness of the Half-time Schools in my district does not enable me to cite examples in support of this opinion. By far the largest portion of the district is exclusively pastoral, and there are hundreds of children, whose parents are employed on the stations, who have no means whatever of obtaining the merest rudiments of knowledge. How these poor children are to be reached is a problem not easy of solution. The proprietors of these magnificent estates might do something to assist their employes in giving an education to their children. There are some of the adjoining stations on a sufficiently large scale, and not too far apart to have Half-time Schools established on them; but, as a rule, the proprietors take little interest in matters of education, and I cannot hope that much will be done for the advancement of the system in this way.

In my report for last year I referred to the difficulty of providing fairly qualified persons to take charge of small schools. I have experienced less difficulty this year in supplying the demand. It must be admitted that some of the persons accepted are not well qualified, yet in most cases they exhibit a tolerable aptitude for the work, and are, as a rule, of an improving class. Three of the teachers so selected were, after a fair trial in small schools, deemed eligible for admission to the Training School, Sydney. The regulation by which an Inspector is empowered to send applicants for employment to a good Public School for a short course of training has been attended with considerable advantage. Of course this training cannot be expected to extend to any degree the attainments of the candidates, yet it gives them a fair idea of organization, discipline, and improved methods of teaching. The delays in furnishing returns, and the mistakes made by untrained teachers in keeping the school records, are also much lessened by this preliminary preparation; but at best this is only a poor substitute for the regular course of training in the Council's Model School. In connection with this subject, I beg to invite attention to the growing necessity of prescribing some kind of periodical examination for teachers of Provisional Schools. That this is necessary will appear from the fact that in 1873 there were 216 Provisional Schools in operation, and of course that number has increased in 1874. In the Mudgee District alone 12 untrained teachers were appointed. Three of these being appointed to Public Schools will of course be required to undergo examination in accordance with Article 37 of the Regulations, but it will be seen that the larger number was appointed to schools in which examination is not compulsory. Should matters go on in this way, it is easy to see that in a few years a large proportion of the teachers will be untrained and uncertificated. Such a result must necessarily lower the status and lessen the influence of the teaching profession. Besides, the younger and more promising teachers in these schools would be largely benefited by being compelled to study for examination. Admission to the Training School might be made a reward to those who pass creditably. I do not undertake to say what range of knowledge these examinations should embrace, or whether they should be made compulsory every year or not; but I do say that something of the kind is a necessity, in order to maintain the vital principle of improvement in these small schools. There are few situations in which a young man has less incentive to study than in that of teacher of a Provisional School. From the isolation of his position, the absence of persons of reading and culture, and the want of books, he is apt to fall into mental lethargy, and ultimately to exhibit more interest in the breeding of a horse or the make of a saddle than in the doctrine of proportion or the solution of a problem in Euclid.

In material condition the schools are steadily improving. The necessity of enclosed grounds, laboratories, and weather-sheds, is now very generally recognized by School Boards. In the earlier part of the year commendable local exertion was made in several places to provide these necessary appendages to good organization. In the latter part of the year a stand-still policy was everywhere apparent, as it is expected the Government will take on its own shoulders the whole burden of equipping schools. With two exceptions—Merriwa and Crudino—the Vested Public Schools are in from fair to good material condition.

condition. The Non-vested and Denominational Schools are in a less satisfactory state; and the material condition and organization of the Provisional Schools are, as a rule, very inferior. The exceptions are—Gundy, Wee Waa, and Coolah. All the Public and Denominational Schools are suitably furnished, and possess a good supply of working appliances. In many of the Provisional Schools the furniture is badly constructed, and of the roughest kind. However, in this particular a regular improvement is taking place, and a few of the more recently erected schools are decently fitted up.

It is pleasing to be able to report that the number of children attending the schools is increasing. The number enrolled in December, 1873, was 3,233, and in December, 1874, it was 3,875,—showing an increase little short of 20 per cent. This result must be regarded as highly satisfactory, and, taken in connection with the number of new schools opened, and those ready to be opened, affords proof, if proof were necessary, of the adaptability of the Public Schools Act to meet the educational wants of the Colony. Notwithstanding what may be said to the contrary, one cannot travel anywhere without seeing the great benefits arising from the passing of this Act. If we consider how the population has been dispersed the last few years by the operation of "free selection," the wonder will be, not that we have not done more, but that we have been able to do so much as to keep pace with the wants of the people. Although the rapid spread of schools is encouraging, yet there is great reason to feel dissatisfied with the regularity of the pupils. All teachers complain that this is the greatest obstacle to improvement; so it is, but the teachers themselves are not always blameless on this score—more could be done by them to secure regular attendance. The causes of irregular attendance have been so often adverted to, that it is unnecessary for me to reiterate them. Their number and effect are in no way abated, but rather seem to increase. In 1873 the average attendance was 69 per cent. of the number enrolled, whilst in 1874 it was only 66 per cent. Besides the irregular attenders, there are hundreds of children within the vicinity of the schools who never enter them. When the State provides schools in which violence is done to no one's conscience, I think the parents should be compelled to send their children. I know that many people dislike compulsion in education, but the fact is a large amount of our social fabric has compulsion for its basis. If a man will not pay his lawful debts he is compelled to do so; and I cannot see why, if parents will not voluntarily discharge their natural obligations to their children, they should not be compelled also. It may be stated that the same causes which render attendance unsatisfactory operate prejudicially against punctuality. However, owing to greater strictness on the part of the teachers, some improvement is noticeable. In a few of the best schools the punctuality is very good; in other respects the moral aspect of the schools is generally creditable. Habits of cleanliness, order, and attention are carefully cultivated, and the pupils are respectful in their demeanour towards their elders, and kindly in their intercourse with each other. The modes of government vary considerably in efficiency, but in all cases right motives are appealed to. Only one complaint of undue severity reached me during the year.

There are only a few schools in the district in which the whole range of subjects prescribed by the Council is not taught, and these are Provisional or Half-time Schools, the subjects omitted being singing and drawing. The rudiments of algebra and geometry are taught in four Public and in two Denominational Schools. A little Latin is also taught in a few schools.

The marks assigned for reading are no higher than those obtained in 1873. However, there is no falling off, and I believe I applied the prescribed test more strictly than previously. In the matter of spelling many of the teachers considered the examination rigorous. Increased readiness in giving the meaning of words is apparent.

Good progress has been made in writing, both on slates and on paper. Immediately after admission the pupils commence writing on slates, and before they are fit for removal from the first class they can generally write words fairly on slates, and make a decent attempt at writing short sentences from dictation. Writing on paper is generally commenced when the pupils reach the second class—sometimes before. The number writing on paper at examination in 1873 was 1,087, of which 593 were marked as from fair to good; whilst in 1874 there were 1,367 writing on paper, of which 847 were estimated from fair to good. In marking the writing I was particularly careful to examine every page of the copy-books right through, and the extra attention thus bestowed on the subject has been well repaid by the neatness with which the copy-books are kept and the improved style of penmanship.

The result of my examinations in arithmetic during the year show little increase in the percentage that could pass the standards. In the simple rules the percentage is about the same as in previous years. In the compound rules fair improvement is observable, whilst in the higher rules fewer pupils were presented for examination, but with a higher percentage of "passes."

There is no improvement in the modes of teaching, or in the state of proficiency in the subject of grammar. There are not more than a dozen schools in the district in which grammar is taught in an intellectual, interesting, or profitable manner. Indeed, I hold it as a waste of time to attempt to have grammar taught in many of the Provisional Schools. With few exceptions, the teachers have a very imperfect knowledge of the subject themselves—they get hold of the hard technicalities, and rattle them out under the mistaken idea that they are teaching the grammar of the language. I was rather amused some time ago by a teacher giving a very learned lecture on "dentals," "labials," and "consonants," to a class of children scarcely able to read the First Book. It is useless to expect teachers to impart knowledge which they have not got. It will be understood that these remarks do not apply to all the Provisional Schools.

In geography the proficiency is somewhat higher than in grammar, but still there is ample scope for improvement. Nearly all the schools are well supplied with excellent maps, but greater use could be made of them in imparting geographical knowledge to the pupils. In a few of the best Public Schools, and in two Denominational Schools, geography is well taught.

The number receiving object lessons has largely increased, whilst the pupils' knowledge of the subjects brought under their notice is fairly satisfactory. I have some doubts whether the benefits supposed to accrue from these lessons are realized or not. Without undervaluing the amount of useful information that may be imparted by means of these lessons, I am of opinion that there is a good deal of false show about them. We hear day after day the same lessons, and the same stereotyped round of questions taken from such works as "Luke's Object Lessons." In these lessons, where one would least expect it, there is a great amount of routine and mechanical teaching. For my own part, I place much greater value on soundness and thoroughness in dealing with reading, writing, and arithmetic, than on a superficial and showy acquaintance with object lessons. I have reason to believe that in some schools in which good marks are got for object lessons, little or no attention is paid to them until a few weeks before the annual examination, and then the pupils are rigorously "crammed" to pass. No teacher could treat the subjects above named in a similar manner without the certainty of absolute failure. I have made it a rule to discourage routine teaching of object lessons from text books, and have advised teachers to frame their lessons on "common things" by which the pupils are surrounded.

The Scripture lessons are read in all the Public, and in the Provisional Schools having a third class. As the reading of them is confined to the third and higher class, the great bulk of the children do not use them, and consequently, as far as the schools are concerned, have no opportunity of becoming acquainted with anything like the formal teachings of the Scriptures. There are few of the Public Schools visited regularly by the clergyman for the purpose of imparting special religious instruction. The hour assigned for reading the Scripture lessons is spent in a more drowsy and spiritless manner than any other portion of the school day. Perhaps some of the parents object to their children reading the lessons, and the teacher is precluded from giving explanations of the text, and thus the whole thing becomes, for teacher and pupils, dull, uninteresting, and monotonous. It opens a field for wide speculation to say how far the religious element in our school system is capable of training a people to be "wise unto salvation." It cannot be doubted that the discipline of a good school, regularly submitted to for a few years, the obedience

obedience to rule, and the training to habits of order and decorum, must exercise a silent but perceptible force on the formation of character, and go a great way in preparing the youth of the Colony for the proper discharge of citizenship. Many earnest friends of education think this is not enough, but the question remains—"How is the State to make provision for a larger amount of religious instruction without arousing 'the war of sects?'"

With regard to the other subjects of the "prescribed course," there is little calling for special remark; they are taught with varying success in different schools, but with much the same results as in previous years.

The teachers of this district are, as a rule, a hardworking and respectable body of public servants. As might be inferred from the remoteness of the district, and from the remarks made in other parts of this report, there is a wide gap between the really good teachers and the few very inferior; but it may be safely said that nearly all have evinced a desire to discharge their duties efficiently.

Local interest in the schools has been more active than heretofore; it was most active in the earlier part of the year. In most places members of the Boards attended at the examinations, and meetings were held afterwards.

From this report it will be seen that schools are extending rapidly; that a very respectable accession has been made to the number of pupils attending them; but that great irregularity of attendance still prevails. Although I have not been able to speak in very decided terms of advancement in attainments, yet I am satisfied that in the great majority of schools a very fair amount of work has been done during the year; and although many of them did not reach the state of proficiency contemplated by the standard, it should be borne in mind that several have been only recently opened, that in these schools the great bulk of the pupils had no regular instruction previously, and that their teachers are new to the work.

Inspector's Office, Mudgee,
1st February, 1875.

G. O'BYRNE,
Inspector of Schools.

MUDGEE DISTRICT.

DETAILED STATEMENT of the Condition of Schools in the Mudgee District, examined during the year 1874.

I.—PUBLIC SCHOOLS.

BOGGABBI (V.) :—Regular inspection, 23rd November.

Numbers enrolled :—Boys, 19 ; girls, 26 ; total, 45.

Numbers present :—Boys, 15 ; girls, 19 ; total, 34.

The material state and organization of this school are very satisfactory. Want of weather-shed is the only defect. The master has formed a flower garden which is in good condition, and tends to give the premises a neat and cheerful aspect. The whole discipline is judicious and effective. The instruction embraces all the prescribed subjects, and is well regulated. Appropriate methods are applied; and the master is earnest in his work. The proficiency is tolerable. The bad state of the teacher's health has lowered the results.

BOURKE (N.-V.) :—Visited, 10th June.

The teacher had left a few days before my arrival in the town. The attendance had dwindled down to some six or eight pupils. The master was a very well qualified man, but these unsatisfactory results were brought about by his unwillingness to settle down to the monotony of teaching young children. A new teacher has since been appointed, and seventy-five pupils are now enrolled. The premises are rented, and a new school is urgently needed in this town.

BURRUNDULLA (P.—N.-V.) :—Regular inspection, 26th February.

Numbers enrolled :—Boys, 23 ; girls, 11 ; total, 34.

Numbers present :—Boys, 17 ; girls, 8 ; total, 25.

The eastern wall of the schoolhouse and the out-offices require some repairs. With these exceptions the material condition and organization remain the same as in former years, and may be regarded as fair. A falling off in the attendance is noticeable, but a satisfactory proportion of those enrolled attend regularly and punctually. Cleanliness is well attended to, and the whole discipline is firm and effective. All the prescribed subjects have a place in the routine of the school. For their ages the pupils are intelligent and self-reliant. The methods are good, and the classification appropriate. The proficiency in arithmetic is very creditable. The attainments range from fair to very fair.

COONAMBLE (V.) :—Regular and general inspection, 1st and 2nd June.

Numbers enrolled :—Boys, 23 ; girls, 21 ; total, 44.

Numbers present :—Boys, 17 ; girls, 19 ; total, 36.

The site of the school is sufficiently central, but it is subject to floods. During the floods in the earlier part of the year the grounds were submerged and the fences swept away. The teacher, unaided, collected and re-erected the fence in very good style. He has laboured hard in other respects to repair the ravages made by the flood. Excepting that the premises require painting, the school may be said to be in a fair state as regards material condition. It is poorly supplied with working materials. Regularity and punctuality are very good. The government is vigorous, securing good discipline and a pleasing tone. The prescribed subjects are taught, and the instruction is well regulated. The methods are fairly intelligent and applied with well sustained zeal. The average proficiency is tolerable.

COONABARABEAN (V.) :—Regular inspection, 29th May.

Numbers enrolled :—Boys, 37 ; girls, 34 ; total, 71.

Numbers present :—Boys, 29 ; girls, 24 ; total, 53.

The teacher's residence is too small, and a weather-shed is wanted. A good supply of water has been secured since last inspection. Taken as a whole, the material condition may be regarded as very fair, and the internal organization good. The discipline secures good order and attention. The pupils are regular and punctual, and the attendance is rapidly increasing. The methods are suitable, but do not seem to have been so industriously applied as in previous years. The average proficiency is tolerable.

CRUDINE (V.) :—Regular inspection, 3rd March.

Numbers enrolled :—Boys, 22 ; girls, 10 ; total, 32.

Numbers present :—Boys, 15 ; girls, 7 ; total, 22.

The grounds are unfenced, and no out-offices have yet been provided, although the attention of the School Board has frequently been directed to this defect. In other respects the material condition and organization are reasonably good. The pupils are irregular and unpunctual. Fair order is maintained, but the pupils are indolent and wanting in self-reliance. Except singing, the prescribed subjects are attempted. The classification is correct, but the instruction has not been well regulated, and as a consequence the teaching is disursive and in a measure inoperative. The proficiency exceeds moderate.

CUDGROONG (N.-V.) :—Regular inspection, 2nd August.

Numbers enrolled :—Boys, 15 ; girls, 9 ; total, 24.

Numbers present :—Boys, 11 ; girls, 7 ; total, 18.

The material organization of the school is fair. The ground has been fenced since last inspection. The furniture and supply of books fairly meet the present requirements. The classification is passable, but

but the routine of the school is badly regulated. The prescribed subjects are attempted; little progress however has been made in any of the subjects save reading and writing. The methods are low in point of merit, and weakly applied. The attainments are indifferent.

DURBO (V.):—General and regular inspection, 20th March and 10th November.

Numbers enrolled:—Boys, 94; girls, 73; total, 167.
Numbers present:—Boys, 74; girls, 50; total, 124.

This is a new school, pleasantly situated, neat in appearance and structure, excellently furnished, and possessing a good supply of apparatus and working materials. The defects are want of sheds and fences. These defects are now being remedied. The classification is faulty, and the order is susceptible of a good deal of improvement. The government is rather harsh. The school presents a favourable aspect as regards cleanliness of pupils and premises. The methods are of an approved kind, and are vigorously applied. The teaching staff is not sufficient. The attainments are nearly tolerable.

GUKTAWANG (V.):—General inspection, 22nd May.

Numbers enrolled:—Boys, 15; girls, 24; total, 39.
Numbers present:—Boys, 9; girls, 14; total, 23.

The school is a new brick structure, well designed, suitably furnished, and well supplied with all the appliances for successful teaching. The old residence has also undergone a thorough repairing. The attendance is low and irregular. The average attendance is not nearly one-half the children residing in the neighbourhood. Punctuality is only tolerable, and cleanliness is fair. As a whole the discipline is weak. The prescribed subjects are taught, and the methods are appropriate, but, from want of thoroughness, fail to produce satisfactory results. The school has not progressed during the year, and the attainments are barely moderate.

GULGONG (Boys—V.):—General inspection, 16th and 17th July.

Numbers enrolled:—Boys, 69.
Numbers present:—Boys, 62.

This is a new school in excellent material condition, suitably furnished, and possessing a good supply of working materials. As I have found on other diggings, the punctuality and regularity cannot be commended. The general discipline may be regarded as fair; it would be better were it not for the inadequacy of the teaching staff. The prescribed subjects are taught; the classification is appropriate, the methods are intelligent, and the attainments tolerable.

GULGONG (Girls—V.):—General inspection, 20th and 21st July.

Number enrolled:—Girls, 71.
Number present:—Girls, 63.

In material condition and organization this school is similar to the boys department. About 70 per cent. of the pupils enrolled attend regularly; punctuality is bad. Cleanliness is satisfactory, and in other respects the discipline is passable. All the prescribed subjects are taught; the classification is pretty good; the instruction is properly regulated, and the methods, though not of high order, are industriously applied. The proficiency exceeds tolerable.

GULGONG (Infants—V.):—General inspection, 17th and 21st July.

Numbers enrolled:—Boys, 44; girls, 25; total, 69.
Numbers present:—Boys, 36; girls, 22; total, 58.

The material condition of this school is excellent; it is fairly furnished, and well supplied with requisites for teaching. About five-eighths of the pupils enrolled attend regularly; punctuality is bad. The school presents a clean and tidy appearance. The general discipline may be stated as fair. All the subjects for an infants school are taught. Some minor defects are noticeable in the classification. The instruction is properly regulated, and the methods, which are suitable, are applied with fair zeal and industry. The attainments range from moderate to tolerable.

HARGRAVES (V.):—Regular inspection, 28th April.

Numbers enrolled:—Boys, 27; girls, 29; total, 56.
Numbers present:—Boys, 19; girls, 22; total, 41.

If a playshed and lavatory were provided, the material condition and organization of this school would be very good. The furniture and apparatus are ample and in good condition. Three-fourths of the pupils are regular and punctual. The pupils are rather noisy when entering and leaving school; in other respects the discipline is very fair. The prescribed subjects are taught; the classification is sound; the instruction is carefully regulated, and the teaching is conducted with praiseworthy zeal. The teacher deserves great credit for the habits of study he has created amongst the elder pupils. The attainments are fair in the first and second classes, and approach very fair in the third class.

HILL END (Boys—V.):—Regular inspection, 30th April, and 1st May.

Numbers enrolled:—Boys, 111.
Number present:—Boys, 98.

In material condition the school remains the same as formerly. The playground is badly situated; lavatories and sheds are much needed. Internally the school is well organized, and possesses a fair supply of working appliances. Ten-thirteenth of the pupils are in regular attendance, but punctuality is indifferent. Cleanliness, order, and attention are very fair, and the government is judicious. The prescribed subjects are taught, and the methods are suitable. The course of instruction is well arranged, and the classification is appropriate. The average proficiency approaches fair.

HILL END (Girls—V.):—Regular inspection, 1st and 4th May.

Numbers enrolled:—82.
Numbers present:—70.

The material condition of the school is defective in the same particulars as the boys department. The internal organization is good. The pupils are somewhat irregular and very unpunctual. Cleanliness is reasonably satisfactory, and very fair order is maintained. The pupils are slow, diffident, and display little power of thought. All the prescribed subjects are taught, but the proficiency of the third-class in arithmetic and dictation is very unsatisfactory. The instruction is fairly regulated, but the classification is faulty in several respects. The teaching appears industrious, although it has failed to produce satisfactory results. The average proficiency is tolerable.

HILL END (Infants—V.):—Regular inspection, 5th May.

Numbers enrolled:—Boys, 58; girls, 49; total, 107.
Numbers present:—Boys, 44; girls, 36; total, 80.

The defects in the material condition referred to in the reports on the other departments exist in this; otherwise the condition is good. Desk accommodation for one class is required. The discipline is kind and judicious. The usual subjects are taught. The average proficiency is nearly fair.

ILFORD

ILFORD (N.-V.) :—Regular inspection, 11th February.

Numbers enrolled :—Boys, 27 ; girls, 25 ; total, 52.
Numbers present :—Boys, 23 ; girls, 22 ; total, 45.

The site of this school is very unsuitable. The material condition and organization are indifferent. A new school in a suitable position is much wanted. Cleanliness is passable, and order and attention may be regarded as tolerable. The prescribed subjects are taught, but the teaching is defective in skill and vigour. About two-thirds of the pupils attend regularly ; punctuality is unsatisfactory. The average proficiency exceeds moderate.

IRONBAKES (V.) :—Regular inspection, 16th March.

Numbers enrolled :—Boys, 34 ; girls, 37 ; total, 71.
Numbers present :—Boys, 28 ; girls, 28 ; total, 56.

A verandah to the residence, a shed, and a supply of water have been provided during the year. The fence affords little protection to the grounds, and consequently the teacher has no encouragement to plant trees or flowers. The school has an adequate supply of working materials, and is excellently furnished. The general discipline is very fair ; the instruction carefully regulated, and the teaching energetic and painstaking. The average proficiency is fair.

LAWSON'S CREEK (N.-V.) :—Regular inspection, 17th and 22nd September.

Numbers enrolled :—Boys, 12 ; girls, 18 ; total, 30.
Numbers present :—Boys, 6 ; girls, 9 ; total, 15.

The building in which the school was held last year had to be abandoned as untenable, and that intended for the teacher's residence is now used as a schoolhouse. It is too narrow, but in other respects is moderately suitable. The furniture and working materials are fairly sufficient. The attendance is marked by great irregularity. Order and attention are very fair, but the pupils are shy and wanting in self-reliance. Singing is not taught. The instruction is regulated by the usual documents, and the methods are tolerably intelligent. The discipline and tone of the school have improved under the present teacher. The proficiency is moderate. A new school is wanted at this place.

MERRIWA (V.) :—Regular inspection, 31st August.

Numbers enrolled :—Boys, 35 ; girls, 34 ; total, 69.
Numbers present :—Boys, 29 ; girls, 29 ; total, 58.

The schoolhouse and teacher's residence are in an extremely bad state of repair. There is no place in the district where a new school is so much wanted. The furniture is old, badly made, and insufficient. The attendance has considerably increased, and about five-sixths of the pupils enrolled attend regularly. Cleanliness, order, and attention may be regarded as fair. The instruction is carefully regulated, and the methods are intelligent. The average proficiency is between moderate and tolerable. The presence of a larger number of very young children lowered the results.

MOLONG (V.) :—Regular inspection, 17th March.

Numbers enrolled :—Boys, 47 ; girls, 31 ; total, 78.
Numbers present :—Boys, 27 ; girls, 15 ; total, 42.

The material condition of this school is tolerable ; some necessary improvements are about to be made. The school is well furnished, and has a good supply of working materials. The pupils and premises are very clean. Owing to the prevalence of whooping-cough, the attendance was low and irregular about the time of examination ; the results were lowered from the same cause. The general discipline is very fair, and the moral tone pleasing. The prescribed subjects are taught, and the instruction is well regulated. The average proficiency exceeds tolerable. A pupil teacher is wanted.

MUDGE (Boys.—V.) :—Regular inspection, 14th and 15th April.

Numbers enrolled :—Boys, 90 ; total, 90.
Numbers present :—Boys, 59 ; total, 59.

New fences are required. The town goats make raids on the premises, and destroy the plants and flowers the teachers have endeavoured to cultivate. The material condition of the schoolroom may be regarded as very fair ; it is well furnished, has a good supply of working materials, and affords fair accommodation for the pupils in attendance. The school stands high as regards cleanliness, regularity, and punctuality. The general discipline is very fair, and the tone of the school pleasing. Besides the usual subjects, the rudiments of Latin, algebra, and geometry are taught. The classification is sound and the methods are suitable, but more thoroughness is desirable. The proficiency ranges from tolerable to fair.

MUDGE (Girls.—V.) :—Regular inspection, 14th and 15th April.

Numbers enrolled :—Girls, 104 ; total, 104.
Number present :—Girls, 78 ; total, 78.

The schoolroom is low, badly ventilated, and too small for the attendance. A new school is a necessity. It is well furnished, and possesses a good supply of working materials. So far as the teacher is responsible the organization is good ; the discipline is also good. Cleanliness is a very pleasing feature in the school. The prescribed subjects are taught. The attainments are fair in the second and third classes, and very fair in the fourth class.

MUDGE (Infants.—V.) :—Regular inspection, 20th April.

Numbers enrolled :—Boys, 70 ; girls, 66 ; total, 136.
Numbers present :—Boys, 62 ; girls, 58 ; total, 120.

The accommodation is by no means adequate, and a new infant school is required. Desk accommodation for the head class is necessary. Regularity and punctuality are satisfactory. Cleanliness is well attended to. The prescribed subjects are taught. The classification is appropriate, the instruction is regulated by programmes which evince fair judgment, and the methods range in point of skill from tolerable to very fair. The teaching does not seem to have been so earnest as in previous years. The average proficiency is tolerable.

NARRABY (V.) :—Regular inspection, —

Numbers enrolled :—Boys, 27 ; girls, 23 ; total, 50.
Numbers present :—Boys, 17 ; girls, 14 ; total, 31.

This is a good commodious schoolhouse, but out of repair ; contracts for repairing it have been entered into. The whole premises present a bare and cheerless appearance, and there is not the slightest protection for the children from sun or rain. The pupils attend badly, but in other respects the discipline is fair. The instruction accords with the prescribed course ; the classification is appropriate, and the methods are suitable and appear to be industriously applied. The average proficiency exceeds tolerable.

PIECELAY CREEK (V.) :—Regular inspection, 6th February.

Numbers enrolled :—Boys, 29 ; girls, 26 ; total, 55.
Numbers present :—Boys, 23 ; girls, 20 ; total, 43.

The school will soon have to be enlarged to accommodate the increasing attendance. As regards state of repair, organization, and material structure, it ranks as good. The records are very carelessly kept

kept. Regularity and punctuality are tolerable. Fair order is maintained, but the pupils do not display much self-reliance. The classification is uneven, and a few of the pupils in the third class have been pushed on to study subjects with which they are unable to cope. The standards prescribed by the Council have not been adhered to. Except singing, the usual subjects are taught. The average proficiency is between moderate and tolerable. A new teacher has since been appointed, and the school is doing well.

PONTO (V.) :—Regular inspection, 19th March.

Numbers enrolled :—Boys, 17 ; girls, 19 ; total, 36.

Numbers present :—Boys, 10 ; girls, 13 ; total, 23.

The school has been transferred from the list of Provisional Schools. Both it and the residence are too small. The light and ventilation are not good. The teacher has given a great deal of attention to the planting of trees and flowers, and in this respect the grounds present a striking contrast to those surrounding most rural schools. Some additions have been made to the furniture, and the requisites are sufficient. The pupils attend irregularly ; this in a great measure is unavoidable, as the parents live on both banks of the Macquarie, which river has been very high during the greater part of the year. The pupils are tolerably clean, and the discipline effects fair order. The prescribed subjects are taught, and the attainments range from moderate to tolerable.

PYRAMUL (V.) :—Regular inspection, 4th March.

Numbers enrolled :—Boys, 20 ; girls, 24 ; total, 44.

Numbers present :—Boys, 18 ; girls, 20 ; total, 38.

This has been transferred from the list of Provisional to that of Public Schools. Although some improvements have been made to the schoolhouse, yet the material condition remains indifferent. There are no out-offices, and the ground is unfenced. The furniture is short in supply, and of bad construction. The school is fairly found in working appliances. Seven-eighths of the pupils attend regularly, and punctuality is pretty good. Cleanliness, order, and attention are pretty good, and the general tone of the school is satisfactory. The usual subjects are taught with fair skill and commendable industry. The average proficiency is between moderate and tolerable.

RYLSTOVE (V.) :—Regular inspection, 9th February.

Numbers enrolled :—Boys, 41 ; girls, 23 ; total, 64.

Numbers present :—Boys, 30 ; girls, 19 ; total, 49.

Both schoolroom and residence require to be enlarged. There is no class-room, nor is there any protection for the children from the weather. A supply of water and a lavatory are also needed. The school is well furnished, and fairly supplied with working materials. About five-sevenths of the pupils enrolled attend regularly, and punctuality is reasonably satisfactory. The pupils are generally clean and respectably clad. The interior of the school should be whitewashed, and the furniture and the floor should receive more careful dusting. The pupils are orderly and attentive, but their self-reliance needs strengthening. The instruction is properly regulated, and the attainments are tolerable in first and second classes, and fair in third class. A pupil teacher is wanted.

SPRINGFLAT (N.-V.) :—Regular inspection, 16th September.

Numbers enrolled :—Boys, 17 ; girls, 17 ; total, 34.

Numbers present :—Boys, 12 ; girls, 11 ; total, 23.

The material condition and organization may be regarded as fair. The residence is too small. The school is fairly furnished, and well supplied with the necessary working materials. Nearly four-fifths of the pupils enrolled are in average attendance ; punctuality is unsatisfactory. The pupils are clean, orderly, and attentive ; the government is judicious. Singing is not taught. The instruction is tolerably well regulated ; the methods are modern, but should be applied with greater zeal and thoroughness. The proficiency is nearly tolerable.

TAMBAROORA (V.) :—Regular inspection, 29th April.

Numbers enrolled :—Boys, 26 ; girls, 23 ; total, 49.

Numbers present :—Boys, 18 ; girls, 19 ; total, 37.

Some repairs have been made, yet, as a whole, the premises present a bare and cheerless aspect. Internally the school is fairly organized, and is well found in working appliances. The general discipline is fair ; some faults noticed at previous inspections have disappeared. The pupils are better classified than formerly, and a creditable number of promotions have been made during the year. The average proficiency is tolerable.

TURON, UPPER (V.) :—Regular inspection, 13th February.

Numbers enrolled :—Boys, 32 ; girls, 24 ; total, 56.

Numbers present :—Boys, 26 ; girls, 18 ; total, 44.

The material condition and organization of this school are good. Cleanliness, order, and attention are fair. Improvement in regularity and punctuality is needed. The prescribed subjects are taught, and the instruction is properly regulated. The methods are not skilful, but are applied with care and industry. The average proficiency is tolerable.

UARDRY (N.-V.) :—Inspected, 27th August.

Numbers enrolled :—Boys, 17 ; girls, 18 ; total, 35.

Numbers present :—Boys, 13 ; girls, 11 ; total, 24.

This school has been transferred from the Provisional list. The material condition has been improved in some respects. In wet weather the school is nearly unapproachable, the site being on black soil, liable to floods ; it is damp and unhealthy. A better site has been secured, and all arrangements made for the erection of a new school. About five-sevenths of the pupils are in regular attendance. The discipline secures fair order and attention. The usual subjects, except singing, are taught. The teaching is painstaking, but displays little skill or vigour. The proficiency exceeds moderate.

WARREN (V.) :—Regular inspection, 18th and 19th June.

Numbers enrolled :—Boys, 17 ; girls, 28 ; total, 45.

Numbers present :—Boys, 17 ; girls, 19 ; total, 36.

The material condition and organization of this school are very fair. The only defect is want of protection for the pupils from sun and rain ; steps have been taken to secure this desirable end. The pupils attend well, and cleanliness is satisfactory. Although the discipline is not firm enough, yet the children are well behaved. The classification is too minute ; the methods are only tolerable, but they are very industriously applied. The school has made fair progress during the year. The average proficiency is fair.

WILBERTSFE (V.) :—Regular inspection, 8th October.

Numbers enrolled :—Boys, 19 ; girls, 16 ; total, 35.

Numbers present :—Boys, 16 ; girls, 14 ; total, 30.

This school was brought into operation in August. The building is new, and in accommodation fairly meets the requirements of the locality ; it is well furnished, and possesses a fair supply of school requisites.

requisites. Steps should be taken to provide a supply of water. Three-fourths of the pupils attend regularly and punctually. Cleanliness is satisfactory, and the discipline is fair. Singing and drawing are not taught. The instruction is properly regulated, and the methods intelligent. The proficiency is between indifferent and moderate.

WELLINGTON (V.) :—Regular inspection, 11th and 12th March.

Numbers enrolled :—Boys, 86; girls, 46; total, 132.
Numbers present :—Boys, 78; girls, 34; total, 112.

The schoolroom has been enlarged, and now affords good accommodation for the rapidly increasing attendance. When play-sheds are provided the material condition will be complete. The school is well furnished, and there is a good supply of working appliances. Nine-thirteenths of the pupils attend regularly, and little fault can be found with the punctuality, although many of the children have to walk long distances to school. Cleanliness is well attended to; the discipline and tone of the school are extremely good. In addition to the prescribed subjects, the rudiments of geometry and algebra are taught. The classification is sound, the instruction well regulated, the methods good, and the teaching zealous and effective. The growing importance of this school rendered it necessary to appoint an assistant and a pupil teacher during the year. The proficiency ranges from fair to very fair.

WINDEYER (V.) :—Regular inspection, 2nd March.

Numbers enrolled :—Boys, 14; girls, 22; total, 36.
Numbers present :—Boys, 1; girls, 11; total, 12.

The building is in a fair state of repair, but the playground is covered with a dense undergrowth of scrub. The position of the school is not central, and does not meet the requirements of the larger portion of the population. The attendance is very irregular, and owing to the prevalence of an epidemic it was particularly so on the day of examination. Punctuality is decidedly bad, and the teacher is to blame for not exhibiting more firmness in dealing with this part of the discipline. Cleanliness is tolerably satisfactory, and little exception can be taken to the general demeanour of the pupils. The prescribed subjects are taught, the instruction is poorly regulated, and the teaching is defective in vigour and thoroughness. The proficiency is moderate.

II.—PROVISIONAL SCHOOLS.

COOMBER (N.-V.) :—General and regular inspection.

Numbers enrolled :—Boys, 15; girls, 10; total, 25.
Numbers present :—Boys, 10; girls, 10; total, 20.

The schoolhouse is a rough slab building, very indifferently furnished and badly organized. The routine of the school is not regulated by a time-table or programmes of lessons, and the teaching has not been in accordance with the Council's standards. It is only fair to mention that the supply of books had only been received a few days before my visit, and that the school has been only a short time under the Council. The pupils are tolerably regular and punctual, but cleanliness should receive more attention. Although quiet and respectful, the pupils have little knowledge of the order that should pervade a school. The master is inexperienced, and the methods are mechanical. The proficiency is very indifferent.

CARROLL (N.-V.) :—Regular inspection, 20th November.

Numbers enrolled :—Boys, 10; girls, 10; total, 20.
Numbers present :—Boys, 5; girls, 8; total, 13.

As regards material condition and organization this school is in a very satisfactory state. The attendance is low and irregular, and the school does not seem to receive much support. The teacher is in a weak state of health, and has frequently to delegate her duties to her daughter. The discipline secures tolerable order and attention. Cleanliness is a pleasing feature of the school. The average proficiency exceeds moderate.

COOLAH (N.-V.) :—Regular inspection, 3rd September.

Numbers enrolled :—Boys, 18; girls, 18; total, 36.
Numbers present :—Boys, 13; girls, 15; total, 28.

The schoolroom and teacher's residence are under the same roof; the building is not large enough for both purposes. It is in fair condition, and some necessary additions have been made to the furniture. Cleanliness is fair, and order tolerable. Seven-ninths of the pupils are regular and punctual. The teacher is untrained, but he discharges his duties with system and industry. Fair progress is being made. Application has been made to convert it into a Public School.

DUNGAREE (V.) :—Regular inspection, 10th August.

Numbers enrolled :—Boys, 15; girls, 11; total, 26.
Numbers present :—Boys, 6; girls, 11; total, 17.

The material condition and organization are very indifferent. The portion of the building assigned to the teacher for residence is wholly unsuitable. The school is well supplied with requisites and moderately furnished. Four-fifths of the enrolled number attend regularly; punctuality needs improvement. Singing and drawing are not taught. The classification is appropriate, and the instruction is well regulated. The methods do not display much skill, but they are applied with untiring industry. The average proficiency is tolerable.

GONGOLGAN (N.-V.) :—Incidental inspection.

The school had been closed for some months for want of a teacher. The schoolroom is tolerably suitable and moderately furnished; the supply of school materials is pretty good. A site for a new school has been applied for, and about £100 of local subscription guaranteed. In passing I was fortunate to procure a teacher and have the school re-opened.

GUNDY (N.-V.) :—General inspection, 17th October.

Numbers enrolled :—Boys, 9; girls, 16; total, 25.
Numbers present :—Boys, 6; girls, 12; total, 18.

This school has only recently been brought into operation. The building is new, well furnished, and in excellent condition. The Council's grant of books had not arrived, and consequently the teaching was unsystematic. The proficiency is very indifferent.

LIMESTONE FLAT (N.-V.) :—Regular inspection, 4th August.

Numbers enrolled :—Boys, 9; girls, 14; total, 23.
Numbers present :—Boys, 9; girls, 9; total, 18.

The material condition and organization are tolerable. The supply of requisites is sufficient for present requirements. About four-fifths of the pupils are regular; punctuality and cleanliness are fair. The discipline secures tolerably good order and attention. Singing is not taught. The methods are of moderate skill, and applied with fair industry. The average proficiency is nearly tolerable.

MERRENDEE (N.-V.) :—Regular inspection, 14th October.

Numbers enrolled :—Boys, 19 ; girls, 13 ; total, 32.
 Numbers present :—Boys, 13 ; girls, 7 ; total, 20.

The material condition of the school is indifferent. The supply of furniture is tolerable, and that of books very fair. Two-thirds of the pupils attend regularly and punctually. The general discipline is good. The methods are intelligent and vigorously applied. The attainments range from fair to very fair. Satisfactory progress has been made during the year.

NARRANGO (N.-V.) :—General inspection, 11th August.

Numbers enrolled :—Boys, 9 ; girls, 7 ; total, 16.
 Numbers present :—Boys, 9 ; girls, 6 ; total, 15.

This school has been brought into operation during the year. The building is very fair, and answers well for a school. It is pretty well supplied with furniture and school requisites. The pupils are clean and tidy ; they attend tolerably well. The school is very noisy, considering the small attendance. The methods are unskilful, but the teaching is industrious. The attainments are between indifferent and moderate.

SPRINGFIELD (N.-V.) :—Regular inspection, 21st May.

Numbers enrolled :—Boys, 19 ; girls, 27 ; total, 46.
 Numbers present :—Boys, 7 ; girls, 12 ; total, 19.

The material condition of this school is tolerable. A supply of water for the use of the pupils is much wanted. The school is badly furnished, but the supply of books and slates is sufficient. The attendance is irregular and unpunctual. Not one-half the children within easy distance of the school attend. More attention should be paid to cleanliness. The instruction is regulated by the usual guides ; the classification is moderately judicious, but the teaching is feeble and wanting in penetrativeness. The proficiency is a little above indifferent.

TREE CREEK (N.-V.) :—Regular inspection, 25th May.

Numbers enrolled :—Boys, 12 ; girls, 14 ; total, 26.
 Numbers present :—Boys, 9 ; girls, 12 ; total, 21.

The material condition and organization of this school remain in a fairly satisfactory state. The supply of furniture and working materials is sufficient. The discipline effects very fair order, and the tone of the school is pleasing. The prescribed subjects are taught ; the methods are of fair merit, and earnestly applied. The average proficiency exceeds fair.

WEB WEA (V.) :—General inspection, 26th November.

Numbers enrolled :—Boys, 14 ; girls, 17 ; total, 31.
 Numbers present :—Boys, 8 ; girls, 11 ; total, 19.

This school has been erected since last inspection. It is substantial, roomy, and well ventilated ; it is also well furnished, and has a good supply of working materials. The government effects very fair order and attention. The pupils are clean and well-behaved. The instruction is regulated by the usual guides, and the methods are of tolerable merit. The average proficiency is between tolerable and fair.

WOLLAR (N.-V.)

Numbers present :—Boys, 11 ; girls, 14 ; total, 25.

The school was visited for the purpose of reporting on the application for aid—it had been in operation as a private school for some time. The building is occasionally used as a Roman Catholic church. In material condition and accommodation it is very fair. At the time of my visit the supply of books was insufficient ; the Council's supply has since been received. The classification does not appear to be based on any well defined principle—the leading defect is over-minuteness. The teaching is painstaking, but defective in tact and vigour. The proficiency is very indifferent.

III.—HALF-TIME SCHOOLS.**GOODRICH (N.-V.)** :—Regular inspection.

Numbers enrolled :—Boys, 15 ; girls, 25 ; total, 40.
 Numbers present :—Boys, 11 ; girls, 18 ; total, 29.

The school is held in a church. The grounds are unfenced, and there are no out-offices. The building affords ample room, and is generally suitable. The furniture, which is of indifferent construction, is not sufficient. The supply of working materials is short. The pupils attend with tolerable regularity, but punctuality needs increased attention. Cleanliness and order are fair. Except singing, the prescribed subjects are taught, and the instruction is tolerably well regulated. The attainments range from moderate to tolerable.

OBLEY (N.-V.) :—Regular inspection, 18th March.

Numbers enrolled :—Boys, 10 ; girls, 5 ; total, 15.
 Numbers present :—Boys, 8 ; girls, 4 ; total, 12.

This is a very commodious schoolhouse ; it is occasionally used by the different Protestant denominations as a church. The desk accommodation and the supply of working materials are insufficient. Cleanliness and order are fair. The attendance is not regular, and the inhabitants do not seem to have confidence in the Half-time system. The classification is tolerably good, and the methods fairly appropriate. The proficiency exceeds moderate.

BERI CREEK (N.-V.) :—General inspection, 20th October.

Numbers enrolled :—Boys, 9 ; girls, 11 ; total, 20.
 Numbers present :—Boys, 6 ; girls, 5 ; total, 11.

The schoolhouse is new and in very fair condition. Out-offices are wanted. The furniture is rough, but in fair supply. Books and other school requisites are badly wanted. The classification is not good, and the routine of the school is not properly regulated. The discipline is fair. The attainments are small.

NUBRYGLYN (N.-V.) :—Regular inspection, 19th October.

Numbers enrolled :—Boys, 9 ; girls, 3 ; total, 12.
 Numbers present :—Boys, 8 ; girls, 3 ; total, 11.

The material condition and organization of this school are bad. A fair proportion of the pupils are in regular attendance. Cleanliness, order, and attention are fair. The instruction is badly regulated, and the school records are in an unsatisfactory state. The methods are tolerably intelligent, and the attainments are very indifferent.

G. O'BYRNE,

Inspector, Mudgee District.

18th January, 1875.

NEWCASTLE DISTRICT.

GENERAL REPORT FOR THE YEAR 1874.

DURING the year just ended seven new schools were established; three existing schools were changed from Public to Half-time; one Half-time was converted into a Public School, and two were closed; two additional departments were formed out of the Newcastle R. C. School; and the certificate was withdrawn from the R. C. School at Clarence Town. The number of schools or departments in existence at the close of the year was:—

Public	53
Provisional	15
Half-time	16
Church of England	10
Roman Catholic	6
Total	100

The number of schools or departments in operation during the whole year was 82; the number in operation during a part of the year only, 17; not in operation during the year, 1. The number fully inspected was 87; the number not fully inspected was 13, of which 4 were opened during the last quarter. 9,701 children are returned as entered on the school records for the whole year; but the ordinary attendance enrolled at the times of inspection was 5,910, of which 4,409, or 75 per cent., were present. In some of the mining townships, especially Wallsend, Waratah, and Plattsburg, the accommodation available is very inadequate to their several requirements; but this defect has been or will soon be removed in the case of the two last mentioned, while in that of the first, definite arrangements are now in progress for the erection of an additional room which, it is expected, will abundantly provide for present emergencies, and render the working of the establishment more convenient, harmonious, and effective than it has been for some time past. At Finocce a new schoolroom was erected; at Kincumber entirely new and fairly suitable premises were provided; at Taree a fine room was added to the previously existing one; at Raymond Terrace new buildings are now approaching completion; at Newcastle South and Woolla Woolla the erection of new and commodious rooms is about to be undertaken; and, altogether, throughout the district improvements in the material condition of the schools have been more or less general. Stockton, a rising township on the north bank of the Hunter, opposite Newcastle, is, owing to certain complications of which the Council is cognisant, still without a school. New buildings are badly needed at Gosford, Markwell, Nelson's Plains, Thalaba, Wyong Creek, Glenmore, Willow Point, Clarence Town, and in the case of Miller's Forest and Raymond Terrace R.C. Schools. The chief centres of population are Newcastle, Stockton, the Collieries, the Williams, Port Stephens, Cape Hawke, the Manning, and Brisbane Water. These tracts contain an estimated aggregate of nearly 27,000 inhabitants; and it is satisfactory to be able to state that, as a rule, the great majority of the children of school age are under instruction, though their attendance is, in numerous instances, very irregular. There are few localities in this considerable extent of territory which have not their schools, and very few children indeed who are debarred by distance or insuperable physical difficulty from the important advantages conferred by them. And it is a noteworthy circumstance that the parents in general manifest an earnest solicitude for the education of their children, regard the existence of a school as an indispensable condition of settlement or continued residence, and often exhibit a commendable spirit of energy and self-sacrifice in seeking to provide one. Sickness and unfavourable weather were prevalent at times during the year, and exercised a depressing influence both on the numerical strength and general efficiency of the schools. In agricultural areas, farming operations interfere periodically, owing to the struggling circumstances of the parents, and their natural desire, not only to save the expense of hired labour, but to give their children an early insight into the details of what, in the vast majority of cases, will be their own occupation also. Another, though not frequent, cause of small and irregular attendance is the tendency to misunderstandings between parents and teachers; and in these cases, I am not at all disposed to throw the entire blame upon the former, being aware that some of the latter are thoughtless, frivolous, and intermeddling, addicted to gossiping and other kindred habits, and devoid of becoming circumspection in their social intercourse and general comportment. The average number enrolled in each school visited was nearly 70; and the number present at examination, 50.

The material condition of the schools inspected may be set down as nearly fair, their moral tone as from very fair to good—a result due in considerable measure to the services of the drill instructor employed by the Council for the schools of Newcastle and the neighbouring towns, and also to the efforts of many teachers, which in this direction were perhaps more diligently applied during the past year than previously. Their efficiency, judged by examination, varies from tolerable to fair. As before remarked, sickness and wet weather materially interfered with the working of almost all at different periods; and such having been the case, the proficiency indicated, though exhibiting no advance as a whole on the average of the preceding year, may nevertheless be regarded as reasonably satisfactory. The fact that five schools more exceeded the standard and seven less went below it speaks well for the general progress of the greater number.

In conclusion, I have only to observe that most of the schools of this district are doing steady, earnest, and fairly effectual work; and that as far as the teachers' services in the past afford a criterion of future success—their efforts being the main conditions—the character for efficiency and usefulness heretofore borne by our Primary Schools will be well sustained during the year upon which we have now entered. Detailed statements respecting the condition of each school inspected will be found appended hereto.

20th January, 1875.

WM. DWYER,
Inspector.

DETAILED STATEMENT showing the condition of the Public, Provisional, and Half-time Schools, inspected in 1874, as regards—

1. Their material condition.
2. Their moral character.
3. The subjects and methods of instruction.
4. The proficiency of the pupils.

PUBLIC SCHOOLS.

BANDON GROVE:—Visited, 10th August.

Present at examination —Boys, 14; girls, 7; total, 21.

1. The premises have been partially repaired, and are now fairly suitable and in good condition. The school is pretty effectively organized. 2. The discipline manifests considerable improvement, and the moral aspect of the school is very fair. 3. The subjects accord with the standard, and are suitably arranged; the methods are fairly intelligent, skilful, and effective. 4. The average proficiency ranges from tolerable to fair.

BARRINGTON:—Visited, 23rd October.

Present at examination:—Boys, 9; girls, 11; total, 20.

1. The condition of the premises is in all respects moderate, and the organization of the school about tolerable. 2. The moral tone of the school is fair. 3. The instruction is fairly suitable, reasonably well arranged, and imparted with passable care, intelligence, and skill. 4. The average proficiency is about moderate.

BLUE

BLUE GUM FLAT :—Visited, 17th December.

Present at examination :—Boys, 11 ; girls, 10 ; total, 21.

1. The premises are in fair condition and well kept, but in need of painting and other slight improvements. The school is cheerful, airy, and well organized. 2. The moral tone is very fair. 3. The occupation is suitable, and properly regulated ; the instruction fairly intelligent, judicious, and effective. 4. The average proficiency exceeds tolerable ; and the general character of the school is about fair.

BOORAL :—Visited, 27th August.

Present at examination :—Boys, 22 ; girls, 22 ; total, 44.

1. The premises are suitable, in good condition, well supplied with requisites, and effectively organized. 2. The moral tone of the school is good. 3. The occupation is appropriate and well arranged ; the instruction fairly skilful, intelligent, and effective. 4. The average proficiency is fair.

CLARENCE TOWN :—Visited, 29th and 30th July.

Present at examination :—Boys, 44 ; girls, 36 ; total, 80.

1. The premises are very old, in bad repair, defectively ventilated, and altogether insufficient for the requirements of the district. The school is fully provided with furniture and other requisites, and the organization, as a whole, is effective. 2. The moral tone of the school is very good. 3. The subjects are suitable and well arranged, and the methods are intelligent, judicious, and effective. 4. The average proficiency is very fair, and the general character of the school good.

CUNDLEPTOWN :—Visited, 10th September.

Present at examination :—Boys, 28 ; girls, 19 ; total, 47.

1. The building and premises need some repairs and improvements, but are in essential respects substantial, suitable, and carefully preserved. The school is very effectively organized. 2. The moral tone of the school is very fair. 3. The subjects are appropriate, and arranged with care and judgment, though not with satisfactory precision ; the methods are skilful, intelligent, and effective. 4. The average proficiency approaches very fair.

CROKI :—Visited, 24th September.

Present at examination —Boys, 31 ; girls, 23 ; total, 54.

1. The ventilation is defective, and a verandah is much needed ; otherwise the premises are in good condition, and the school is properly organized. 2. The moral tone of the school is good. 3. The subjects are appropriate and well arranged ; the methods intelligent, earnest, and fairly effective. 4. The average proficiency is very fair nearly.

CROOM PARK :—Visited, 7th August.

Present at examination :—Boys, 17 ; girls, 13 ; total, 30.

1. The premises are in fair condition, and reasonable suitable ; and the school is well provided with furniture, apparatus, and books. 2. The moral tone is fair. 3. The subjects are fairly appropriate and suitably arranged ; the methods are passably skilful and effective. 4. The average proficiency is nearly fair.

DINGO CREEK :—Visited, 15th October.

Present at examination :—Boys, 14 ; girls, 13 ; total, 27.

1. The ground is neither enclosed nor provided with out-offices. The buildings are passably suitable, and the school is moderately well organized. 2. The moral aspect of the school is fair. 3. The occupation is fairly appropriate and suitably arranged ; the instruction is tolerably intelligent and earnest, but wanting in judicious application. 4. The average proficiency slightly exceeds moderate.

DUMARESQ ISLAND :—Visited, 11th September.

Present at examination :—Boys, 13 ; girls, 10 ; total, 23.

1. The room is small and badly ventilated, and the teacher's house leaky and uncomfortable, but the premises, as a whole, are in fair condition and carefully kept. The school is effectively organized. 2. The moral tone of the school is very fair. 3. Except singing, the subjects agree with the standard and are duly arranged ; the methods are intelligent, reasonably judicious, and effective. 4. The average proficiency exceeds fair, and the general character of the school is very fair.

DUNGOG :—Visited, 4th August.

Present at examination :—Boys, 23 ; girls, 24 ; total, 47.

1. The playground is without shade, but otherwise the premises are suitable and in good condition, and the school is effectively organized. 2. The moral tone of the school is good. 3. The occupation is appropriate and well arranged, the instruction judicious and fairly effective. 4. The average proficiency exceeds fair.

EAGLETON :—Visited, 1st December.

Present at examination :—Boys, 11 ; girls, 13 ; total, 24.

1. Some repairs and improvements are needed, but the premises are, for the most part, in good repair, suitable and sufficient, and the school is well organized. 2. The discipline betrays some laxity, and the moral tone is only tolerable. 3. The subjects accord for the most part with the standard, and are arranged with tolerable care and judgment. The methods are intelligent and appropriate, but not energetically applied. 4. The average proficiency slightly exceeds moderate.

GHINNI GHINNI :—Visited, 17th September.

Present at examination :—Boys, 11 ; girls, 20 ; total, 31.

1. The premises are suitable, in very good condition, and the school is very effectively organized. 2. The moral tone of the school is very fair. 3. The subjects are suitable and properly arranged ; the methods fairly intelligent, skilful, and well applied. 4. The average proficiency is nearly fair.

GOSFORD :—Visited, 10th December.

Present at examination :—Boys, 13 ; girls, 18 ; total, 31.

1. The building is insufficient and unsuitable ; and the premises generally are considerably out of repair. Under the circumstances the school is fairly organized. 2. The moral tone of the school is fair. 3. Except singing and drawing the course of instruction accords with the standard, and is arranged with fair skill and care. The teaching is intelligent fairly judicious, and effective. 4. The average proficiency ranges from tolerable to fair, and the general character of the school is fair.

HENHAM :—Visited, 26th November.

Present at examination :—Boys, 7 ; girls, 8 ; total, 15.

1. Slight repairs are needed, but the premises are fairly suitable ; and the general organization is effective. 2. The moral tone is very fair. 3. The subjects are fairly appropriate and suitably arranged. The

The instruction is intelligent, and, as far as witnessed, reasonably impressive and effectual. 4. The average proficiency exceeds tolerable. More than half the ordinary numbers were absent, on account of rain, in the early part of the week.

HAMILTON (Primary):—Visited, 16th and 17th November.

Present at examination :—Boys, 61 ; girls, 56 ; total, 117.

1. Want of a lavatory is the only serious defect in the material condition. The school is suitable, in excellent repair, and well found in furniture and appliances. 2. The moral tone is fair. 3. The subjects for the most part accord with the standard, and are arranged with passable care and judgment in the requisite guides. The instruction is reasonably skilful and effectual, but somewhat deficient in energy and spirit ; it is, however, reasonably appropriate and impressive. 4. The average proficiency exceeds fair, and the general character of the school is very fair.

HAMILTON (Infant):—Visited, 17th and 18th November.

Present at examination :—Boys, 44 ; girls, 46 ; total, 90.

1. The accommodation is wholly inadequate to the requirements, and the organization is consequently defective, but as far as the requisite means are available it is passable. 2. The moral tone is fair. 3. The subjects are appropriate, and arranged with reasonable care and skill. The teaching is intelligent, earnest, and, under the circumstances, fairly applied. 4. The average proficiency exceeds tolerable, and the general efficiency of the school is above fair.

HANBURY (Primary):—Visited, 6th to 11th May.

Present at examination :—Boys, 71 ; girls, 35 ; total, 104.

1. The premises are substantially in good condition, but some repairs and renovation are necessary. The school is efficiently organized. 2. The discipline appears to have suffered considerable relaxation of late, and the moral aspect of the school is not above fair. 3. The subjects are suitable and properly arranged ; the methods intelligent and applied with fair skill and effect. 4. The average proficiency is nearly fair, and the general character of the school may be considered very fair.

HANBURY (Infant):—Visited, 13th May.

Present at examination :—Boys, 41 ; girls, 51 ; total, 92.

1. The room is awkwardly situated, and otherwise open to objection, but passably sufficient for present wants. It is suitably furnished, and pretty well found in all requisite appliances. 2. The discipline is weak, and the moral tone only moderate. 3. The subjects are appropriate, but not satisfactorily arranged. The methods are intelligent, but not impressive. 4. The average proficiency approaches tolerable.

KINCUMBER :—Visited, 14th December.

Present at examination :—Boys, 15 ; girls, 15 ; total, 30.

1. The building is new and fairly suitable, and the school is well provided with furniture and other requisites. 2. The moral tone is fair. 3. The subjects are suitable and arranged with fair care and skill, the methods tolerably intelligent and appropriate. 4. The average proficiency exceeds moderate.

LAMBTON (Primary):—Visited, 24th April to 5th May.

Present at examination :—Boys, 93 ; girls, 85 ; total, 178.

1. The school is effectively organized and in good condition, but the ventilation is deficient and the accommodation inadequate. The premises in general need repairs. 2. The pupils are somewhat unsteady, and some of them addicted to noisy habits, but, judged as a whole, the moral aspect of the school is very fair. 3. The subjects accord with the standard, are properly arranged, and taught with reasonable skill and effect. 4. The average proficiency approaches very fair.

LAMBTON (Infant):—Visited, 22nd April.

Present at examination :—Boys, 104 ; girls, 74 ; total, 178.

1. The site is low and damp, but the premises are suitable and in good condition, and the school is well organized. 2. The moral tone is fair. 3. The subjects are appropriate and suitably arranged, the methods reasonably intelligent and skilful. 4. The average proficiency is moderate.

MARLEE :—Visited, 14th October.

Present at examination :—Boys, 14 ; girls, 9 ; total, 23.

1. The premises are suitable and in good condition, and the organization of the school is appropriate and effective. 2. The moral tone is very fair. 3. The subjects are fairly suitable and well arranged, the methods reasonably intelligent, careful, and judicious. 4. The average proficiency is nearly fair.

MINMI :—Visited, 20th August.

Present at examination :—Boys, 18 ; girls, 23 ; total, 41.

1. The ground needs fencing and the building repairs, but the accommodation is moderately sufficient for present wants. The general organization is fairly effective. 2. The moral tone of the school is fair. 3. The occupation is appropriate and suitably arranged ; the instruction, as witnessed, is fairly earnest and intelligent, but, judged by the results, its effects are meagre. 4. The average proficiency exceeds moderate.

MINIMBAH :—Visited, 4th September.

Present at examination :—Boys, 21 ; girls, 9 ; total, 30.

1. The site is unpleasant, and the schoolroom small and unsuitable, but a new one has since been erected in a more advantageous position. The general organization is tolerable. 2. The moral tone of the school is very fair. 3. Except singing, the prescribed subjects are taught and properly arranged ; the methods are fairly intelligent and skilful. 4. The average proficiency is nearly fair.

MITCHELL'S ISLAND :—Visited, 18th September.

Present at examination :—Boys, 27 ; girls, 33 ; total, 60.

1. The premises are in good order, well situated, fairly sufficient and suitable, and the school is very fairly organized. 2. The moral tone is fair. 3. The subjects are fairly suitable, and, for the most part passably arranged ; the methods are mechanical, but earnest and painstaking. 4. The average proficiency is nearly fair.

MONKERAL :—Visited, 27th October.

Present at examination :—Boys, 13 ; girls, 11 ; total, 24.

1. The premises are in all respects tolerable, and the organization of the school is moderately effective. 2. The moral tone is tolerable. 3. The subjects are suitable, and arranged with passable care and skill ; the methods are tolerably intelligent and painstaking. 4. The average proficiency is nearly tolerable.

MosQUITO

MOSQUITO ISLAND :—Visited, 19th November.

Present at examination :—Boys, 20 ; girls, 18 ; total, 38.

1. The building is in good condition, but without a verandah, and the playground is poorly shaded. The school is effectively organized. 2. The moral tone of the school is fair. 3. The subjects are appropriate and suitably arranged ; the methods, as witnessed, are fairly suitable and effective. 4. The average proficiency varies from moderate to tolerable.

NELSON'S PLAINS :—Visited, 23rd July.

Present at examination :—Boys, 16 ; girls, 16 ; total, 32.

1. The schoolroom is low and barely sufficient, but in tolerable repair and passably organized. A residence has been provided for the teacher. 2. The moral aspect of the school is fair. 3. The prescribed subjects are taught and fairly arranged ; the instruction is reasonably intelligent, appropriate, and effective. 4. The average proficiency approaches fair.

NEWCASTLE (Primary) :—Visited, 23rd to 25th June.

Present at examination :—Boys, 110 ; girls, 65 ; total, 175

1. The walls need colouring, the window-sashes painting, and the entire premises some repairs and renovation, but the schoolroom is suitable, sufficient, and very effectively organized. 2. The discipline is suitable and judiciously applied, and the moral tone of the school excellent. 3. The occupation is appropriate and skilfully arranged, and the instruction is imparted with satisfactory intelligence and effect. 4. The average proficiency exceeds good, and the general efficiency of the school is very good.

NEWCASTLE (Infants) :—Visited, 26th June.

Present at examination :—Boys, 65 ; girls, 51 ; total, 116.

1. The room and its organization are in every respect suitable, and the stock of appliances is appropriate and abundant. 2. The moral tone of the school is excellent. 3. The instruction is appropriate, judiciously arranged, and effectively imparted. 4. The average proficiency ranges from very fair to good, and the general character of the school is very good.

NEWCASTLE SOUTH :—Visited 28th May to 5th June.

Present at examination :—Boys, 149 ; girls, 109 ; total, 258.

1. The premises are very unsuitable, but arrangements are now completed for the erection of new ones to be vested in the Council. The organization is as full and effective as, under the circumstances, it can be rendered. 2. The moral tone is good. 3. The subjects accord with the standard, are suitably arranged, and imparted by earnest and judicious methods. 4. The average proficiency is nearly very fair, and the general character of the school may be considered good.

ONYXEMBAH :—Visited, 10th July.

Present at examination :—Boys, 24 ; girls, 26 ; total, 50.

1. The building is small, but in good condition and passably suitable, but not kept with satisfactory neatness. The organization is fairly effective. 2. The moral tone is fair. 3. The subjects are suitable, but their arrangement for the quarter was not completed. The methods are fairly intelligent, and passably effective. 4. The average proficiency approaches tolerable, and the general character of the school is above fair.

OXLEY ISLAND :—Visited, 16th September.

Present at examination :—Boys, 19 ; girls, 22 ; total, 41.

1. The premises are well situated, in fair condition, and cleanly kept, but the playground is destitute of shade. The school is tolerably well organized. 2. The moral tone of the school is very fair. 3. Except singing and drawing the subjects accord with the standard, and are fairly arranged ; the instruction, as a whole, manifests improvement, and though still deficient in skilful application its general character is promising. 4. The average proficiency is very nearly tolerable, and the general efficiency of the school nearly fair.

PLATTEBURG :—Visited, 23rd and 24th November.

Present at examination :—Boys, 93 ; girls, 66 ; total, 159.

1. The building is insufficient and unsuitable, but new premises are nearly completed. Under the circumstances the organization is fairly effective. 2. The moral tone of the school is very fair. 3. The classification is unsuitable, and the occupation, to some extent, injudiciously advanced ; but the lesson guides are prepared with reasonable care and skill. The methods in themselves are tolerably intelligent, earnest, and appropriate, but not applied with satisfactory discernment and experience. 4. The average proficiency ranges from moderate to tolerable, but, allowing for irregular attendance and other hindrances, the general character of the school may be considered fair.

RAYMOND TERRACE :—Visited, 21st July.

Present at examination :—Boys, 16 ; girls, 14 ; total, 30.

1. The premises are unsuitable and badly situated, but new ones are in course of erection. Under present circumstances the organization is passable. 2. The moral tone of the school is good. 3. The occupation is appropriate, and arranged with reasonable care and skill ; the instruction is intelligent, fairly judicious, and effective. 4. The average proficiency varies from tolerable to fair, and the general character of the school is fair.

REDBANK :—Visited, 15th September.

Present at examination :—Boys, 15 ; girls, 16 ; total, 31.

1. The site is inconvenient and unpleasant, and the fences are very insecure ; but the schoolroom and its equipment are, as a whole, tolerable. 2. The moral tone of the school is very fair. 3. The subjects are fairly appropriate and tolerably well arranged ; the methods reasonably intelligent, skilful, and effective. 4. The average proficiency is nearly tolerable.

SRAHAM :—Visited, 24th July.

Present at examination :—Boys, 11 ; girls, 12 ; total, 23.

1. The premises are well situated, in fair condition, and passably suitable ; and the school is tolerably well organized. 2. The moral tone is fair. 3. The subjects are fairly appropriate, and reasonably well arranged ; the methods tolerably intelligent, earnest, and effective. 4. The average proficiency exceeds moderate.

TARBEE :—Visited, 30th September and 1st October.

Present at examination :—Boys, 49 ; girls, 24 ; total, 73.

1. Since last inspection the accommodation has been considerably enlarged and improved, and is now equal to the requirements of the place. The organization is effective. 2. The moral tone of the school is good. 3. Except singing and Scripture lessons the prescribed subjects are taught, but their arrangement

arrangement for the quarter was not completed at the time of inspection. The instruction is appropriate and reasonably judicious, but, owing to local circumstances, not so effective as formerly. 4. The average proficiency approaches very fair, and the general character of the school is nearly good.

TINONEE :—Visited, 2nd October.

Present at examination :—Boys, 26, girls, 21; total, 47.

1. The schoolhouse is new, suitable, and sufficient, but not properly protected from the weather on the western side. The general organization is fair. 2. The moral tone is very fair. 3. The subjects are appropriate, but their arrangement was not complete, the time of inspection having been in this case and that of the preceding school in the first week of the quarter. The instruction is careful, fairly judicious, and effective. 4. The average proficiency exceeds fair.

TOMAGO :—Visited, 16th July.

Present at examination :—Boys, 14; girls, 4; total, 18.

1. The premises are suitable and in good condition, and the school is fairly provided with furniture and appliances. 2. The moral tone of the school is tolerable. 3. The subjects are fairly appropriate, and reasonably well arranged; the methods are, as a whole, mechanical, but earnest and tolerably effective. 4. The average proficiency exceeds tolerable.

TELEGHERRY :—Visited, 29th October.

Present at examination :—Boys, 24; girls, 21; total, 45.

1. The walls of the schoolroom need lining and colouring, but its general organization is reasonably effective, and the condition of the premises is fairly satisfactory. 2. The moral tone is tolerable. 3. Except singing and drawing the prescribed subjects are taught, and arranged with, for the most part, moderate care and skill. The teacher is kind and gentle with the children, but the actual instruction wants the more important attributes of success. 4. The average proficiency is nearly tolerable—an improvement upon the results of the preceding examination.

THALABA :—Visited, 6th August.

Present at examination :—Boys, 18; girls, 15; total, 33.

1. The buildings are of a rude character, but somewhat improved by recent repairs. The organization is in all respects moderate. 2. The discipline wants energy, and the moral tone is only moderate. 3. The subjects are fairly suitable and passably well arranged, the methods are appropriate in themselves, but want energy in their application. 4. The general proficiency exceeds moderate.

WALLSEND (Primary) :—Visited, 18th, 19th, 26th March, and 2nd April.

Present at examination :—Boys, 115; girls, 65; total, 180.

1. The accommodation is insufficient for the requirements of the place, but the premises are in excellent condition, and the school is very effectively organized. 2. The moral tone of the school is excellent. 3. The subjects are appropriate, and skilfully arranged; the methods intelligent, judicious, and effective. 4. The average proficiency varies from very fair to good, and the general character of the school is very good.

WALLSEND (Infant) :—Visited, 27th March.

Present at examination :—Boys, 56; girls, 55; total, 111.

1. The accommodation is far too small for the numbers, and the ventilation is defective. The organization, as a whole, is incomplete; but these defects are about to be removed. 2. The moral tone of the school is good. 3. Geography is not taught; but the other subjects accord with the standard, and are suitably arranged. The instruction is intelligent, judicious, and effective. 4. The average proficiency exceeds fair, and the general character of the school is very fair.

WARATAH :—Visited, 13th July.

Present at examination :—Boys, 24; girls, 15; total, 39.

1. The schoolroom—a temporary one—is old, unsuitable, in bad condition, and inconveniently situated. Under the circumstances, the organization is tolerable. New premises are now available. 2. The moral tone is fair. 3. The subjects are suitable and arranged with fair judgment; the methods are tolerably intelligent and well applied. 4. The average proficiency exceeds moderate.

WILLIAM TOWN :—Visited, 3rd December.

Present at examination :—Boys, 16; girls, 18; total, 34.

1. The premises are central, suitable, in good condition, and well preserved. The organization of the school is effective. 2. The moral tone is fair. 3. The occupation is suitable and properly arranged, and the methods are earnest, reasonably skilful, and painstaking. 4. The average proficiency approaches fair, and the general character of the school is nearly very fair.

WINGHAM :—Visited, 12th October.

Present at examination :—Boys, 37; girls, 27; total, 60.

1. The accommodation is very inadequate, and the house is unprotected by verandahs or otherwise shaded—a circumstance which makes both school and residence very uncomfortable. The stock of furniture, apparatus, and books is tolerable. 2. The moral tone of the school is fair. 3. The instruction is appropriate, but its arrangement for the quarter was not completed; the teaching is zealous, skilful, and effective. 4. The average proficiency is fair.

WOOLA WOOLA :—Visited, 29th September.

Present at examination :—Boys, 24; girls, 20; total, 44.

1. The building is old, in bad repair, insufficient, and unsuitable; but arrangements are made for the erection of a new one. The stock of furniture and appliances is fair, and the general organization reasonably good. 2. The moral tone is very fair. 3. Singing excepted, the prescribed subjects are taught and arranged with satisfactory care and skill; the instruction is fairly intelligent and judicious. 4. The average proficiency is fair.

YAYPO :—Visited, 9th October.

Present at examination :—Boys, 7; girls, 11; total, 18.

1. The premises are in fair condition, suitable, sufficient, provided with good furniture and apparatus, and in general fairly organized. 2. The moral tone is fair. 3. The occupation is suitable and properly arranged, the instruction fairly intelligent and skilful. 4. The proficiency ranges from fair to very fair.

PROVISIONAL SCHOOLS.

DINGO CREEK :—Visited, 13th October.

Present at examination :—Boys, 11 ; girls, 9 ; total, 20.

1. The condition of the premises and the organization of the school are barely tolerable. 2. The moral tone is tolerable. 3. The subjects are fairly suitable and passably arranged ; the instruction is mechanical, but moderately earnest and effective. 4. The average proficiency is nearly moderate.

ERINA :—Visited, 15th December.

Present at examination :—Boys, 15 ; girls, 12 ; total, 27.

1. The building is tolerably suitable and in passable repair, but inadequately furnished. The stock of apparatus and books is tolerable. 2. The moral tone is fair. 3. The occupation is suitable and fairly arranged, the instruction tolerably intelligent and painstaking. 4. The average proficiency is nearly tolerable.

HARRINGTON :—Visited, 25th September.

Present at examination :—Boys, 9 ; girls, 10 ; total, 19.

1. The site is pleasant, the building in fair condition and reasonably sufficient, and the organization tolerable. 2. The discipline is weak, and the moral tone only tolerable. 3. The subjects are fairly appropriate and well arranged, but the instruction is mechanical and uninteresting. 4. The average proficiency is below moderate.

KIMBRICKI :—Visited, 21st October.

Present at examination :—Boys, 6 ; girls, 12 ; total, 18.

1. The room is insufficient and in bad repair, and the organization only indifferent. 2. The discipline is of small value, and the moral aspect of the school moderate only. 3. The occupation is suitable in kind, but badly arranged and unskillfully conducted. The instruction is mechanical and ineffectual. 4. The average proficiency is very moderate.

OAKENDALE :—Visited, 27th July.

Present at examination :—Boys, 11 ; girls, 7 ; total, 18.

1. The schoolroom is in fair condition, reasonably sufficient and suitable, and provided with a moderate stock of furniture, apparatus, and books. 2. The moral tone is fair. 3. The subjects are appropriate, and arranged with tolerable care and skill ; the methods are passably judicious and effective. 4. The average proficiency is tolerable.

TEBRIGAL :—Visited, 15th December.

Present at examination :—Boys, 4 ; girls, 6 ; total, 10.

1. The site is indifferent, but the building is in good repair, sufficient and suitable ; the school is fairly organized. 2. The moral tone is fair. 3. The occupation does not fully accord with the standard, but is suitable, as far as it goes, and fairly arranged. The methods are intelligent and reasonably effective. 4. The average proficiency is nearly fair.

WYBONG CREEK :—Visited, 18th December.

Present at examination :—Boys, 8 ; girls, 8 ; total, 16.

1. The schoolroom is insufficient, unsuitably placed, entirely unfit for its present purpose, and very poorly organized. 2. The moral tone is tolerable. 3. The occupation is fairly suitable and arranged with moderate adherence to the prescribed forms ; the methods are painstaking, but otherwise of small value. 4. The average proficiency varies from moderate to tolerable.

HALF-TIME SCHOOLS.

BOULAMBUGLE :—Visited, 31st August.

Present at examination :—Boys, 3 ; girls, 7 ; total, 10.

1. The premises are in tolerable condition, passably suitable, and reasonably well provided with furniture and apparatus. 2. The moral tone is fair. 3. The subjects are appropriate, but not fully arranged ; the methods are reasonably intelligent, but not satisfactorily effective. 4. The average proficiency is slightly above moderate.

BULLADELAH :—Visited, 31st August.

Present at examination :—Boys, 11 ; girls, 10 ; total, 21.

1. The room is passably suitable and sufficient, and the stock of furniture and apparatus tolerable. 2. The moral tone is fair. 3. The subjects are suitable, but not properly arranged ; the methods are intelligent and tolerably judicious. 4. The average proficiency is a little over tolerable.

BROOKFIELD :—Visited, 5th August.

Present at examination :—Boys, 11 ; girls, 5 ; total, 16.

1. The buildings are old and considerably out of repair ; but the schoolroom is in moderate condition and tolerably well furnished for present wants. 2. The moral tone is very fair. 3. The subjects are suitable and fairly arranged ; the methods intelligent, skilful, and reasonably effectual. 4. The average proficiency exceeds tolerable.

GLENMORE :—Visited, 12th August.

Present at examination :—Boys, 6 ; girls, 9 ; total, 15.

1. The building is a rough one, but in moderate condition and passable for the place. The organization is also passable. 2. The moral tone is tolerable. 3. The subjects are suitable and fairly arranged, the methods tolerably intelligent and painstaking. 4. The average proficiency is tolerable.

GLENWILLIAM :—Visited, 31st July.

Present at examination :—Boys, 11 ; girls, 5 ; total, 16.

1. The situation is low, and the building dilapidated and uncomfortable ; but steps have been taken for improving the latter. The school is fairly provided with furniture and appliances. 2. The moral tone is very fair. 3. The subjects are suitable and properly arranged, the methods intelligent and effective. 4. The average proficiency exceeds fair.

LANSDOWNE :—Visited, 22nd September.

Present at examination :—Boys, 4 ; girls, 6 ; total, 10.

1. The building is reasonably suitable, in good condition, and tolerably well provided with furniture, apparatus, and books. 2. The moral tone of the school is very fair. 3. The subjects are appropriate and suitably arranged, and the instruction is fairly skilful and effective. 4. The average proficiency exceeds fair.

JOHN'S RIVER :—Visited, 23rd September.

Present at examination :—Boys, 5 ; girls, 5 ; total, 10.

1. The building and appointments are fairly suitable ; and the school is reasonably well found in requisites. 2. The moral tone of the school is fair. 3. The occupation is suitable, but not arranged with satisfactory care and precision ; the instruction is fairly appropriate, and under the circumstances passably effective. 4. The average proficiency is moderate.

M'LEAN RIVER, UPPER :—Visited, 3rd September.

Present at examination :—Boys, 10 ; girls, 4 ; total, 14.

1. The building is passable as regards condition, suitability, and general organization. 2. The moral tone is very fair. 3. The subjects are appropriate and fairly arranged ; the methods, reasonably intelligent and effective. 4. The average proficiency is tolerable.

M'LEAN RIVER, LOWER :—Visited, 3rd September.

Present at examination :—Boys, 8 ; girls, 7 ; total, 15.

1. The material character of the school is tolerable. 2. The moral tone is very fair. 3. The instruction is suitable, and properly arranged ; and the methods are earnest and fairly effective. 4. The average proficiency ranges from tolerable to fair.

UNDERBANK :—Visited, 11th August.

Present at examination :—Boys, 10 ; girls, 7 ; total, 17.

1. The condition of the building and its general organization are tolerable. 2. The moral tone of the school is fair. 3. The subjects are suitable, and arranged with passable care and skill ; the methods are tolerably intelligent and effective. 4. The average proficiency is from tolerable to fair.

MYALL RIVER, LOWER :—Visited, 1st September.

Present at examination :—Boys, 14 ; girls, 25 ; total, 39.

1. The building is awkward in shape and insufficient in size, but tolerable as to condition and organization. 2. The moral tone is tolerable. 3. The subjects are fairly appropriate and passably arranged ; the methods are mechanical, but as a whole earnest and moderately effective. 4. The average proficiency exceeds moderate, and the general character of the school is tolerable.

MYALL RIVER, UPPER :—Visited, 2nd September.

Present at examination :—Boys, 9 ; girls, 11 ; total, 20.

1. The premises are moderately suitable, and the school is passably organized. 2. The moral tone is fair. 3. The occupation is reasonably appropriate and moderately well arranged ; the methods are earnest and tolerably effective. 4. The average proficiency and general character of the school may be considered tolerable.

WOLLONBA RIVER :—Visited, 8th September.

Present at examination :—Boys, 7 ; girls, 11 ; total, 18.

1. The building is rough and unsuitable, but intended only to meet a temporary want ; the stock of furniture and appliances is moderate. 2. The moral aspect of the school is fair. 3. The subjects are fairly appropriate and passably arranged ; the methods are mechanical, but moderately earnest and effective. 4. The average proficiency exceeds moderate.

WILLOW POINT :—Visited, 7th September.

Present at examination :—Boys, 9 ; girls, 6 ; total, 15.

1. The building is a very inferior slab one, in poor condition, and, except as a temporary makeshift, wholly unsuitable. The furniture is clumsy, and the general organization lax and ineffective. 2. The moral tone is tolerable. 3. The subjects are passably suitable, but their arrangement is not satisfactorily precise ; the methods are mechanical, but moderately intelligent and effective. 4. The average proficiency is moderate.

WARD'S RIVER :—Visited, 26th October.

Present at examination :—Boys, 5 ; girls, 5 ; total, 10.

1. The building and appointments are fairly suitable, and the school is pretty well provided with furniture and other requisites. 2. The moral tone of the school is fair. 3. The subjects are fairly suitable and well arranged ; the methods passably intelligent, earnest, and effective. 4. The average proficiency approaches tolerable.

JOHNSON'S CREEK :—Visited, 26th October.

Present at examination :—Boys, 6 ; girls, 3 ; total, 9.

1. The condition and suitability of the building and the organization of the school are tolerable. 2. The moral tone is very fair. 3. The subjects are appropriate and suitably arranged ; the methods are intelligent, passably skilful, and fairly effective. 4. The average proficiency is about fair.

SYDNEY DISTRICT.

INSPECTOR'S General Report upon the condition of Public, Provisional, and Certified Denominational Schools for the year 1874.

At the beginning of the year 1874, 110 schools were in operation in this district. These included thirty-six Public, two Provisional, and seventy-two Certified Denominational Schools. During the year a Public School was opened in Devonshire-st, the certificates were withdrawn from St. Leonards C. E. Girls', and Double Bay R. C., on the ground of small attendance ; St. Andrew's Pres. was voluntarily closed by the Denomination ; the Public School in Jamison-street lapsed, and Tempe Provisional and St. Leonards Pres. were converted into Public Schools. The schools now in operation therefore comprise thirty-eight Public, one Provisional, and sixty-eight Denominational—in all, 108 schools.

All these schools were regularly inspected during the year, besides being incidentally visited with tolerable frequency. We are thus enabled to speak with some confidence on their condition and management. The regular inspections were minute and searching, extending in some instances over several days, and comprised a patient investigation into the material, disciplinary, and instructional arrangements of each school.

Not

Not only was an effort made to arrive at the attainments and progress of each pupil, but attention was especially directed to estimate as nearly as practicable the value of the teaching as a means of intellectual culture, and as an agent in forming sound mental habits.

Existing schools make fair provision for the educational wants of the district. In former reports we have pointed out localities where the number of schools might be conveniently reduced. Such a result would not only lessen the cost of education, but materially add to the efficiency and usefulness of the remaining schools. Public Schools are required at Surry Hills, Waverley, Darlinghurst, Double Bay, Balmain West, Darlington, Haymarket, and other centres of population throughout the city.

In a majority of the schools the organization is good. The schoolhouses are built on approved models, and liberally provided with the best educational appliances; the instruction is judiciously regulated, and the pupils are classified with a due regard to their ages and capabilities. Four-ninths of the Public Schools are conducted in temporary premises, and in no instance is the organization of an unexceptionable character; the chief defects being bad sites, insufficient school accommodation, and inferior furniture. Similar defects characterise two-fifths of the Denominational Schools. Minor material improvements have been effected in several instances, additional rooms have been erected or are in course of erection in connection with the following schools:—Marrickville, William-street, Balmain C.E., Parramatta-street R.C., St. Philip's C.E.

Viewed in relation to discipline, the schools show to advantage as compared with their condition in this respect in previous years. In most instances a mild but firm government obtains; corporal punishment is seldom resorted to, good order is maintained, and the conduct of the pupils is marked by a modest, subdued, and respectful demeanour. Where the discipline has been found defective, it has arisen with few exceptions from a feeble or vacillating government.

The average quarterly enrolment of pupils has been 12,437. Of these, 12,417 were present at the inspections. The attendance was in the earlier part of the year injuriously affected by wet weather, and towards the end by scarlatina and measles. These causes operated to make the average lower than usual. Under ordinary circumstances the pupils attend with fair regularity.

The methods of teaching in common use are suitable and effective. They are either analytic, synthetic, or both, according to the subject treated. They are applied with earnestness, vigour, and skill. Where they are accompanied by appropriate questioning and supplemented by searching examination at the close of the lessons the best results are produced. Mere didactic teaching is seldom met with, and rote learning is becoming a thing of the past. The course of instruction pursued not only adds to the knowledge of children, but, what is of far higher importance, develops their intellectual faculties and enables them to think. The intelligence and mental culture of the pupils form important elements in estimating the efficiency of the teacher's labours.

Of the subjects of instruction, reading, writing, drawing, object lessons, and needlework, are taught well; Scripture, geography, music, and trigonometry, very fairly; arithmetic, grammar, mensuration, Latin, fairly; dictation, English composition, algebra, geometry, tolerably.

Judged by the standard, seven Public Schools are below its requirements, sixteen satisfy them, and sixteen exceed them. Of Denominational Schools, twenty-five are below, thirty-seven up to, and eight above the standard. In 1873, forty schools were below the standard; in 1874, thirty-three.

It will thus be seen that progress is being made. Indeed it may be stated that, whether as regards organization, discipline, or instruction, the schools of the district evidence improvement.

Of the teachers it may be stated that they are respectable, intelligent, and reasonably well trained for the work. A few are behind the requirements of city schools, but the great bulk are doing earnest, faithful, and efficient service. The labours of the pupil-teachers, numbering 166, can hardly be too highly spoken of. These young persons are passing through the Training School at the rate of about thirty per annum, and are gradually occupying the more important schools of the Colony. The very best results may be anticipated from the satisfactory manner in which the pupil-teacher system is being developed.

Little can be said in favour of the local supervision of our schools. In about half-a-dozen it is active and beneficial; in the remainder it is of a nominal character.

In the report for last year attention was invited to the large number of children—between four and five thousands—that attended no school at all. Nothing has been done to alter this state of things. As already suggested, the best remedy, in our opinion, would be found in the establishment of several free schools, and it is much to be desired that some amendment may be made in the Public Schools Act to allow of this being done. There are several localities in and around the city where free schools are urgently needed. We have indicated some in our report for 1873. It appears to us that if such schools were brought into existence, the question of free education would be reasonably well met, in this district at least.

To sum up:—The organization has improved; the discipline is healthy; the attainments indicate an advance on those of previous years; the teachers are earnest, diligent, and fairly efficient; and generally it may be stated that primary education is making good progress in the district.

EDWIN JOHNSON.
JAMES W. ALLPASS.

Inspectors' Office,
13th January, 1875.

ANNEX.

DETAILED Statement of the condition of Public and Provisional Schools in the Sydney District, visited during the year 1874.

The remarks under head 1 relate to the material condition of schools; under 2, to their moral character; 3, to the subjects and methods of instruction; 4, to the proficiency of the pupils.

PUBLIC SCHOOLS.

BALMAIN:—Visited, 25th, 26th February and 2nd, 3rd March.

Numbers present:—Boys, 183; girls, 127; total, 310.

1. With the exception of insufficient accommodation, the school is in satisfactory material condition. 2. The school is well organized, the pupils are under excellent discipline, and their moral tone is very satisfactory. 3. The instruction is prosecuted with intelligent method, and the course comprehends all the subjects prescribed by the Council. 4. The proficiency of the pupils is as follows:—First class, tolerable to fair; second class, fair; upper second class, fair to very fair; third and fourth classes, very fair; fifth class, very good+.

BALMAIN (Infants):—Visited, 26th February and 3rd March.

Numbers of pupils present:—Boys, 79; girls, 86; total, 165.

1. The school is conducted mainly in the class-room. The lavatory is occasionally used for the babies. The accommodation is unsuitable and insufficient. There is a fair supply of working appliances. 2. A good attendance is maintained. The pupils are reasonably regular and punctual, neat and clean in person, and well behaved. The government is mild, intelligent, and effective. The moral aspect of the school is healthy and pleasing. 3. The classification is affected by exceptional circumstances; insufficient accommodation is perhaps the one that has to be most studied and provided against. The methods are those usually practised in the better infant schools; the teaching is earnest, painstaking, and fairly skilful. 4. The attainments are fair.

BOTANY:—

BOTANY :—Visited, 25th August.

Numbers present.—Boys, 30; girls, 33; total, 63

1. The school premises are good, they are suitably furnished and are fairly well kept. 2. The organization is correct, and the discipline effects fair order. 3. The highest class is a third, and for a school of the kind all the subjects prescribed are taught. 4. The proficiency of the pupils ranges between fair and very fair.

BOTANY ROAD :—Visited, 11th February.

Numbers present :—Boys, 88; girls, 52; total, 140.

1. The material condition of this school is as good as can be expected in the circumstances. As a makeshift, the schoolroom, though small, does tolerably well. There is a sufficiency of educational appliances. 2. A fair attendance is secured. The pupils are reasonably regular and punctual. Drill is taught with fair success. The government is somewhat feeble. A few of the elder boys are inclined to be forward and disobedient. With this exception, the order and general discipline may be regarded as fairly satisfactory. 3. Very fair judgment is shown in the classification of the pupils. The instruction embraces all the prescribed subjects, is well arranged, and imparted with painstaking and a fair degree of earnestness. The methods are modern, but require to be applied with greater skill. The school is divided into four classes. The average proficiency is fair.

BOURKE-STREET (Boys) :—Visited, 12th–13th May.

Number present :—127.

1. The schoolroom is a fair one, but it is badly furnished. There is a sufficiency of desks, but they are of a very unsuitable and rickety description. Owing to the character of the site, there is no proper playground, and the out-offices are badly situated. 2. Excepting some cases of faulty classification, the organization is passable. The discipline is bad, the children being in some instances very disobedient. 3. The pupils are instructed in the prescribed subjects, and the teaching is earnestly prosecuted. 4. As a whole the pupils are fairly proficient, but in the upper class, a fourth, the results are but barely tolerable.

BOURKE-STREET (Girls) :—Visited, 13th March.

Number present :—120.

1. The schoolroom is commodious, clean, and neatly arranged. Additional desks are needed; those in use are of inferior construction. The seats also are bad. There is a fair supply of apparatus. 2. The attendance has largely increased. The pupils are regular, punctual, and clean; good order is maintained. The government is mild, but firm and effective. 3. The classification is appropriate; the lesson documents are arranged with fair judgment; the methods are suitable, and are diligently applied. 4. The following is the proficiency of the several classes :—First, fair; second, very fair; third, fair; fourth, fair+.

BOURKE-STREET (Infants) :—Visited, 14th May.

Numbers present :—Boys, 86; girls, 85; total, 171.

1. The schoolroom, though somewhat small, is on the whole a suitable one. Want of proper recreation space is a serious detriment to the school. 2. The children are under healthy and effective discipline. 3. The instruction is modern, methodical, and intelligent. 4. The proficiency of the children ranges between tolerable and fair.

CAMPERDOWN :—Visited, 28th May.

Numbers present :—Boys, 41; girls, 21; total, 62.

1. A lavatory and a weather-shed are pressing requirements; the playground needs to be drained and the fences and the woodwork of the windows painted. The desk accommodation is insufficient; with these exceptions, the organization and material condition of the school are satisfactory. 2. A certain degree of irregularity characterizes the attendance. Wet weather prevented many of the pupils being present at the examination. With few exceptions they are punctual and clean. The government is vigorous and effective, securing good order and a healthy moral tone. 3. The instruction accords with the prescribed course, and is judiciously regulated. The methods are appropriate, and are applied with earnestness, diligence, and skill. 4. The following is the proficiency of the several classes :—Second, very fair+; third, very fair (nearly); fourth, very fair.

CAMPERDOWN (Infants) :—Visited, 28th May.

Numbers present :—Boys, 19; girls, 19; total, 38.

1. It would be an advantage were the portion of the room in which the infants are taught screened from view. On the whole the instructional appliances are tolerably suitable. 2. The discipline is healthy. 3. The instruction, which is of the kind usual in infants' schools, evidences painstaking. 4. The proficiency is fair.

CLEVELAND-STREET (Boys) :—Visited, 8th, 9th, 10th September.

Number present :—309.

1. The schoolroom is in very good repair, and is abundantly provided with suitable educational appliances. 2. The attendance has undergone a considerable diminution. Three-fourths of the pupils attend regularly and with commendable punctuality. Other features of the discipline are not less satisfactory. The pupils present a clean and neat appearance, are subdued in demeanour, well conducted, and in excellent order. 3. Except that promotions are unnecessarily frequent, fair judgment is exhibited in the classification. The instruction is of full range, regulated with very fair ability, and imparted by modern methods. The teaching would appear, however, to lack life and thoroughness. 4. The proficiency of the several classes is as follows :—First, tolerable to fair; second, fair; upper second, very fair; third, very fair+; upper third, barely tolerable; fourth, tolerable+; fifth, fair.

CLEVELAND-STREET (Girls) :—Visited, 27th August, and 1st, 2nd, 3rd September.

Number present :—293.

1. The school premises are well furnished and in good repair. 2. The organization is of a very satisfactory character, and the pupils are excellently disciplined. 3. Subjects of instruction for a school having a fifth class are taught in an effective manner. 4. The average proficiency of the whole school reaches very fair, in the fourth it is good, and in the fifth class good+.

CLEVELAND-STREET (Infants) :—Visited, 26th and 27th August.

Numbers present :—Boys, 211; girls, 150; total, 361.

1. The school premises, whilst of excellent character, afford but insufficient accommodation to the number of pupils in attendance, and a class-room is a marked want. 2. Both as regards organization and discipline the school is in a very satisfactory state. 3. The school course includes all branches usually taught in good infants' schools. 4. The average proficiency reaches very fair.

DEVONSHIRE-STREET :—

DEVONSHIRE-STREET :—Visited, 4th June.

Numbers present :—Boys, 85 ; girls, 47 ; total, 132.

1. This school is held in rented premises belonging to the Congregational denomination. The building is a new one, and when the enlargements, now in course of erection, are completed, the material condition of the school will be satisfactory. 2. The organization accords with usual plans. The government is feeble and vacillating ; as a result, the pupils are restless and persistently noisy. The moral tone of the school is affected by the lax government. 3. The teaching is prosecuted in a methodical manner, but it is wanting in effect. 4. The results as ascertained by examination are :—First class (babies) from fair to very fair ; upper first, approaching tolerable ; second, fair ; third, tolerable +.

FORT-STREET (Boys) :—Visited, 18th, 19th, 20th, 23rd, 24th, 26th, 27th, and 30th November, 1st, 2nd, 3rd, and 4th December.

Number present :—450.

1. The school premises are, on the whole, in good condition, and they are well kept. 2. The organization of the school is excellent. The pupils are under very effective government. They manifest marked industry, and a pleasing earnestness to excel when under test. 3. In stating that the prescribed subjects are taught, it must be noticed that the range taken is of much wider scope than what obtains in our ordinary schools. Exclusive of the more usual branches of instruction, the programme for the fifth class embraces higher arithmetic, mensuration, algebra, trigonometry, Euclid (6 books), Latin grammar, and Cæsar. 4. The general proficiency of the whole school approaches very good ; that of the fifth class is excellent.

FORT-STREET (Girls) :—Visited, October 20th, and November 6th, 10th, 11th, 12th, 13th, 16th, 17th, and 18th.

Number present :—337.

1. The material condition of the school is thoroughly satisfactory. The furniture is sufficient, and the appliances ample. 2. The discipline is highly effective. The moral tone of the school is excellent. 3. Judicious arrangements are made for the instruction of the classes in the prescribed subjects. 4. The proficiency in the first and second classes reaches very fair ; in the third and fourth, to good nearly ; and in the upper fourth and fifth classes the ascertained results range between good and very good.

FORT-STREET (Infants) :—Visited, 29th, 30th September, and 6th October.

Numbers present :—Boys, 218 ; girls, 163 ; total, 381.

1. The rooms in which the children of this department are taught are clean, lofty, and well-ventilated, but the spaces in front of the galleries are too small, and afford insufficient desk-room. There is a good supply of apparatus, books, and maps. 2. The children are orderly and well governed ; for their years they manifest satisfactory attention to instruction. 3. The usual branches are included in the school course. 4. The average proficiency exceeds very fair.

GLEBE :—Visited, 8th, 9th, and 10th June.

Numbers present :—Boys, 117 ; girls, 81 ; total, 198.

1. The premises are good, well kept, and well found in appliances. The school is properly arranged and organized. 2. Inclement weather reduced the attendance during the examination ; ordinarily it is about thirty more. Satisfactory discipline is maintained. 3. Instruction in the ordinary branches is regulated by judicious lesson-guides, and the school work is prosecuted in an earnest manner. 4. The average proficiency of the pupils approaches very fair. The highest class is a fourth.

GLEBE (Infants) :—Visited, 8th June.

Numbers present :—Boys, 82 ; girls, 57 ; total, 139.

1. The schoolroom is small, but is in all other respects well adapted to teaching purposes. It is liberally found in working materials, and presents a clean, neat, and cheerful appearance. 2. The late unsettled weather has operated unfavourably on the attendance. About seven-ninths of the pupils attend regularly. They are punctual, clean, fairly subdued in demeanour, and well behaved. 3. The full Infants' School Course is observed. The methods are appropriate, and are applied with fair earnestness and industry. 4. Fair results have been produced.

JAMIESON-STREET :—Visited, 15th June.

Numbers present :—Boys, 65 ; girls, 44 ; total, 109.

1. This property does not belong to the Council. In every sense the school premises are unsuitable, and they are also in very bad repair. 2. The school is under effective discipline, and the moral tone is pleasing. 3. All the subjects prescribed for a school of three classes are effectively taught. 4. The average proficiency exceeds very fair. The school has since been closed, and, as they could not be accommodated in the Fort-street Schools, most of the pupils have entered the C.E. School at St. Philip's.

MANLY :—Visited, 4th March.

Numbers present :—Boys, 44 ; girls, 20 ; total, 64.

1. Lavatories and a weather-shed for the use of the boys are required ; otherwise the schoolroom is commodious, in fair repair, and sufficiently found in working material. The organization, as a whole, is fairly satisfactory. 2. The attendance is but moderately regular, and is affected by exceptional circumstances. Perhaps the most noticeable of these is the migratory character of a large number of the residents. Many of the pupils attend the school for short periods, and then remove from the neighbourhood. This perpetual change in the composition of the pupils exercises a very injurious influence on the discipline of the school and the attainments of the pupils. As regards punctuality, there is little to complain of. The pupils are also in fair order, and tolerably well behaved. The government however is hardly strict enough. 3. Fair judgment is shown in the classification. The instruction is regulated by the usual guides, and imparted with painstaking, fair energy, and fair intelligence. 4. The average proficiency ranges between tolerable and fair. Scripture is not taught, by request of the parents of the pupils.

MARRICKVILLE :—Visited, 28th October and 3rd November.

Numbers present :—Boys, 99 ; girls, 69 ; total, 168.

1. Excepting that the primary schoolroom is much too narrow, the buildings are of excellent character. The newly erected infants' room is not only a valuable addition to the accommodation, but it is certainly one of the best rooms in the district. In all respects the school is well found in appliances, and the organization is correct. 2. The punctuality of the pupils is somewhat unsatisfactory ; in other respects the discipline is effective. 3. The subjects prescribed for a school of four classes are taught intelligently. 4. The average proficiency ranges between fair and very fair.

NEWTOWN :—Visited, 7th May.

Numbers present :—Boys, 69 ; girls, 39 ; total, 108.

1. The school is conducted in premises belonging to the Congregational body. The schoolroom is in very fair repair, spacious, and fairly found in educational appliances. 2. The attendance is marked by fair

fair regularity. The pupils are tolerably punctual, reasonably clean, and in fair order. The government is inclined to be vacillating and feeble. 3. The instruction accords with the prescribed course, except that French is substituted for geometry. Fair judgment is shown in the compilation of the lesson documents. The methods are in the main modern, and although applied with seeming earnestness and industry, are wanting in vigour, elasticity, and penetrativeness. 4. The proficiency is fairly up to the demands of a fourth class.

NEWTOWN (Infants):—Visited, 7th May.

Numbers present:—Boys, 40; girls, 27; total, 67.

1. The space allotted to the infants is much too limited; this is the more felt because no provision can be made for desks. The playground is exceedingly small. The movement for better school premises will, if successful, remedy the defects noted. 2. The children are under good discipline, and the moral tone of the school is healthy. 3. The teaching is judiciously regulated. 4. The proficiency of the pupils approaches fair.

NORTH SYDNEY.—Visited, 8th October.

Numbers present:—Boys, 24; girls, 26; total 50.

1. Extensive repairs are necessary to the premises, fences, and out-houses. The material aspect of the school is far from satisfactory, and unless the present non-vested buildings are speedily put into repair the erection of new vested premises will be requisite. 2. The pupils are fairly orderly and attentive. The discipline is fairly effective, and the general tone of the school is healthy. 3. The subjects embrace all prescribed for a third class. The classification is injudicious in respect of divisions in classes; the instruction is properly regulated, and the teaching is marked by energy and industry. 4. The average proficiency is from fair to very fair.

PADDINGTON (Boys):—Visited, 28th and 29th April.

Number present:—149.

1. The school is in excellent material condition and well organized. 2. Wet weather interfered with the attendance on the days of examination. Under ordinary circumstances, it is about four-fifths of the number enrolled. The pupils are punctual, clean, and in good order. The government is firm and effective. 3. The instruction embraces all the required subjects, and is judiciously regulated. The methods of teaching are appropriate, and are applied with earnestness, energy, and skill. 4. The proficiency of the several classes is:—First, fair; second, very fair to good; upper second, very fair to good; third, good; fourth, very fair to good.

PADDINGTON (Girls):—Visited, 28th and 29th April.

Number present:—129.

1. The school premises are excellent in kind, and the educational appliances are ample and good. The school is well organized. 2. The pupils are under good discipline. 3. The instruction is complete as regards the subjects to be taught, but in some respects the range taken is too low for a metropolitan school. 4. The average proficiency is about fair.

PADDINGTON (Infants):—Visited, 5th May.

Numbers present:—Boys, 105; girls, 76; total, 181.

1. In all respects the material state of this school is good. 2. The school is well organized and healthily disciplined. 3. The instruction is intelligent and rigorous. 4. The pupils are very fairly proficient in the subjects taught them.

PITT-STREET:—Visited, 6th May.

Numbers present:—Boys, 38; girls, 24; total, 62.

1. The want of a playground is a marked defect in the organization of this school. Suitable desks are also badly needed; in all other respects the supply of furniture and apparatus is sufficient. 2. In the circumstances, a fair attendance is maintained. The pupils are clean, punctual, and tolerably regular. Fair order is secured, but the government needs to be a little more strict. 3. Having regard to the smallness of the attendance, the classification is high. The instruction is of full range, and is regulated with very fair ability. Modern methods are employed. 4. The results of the teaching may be summarized thus:—Second class, moderate; upper second, tolerable; third, fair; upper third, fair +.

PITT-STREET (Infants):—Visited, 6th May.

Numbers present:—Boys, 30; girls, 22; total, 52.

1. The arrangements for the instruction of this department are unsatisfactory. The space allowed is too small, and the children are merely divided from the primary classes by a curtain. There is no playground, and the closets are in close proximity to the schoolroom. As the property does not belong to the Council there is no present remedy for the stated defects. 2. The order is at best about fair. 3. The subjects taught in Infants Schools are provided for in the programmes, but the methods of instruction do not appear to be very effective. 4. The proficiency averages tolerable.

PYRMONT:—Visited, 5th March.

Numbers present:—Boys, 75; girls, 52; total, 127.

1. The school is conducted in temporary premises. The building is much too small, is in a bad situation and in bad repair. The out-buildings are of the most wretched character. There is a fair supply of educational appliances, but the general material condition of the school is most unsatisfactory. 2. Considering the defective character of the school premises, a fair attendance is maintained. The pupils are regular, punctual, and in very fair order. The government is mild, and otherwise judicious. The moral tone is healthy. 3. The number of classes might be conveniently reduced; the instruction is of full range up to the requirements of a fourth class, is intelligently arranged, and imparted by modern methods. 4. The average proficiency is fair.

PYRMONT (Infants):—Visited, 5th March.

Numbers present:—Boys, 47; girls, 27; total, 74.

1. The building is small, badly ventilated, in wretched condition, and is altogether unimprovable. So far as the area of the room will allow, the appointments are sufficient, and the organization is passable in the circumstances. This property does not belong to the Council. 2. The children are in some respects unsatisfactorily controlled. 3. Prescribed subjects are taught. 4. The proficiency of the pupils is slightly above tolerable.

ST. LEONARDS:—

ST. LEONARDS :—Visited, 17th September.

Numbers present :—Boys, 77 ; girls, 54 ; total, 131.

1. The building is a substantial stone structure, but it is not large enough to properly accommodate the pupils in attendance ; noticeable wants are a lavatory, weather-shed, and a proper supply of water ; the school is well furnished and satisfactorily organized. 2. The moral tone of the school is of very fair character, and the children are fairly punctual and orderly. 3. The highest class is a third ; all the subjects prescribed for a school of the kind are taught ; the instruction is but fairly educative. 4. The average proficiency is fair ; the teacher has since been removed.

SUSSEX-STREET :—Visited, 11th June.

Numbers present.—Boys, 46 ; girls, 32 ; total, 78.

1. The schoolroom is suitable, and it is properly furnished ; there is no playground, and the closets are badly situated. 2. The pupils are very fairly disciplined. 3. The teaching is earnest and painstaking, but not correspondingly abiding in its results. 4. The proficiency ranges between tolerable and fair ; the highest class is a third.

SUSSEX-STREET SOUTH :—Visited, 11th June.

Numbers present :—Boys, 43 ; girls, 33 ; total, 76.

1. The approach to the school is bad ; the schoolroom is commodious, clean, and cheerful-looking ; the supply of working materials is sufficient ; and the organization as a whole may be described as reasonably satisfactory. 2. Of late the attendance has been much lower than usual, owing to rainy weather ; in general, however, it is marked by irregularity, the average number present not exceeding two-thirds of those enrolled ; otherwise, the pupils are punctual, clean, and neat ; good order is maintained ; the government is judicious and effective, and the prevailing tone is pleasing and healthy. 3. All the specified subjects are taught under fairly satisfactory conditions, due regard being had to a correct classification of pupils, and to a proper arrangement of the lesson documents ; the methods are appropriate, and are applied with vigour and skill. 4. The proficiency is as follows :—First class, very fair to good ; second class, good ; third, very fair. Good work is done in this school.

WATSON'S BAY :—Visited, 19th May.

Numbers present :—Boys, 36 ; girls, 14 ; total, 50.

1. This property belongs to the Marine Board ; the schoolhouse is in satisfactory condition, but the fences are much broken and there is no weather-shed. 2. The school is satisfactorily organized, and the pupils are under fair discipline. 3. The course accords with what is prescribed for a school of three classes ; the instruction is wanting in thoroughness. 4. This school is considerably below the requirements of the standard ; the average proficiency ranges between moderate and tolerable.

WILLIAM-STREET (Boys) —Visited, 9th, 10th, 11th, 12th, 13th March.

Number present :—232.

1. The schoolhouse is in good repair and suitably furnished. All necessary outbuildings are provided. The school records are badly kept. 2. The discipline is of fair character. 3. The classification is bad : this is especially true of the junior classes, many of the pupils of which are only fit for the baby department. The instruction is poorly regulated, the lesson documents being well nigh worthless. 4. The attainments of the several classes may be described thus :—1st, indifferent ; 2nd, moderate ; upper 2nd, barely moderate ; 3rd, barely tolerable ; 4th, tolerable to fair. In point of efficiency the school is much below the standard.

On receipt of the report of which the foregoing is a summary, the Head Master was called upon to explain. His reply was submitted to the Inspector for such remark as he might deem necessary ; and ultimately the whole correspondence was referred to the Examiner, whose report thereon is as follows :—

"1. As regards the charge of incorrect rolls and fee account books, it is tolerably clear that, at the time of inspection, these records were not entirely accurate. Mr. Murray, however, is not, in my opinion censurable for employing his subordinates in marking the rolls and constructing programmes, so long as he designed by this course to give the junior teachers a knowledge of their future duties ; and it is, I believe, customary in other schools to commit the calling of the roll and the collection of fees to the teachers of the various classes. The error at William-street really lay in the want of effective supervision, but the inflamed state of Mr. Murray's eyes, about the time of inspection, must have rendered a close scrutiny of the records difficult. 2. The allegations as to unsound classification have not been wholly disproved. There is reason to believe that pupils have been placed in classes for which they were unfitted ; but how far this course was forced upon the Head Master by removal of one of his staff, and by other circumstances which he could not control, does not appear. I have no doubt that he acted for the best in this matter. 3. The mode of reckoning the 'quarter of enrolment' with a view of estimating the proficiency is in my opinion erroneous, and can only be held safe and just when a pupil has attended regularly, or passably so, during the quarter. 4. In the matter of the time table the evidence is conflicting. In view of the classification I am of opinion that Mr. Murray acted for the best. 5. The question of proficiency is one much more difficult to settle, although, at first sight, no difficulty appears. Mr. Johnson's statement that he adhered to the curriculum for the quarter shows consideration for the teachers, for, had he chosen, he might have taken a wider range ; indeed, with the *scope* or *matter* of the examination little fault can be found. But Mr. Murray takes exception to the *mode* of examination, and it is here that the element of uncertainty lies. It is undeniable that the difficulties of examination may quite unintentionally be greatly intensified, and the ratio of answering lowered by the manner of the examiner, by his mode of presenting the questions, and by the limitation of the time allowed for thought. Although these are really points of consequence in this case, the Council has no data upon which to proceed to a satisfactory conclusion ; indeed, the evidence of unbiassed witnesses—witnesses accustomed to rapid oral questioning, and to the habits of classes under examination—would be the only conclusive testimony, and when, to the unsolved doubts upon this point, we add the unusually early date at which the examination was held, the precarious attendance through adverse weather, the inflamed eyes of the master, the comparatively feeble powers of the assistant, the close and searching character of the examination, the admitted existence of defects, and the earnest desire expressed by Mr. Murray to rectify them, it is impossible to avoid the conclusion that the Inspector's recommendation is, under the circumstances, too severe. It is admitted that the school is not equal to standard requirements, but this would scarcely necessitate the punishment of summary removal from office."

WILLIAM-STREET (Girls) :—Visited, 11th, 12th, 13th, and 16th March.

Number present :—213.

1. The schoolroom is a good one. At present the accommodation is insufficient for the attendance, but a large classroom is in course of erection. There is a plentiful supply of working appliances. In the circumstances, the organization is very good. 2. The tone of the school is very pleasing. The government is very effective, and the pupils exhibit marked industry when under test. 3. The subjects prescribed for a school of four classes are treated in a methodical and intelligent manner. 4. The proficiency in the several classes is as follows :—2nd and 3rd classes, fair ; 4th, very fair to good.

WILLIAM-STREET

WILLIAM-STREET (Infants) :—Visited, 9th, 10th, and 11th March.

Numbers present :—Boys, 135 ; girls, 124 ; total, 259.

1. The school premises are fairly commodious, and in good repair. There is a sufficient supply of working appliances, and the organization is unexceptionable. 2. The pupils are well-behaved and under good control. Inclement weather affected the attendance during the examination. 3. The instruction is of a kind suited to young children, and the subjects prescribed are treated in an effective manner. 4. The average proficiency reaches very fair ; in the highest class the results are good nearly.

BOTANY HEADS (Provisional) :—Visited, 21st May.

Numbers present :—Boys, 15 ; girls, 4 ; total, 19.

1. The schoolroom is exceedingly small, but is the only one available for the purpose. It is provided with as much furniture and apparatus as it can conveniently hold. 2. About four-fifths of the pupils attend regularly. This attendance may be regarded as good when it is considered that some of the children have to travel long distances. The pupils attend with commendable punctuality, are clean and neat in person, subdued and modest in demeanour, and well-behaved. 3. Too much anxiety is manifested to push the children through the classes. All the prescribed subjects are taught, and the instruction is regulated with passable judgment. Little opportunity was afforded for observing the methods, but they appear to be of tolerable worth ; they are applied with earnestness and industry. 4. The proficiency of the several classes may be summarized, thus :—First, tolerable ; second, tolerable ; third, tolerable to fair.

TEMPE (Provisional) :—Visited, 14th October.

Numbers present :—Boys, 21 ; girls, 20 ; total, 41.

1. The school is held in the Wesleyan chapel. The building is unsuitable and badly furnished, but commodious and well-appointed. Vested premises are ready for occupation, and the school will shortly be reorganized. 2. The government is effective, and in all matters of discipline the teacher, Mr. McLean, has induced a marked improvement upon that previously obtained. 3. The pupils are properly classified, and their instruction is judiciously regulated. The subjects prescribed for a school of three classes are intelligently treated. 4. The average proficiency reaches fair+.

APPENDIX I.

RECEIPTS and DISBURSEMENTS of the Council of Education, from 1st January to 31st December, 1874.

RECEIPTS.		DISBURSEMENTS.	
	£ s. d.		£ s. d.
To balance from 1873	12,239 6 10	GENERAL MANAGEMENT.	
" Amount received from Treasury on account of Vote for 1874	120,000 0 0	By salaries and allowances	6,217 10 11
" Church and School Estates Revenue	1,600 3 4	" Repairs, rent, and furniture	631 19 10
		" Books, binding, printing, and stationery	656 3 0
		" Miscellaneous expenses:—	
		Duty stamps and telegrams £ 7 10 0	
		Clerical aid and labour	63 6 6
		Furniture, fuel, and light	14 0 5
		Travelling expenses and freight	48 7 4
		Sundry small expenses	42 18 9
			176 3 0
			7,681 16 9
		INSPECTION.	
		" Salaries and allowances	5,591 15 2
		" Rent	80 0 0
		" Books, printing, and stationery	137 13 2
		" Travelling expenses	1,685 3 6
		" Miscellaneous expenses	
		Sundry small expenses	30 18 7
			7,525 10 5
		TRAINING DEPARTMENT.	
		" Salaries and allowances	3,425 5 1
		" Repairs and furniture	
		" Books, printing, and stationery	31 15 2
		" Miscellaneous expenses	
		Sundry small expenses	
			3,457 0 3
		PUBLIC SCHOOLS.	
		" Salaries and allowances	51,606 17 10
		" Buildings, repairs, rent, and furniture	15,624 6 4
		" Books, printing, and stationery	1,798 11 0
		" Travelling expenses	634 16 2
		" Miscellaneous expenses:—	
		Architect's commission	127 18 11
		Sundry small expenses	20 5 8
			148 4 7
			69,812 15 11
		PROVISIONAL SCHOOLS.	
		" Salaries and allowances	10,812 14 4
		" Repairs and furniture	72 2 0
		" Books, printing, and stationery	457 7 9
		" Travelling expenses	1 0 0
		" Miscellaneous expenses	
		Sundry small expenses	1 0 3
			11,344 4 4
		HALF-TIME SCHOOLS.	
		" Salaries and allowances	3,985 13 10
		" Repairs and furniture	23 7 0
		" Books, printing, and stationery	123 15 8
		" Travelling expenses	42 0 0
		" Forage allowances	413 15 0
		" Miscellaneous expenses	
		Sundry small expenses	
			4,588 11 6
		CERTIFIED DENOMINATIONAL CHURCH OF ENGLAND SCHOOLS.	
		" Salaries and allowances	12,814 13 6
		" Repairs and furniture	514 0 8
		" Books, printing, and stationery	326 9 1
		" Travelling expenses	58 18 0
		" Miscellaneous expenses	
		Sundry small expenses	18 19 0
			13,733 0 3
		CERTIFIED DENOMINATIONAL ROMAN CATHOLIC SCHOOLS.	
		" Salaries and allowances	11,330 7 10
		" Repairs and furniture	184 9 5
		" Books, printing, and stationery	352 12 2
		" Travelling expenses	46 6 0
		" Miscellaneous expenses	
		Sundry small expenses	
			11,913 15 5
		CERTIFIED DENOMINATIONAL PRESBYTERIAN SCHOOLS.	
		" Salaries and allowances	1,131 5 2
		" Repairs and furniture	94 0 11
		" Books, printing, and stationery	23 17 7
		" Travelling expenses	2 3 6
		" Miscellaneous expenses	
		Sundry small expenses	
			1,251 7 2
		CERTIFIED DENOMINATIONAL WESLEYAN SCHOOLS.	
		" Salaries and allowances	1,254 17 1
		" Repairs and furniture	80 15 8
		" Books, printing, and stationery	28 2 4
		" Travelling expenses	2 10 0
		" Miscellaneous expenses	
		Sundry small expenses	
			1,366 5 1
		CERTIFIED DENOMINATIONAL HEBREW SCHOOL.	
		" Salaries and allowances	181 9 9
		" Repairs and furniture	
		" Books, printing, and stationery	5 0 4
		" Travelling expenses	
		" Miscellaneous expenses	
		Sundry expenses	
			186 10 1
		" Text-books	85 4 1
		" Books for ragged school	20 0 0
		" Balance	873 8 11
			£ 133,839 10 2
			£ 133,839 10 2

Council of Education Office,
17th March, 1875.JOHN M. GIBSON,
Accountant.

1875.

NEW SOUTH WALES.

REPORT

OF THE

COUNCIL OF EDUCATION

UPON THE CONDITION

OF THE

CERTIFIED DENOMINATIONAL SCHOOLS

FOR

1874.

Presented to both Houses of Parliament, in pursuance of the Act 30 Vic. No. 22, sec. 27.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1875.

THE COUNCIL OF EDUCATION TO HIS EXCELLENCY THE GOVERNOR,

SUBMITTING

REPORT UPON DENOMINATIONAL SCHOOLS FOR 1874.

To His Excellency SIR HERCULES GEORGE ROBERT ROBINSON, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Governor-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

May it please your Excellency,

We have the honor, in compliance with the requirements of the Public Schools Act, to submit this our eighth Annual Report upon the condition of Certified Denominational Schools, being that for the year 1874.

The number of Certified Denominational Schools in operation during 1874 was 204, being a net decrease of five. In 1873 the number of existing schools of this class was 209. Of these, the undermentioned were closed in 1874:— Appendix A.

- Bathurst—Presbyterian.
- Kent-strect—Presbyterian.
- Yass—Presbyterian.
- St. Leonards—Presbyterian.
- Portland Head—Presbyterian.
- Parramatta—Wesleyan.
- Hinton—Church of England.

Certificates were granted to the Roman Catholic Schools at Lambton and Gulgong.

Appendix B.

As usual, the general condition of Certified Denominational Schools is described in our Report upon Public Schools, but further information as to the several schools inspected is contained in the appended detailed reports of the Inspectors. A Return showing the number of pupils enrolled and in average attendance, together with the amount paid for school fees, is also appended. Appendix C.
Appendix D.

The amounts paid to the different classes of Certified Denominational Schools from the Church and Schools Estates Revenue were the following:—

Church of England	£509 7 0
Roman Catholic	184 9 5
Presbyterian	94 0 11
Wesleyan	80 15 8
	£868 13 0

We submit this our Report upon the Certified Denominational Schools, for the year ending 31st December, 1874; and in testimony thereof, we have caused our corporate Seal to be affixed hereto, this fifth day of April, one thousand eight hundred and seventy-five.

(L.S.)

W. WILKINS,
Secretary.

J. SMITH, President.
THOMAS HOLT.
S. C. BROWN.
W. A. DUNCAN.
ALFRED STEPHEN.

APPENDIX A.

ATTENDANCE of Children at the Denominational Schools, as certified by the Local Boards, for the Quarter ending 31st December, 1874, or for the last Quarter of that year during which the Schools were in operation.

Name of School.	Number of Children on Rolls.								Attendance.			Expenditure from Public Funds.					Local Contributions.		Total.				
	Boys.	Girls.	Total.	Church of England	Roman Catholic.	Presbyte- rian.	Wesleyan.	Others.	Boys.	Girls.	Total.	Salaries.	Books and Apparatus.	Travelling Expenses and Forage.	Buildings, Rent Fur- niture, &c.	Buildings, Furniture, &c.	School Fees.						
CHURCH OF ENGLAND SCHOOLS.																							
Ashfield.....	58	28	86	50	4	13	7	3	367	179	546	144	15	0	3	19	5	101	16	3	255	10	8
Balmain	142	119	261	189	2	33	36	11	978	821	1799	204	4	8	9	11	1	261	10	3	452	6	0
Bathurst	159	133	292	243	4	22	12	11	1059	757	1816	237	6	10	7	3	1	21	3	6	356	7	5
Bendolba	21	23	44	22	3	20	5	...	135	186	321	104	18	2	2	8	1	0	19	10	4	10	10
Bishop's Bridge	10	16	26	...	...	...	...	...	66	111	176	4	0	0	0	0	0	60	17	4	154	15	10
Braidwood	47	28	75	61	...	8	3	3	313	154	471	90	0	0	3	18	6	22	10	2	121	14	8
Broke	34	34	68	47	19	...	...	...	158	143	375	92	15	6	1	6	4	22	10	2	122	11	3
Buchanan	29	22	51	24	12	6	9	...	192	125	317	68	0	0	1	18	11	31	8	0	135	5	4
Burrawang	24	37	61	44	5	7	2	3	152	202	352	102	0	0	0	17	4	50	16	0	161	7	3
Burwood	39	28	67	51	6	...	...	10	22	365	297	63	1	11	1	1	10	22	11	6	86	15	3
Cabramatta	9	22	31	27	14	...	...	...	139	161	297	63	1	11	1	1	10	91	10	1	234	11	8
Camden	54	33	87	79	...	...	...	1	416	249	665	123	1	7	...	...	20	29	11	5	146	17	6
Campbelltown	26	21	47	37	2	...	...	8	142	143	285	105	19	11	2	5	2	37	2	9	133	15	5
Canberry	22	18	40	26	9	5	...	...	167	148	315	93	1	3	3	11	6	34	5	3	134	14	3
Cauterbury	35	24	59	44	1	5	4	...	157	111	267	82	0	0	1	4	5	39	19	0	123	3	5
Cassilis	23	19	42	28	14	...	...	...	28	231	511	102	0	0	2	11	6	47	17	6	172	9	0
Castle Hill	48	34	82	50	7	24	...	51	2967	1227	3304	302	16	0	10	9	3	437	3	104	750	9	1
Christ Church	316	216	532	390	10	46	35	...	2067	1227	3304	302	16	0	10	9	3	24	8	8	93	3	4
Cobbity	23	17	40	40	...	...	...	...	174	144	318	66	13	11	0	11	8	63	9	3	163	3	1
Corowa	41	39	80	42	14	18	...	6	234	261	495	98	10	0	0	15	3	46	11	3	142	4	8
Dapto	24	26	50	32	9	6	13	...	237	213	493	92	0	0	2	11	11	263	17	3	524	3	0
Darlinghurst	152	89	241	187	21	14	19	...	1138	657	1788	252	18	0	7	7	9	253	17	3	524	3	0
Denman	20	37	57	35	16	1	...	3	127	72	35	66	0	0	1	0	0	229	11	85	501	18	11
Double Bay	151	108	259	196	26	5	29	...	1053	714	1767	267	7	1	5	0	2	229	11	85	501	18	11
Dungog	29	22	51	44	4	3	...	...	181	133	314	78	0	0	1	7	3	41	15	10	130	8	1
Emu Plains	30	16	46	38	...	...	...	...	183	107	297	99	0	0	1	0	0	52	3	2	138	3	9
Enfield	46	44	90	55	24	3	5	...	286	262	628	79	10	4	3	16	5	35	17	6	165	13	10
Fox Ground	32	32	64	25	10	7	9	...	211	142	353	66	0	0	3	16	5	42	4	3	178	2	11
Frederickton	35	20	55	41	6	13	4	...	242	203	445	104	18	10	1	9	10	83	0	0	209	12	7
Glebe	65	46	111	73	4	2	20	2	466	325	791	136	11	10	...	...	...	9	6	6	90	18	3
Gosford	19	19	38	38	...	...	...	...	125	121	246	78	0	0	3	11	9	149	11	6	439	5	8
Goulburn	117	71	188	133	3	24	28	...	867	46	1377	212	1	4	6	3	2	46	16	5	138	2	3
Goulburn North	45	33	78	41	6	3	14	12	243	183	426	89	17	10	1	8	0	...	...	...	16	15	1
Gundagai South	8	9	17	11	5	...	...	...	57	43	107	16	12	1	...	...	...	9	18	3	105	12	11
Hexham	21	20	41	23	3	8	18	...	135	145	287	84	0	0	1	14	8	34	7	0	128	14	10
Hamberoo	26	25	51	37	...	...	...	...	179	164	341	83	14	2	3	3	8	36	2	0	110	16	7
Jerry's Plains	36	31	67	45	22	...	...	...	235	164	394	72	0	0	2	14	7	46	7	8	116	3	7
Kempsey	31	23	54	23	15	3	13	...	235	151	386	82	9	2	1	11	9	24	2	7	144	5	0
Kurrajong	29	17	46	42	1	3	...	...	187	121	308	91	5	0	1	12	4	67	7	4	242	1	11
Liverpool	65	40	111	106	...	...	...	...	445	287	732	152	8	2	7	11	9	38	8	3	241	17	7
Lord's Forest	25	22	47	19	1	2	5	...	175	154	329	102	0	0	1	9	4	41	17	2	125	6	0
Macquarie River	25	25	50	32	8	10	...	...	195	187	382	80	0	0	2	8	1	87	5	7	229	18	6
Maitland East	78	60	138	130	...	...	...	...	573	383	956	140	0	7	2	12	4	66	1	6	238	10	6
Maitland (St. Mary's) West	64	34	98	83	...	...	...	...	243	161	404	106	8	0	4	2	10	58	11	3	169	2	7
Maitland West (St. Paul's)	38	30	68	63	1	3	10	...	243	161	404	106	8	0	4	2	10	31	13	7	114	3	1
Miller's Forest	52	46	98	37	33	13	15	...	192	242	434	156	8	4	3	0	2	36	0	1	195	8	8
Morpeth	35	40	75	61	6	...	...	...	373	337	710	127	15	4	1	14	2	65	15	2	200	4	8
Moruya	54	57	111	52	11	19	29	...	373	824	1797	239	14	11	9	11	10	211	8	11	482	15	8
Mudgee	158	132	290	250	3	22	6	9	973	385	789	121	0	0	3	7	3	107	5	8	231	12	0
Musclebrook	69	62	131	117	...	...	...	...	404	385	226	92	13	3	...	...	...	19	6	0	116	10	3
Nayellau	15	23	38	34	...	...	...	...	73	153	54	116	0	0	...	...	...	74	7	3	196	6	3
Newcastle (St. John's)	45	41	86	74	...	...	...	...	278	262	540	102	0	0	2	19	3	199	6	3	428	15	3
Newcastle (Christ Church)	141	124	265	202	6	24	19	14	928	743	1671	226	17	3	3	12	10	195	9	9	404	19	10
Newtown	127	111	238	204	5	2	8	19	822	683	1595	205	17	3	3	12	10	62	3	10	179	13	5
Paddington	47	43	90	67	4	10	8	...	271	218	489	111	8	...	...	...	10	92	10	0	269	5	5
Parramatta	86	64	150	123	7	...	...	...	617	376	986	153	4	...	...	...	...	133	15	8	295	7	8
Parramatta North	93	55	148	72	12	16	47	1	617	358	975	151	0	10	5	11	2	390	0	31	755	0	34
Parramatta-street	251	208	459	417	9	4	13	16	1725	1277	3902	357	5	3	7	15	0	...	...	...	...	...	...
Paterson	21	10	31	27	3	...	...	...	96	56	152	16	11	3	...	...	...	0	17	6	152	7	6
Pennant Hills	27	31	58	59	...	...	...	...	181	163	344	105	13	5	3	3	11	134	1	9	230	15	5
Petersham	80	68	148	98	3	6	2	39	502	384	886	97	7	...	...	...	...	35	11	9	118	14	10

APPENDIX A—continued.

Name of School.	Number of Children on Rolls.							Attendance.			Expenditure from Public Funds.					Local Contributions.			Total.						
	Boys.	Girls.	Total.	Church of England.	Roman Catholic.	Presby-terian.	Wesleyan.	Others.	Boys.	Girls.	Total.	Salaries.	Books and Apparatus.	Travelling Expenses and Forage.	Buildings, Rent, Furniture, &c.	Buildings, Furniture, &c.	School Fees.								
CHURCH OF ENGLAND SCHOOLS—continued.																									
												£	s.	d.	£	s.	d.	£	s.	d.					
Windsor	56	59	115	83	..	4	25	3	39'4	39'	78'4	153	12	11	2	3	3	5	60	6	3	235	2	7	
Wollongong	70	45	115	83	..	14	18	2	54'4	36'1	87'1	152	11	11	5	5	2	5	0	0	0	281	0	7	
Woodville	32	22	54	29	11	1	12	2	21'8	16'	37'8	95	0	0	0	16	10	0	33	3	9	130	13	7	
Woonona	34	27	61	25	9	25	3	2	20'8	12'9	33'7	102	0	0	0	5	9	0	214	2	6	401	3	0	
Yass	96	71	167	95	24	17	39	4	68'9	43'2	112'1	138	17	2	3	14	10	4	8	6	10	0	0	0	
Young	65	38	103	79	..	8	9	7	43'	20'4	63'4	111	10	0	0	0	0	0	51	14	9	173	4	9	
ROMAN CATHOLIC SCHOOLS.																									
Adelong	44	22	66	6	51	8	1	1	26'2	11'3	37'5	84	2	0	0	13	6	0	60	3	6	144	19	0	
Albury	127	127	254	119	1	1	1	1	91'5	91'5	183	150	0	0	1	16	9	0	109	8	6	251	5	3	
Appin	21	22	43	4	42	1	1	1	14'7	15'8	30'5	73	0	0	0	8	6	0	16	14	7	99	3	1	
Araucan	69	66	135	7	128	1	1	1	52'6	48'4	101'	98	0	0	4	10	4	0	118	18	9	219	9	4	
Arncliffe	46	41	87	10	73	4	1	1	39'1	27'4	57'5	116	0	0	12	11	9	0	48	3	4	170	15	4	
Balmn	44	44	88	44	44	1	1	1	31'7	31'7	63'4	90	0	0	0	0	0	0	38	1	1	128	1	1	
Bargo	15	15	30	4	26	1	1	1	12'	13'1	25'1	57	11	0	1	9	4	0	12	2	9	71	3	1	
Bathurst	162	225	387	1	386	7	10	1	179'9	147'4	325'3	378	0	0	2	9	4	48	10	213	6	6	642	6	2
Bega	55	45	100	15	83	1	1	1	39'4	30'4	69'8	105	0	0	4	4	6	0	56	2	6	168	7	0	
Berrima	15	21	36	6	29	1	1	1	17'3	30'4	47'7	93	0	0	2	13	4	2	29	17	3	128	0	7	
Blandford	32	42	74	16	58	1	1	1	23'1	11'5	34'6	69	0	0	2	17	3	0	125	4	2	301	9	10	
Bradwood	87	63	150	23	124	3	1	1	55'3	43'9	99'2	169	1	9	7	3	11	0	30	1	0	103	19	0	
Bungendore	28	18	46	7	39	1	1	1	23'1	11'5	34'6	69	0	0	2	17	3	0	52	15	14	134	6	7	
Burrows	36	35	71	1	69	1	1	1	26'2	22'9	49'1	76	11	6	5	0	0	0	23	11	11	102	18	2	
Cabrarnatta	22	20	42	2	42	4	1	1	16'8	18'3	35'1	78	0	0	1	6	3	0	29	3	3	99	1	6	
Caundee	21	30	51	5	46	1	1	1	13'1	18'9	32	66	0	0	2	12	2	0	30	3	3	126	11	5	
Cambelton	65	53	118	25	79	2	1	1	39'3	35'7	75	161	18	8	3	9	6	0	39	5	5	139	15	2	
Camperdown	52	43	95	1	94	1	1	1	32'2	20'8	53'	99	9	3	1	0	6	0	39	5	5	126	0	1	
Charcoal Creek	41	28	69	26	43	1	1	1	30'3	22'7	53'	90	0	0	3	14	7	0	32	14	6	109	10	1	
Clarence Town	10	10	20	20	0	1	1	1	8'8	8'5	17'3	42	10	0	0	0	0	0	37	6	6	127	6	6	
Concord	34	17	51	1	50	1	1	1	24'1	11'2	35'3	90	0	0	0	0	0	0	30	8	28	129	8	7	
Cook's River	25	32	57	9	48	1	1	1	19'3	22'4	41'7	96	0	0	3	0	5	0	26	6	6	109	0	5	
Cooma	32	25	57	5	52	1	1	1	22'5	16'9	39'4	74	1	10	5	2	1	0	18	10	6	105	10	6	
Dapto	23	21	44	1	43	1	1	1	18'6	16'5	35'2	87	0	0	0	0	0	0	18	10	6	105	10	6	
Double Bay	30	16	46	2	44	1	1	1	13'6	9'1	22'7	67	10	0	0	0	0	0	23	13	14	91	3	11	
Goulburn	132	142	274	3	270	1	1	1	97'1	103'8	200'9	276	2	0	13	5	7	0	151	10	10	440	18	5	
Grafton	73	53	126	19	93	11	2	1	44'9	20'5	74'4	90	0	0	3	13	8	0	77	11	3	171	4	11	
Greenhill	43	65	108	23	82	3	1	1	25'5	38'	63'5	139	0	0	6	13	11	0	108	11	0	254	4	11	
Gulgong	85	105	188	21	164	1	1	1	58'4	67'3	125'7	56	2	1	10	9	5	0	64	3	3	139	14	9	
Haymarket	230	230	460	3	227	1	1	1	146'1	146'1	292'2	373	4	8	8	5	11	0	182	8	8	407	17	11	
Hill End	47	49	96	1	95	1	1	1	23'5	30'9	54'4	95	0	0	7	0	2	0	53	13	6	155	13	8	
Ingleton	53	31	84	27	57	1	1	1	19'2	19'2	38'4	78	0	0	4	0	5	0	30	18	6	112	18	11	
Jamberoo	26	30	56	3	53	7	1	1	20'4	20'9	41'3	102	0	0	4	2	4	0	57	11	2	163	13	6	
Jembalumbene	39	45	84	7	75	1	1	1	20'4	31'3	51'7	88	2	2	4	6	0	0	22	0	3	114	8	5	
Jungiong	18	24	42	14	28	1	1	1	10'6	15'9	26'5	67	0	0	2	1	3	0	49	6	0	118	7	3	
Kent-street North	157	144	301	17	284	1	1	1	97'1	102'2	199'3	283	5	0	13	0	11	0	185	3	9	473	9	1	
Kent-street South	131	120	251	19	232	1	1	1	74'7	51'3	126'	160	10	5	8	2	10	0	174	10	5	475	11	3	
Kinross	12	26	38	1	37	1	1	1	7'1	18'	25'1	66	0	0	0	0	0	0	11	17	6	77	17	6	
Kurrabung	39	29	68	26	39	10	1	1	27	18'6	45'6	78	0	0	3	17	8	0	49	8	8	131	6	4	
Lambton	94	93	187	14	121	4	10	38	63'4	57'1	120'5	162	5	0	14	5	8	0	52	6	0	128	16	3	
Lane Cove	35	12	47	13	34	1	1	1	25'6	9'3	34'9	66	0	0	2	5	8	0	63	1	3	103	1	11	
Liverpool	38	34	72	1	72	1	1	1	28'4	24'9	53'3	105	19	0	19	10	8	0	25	9	2	99	1	6	
Lochuar	28	27	55	1	54	1	1	1	16'3	19'5	35'8	71	19	0	19	10	8	0	57	4	10	204	7	3	
Maitland East	69	52	121	1	121	1	1	1	49'	34'4	83'1	136	11	7	7	14	7	0	204	19	11	650	0	10	
Maitland West	232	187	419	13	405	1	1	1	174'7	150'5	325'2	431	0	0	13	0	11	0	26	17	9	112	7	9	
Mananguly	29	18	47	5	42	1	1	1	19'9	10'8	30'7	65	10	0	0	0	0	0	113	10	0	108	14	8	
Miller's Forest	26	29	55	3	52	1	1	1	22'1	23'8	45'9	97	0	0	0	0	0	0	38	17	6	134	1	7	
Mitigong	36	24	60	24	23	3	10	1	25'3	18'1	43'4	92	0	0	1	0	2	3	49	0	8	244	1	11	
Morpeth	44	38	82	8	82	1	1	1	29'5	26'4	55'9	153	0	0	3	2	1	0	67	16	3	193	10	10	
Moruya	50	60	110	6	107	2	1	1	38'8	40'2	79	122	15	11	2	18	8	0	134	13	11	299	11	11	
Mudgee	71	59	130	7	120	3	1	1	48'3	29'5	77'8	153	15	6	2	2	6	0	42	10	5	149	16	4	
Musclebrook	43	27	70	23	38	6	3	1	27'	15'6	43'3	105	12	0	1	1									

APPENDIX A.—continued.

Name of School.	Number of Children on Rolls.							Attendance.			Expenditure from Public Funds.					Local Contributions.		Total.							
	Boys.	Girls.	Total.	Church of England	Roman Catholic.	Presby-terian.	Wesleyan.	Others.	Boys.	Girls.	Total.	Salaries.	Books and Apparatus.	Travelling Expenses and Con- vance.	Buildings, Rent, Fur- niture, &c.	Buildings, Furniture, &c.	School Fees.								
PRESBYTERIAN SCHOOLS.																									
Campbelltown	41	19	60	27	7	7	19	399	122	431	95	7	10	1	17	6	17	8	0	35	17	63	151	10	103
Charcoal Creek	17	39	47	36	10	10	10	119	212	331	93	0	9	1	8	5	24	8	0	30	18	0	149	15	2
Dapto	16	15	31	10	10	10	10	126	102	228	78	0	0	1	13	6	1	3	6	18	0	10	98	17	10
Erskine-street	52	47	99	60	5	22	11	285	251	536	129	10	3	...	...	...	...	...	...	106	18	9	236	9	0
Kempsey	43	49	92	42	14	16	11	32	363	633	70	0	0	0	18	1	...	...	...	63	4	2	134	2	3
Maitland West	26	12	38	13	3	17	5	198	62	26	91	4	8	1	17	8	1	0	0	40	2	8	134	5	0
Parramatta Junction	24	33	57	17	14	3	15	8	177	194	371	66	0	0	...	...	...	...	...	36	19	0	102	19	0
Shoalhaven	50	34	84	28	16	23	10	324	18	594	104	0	0	3	0	6	17	8	0	53	19	3	178	7	9
Waverley	43	39	82	10	6	10	36	29	343	797	146	1	8	3	0	0	17	8	11	84	5	10	250	16	5
Woolloomooloo	109	82	191	88	9	42	17	35	72	553	1273	174	0	0	4	17	9	...	...	158	3	11	337	1	8
WESLEYAN SCHOOLS.																									
Botany	28	22	50	8	...	36	6	131	148	339	90	0	0	2	7	4	...	...	...	39	19	7	141	16	11
Carr's Creek	16	21	37	9	4	7	14	3	114	171	285	71	0	0	2	3	4	...	...	24	11	11	101	15	3
Castlerough	30	19	49	2	11	...	35	...	182	119	301	105	5	1	2	6	3	...	...	39	19	6	145	0	10
Chippendale	130	105	235	59	...	16	146	14	853	588	1439	212	12	0	1	2	10	0	12	15	8	204	9	4	
Maitland West	71	48	119	26	1	5	61	24	489	278	767	52	10	0	3	5	6	...	...	26	5	5	82	0	11
Newtown	81	81	162	42	2	18	75	25	579	531	111	229	11	9	2	15	2	...	...	161	9	16	412	8	9
Rocky Point	24	32	56	14	1	1	35	5	109	174	343	91	11	0	2	9	6	...	...	40	1	6	144	17	0
Surry Hills	197	125	323	83	2	12	172	48	1176	609	1785	202	10	1	9	12	4	...	...	299	18	6	525	3	11
Ulmara	24	25	49	13	10	6	26	...	177	161	338	89	0	9	3	2	11	...	...	28	4	2	105	17	10
HEBREW SCHOOL.																									
Sydney	60	45	105	13	3	3	85	407	298	705	181	9	9	5	0	4	...	...	...	81	9	8	267	19	9

APPENDIX B.

SCHEDULE of Applications for Certificates to Denominational Schools, received during the year 1874.

Name of Place.	Distance of nearest School.	Number of Children residing in the Locality.							Number of Children promised to attend.							Number of Parents or Guardians undertaking to send Children.					Council's Decision.				
		Boys.	Girls.	Total.	R. C.	Pres.	Wes.	Others.	Boys.	Girls.	Total.	R. C.	Pres.	Wes.	Others.	Total.	R. C.	Pres.	Wes.	Others.		Total.			
Cowra (R.C.)	...	24	24	48	24	...	...	48	24	24	48	24	...	...	48	12	12	...	...	24	Under consideration.		
Grafton South (R.C.)	2	21	27	48	0	34	6	...	48	21	27	48	0	34	6	...	48	0	34	5	...	48	Declined.		
Guigong (R.C.)	2	82	35	117	1	116	...	117	82	35	117	1	116	...	117	1	62	...	...	53	Agreed to.		
Lambton (R.C.)	2	49	61	110	11	92	...	7	110	49	61	110	11	92	...	7	110	4	37	...	3	44	Agreed to.		
Spring Valley (R.C.)	2	55	62	117	...	...	...	...	19	22	41	...	35	3	3	...	41	16	2	3	...	21	Declined.
		231	209	440	45	266	5	...	7	323	195	169	364	45	331	8	3	7	304	26	151	7	8	3	190

APPENDIX C.

INSPECTORS' Reports upon Certified Denominational Schools inspected in 1874.

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|----------------------|---------------------|
| ALBURY DISTRICT. | GOULBURN DISTRICT. |
| ARMIDALE DISTRICT. | MAITLAND DISTRICT. |
| BRADWOOD DISTRICT. | MUDGEE DISTRICT. |
| CAMDEN DISTRICT. | NEWCASTLE DISTRICT. |
| CUMBERLAND DISTRICT. | SYDNEY DISTRICT. |

ALBURY DISTRICT.

SUMMARY of Reports upon the Certified Denominational Schools inspected during the year 1874.

ALBURY (R.C.) :—Visited, 11th and 12th August.

Present at examination :—Boys, 86.

The schoolhouse has been put in thorough repair, and provided with the furniture necessary to its complete equipment. There is an ample supply of working materials, and the premises, as a whole, present an improved and neat appearance. The attendance is reasonably regular, and the general discipline fairly healthy; the instruction is duly regulated, and the average proficiency of the pupils is fair.

ADRLONG (R.C.) :—Visited, 8th December.

Present at examination :—Boys, 28 ; girls, 7 ; total, 35.

The furniture needs repairs—a lavatory and weathershed have yet to be provided, and the general organization is defective in some minor points. The number of pupils enrolled for the year has been comparatively small, and of these, many are unpunctual—otherwise the discipline is healthy; the instruction is judiciously regulated; and the average proficiency of the several classes is fairly satisfactory.

COROWA (C.E.) :—Visited, 21 September.

Present at examination :—Boys, 26 ; girls, 22 ; total 48.

The school buildings are commodious and well designed, but much in need of painting and other repairs. There is an ample supply of educational appliances, and the whole premises are carefully kept. About sixty per cent. of the children of school ages in the locality are enrolled; the attendance is only tolerably regular, and the requirements of order and attention are but partially met. The instruction is duly regulated, and the average proficiency of the classes ranges from tolerable to fair.

JUGIONG (R.C.) :—Visited, 1st June.

Present at examination :—Boys, 20 ; girls, 19 ; total, 39.

Since last inspection, the schoolhouse has been repaired, and additional furniture provided. Three-fourths of the children in the locality are enrolled, and, apart from the irregularity of the attendance, the discipline is very fairly effective. Good progress has been made in the several subjects of instruction, and the actual proficiency averages very fair.

TUMUT (R.C.) :—Visited, 15th June.

Present at examination :—Boys, 20 ; girls, 14 ; total, 34.

More suitable school premises are needed, but the supply of furniture and working materials is sufficient. Owing chiefly to the recent change of teachers, the attendance on day of inspection was comparatively small. The general discipline is vigorous and effective; the work of instruction is diligently conducted, and the methods of teaching are calculated to strengthen the mental powers of the pupils. The actual proficiency is moderate, but for this the present teacher is in no way responsible.

EDMUND H. FLANNERY,
Inspector, Albury District.

ARMIDALE DISTRICT.

SUMMARY of Reports upon Certified Denominational Schools examined during the year 1874.

I.—CHURCH OF ENGLAND SCHOOLS.

FREDERICTON (C.E.) :—Regular inspection, 7th August.

Number enrolled :—Boys, 32 ; girls, 31 ; total, 63.

Number present :—Boys, 25 ; girls, 27 ; total 52.

1. School is held in the C.E. place of worship, a building not unsuitable in most respects, but indifferently furnished; the seats especially being cumbersome, and of inconvenient length. The stock of working materials is adequate; in other respects the material part of the organization is fair. 2. Very fair regularity and punctuality are secured, but in other points the effects of the discipline are not satisfactory. The attention of the pupils is unsteady, and the habit of whispering prevails among the younger children. Greater animation and energy need to be exercised in conducting all the school operations. 3. The course of instruction is complete, and regulated by the usual documents. Judged by results, the methods are not of a high order. In all but the mechanical branches, the proficiency of the pupils is much below the standard that should be reached. The average proficiency approaches *tolerable*.

KEMPSEY EAST (C.E.) :—Regular inspection, 29th July.

Number enrolled :—Boys, 25 ; girls, 22 ; total, 47.

Number present :—Boys, 21 ; girls, 16 ; total, 37.

1. The schoolhouse—the C.E. place of worship—is fairly suitable; but the furniture, which serves for both church and school, is old and ungainly. There is a sufficiency of working appliances in very fair condition. In other points the organization is fair. 2. Many of the elder pupils are irregular in their attendance. The discipline in general is fair, but greater energy on the part of the teacher is necessary to secure satisfactory activity and industry among the pupils. 3. Singing is not taught, but otherwise the prescribed course of instruction is followed. The methods, as far as noted, are not unsuitable, but the teaching lacks vigour and penetrativeness; and the pupils, as a rule, are indisposed to exert themselves. The average proficiency is *moderate to tolerable*.

TAMWORTH (C.E.) :—General inspection, 1st May.

Number enrolled :—Boys, 35 ; girls, 24 ; total, 59.

Number present :—Boys, 28 ; girls, 18 ; total, 46.

1. The schoolroom is commodious and suitable, cleanly kept, and in very fair repair. Since last inspection now out-offices have been provided. The supply of furniture, apparatus, and books, is fully adequate to existing requirements. 2. As far as can be the case in the absence of drill, the order is good. The government is mild, but reasonably firm and judicious. 3. The lesson documents are carefully compiled, and appear to have been observed; and the methods employed are, generally speaking, appropriate, and applied with fair intelligence and energy. The pupils are attentive under examination, and evince tolerable mental training. The average proficiency exceeds *tolerable*.

II.—ROMAN CATHOLIC SCHOOLS.

ARMIDALE (R.C.) :—General inspection, 14th September.

Number enrolled :—Boys, 44 ; girls, 34 ; total, 78.

Number present :—Boys, 34 ; girls, 27 ; total, 61.

1. Various improvements have been effected since last inspection; and, except that the school is rather badly located, the material condition is now very fair. There is a full supply of furniture, apparatus, and books, and the organization is satisfactory in its other features. 2. The children are punctual, very orderly, obedient, and respectful. In these points, as in others, the condition of the school is in marked contrast to that in which it was found at the previous inspection. 3. Singing is omitted; otherwise the prescribed course is followed, with the addition of elementary Latin, Euclid, and French, for the more advanced pupils of 3rd class. The classification is fair, but the numbers preponderate in the lower grades. The instruction is well regulated, and the methods are of very fair quality, and marked by intelligent and energetic application. The average proficiency of the pupils rates from *fair to very fair*.

GRAFTON

GRATTON (R.C.) :—Regular inspection, 15th October.

Number enrolled :—Boys, 65 ; girls, 43 ; total, 108.
Number present :—Boys, 48 ; girls, 25 ; total, 73.

1. The material condition and organization continue fair. The erection of a new school-house is contemplated. 2. The discipline has improved since last inspection, though still weak in some points. 3. The classification is on the whole correct, and the preparation of the various lesson documents and the methods of teaching, as far as noted, are of fair merit. The pupils are attentive under examination and work with fair energy, and the results of instruction are an improvement on those of last year—the average proficiency being nearly *fair*.

III.—PRESBYTERIAN SCHOOL.

KEMTSEY WEST, (Pres.) :—Regular inspection, 30th July.

Number enrolled :—Boys, 43 ; girls, 37 ; total, 80.
Number present :—Boys, 26 ; girls, 33 ; total, 59.

1. The building is suitable and in very fair repair, but another closet is much required. The general appearance of both schoolhouse and residence is creditable alike to the teacher's taste and industry. The material organization of the school is rendered defective by the unsuitableness of the furniture and the presence of several cumbersome articles required in connection with the use of the building as a place of worship. 2. The attendance is steady, and has increased under the present teacher. Very fair regularity is secured, but a large number of the pupils are unpunctual. The order has improved sensibly since last inspection, but is not yet precise enough, especially in regard to what should be the simultaneous movements of the pupils. The moral tone is fair. 3. The lesson documents are framed with care and neatness. The classification is, however, still too minute, and the instruction too individual in its character. The teaching, however, is earnest and painstaking, and the average proficiency of the pupils *tolerable*.

IV.—WESLEYAN SCHOOLS.

CARR'S CREEK (Wes.) :—Regular inspection, 20th October.

Number enrolled :—Boys, 15 ; girls, 20 ; total, 35.
Number present :—Boys, 10 ; girls, 15 ; total, 25.

1. A four-roomed residence has been provided for the teacher since last inspection, and the school-room has been enlarged. The fences are still in a dilapidated state, and give the premises an untidy appearance. The stock of working materials is ample, and the organization is fair. 2. The attendance has been low of late, on account of sickness. Ordinarily the pupils are very fairly regular and punctual. The discipline secures quietness and obedience, but the attention of the pupils is not active enough. The moral tone is fair. 3. All the prescribed subjects are taught; the teaching, however, lacks vigour and penetrativeness. The average proficiency is *moderate to tolerable*.

ULMARRA (Wes.) :—General inspection, 27th November.

Number enrolled :—Boys, 23 ; girls, 24 ; total, 47.
Number present :—Boys, 19 ; girls, 16 ; total, 35.

1. The schoolroom is used as a place of worship by the Wesleyan body, whose property it is. The furniture is not suitable, the desks being much too high and the seats large and clumsy. There is a sufficiency of books and apparatus. In other respects the organization is moderate. 2. A large number of pupils are unpunctual. The order is indifferent, and some of the younger pupils are so talkative and restless as to disturb the work of the whole school. 3. Singing is not taught, and, as far as results are concerned, the same may be said of object-lessons. The time-table and lesson programmes are tolerably appropriate, but the teaching is inanimate, and produces indifferent results in those subjects where mental training is required. The pupils are tolerably attentive under examination, but do not exert themselves. The average proficiency is *moderate*.

J. D. BRADLEY,
Inspector of Schools,
Armidale District.

BRAIDWOOD DISTRICT.

SUMMARIES of Reports furnished on Certified Denominational Schools during the year 1874.

I.—CHURCH OF ENGLAND SCHOOLS.

BRAIDWOOD :—Inspected, 26th October, 1874.

Enrolled :—Boys, 43 ; girls, 25 ; total, 68.
Present :—Boys, 39 ; girls, 20 ; total, 59.

1. The school is in a good state of repair, and is well supplied with all requisites. 2. The discipline is satisfactory. 3. All the prescribed subjects are taught, except singing. The mark for spelling, reading, dictation, and geography is above the average, that for writing, arithmetic, grammar, and object-lessons, well up to the average, and that for drawing below. The general proficiency approaches *very fair*.

CANBERRA :—Inspected, 16th February, 1874.

Enrolled :—Boys, 26 ; girls, 20 ; total, 46.
Present :—Boys, 26 ; girls, 18 ; total, 44.

1. New desks have been provided since last inspection, and the material condition is now satisfactory. 2. Three-fourths of the pupils are regular. Except that the children are somewhat inattentive, the discipline is fair. 3. All the prescribed subjects are taught, and the work of the school is carried on honestly and with industry. The attainments are of an average character, and the progress made since last inspection is reasonably satisfactory. The general proficiency is between *tolerable* and *fair*.

MORUYA :—Inspected, 29th July, 1874.

Enrolled :—Boys, 45 ; girls, 42 ; total, 87.
Present :—Boys, 38 ; girls, 33 ; total, 71.

1. The material condition is good in all respects. 2. In quietness, attention, and general order, the school has somewhat fallen off since last inspection. 3. During the past year this school was closed three months for want of a teacher, and, owing mainly to this circumstance, the attainments of the pupils are not relatively as high as they were. All the prescribed subjects are taught. The mark for reading, writing, and geography is up to the average, but that for all other subjects is below. The general proficiency is between *tolerable* and *fair*, but the present teacher has not been long enough in charge to be held responsible for this mark.

II.—ROMAN CATHOLIC SCHOOLS.

ARALUEN :—Inspected, 9th June, 1874.

Enrolled :—Boys, 69 ; girls, 61 ; total, 130.

Present :—Boys, 60 ; girls, 54 ; total, 114.

1. The building is in a good state of repair, and is well supplied with all requisites. There is the same defect in organization that was noticed last year. 2. Not quite half the pupils are regular. Except that too much talking is allowed, the discipline is fair. 3. The prescribed subjects are taught, except drawing. The reading throughout the school is very satisfactory, and the condition of the upper 2nd class, numbering twenty-nine pupils about eight years of age, is most creditable to the teachers. In all the classes average progress has been made. The general proficiency is *fair*.

BEGA :—Inspected, 25th August, 1874.

Enrolled :—Boys, 38 ; girls, 36 ; total, 74.

Present :—Boys, 35 ; girls, 27 ; total, 62.

1. The school and the residence are in good condition, and there is a sufficient supply of furniture, apparatus, and working materials. 2. The discipline is satisfactory, and the government firm and effective. 3. All the prescribed subjects are taught. The mark for reading, spelling, dictation, writing, singing, geography, and object lessons is above the average, that for arithmetic and grammar up to the average, and that for drawing below. The general proficiency is *very fair*.

BRAIDWOOD :—Inspected, 27th and 28th October, 1874.

Enrolled :—Boys, 80 ; girls, 61 ; total, 141.

Present :—Boys, 67 ; girls, 48 ; total, 115.

1. The material condition is satisfactory in all respects. 2. The discipline has much improved during the year ; the pupils are now orderly, attentive, and well under control. 3. All the prescribed subjects are taught, except singing and drawing. The condition of the 1st class and the 4th class is highly creditable to the teachers. Throughout the school the mark for every subject is above the average. The general proficiency is between *very fair* and *good*.

BUNGENDORE :—Inspected, 21st April, 1874.

Enrolled :—Boys, 27 ; girls, 14 ; total, 41.

Present :—Boys, 24 ; girls, 14 ; total, 38.

1. The material condition is satisfactory. 2. Three-fourths of the pupils are regular, and they are more punctual in the morning than they were. The discipline has improved in all respects. 3. All the prescribed subjects are taught, except singing. The mark for dictation is above the average, that for reading, spelling and writing up to the average, and that for grammar, object-lessons, geography and arithmetic below. The general proficiency is between *tolerable* and *fair*.

COOMA :—Inspected, 26th February, 1874.

Enrolled :—Boys, 35 ; girls, 15 ; total, 50.

Present :—Boys, 26 ; girls, 13 ; total, 39.

1. The school is sufficiently large, but is much out of repair, and is but imperfectly supplied with furniture. 2. The children talk too much, and are excessively inattentive. 3. All the prescribed subjects are attempted except singing. During the past two years this school has been closed for considerable periods, and the children have suffered in consequence of the frequent change of teachers. Both in discipline and attainments the school has greatly fallen off since it was inspected in 1872. The mark this year, for every subject, is below the average. The general proficiency is between *moderate* and *tolerable*.

JEMBAICUMBENE :—Inspected, 12th May, 1874.

Enrolled :—Boys, 31 ; girls, 33 ; total, 64.

Present :—Boys, 24 ; girls, 27 ; total, 51.

1. The building though new, is rough, badly lined, very cold in winter, and altogether untidy and cheerless. There is a sufficient supply of all requisites. 2. About half the pupils are regular, but many get late in the morning. The discipline is satisfactory. 3. All the prescribed subjects are taught except singing. The mark for dictation is above the average ; that for reading, writing, grammar, and geography up to the average ; and that for object lessons, arithmetic, and drawing, below. The general proficiency is slightly beyond *fair*.

MORUYA (Boys) :—Inspected, 20th July, 1874.

Enrolled :—47.

Present :—34.

When visited, this school was not in regular working order. Speaking generally, the school was in a very unsatisfactory condition. A new teacher is now in charge.

MORUYA (Girls) :—Inspected, 21st July, 1874.

Enrolled :—49.

Present :—46.

1. The material condition is satisfactory. 2. Only about half the pupils are regular. The discipline is sound. 3. All the prescribed subjects are taught except singing. The mark for reading, spelling, dictation, grammar, geography, and object lessons is above the average, and that for all other subjects well up to the average. Considering the amount of work thrown upon the teacher by four classes, the state of the school is highly creditable to her. The general proficiency is *very fair*.

NERRIGUNDAH :—Inspected, 7th August, 1874.

Enrolled :—Boys, 21 ; girls, 11 ; total, 32.

Present :—Boys, 17 ; girls, 10 ; total, 27.

1. The building and outfit are satisfactory. 2. The children are not punctual in the morning ; there is far too much talking allowed in school ; and the discipline generally has fallen off since last inspection. 3. The children in class III show considerable ability, and answer with accuracy, but the pupils in the lower classes are not relatively so well trained. The mark for reading is above the average ; that for dictation, arithmetic, and geography, is up to the average ; and that for other subjects is below. The general proficiency is between *fair* and *very fair*.

QUEANBEYAN :—Inspected, 12th February, 1874.

Enrolled :—Boys, 28 ; girls, 19 ; total, 47.

Present :—Boys, 19 ; girls, 12 ; total, 31.

1. The building and furniture are in a satisfactory condition. 2. Not more than half the pupils are regular, and the unpunctuality in the morning is excessive. The children talk, copy, and lounge about, and the discipline in every way is loose. The government is feeble, and the whole spirit of the school depressing. 3. Partly owing to irregularity and partly to want of vigour and determination in the teaching, the attainments are very poor, and the progress made since last inspection is unsatisfactory. The average proficiency is between *indifferent* and *moderate*. A new teacher has been placed in charge.

REIDSDALE :—Inspected, 1st June, 1874.

Enrolled :—Boys, 29 ; girls, 30 ; total, 59.

Present :—Boys, 24 ; girls, 26 ; total, 50.

1. The building is old and shabby, draughty and uncomfortable, but there is a fair supply of apparatus. 2. Owing to distance and the demand for children's labour, not more than half the pupils are regular. The discipline is good. 3. All the prescribed subjects are taught except singing and drawing. The attainments are of an average character, giving a general proficiency approaching to *fair*.

J. C. MAYNARD,
Inspector, Braidwood District.

CAMDEN DISTRICT.

CERTIFIED DENOMINATIONAL SCHOOLS.

SUMMARY of Reports for 1874.

THE following remarks are abridged statements of my detailed reports upon the condition of the Denominational Schools inspected by me during the year 1874. The remarks chiefly relate to the material condition and organization of the schools, the general discipline and moral training, the subjects and methods of instruction, and the progress of the pupils in learning.

CHURCH OF ENGLAND SCHOOLS.

ASHFIELD :—Visited, 17th December.

Pupils enrolled :—Boys, 58 ; girls, 26 ; total, 84.

At examination :—Boys, 37 ; girls, 14 ; total, 51.

A residence for the teacher and weather-sheds are required, but the supply of furniture, apparatus, and books is sufficient. The pupils are clean, orderly, and attentive to their work, but not all sufficiently punctual. All the prescribed subjects are taught. The average attendance of the pupils enrolled is 64 days per cent. There are no free pupils, but eight children of the educable ages in the locality are not under school instruction. The pupils answered, so far as examined, about 70 per cent. of the questions asked, and the proficiency in very fair.

CAMDEN :—Visited, 29th April.

Pupils enrolled :—Boys, 47 ; girls, 29 ; total, 76.

At examination :—Boys, 42 ; girls, 28 ; total, 70.

The buildings have been painted, hat-pegs supplied, and a portico erected since last inspection, but lavatories and weather-sheds are still required. There is a comfortable residence for the teacher. The government and general discipline are satisfactory. All the prescribed subjects are taught. The average attendance of the pupils enrolled is 70 days per cent. There are seven free pupils, but the teacher is not aware of any C.E. children of the educable ages in the town or vicinity not under school instruction. 70 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is very fair.

CAMPBELLTOWN :—Visited, 8th June.

Pupils enrolled :—Boys, 39 ; girls, 26 ; total, 65.

At examination :—Boys, 26 ; girls, 17 ; total, 43.

A class-room, a lavatory, and a weather-shed, are required. The books are much worn, and additional apparatus needed. The government is lax, and the general discipline is unsatisfactory. Singing is not taught. The average attendance of the pupils enrolled is 66 days per cent. There are nine free pupils, and about twenty children of the educable ages in the locality not under school instruction. About 50 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is tolerable.

CANTERBURY :—Visited, 25th June.

Pupils enrolled :—Boys, 36 ; girls, 23 ; total, 59.

At examination :—Boys, 28 ; girls, 19 ; total, 47.

The schoolroom and closets have been put in proper repair, and hat-pegs supplied since the last inspection, but lavatories and weather-sheds are required. There is no residence for the teacher, but the working materials are sufficient. All the prescribed subjects are taught, and the general discipline has been improved since last year. There are thirteen free pupils, and fifteen children of the educable ages in the neighbourhood not under school instruction. The average attendance of the scholars enrolled is 66 days per cent. 60 per cent. of the questions asked at the examination were answered, and the proficiency is fair.

DAPTO :—Visited, 22nd October.

Pupils enrolled :—Boys, 34 ; girls, 26 ; total, 60.

At examination :—Boys, 31 ; girls, 21 ; total, 52.

Lavatories, a weather-shed, more hat-pegs, and the painting of the buildings are required, but the working materials are sufficient. The general discipline is fairly effective in most respects. Singing is not taught. The average attendance of the children enrolled is 60 days per cent. There are thirteen free pupils, and seven children of the educable ages in the locality not receiving school instruction. 62 per cent. of the questions asked at the examination were answered, and the progress of the pupils in learning is fair.

ENFIELD :—Visited, 26th June.

Pupils enrolled :—Boys, 34 ; girls, 32 ; total, 66.

At examination :—Boys, 10 ; girls, 7 ; total, 17.

The desks have been repaired, a kitchen built, and the rooms of the residence papered since the last inspection. The erection of lavatories is in progress. The small attendance of scholars at the examination was caused by the wet morning. The working materials are sufficient. The average attendance of the children enrolled is 66 days per cent. There are no free pupils, but ten children of the educable ages in the locality are not attending school. The scholars answered about 50 per cent. of the questions asked at the examination. The teacher has been only a few months in charge of the school, and the attainments of the pupils are tolerable.

FOXGROUND :—Visited, 3rd December.

Pupils enrolled :—Boys, 32 ; girls, 19 ; total, 51.

At examination :—Boys, 21 ; girls, 16 ; total, 37.

Lavatories and weather-sheds are required, but in all other respects the material condition of the school is reasonably good. The furniture, apparatus, and books, are sufficient, and the general discipline is fairly effective. Singing is not taught. The average attendance of the scholars enrolled is 70 days per cent.

cent. There are no free pupils, but fifteen children of the educable ages within a reasonable distance of the school are not attending. The scholars answered, so far as examined, about 50 per cent. of the questions asked, and their proficiency is tolerable.

LIVERPOOL :—Visited, 15th July.

Pupils enrolled :—Boys, 52 ; girls, 40 ; total, 92.
At examination :—Boys, 47 ; girls, 33 ; total, 80.

A schoolroom and out-buildings of brick and chingies have been erected since last inspection ; but fencing, lavatories, a bell, weather-sheds, and a new residence for the teacher, are much needed. Three more forms and additional hat-pegs are required. The general discipline has been improved since last year. All the subjects of instruction prescribed by the Council are taught, and the elder boys are well advanced in squad drill. The average attendance of the pupils enrolled is 66 days per cent. There are eleven free pupils, and about twenty C.E. children of the educable ages in the town and vicinity not under school instruction. 70 per cent. of the questions asked at the examination were answered, and the proficiency of the scholars is very fair.

LOD'S FORST :—Visited, 1st September.

Pupils enrolled :—Boys, 29 ; girls, 22 ; total, 51.
At examination :—Boys, 22 ; girls, 17 ; total, 39.

Lavatories and a residence for the teacher are required ; but otherwise, the material condition of the school is fairly satisfactory. The children are clean, orderly, and attentive to their lessons. All the prescribed subjects are taught. There are seven free pupils, and about forty children of the educable ages in the neighbourhood not under school instruction. 60 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is fair.

MACQUARIE RIVER :—Visited, 20th May.

Pupils enrolled :—Boys, 24 ; girls, 21 ; total, 45.
At examination :—Boys, 22 ; girls, 19 ; total, 41.

Lavatories, a weather-shed, a closet for the girls, a chimney for the residence, a bell and hat-pegs, are required, and the buildings are in much need of painting. The supply of furniture, apparatus, and books, is sufficient, and the general discipline is satisfactory. The average attendance of the children enrolled is 73 days per cent. Singing is not taught. There are five free pupils, and about forty children of the educable ages in the locality not under school instruction. About 60 per cent. of the questions asked at the examination were answered, and the proficiency is fair.

NARELLAN :—Visited, 8th May.

Pupils enrolled :—Boys, 16 ; girls, 23 ; total, 39.
At examination :—Boys, 14 ; girls, 22 ; total, 36.

The material condition of the school is in all respects reasonably good. The pupils are punctual, clean and orderly, and attentive to their lessons. All the subjects prescribed are taught. There are nineteen free pupils, but only three children of the educable ages in the neighbourhood not attending school. The average attendance of the children enrolled is 60 days per cent. About 70 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are very fair.

WOLLONGONG :—Visited, 16th September.

Pupils enrolled :—Boys, 70 ; girls, 48 ; total, 118.
At examination :—Boys, 60 ; girls, 33 ; total, 93.

Lavatories, weather-sheds, and a bell are required, but otherwise the material condition of the school is good. The supply of furniture and working materials is sufficient. The children are clean and orderly, attentive, and respectful in their manners. All the subjects of instruction prescribed are taught. The average attendance of the children enrolled is 80 days per cent. There are no free pupils, and the teacher is not aware of any C.E. children of the educable ages in the town or vicinity growing up without instruction. 70 per cent. of the questions asked at the examination were answered, and the progress of the scholars in learning is very fair.

WOONONA :—Visited, 6th August.

Pupils enrolled :—Boys, 29 ; girls, 23 ; total, 52.
At examination :—Boys, 21 ; girls, 17 ; total, 38.

Weather-sheds, lavatories, a new kitchen, and a bell, are required, and all the buildings need repairs. The furniture, apparatus, and books, are sufficient. Singing is not taught. The children are clean and orderly, and more attentive than formerly. The average attendance of the scholars enrolled is 54 days per cent. There are three free pupils, and nine children of the educable ages in the locality not receiving school instruction. About 60 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are fair.

ROMAN CATHOLIC SCHOOLS.

APPIN :—Visited, 21st July.

Pupils enrolled :—Boys, 20 ; girls, 18 ; total, 38.
At examination :—Boys, 19 ; girls, 16 ; total, 35.

The schoolroom needs painting ; there are no lavatories, and the weather-shed requires roofing. There is a comfortable residence for the teacher, and the supply of furniture, apparatus, and books is sufficient. The general discipline has been improved under the present teacher, and all the subjects of instruction are taught. The average attendance of the pupils enrolled is about 75 days per cent. There are eleven free pupils, but no children of the educable ages in the locality growing up without school instruction. The pupils answered 50 per cent. of the questions asked at the examination, and the proficiency is tolerable.

BARGO :—Visited 24th July.

Pupils enrolled :—Boys, 14 ; girls, 13 ; total, 27.
At examination :—Boys, 14 ; girls, 13 ; total, 27.

Lavatories, fencing, hat-pegs, a table, two chairs, and a book-press are required. There is a residence for the teacher, and the desks, forms, apparatus, and books, are sufficient. The general discipline is passable, but singing is not taught. The average attendance of the pupils enrolled is 90 days per cent. There are eleven free pupils, and all the children of the educable ages in the neighbourhood are receiving school instruction. About 50 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is tolerable.

CAMDEN :—Visited, 30th April.

Pupils enrolled :—Boys, 19 ; girls, 29 ; total, 48.
At examination :—Boys, 14 ; girls, 21 ; total, 35.

The buildings have been repaired since last inspection, and the furniture, apparatus, and books, are sufficient. The general discipline is fairly effective, and all the prescribed subjects are taught. The average

average attendance of the scholars enrolled is 60 days per cent. There are twelve free pupils, and thirteen children of the educable ages in the town and vicinity not receiving school instruction. Fifty per cent. of the questions asked at the examination were answered, and the attainments of the scholars are tolerable.

CAMPBELLTOWN :—Visited, 18th June.

Pupils enrolled :—Boys, 57 ; girls, 55 ; total, 112.
At examination :—Boys, 48 ; girls, 37 ; total, 85.

The material condition of the school is reasonably good, and the general discipline is satisfactory. The furniture is not of modern construction, but the supply of apparatus and books is sufficient. All the prescribed subjects are taught. The average attendance of the children enrolled is 66 days per cent. There are no free pupils, but there are ten R. C. children of the educable ages in the town and vicinity not under school instruction. Seventy per cent. of the questions asked at the examination were answered, and the attainments of the pupils are very fair.

CHARCOAL CREEK :—Visited, 9th September.

Pupils enrolled :—Boys, 30 ; girls, 37 ; total, 67.
At examination :—Boys, 25 ; girls, 23 ; total, 48.

A residence for the teacher, lavatories, a bell, and a weathershed are required ; but the supply of furniture, apparatus, and books is sufficient. The general discipline is passable in most respects ; but singing is not taught. The average attendance of the scholars enrolled is 75 days per cent. There are eleven free pupils, and six children of the educable ages in the locality not receiving school instruction. Fifty-three per cent. of the questions asked at the examination were answered, and the attainments of the pupils are tolerable.

DARTO :—Visited, 28th October.

Pupils enrolled :—Boys, 22 ; girls, 19 ; total, 41.
At examination :—Boys, 21 ; girls, 16 ; total, 37.

Lavatories, a weather-shed, and a supply of water, are required ; but the stock of furniture, apparatus, and books, is sufficient. The government and general discipline of the school are good, but singing is not taught. There are eight free pupils, but no children of the educable ages in the neighbourhood are growing up without school instruction. The average attendance of the pupils enrolled is 63 days per cent. About 75 per cent. of the questions asked at the examination were answered, and the proficiency of the scholars is above very fair.

IRISHTOWN :—Visited, 25th February.

Pupils enrolled :—Boys, 34 ; girls, 29 ; total, 63.
At examination :—Boys, 22 ; girls, 21 ; total, 43.

Lavatories, hat-pegs, another closet, and weather-sheds, are required ; but the furniture, apparatus, and books, are sufficient. There is a comfortable residence for the teacher, and the general discipline is passable ; but singing is not taught. The average attendance of the scholars is 66 days per cent. There are twenty-four free pupils, and twenty children of the educable ages in the locality not receiving school instruction. About 50 per cent. of the questions asked at the examination were answered, and the proficiency is tolerable.

LIVERPOOL :—Visited, 10th February.

Pupils enrolled :—Boys, 31 ; girls, 40 ; total, 71.
At examination :—Boys, 30 ; girls, 25 ; total, 55.

There is a comfortable residence for the teacher, and the buildings are in fair repair, but need painting. The supply of working materials is sufficient, and the general discipline has been much improved during the year ; but singing is not taught. The average attendance of the scholars enrolled is 70 days per cent. There are seventeen free pupils, but the teacher states there are no R.C. children in the town or vicinity growing up without school instruction. 57 per cent. of the questions asked at the examination were answered ; the attainments of the pupils are nearly fair.

MENANGLE :—Visited, 9th May.

Pupils enrolled :—Boys, 26 ; girls, 17 ; total, 43.
At examination :—Boys, 22 ; girls, 16 ; total, 38.

Lavatories and weather-sheds are still required ; but the working materials are sufficient, and the buildings are in fair repair. The pupils are clean and orderly, and more attentive than formerly ; singing and drawing are not taught. The average attendance of the pupils enrolled is 66 days per cent. There are no free pupils ; but ten children of the educable ages in the neighbourhood are not receiving school instruction. 57 per cent. of the questions asked at the examination were answered, and the attainments of the pupils are very fair.

THE OAKS :—Visited, 15th May.

Pupils enrolled :—Boys, 26 ; girls, 26 ; total, 52.
At examination :—Boys, 18 ; girls, 20 ; total, 38.

There is no residence for the teacher, and lavatories are required ; but otherwise the material condition is good. The general discipline is fairly effective, but singing is not taught. The average attendance of the scholars enrolled is 66 days per cent. There are ten free pupils, and only three children of the educable ages in the neighbourhood not receiving school instruction. 60 per cent. of the questions asked at the examination were answered, and the proficiency of the pupils is fair.

ROCKY POINT :—Visited, 16th April.

Pupils enrolled :—Boys, 13 ; girls, 20 ; total, 33.
At examination :—Boys, 11 ; girls, 20 ; total, 31.

A residence for the teacher, lavatories, a weather-shed, and some additional hat-pegs, are required ; but the schoolroom is in good repair, and the furniture, apparatus, and books, are sufficient. The general discipline admits of considerable improvement, and singing and drawing are not taught. The average attendance of the scholars enrolled is 66 days per cent. There are twelve free pupils, and ten children of the educable ages in the locality not receiving school instruction. About 50 per cent. of the questions asked at the examination were answered, and the attainments of the scholars are tolerable.

SPANIARDS HILL :—Visited, 13th May.

Pupils enrolled :—Boys, 25 ; girls, 18 ; total, 43.
At examination :—Boys, 21 ; girls, 12 ; total, 33.

Fencing, lavatories, and a weather-shed are required ; but the supply of working materials is sufficient. The pupils are clean and orderly, but wanting in attention. All the prescribed subjects are taught, but the methods of tuition are defective. The average attendance of the scholars enrolled is 62 days per cent., but they are not sufficiently punctual. There are fourteen free pupils, and six children of the educable ages in the locality not under school instruction. 40 per cent. of the questions asked at the examination were answered. The attainments of the scholars are only moderate.

WOLLONGONG —

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WOLLONGONG :—Visited, 8th September.

Pupils enrolled :—Boys, 53 ; girls, 5 ; total, 58.

At examination :—Boys, 31 ; girls, 1 ; total, 32.

Lavatories, a bell, and weather-shed are required ; but the furniture, apparatus, and books, are sufficient. The teacher's residence is rather small, and the roof needs some repairs. The general discipline is fairly satisfactory, but singing is not taught. The average attendance of the scholars is 66 days per cent. There are three free pupils ; but no R.C. children of the educable ages in the town or vicinity not receiving school instruction. 62 per cent. of the questions asked at the examination were answered, and the attainments of the scholars are above fair.

PRESBYTERIAN SCHOOLS.

CAMPBELLTOWN :—Visited, 3rd February.

Pupils enrolled :—Boys, 27 ; girls, 25 ; total, 52.

At examination :—Boys, 21 ; girls, 14 ; total, 35.

A weather-shed, lavatories, hat-pegs, repairs to the windows, another closet, and an additional room for the teacher's residence, are required. The general discipline has been improved since the last inspection, but singing and drawing are not taught. The average attendance of the scholars is 60 days per cent., and they are nearly all punctual. There are no free pupils, and only three Presbyterian children of the educable ages in the town and neighbourhood not receiving school instruction. About 53 per cent. of the questions asked at the examination were answered, and the attainments of the scholars are tolerable.

CHARCOAL CREEK :—Visited, 11th September.

Pupils enrolled :—Boys, 17 ; girls, 31 ; total, 48.

At examination :—Boys, 14 ; girls, 26 ; total, 40.

A weather-shed, a lavatory, and a bell are required ; but the buildings are in fair repair, and the furniture, apparatus, and books, are sufficient. All the prescribed subjects are taught. The average attendance of the pupils enrolled is 75 days per cent., but they are not all punctual. There are no free pupils, but eight children of the educable ages in the locality are not attending school. 50 per cent. of the questions asked at the examination were answered, and the attainments of the scholars are tolerable.

DAPTO :—Visited, 27th October.

Pupils enrolled :—Boys, 16 ; girls, 15 ; total, 31.

At examination :—Boys, 12 ; girls, 12 ; total, 24.

A lavatory, a weather-shed, a bell, a clock, a book-press, and repairs to the closets, are required. The side walls of the schoolroom need colouring, the windows are in bad repair, the seats are too short, and the residence needs repairs to the roof and new locks to the doors. The discipline is unsatisfactory, and drawing is not taught. The average attendance of the scholars enrolled is 74 days per cent., but they are very unpunctual. There are twelve free pupils, but no children of the educable ages in the locality growing up without school instruction. 45 per cent. of the questions asked at the examination were answered, and the proficiency of the scholars is between moderate and tolerable.

WESLEYAN SCHOOLS.

ROCKY POINT :—Visited, 31st August.

Pupils enrolled :—Boys, 31 ; girls, 28 ; total, 59.

At examination :—Boys, 22 ; girls, 24 ; total, 46.

A residence for the teacher, a bell, lavatories, and roofing for the weathershed are required, but the supply of furniture, apparatus, and books, is sufficient. Arrangements have been made to repair the windows and colour the inside walls of the schoolroom. The general discipline is tolerably satisfactory, but the instruction is very superficial and the methods of tuition defective. Singing is not taught. The average attendance of the pupils enrolled is 66 days per cent. There are seven free pupils, and twelve children of the educable ages in the neighbourhood not receiving school instruction. 47 per cent. of the questions asked at the examination were answered. The proficiency of the scholars is barely tolerable.

W. MINTYRE,

Inspector, Camden District.

CUMBERLAND DISTRICT.

Summaries of Reports on Denominational Schools for 1874.

CHURCH OF ENGLAND SCHOOLS.

BURWOOD :—Visited, 23rd July.

Numbers present :—Boys, 20 ; girls, 26 ; total, 46.

The premises are in need of repair, but the school is fairly supplied with furniture and necessary teaching appliances. Nearly two-thirds of the pupils are regular, and they are orderly and fairly attentive, and evince fair accuracy under examination. The government is firm. The instruction is regulated and includes all the subjects enjoined by the Council. The methods are suitable, and the teaching is characterized by industry and care. The average proficiency is fairly satisfactory.

CABRAMATTA :—Visited, 17th September.

Numbers present :—Boys, 15 ; girls, 17 ; total, 32.

The site is not central. Repairs effected since last inspection have improved the material conditions now, on the whole, tolerable. About two-thirds of the pupils are regular, and they are tolerably orderly and attentive. The discipline is too slack, and the pupils do not manifest much accuracy, or apply themselves with vigour to their work. The subjects do not embrace object lessons, singing, or drawing ; the occupation is faulty, and the teaching wants intelligence and point. The results average from moderate to tolerable.

CASTLE HILL :—Visited, 3rd December.

Numbers present :—Boys, 31 ; girls, 26 ; total, 57.

The playground is too small, but otherwise the material condition is fair. The pupils are fairly orderly, and on the whole very fairly attentive. Their answering is fairly accurate, but their self-reliance needs fostering. The government is mild, but needs sustained watchfulness. The subjects of instruction are those prescribed ; the methods are suitable ; and the teaching is marked by industry and care. The average proficiency is fairly satisfactory.

COBBITY :—

COBBITY :—Visited, 18th September.

Numbers present :—Boys, 17 ; girls, 13 ; total, 30.

The material condition of the school is reasonably satisfactory. About seven-tenths of the pupils are regular. The first class is very disorderly, but the second and third are tolerably orderly and attentive. The government needs greater promptness and vigilance to restrain and prevent disorder. The subjects are tolerably regulated, and they are those prescribed. The occupation of the pupils is tolerably provided for, and the methods and teaching are moderately effective. The average proficiency is from moderate to tolerable. More earnest self-reliant effort on the part of the pupils and more vigorous teaching and discipline are necessary to raise the attainments.

EMU :—Visited, 27th April.

Numbers present :—Boys, 26 ; girls, 14 ; total, 40.

The residence, schoolroom, and out-offices, are all in need of repair. The entire premises require painting, and a play-shed, and a tank, together with spouting for the buildings. About three-fifths of the pupils are regular, and they are tolerably orderly and fairly attentive. They are tolerably correct in their answers, and the government is mild but tolerably firm. The subjects embrace all required for the classification. The teaching is industrious, but wanting in penetrative force; and the average attainments range from moderate to tolerable.

KURRAJONG :—Visited, 27th May.

Numbers present :—Boys, 12 ; girls, 12 ; total, 24.

The erection of a detached kitchen is still desirable, but otherwise the material condition is fair. Two-thirds of the pupils are regular, and they are fairly orderly and attentive. They are tolerably self-reliant, but slow in answering; and their mental effort is not vigorous. The government is mild, but wanting in energy. The instruction comprises all the subjects required; and the teaching is industrious, but lacking force. The average proficiency is about tolerable. The attendance, on account of the state of the weather, was smaller than usual.

PARRAMATTA :—Visited, 6th and 7th November.

Numbers present :—Boys, 66 ; girls, 39 ; total, 105.

The material condition of the school is satisfactory. Two-thirds of the pupils are regular; and they are, on the whole, fairly orderly and attentive, as well as self-reliant and accurate under examination. The government is firm and watchful. The instruction embraces all the required subjects, and is properly regulated. The teaching is industrious and systematic; and the results are fairly satisfactory.

PARRAMATTA, NORTH :—Visited, 4th and 6th November.

Numbers present :—Boys, 69 ; girls, 38 ; total, 107.

Weather-sheds have been erected since last inspection. The general condition is satisfactory. About three-fourths of the pupils are regular, and they are now fairly orderly and attentive, as well as self-reliant and accurate. The government is now fairly effective. The subjects accord with the prescribed requirements, the instruction is regulated, and the teaching is energetic and fairly intelligent. The average attainments are fairly satisfactory.

PENNANT HILLS :—Visited, 26th August.

Numbers present :—Boys, 17 ; girls, 16 ; total, 33.

The general condition of the premises is satisfactory. The state of the records indicates neglect. About three-fifths of the pupils are regular. They are only tolerably orderly or attentive, and their answering is neither prompt nor of an accurate character. The government appears to want promptness and vigour. The instruction includes all the subjects; and programmes are drawn up, but not faithfully adhered to in all cases. The teaching is defective in penetrative force, and the average proficiency is only about tolerable.

PETERSHAM :—Visited, 29th and 30th July.

Numbers present :—Boys, 56 ; girls, 51 ; total, 107.

There is no residence. The material condition is, on the whole, satisfactory. About two-thirds of the pupils are regular, and they are fairly orderly and attentive, but more earnest application to work is desirable; and an inclination to mutter and talk needs correction. The government is mild, but wants vigour and energy. The subjects embrace all prescribed, but object lessons are omitted in the upper classes. The classification is low, about three-fifths of the pupils being in the first class. The teaching is defective in vigour, especially in the upper classes; and the attainments are not, taken as a whole, satisfactory, the average not being beyond tolerable.

PITT TOWN :—Visited, 18th June.

Numbers present :—Boys, 17 ; girls, 21 ; total, 38.

The material condition is, on the whole, tolerably satisfactory, but the records are incorrect in various particulars. About seven-tenths of the pupils appear to be regular, and they are tolerably orderly, but only moderately attentive. The government needs sustained vigilance and firmness. The instruction includes all required subjects but singing, and it is moderately regulated by the necessary guides. The teaching needs thoroughness and penetrative force to render it effective. The average proficiency is from moderate to tolerable.

RICHMOND :—Visited, 20th May.

Numbers present :—Boys, 36 ; girls, 27 ; total, 63.

The residence is damp and unhealthy, and the schoolroom is not a good one, but a new brick building is in course of erection. The school is fairly supplied with necessary teaching appliances. About two-thirds of the pupils are regular, and the order and attention are fair. They are fairly self-reliant and accurate under examination. The discipline is fairly effective. All the required subjects are included in the instruction, which is regulated with fair skill. The teaching is conducted with industry and care, and the average results reach about fair.

ROUSE HILL :—Visited, 25th June.

Numbers present :—Boys, 17 ; girls, 21 ; total, 38.

There is a good residence, but the schoolroom is in need of repair, and the furniture requires renewing; otherwise the material condition is satisfactory. About seven-tenths of the pupils are regular, but they are only moderately punctual. They are tolerably orderly and attentive, as well as self-reliant and accurate. The government is mild. Singing is omitted from the subjects of instruction. The methods are suitable, and the teaching is industrious and fairly careful. The average proficiency is tolerable.

RIDE :—

RIDE :—Visited, 30th November.

Numbers present :—Boys, 39 ; girls, 36 ; total, 75.

The schoolroom is now, commodious, and suitable, and the residence is being enlarged and put into proper repair. Some of the desks are badly constructed, but on the whole the school is fairly supplied with teaching requisites. About two-thirds of the pupils are regular, and they are fairly orderly and attentive, but need greater power of sustained application to work. The government is mild and fairly effective, but would be improved by greater vigour. All the subjects prescribed are taught ; the lesson documents are neatly constructed, and the teaching is industrious and painstaking. The average proficiency is fair.

SEVEN HILLS :—Visited, 18th March.

Numbers present :—Boys, 21 ; girls, 17 ; total, 38.

The schoolroom is suitable, and is fairly furnished with necessary requisites. The records are incomplete in one or two particulars. About two-thirds of the pupils are regular, and they are tolerably orderly and attentive. They are only moderately self-reliant and correct under examination. The government wants vigour and watchfulness. The instruction embraces all the subjects prescribed, and is regulated by the usual documents, but they are not closely adhered to in all subjects. The teaching needs greater force and thoroughness, and the average proficiency is only moderate.

SOUTH CREEK :—Visited, 6th May.

Numbers present :—Boys, 53 ; girls, 32 ; total, 85.

A new closet has been erected since last inspection, and the premises are in fair repair. The furniture is insufficient, and of inferior quality. About two-thirds of the pupils are regular, and they are fairly orderly and attentive, as well as accurate under examination. The government seems vigorous and watchful. The subjects include all those prescribed, except singing. The classification is low. The teaching is conducted with energy, and the average attainments are nearly fair.

WILBERFORCE :—Visited, 19th June.

Numbers present :—Boys, 27 ; girls, 27 ; total, 54.

The teacher's residence needs repair, but in other respects the material condition is fair. The school is fairly supplied with necessary teaching appliances. The pupils are clean, orderly, and fairly attentive, and they show tolerable self-reliance and accuracy under examination. About two-thirds of them are regular. The discipline is mild, but fairly firm and effective. The prescribed subjects are taught, and the instruction is regulated ; the classification is appropriate ; and the teaching is conducted with animation and energy. The average attainments are tolerable.

WINDSOR :—Visited, 12th June.

Numbers present :—Boys, 34 ; girls, 32 ; total, 66.

The schoolroom is in fair condition, but the teacher's residence is in need of repair, and the walls of the schoolroom require white-washing. About seven-tenths of the pupils are regular, and they are fairly orderly and attentive. They are tolerably self-reliant and accurate, but do not manifest such readiness in answering as is desirable. The government seems mild, but somewhat impulsive. The subjects embrace all prescribed, the methods are suitable, and the teaching seems industrious, but wanting in force. The average results are nearly fair.

CASTLEREAGH (Wesleyan) :—Visited, 29th April.

Numbers present :—Boys, 28 ; girls, 16 ; total, 44.

There is no residence, but several minor improvements have been effected since last inspection, and the school is fairly furnished with teaching appliances. About two-thirds of the pupils are regular. They are tolerably orderly and fairly attentive. The government is mild. The instruction is regulated, and comprises all required subjects, and the teaching is industrious and tolerably effective. The average proficiency is about tolerable.

PARRAMATTA JUNCTION (Presbyterian) :—Visited, 6th March.

Numbers present :—Boys, 18 ; girls, 16 ; total, 34.

In its material aspect the general condition and circumstances of the school have undergone no alteration since last inspection. About two-thirds of the pupils are regular, and they are fairly attentive, but only moderately orderly. They exhibit but little mental activity under examination. The government seems firm, but needs greater vigilance. The subjects do not embrace singing or drawing. The instruction is moderately regulated, and the teaching is industrious, but only moderately effective in most subjects. The average results are "moderate." This is the only Presbyterian school in the district, and application has now (1875) been made for its conversion into a Public one.

ROMAN CATHOLIC SCHOOLS.

PARRAMATTA :—Visited, 15th September.

Numbers present :—Boys, 16 ; girls, 21 ; total, 37.

The schoolroom is only moderately suitable, and the furniture is insufficient. The school is tolerably furnished with necessary teaching appliances. About two-thirds of the pupils are regular, and they are moderately orderly and attentive, but neither prompt nor accurate in their answering. The government needs promptness and vigour. The instruction embraces all the subjects prescribed for the classification. The teaching wants point and vigour, and the attainments are low, being only from "indifferent to moderate." The present teacher has not been long in charge of the school.

CONCORD :—Visited, 22nd July.

Numbers present :—Boys, 27 ; girls, 7 ; total, 34.

The internal arrangements of the school continue as at the previous inspection. The residence is too small, and not in very good repair, and a book-press and table are necessary. About two-thirds of the pupils are regular, but they are only tolerably orderly and attentive, and only moderately accurate. They are listless and apathetic, and few appear to care to answer. The discipline is slack. The subjects accord with the requirements of the Council. The methods are tolerably suitable, but are not applied with energy ; the teaching lacks animation and vigour ; and the results average about moderate.

KURRAJONG :—

KURBAJONG:—Visited, 26th May.

Numbers present:—Boys, 16; girls, 9; total, 25.

The desk accommodation is insufficient, and a suitable book press is required. The closets are in need of repair, and greater care is necessary in keeping the records. The pupils are very irregular, the average for the previous quarter having been only about 55 per cent. They are tolerably orderly and attentive, but are only moderately self-reliant and accurate, and their power of mental effort is weak. The government is only moderately effective. The instruction embraces all prescribed but singing. The classification is not judicious. The teaching is of a mechanical character, and the average proficiency is about moderate.

LANE COVE:—Visited, 3rd September.

Numbers present:—Boys, 25; girls, 13; total, 38.

The furniture is clumsy and insufficient, and the supply of materials is tolerable. The records are incomplete and incorrect in several particulars. About two-thirds of the pupils are regular, but they are only moderately orderly or attentive. They appear little inclined to mental exertion, and their answering is neither prompt nor accurate. The government is not strict enough. The instruction embraces all the subjects, but the classification is indifferent, and the methods are of similar quality. The teaching is pointless and unintelligent, and the results give an average of barely moderate.

NELSON:—Visited, 24th June.

Numbers present:—Boys, 18; girls, 16; total, 34.

In its material aspect this school may be regarded as tolerably satisfactory. About three-fourths of the pupils appear to be regular, but they are only moderately orderly or attentive, and their answering is neither prompt nor thoughtful. The government is not sufficiently strict. Singing is omitted, but otherwise the subjects accord with the Council's requirements. The teaching is defective in intelligence and vigour, and the average proficiency is not satisfactory, being less than moderate.

PARRAMATTA:—Visited, 3rd November.

Numbers present:—Boys, 44; girls, 43; total, 87.

There is no residence, but the schoolroom is large and airy, but new closets have been erected since last inspection. The furniture, except two desks, is of a clumsy and unwieldy character. The lavatories need covering in and suitable entrances thereto, the present arrangement of passing through the school to reach them being very objectionable. About two-thirds of the pupils are regular and punctual. They are orderly and very fairly attentive. The government is fairly effective, and the prevailing spirit of the school is pleasing. The instruction is regulated, and includes all the subjects prescribed. The teaching is careful and industrious, and the results are about fairly satisfactory. The attendance at this school has much decreased, owing to the opening of another school close to it under ladies of a religious order.

PENRITH:—Visited, 24th July.

Numbers present:—Boys, 31; girls, 32; total, 63.

Since last inspection a rough slab closet has been provided for the boys, but the other one is in bad repair. In other respects the material condition remains the same as it was last year. About two-thirds of the pupils are regular, and they are fairly orderly and attentive, but only tolerably self-reliant and accurate. The government is mild, but needs greater energy and vigilance. The instruction comprises all the subjects enjoined by the Council, and is regulated by the usual guides. The teaching is conducted with industry, but needs greater vigour. The average attainments are about tolerable.

PETERSHAM:—Visited, 24th July.

Numbers present:—Boys, 18; girls, 13; total, 31.

Except as regards the smallness of the teacher's residence, the material condition is fairly satisfactory. About two-thirds of the pupils are regular, and they are fairly orderly and attentive. They are tolerably accurate under examination, but do not exert themselves to answer with promptitude. Singing is omitted, but all other subjects prescribed are taught, and the instruction is regulated. The teaching is careful, but needs greater application on the part of the pupils to render it effective. The attainments reach an average of from tolerable to fair.

RICHMOND:—Visited, 19th May.

Numbers present:—Boys, 27; girls, 42; total, 69.

Additional furniture has been provided since last inspection, but otherwise the material condition continues the same. Two-thirds of the pupils are regular and punctual. They are fairly orderly and attentive, as well as accurate in answering. The discipline is mild but firm. The instruction is regulated, and embraces all required subjects. The teaching is careful and industrious, and is productive of results that average about fair.

RYDE:—Visited, 1st December.

Numbers present:—Boys, 25; girls, 19; total, 44.

The schoolroom is too small; otherwise the material condition is fair. About seven-tenths of the pupils are regular, and they are orderly and fairly attentive. They apply themselves to work with industry and vigour. The government is firm and effective. All prescribed subjects are taught, and the instruction is regulated by the proper documents. The teaching is intelligent and energetic, and gives an average proficiency of from fair to very fair.

VILLA MARIA:—Visited, 13th August.

Numbers present:—Boys, 20; girls, 28; total, 48.

The schoolroom is a good one, and the material condition, generally speaking, is fairly satisfactory. About seven-tenths of the pupils are regular, and they are orderly and attentive, as well as very fairly self-reliant and accurate in their answers. The government is prompt and firm. The subjects accord with the Council's requirements; the methods are intelligent, and the teaching is conducted with energy. The average proficiency is nearly very fair.

WINDSOR:—Visited, 11th and 18th June.

Numbers present:—Boys, 58; girls, 34; total, 92.

The teacher's residence is too small, and it as well as the out-offices are in need of repair; otherwise the material condition is satisfactory. About three-fourths of the pupils are regular, and they are very fairly orderly and attentive. They show considerable animation and readiness in answering, and the government is firm. The instruction is regulated, and embraces all the subjects prescribed. The classification has improved since last inspection, but is still marked by the majority of the pupils being in the first class. The teaching is industrious and careful, and the results are fairly satisfactory.

GOULBURN DISTRICT.

SUMMARIES of Reports on Denominational Schools inspected during the year 1874.

I.—CHURCH OF ENGLAND SCHOOLS.

BURRAWANG :—Visited, 10th March.

Numbers enrolled :—Boys, 30 ; girls, 38 ; total, 68.

Numbers present :—Boys, 26 ; girls, 33 ; total, 59.

None of the material improvements pointed out as necessary at last inspection have been effected. The schoolroom and playground are not kept with sufficient regard to neatness. The records are defective. Wet weather has interfered with the regularity of the attendance—at no time a very satisfactory feature of the school. Want of punctuality and other loose habits among the pupils indicate weak discipline. All required subjects are proportionately provided for on the prescribed instructional guides. In some branches, however, the matter of instruction has been poor, limited and ill-arranged. The results are uneven ; they average *tolerable*. For the teaching to become impressive and effective, it would need to be conducted with energy more judiciously directed and regulated.

GOULBURN :—Visited, 23rd to 26th February.

Numbers enrolled :—Boys, 92 ; girls, 62 ; total, 154.

Numbers present :—Boys, 59 ; girls 42 ; total, 101.

The premises are in the same dilapidated state last reported, and the new schoolhouse is still only in course of erection. The defective arrangements for the management of the first class having been rectified, the general internal organization is now *very good*, considering the exceedingly defective material provisions. Accidental causes affected the attendance at, and previously to the time of inspection. The government is vigorous and healthy, and the discipline is *very fair* on the whole, a great improvement being observable in the first class. The whole instructional arrangements are satisfactory, and the course is complete. In algebra and geometry, the matter of the lessons exceeds the requirements of the standard, and in other subjects is up to them. The proficiency is *fair* in the first and second classes, *very fair* in the third, and *good* in the fourth.

NORTH GOULBURN :—Visited, 27th March.

Numbers enrolled :—Boys, 32 ; girls, 36 ; total, 68.

Numbers present :—Boys, 25 ; girls, 26 ; total, 51.

A tank has been provided, and other material improvements are in progress. Several of the desks and forms are unsuitable in their present condition, and a book press is badly wanted. Much valuable space is taken up by school furniture unsuitable and unavailable for school purposes, and Denominational books are left in various places about the school. The attendance is numerous, but somewhat fluctuating. The government is weak and wavering, and, as a consequence, the children have fallen into loose and disorderly habits. All subjects required for the third class are provided for. The teaching is not well distributed, is superficial in character, not well regulated, and not productive of anything like satisfactory results. The proficiency of the pupils is below *moderate*, and the general results fall to *indifferent*.

SUTTON FOREST :—Visited, 20th November.

Numbers enrolled :—Boys, 38 ; girls, 22 ; total, 60.

Numbers present :—Boys, 26 ; girls, 19 ; total, 45.

Lavatory, weather-shed, and water supply are badly wanted. The school is sufficiently furnished and stocked, and is well kept. Under ordinary circumstances the school, the only one in the township, secures the enrolment of a large majority of the children. Of late, however, the attendance has been seriously interfered with by the prevalence of an epidemic. Ordinarily the attendance of a considerable number of the pupils is very irregular, in spite of the teacher's best efforts to remove the evil. As far as he can be held responsible, the general discipline is *good*. The pupils are properly divided into three classes, but the first class is unnecessarily split up. The instruction is well regulated ; the course includes all required subjects, except singing, with elementary Latin added for the third class. The average proficiency is *tolerable*. Dictation exceedingly weak. The causes of these low results are somewhat complex.

TERRARA :—Visited, 27th July.

Numbers enrolled :—Boys, 19 ; girls, 30 ; total, 49.

Numbers present :—Boys, 14 ; girls, 27 ; total, 41.

A class-room has been added within the year. With one exception, the records are properly kept. From various causes the numbers are lower than usual. The children enrolled attend with fair regularity and punctuality. In other respects the discipline has become somewhat lax, and is only *tolerably* satisfactory. Little exception can be taken to the classification and general instructional arrangements. The course of instruction is complete ; the methods employed are of modern caste, but are not practised with the consecutiveness and thoroughness necessary to the accomplishment of high results. The pupils' attainments are of very easy range, and their general proficiency averages only slightly above *tolerable*. Recent promotions account in part for the comparatively low results.

YASS :—Visited, 30th April and 1st May.

Numbers enrolled :—Boys, 89 ; girls, 64 ; total, 153.

Numbers present :—Boys, 73 ; girls, 49 ; total, 122.

The school premises are in the unsatisfactory state last reported, but repairs are about to be commenced. These, however, will fall far short of rendering the material organization complete and satisfactory. A good residence has been provided for the teacher. Some of the school movements are unduly noisy, but as a whole the discipline is *very fair*. All required subjects up to a fourth class standard are taught, and elementary algebra is added. Teaching is carried on with energy and diligence, and produces results varying from *fair* to *very fair* throughout. A temporary diminution of the teaching power increased the difficulty arising from an otherwise very imperfect organization.

II.—ROMAN CATHOLIC SCHOOLS.

BERRIMA :—Visited, 23rd September.

Numbers enrolled :—Boys, 17 ; girls, 22 ; total, 39.

Numbers present :—Boys, 14 ; girls, 19 ; total, 33.

The condition and tenure of the premises remain as last reported. The numbers have been below the required minimum for the last three quarters, the average for the nine months being only 26.8. The discipline is now *fair*, and the moral tone is healthy. A fourth class has been recently formed. All required subjects are taught. The instruction is carefully imparted. The results approach *fair* on the average.

GOULBURN (Boys):—Visited, 22nd and 23rd June.

Number enrolled:—63.

Number present:—66.

There has been no change in the school premises since last inspection, but a residence for the teacher has been provided in a separate part of the town. The opening of St. Patrick's College and other causes have somewhat effected the attendance, which, however, is still reasonably numerous. The boys are now more orderly and subject to control, and generally manifest a becoming demeanour. The discipline is *very fair*. Excepting one boy, who receives separate lessons in elementary mathematics and Latin, no material has been left in the school for any class higher than a 3rd. The only defect in the classification is the existence of a lower division in the 1st class, the pupils of which are only fit for the infants' school. Singing excepted, all subjects required for the classification are taught. The teaching is on modern methods, and produces on the average *fair* results. The 1st class is very weak, and reduces the mark for the whole school.

GOULBURN (Girls' and Infants'):—Visited, 15th to 18th June.

Numbers enrolled:—Boys, 39; girls, 138; total, 177.

Numbers present:—Boys, 19; girls, 84; total, 103.

The material condition and general organization remain as last reported. The proper method of keeping the records is now adopted. The stock of appliances is sufficient and in good condition. Amongst them are several useful diagrams drawn by the teachers themselves. The recognised teaching power is barely sufficient, but that actually brought into requisition is far more than adequate. The employment of persons neither paid nor recognised by the Council is still persisted in. The numbers keep up, but prevalent sickness has interfered with the regularity of attendance. Last year's inspection, backed up by incidental revisitation and advice, has had the desired effect upon the discipline, which is now *good* throughout. In the infants' school the improvement is particularly marked. Form and colour lessons have been added to the infants' school course, but the theory of music is not taught to the girls. The character of the instruction has sensibly improved. It is more educative in its tendency, and is imparted with increased skill. This, combined with more effective discipline, has considerably raised the general proficiency of the pupils, which now exceeds *fair* on the average in both branches of the school.

MITTAGONG:—Visited, 17th September.

Numbers enrolled:—Boys, 22; girls, 19; total, 41.

Numbers present:—Boys, 19; girls, 19; total, 38.

The building, a Roman Catholic Church, has not been altered in any way since last inspection. The internal organization has been corrected. Within the last three months the attendance has slightly increased. The school is conducted throughout as a Public School. The majority of pupils belong to Protestant Churches, and the only special religious instruction given is Protestant. The government has become far more circumspect and judicious. The general discipline is *fair*. Suitable instructional arrangements are in force, the matter of the instruction is generally suitable, and the results achieved are *fair*. The school is rising from the low and precarious state in which it has been for two years past, but to continue it as at present conducted, under the name of Roman Catholic School, is simply an anomaly.

TARALGA:—Visited, 21st May.

Numbers enrolled:—Boys, 25; girls, 17; total, 42.

Numbers present:—Boys, 16; girls, 14; total, 30.

A well has been sunk since last inspection. The Council's property is damaged through the want of proper bookshelves. The records are defective in some particulars. The removal of some families has lowered the attendance of late, but the children enrolled attend with *fair* regularity except at harvest time. They are also *tolerably* punctual, mannerly, and clean. They have yet to be trained to render prompt and sustained obedience. The classification may be considered appropriate, and the regulation of the instruction suitable. Modern methods are adopted, but they are practised with only partial effect. The first class is relatively in the most efficient state. The attainments of the whole average below *tolerable*.

ULLADULLA:—Visited, 20th August.

Numbers enrolled:—Boys, 27; girls, 28; total, 55.

Numbers present:—Boys, 25; girls, 27; total, 52.

The school has been lined, and hat-pegs have been provided. In some items the school stock is short. The records are defectively kept in some particulars. The enrolment keeps up, but the attendance has not been satisfactorily regular. In other respects the general discipline is *good*. The classification still tends to be over minute. All subjects required for the three classes are provided for, except singing and drawing; but object lessons have been somewhat neglected of late. The average proficiency approaches *very fair*.

YASS (Boys):—Visited, 27th and 28th April.

Number enrolled:—69.

Number present:—58.

The building and premises remain as last reported. The teaching power is barely sufficient for the attendance. There is an amount of unnecessary noise, as well as some unsteadiness in connection with the school operations, particularly in the lower classes; apart from this defect, the discipline is *very fair*. There are four classes,—an arrangement justified by the attainments of the elder pupils, but not well adapted to the present teaching power. The work of the school is carried on with diligence and very fair skill. All required subjects except singing are taught, and elementary algebra and mensuration are added. On the average the proficiency exceeds *fair*, but in the fourth class nearly reaches *good*.

YASS (Girls):—Visited, 29th April.

Number enrolled:—52.

Number present:—60.

Hat-pegs, three new desks, and a book press have been added. Some omissions occur in the records, and the construction of the programmes was in arrear. The numbers are about stationary. The attendance is regular and *fairly* punctual. The discipline as a whole is *tolerable*. The pupils are not kept continuously and profitably occupied; and a considerable share of work is deputed to a mistress unrecognized by the Council. The course of instruction is complete. The teaching is least effective in the branches requiring skilful explanatory treatment. The proficiency is *tolerable*.

III.—PRESBYTERIAN SCHOOL.

SHOALHAVEN:—Visited, 23rd and 24th July.

Numbers enrolled:—Boys, 46; girls, 23; total, 69.

Numbers present:—Boys, 43; girls, 22; total, 65.

The material condition remains unchanged. The internal organization is as good as is possible under the circumstances. The attendance of pupils is numerous, punctual, and for the locality *very fairly*.

fairly regular. The general discipline is *very good*. Singing is not taught; but to the other prescribed subjects up to a fourth class standard, elementary algebra and Latin are added. The instructional arrangements are judiciously devised and clearly set forth. The teaching is careful, thorough, and educative. The pupils' attainments are of full range, and their proficiency averages from *very fair to good*. The school is in a *good* state of efficiency.

D. S. HICKS,
Inspector.

MAITLAND DISTRICT.

SUMMARY of Reports upon Certified Denominational Schools for 1874.

I.—CHURCH OF ENGLAND SCHOOLS.

BISHOP'S BRIDGE (N.V.)

Finally closed on the 31st January, 1874.

BROKE (N.V.) :—Visited, 24th September.

Numbers enrolled :—Boys, 32; girls, 35; total, 67.
Numbers present :—Boys, 27; girls, 24; total, 51.

1. Material condition improved, and very fair supply of furniture, fair in quantity and quality; water tank, lavatory, and weather-shed needed; organization tolerable. 2. Attendance not satisfactorily regular and punctual, fair order maintained, government tolerably intelligent, but not exacting enough; moral tone tolerable and improved. 3. Prescribed subjects taught, lesson documents very fair, and teaching earnest, but wanting in thoroughness. 4. Average proficiency moderate.

BUCHANAN (N.V.) :—Visited, 26th June.

Numbers enrolled :—Boys, 27; girls, 25; total, 52.
Numbers present :—Boys, 21; girls, 19; total, 40.

1. Schoolhouse commodious, lately repaired, and tolerably suitable; weather-shed and lavatory needed; supply of school requisites fair. 2. Attendance fairly punctual, but irregular and below the minimum; disciplinary condition of the school tolerable and promising. 3. Prescribed subjects taught, except singing and sewing; classification and lesson documents of fair merit, and teaching earnest, animated, and tolerably skilful. 4. Average proficiency tolerable and promising.

DENMAN (N.V.) :—Visited, 30th November.

Numbers enrolled :—Boys, 19; girls, 32; total, 51.
Numbers present :—Boys, 11; girls, 23; total, 34.

1. Material condition and organization fair, and aspect clean and respectable. 2. Attendance fairly regular and punctual, appearances clean and comfortable, government mild and fairly effective; moral tone fair. 3. Prescribed subjects taught, instruction fairly well regulated, and teaching earnest, painstaking, and tolerably skilful. 4. Average proficiency tolerable.

HINTON (N.V.)

Certificate withdrawn in October.

JERRY'S PLAINS (N.V.) :—Visited, 21st September.

Numbers enrolled :—Boys, 37; girls, 30; total, 67.
Numbers present :—Boys, 23; girls, 15; total, 38.

1. Material condition and organization improved and tolerable. 2. Discipline tolerably effective. 3. Instruction appropriate and fairly well regulated, and teaching earnest and diligent, tolerably intelligent, but wanting in vigour and vivacity. 4. Average proficiency moderate to tolerable.

EAST MAITLAND (N.V.) :—Visited, 30th April and 1st May.

Numbers enrolled :—Boys, 71; girls, 56; total, 127.
Numbers present :—Boys, 67; girls, 26; total, 83.

1. Supply of water, lavatories, additional hat-pegs, and out-offices, still needed; material organization otherwise satisfactory. 2. Attendance 20 per cent. less than that of last year; two-thirds regular, and very fairly punctual. Discipline mild, and fairly intelligent, but not vigilant and exacting enough. Moral tone of the school fair. 3. Course of instruction complete, and of third-class range. An hour and a half weekly occupied in imparting special religious instruction, and three and a half hours in the teaching of history, etc. Programmes of lessons, classification, and supervision of silent lessons partially satisfactory. Teaching earnest and diligent, but not vigorous and impressive enough. 4. Average proficiency tolerable. Arithmetic, grammar, geography, and spelling, weak subjects.

WEST MAITLAND (St. Mary's, N.V.) :—Visited, 28th and 29th April.

Numbers enrolled :—Boys, 58; girls, 35; total, 93.
Numbers present :—Boys, 26; girls, 16; total, 42.

1. Material condition, aspect, and organization improved and very fair. Out-offices very unsatisfactory. Lavatory and weathershed needed. 2. Attendance tolerably regular, and very fairly punctual, but 56 per cent. less than last year's. Government mild, intelligent, and improved, but still not stimulating and exacting enough in the lower classes. Moral tone very fair. 3. Prescribed subjects taught; lesson documents of very fair character; methods, tolerably intelligent; and teaching, earnest and diligent. 4. Average proficiency, nearly tolerable.

WEST MAITLAND (St. Paul's) :—Visited, 8th and 9th October.

Numbers enrolled :—Boys, 33; girls, 26; total, 59.
Numbers present :—Boys, 28; girls, 24; total, 52.

1. Schoolroom commodious, and supply of working materials adequate. Bell, water-tank, and lavatory, draining of play-ground, and repairing of fence, windows, desks, and teacher's residence needed. Material aspect and condition neglected and unsatisfactory. 2. Attendance irregular and unpunctual, and 46 per cent. less than last year's average. Pupils not satisfactorily neat and clean in their persons, zealous, and industrious, but better regulated in their movements and demeanour. Moral tone barely tolerable. 3. Course of instruction complete; lesson documents satisfactory, but classification low. Methods of fair merit, but the teaching not satisfactorily impressive and effective. 4. Average proficiency moderate.

MORPETH (N.V., Primary) :—Visited, 5th May.

Numbers enrolled :—Boys, 18; girls, 16; total, 34.
Numbers present :—Boys, 15; girls, 16; total, 31.

1. Material character and organization satisfactory; supply of school requisites adequate, and general aspect pleasing. 2. Attendance tolerably regular and fairly punctual, but languishing and below

below the minimum. Government firm and intelligent; appearances neat and clean; order and conduct of pupils very fair; moral tone healthy and very fair. 3. Course of instruction complete, of 3rd class range, and well regulated; classification somewhat low in point of age; character of the teaching, very fair in general. 4. Average proficiency, from fair to very fair.

MORPETH (Infants—N.V.) :—Visited, 6th May.

Numbers enrolled :—Boys, 26; girls, 27; total, 53.

Numbers present :—Boys, 18; girls, 20; total, 38.

1. Schoolroom clean and commodious; material condition good, and supply of school requisites ample. 2. Attendance fairly punctual, but irregular and decreasing. School fees low and precarious. Promotions to Primary Department retarded. Government mild and judicious, but younger pupils not satisfactorily quiet, orderly, and attentive. Moral tone tolerable. 3. Instruction appropriate, but incomplete. Teaching earnest and diligent, moderately skilful and animated. 4. Average proficiency, moderate.

MOSWELL BROOK (N.V.) :—Visited, 27th October.

Numbers enrolled :—Boys, 62; girls, 58; total, 120.

Numbers present :—Boys, 46; girls, 47; total, 93.

1. Material condition and organization, fair and improved. Weather-shed and lavatory needed. 2. Attendance punctual but irregular; appearances neat and clean; government mild and intelligent, and moral tone of the school very fair. 3. Prescribed subjects taught except singing; lesson documents of very fair merit, and teaching zealous and painstaking, but rather feeble in the lower classes. 4. Average proficiency tolerable. General condition of the school improved and promising.

PATERSON (N.V.)

Certificate recently withdrawn.

SCONE (N.V.) :—Visited, 30th October and 16th November.

Numbers enrolled :—Boys, 55; girls, 50; total, 105.

Numbers present :—Boys, 44; girls, 43; total, 87.

1. Schoolroom commodious and now more suitable, adequately appointed, clean, but in need of repair. Weather-shed, lavatory, and water tank needed. 2. Attendance irregular, but very fairly punctual, appearances neat and clean, government fairly intelligent, but not sufficiently firm and exacting. Discipline of lower divisions rather feeble, moral tone tolerable and promising. 3. Instruction complete, and of 3rd class range; lesson documents of very fair merit, methods tolerably intelligent, and teaching earnest and diligent, but not sufficiently vigorous, impressive, and profitable. 4. Average proficiency moderate to tolerable. Present teacher but recently appointed.

SINGLETON (N.V.) :—Visited 24th and 25th August.

Numbers enrolled :—Boys, 73; girls, 38; total, 111.

Numbers present :—Boys, 38; girls, 16; total, 54.

1. Material condition and organization good. 2. Attendance well maintained, punctual, and tolerably regular; appearances clean and comfortable; most of the pupils docile and well behaved, but not sufficiently zealous, self-reliant, and painstaking; moral tone very fair in general. 3. Course of instruction complete, and of 3rd class range; lesson documents very fair, but classification rather low; teaching earnest, diligent, and tolerably intelligent, but not adequately spirited and impressive. 4. Average proficiency from moderate to tolerable.

WOODVILLE (N.V.) :—Visited, 22nd April.

Numbers enrolled :—Boys, 19; girls, 13; total, 32.

Numbers present :—Boys, 17; girls, 13; total, 30.

1. Material condition and organization fair, and aspect of schoolroom improved. 2. Attendance reasonably punctual, but low and irregular; government healthy and intelligent; moral tone from fair to very fair. 3. Course of instruction complete and of 3rd class range; classification fair, and the occupation of the pupils better regulated; methods fair, and teaching earnest, diligent, and improved. 4. Average proficiency nearly fair.

II.—ROMAN CATHOLIC SCHOOLS.

BLANDFORD (N.V.) :—Visited, 11th September.

Numbers enrolled :—Boys, 32; girls, 34; total, 66.

Numbers present :—Boys, 21; girls, 19; total, 40.

1. Fencing, lavatory, water-tank, and weather-shed unprovided; material organization otherwise very fair. 2. Attendance fairly punctual, but irregular and decreasing. Fair order maintained, but pupils not satisfactorily diligent, self-reliant, and painstaking, and personally neat and clean. Moral tone tolerable and retrogressive. 3. Prescribed subjects taught, except singing and sewing; character of classification and lesson documents fair. Teaching tolerably intelligent, but not satisfactorily painstaking and vigorous. 4. Average proficiency moderate.

LOCHINVAR (N.V.) :—Visited, 7th July.

Numbers enrolled :—Boys, 18; girls, 17; total, 35.

Numbers present :—Boys, 18; girls, 17; total, 35.

1. This school is held in a church, the furniture and services of which occasionally interfere with the routine. Supply of furniture and apparatus adequate; desks and seats clumsy, and maps carelessly kept. Material organization objectionable. Suitable school buildings needed. 2. Attendance increased, tolerably regular, but unpunctual. Moral tone of the school in most respects fair. 3. Prescribed subjects taught, except drawing. Instruction tolerably intelligent and well regulated, but the classification low. 4. Average proficiency tolerable and promising.

EAST MAITLAND (N.V.—Boys) :—Visited, 7th May.

Numbers enrolled :—Boys, 49.

Numbers present :—Boys, 41.

1. Material condition and organization very fair; supply of school requisites adequate, and interior aspect neat and clean. Lavatory and weather-shed unprovided. 2. Attendance punctual and tolerably regular; government intelligent and firm; most of the pupils orderly and well behaved, but wanting in spirited energy. Moral tone very fair in general. 3. Course of instruction appropriately regulated and complete, except in singing. Special religious instruction given twenty minutes daily. Classification rather low in point of age. Teaching earnest and painstaking, fairly intelligent, but wanting in liveliness and vigour. 4. Average proficiency tolerable.

EAST

EAST MAITLAND (N.V.—Girls):—Visited, 8th May.

Numbers enrolled:—Boys, 13; girls, 37; total, 50.

Numbers present:—Boys, 11; girls, 26; total, 37.

1. Material condition, aspect, and organization, very fair; supply of school requisites adequate
2. Attendance reasonably punctual and tolerably regular; government intelligent and firm; moral tone, fine. Supervision of playground neglected. 3. Prescribed subjects taught, except singing; classification and lesson documents fair; teaching feeble in the oral subjects, and the progress of the youngest pupils unsatisfactory. 4. Average proficiency, moderate.

WEST MAITLAND (N.V.—Boys):—Visited, 21st, 26th, 27th and 28th May.

Numbers enrolled:—148.

Numbers present:—102.

1. Schoolroom commodious, suitable, but in need of whitewash; supply of furniture adequate; desks old and clumsy, and hat-pegs very inconveniently placed. Condition of out-offices and playground fence bad. Premises not uniformly neat and clean. 2. Attendance tolerably regular, but unpunctual. School fees laxly exacted. Government mild and intelligent, but not uniformly strict and vigilant in details of management. Discipline of lowest class still too lax. Moral tone from fair to very fair. 3. Prescribed subjects taught, including geometry, algebra, and bookkeeping. Lesson documents appropriate, but classification low in point of age. Teaching earnest, diligent, and of fair average skill. 4. Average proficiency fair. Attainments of lowest class below the standards.

WEST MAITLAND (N.V.—Girls):—Visited, 14th, 15th, 16th, 17th July.

Numbers enrolled:—81.

Numbers present:—72.

1. Larger playground, lavatory, bell, and suitable hat-room needed; schoolroom commodious, and admirably neat and clean. Organization very fair. 2. Attendance fairly regular, but unpunctual and too low for the teaching staff. Government intelligent, but not uniformly strict and vigilant; supervision of playground feeble, and school operations not uniformly quiet and orderly. Copying and prompting still too prevalent. Appearance and demeanour of pupils pleasing. 3. Prescribed subjects taught; classification low in point of age, otherwise appropriate; lesson documents very fair, and teaching earnest and diligent, but not adequately spirited and impressive in the second and third classes. 4. Average proficiency tolerable.

WEST MAITLAND (N.V.—Infants):—Visited, 22nd, 23rd, and 24th July.

Numbers enrolled:—Boys, 50; girls, 72; total, 122.

Numbers present:—Boys, 45; girls, 69; total, 114.

1. Material condition good; schoolroom clean, airy, and commodious; appointments adequate; playground too small and unsuitable. 2. Attendance well maintained and fairly regular, but unpunctual. Government healthy, but not sufficiently firm and exacting. Whispering, restlessness, and copying, too prevalent in the lower divisions. Moral tone barely fair. 3. Instruction appropriate, and classification fairly intelligent. Character of the teaching tolerable. 4. Average proficiency tolerable.

MORPETH (N.V.):—Visited, 11th and 12th May.

Numbers enrolled:—Boys, 41; girls, 46; total, 87.

Numbers present:—Boys, 35; girls, 36; total, 71.

1. Lavatory and additional hat-pegs needed; material organization otherwise satisfactory. 2. Attendance punctual, but irregular; government healthy and intelligent; order very fair, and appearances clean and comfortable. Moral tone very fair. 3. Instruction complete, of third class range, and judiciously regulated. Teaching zealous and animated, but not adequately impressive and profitable throughout. 4. Average proficiency tolerable.

MCSWELL BROOK (N.V.):—Visited, 28th October.

Numbers enrolled:—Boys, 35; girls, 21; total, 56.

Numbers present:—Boys, 33; girls, 16; total, 49.

1. Weather-shed and lavatory needed; material condition, aspect, and organization, satisfactory
2. Attendance punctual, but not satisfactorily regular; appearances neat and clean; government mild and intelligent; moral tone healthy and very fair. 3. Prescribed subjects taught, except singing; lesson documents appropriate, but classification rather low in point of age. Teaching zealous, painstaking, and very fairly intelligent. 4. Average proficiency fair.

PHOENIX PARK (N.V.):—Visited, 4th August.

Numbers enrolled:—Boys, 24; girls, 17; total, 41.

Numbers present:—Boys, 19; girls, 11; total, 30.

1. Site low, and affected by floods. Schoolroom too small and ill ventilated. Supply of school requisites tolerably sufficient. Organization moderate. 2. Attendance tolerably regular, but unpunctual, and school fees low and poorly paid. Discipline feeble and moderately effective. 3. Prescribed subjects taught, except singing; occupation of the pupils moderately well regulated; teaching moderately skilful. 4. Average proficiency moderate; condition of school languishing.

SINGLETON (N.V.):—Visited, 13th, 14th, and 17th August.

Numbers enrolled:—Boys, 62; girls, 80; total, 142.

Numbers present:—Boys, 42; girls, 57; total, 99.

1. Material condition, aspect, and organization, good. 2. Attendance well maintained; three-fourths thereof regular and very fairly punctual. Government mild and intelligent; appearances clean, and comfortable, and pupils docile and well-behaved, but not sufficiently animated and industrious. Disciplinary aspect, improved and very fair. 3. Prescribed subjects taught, except singing; lesson documents appropriate, but classification too minute, and also low in point of age. Teaching tolerably intelligent, but feeble in the lower classes. 4. Average proficiency from moderate to tolerable. Grammar, geography, and arithmetic, weak subjects.

III.—PRESBYTERIAN SCHOOLS.

WEST MAITLAND (N.V.):—Visited, 12th November.

Numbers enrolled:—Boys, 28; girls, 14; total, 42.

Numbers present:—Boys, 20; girls, 4; total, 24.

1. Material condition, aspect, and organization very fair and improved. 2. Attendance reasonably punctual, below the minimum, and 75 per cent less than last year's. Discipline healthy and fair. 3. Prescribed subjects taught, except singing and sewing. Teaching zealous, animated, and painstaking. 4. Average proficiency moderate.

IV.—WESLEYAN SCHOOLS.

WEST MAITLAND (N.V.) :—Visited, ——

No inspection. School closed, 31st March.

MUDGEE DISTRICT.

DETAILED Statement of the condition of Denominational Schools in the Mudgee District, examined during the year 1874.

I.—CHURCH OF ENGLAND SCHOOLS.

CASSILIS :—Regular inspection, 28th August.

Numbers enrolled :—Boys, 22; girls, 16; total, 38.

Numbers present :—Boys, 9; girls, 6; total, 15.

Materially considered, this school is in very fair condition. It is well furnished and supplied with school requisites. The attendance has gradually fallen off, and has been below the required minimum for a considerable time. The pupils are reasonably clean, orderly, and attentive. The methods are of average merit, but, owing to the irregular attendance, the attainments do not come up to the standard. The proficiency is a little above moderate.

MUDGEE (Primary) :—Regular inspection, 17th, 18th, and 19th August.

Numbers enrolled :—Boys, 56; girls, 53; total, 109.

Numbers present :—Boys, 49; girls, 39; total, 88.

The material condition and organization are good. The attendance is regular and punctual. Cleanliness is very satisfactory. The government is firm, judicious, and effective. The rudiments of Latin, geometry, and algebra are taught, in addition to the usual subjects. The classification is good, and the instruction well-regulated. Marked improvement has been made in singing and sewing. The methods are good, and applied with zeal and energy. Notwithstanding this, the attainments are not quite equal to what they were last year. The average proficiency approaches very fair.

MUDGEE (Infants) :—Regular inspection, 30th July.

Numbers enrolled :—Boys, 68; girls, 47; total, 115.

Numbers present :—Boys, 57; girls, 39; total, 96.

The school has been enlarged, and in other respects the material condition has been improved. Charts and illustrations, usually found in infant schools, are wholly wanting. The supply of books is adequate to present requirements. The usual subjects are taught, and the instruction is tolerably well-regulated. Nine-thirteenths of the pupils are regular; punctuality is pretty good. The general discipline is fair. In the lowest class it is difficult to secure attention. The methods are only tolerable, but seem to be industriously applied. The average proficiency exceeds moderate.

II.—ROMAN CATHOLIC SCHOOLS.

GULGONG :—General inspection, 8th and 9th October.

Numbers enrolled :—Boys, 70; girls, 90; total, 160.

Numbers present :—Boys, 49; girls, 63; total, 117.

The school is a large bark building, formerly used as a church. It is rendered somewhat substantial by being lined with pine boards. Additional furniture is required. The supply of books is also limited. Lesson registers are not kept. About four-sevenths of the pupils attend regularly; the punctuality is by no means good. The discipline has improved very much of late; good order is now maintained in all the classes, excepting the first. The methods are tolerable, and earnestly applied. The proficiency is tolerable.

HILL END :—Regular inspection, 5th and 6th May.

Numbers enrolled :—Boys, 51; girls, 61; total, 112.

Numbers present :—Boys, 37; girls, 40; total, 77.

Weather-sheds and a lavatory are wanted; in other respects the material condition is good. The furniture is badly arranged, and the supply of working materials is not sufficient; many of the pupils are without copybooks. About seven-twelfths of the pupils attend regularly, but punctuality is decidedly bad. Cleanliness should receive more attention. The government should be more active and vigorous. The prescribed subjects are taught, and the instruction is properly arranged. The methods are tolerably suitable, and appear to be industriously applied. The proficiency is nearly tolerable.

MUDGEE :—Regular inspection, 16th and 21st April.

Numbers enrolled :—Boys, 70; girls, 67; total, 137.

Numbers present :—Boys, 57; girls, 53; total, 110.

The schoolroom is far too small for the attendance, and a dilapidated hut, very badly furnished, has to be used by the junior pupils. This part of the school is in charge of the pupil teacher, and it is badly supplied with books. The main schoolroom is in good condition and well furnished. The playground and out-offices are not in a satisfactory state. The pupils are regular and punctual; good order is maintained, and the discipline is thoroughly effective. The rudiments of Latin, algebra and geometry, are taught, as well as the usual subjects. The methods are good, and the work is carried on with well-sustained zeal. The average proficiency exceeds fair.

WELLINGTON :—General inspection, 13th March and 16th October.

Numbers enrolled :—Boys, 30; girls, 32; total, 62.

Numbers present :—Boys, 24; girls, 27; total, 51.

The school is conducted in an old store; it affords fair accommodation for the attendance, and is moderately furnished. The supply of working material is not sufficient. The pupils are tolerably regular and punctual. The discipline is tolerably good, and the tone of the school has improved. The teaching is industrious, but it wants method and thoroughness. The average proficiency is between moderate and tolerable.

Inspector's Office, 18th January, 1875.

G. O'BYRNE, Inspector,
Mudgee District.

NEWCASTLE DISTRICT.

DETAILED STATEMENT showing the condition of the Certified Denominational Schools inspected in 1874, as regards,—

1. Their material condition.
2. Their moral character.
3. The subjects and methods of instruction.
4. The proficiency of the pupils.

DUNGOE (C.E.) :—Visited, 3rd August.

Present at examination :—Boys, 22 ; girls, 16 ; total, 38.

1. The premises are in fair condition, reasonably suitable, and provided with a passable stock of furniture and other appliances. 2. The moral aspect of the school is fair. 3. The occupation is appropriate, and arranged with passable care and neatness, but the instruction wants vigour and judgment. 4. The average proficiency is below moderate.

GOSFORD (C.E.) :—Visited, 11th December.

Present at examination :—Boys, 8 ; girls, 11 ; total, 19.

1. The building is old and a good deal out of repair, but cleanly kept and reasonably suitable. The furniture is of a tolerable description, and answers reasonably well for present wants. The stock of apparatus and books is fair. 2. The moral tone of the school is very fair. 3. The occupation is suitable and properly arranged ; the instruction, judged by results, is fairly judicious and effective. 4. The average proficiency varies from tolerable to fair.

HENHAM (C.E.) :—Visited, 27th November.

Present at examination :—Boys, 12 ; girls, 12 ; total, 24.

1. The building is in tolerable condition ; but the ground, fences, and out-buildings are unsatisfactory. The organisation has been slightly improved, but, as a whole, it is still ineffective. 2. The moral tone of the school is about fair. 3. Except singing and drawing, the prescribed subjects are taught, and arranged with passable care and skill. The instruction is mechanical as a whole, but earnest, painstaking, and passably effective. 4. The average proficiency is nearly tolerable. Several children absent on account of rain in the early part of the week.

KINCUMBER (R.C.) :—Visited, 16th December.

Present at examination :—Boys, 3 ; girls, 12 ; total, 15.

1. The site is convenient and pleasant ; but the building is small, uncomfortable, awkward and poorly organised. 2. The discipline is very weak, and the moral tone of the school only moderate. 3. Most of the prescribed subjects are professedly taught, but subject to no arrangement ; the methods are of small value. 4. The proficiency is very moderate.

MILLER'S FOREST (C.E.) :—Visited, 2nd December.

Present at examination :—Boys, 20 ; girls, 24 ; total, 53.

1. The premises are reasonably suitable, sufficient, and in good condition ; the general organisation is tolerable. 2. The moral tone is tolerable. 3. The subjects, for the most part, accord with the standard, and are tolerably well arranged. The teaching was feeble and mechanical ; but the teacher (since dead) was in bad health. 4. The average proficiency exceeds moderate.

NEWCASTLE (C.E.—Christ Church) :—Visited, 6th to 9th July.

Present at examination :—Boys, 86 ; girls, 71 ; total, 157.

1. The premises are in good condition, and, in all particulars except the playground, which is wholly inadequate, equal to present requirements. The organization of the school is good. 2. The moral tone of the school is very good. 3. The prescribed subjects are taught, and the requisite instructional documents prepared with care and judgment. The methods are skilful and effective. 4. The actual proficiency is fair, and the general character of the school very fair.

NEWCASTLE (C.E.—St. John's) :—Visited, 15th May.

Present at examination :—Boys, 26 ; girls, 21 ; total, 47.

1. The premises are in fair condition, and the school-room is suitable and reasonably well organized. 2. The discipline is feeble, and the moral tone of the school very moderate. 3. The subjects are appropriate, and regulated with passable care ; but the methods want animation, energy, and skill. 4. The average proficiency slightly exceeds moderate.

NEWCASTLE (R.C.—Boys) :—Visited, 18th and 19th June.

Present at examination :—Boys, 88.

1. The room is fairly suitable, amply sufficient, in good condition, and well provided with furniture and apparatus. 2. The moral tone of the school is very fair. 3. The subjects are suitable, and fairly arranged ; the methods are intelligent and judiciously applied. 4. The average proficiency approaches very fair.

NEWCASTLE (R.C.—Girls) :—Visited, 15th to 17th June.

Present at examination :—Boys, 44 ; girls, 164 ; total, 208.

1. The premises are advantageously and pleasantly situated, in very good condition, suitable, sufficient, and well appointed. The school is very effectively organized. 2. The moral tone of the school is very good. 3. The subjects are suitable, and properly arranged ; the methods judicious and effective. 4. The average proficiency exceeds fair, and the general efficiency of the school varies from very fair to good.

RAYMOND TERRACE (C.E.) :—Visited, 22nd July.

Present at examination :—Boys, 26 ; girls, 24 ; total, 50.

1. The premises are in good condition, well situated, and adequately supplied with furniture and apparatus. The general organization is effective. 2. The moral tone of the school is very fair. 3. The subjects are suitable, and carefully arranged ; but the methods evince a want of skill and vigour. 4. The average proficiency approaches tolerable.

RAYMOND TERRACE (R.C.) :—Visited, 17 July.

Present at examination :—Boys, 22 ; girls, 20 ; total, 42.

1. The building is old, and in bad repair, but kept with commendable cleanliness and care ; the organization is tolerable. 2. The moral tone is tolerable. 3. The subjects are suitable and reasonably well arranged, but the methods want skill and vigour, and fail to produce satisfactory results. 4. The average proficiency is moderate.

STROUD (C.E.) :—Visited, 28th October.

Present at examination :—Boys, 20 ; girls, 17 ; total, 37.

1. The fences are insecure, and the schoolroom walls need colouring ; but otherwise the premises are suitable and substantial. Better furniture has been provided, and the organization is now fairly effective. 2. The discipline is feeble and unsystematic, and the moral tone only tolerable. 3. The prescribed subjects are taught, and arranged in the requisite guides, but these are not constructed with satisfactory care and neatness. The instruction is deficient in vigour and skill. 4. The average proficiency is nearly tolerable.

UPPER BENDOLBA (C.E.) :—Visited, 13th August.

Present at examination :—Boys, 21 ; girls, 22 ; total, 43.

1. The building is very dilapidated, indifferently suitable, and poorly provided with furniture, but the stock of apparatus and books is reasonably sufficient. Repairs have since been effected. 2. The discipline is injudicious, unsystematic, and of small effect, and the moral tone is only moderate. 3. The subjects are suitable, and arranged in the requisite guides ; the methods are of superficial cast, wanting in interest and well directed skill, and failing to produce satisfactory results. 4. The average proficiency slightly exceeds tolerable.

WALSSEND (C.E.) :—Visited, 21st August.

Present at examination :—Boys, 30 ; girls, 34 ; total, 64.

1. The interior appearance of the room is dingy, and the playground needs a shed and lavatory ; the furniture and apparatus are fairly suitable and sufficient ; and the general organization of the school is reasonably effective. 2. The moral tone is very fair. 3. The prescribed subjects are taught, and fairly arranged ; the methods are intelligent, and reasonably judicious. 4. The average proficiency is nearly fair.

SYDNEY DISTRICT.

DETAILED Statement of the condition of Certified Denominational Schools in the Sydney District inspected during the year 1874.

THE remarks under head 1 relate to the material condition of schools ; under 2, to their moral character ; 3, to the subjects and methods of instruction ; 4, to the proficiency of the pupils.

BALMAIN (C.E.) :—Visited, 16th February.

Numbers present :—Boys, 68 ; girls, 65 ; total, 133.

1. A weather-shed has yet to be provided, and the windows are still in a state of disrepair. The schoolroom affords fair accommodation, is fairly furnished, and fully found in working materials. 2. A tolerably numerous attendance is secured. The pupils are regular, punctual, clean, and in very fair order. The government is mild but firm, and effects a healthy moral tone. 3. The classification is too much in detail : there are too many divisions. All the prescribed subjects are taught. 4. Up to the requirements of a third class, the proficiency is fair.

BALMAIN (R.C.) :—Visited, 7th October.

Number present :—Boys, 34.

1. The material condition as regards the schoolroom is satisfactory, and the furniture is serviceable, but of a clumsy description. There is no proper playground, and the out-offices are of indifferent character. 2. The pupils are fairly orderly and attentive, but they do not answer with sufficient promptness, and their power of mental effort and sustained application to work is weak. The discipline needs greater energy to render it effective. 3. The subjects taught do not include object lessons or singing. The instruction is tolerably regular and the methods are suitable, but the teaching wants vigour and point. 4. The results are not satisfactory, the average proficiency being only from moderate to tolerable. The attendance is low for so populous a locality. The average attendance for 1874 was only slightly above the required minimum of thirty.

BOTANY (Wesleyan) :—Visited, 12th February.

Numbers present :—Boys, 21 ; girls, 12 ; total, 33.

1. A supply of water, a lavatory, and a weathershed have yet to be provided. The schoolroom, which is used as a chapel, is in fair repair, and passably found in furniture ; its internal appearance is far from neat or orderly. Some of the records are in arrears. 2. The pupils are unpunctual in attendance, but fairly regular. Several are untidily dressed. In behaviour, they are talkative, noisy and ill-mannered. Drill is not taught ; the government is feeble and ineffective ; the moral tone is low. 3. The classification is bad. The instruction is of full range, but poorly arranged. The methods are mechanical and ineffective. 4. The school is taught in three classes, of which the highest is the third. The proficiency ranges from small to indifferent.

CAMPERDOWN (R.C.) :—Visited, 10th February.

Numbers present :—Boys, 17 ; girls, 18 ; total, 35.

1. The schoolhouse is in fair repair, but the interior is dingy and uninviting. The furniture is clumsy but sufficient. On the whole, the school is properly organized. 2. With the exception that the punctuality of the pupils is very unsatisfactory, the discipline is effective. The children are clean, orderly, and well-behaved. 3. The instruction is judiciously regulated, and deals with the subjects prescribed for a school of three classes. 4. The proficiency ranges between tolerable and fair.

CHIPPENDALE (Wesleyan) :—Visited, 19th and 20th May.

Numbers present :—Boys, 86 ; girls, 76 ; total, 162.

1. A weather-shed is urgently needed ; hat-pegs too are required for the use of the younger children. With these exceptions, the material state of the school is very fair. 2. The attendance is tolerably numerous, and marked by fair regularity. The pupils are also punctual and clean. While their behaviour is fairly quiet in the classes, it is marked at times by much unsteadiness. The government needs to be more firm and strict. 3. Fair judgment is shown in the classification ; the lesson documents are fairly compiled ; the methods are of modern cast, and are applied with diligence and a tolerable degree of skill. 4. The proficiency of the several classes is : First, tolerable ; second, fair ; upper second, tolerable ; third, tolerable.

CHRIST CHURCH (C.E.) :—Visited, 4th and 5th August.

Numbers present :—Boys, 130 ; girls, 64 ; total, 194.

1. The schoolroom is commodious and pleasant. It is in very good repair, and well found in furniture and the other usual educational appliances. Suitable out-buildings are provided. 2. The attendance is marked by fair regularity. The pupils are also punctual and clean. Their behaviour is marked

marked by much boisterousness; noise and disorder is very prevalent, and the school movements are loosely and noisily performed. 3. The instruction includes all the prescribed subjects, geometry excepted. It is regulated with tolerable judgment. The methods are of mixed character, but only moderately suitable. They are applied with fair zeal and industry. 4. The following is the proficiency of the several classes:—First, indifferent; second, fair; third, barely moderate; fourth, tolerable.

CHRIST CHURCH (C.E.—Infants) —Visited, 4th August.

Numbers present.—Boys, 77; girls, 40; total, 117.

1. The interior of the schoolroom is dingy and uninviting, otherwise the material condition of the school is good. The organization is of the kind used in infants' schools. 2. There is room for improvement in the punctuality of the children. Fair order is obtained, and, as a whole, the tone of the school is healthy. 3. The instruction is carefully prosecuted. 4. The proficiency of the pupils reaches fair.

COOK'S RIVER (C.E.) :—Visited, 21st July.

Numbers present :—Boys, 53; girls, 30; total, 83.

1. The schoolhouse is commodious, and in fair repair; it is sufficiently found in working material. The desks are old, much worn, and ink-stained. All necessary out-buildings are provided. 2. Seven-tenths of the pupils attend regularly; this is not satisfactory. The government is mild; corporal punishment is seldom inflicted, perhaps less so than the general character of the discipline would seem to warrant. Fair order, however, is maintained, and the moral tone of the school is healthy and pleasing to a fair extent. 3. The classification is correct in the circumstances. Very fair ability is displayed in the compilation of the lesson documents. The methods are modern, and are applied with earnestness, very fair energy, and considerable painstaking. 4. The following is the proficiency of the several classes.—First, fair; second, fair; third, very fair (nearly).

COOK'S RIVER (C.E.—Infants) :—Visited, 21st July.

Numbers present :—Boys, 36; girls, 30; total, 66.

1. Excepting the want of desks, the material condition of this school is satisfactory. 2. The organization is correct, and the discipline is very fairly effective. 3. The pupils are classified with judgment, and their instruction in the prescribed subjects is effectively regulated. 4. The proficiency in the several classes averages tolerable.

COOK'S RIVER (R.C.) :—Visited, 10th February.

Numbers present.—Boys, 26; girls, 19; total, 45.

1. The school is held in a portion of the church. A fair supply of inferior furniture is provided. In other respects the material condition of the school is indifferent. 2. The attendance may be regarded as fair for the neighbourhood. The pupils are fairly regular and tolerably punctual. With few exceptions, they are clean and becomingly attired. The government is mild, and effects fair order. Drill is not taught, the result is, the movements of the pupils are loosely performed. 3. The time-table provides for the teaching of all the prescribed subjects, but there is reason to believe that object lessons, singing, and drawing, are taught in a desultory manner. The methods are moderately suitable, but need to be applied with greater vigour, earnestness, and skill. 4. The proficiency of the first-class is moderate; of the second, moderate to tolerable; and of the third, moderate to tolerable.

DARLINGHURST (C.E.) :—Visited, 22nd and 23rd April.

Numbers of pupils present :—Boys, 64; girls, 31; total, 103.

1. A large and superior class-room has been erected since last inspection. Excellent accommodation is now provided, and full facilities are afforded for the efficient carrying on of the work of instruction. The school buildings are in good repair and well kept. 2. A good attendance is maintained. The pupils are regular, punctual, and in very fair order. The government is mild and effective and the moral tone healthy. 3. The classification is judicious; the instruction is well regulated; the methods are appropriate, and are applied with earnestness, diligence, and skill. 4. The following is the proficiency of the several classes :—First, fair; second, very fair +; third, good to very good.

DARLINGHURST (C.E.—Infants) :—Visited, 22nd April.

Numbers present :—Boys, 51; girls, 40; total, 91.

1. Viewed materially, this school is in good condition. The schoolroom is sufficiently spacious, well-lighted, well-ventilated, and is liberally supplied with appliances for carrying on the work of instruction. It is clean and cheerful-looking. 2. The attendance continues to increase. It is marked by more than ordinary regularity. The pupils are punctual, neat-looking, and well-conducted. 3. Fair judgment is shown in the classification. The instruction is passably arranged, and imparted with earnestness and diligence. 4. The proficiency is fair.

DOUBLE BAY (C.E.) :—Visited, 30th July.

Numbers present :—Boys, 48; girls, 42; total, 90.

1. An important addition has been made to the schoolroom by including a portion of what was formerly the teacher's residence. The accommodation now afforded is sufficient to meet the requirements of the denomination for some time to come. The school is well found in working materials, and its internal appearance is clean, neat, and inviting. The closets are in unpleasant proximity to the schoolhouse, and their condition in point of cleanliness is unsatisfactory. A urinal has yet to be provided. 2. A little more than two-thirds of the pupils attend regularly. They are very fairly punctual, present a neat, cheerful appearance, are subdued in demeanour and well behaved. 3. Fair judgment is shown in the classification; the instruction includes all essential branches, is intelligently arranged, and imparted by suitable methods. 4. The following is the proficiency of the several classes.—First, nearly tolerable; second, fair to very fair; third, fair to very fair.

DOUBLE BAY (C.E.—Infants) .—Visited, 30th July.

Numbers present :—Boys, 49; girls, 25; total, 74.

1. The schoolroom is a good one, and it is properly furnished and supplied with *matériel*. 2. The government is healthy, and the moral tone of the school sound. 3. The usual infants' school course is observed. 4. The average proficiency is very fair.

DOUBLE BAY (R.C.) :—Visited, 12th February.

Numbers present.—Boys, 24; girls, 15; total, 39.

1. The school is held in a temporary church. The building is very fairly suitable, and its furniture and appliances meet requirements. The school is properly organized. 2. By dint of signalling and threatening the teacher managed to obtain fair order, the normal character of the government is, however, problematical. 3. The instructional arrangements are somewhat injudicious. The subjects prescribed for a school of three classes are included in the course. 4. The proficiency ranges between moderate and tolerable.

ENSKINE-STREET (Presbyterian) :—Visited, 24th July.

Numbers present :—Boys, 28; girls, 33; total, 61.

1. The premises are in excellent condition. The schoolroom is well-appointed, and the supply of material is ample. 2. The pupils are under fair control. 3. Their classification is injudicious, and the educational range, low. 4. The highest class is a second; the proficiency does not exceed tolerable.

GLEBE (C.E.) :—Visited, 7th August.

Numbers present :—Boys, 55; girls, 35; total, 90.

1. This school is taught in suitable and well-conditioned premises, the furniture is however of very inferior kind. 2. The organization is of passable worth, and the pupils attend with fair punctuality. Judged by the demeanour of some of the pupils, the discipline must be regarded as lax. The moral tone of the school is tolerably satisfactory. 3. The subjects prescribed for a school of three classes are taught, so far as plan goes, systematically, but certainly not effectively. 4. The average proficiency of the pupils is slightly in excess of moderate.

HAYMARKET (R.C.—Boys) :—Visited, 6th August.

Number present :—143.

1. Lavatories, a urinal, and a book-press have been provided since last inspection. The furniture is sufficient in quantity, but of inferior quality. Of other working materials there is a reasonable supply. The organization has improved, and may now be pronounced fairly satisfactory. 2. Three-fourths of the pupils attend regularly, and with fair punctuality. They are clean in person, tidily dressed, and tolerably well-behaved. Fair order is maintained. 3. The classification is tolerably judicious. The instruction, which is of full range up to the requirements of a third class, is regulated with fair ability, and based on modern methods. 4. The proficiency of the several classes may be thus summarised :—First, tolerable to fair; lower second, moderate; second, fair; third, fair to very fair.

ELIZABETH-STREET (Hebrew) :—Visited, 26th ———.

Numbers present :—Boys, 49; girls, 27; total, 76.

1. The school is conducted in the Odd Fellows' Hall. The schoolroom is commodious, well-lighted, and well ventilated. It is sufficiently provided with furniture and apparatus of a suitable kind. Some of the books are in bad condition. All necessary out-buildings are provided. 2. Three-fourths of the pupils attend regularly. Less than the usual number were present on the day of examination, owing to rainy weather. The pupils are fairly punctual and clean; in all other respects the discipline is very unsatisfactory. 3. Moderate judgment is shown in the classification. The instruction is tolerably well regulated. The methods are suitable in the abstract, but owing to defective discipline, fail to realize adequate results. 4. The attainments of the several classes may be described thus :—First, very fair; upper first, fair; second, tolerable to fair; upper second, fair+; third, fair+.

KENT-STREET NORTH (R.C.—Boys) :—Visited, 28th July.

Number present, 114.

1. The schoolhouse is a substantial stone building; its interior walls, however, much require pointing and colouring, and the floor is in need of repair. 2. The organization is correct, and the pupils are fairly orderly and well-behaved. 3. The teaching is appropriately regulated, and intelligently prosecuted. 4. The results are :—First class, fair+; Second, tolerable to fair; third class, fair.

KENT-STREET NORTH (R.C.—Girls) :—Visited, 28th July.

Number present :—117.

1. The schoolroom is a new brick building, spacious, fairly lighted, and well ventilated. Its immediate proximity to the street is a disadvantage. The desks are old and cumbersome; those used by the younger children are altogether unsuitable. The remaining furniture is of a passable character. There is a sufficiency of apparatus and books. 2. About eleven fourteenths of the pupils attend regularly; the punctuality is indifferent. With few exceptions the pupils are clean. Fair order is maintained. The government is mild, and tolerably effective. 3. The instruction embraces all the subjects prescribed for a school of three classes. It is fairly arranged, and imparted by suitable methods. 4. The proficiency of the pupils may be thus summarised :—First class, tolerable to fair; second, tolerable to fair; third, fair.

KENT-STREET SOUTH (R.C.—Boys) :—Visited, 19th and 20th March.

Number present, 106.

1. The schoolroom is a good one, and is suitably furnished with furniture and working appliances. This school is under the disadvantage of having no playground. 2. The children are under good discipline. 3. The subjects prescribed for a school of four classes have been intelligently treated. 4. The average proficiency slightly exceeds fair.

KENT-STREET SOUTH (R.C.—Girls and Infants) :—Visited, 19th March.

Numbers present :—Boys, 26; girls, 79; total, 105.

1. The school is held in a church. The furniture is unsuitable; other features of the organization are necessarily unsatisfactory. There is no playground. 2. The attendance has declined, and is marked by much irregularity. The pupils are tolerably punctual, fairly clean, and in very fair order. The government has improved in firmness, and is now reasonably effective. 3. Fair judgment is shown in the classification. The instruction is based on tolerably intelligent guides, and is imparted with industry and a fair degree of skill. 4. The proficiency of the several classes is :—First, very fair; upper first, fair; second, very fair; third, tolerable to fair.

NEWTOWN (C.E.) :—Visited, 17th July.

Numbers present :—Boys, 47; girls, 32; total, 79.

1. A lavatory and a playshed have not yet been provided. There is a sufficiency of furniture, apparatus, and other school requisites. The schoolroom is clean, and its appointments are orderly arranged. Proper attention is devoted to the keeping of the records. 2. A fair attendance is secured, but it is characterised by much irregularity. The pupils are tolerably punctual, clean, and, with few exceptions, well behaved. The government is mild, moderately firm, and effects fair order. 3. The pupils are classified with tolerable judgment. Fair ability is displayed in the lesson documents. The methods are in the main modern, but need to be applied with greater vigour, intelligence and skill. 4. The attainments of the several classes may be described thus :—First, tolerable; second, tolerable to fair; third, tolerable.

NEWTOWN (C.E.—Infants) :—Visited, 17th July.

Numbers present :—Boys, 28; girls, 32; total, 60.

1. Owing principally to the deep verandahs round the building, the schoolroom is not well lighted, and this, together with the dingy cast of the interior, gives the room an uninviting appearance. 2. The routine usual in infant schools is observed. The attendance is of fitful character; those children who are reasonably regular in attendance are fairly punctual. The discipline is quiet and effective. 3. The instruction is judiciously regulated. 4. The proficiency of the pupils averages fair.

NEWTOWN

NEWTOWN (R.C.) :—Visited, 23rd September.

Numbers present :—Boys, 47; girls, 49; total, 96.

1. The material condition of the school is satisfactory. The organization is correct. 2. The attendance, which has improved, is marked by reasonably good punctuality. The pupils are tidy in person, orderly, and well behaved. The moral tone of the school is healthy. 3. The teaching evidences a careful intelligence in the treatment of the several branches of instruction. 4. The results of the examination in the first and second classes average between very fair and good; in the third class the proficiency reaches good nearly.

NEWTOWN (Wesleyan).—Visited, 29th July.

Numbers present :—Boys, 53; girls, 17; total, 100

1. There is no weathershed, and the closets are badly situated. In other respects the school premises are of satisfactory character. There is a sufficient supply of fairly suitable furniture, and the working appliances meet the requirements of the school. The general organization is of passable worth. 2. The government is weak. The punctuality of the children is unsatisfactory, and the same may be said of the behaviour of the elder boys. 3. The course of instruction for a school of three classes is observed. In the primary classes the teaching has been very ineffective. 4. The proficiency is as follows :—First class (infants) ranging between tolerable and fair; second class moderate+; third slightly in advance of indifferent.

PADDINGTON (C.E.) :—Visited, 23rd July.

Numbers present :—Boys, 34, girls, 24; total, 58.

1. Except that the windows are much broken, the schoolhouse is in a fair state of repair. It is fairly found in working appliances. 2. The attendance is about stationary. Eleven-sixteenths of the pupils attend regularly; the punctuality is satisfactory, and the other features of the discipline are fairly healthy. 3. The classification is fairly judicious; the instruction embraces all the subjects prescribed for a school of three classes; the methods are for the most part modern, and are applied with painstaking and a fair degree of skill. 4. The attainments of the several classes are :—First, very fair; second, fair to very fair; third, fair+.

PADDINGTON (R.C.) :—Visited, 12th May.

Numbers present :—Boys, 43; girls, 49; total, 92.

1. The school is held in a portion of the church. The accommodation is very inferior, and is much hampered by the presence of church furniture. The schoolroom is very dirty, and the internal arrangements are wanting in neatness and order. There is an insufficiency of desks; a lavatory and a supply of water are badly needed. 2. The attendance is about stationary. The pupils are tolerably regular and moderately punctual. Several are far from clean. The government is feeble and ineffective, and the order bad. 3. A passable classification obtains. All the required subjects are taught, but the range of instruction is low. The methods are mechanical and unskilful. 4. The following is the proficiency of the several classes :—First, indifferent; second, moderate; third, indifferent.

PARRAMATTA-STREET (C.E.) :—Visited, 11th and 13th August.

Numbers present :—Boys, 94; girls, 77; total, 171.

1. On the whole the school premises are in good condition. The schoolroom is well arranged and furnished. There is a good supply of material. The organization is correct. 2. The government is effective, and the order maintained throughout the school is very good. 3. The school is arranged in four classes. The prescribed subjects are treated in an earnest and intelligent manner. 4. The average proficiency is fair.

PARRAMATTA-STREET (C.E.—Infants.) :—Visited, 11th August.

Numbers present :—Boys, 72; girls, 56; total, 128.

1. The schoolroom is suitable, in good repair, and properly found in educational appliances. 2. A fair attendance is maintained. The pupils are tolerably regular, fairly punctual, clean, and well-behaved. The government is mild, and effects very fair order. The discipline and tone of the school have improved. 3. The usual infants' school routine is followed. The pupils are classified with tolerable judgment; the instruction is moderately well regulated; the methods are modern, and are applied with fair zeal and industry. 4. The average proficiency is barely tolerable.

PARRAMATTA-STREET (R.C.—Boys) :—Visited, 2nd and 3rd June.

Number present :—111.

1. The material condition of the premises is unsatisfactory, but new buildings are in course of erection. The furniture is of fair worth; there is a proper supply of working appliances. 2. On the whole the children are punctual, and about five-sevenths of them attend regularly. The order, general discipline, and moral tone are of fair worth. 3. The subjects prescribed for a school of four classes are taught. 4. The proficiency averages fair.

PARRAMATTA-STREET (R.C.—Girls) :—Visited, 3rd June.

Number present :—70.

1. The school building is old, in indifferent repair, and badly situated. The furniture is also old and unsuitable. There is a sufficiency of apparatus. The records are neatly kept. Measures are in progress for the erection of new buildings. 2. A tolerable attendance is secured, but it is marked by considerable irregularity; the pupils are also very unpunctual; they are reasonably clean in person; their behaviour, although somewhat unsteady at times, is passable on the whole. The order may be estimated as fair. The government needs to be more strict. 3. The classification is faulty. The instruction is regulated with fair judgment; the methods are modern, but require to be applied with greater earnestness and intelligence. 4. The proficiency of the several classes may be thus summarized :—First, fair; second, fair; third, moderate.

PARRAMATTA-STREET (R.C.—Infants) :—Visited, 2nd June.

Numbers present :—Boys, 75; girls, 50; total, 125.

1. The school is conducted in a portion of the girls' schoolroom. The accommodation is utterly insufficient. There is a tolerable supply of working appliances. The organization may be described as passable in the circumstances. 2. Five-eighths of the pupils attend regularly. So great an amount of irregularity constitutes a serious hindrance to effective teaching. The pupils are but moderately punctual, several of them are untidy in appearance. For this the teacher cannot justly be held responsible. Very fair order is maintained, and the government is mild, judicious, and effective. 3. As far as possible the ordinary infants' school course is observed. The instruction is well arranged, well prepared, and imparted with earnestness, energy, and intelligence. 4. The proficiency ranges between fair and very fair.

PLYMOUTH

PYRMONT (C.E.) :—Visited, 21st April.

Numbers present :—Boys, 70 ; girls, 47 ; total, 117.

1. A lavatory and a weather-shed have still to be provided ; in other respects the school is in good repair, fairly furnished, and orderly arranged. 2. The attendance has largely increased under the present teacher. The pupils are clean in person, neatly attired, punctual, and fairly regular in attendance. Other features of the discipline are less satisfactory. The government is deficient in vigour and firmness ; drill is imperfectly carried out ; the school movements are wanting in precision ; and generally it may be stated that the pupils have yet to acquire habits of attention and prompt obedience. 3. The classification is unnecessarily minute—there are too many classes. The instruction is in some respects badly arranged ; too much is attempted, and a closer adherence to the standards is desirable. 4. The proficiency of the several classes is :—First, tolerable to fair ; upper first, tolerable ; second, barely tolerable ; third, tolerable+.

PYRMONT (R.C.) :—Visited, 23rd January.

Numbers present :—Boys, 40 ; girls, 26 ; total, 66.

1. The schoolroom is commodious, well lighted, and in good repair, but the playground is by no means a suitable one. The school is well organized. 2. The children are clean, orderly, and attentive, evidencing to the healthy character of the government. 3. The course of instruction is judiciously regulated—it includes what is expected in a school of three classes. 4. The results are fair.

RANDWICK (C.E.) :—Visited, 23rd July.

Numbers present :—Boys, 31 ; girls, 18 ; total, 49.

1. The schoolhouse is substantial, and in good repair. It is suitably furnished, and its appliances are ample ; the organization is good. 2. The average attendance is reasonably satisfactory. The children are under very fair control, and the tone of the school is healthy. 3. The instruction is treated in a painstaking manner and with tolerable skill. 4. The highest class is a third. The average proficiency is fair.

REDFERN (C.E.) :—Visited, 1st April.

Numbers present :—Boys, 79 ; girls, 50 ; total, 129.

1. Materially the school is in good condition ; it is fairly organized : the records are correctly kept. 2. The attendance has declined. The pupils are fairly regular and punctual, reasonably clean, and in very fair order. The government appears to have improved in firmness, and is now productive of a tolerably sound moral tone. 3. The classification is low for the attendance. All the specified subjects are taught up to the requirements of a third class. The instruction is regulated with passable judgment, and imparted with diligence and a tolerable degree of skill. 4. The following is the proficiency of the several classes :—First, tolerable ; second, tolerable to fair ; upper second, tolerable ; third, fair to very fair.

REDFERN (Infants—C.E.) :—Visited, 1st April.

Numbers present :—Boys, 93 ; girls, 61 ; total, 154.

1. The schoolhouse is in good condition and satisfactorily appointed. The routine agrees with that usual in infants' schools, and in all respects the organization is correct. 2. The government is mild and fairly effective. 3. The instruction deals with the prescribed subjects ; these are treated with earnestness and fair method. 4. The average proficiency slightly exceeds fair.

ST. ANDREW'S (C.E.) :—Visited, 15th and 16th July.

Numbers present :—Boys, 55 ; girls, 35 ; total, 90.

1. The school premises are commodious, and properly supplied with apparatus and necessary appliances. Playsheds are much required, and the playground urgently needs draining. 2. The attendance is fitful, the ordinary average not exceeding five-eighths of the number of pupils enrolled. There is much disorder in the school, and many of the children exhibit an exceedingly rude demeanour. The government appears to be somewhat wanting in nerve and tact. The moral tone of the school is unsatisfactory. 3. The course of instruction provides for the treatment of the subjects prescribed for a school of four classes. 4. The average proficiency of the pupils does not exceed tolerable.

ST. ANDREW'S (Infants—C.E.) :—Visited, 15th and 16th July.

Numbers present :—Boys, 61 ; girls, 42 ; total, 103.

1. The schoolroom is sufficiently commodious, but is only partially divided from the primary department. It is reasonably well provided with suitable educational appliances. The playground is badly drained, and is unprovided with a weather-shed ; the closets, too, are in close proximity to the school buildings. 2. The attendance is comparatively small, and is marked by much irregularity. The pupils are otherwise punctual and clean. Very fair order is maintained, and the government is mild, judicious, and effective. 3. The usual infants' school course is followed. The teaching is intelligently arranged, and imparted by suitable methods. 4. The average proficiency approaches very fair.

ST. JAMES'S (Boys—C.E.) :—Visited, 22nd, 26th, and 27th October.

Number present :—106.

1. The premises are good and well appointed, and all the school arrangements agree with prescribed plans. 2. The pupils attend with satisfactory punctuality, and five-sixths of them with regularity. They are under excellent control, and exhibit orderly and industrious habits. The moral tone of the school is very pleasing. 3. The children are judiciously classified, and their instruction is effectively regulated. The teaching is of modern cast, and has been earnestly and intelligently prosecuted. 4. The highest class is a fourth. The average proficiency of the whole school exceeds very fair.

ST. JAMES'S (Girls—C.E.) :—Visited, 21st October.

Number present :—67.

1. The schoolroom is a good one, and is amply supplied with working appliances. A correct organization obtains. 2. The school is organized in three classes : the routine is of approved character. The pupils are under excellent control, and the moral aspect of the school is healthy. 3. The teaching is of full range up to the requirements of a third class. The methods employed evidence painstaking. 4. The average proficiency reaches very fair.

ST. JAMES'S (Infants—C.E.) :—Visited, 13th October.

Numbers present :—Boys, 111 ; girls, 78 ; total, 189.

1. This school is taught in a good and well appointed room, and the organization agrees with that usual in well regulated infants' schools. 2. The average attendance equals nearly three-fourths of the enrolment. Most of the pupils are punctual : they are tidy in appearance, and as a whole, orderly in conduct. 3. The lesson programmes provide for a proper treatment of the prescribed subjects, but the teaching power of the school staff has been injudiciously distributed, and far too much work has been thrown upon a young pupil teacher. 4. The proficiency of the children averages slightly above fair.

St.

ST. LEONARDS (Boys—C.E.) :—Visited, 24th September.

Number present :—75.

1. The condition of the premises and the appointments of the school are alike satisfactory. The organization is unexceptionable. 2. In most instances the pupils are punctual in attendance, and somewhat over three-fourths of them attend with regularity. Their behaviour and industry evidence that they are under good discipline. The moral tone of the school is very good. 3. The lesson guides ensure a correct treatment of the prescribed subjects of instruction, and with the exception of arithmetic in the second and third classes, the school exhibits satisfactory educational results. 4. The highest class is a third. The average proficiency reaches very fair, nearly.

ST. LEONARDS (Girls—C.E.) :—Visited, 29th September.

Number present :—18.

1. The schoolhouse is a good one, but the furniture is both unsuitable and insufficient. The organization is of inferior character, and but moderately approximates to what obtains in the Council's Schools. 2. The average attendance for the year has seldom exceeded eighteen. The children are clean, orderly, and well behaved. 3. They have been instructed in subjects prescribed for a first and a second class, but the lesson guides are of indifferent worth. The methods of teaching have but a moderate agreement with those exhibited in our ordinary schools, yet in the range of instruction taken satisfactory work has been done. 4. The average proficiency is fair. On account of the small attendance, this school has since been closed.

ST. LEONARDS (R.C.) :—Visited, 21st May.

Numbers present :—Boys, 60 ; girls, 41 ; total, 101.

1. Excepting that there are no weather-sheds, and that the girls' out-office is on the boys' playground, and is approached in full view of the boys, the material condition of the school premises is satisfactory. 2. The organization is of the usual kind ; satisfactory order is maintained, and the pupils are very fairly attentive and industrious when under instruction. 3. The highest class is a third. 4. The average proficiency reaches fair.

ST. MARY'S (Boys—R.C.) :—Visited, 25th and 26th March.

Number present :—91.

1. The schoolroom is commodious and in good repair : it is provided with furniture of an inferior kind. The desks are very old, cumbrous, much hacked, and almost useless. A lavatory and a weather-shed are standing wants. The records are correctly kept, and most of the other features of the organization are satisfactory. 2. A tolerable attendance is maintained, but it is marked by considerable irregularity. The pupils are fairly punctual, tolerably clean and well behaved. The government is strict, and effects very fair order. The moral tone of the school is healthy. 3. Very fair judgment is shown in the classification. The instruction embraces all necessary branches, is regulated by the usual documents, and imparted with fair earnestness, industry, and intelligence. 4. The proficiency of the several classes is :—First, fair ; second, fair to very fair ; third, nearly fair ; fourth, tolerable.

ST. MARY'S (Girls—R.C.) :—Visited, 25th, 26th, 27th March.

Number present :—113.

1. The material condition of the school premises is satisfactory. Excepting many instances of faulty classification in the head class, the organization is correct. 2. The pupils are but fairly punctual, and their attendance is very fluctuating. They are well behaved, and the order witnessed was satisfactory. 3. The highest class is termed a fourth ; its attainments contradict such a designation. As a whole, the range of instruction in the several classes falls below that in other metropolitan schools. 4. The average proficiency is about tolerable.

ST. MARY'S (Infants—R.C.) :—Visited, 30th March.

Numbers present :—Boys, 59 ; girls, 54 ; total, 113.

1. The schoolroom is much too narrow, and the gallery and furniture are very unsuitable. The organization is passable in the circumstances. 2. The children are very unpunctual and irregular in attendance ; they are exceedingly restless and noisy ; the discipline is very weak. 3. The range and quality of the instruction is inferior to the standard and kind aimed at in other metropolitan infants' schools. 4. The estimated proficiency of the children in the subjects treated is slightly in advance of tolerable.

ST. PHILLIP'S (C.E.—Boys) :—Visited, 16th June.

Number present, 88.

1. The schoolroom is a superior structure, of good design, commodious and airy ; it occupies, however, an objectionable site, being in the midst of noisy thoroughfares. There is an abundant supply of educational appliances, in a very fair state of preservation. As a whole, the organization is decidedly good. 2. Fully three-fourths of the pupils attend regularly ; the punctuality is also satisfactory ; the pupils are clean and becomingly attired ; they are subdued in demeanour and quietly behaved ; very fair order is secured ; the government is mild and effective, and the moral tone is healthy. 3. Very fair judgment is shown in the classification ; the instruction embraces all the subjects prescribed for a third class, is properly devised, and imparted by suitable methods. 4. The proficiency of the several classes is as follows :—First, fair ; second, very fair to good ; third, very fair.

ST. PHILLIP'S (C.E.—Girls) :—Visited, 17th June.

Number present, 89.

1. Additions are being made to the schoolroom, which is too small for the attendance. When the work is completed the girls will have premises in keeping with the other departments. 2. The pupils exhibit a pleasing appearance and demeanour ; they are orderly, and also fairly industrious. 3. The teaching is effectively regulated, and so far as the requirements of a third class are concerned all the prescribed subjects are taught. 4. The proficiency approaches very fair.

ST. PHILLIP'S (C.E.—Infants) :—Visited, 16th June.

Numbers present :—Boys, 121 ; girls, 111 ; total, 232.

1. The schoolroom is commodious, and well suited to its uses ; its appointments are good ; the organization presents the features required in an infants' school. 2. The pupils are clean and neat in appearance, and very fairly orderly in their behaviour. 3. The methods of instruction are suited to children of tender age, and the school course includes all the usual branches. The proficiency approaches very fair in the several classes.

SURREY HILLS (C.E.) :—Visited, 15th and 16th October.

Numbers present :—Boys, 61 ; girls, 36 ; total, 97.

1. The main building has been shingled and fitted with spouting since last inspection. The playground is small, but in most other respects the material condition of the school is fairly satisfactory. 2. The discipline is slack ; the government needs greater promptness and vigilance to render it effective
in

in forming and maintaining good orderly habits among the pupils. The want of thorough disciplinary power is chiefly the weak point in the school. 3. The instruction is regulated, and includes the subjects prescribed for a third class standard. The teaching seems industrious and earnest, but is not productive of satisfactory results on the whole. 4. The proficiency may be thus stated:—First class, nearly tolerable; second class, nearly fair; third class, tolerable. The average of the school is from tolerable to fair.

SURRY HILLS (C.E.—Infants):—Visited, 15th October.

Numbers present:—Boys, 42; girls, 45; total, 87.

1. The schoolroom is a suitable one: it is properly furnished, and the necessary out-buildings are provided. 2. The pupils are properly classified, they are under good control, and their demeanour is pleasing. 3. The usual infants' school course is observed. The teaching evidences methods of fair worth. 4. The average proficiency slightly exceeds tolerable.

SURRY HILLS (R.C.—Boys):—Visited, 22nd July.

Number present, 136.

1. The schoolroom is underneath the church, is damp, badly lighted, and badly ventilated. The desks are old, cumbersome, and unsuitable; there is a fair supply of apparatus and books; proper closet accommodation is urgently needed. 2. But two-thirds of the pupils attend regularly; they are tolerably punctual, and, with few exceptions, clean. Fair order is maintained, but not without much effort on the part of the teacher. 3. There are too many classes, otherwise the classification is fairly judicious. All the prescribed subjects are taught up to the requirements of a third class. The instruction is properly arranged, the methods are appropriate, and are applied with earnestness, painstaking, and a fair degree of skill. 4. The proficiency of the several classes is as follows:—First, fair; upper first, fair to very fair; second, fair to very fair; upper second, tolerable to fair; third, very fair.

SURRY HILLS (R.C.—Girls):—Visited, 22nd July.

Number present, 72.

1. The schoolroom is in the basement of a church; it is low-pitched, and being much below the level of the road is damp and badly lighted. The playground is unfit for use in even moderately wet weather; as a whole the material condition is very unsatisfactory. The schoolroom arrangements are passable in the circumstances, and the organisation is of fair worth. 2. The attendance is fluctuating, and does not exceed seven-twelfths of the enrolment; want of punctuality on the part of the children is a marked defect. The pupils are neat and clean in person, and their demeanour is pleasing. Fair order is maintained. 3. The course of instruction includes the subjects prescribed for a school of three classes. 4. The proficiency approaches fair.

SURRY HILLS (Wesleyan):—Visited, 17th March.

Numbers present:—Boys, 110; girls, 42; total, 152.

1. Except that a lavatory is urgently needed, the organisation of this school is good. 2. The attendance is numerous and is gradually improving. The pupils are regular, fairly punctual, and clean. Fair order is maintained, and the moral tone of the school is decidedly healthy. 3. The instruction is of full range up to the requirements of a third class, is regulated by the usual guides, and based on intelligent and effective methods. 4. The proficiency is as follows:—First class, tolerable to fair; second, fair to very fair; third, very fair+. The teaching is educative in its character.

SURRY HILLS (Wesleyan—Infants):—Visited, 17th March.

Numbers present:—Boys, 47; girls, 43; total, 90.

1. The material condition of the school premises is good. 2. The children are very fairly punctual in attendance, and with a few exceptions they are neat in appearance. They are excessively restless, and by no means orderly. 3. The instruction includes all the prescribed infants' school subjects. Undoubtedly it is methodically imparted, but the work done is not abiding. 4. The results are but tolerable.

TRINITY (C.E.):—Visited, 27th May.

Numbers present:—Boys, 52; girls, 36; total, 88.

1. The material condition of the school is very fair, and is perhaps as good as can be expected in the circumstances. The schoolroom is reasonably commodious, and very fairly appointed. 2. Ordinarily the attendance is rather irregular; on the day of examination it was unfavourably affected by rain. The pupils are fairly punctual and clean. Tolerable order is maintained. 3. A judicious classification obtains, the instruction is of full range up to the requirements of a third class, and is fairly regulated; the methods are modern, and diligently applied. 4. The proficiency of the several classes is:—First, nearly fair; second, fair; third, very fair.

TRINITY (C.E.—Infants):—Visited, 27th May.

Numbers present:—Boys, 53; girls, 45; total, 98.

1. The educational appliances of this school are ample, and little exception can be taken to its material condition. 2. The attendance on the day of inspection was influenced by continuous rain. The children are very fairly punctual; their appearance is satisfactory, and they are fairly orderly. 3. The ordinary subjects are taught. 4. The proficiency reaches tolerable.

VICTORIA-STREET (R.C.—Girls):—Visited, 24th March.

Number present, 59.

1. The schoolroom is commodious, cheerful, and liberally provided with working appliances. Care and neatness characterize the keeping of the school records. Viewed as a whole, the organization may be regarded as very fair. 2. About five-sixths of the pupils attend regularly. Fair punctuality is observed; very good order is maintained; and the moral tone of the school is excellent. 3. All the prescribed subjects are taught; the instruction is judiciously regulated; the methods are appropriate, and are applied with earnestness, industry, and very fair skill. 4. The attainments of the several classes are:—Second, fair; lower third, nearly fair; upper third, very fair.

VICTORIA-STREET (R.C.—Infants):—Visited, 24th March.

Numbers present:—Boys, 39; girls, 44; total, 83.

1. The schoolroom is suitable, and sufficiently found in teaching appliances. 2. Prevalent sickness among the children reduced the attendance at the inspection. Very fair punctuality is obtained; the children are neatly dressed, and manifest orderly habits and a cheerful demeanour. 3. The instructional course is of full range, and the teaching is regulated by proper lesson guides. 4. The average proficiency reaches fair.

WATERLOO (C.E.):—Visited, 18th March.

Numbers present:—Boys, 57; girls, 43; total, 100.

1. Materially the school is in fair condition. 2. A fair attendance is maintained, but it is marked by irregularity. The pupils are punctual and clean. A considerable amount of restlessness characterizes the

the conduct of the younger children, and the drill is loosely performed. The general order, however, may be regarded as fair. The government is slightly deficient in firmness. 3. Moderate judgment is evinced in the classification; the instruction is fairly regulated; the methods are of modern cast, but are not applied with judgment or effect. The teaching is altogether too suggestive; too much is done for the pupils, and the result is that they make little effort to answer and less to think. 4. The attainments of the several classes are:—First, indifferent to moderate; second, tolerable to fair; third, barely tolerable.

WATERLOO (C.E.—Infants) :—Visited, 18th March.

Numbers present:—Boys, 39; girls, 44; total, 83.

1. The school premises are in fairly satisfactory condition, and there is a suitable supply of furniture and working appliances. 2. The attendance is much lower than usual, by reason of sickness. The punctuality is fair, and the pupils are clean and orderly. 3. The full infants' school course is observed; the methods used are intelligent and appropriate. 4. The proficiency is fair.

WATERLOO (R.C.) :—Visited, 20th May.

Numbers present:—Boys, 72; girls, 51; total, 123.

1. The school is held in a portion of the R.C. Church. In the circumstances the organization is satisfactory. The building is very exposed and draughty, so much so that it frustrates attempts to keep the school area in an orderly state. The furniture is sufficient and of fair worth. 2. The pupils are fairly punctual, but the regularity of quite one-third of them is of very unsatisfactory character. Very fair order is maintained. 3. The classification of the elder children is too high: the teacher has been informed that the ages and attainments of the pupils in the head class do not warrant him in terming it a Fourth Class. Since the inspection, it may be remarked, the Council has issued a scale of fees based on the number of children attending a school belonging to a given family. Previously it was the undesirable custom, in this and a few other schools in the district, to charge the pupils according to the class they were in; a high and faulty classification was frequently the result. 4. Up to the standard of a school having a Third Class, the average proficiency of the pupils approaches fair.

WAVERLEY (C.E.) :—Visited, 11th May.

Numbers present:—Boys, 32; girls, 36; total, 68.

1. The schoolhouse is substantial, in good repair, and has the necessary out-offices attached. 2. Owing to prevalent sickness among children the attendance for the past month has not exceeded two-thirds of the enrolment; previously it was three-fourths. The pupils are under good discipline. The moral tone of the school is healthy. 3. The subjects prescribed for a school having a third class are treated methodically; the continued absence of the pupil teacher through sickness has told sensibly on the attainments of the younger pupils, nevertheless the importation of a larger amount of energy into the teaching generally might have induced higher average results. 4. The average proficiency of the children, as ascertained by the examination, does not exceed tolerable. In the third class it reaches fair.

WAVERLEY (R.C.) :—Visited, 22nd September.

Numbers present:—Boys, 34; girls, 49; total, 83.

1. The school premises are in a satisfactory state. 2. The attendance is of fluctuating character, but the punctuality is fair. The children are prone to disorderly habits, nor do they evince a proper amount of application and industry. 3. The prescribed subjects are taught. 4. The proficiency does not exceed moderate.

WAVERLEY (Presbyterian) :—Visited, 24th February.

Numbers present:—Boys, 32; girls, 26; total, 58.

1. The condition and appointments of this school are of fair character. The organization is passably correct. 2. The pupils manifest a satisfactory demeanour, and also orderly habits. They attend with very fair punctuality, and their general attendance is satisfactory. Wet weather affected the attendance on the day of inspection. 3. The subjects prescribed for a school having a Third Class are taught. 4. The results are slightly above tolerable.

WOOLLOOMOOLOO (Presbyterian) :—Visited, 17th February.

Numbers present:—Boys, 64; girls, 47; total, 111.

1. The schoolroom is a good one, and the furniture and appointments are suitable and sufficient. The position of the room in which the infants, numbering some seventy, are taught, is bad. Situated under the principal room and altogether below the level of the main street, nothing but the fall of the ground to the back lane saves it from being a cellar. There is no proper ceiling or anything to deaden the sounds above, and at times the teaching is carried on under great distraction. 2. The pupils are very fairly punctual, and they are clean and properly behaved, but irregularity is a standing defect. The attendance is ordinarily less than two-thirds of the enrolment, and on the day of inspection it was some twenty lower than usual, arising, the teacher thought, from the previous day being a wet one. 3. The prescribed subjects for a school having a third class are taught in a methodical manner, but the results are not correspondingly satisfactory. 4. In the infants' division the proficiency ranged between fair and very fair, in the primary classes it was slightly above tolerable.

APPENDIX D.

GENERAL ABSTRACT of Returns from Denominational Schools.

Quarter ending--	Number of Children on the Rolls.									Average Attendance.			Amount of School Fees paid.		
	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.	Boys.	Girls.	Total.			
MARCH, 1874.															
Church of England Schools	6,661	5,301	11,962	8,944	642	801	965	610	11,962	4,253.1	3,115.9	7,369.	2,143	8	10½
Roman Catholic do.	5,392	4,590	9,982	704	9,115	72	64	27	9,982	3,412.9	2,938.4	6,351.3	1,470	7	1
Presbyterian do.	615	511	1,126	504	96	224	181	121	1,126	396.6	301.6	698.2	144	19	8
Wesleyan do.	660	516	1,176	273	45	54	631	173	1,176	423.9	289.2	713.1	232	9	10
Hebrew School	98	43	141	11	7	0	1	122	141	65.3	29.	94.3	26	12	9
Total.....	13,426	10,961	24,387	10,436	9,905	1,151	1,842	1,053	24,387	8,551.8	6,674.1	15,225.9	4,017	18	2½
JUNE, 1874.															
Church of England Schools	6,639	5,214	11,853	8,917	618	782	936	600	11,853	4,305.7	3,178.5	7,484.2	2,281	5	6
Roman Catholic do.	5,398	4,662	10,060	685	9,231	45	69	30	10,060	3,516.2	3,008.	6,524.2	1,578	10	8½
Presbyterian do.	581	433	1,064	468	87	217	177	115	1,064	353.1	289.5	642.6	153	13	9
Wesleyan do.	573	426	999	234	31	43	575	116	999	365.4	256.3	621.7	221	14	6
Hebrew School	106	45	151	7	9	0	0	135	151	56.8	26.6	83.4	22	14	9
Total.....	13,297	10,830	24,127	10,311	9,976	1,087	1,757	996	24,127	8,597.2	6,758.9	15,356.1	4,257	19	2½
SEPTEMBER, 1874.															
Church of England Schools	6,663	5,256	11,919	8,938	635	801	949	546	11,919	4,405.1	3,244.4	7,649.5	2,403	6	11
Roman Catholic do.	5,432	4,735	10,167	759	9,220	60	77	51	10,167	3,544.	3,070.4	6,614.4	1,669	17	7½
Presbyterian do.	446	372	818	332	82	152	142	110	818	285.	232.9	517.9	151	6	1
Wesleyan do.	522	381	903	204	21	46	517	115	903	335.1	244.2	579.3	196	14	5½
Hebrew School	71	49	120	11	8	2	0	99	120	48.3	30.9	79.2	16	15	9
Total.....	13,134	10,793	23,927	10,294	9,966	1,061	1,685	921	23,927	8,617.5	6,822.8	15,440.3	4,438	0	10½
DECEMBER, 1874.															
Church of England Schools	6,633	5,283	11,966	9,016	653	811	913	573	11,966	4,437.	3,296.	7,733.	2,508	16	11½
Roman Catholic do.	5,417	4,770	10,187	725	9,225	79	95	63	10,187	3,638.4	3,155.	6,793.4	1,823	1	4½
Presbyterian do.	427	346	773	316	81	151	141	84	773	294.7	230.8	525.5	173	15	11½
Wesleyan do.	524	443	969	245	33	63	519	109	969	343.6	257.4	601.	209	9	7
Hebrew School	60	45	105	13	3	3	0	86	105	40.7	29.8	70.5	15	6	5½
Total.....	13,111	10,889	24,000	10,315	9,995	1,107	1,668	915	24,000	8,754.4	6,969.	15,723.4	4,726	10	3½

Sydney: Thomas Richards, Government Printer—1875.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PUBLIC SCHOOLS ACT.

(PETITION OF INHABITANTS OF NEWCASTLE)

Ordered by the Legislative Assembly to be printed, 25 June, 1875.

To the Honorable the Members of the Legislative Assembly, in Parliament assembled
The Petition of the undersigned inhabitants of the Electorate of Newcastle,—
HUMBLY SHOWNETH:—

1. That having heard that a proposal to amend the Public Schools Act of 1866 is in contemplation, your Petitioners desire, with the earnestness of religious conviction, to have Denominational Schools for the education of their children.

2. That the present Public Schools Act does not indeed directly destroy Denominational Schools but that by refusing such help as it freely gives to Public Schools it inflicts a heavy penalty upon all who on grounds of Christian faith, necessarily require Denominational Schools.

3. That those who seek the Denominational Schools, viz., Roman Catholics and the majority of the Church of England, are so large a proportion of the whole population that it would be unjust to refuse them a satisfaction which is one of conscience.

4. That the number of those who are satisfied with the Public Schools Act is also so great that no Denominationalist seeks to withhold from them their fair proportion of help out of the common purse. The intolerance and sectarianism are all on the side of the Secularists.

5. That speaking of a public measure in the abstract, and without reference to motives, your Petitioners cannot but characterize the allotment of money contributed by a whole population in favour of one section of it as oppressive, and a blot on the legislation of a free Country.

6. That Denominationalists are ready to submit to Government inspection the results of their teaching in secular subjects, and have confidence that the value of these results and the economy of their establishments will be acknowledged by the Council of Education as at least equal to anything attained elsewhere.

7. That we the undersigned pray that your Honorable House will take this statement into consideration, and should any change be made in the Public Schools Act of New South Wales, that you will apportion pecuniary aid equitably between Denominationalists and Secularists, and thereby satisfy the just demands of all sections of the community.

And your Petitioners will ever pray, &c., &c.

[Here follow 729 signatures.]

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PUBLIC SCHOOLS ACT.

(PETITION OF SYNOD OF EASTERN AUSTRALIA.)

Ordered by the Legislative Assembly to be printed, 6 May, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Memorial of the Synod of the Presbyterian Church of Eastern Australia,—

RESPECTFULLY SHOWETH :—

That the Synod of the Presbyterian Church of Eastern Australia during its last session agreed that a copy of the following deliverance be laid before the Parliament and Government of this Colony, viz. :—

That this Synod is of opinion that the Parliament of this country should secure to its people certain fundamental rights in the education of the rising generation :—

- 1st. That the Word of God, the Bible in its entirety, being unparalleled in excellence and the alone supreme standard of morality, should be used in every Public school for the moral training and for the general information and education of the young.
- 2nd. That each school district should have the right of selecting by means of a locally elected Board its own teachers, that teacher being a certified public teacher, in which case no unworthy man, whose character or principles were opposed to the views of the great majority of the district, would be thrust upon the people to the detriment of education.
- 3rd. That a public common undenominational school system accords most with the wants of our country and the demands of the age, but this Synod is strongly opposed to a purely secular system as being radically atheistic, and can only approve of a limited freeness and compulsion.

Your Petitioners therefore humbly pray that your Honorable House will take the premises into consideration, and legislate in accordance therewith.

And your Petitioners, as in duty bound, will ever pray.

Sydney, New South Wales,
November 16th, 1874.

ISAAC MACKAY,
Moderator of Synod.
DUNCAN MINNES,
Synod Clerk.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PUBLIC SCHOOLS ACT.

(PETITION OF ELECTORS OF THE HUME.)

Ordered by the Legislative Assembly to be printed, 30 June, 1875.

To the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled
The Petition of the undersigned inhabitants of the Electorate of The Hume,—

HUMBLY SHOWETH :—

1. That having heard that a proposal to amend the Public Schools Act of 1866 is in contemplation, your Petitioners desire, with the earnestness of religious conviction, to have Denominational Schools for the education of their children.

2. That the present Public Schools Act does not indeed directly destroy Denominational Schools, but that by refusing such help as it freely gives to Public Schools it inflicts a heavy penalty upon all who, on grounds of Christian faith, necessarily require the Denominational Schools.

3. That those who seek for Denominational Schools, viz., Roman Catholics and the majority in the Church of England, are so large a proportion of the whole population that it would be unjust to refuse them a satisfaction which is one of conscience.

4. That the number of those who are satisfied with the Public Schools is also so great that no Denominationalist seeks to withhold from them their fair proportion of help out of the common purse. The intolerance and sectarianism are all on the side of the Secularists.

5. That speaking of a public measure in the abstract, and without reference to motives, your Petitioners cannot but characterize the allotment of money contributed by a whole population in favour of one section of it as oppressive, and a blot on the legislation of a free Country.

6. That Denominationalists are ready to submit to Government inspection the results of their teaching in secular subjects, and have confidence that the value of those results and the economy of their establishments will be acknowledged by the Council of Education as at least equal to anything attained elsewhere.

7. That in laying this statement before your Honorable House, it will be perceived that it is the desire of your Petitioners to see some amendment of the Public Schools Act, which will apportion pecuniary aid equitably between Denominationalists and Secularists, and thereby satisfy the just demands of all sections of the community.

Your Memorialists humbly pray that your Honorable House will carefully consider the above Petition, and grant such relief as may be sufficient.

[*Here follow 500 signatures.*]

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PUBLIC SCHOOLS ACT.

(PETITION OF RESIDENTS OF TUMUT.)

Ordered by the Legislative Assembly to be printed, 5 July, 1875.

To the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned inhabitants of the Electorate of Tumut,—

HUMBLY SHOWETH :—

1. That having heard that a proposal to amend the Public Schools Act of 1866 is in contemplation, your Petitioners desire, with the earnestness of religious conviction, to have Denominational Schools for the education of their children.

2. That the present Public Schools Act does not indeed directly destroy Denominational Schools, but that by refusing such help as it freely gives to Public Schools it inflicts a heavy penalty upon all who, on grounds of Christian faith, necessarily require the Denominational Schools.

3. That those who seek for Denominational Schools, viz., Roman Catholics and the majority in the Church of England, are so large a proportion of the whole population that it would be unjust to refuse them a satisfaction which is one of conscience.

4. That the number of those who are satisfied with the Public Schools is also so great that no Denominationalist seeks to withhold from them their fair proportion of help out of the common purse. The intolerance and sectarianism are all on the side of the Secularists.

5. That speaking of a public measure in the abstract and without reference to motives, your Petitioners cannot but characterize the allotment of money contributed by a whole population in favour of one section of it as oppressive, and a blot on the legislation of a free Country.

6. That Denominationalists are ready to submit to Government inspection the results of their teaching in secular subjects, and have confidence that the value of those results and the economy of their establishments will be acknowledged by the Council of Education as at least equal to anything attained elsewhere.

7. That in laying this statement before your Honorable House, it will be perceived that it is the desire of your Petitioners to see some amendment of the Public Schools Act which will apportion pecuniary aid equitably between Denominationalists and Secularists, and thereby satisfy the just demands of all sections of the community.

Your Petitioners therefore humbly pray that your Honorable House will refuse to sanction the withdrawal of aid from Denominational Schools.

And your Petitioners will ever pray.

[Here follow 138 signatures.]

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PUBLIC SCHOOLS ACT.
(PETITION OF INHABITANTS OF THE UPPER HUNTER.)

Ordered by the Legislative Assembly to be printed, 7 July, 1875.

To the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned inhabitants of the Electorate of Upper Hunter,—

HUMBLY SHOWETH :—

1st. That having heard that a proposal to amend the Public Schools Act of 1866 is in contemplation, your Petitioners desire, with the earnestness of religious conviction, to have Denominational Schools for the education of their children.

2nd. That the present Public Schools Act does not indeed directly destroy Denominational Schools, but that by refusing such help as it freely gives to Public Schools it inflicts a heavy penalty upon all who, on grounds of Christian faith, necessarily require the Denominational School.

3rd. That those who seek for Denominational Schools, viz., Roman Catholics and the majority in the Church of England, are so large a proportion of the whole population that it would be unjust to refuse them a satisfaction which is one of conscience.

4th. That the number of those who are satisfied with the Public Schools is also so great that no Denominationalist seeks to withhold from them their fair proportion of help out of the common purse. The intolerance and sectarianism are all on the side of the Secularists.

5th. That speaking of a public measure in the abstract, and without reference to motives, your Petitioners cannot but characterize the allotment of money contributed by a whole population in favour of one section of it as oppressive, and a blot on the legislation of a free Country.

6th. That Denominationalists are ready to submit to Government inspection the results of their teaching in secular subjects, and have confidence that the value of those results and the economy of their establishments will be acknowledged by the Council of Education as at least equal to anything attained elsewhere.

7th. That in laying this statement before your Honorable House, it will be perceived that it is the desire of your Petitioners to see some amendment of the Public Schools Act, which will apportion pecuniary aid equitably between Denominationalists and Secularists, and thereby satisfy the just demands of all sections of the community.

Your Petitioners therefore pray your Honorable House to take the subject into consideration.

And your Petitioners will ever pray.

[Here follow 215 signatures.]

1875.

LEGISLATIVE ASSEMBLY,

NEW SOUTH WALES.

PUBLIC SCHOOLS ACT.

(PETITION OF RESIDENTS OF YASS PLAINS.)

Ordered by the Legislative Assembly to be printed, 19 July, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned inhabitants of the Electorate of Yass Plains,—

HUMBLY SHOWETH :—

1. That having heard that a proposal to amend the Public Schools Act of 1866 is in contemplation, your Petitioners desire, with the earnestness of religious conviction, to have Denominational Schools for the education of their children.

2. That the present Public Schools Act does not indeed directly destroy Denominational Schools, but that by refusing such help as it freely gives to Public Schools it inflicts a heavy penalty upon all who, on grounds of Catholic faith, necessarily require the Denominational Schools.

3. That those who seek for Denominational Schools, viz., Roman Catholics and the majority in the Church of England, are so large a proportion of the whole population that it would be unjust to refuse a satisfaction which is one of conscience.

4. That the number of those who are satisfied with Public Schools is so great that no Denominationalist seeks to withhold from them their fair proportion of help out of the common purse. Intolerance and sectarianism are all on the side of the Secularists.

5. That speaking of a public measure in the abstract, and without reference to motives, your Petitioners cannot but characterize the allotment of money contributed by a whole population in favour of one section of it as oppressive, and a blot on the legislation of a free Country.

6. That Denominationalists are ready to submit to Government inspection the results of their teaching in secular subjects, and have confidence that the value of those results and the economy of their establishments will be acknowledged by the Council of Education as at least equal to anything attained elsewhere.

7. That in laying this statement before your Honorable House, it will be perceived that it is the desire of your Petitioners to see some amendment of the Public Schools Act, which will apportion pecuniary aid equitably between Denominationalists and Secularists, and thereby satisfy the just demands of all sections of the community.

And your Petitioners therefore pray that your Honorable House will see fit to amend the Public Schools Act in the direction indicated.

And your Petitioners will ever pray, &c.

[Here follow 262 signatures.]

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PUBLIC SCHOOLS ACT.
(PETITION OF INHABITANTS OF GOULBURN.)

Ordered by the Legislative Assembly to be printed, 24 July, 1875. A.M.

To the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned inhabitants of the Electorate of the city of Goulburn,—

HUMBLY SHewETH :—

1. That having heard that a proposal to amend the "Public Schools Act of 1866" is in contemplation, your Petitioners desire with the earnestness of religious conviction to have Denominational Schools for the education of their children.

2. That the present Public Schools Act does not indeed directly destroy Denominational Schools but that by refusing such help as it freely gives to Public Schools it inflicts a heavy penalty upon all who, on grounds of Christian faith, necessarily require the Denominational School.

3. That those who seek for Denominational Schools, viz.,—Roman Catholics and the majority in the Church of England, are so large a proportion of the whole population that it would be unjust to refuse them a satisfaction which is one of conscience.

4. That the number of those who are satisfied with the Public Schools is also so great that no Denominationalist seeks to withhold from them their fair proportion of help out of the common purse. The intolerance and sectarianism are all on the side of the secularists.

5. That speaking of a public measure in the abstract and without reference to motives, your Petitioners cannot but characterise the allotment of money contributed by a whole population in favor of one section of it, as oppressive and a blot on the Legislation of a free country.

6. That Denominationalists are ready to submit to Government inspection the results of their teaching in secular subjects, and have confidence that the value of those results and the economy of their establishments will be acknowledged by the Council of Education as at least equal to anything attained elsewhere.

7. That in laying this statement before your Honorable House it will be perceived that it is the desire of your Petitioners to see some amendment of the Public Schools Act which will apportion pecuniary aid equitably between Denominationalists and Secularists, and thereby satisfy the just demands of all sections of the community.

Your Petitioners therefore humbly pray that your Honorable House will take the matter into your favorable consideration.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 346 signatures.]

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PUBLIC SCHOOLS ACT.

(PETITION OF ELECTORS OF THE HUNTER.)

Ordered by the Legislative Assembly to be printed, 3 August, 1875.

To the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned inhabitants of the Electorate of the Hunter,—

HUMBLY SHOWETH :—

1. That having heard that a proposal to amend the "Public Schools Act of 1866" is in contemplation, your Petitioners desire with the earnestness of religious conviction to have Denominational Schools for the education of their children.

2. That the present Public Schools Act does not indeed directly destroy Denominational Schools, but that by refusing such help as it freely gives to Public Schools it inflicts a heavy penalty upon all who, on grounds of Christian faith, necessarily require the Denominational Schools.

3. That those who seek for Denominational Schools, viz.,—Roman Catholics and the majority in the Church of England, are so large a proportion of the whole population that it would be unjust to refuse them a satisfaction which is one of conscience.

4. That the number of those who are satisfied with the Public Schools is also so great that no Denominationalist seeks to withhold from them their fair proportion of help out of the common purse. The intolerance and sectarianism are all on the side of the secularists.

5. That speaking of a public measure in the abstract and without reference to motives, your Petitioners cannot but characterise the allotment of money contributed by a whole population in favor of one section of it, as oppressive and a blot on the Legislation of a free country.

6. That Denominationalists are ready to submit to Government inspection the results of their teaching in secular subjects, and have confidence that the value of those results and the economy of their establishments will be acknowledged by the Council of Education as at least equal to anything attained elsewhere.

7. That in laying this statement before your Honorable House it will be perceived that it is the desire of your Petitioners to see some amendment of the Public Schools Act which will apportion pecuniary aid equitably between Denominationalists and Secularists, and thereby satisfy the just demands of all sections of the community.

That your Petitioners humbly pray that your Honorable House will take this statement into consideration, and, should any change be made in the Public Schools Act of N. S. W., that you will apportion pecuniary aid equitably between Denominationalists and Secularists, and thereby satisfy the just demands of all sections of the community.

And your Petitioners will ever pray.

[Here follow 103 signatures.]

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PUBLIC SCHOOLS ACT.

(PETITION OF ELECTORS OF ARGYLE.)

Ordered by the Legislative Assembly to be printed, 4 August, 1875.

To the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned inhabitants of the Electorate of Argyle,—

HUMBLY SHOWETH:—

1. That having heard that a proposal to amend the Public Schools Act of 1866 is in contemplation, your Petitioners desire, with the earnestness of religious conviction, to have Denominational Schools for the education of their children.

2. That the present Public Schools Act does not indeed directly destroy Denominational Schools, but that by refusing such help as it freely gives to Public Schools it inflicts a heavy penalty upon all who, on grounds of Christian faith, necessarily require the Denominational Schools.

3. That those who seek for Denominational Schools, viz., Roman Catholics and the majority in the Church of England, are so large a proportion of the whole population that it would be unjust to refuse them a satisfaction which is one of conscience.

4. That the number of those who are satisfied with the Public Schools is also so great that no Denominationalist seeks to withhold from them their fair proportion of help out of the common purse. The intolerance and sectarianism are all on the side of the Secularists.

5. That speaking of a public measure in the abstract, and without reference to motives, your Petitioners cannot but characterize the allotment of money contributed by a whole population in favour of one section of it as oppressive, and a blot on the legislation of a free Country.

6. That Denominationalists are ready to submit to Government inspection the results of their teaching in secular subjects, and have confidence that the value of those results and the economy of their establishments will be acknowledged by the Council of Education as at least equal to anything attained elsewhere.

7. That in laying this statement before your Honorable House, it will be perceived that it is the desire of your Petitioners to see some amendment of the Public Schools Act, and your Petitioners pray your Honorable House will in that amendment apportion pecuniary aid equitably between Denominationalists and Secularists, and thereby satisfy the just demands of all sections of the community.

And your Petitioners will ever pray.

[Here follow 372 signatures.]

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

EDUCATION.

(CHARGES AGAINST MR. EDWARD JUSTELIUS, TEACHER OF THE CERTIFIED CHURCH OF ENGLAND
SCHOOL AT EMU PLAINS.)

Ordered by the Legislative Assembly to be printed, 5 July, 1875.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 4 June, 1875, That there be laid upon the Table of this House,—

“Copies of all Correspondence and papers relating to charges made by the
“Rev. George Gurney against Mr. Edward Justelius, Teacher of the Certified
“Church of England School at Emu Plains; and also copies of all papers
“relating to a counter-charge made by the Teacher against the Rev.
“George Gurney, together with copies of all papers in the matter.”

(*Mr. Davies.*)

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE UNDER SECRETARY, DEPARTMENT OF JUSTICE
AND PUBLIC INSTRUCTION.

Council of Education Office,
Sydney, 1 July, 1875.

SIR,

With reference to your letter, dated 10th June ultimo, I am directed by the Council of Education to transmit herewith copies of all correspondence and papers relating to charges preferred by the Rev. George Gurney against Mr. Edward Justelius, teacher of the Certified Denominational Church of England School at Emu Plains; and also the counter-charges of Mr. Justelius against Mr. Gurney.

I have &c.,
W. WILKINS,
Secretary.

SCHEDULE of Correspondence and papers relating to charges made by the Rev. George Gurney against Mr. Edward Justelius, teacher of the Certified Church of England School at Emu Plains; and also copies of all papers relating to a counter-charge made by the Teacher against the Rev. George Gurney: together with copies of all papers in this matter:

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EDUCATION.

No. 1.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
24 September, 1874.

GENTLEMEN,

Since the late meeting respecting "Education" there has been such a marked change in the tone of the *teacher* at Emu Church of England Certified Denominational School (Mr. Justelius)—he has been so abusive and impudent whenever I have made any inquiries respecting the school, or mentioned any complaints—that I *can no longer work with him*. The school is going down very fast, and the children being taken to Penrith, to the great hurt of the school. Now I have no desire to *injure him* or his large family, but I think, as he is a *Wesleyan*, and has repeatedly expressed his wish that the school could be converted into a Public School, I do not think he is likely to do justice to the school and the denominational interests committed to his charge. Under these circumstances I think he ought to be removed, and the school placed under the charge of a Church of England teacher, as provided by the Act. I think it would be better for all parties, and give Emu Denominational School a fair change and no favour. I say that I have no wish to injure the teacher, though I can no longer work with him, but think that at this particular juncture, when there is a talk about these small schools, that I can only have fair play with a Church teacher for a Church Denominational School.

I have, &c.,
GEORGE GURNEY,
Chairman of Local Board.

B.C., Inspector of Cumberland District.—*Very urgent*.—Be good enough to state if you can recommend an arrangement whereby Mr. Justelius may be removed from this school, and an eligible teacher appointed.—E.J., 30/9/74.

B.C., Secretary.—It would appear from the teacher's letter, hereto annexed, that he is "not a member of the Wesleyan Church, but at present a member of the Church of England." Mr. Justelius cannot therefore be removed from the Emu C.E. School on the ground stated by the Rev. G. Gurney.—J. M'CREDIE, Insp., Cumb. District, 5/10/74.

No. 2.

MR. E. JUSTELIUS TO THE INSPECTOR OF SCHOOLS, CUMBERLAND DISTRICT.

Cert. Denom. C.E. School,
Emu, 3 October, 1874.

SIR,

I have the honor to acknowledge your memorandum of 2nd inst., in which you inform me that it has been stated that I am a Wesleyan, and *not* a proper person to continue in charge of a Denominational Church of England School. You also request me to state to what religious denomination I belong.

I most respectfully beg to state that I was brought up in the Lutheran Church, but since my marriage have mostly attended the Wesleyan Church, and since I came to Emu I and my family have regularly attended the services in the Church of England, and I am a pewholder in the Church of England, and I have occasionally attended the Wesleyan services here, at times when there has been *no* service in the Church of England. My children have regularly attended the C.E. Sunday-school here, and I have also been a teacher in the C.E. Sunday-school here. I have for the last nine months *not once* been to the Wesleyan church, nor have my family. About the same time ago, at the desire of Rev. Gurney, I withdrew my children from the Wesleyan Sunday-school, where they occasionally had attended, *only* on such occasions when there was no Sunday-school in the Church of England here. I and my family have since regularly attended the Church of England, and *no* other Church. I have communicated in the Church of England here, and have had two children baptized here by Rev. Gurney. I therefore beg to inform you, in answer to your memorandum, that I am *not* a member of the Wesleyan Church, but at present a member of the Church of England. Rev. Gurney has repeatedly expressed his satisfaction with the manner in which I conduct the religious instruction in the day-school.

I therefore most respectfully beg to submit that I cannot see that the 40th clause of the Public Schools Act has been infringed by my appointment to this school.

I have, &c.,
EDWARD JUSTELIUS.

No. 3.

THE ACTING SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.

Council of Education Office,
Sydney, 30 September, 1874.

REV. SIR,

I am directed by the Council of Education to acquaint you that your letter, dated 24th September instant, upon the subject mentioned below, is under consideration, and that a further communication respecting it will be addressed to you as soon as the Council has arrived at a decision in the matter.

I have, &c.,
E. JOHNSON,
(For Secretary.)

SUBJECT:—Requesting removal of teacher, Mr. Justelius.

No. 4.

4

No. 4.

THE ACTING SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.

Council of Education Office,
Sydney, 9 October, 1874.

REV. SIR,

With reference to your letter of 24th September ultimo, in which you request that, as Mr. E. Justelius is a Wesleyan, he may be removed from the Certified Denominational Church of England School at Emu, and a member of the Church of England appointed in his stead, I am directed by the Council of Education to acquaint you that a communication has been received from Mr. Justelius, in which he alleges that he is not a Wesleyan, but a member of the Church of England.

I have, &c.,
E. JOHNSON,
(For Secretary.)

No. 5.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
13 October, 1874.

GENTLEMEN,

I have your note of the 9th instant. I much regret that Mr. Justelius has claimed to be a member of the Church of England after two years profession of another persuasion.

I now respectfully claim under the 10th clause of the Education Act of 1866, that the Inspector be instructed to make inquiries *here*, for the matter is so *notorious* that the very idea of his being a member of the Church of England is laughed at.

I am sure, gentlemen, that you will grant me this very reasonable request.

I remain, &c.,
GEO. GURNEY.

P.S.—I do not think that Mr. Justelius would on his oath claim to be a churchman—he was educated a Lutheran.—G.G.

B.C., Inspector of Cumberland District.—Be good enough to hold the necessary inquiry in order that it may be ascertained to what religious denomination Mr. Justelius belongs.—E.J., 22/10/74.

No. 6.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu.

GENTLEMEN,

Should you grant my very reasonable request respecting the religious persuasion of our teacher, viz., that inquiry be made on the spot, I would further suggest that I be allowed to nominate a gentleman to assist the Inspector in the inquiry, and that due notice be given of the time of the Inspector's visit.

I have, &c.,
GEORGE GURNEY.

No. 7.

THE ACTING SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.

Council of Education Office,
Sydney, 22 October, 1874.

REV. SIR,

I am directed by the Council of Education to acquaint you that, in accordance with the request contained in your letter dated 13th October instant, the District Inspector has been instructed to hold the necessary inquiry, in order that it may be ascertained to what religious denomination Mr. E. Justelius, teacher of the Certified Denominational Church of England School at Emu, belongs.

I have, &c.,
E. JOHNSON,
(For Secretary.)

No. 8.

THE INSPECTOR OF SCHOOLS, CUMBERLAND DISTRICT, TO THE SECRETARY TO THE COUNCIL OF EDUCATION.

EMU, C.E.—Investigation into charge against the teacher.

HEREWITH are forwarded the statements which were made at the above investigation on the 7th instant, together with all other papers in my possession relating to the case.

2. From these documents the following facts may be gathered on perusal:—

(1.) Mr. Justelius is proved to have belonged to the Church of England at Bankstown, from which he was removed to Emu C.E. school. This is clearly shown in annex A.

(2.)

- (2.) It is also stated explicitly in annex B, by the Rev. A. S. Swift, the Wesleyan Clergyman of the locality, that Mr. Justelius is *not a member of the Wesleyan Church*, as has been alleged in Mr. Gurney's original letter of the 24th September last.
- (3.) It is admitted by Mr. Gurney that Mr. Justelius has communicated once in the Church of England at Emu, and it appears to me that Mr. Gurney has failed to prove that Mr. Justelius is *not a member of the Church of England*, which he claims to be.

3. I am of opinion, therefore, that the Council should decline to remove Mr. Justelius from the Emu C.E. school.

4. I may add that the Rev. J. Vaughan was present, *ex gratiâ*, during the investigation, and that he concurs with me in thinking that Mr. Gurney has quite failed to prove his case.

J. M'CREIDIE,

Sydney, 14 November, 1874.

Inspector, Cumberland District.

[Enclosures.]

Emu Plains C.E. School,
7 November, 1874.

STATEMENTS made at an inquiry into a charge preferred by the Rev. G. Gurney, B.A., against Mr. Justelius, teacher of the above school, of being a Wesleyan.

Rev. G. Gurney's statement.

MR. JUSTELIUS was appointed I believe in June, 1872, bringing his appointment with him, no mention of sect being made therein, and no previous information of his arrival being given to me. I first heard of his arrival by being told that he was at the station. Mrs. Justelius told Mrs. Gurney some few weeks after arrival that both she and her husband were Wesleyans. Her words were, "Why, Mrs. Gurney, both myself and my husband are Wesleyans," to which Mrs. Gurney replied, "Mr. Gurney does not know that." Mr. Justelius afterwards explained to me that he was baptized and educated a Lutheran, but joined the Wesleyans when he married his wife. His father-in-law and mother-in-law confirmed that statement, saying in effect that he ought to be grateful to Mr. Gurney for allowing him to remain a teacher here, he not being of the Church of England denomination. On receiving little kindnesses he has expressed himself more gratified, inasmuch as he was not of my denomination. He told me himself in my house this: that the Rev. Mr. Middleton, a Wesleyan Clergyman, advised him to attend the Church services while a teacher of the school, but that he should not have accepted the appointment. Mr. Wood, a Wesleyan, stated that he thought the Council should not have made the appointment. A dispute had arisen about Wood's boy learning the C.E. Catechism, to which that gentleman had objected under the belief that Mr. Justelius was being persecuted by me, by being required to attend the Church service instead of the Wesleyan. After an interview between him, Mr. Justelius, and myself, he was satisfied, and withdrew his objection. Previous to this meeting, Mr. Justelius had openly left the Church, joined the Wesleyans, and said he would never return again. On my assurance that I had not asked for his removal under the 10th clause of the Act he returned to the Church. His children have attended the Wesleyan Sunday-school as often, if not oftener, than the Church one, and occasionally have left the Church entirely for the Wesleyan. Up to this present moment he has never stated to me that he is a *bonâ fide* churchman, but always has allowed that he was not of my denomination. Mr. Payer, a member of the Board, said to me yesterday, that as he could not be present to day, he desired me to say that his impression was, that he was a Wesleyan. Mr. Justelius states in his letter that he is *at present* a member of the Church of England, which implies that he was not always or invariably one. He has not taught in the Church of England Sunday-school for nearly a year. He withdrew from his post and said that he would not teach again. He says that he has only attended the Wesleyan Church when there was no service in the Church of England. This I deny, for he has openly attended when there was service in the Church of England here. It appears to me that the question at issue is: "Is he or is he not a member of the Church of England?" He was not compelled to teach in the Sunday-school, but invited to assist therein according to usual custom.

Cross-examined by Mr. Justelius: You told me that you were born and educated a Lutheran, and when you came to the Colony your preferences led you to the Wesleyans, to whom your wife belonged, and that you joined them when you married her, and had continued with them up to the time of your coming here; I understood you that you attended the Wesleyan Church as a member thereof; your words were, that you "joined the Wesleyan Church when you were married;" I do not know if by "joining," you meant being a member of the Wesleyan Church; I presented you to the Bishop as a seatholder and not as a member of the Church of England; being a seatholder, you were a fit and proper person to sign the consecration petition to the Bishop; you communicated once in the Church of England here since you came; you came on your own authority; I have already said that you led me to believe that you were a Wesleyan up to the time of your coming here.

GEORGE GURNEY.

Mrs. Gurney, being called, stated:—I was speaking to Mrs. Justelius, and saying that I was sorry Rev. Mr. Somerville had left, as Mr. Gurney and he had got on well together; I am not sure what remark was then made, but Mrs. Justelius then said: "I am sorry, for my husband and myself are both Wesleyans."

Cross-examined by Mr. Justelius: I don't remember anything that happened on the first Sunday you were here; I do not remember saying to you that I hoped you were not Wesleyans.

EMILY A. GURNEY.

Statement of Mr. Justelius.

I WOULD beg to state, in the first place, that I adhere to all the statements contained in my letter of 3rd October last. I never told Mr. Gurney that I was a member of the Wesleyan Church at any time. When I came to Emu I was requested by the Rev. Mr. Gurney to teach in the Sunday-school, and I continued so to do until he, in the presence of Mr. Wood, said he thought it better for me not to continue teaching in the Sunday-school. He also said that he would send for me to attend when he was absent, which he has done several times, and I have always acceded to his request. I beg to reiterate that I am not a member of the Wesleyan Church, and I claim to be a member of the Church of England. I attended the Church of England at Bankstown for twelve months before coming to Emu, and communicated there, as is shown by the note now handed in from the Rev. W. J. Gunther, of Parramatta, dated 6th November inst. I was originally trained under the Denominational Church of England Board at St. James's C. E. School, which I entered on the recommendation of the Bishop himself. Herewith.

Cross-examined by Mr. Gurney: I left the Sunday-school before meeting you at Mr. Woods, at your recommendation; I did attend the Wesleyan Church for a few Sundays about that time; I cannot remember whether my children left the Church of England Sunday-school about that time; I did not say that I would not return to the Church unless you had not written to ask for my removal; I have been under the Council of Education since 1st June, 1871, and then belonged to the Church of England; I don't remember what I entered myself as to religion in the last Census return: Mrs. Justelius was entered in the Census as a Wesleyan, as far as I remember; probably I entered myself as a Protestant; I am a *bonâ fide* member of the Church of England; I don't remember the exact date of my joining the Church of England; I at one time belonged to the Lutheran Church; I was baptised in the Lutheran Church; I have been confirmed by a Bishop of the Lutheran Church, but not by one of the Church of England; I was married by a Wesleyan clergyman; I think four of my children have been baptised by clergymen not belonging to the Church of England, and three by the Church of England clergymen; my wife held a sitting in the Wesleyan Church, and I attended when there was no Church of England service; I don't remember stating to any one since coming here that I belonged to the Wesleyan Church; Rev. Mr. Middleton never said to me that I should not have accepted the charge of this school; Mr. Wood never said to my knowledge that the Council did wrong in appointing me to this school; I never said to any one that I would not attend again at the Church of England service, or not let my children do so.

EDWD. JUSTELIUS.

Statement

Statement of Mr. William Henry Wood.

I AM residing on Emu Plains, and am a farmer. I never said to Mr. Gurney that the Council was wrong in appointing you to this school. You are not, to my knowledge, a member of the Wesleyan Church, to which I belong. Mr. Gurney told me lately, I think, that he would remove you, or that he would do his best for your removal. I objected to my boy learning the Church of England Catechism, because I thought Mr. Gurney was persecuting you. You never to my knowledge said to Mr. Gurney, in my presence, that you would not return to the Church unless he (Mr. Gurney) would abstain from asking for your removal.

Cross-examined by Rev. Mr. Gurney: I think you have been persecuting Mr. Justelius since he came here on several occasions; I think that you were persecuting Mr. Justelius by coming into the school and insulting him before the children; I remember the meeting at my house; I saw Mr. Justelius about that time several Sundays in the Wesleyan Church; I did not hear it reported about that time that Mr. Justelius had said that he would not return to Church again; I never heard you say anything at that time about asking for the removal of Mr. Justelius; it is quite likely that the Church of England service was going on when I saw him in the Wesleyan Church.

W. H. WOOD.

Statement of Mrs. Justelius.

I DID not tell Mrs. Gurney that you were a Wesleyan, but I said that I was one. On the first Sunday, after coming here, Mrs. Gurney said she only hoped we were not Wesleyans.

ISABELLA JUSTELIUS.

[Annex A.]

The Rev. W. J. Gunther to Mr. Justelius.

St. John's, Parramatta,
6 November, 1874.

My dear Sir,

I received your note yesterday, in which you ask me to certify that you attended the services of the Church of England and the Holy Communion when you resided at Bankstown. In answer I beg to say that you attended the services regularly, took an interest in Church matters, and I find from my note-book attended the Holy Communion.

I regret I cannot remember how many times the Holy Communion was celebrated between June 1, 1871, and June 1, 1872, nor how many times you were present.

I am, &c.,
W. J. GUNTHER.

[Annex B.]

The Rev. A. S. Swift to John M'Creddie, Esq.

Emu Plains, 6 November, 1874.

Dear Sir,

Understanding that Mr. Justelius's position as teacher of the Church of England Denominational School here is likely to be seriously affected on the alleged ground of his being a Wesleyan, I deem but justice to him to state what my position enables me to do, viz., that first, he is not a member of our Church; nor secondly, an attendant on our public ministrations.

During the seven months and more of my location here I have but once exchanged civilities with him, and never once seen him at our service.

I am, &c.,
ALFRED S. SWIFT.

No. 9.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
16 November, 1874.

GENTLEMEN,

May I submit the following remarks upon the late inquiry under Mr. Inspector M'Creddie.

1. That Mr. Justelius never denied my statement made at the opening of the proceedings in any material respect.
2. That in a letter read by Mr. M'Creddie Mr. Justelius stated that he was at present of the Church of England.
3. *That, while he remembered putting down his wife and family (at the late Census) as Wesleyans, he could not remember what he had entered as his denomination.
4. That Mr. Wood, the only witness called by Mr. Justelius, was and is a Wesleyan, and had stated previously to me, in presence of my wife and daughter, that he would say nothing to injure Mr. Justelius.
5. That Bankstown was a Provisional Church of England School, and service held in the school-room which easily accounted for the teacher's attendance at service of Mr. Gunther.
6. That if Mr. Justelius were an undoubted and *bona fide* member of the Church of England, would his only witness be Wesleyan to prove it?
7. If Mr. Justelius had never been impudent and insulting to me how came it that under the threat of law proceedings he wrote an abject apology?—Copy on the other leaf.
8. That while there is but one certified school upon this side the river there are at least 130 to 150 children of school age.

*NOTE.—Might not an inquiry be made, or an answer demanded?—G.G.

No. 10.

THE ACTING SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.

Council of Education Office,
Sydney, 2 December, 1874.

REV. SIR,

I am directed by the Council of Education to acquaint you that the Council has had under consideration the Inspector's report upon an inquiry which has been held in consequence of your request for the removal of Mr. E. Justelius, the teacher of the Certified Denominational Church of England School at Emu, on the ground that he is not a member of the Church of England.

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2. I am further directed to state that it does not appear from the nature of the evidence taken at the investigation that the Council would be justified in removing Mr. Justelius from his present position on the ground that he is not a member of the Church of England.

I have, &c.,
E. JOHNSON,
(For Secretary.)

No. 11.

THE ACTING SECRETARY TO THE COUNCIL OF EDUCATION TO MR. E. JUSTELIUS.

Council of Education Office,
Sydney, 2 December, 1874.

Chairman's request for your removal.

THE Council, having had under consideration the report of the Inspector on the investigation recently held with reference to the Local Board's allegation that you are not a member of the Church of England, is of opinion that the evidence is not sufficient to sustain the allegation, and has therefore declined to remove you on the ground assigned by the Board.

E. JOHNSON,
(For Secretary.)

No. 12.

THE ACTING SECRETARY TO THE COUNCIL OF EDUCATION TO THE INSPECTOR OF SCHOOLS, CUMBERLAND DISTRICT.

Council of Education Office,
Sydney, 2 December, 1874.

EMU, C.E.—Chairman's request for removal of teacher, Mr. Justelius, your B.C. No. 74-1,186, dated 14th November.

THE Revd. Mr. Gurney has been informed that it does not appear from the nature of the evidence taken at the inquiry conducted by you with reference to the above matter that the Council would be justified in removing Mr. Justelius from his present position, on the ground that he is not a member of the Church of England.

E. JOHNSON,
(For Secretary.)

No. 13.

THE INSPECTOR OF SCHOOLS, CUMBERLAND DISTRICT, TO THE SECRETARY TO THE COUNCIL OF EDUCATION.

EMU, C.E.—Additional papers in recent inquiry.

THESE papers are forwarded to be placed with those already forwarded.

It will be observed that they are contradictory of certain statements of Mr. Gurney.

J. M'CREIDIE,
Inspector, Cumberland District, 17/11/74.

Mr. E. Justelius to the Inspector of Schools, Cumberland District.

C.C.E. School, Emu, 14 November, 1874.

Sir,

I have the honor to enclose certificates from my father and mother-in-law, contradicting that part of Revd. Gurney's statement at the late inquiry, where he stated that they told him, in effect, that I ought to be grateful to Mr. Gurney for allowing me to remain as teacher here, I not being of the same denomination, namely, the Church of England.

I have, &c.,
ED. JUSTELIUS.

Sydney, 12/11/74.

I HAD no conversation whatever with the Revd. Mr. Gurney concerning the religious opinions of Mr. Justelius, and never said either in effect or otherwise, that Mr. Justelius ought to be grateful to the Revd. Mr. Gurney for allowing him to remain a teacher at Emu, he not being of the same denomination, namely, the Church of England.

ISABELLA BOLES.

Sydney, 12/11/74.

I HAD no conversation with the Rev. Mr. Gurney, particularly about the religious persuasion of Mr. Justelius, and certainly deny that I ever said to the Revd. Mr. Gurney, or anyone else, that Mr. Justelius ought to be grateful to the Revd. Mr. Gurney for allowing him to remain a teacher at Emu, he not being of the same denomination, namely the Church of England.

JAMES BOLES.

No. 14.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
14 December, 1874.

GENTLEMEN,

I beg to acknowledge the receipt of your note respecting the denomination of Mr. Ed. Justelius, and to thank you for the trouble you have taken in the matter.

I should not have addressed you again *at present*, had not a circumstance occurred this morning which renders the removal of the teacher imperative, in my opinion.

He,

He, this morning, during the first hour, insulted me most grossly. He called me a liar, a scoundrel, and told me that I was not worthy to wear the black coat of a clergyman; called three boys out of the school while I was hearing them read the Bible; tried to tear one of the school records out of my hand, shook his fist in my face, and said that if I had been outside he would have treated me in another way; interrupted me by walking up and down the school, and making a noise with his feet; and then walked out of the school. His conduct was more like one mad than anything else.

I trust that for the interest of the district he may be removed to another post. The best Church families have retired from the school, and others would leave if only they were able to meet with another school nearer than Penrith. Several of those near to the Nepean have gone there.

The numbers are also so very much reduced, being only thirty, and that including six of his own children. I am quite convinced that a new school teacher would have a chance of a very good school. There is no other Government school here, but when one is built by the *Council* I would offer no opposition to the close of our Church school; but till then I consider myself bound to do all in my power for the *morale* and efficiency of the institution, which are now suffering under the present master.

I have, &c.,

GEORGE GURNEY,

Chairman of Local Board.

Note respecting the three boys being called out. I was hearing the class read from the Bible. He came to the door and called the three oldest boys out. I went to the door and told him that they must return or I would at once leave. They then returned.—G.G.

This is not, by many, the first time I have suffered abuse from the teacher, but is almost invariably the case now, more or less gross.—G.G.

Were I not the clergyman, I would not hold office as a member of the Board one hour longer to submit to such abuse.

No. 15.

THE ACTING SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.

Council of Education Office,

Sydney, 31 December, 1874.

REV. SIR,

In acknowledging the receipt of your letter of the 14th December instant, I am directed by the Council of Education to acquaint you that in consequence of the representations contained in your communication, the Council has decided to remove Mr. Edward Justelius from his position as teacher of the Certified Denominational Church of England School at Emu.

I have, &c.,

E. JOHNSON,

(For Secretary.)

No. 16.

THE ACTING SECRETARY TO THE COUNCIL OF EDUCATION TO MR. E. JUSTELIUS.

Council of Education Office,

Sydney, 31 December, 1874.

The Council has decided to make arrangements for your removal from your present position as teacher of the above school.

E. JOHNSON,

(For Secretary.)

No. 17.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,

2 January, 1875.

GENTLEMEN,

I thank you for your kind interest in the matter of Mr. Ed. Justelius, and feel great relief in consequence of your decision to remove the teacher.

I am the only member of the Local Board who ever visits or takes any interest in the affairs of the school, and the only one who is brought into contact with Mr. E. Justelius.

I feel that you have arrived at a just and wise decision. As a clergyman of the denomination in question (Church of England) I could not resign my post, nor refuse for long to visit the school, and yet I could not after his behaviour work with him for the benefit of the school. His behaviour for many months past has been extremely insulting as well as violent, and such conduct could not but have a very injurious influence upon the minds of the children, as well as hold up the office of both Minister and Local Board to contempt.

I have, &c.,

GEO. GURNEY.

No. 18.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,

2 January, 1875.

I THINK it but right to inform the Council of Education that since the receipt of their decision Mr. E. Justelius and his son have been from *house to house* of all denominations with a petition in hand to enlist the sympathies of the people in his favour.

G. GURNEY.

No. 19.

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No. 19.

MR. W. H. WOOD TO THE SECRETARY TO THE COUNCIL OF EDUCATION.

Emu Plains, 2 January, 1875.

Sir,

I beg to inclose a memorial, signed spontaneously by all the householders on Emu Plains. I also beg to certify that all the signatures are genuine and signed by none but *bonâ fide* householders and resident within the school district of Emu Plains.

I have, &c.,
W. H. WOOD.

[Enclosure.]

To the Secretary, Council of Education, Sydney,—

Emu Plains, 1 January, 1875.

Sir,

We, the undersigned inhabitants of the District of Emu Plains, have heard with regret that the Council have determined to remove Mr. E. Justelius, teacher of the Church of England school here.

We would respectfully request the Council to reconsider the matter, as we have every confidence in Mr. and Mrs. Justelius as teachers.

W. H. Wood
Jacob Innes
Mark Towle
Henry Peir
Donald Ross
Henry Messer
James Bunyan
Mrs. C. Beasley
Mrs. Staks
John J. Bissland
William Walker
John Hayden
Mrs. Maria York

G. H. Dempsey
John Ryan
Alfred Stanhope Swift
Jas. Tobias Ryan (Mem-
ber of Local Board)
Mrs. Sarah Ryan
Mrs. Barbara Jones
Mrs. Mary Evans
Mrs. Jessie Upton
Jonathan Mullis
Mrs. Etta Walker
Wm. Lucas
T. A. Cunningham

Mrs. Maria Evans
Mrs. James Evans
Isaac Innes
Abraham Rayner
W. Poll
James Jude
James March
Mrs. W. Cornell
Joseph Taylor
Mrs. H. Marchant
John Rayner
Hugh Curry
G. Ryan

David Fitch
Mrs. Beatson
Daniel Upton
Wm. J. Rayner
Wm. Frost
Wm. Ellison
John Colless
George Colless
John E. Bisset
Mrs. Maria Peasley
Wm. Wagstaff
James Coghlan
Mrs. Harriet Colless

[In all 51 Signatures.]

No. 20.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE INSPECTOR OF SCHOOLS, CUMBERLAND DISTRICT.

Council of Education Office,
Sydney, 5 January, 1875.

EMU, C.E. :—Proposed removal of teacher, Mr. Justelius.

The Council has decided to remove Mr. Justelius from the above school in consequence of his insulting conduct towards the Rev. G. Gurney, Chairman of the Local Board. Be good enough therefore to submit a recommendation with a view to his removal as early as practicable.

W. WILKINS,
Secretary.

No. 21.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
7 January, 1874.

GENTLEMEN,

I shall feel obliged if in carrying into effect your decision to remove Mr. Justelius from Emu, you would kindly appoint such a teacher as, being a member of the Church of England, you might in your wisdom deem fit.

I am, &c.,
GEORGE GURNEY.

B.C., Inspector of Cumberland District.—Be good enough to state if you can arrange for the appointment of an eligible teacher to succeed Mr. Justelius?—W.W., 11/1/75.

B.C., Secretary.—I am unable to arrange to place another teacher instead of Mr. Justelius at Emu Plains. With reference to B.C., No. 75/34, I would also remark that I am unable to provide for the removal of Mr. Justelius. It does not appear that the teacher has been communicated with respecting the alleged "insulting conduct"; and lest there should be some oversight in the matter, I think it right to point this out. It seems to me that no decision should be arrived at without first calling upon the teacher for his version of the affair.—J. M'CREDIE, Inspector, Cumberland District.

No. 22.

MR. G. H. JOHNSON TO THE SECRETARY TO THE COUNCIL OF EDUCATION.

76, Devonshire-street, Strawberry Hills,
21 January, 1875.

Sir,

Having been led to infer from information I have received that there is a school at Emu Plains requiring a master, I have the honor herewith to offer myself as a candidate. I have written to the Rev. Mr. Gurney on the subject, who has sent me in reply the note attached to this application.

Trusting that his note will be favourably acknowledged, and awaiting your reply,

I have, &c.,
G. H. JOHNSON.

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[Enclosure.]

[Enclosure.]

The Rev. G. Gurney to Mr. G. H. Johnson.

Parsonage, Emu,
20 January, 1875.

Dear Sir,

I have your note and that of Mr. Vidal, who also mentions the name of Mr. Wilkins.

I am prepared to accept your appointment should the Council think fit to propose you, or to entertain your application, which I presume has already been sent in. You can make any use you think fit with this note to secure the approval of the Council, or, if necessary, I am prepared to write to the Council in your favour.

Yours, &c.,
GEORGE GURNEY.

No. 23.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO MR. E. JUSTELIUS.

Council of Education Office,
25 January, 1875.

Complaints preferred against you by the Rev. Mr. Gurney, Chairman of Local Board.

THE Council is in receipt of a communication from the Rev. George Gurney, Chairman of the Local Board, complaining that you behaved towards him in a most insulting manner on the morning of the 14th December ultimo. Mr. Gurney states—

"He, this morning, during the first hour insulted me most grossly. He called me a liar, a scoundrel, and told me that I was not worthy to wear the black coat of a clergyman; called three boys out of the school while I was hearing them read the Bible; tried to tear one of the school records out of my hand; shook his fist in my face and said that if I had been outside he would have treated me in another way; interrupted me by walking up and down the school and making a noise with his feet, and then walked out of the school."

The Council has therefore instructed me to call upon you for such explanation as you may be in a position to furnish with reference to the charges preferred against you by the Rev. Mr. Gurney.

W. WILKINS,
Secretary.

No. 24.

THE REV. G. GURNEY TO THE SECRETARY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
27 January, 1875.

MY DEAR SIR,

A Mr. G. H. Johnson has applied to me for the post of teacher at Emu Church of England C. D. School. Mr. Canon Vidal has also written me in favor of Mr. Johnson's application.

I am willing to accept Mr. Johnson should the Council nominate him. I am satisfied that a very good school can be got together by an efficient teacher. The situation is good, the school large, and the teacher's residence commodious and in very good order.

I trust the Council will not delay their appointment, as Mr. Justelius's conduct is so offensive towards me that I am unable to take any active part in the well being of the school during his stay.

I remain, &c.,
GEORGE GURNEY.

No. 25.

MR. E. JUSTELIUS TO THE SECRETARY TO THE COUNCIL OF EDUCATION.

Certe. C.E. School,
Emu, 28 January, 1875.

SIR,

I have the honor to acknowledge the receipt of your memorandum of the 25th instant, containing complaints preferred against me by the Rev. G. Gurney, Chairman of the Local Board.

I most respectfully beg to assure the Council that all the charges contained in your memo. are unfounded. I most emphatically deny having insulted Mr. Gurney, as stated in your memorandum.

On the morning referred to in your memo. Mr. Gurney came into the school, saying, "I am come to give religious instruction." I answered, "Very well, sir," and handed him the Bible. He then told the children to pay attention, as he wished to speak to them about the fence of the churchyard being broken down. I then stepped forward, and said, "Please, sir, I cannot allow you to speak to the children about the fence during school hours." He then, turning towards me, said, "Hold your tongue you impudent fellow; this is my hour and I can use it as I please." I then replied, "Most certainly not; you are at liberty to give the religious instruction but I will not allow either the Council's regulations or the Public Schools Act to be infringed, because they provide that the school time must either be used for religious or secular instruction, and I cannot allow any of the school time to be taken up for any other purpose without the sanction of the Council." He then said, "I tell you that you are an impudent boy who dare to speak in such manner to a clergyman." I then answered, "I am sorry to say some clergymen are not very particular how they speak to those they think beneath them in position." I never mentioned the word "scoundrel," nor did I call Mr. Gurney a liar; nor did I make any noise with my feet by walking up and down.

During the time Mr. Gurney was in the school Mrs. Justelius in a very gentle manner called me out, when Mr. Gurney called out to her, "Hold your tongue you impudent woman." I then told Mr. Gurney that but for his position as Chairman of the Local Board I would not allow him to speak to my wife in such manner. I did not leave the schoolroom until Mr. Gurney left, and then at his request to go outside to look at the fence; nor did I shake my fist in his face as alleged.

I

I respectfully beg to say that Mr. Gurney's statement is simply untrue, which can be proved by the scholars who attended on the 14th ultimo.

Mr. Gurney has told me that he will use every means in his power to have me not only removed but dismissed.

On the morning in question Mr. Gurney smelt very strongly from spirits and chlorodyne, and I attribute his excited state of mind to over-indulgence. His medical adviser has told me that his over-indulgence in chlorodyne is affecting his intellect and will drive him mad; and several of his parishioners have told me they attribute his treatment towards me to partial madness. He so far forgot himself lately, when I complained to him of one of his children, that he struck me forcibly with his fist in the presence of two gentlemen, which matter I have been advised to lay before the Bishop.

I have been compelled to seek the protection of the law against his eldest son for beating my small children when I have been away from home. I have, since I came to Emu, endeavoured to do my duty to the best of my ability, and believe I have the sympathy of the whole community here.

My predecessor, Mr. Paul, was tormented and persecuted by Mr. Gurney until he was actually compelled to leave against his own wish, and against the wishes of the people.

I got on very well with Mr. Gurney until I found out that he sent my little children privately to the public-house for grog for his use, and my remonstrance with him against such conduct was the cause of the first ill-will on his part towards me and mine.

I declare solemnly that what I have stated in this letter is in strict accordance with truth, and I now leave myself in the hands of the Council, feeling confident I will receive justice and consideration, which I can never expect from the Chairman of the Local Board here.

I have, &c.,
EDWARD JUSTELIUS.

P.S.—“I forgot to mention that on one occasion I said to Mr. Gurney, ‘I consider you are not fit to be a clergyman when you send to the public-house on a Sunday morning for grog.’—E.J.”

No. 26.

THE REV. G. GURNEY to THE COUNCIL OF EDUCATION.

Parsonage, Emu, 1 February, 1875.

GENTLEMEN,

I much regret that I have to lay another complaint against Mr. Justelius. As he is to be removed to another school I should much prefer keeping silence, but he is so misrepresenting matters and spreading such false reports that in self-defence I am compelled to take this course.

On the evening of the 25th January ultimo my son George had a dispute with his two sons, and under great provocation George gave them each a box on the ears. His sons have often struck my boys. Now, I much regret such proceedings, and would have prevented it had I been present, or made him apologize *at the time, if I had been asked*; but Mr. Justelius took the law into his own hands, and rushed at my son horsewhip in hand. George retired behind me, and then passed within my Mr. Justelius was so excited that in his efforts to get at my son, and escape from his brothers-in-law, that he left his coat and then his waistcoat in their hands. He then tried to enter my gates, but my daughter stood in the way to keep the fastening down. At this stage he shook his fist at her and said, “I will give it you when I get you outside.” Before retiring he offered to fight me, called me liar, snotty wretch, and said, “You preach on Sunday, but are a devil on Monday.” His next step was to take out a summons against my boy, and ask leave of you to close the school on Friday to watch the case, which did not come on. He stated to Mr. Wynne, lessee of the railway bridge, that he came quietly up to me to ask my interference, and that my answer was a blow between the eyes, but that he thanked God he had sufficient resolution to restrain himself from returning the blow. I never raised my hand to him or any man in my life to strike. I am “*no striker*.” My son, wife, and daughter were all present and can bear me out as to the truthfulness of this statement. Had he got at my boy my belief is that he would have dealt him a blow from which he would not have recovered easily. He has gone in again to-day to take out another summons if the Clerk of the Bench will give it.

On Friday last, the 29th, he came and asked me to allow the 25th to be as though it had not been. Had he withdrawn the charge about me (*i.e.*, the charge of striking Justelius) I would have agreed but he would not give the contradiction in writing. I asked him, “Dare you say that I struck you?” His reply was, “I was so excited I do not know or remember what did take place. I believe you did not,” and stated that he would take his oath that he did not tell the lessee of the bridge as reported, but he would not write anything down, and so the interview ended. On Saturday last I sent my boy to say that I was willing, in the interests of peace, to erase the 25th from my memory. I would have done so had he only remained quiet. But he tried to get my son to sign a document in an underhand way, which he had previously stated in the town he would make as public as possible. When he asked my son to sign the paper he said, “It is nothing to do with your father.” I never in my life witnessed such an exhibition of temper as Mr. Justelius displayed on Tuesday last.

The petition he sent in to you lately from Emu was signed by people who *as a rule* did not belong to either church or school. I am willing to account for every signature if only I am given an opportunity.

As a general rule signatures to petitions are easily obtained, and one or two of note may account for the rest.

I have, &c.,
GEORGE GURNEY.

THE REV. G. GURNEY to THE COUNCIL OF EDUCATION.

Parsonage, Emu,
3 February, 1875.

GENTLEMEN,

Mr. Justelius was in Sydney all day on February 2 (yesterday), and left the school in the hands of his wife. I gave him no permission, nor do I know of any person—entitled to give such permission—having been applied to.

This seems to me as very irregular.

I have, &c.,

GEORGE GURNEY,
Chairman of Local Board, Emu Ch. of Engd. Cd. Denl. School.

No. 27.

THE SECRETARY TO THE COUNCIL OF EDUCATION to THE INSPECTOR OF SCHOOLS, CUMBERLAND DISTRICT,
FOR inquiry and report as to grounds upon which Mr. Justelius's removal is deprecated and his retention is desired.

Very urgent.—2/2/75.

W.W.

B.C., Secretary,—

1. Fifty-one signatures are affixed to this petition in favour of Mr. Justelius. Of these, *thirty-five* belong to the Church of England, *twelve* are Wesleyans, *three* Presbyterians, and *one* Roman Catholic. There being no other school in the locality but the Emu C. E. one, *persons of all denominations are interested in the school and the teacher.*

2. From Annex B it will be seen that the petitioners represent thirty-nine children in attendance at the Emu C. E. School, the number enrolled therein being for last quarter forty-six. It appears therefore that nearly all the parents of pupils have signed the petition, and they are all, I believe, *bonâ fide* residents of Emu Plains.

3. I visited Emu Plains yesterday, and met a number of the petitioners (17), whose statements as to the grounds on which they signed the petition are appended hereto in Annex B, and require, I think, no comment from me beyond this, that they were taken down singly with the most scrupulous care, each one being called in as required, and Mr. J. T. Ryan, a member of the Local Board, being present as well as Mr. Wood. Neither of these gentlemen *were* allowed to take part in the proceedings by asking questions, &c.

4. I met the persons whose statements are given in Annex A in Mr. Wood's house. To have conducted the inquiry in the schoolroom would have necessitated the closing of the school, and would have brought the petitioners into collision with Mr. Gurney, which in the circumstances it was, I think, well to avoid.

J. M'CRENIE, Inspr., Cumbd. Dist., 4/2/75.

Emu, 3 February, 1875.

STATEMENT of persons who signed the petition in favour of Mr. Justelius, of Emu C. E. School, dated 1 January, 1875.

(1.) *Mr. James T. Ryan* :—My reason for signing the petition was this, that I do not believe any schoolmaster could agree with Mr. Gurney. From all I could glean from the people, I believe that Mr. Gurney is in the wrong in his disputes with Mr. Justelius. The former teacher—Mr. Paul—left because of his disagreeing with Mr. Gurney. I am a member of the Emu C. E. Local Board.

JAMES T. RYAN.

(2.) *Mr. John Haydon* :—Until a fortnight ago I was one of the churchwardens in connection with the Emu Church of England. My opinion was in favour of Mr. Justelius, because my child got such good learning from him at the school. Though I am a churchman, I think Mr. Gurney is in the wrong in his disputes with Mr. Justelius; and it is, so far as I can learn, from intercourse with the people, the general opinion. I therefore signed the petition in his favour.

JOHN HAYDON.

(3.) *George Henry Dempsey* :—I signed the petition in favour of Mr. Justelius, because I believe Mr. Gurney to have been in the wrong in his disputes with him from my own personal knowledge. My orchard is close to the church and school, and when in it I heard them disputing one day. I then heard Mr. Gurney make use of words that I thought very improper for a clergyman. Mr. Gurney then called Mr. Justelius a "rascal" or a "scoundrel,"—I am not sure which. I went away at once lest I should be called as a witness and did not hear any more. The general opinion is that Mr. Gurney is in fault. It is horri-fying to me to hear my children rehearse what takes place between the Minister and schoolmaster. I am a Roman Catholic.

G. H. DEMPSEY.

(4.) *Mr. Wm. Wagstaff* :—I signed the petition because I thought Mr. Justelius to be a proper man for Emu C. E. school. I am of opinion that the schoolmaster is in the right and Mr. Gurney in the wrong in the disputes that have taken place between them. He had a good schoolmaster, Mr. Paul, here before, and he was not satisfied until he got him shifted. The common opinion among the people is that Mr. Gurney should be removed and not Mr. Justelius. I belong to the Church of England.

WILLIAM WAGSTAFF.

(5.) *Mr. Isaac Innes* :—I live at Emu Plains, am a member of the Church of England, and have four children attending the school. I signed the petition in favour of Mr. Justelius, because I firmly believe that Mr. Gurney is in the wrong in his disputes with the teacher. They have both talked to me about their disputes, and I believe Mr. Gurney to be in the wrong. I have only heard one person speak in favour of Mr. Gurney in the matter; all but that one whom I have heard speak about these matters are against him (Mr. Gurney.)

ISAAC INNES.

(6.) *Wm. Ellison* :—I live at Emu Plains, and am a member of the Church of England. I signed the petition because I thought Mr. Justelius was being removed on account of being incompetent, and I did not think him so. I thought it had been represented to the Council that the people wished his removal, which I knew not to be true. I have heard about the quarrels between the teacher and Mr. Gurney, and I am of opinion that if a fresh teacher came here to-morrow he could not agree with Mr. Gurney. In fact I think no one could do so. I believe him to be insane, judging from his acts. It is the common opinion that he (Mr. Gurney) is quite in the wrong.

WILLIAM ELLISON.

(7.)

(7.) *Daniel Upton* :—I live at Emu Plains, and go to the Church of England there. I think Mr. Gurney is in the wrong, so far as I have heard and can judge of the disputes between them. I believe that the most of the people are in favour of Mr. Justelius. The former teacher, Mr. Paul, and he (Mr. Gurney) often disagreed, and it was reported that he went away on that account.

DANIEL UPTON.

(8.) *Mrs. Charles Beasley* :—I live at Emu Plains and attend the Church of England there. I have three children attending school, and two more ready to go as soon as this disputing is settled. I signed the petition because I think Mr. Justelius is in the right and Mr. Gurney in the fault in the quarrels that have taken place between them. I am perfectly sure of this from what my eldest daughter, who is fifteen years old, has told me when she has come home from school. All that I have talked with about it take the part of Mr. Justelius. My husband is now in Queensland. If another teacher came I believe he would not agree with Mr. Gurney.

SARAH BEASLEY.

(9.) *Mark Towle* :—I live at Emu Plains, and am a Baptist, but my children attend the Church of England and go to the school. I signed the petition in favour of Mr. Justelius because I believe Mr. Gurney to be in the wrong and Mr. Justelius to be right. The general opinion of the people is, I think, that Mr. Gurney is not a fit and proper person to be over any school. I keep a store and have dealings with Mr. Gurney, and have stopped his credit because I can't trust him. He takes a large quantity of chlorodyne. He has had as many as 3½ dozens of bottles of chlorodyne—some of them costing 3s. 6d. each—in five weeks or thereabouts, and I believe he takes it to excess.

M. TOWLE.

(10.) *Jacob Innes* :—I live at Emu, and attend the Church of England there. I have three children at school. I signed the petition because I think Mr. Gurney is in the wrong in the disputes between him and the teacher. The general opinion agrees with mine. If anyone needs removal it is Mr. Gurney.

JACOB INNES.

(11.) *James March* :—I live at Emu, am a churchman, and have got a grandson at school. I signed the petition because I think Mr. Gurney is in the wrong in the quarrels between him and the teacher. My grandson is fourteen years old, and he told me not long ago that Mr. Gurney kicked up a great row with Mr. Justelius in the school. All that I have heard speak about these things are against Mr. Gurney.

JAMES MARCH.

(12.) *William Poll* :—I live at Emu, and go to the Church of England; I have three children at school. I signed the petition because I thought Mr. Justelius to be in the right, and not Mr. Gurney, in their disputes. My children used to come home and tell me about them. All that have spoken to me about them believe Mr. Justelius to be in the right. If any one is to be removed I think it should be Mr. Gurney.

WILLIAM POLL.

(13.) *Wm. Lucas* :—I live at Emu, and am a Wesleyan. The former teacher, Mr. Paul, left, I believe, through the interference of Mr. Gurney. Mr. Justelius is liked by the people generally. From what I have heard I believe Mr. Gurney has the sympathy of scarcely any one on Emu Plains, and I believe, in common with nearly all here, that Mr. Gurney is wrong in his interference with Mr. Justelius. I therefore signed the petition in the latter's favour.

WM. LUCAS.

(14.) *John Ryan* :—I live at Emu Plains, and belong to the Church of England. I signed the petition because I believe from what I have heard that Mr. Gurney is in fault in the disputes with Mr. Justelius. I have never heard any one defend Mr. Gurney in the matter. The former teacher, Mr. Paul, could not agree with Mr. Gurney, and left in consequence.

JOHN RYAN.

(15.) *John Bissland* :—I live at Emu, and am a Wesleyan. I had two children at school until lately. I signed the petition, because I thought highly of Mr. Justelius as a teacher and a man, and considered Mr. Gurney's conduct towards him to be wrong. The general impression is that his conduct is deserving of censure, and that he is unworthy of his high office. In my opinion he is insane.

JOHN G. BISSLAND.

(16.) *Jonathan Mullis* :—I live at Emu, and am a Wesleyan. I have two children at the Emu C. E. School. I signed the petition in Mr. Justelius' favour, because I heard that Mr. Gurney was keeping annoying him, and thought he (Mr. G.) was wrong. This is the general opinion of people here. My children have told me several times of quarrels between them in the school.

JONATHAN MULLIS.

(17.) *Wm. Henry Wood* :—I live at Emu, and belong to the Wesleyan Church. I signed the petition because I know Mr. Gurney to be in the wrong, from his own talk to me. I have every confidence in Mr. Justelius as a teacher and a gentleman, and I believe it is the general impression about here that Mr. Gurney is totally unfit for the position he occupies. My boy has repeatedly come home and spoken of the disturbances in school caused by Mr. Gurney. He told me that Mr. Gurney called Mr. Justelius a liar one day. I believe that several children have been taken away from the school on account of Mr. Gurney's conduct.

W. H. WOOD.

Mr. E. Justelius to Mr. Inspector M'Credie.

Cert. C. E. School, Emu, 3 February, 1875.

Sir,

In compliance with your request, I have the honor herewith to furnish you with the number of children who attend this school, belonging to each of the householders who signed the petition against my removal.

Names of Parents.	No. of Children.	Names of Parents.	No. of Children.
Jacob Innes	3	Jonathan Mullis	2
Mark Towle	3	Mrs. Etta Walker	2
Henry Peir	1	Isaac Innes	4
Donald Ross	1	Abraham Rayner	2
Henry Mergio	3	W. Poll	3
James Bunyan	2	James March	1
Mrs. Beasley	3	Mrs. W. Cornell	3
Mrs. Stokes	1	Hugh Curry	1
John Haydon	1		
Wm. Wood	1		
G. H. Dempsey	2		
			39

I have, &c.,
EDWD. JUSTELIUS.

No. 28.

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No. 28.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
3 February, 1875.

GENTLEMEN,

A meeting took place at Mr. Woods', a Wesleyan, Mr. M'Credie in the chair. None of those in my favour were allowed to enter the room. The people assembled first at the school and then retired to Mr. Woods', Mr. M'Credie (Inspector) stating that it was more than his place was worth to hold it in the school without the permission of the Council.

I consider that it is not the part of an Inspector to attend such party meetings or to help a political or sectarian movement against the Chairman of the Local Board. I consider it my duty to inform the Council of such proceedings. Mr. Justelius took an active part in the late election in favour of Mr. Ryan, denouncing me at a meeting held here at a public-house. I recorded my vote in favour of Mr. Shepherd, but otherwise attended no meetings and influenced no voters.

I remain, &c.,
GEORGE GURNEY.

P.S.—Mr. Wood was in the chair, but Mr. M'Credie arranged everything.—G.G.

No. 29.

MR. E. JUSTELIUS TO THE SECRETARY TO THE COUNCIL OF EDUCATION.

Cert. C.E. School,
Emu, 4 February, 1875.

SIR,

I have the honor to request that the Council will be pleased to permit me to close this school for *one* day next week, for the purpose of attending at the Police Court, Penrith, in an assault case between myself and the Rev. G. Gurney, and in which case I am the plaintiff.

I have, &c.,
EDWD. JUSTELIUS.

No. 30.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
5 February, 1875.

GENTLEMEN,

On the evening of the 3rd instant I wrote to Mr. Justelius for his authority for leaving his school all day on Tuesday, the 2nd, for Sydney. The same evening, he gave written reply that a member of the Local Board had given permission. On the morning of the 4th I wrote for the name of the member of Local Board, but received no reply till he had sent a note or message to Mr. J. T. Ryan, and received a note from that gentleman in reply. He then wrote to say that the name of the member of Local Board was J. T. Ryan, Esq.

I then wrote to ask if the permission was given *prior* to his going to Sydney, and in writing; after waiting (30) thirty hours and no reply I conclude, as I have all along suspected, that he left his post hurriedly at 6 in the morning of Tuesday without any authority.

Being the Chairman of Local Board, his duty was clearly to apply to me (living as I do within a stone's throw) in the first instance, but this he did not, nor did he acquaint me of his having gone, or his intention previously to go.

I am satisfied in my own mind that he has not acted properly on this occasion.

I am, &c.,
GEO. GURNEY.

No. 31.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO MR. E. JUSTELIUS.

Council of Education Office,
Sydney, 9 February, 1875.

Your letter, dated 4th February instant, requesting permission to close school for one day.

The Council has granted you permission to close the above school for one day during the current week, for the purpose mentioned in your letter. Be good enough to report to this office the day on which you were absent from your duties.

W. WILKINS,
Secretary.

No. 32.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.

Council of Education Office,
Sydney, 10 February, 1875.

REV. SIR,

I am directed by the Council of Education to acquaint you that the Council has granted Mr. E. Justelius, teacher of the Certified Denominational Church of England School at Emu, leave of absence from his duties for one day, to enable him to appear in a case at the Police Court at Penrith during the current week.

I have, &c.,
W. WILKINS,
Secretary.

No. 33.

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No. 33.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE INSPECTOR OF SCHOOLS, CUMBERLAND DISTRICT.

Council of Education Office,
Sydney, 10 February, 1875.

EMU, C.E.—Leave of absence to teacher.

THE Council has granted the teacher of the above school, Mr. E. Justelius, leave of absence from duty for one day during the current week, to enable him to appear in a case at the Police Court, Penrith.

I have, &c.
W. WILKINS,
Secretary.

No. 34.

MR. E. JUSTELIUS TO THE SECRETARY TO THE COUNCIL OF EDUCATION.

Certe. C.E. School, Emu,
10 February, 1875. 7 p.m.

SIR,

I have the honor to acknowledge your memo. of 9th instant, received this moment, intimating that the Council has been pleased to grant me permission to close this school for one day during the current week.

Friday being the only Court day during this week, and being summoned to attend an investigation to be held in this school on that day, I shall not be able to take advantage of the permission given, but must postpone the Court business until some other future day.

I have, &c.,
E. JUSTELIUS.

No. 35.

REPORT OF SIR ALFRED STEPHEN AND S. C. BROWN, ESQ.

Emu Plains C. E. School.—Complaint of the Rev. G. Gurney against the teacher—E. Justelius.

THE first charge is in substance that Mr. Gurney went to the school on 14th December last for the purpose of giving religious instruction there, and that he was obstructed by the teacher's interference, gross abuse, and insolence, extending even to the shaking of his fist in Mr. Gurney's face, calling him a liar and scoundrel, trying to tear one of the school-books out of his hand, walking noisily up and down the room, &c. The whole of this is denied by the teacher.

We examined one witness, a lad of 15, called by Mr. Gurney; three boys and one girl, aged respectively 14, 10, 13, and 10, called by Mr. Justelius, and were addressed by both parties.

Mr. Ryan, a Member of the School Board, was present during the investigation. The children were examined separately.

Not one of the witnesses heard the word scoundrel, nor saw Justelius shake his fist, or walk noisily in the room. Nor did they hear a certain threat which Mr. Gurney's letter mentions.

But, in effect, they all agree in the following version of the scene: Mr. Gurney commenced, after announcing that he came to give religious instruction, by a complaint respecting the church-yard fence, which he accused Justelius's sons of having broken, saying that they took the grass for their father's horse. An altercation ensued; Justelius, who is evidently a very excitable person, observing that Mr. Gurney's only right there was to give religious instruction, or that *that* was not religious instruction. In the course of the dispute, Mr. Gurney having taken up the school *Fee* Book by mistake, supposing it to be the *Visitors'* Book, and insisting on its being the latter, Mr. Justelius tried to take the book from him, and during the struggle, which ended by the tearing of the book, or about that time, Mr. Justelius used the grossly offensive words which follow. He said that if Mr. Gurney persisted in calling the book the *Visitors'* Book he told a lie, or, according to one of the lads, he must be a liar. He also said that Mr. Gurney wore a black coat, but had a blacker heart beneath it.

It is impossible that such language as this, addressed to the clergyman and Chairman of the School Board, can be characterized otherwise than as in the highest degree improper. On the other hand, large allowance must be made for a teacher whose children were charged in the school with stealing, and who had, in presence of all assembled, been called an impudent person, and threatened with suspension, as Justelius was that morning by Mr. Gurney. Scarcely a month had elapsed, moreover, since the termination of an inquiry, instituted at Mr. Gurney's instance, on the latter's complaint, that Mr. Justelius was a Wesleyan, the object of which was to effect the teacher's removal. The charge turned out to be utterly without foundation. And we conceive that, under such circumstances, even had there been no ill-feeling between them existing of an earlier date than September last, Mr. Gurney is seriously to blame for commencing another cause of quarrel; and especially for introducing it in the school hours, before the children. That in fact such an ill-feeling did exist, we gather from Mr. Gurney's own letter, referring to some statements reflecting on him, or on a member of his family, made in that year, or said to have been made by Mr. Justelius.

We think it a duty to add, as the papers in the case conclusively show, that the teacher is highly approved of and supported in the district; and that the parents almost unanimously (those who represent thirty-nine of the children having signed a petition to that effect) would much regret his removal. Our own conclusion is, that the version of the unfortunate disturbance, which we have stated to have been given by the witnesses examined, is a correct one in substance; and that, however censurable Mr. Justelius may be for the language into which he was betrayed, it would not be just to remove him.

The second charge made by Mr. Gurney is founded on an occurrence, not affecting Mr. Justelius's conduct as a teacher, but relates entirely to an altercation which took place on the evening of the 25th ultimo, in some open ground adjoining Mr. Gurney's residence, and which commenced, it seems, in a disturbance or quarrel between the children of the parties. Upon the whole, we thought it expedient to
enter

enter on this charge also, as it imputes to the teacher not only most offensive language towards Mr. Gurney, but also an unbecoming threat to his daughter, and an attempt to enter that gentleman's gate in order to commit an assault.

We deeply regret to say that the evidence on this charge was so conflicting as to render it impossible for us to arrive at any conclusion perfectly satisfactory to our own minds. Mr. Gurney's son, a young gentleman of 17, who attends the Glebe Point classical school, and the daughter, a girl aged 15, who gave her evidence calmly, and with apparent truthfulness, confirmed their father's representation substantially throughout. Two brothers-in-law of Mr. Justelius's, on the other hand, named William and James Bowles, utterly contradicted the Gurneys in every particular; and even declared that the only violence exhibited on the occasion was by Mr. Gurney, who struck Mr. Justelius on the chest without provocation. If we applied the established legal rule, that every complainant must establish his case by preponderating testimony, we should be compelled to say of the present that it was "*not proven*." But as Mr. Justelius has initiated proceedings before the Penrith Bench, we abstain from pronouncing any opinion on the facts. It is not improbable that his complaint, therefore, may—on the same principle to which we have adverted—be dismissed as unsubstantiated. We have ourselves no doubt that both Mr. Gurney and Mr. Justelius were exceedingly excited; so that each may unconsciously exaggerate, or even (possibly) invent matters. And the painful contradictions mentioned by us may perhaps be explained—to some extent at least—by the supposition that the two sets of witnesses really refer to different points of time.

15th Feby., 1875.

ALFRED STEPHEN.
S. C. BROWN.

No. 36.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu.

18 February, 1875.

GENTLEMEN,

When Sir Alfred Stephen and S. C. Brown, Esq., were down here on the 12th instant, I stated that *one* of my *witnesses*, Richard Wynne, was not present, being away at Narellan. Sir Alfred told me to get his evidence and forward it by post. Mr. Wynne returned yesterday to the toll over the Nepean River, Emu and Penrith, and this morning I wrote at his dictation the accompanying, which he signed in the presence of myself and my son George. Its value consists in this, that the statement entirely contradicts the statement of his two brothers-in-law, the Messrs. W. & J. Boles, who stated that I hit him in the *chest*; and Mr. Justelius's statement to me in my house, sworn to by my daughter, as stated in my note February 1, that to the best of *his* recollection I did not hit him at all, which was of course the only true statement. My children—George, 17, now in eighteenth year, and Florence Clifton Gurney, 15 in November last year—both being present, stated most distinctly that I did not strike him. My wife and my second son were also prepared (as I stated to you) to swear the same, and I am quite sure that none of them would tell an untruth even to shelter their father; and I again assert that *I never* struck him; and I am quite sure no one who knows my disposition would believe it for one moment.

You may say why should his brother's statement be doubted. Does not the reason suggest itself? Have they not indeed tried to prove too much for their brother-in-law? I think it manifest. Would a clergyman without any provocation strike a *man* deliberately, as the brothers-in-law state, and as an answer to a very proper request, if it was as they stated? My belief is that the man is a very *wicked man*, and at times I think not in his right mind. Mr. Justelius has told Mr. Squires, of Penrith, that Sir Alfred Stephen said to *me* during the inquiry: "Is that the way you preach the Gospel?" Did Sir Alfred say so; if so, to what did it refer? He is making other false statements as to what took place, and I am not inclined to follow and contradict him. Surely justice will soon overtake him. I do not wish him to be ruined; but the further he proceeds matters become more serious, and from the Council I shall, I fear, have to appeal to the law, a last resort, and one which as a minister I abhor.

I have, &c.,

GEORGE GURNEY.

P.S.—One more word: When Mr. Justelius took out a summons against my boy on the 27th January, why not take one against *me*? Why pass over the graver and neglect the greater offence? He has not taken one out against me at all.

I am more than ever convinced that the five children who gave evidence in school were told what to say. I will never rest till I find out the truth.

[Enclosure.]

Nepean Bridge, Penrith,
18 February, 1875.

I, RICHARD WYNNE, lessee of the Nepean Bridge (toll), state as follows:—That on the 27th day of January ultimo Mr. Ed. Justelius, Teacher of Emu C. of E. Denoml. School, said as follows:—"I have just taken out a summons against George Gurney (the younger) for beating my boys." * * * "I would not have done so, but when I went to Mr. Gurney to ask him to chastise George he struck me a blow *as hard as he could between the eyes*." I said I am surprised at Mr. Gurney doing so—I can scarcely credit it—when he replied, "I had two gentlemen present who witnessed it," and further, "I thank God I was prevented from retaliating."

I, Richard Wynne, am prepared to state the above on *oath* if required.

RICHARD WYNNE.

Signed in presence of,—

REV. G. GURNEY and } Witnesses to signature.
GEO. B. GURNEY, }

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No. 37.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO MR. E. JUSTELIUS.

Council of Education Office,
Sydney, 19 February, 1875.

Charges preferred against you by Rev. G. Gurney.

HAVING carefully inquired into the charges preferred against you by the Rev. G. Gurney, the Council is of opinion that you are not deserving of removal from your present position on account thereof. I am, however, to caution you as to the necessity for avoiding the use of discourteous or improper language towards members of the Local Board.

W. WILKINS,
Secretary.

No. 38.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.

Council of Education Office
Sydney, 20 February, 1875.

REV. SIR,

I have the honor, by direction of the Council of Education, to acquaint you that, after full and careful inquiry, the Council is of opinion that Mr. E. Justelius is not deserving of removal from his present position as teacher of the Certified Denominational Church of England School at Emu, on account of the charges preferred against him in your letters dated respectively 14th December last and 1st February instant.

I have, &c.,
W. WILKINS,
Secretary.

No. 39.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.

Council of Education Office,
Sydney, 26 February, 1875.

REV. SIR,

With reference to your letter of 18th instant, I am directed by the Council of Education to transmit herewith a copy of the report brought up by Sir Alfred Stephen and S. C. Brown, Esq., on the charges preferred by you against Mr. Justelius, teacher of the Certified Denominational Church of England School at Emu. This course is adopted in order that you may see that the point referred to in your communication under notice was not decided by the Council.

I have, &c.,
W. WILKINS,
Secretary.

No. 40.

THE REV. GEO. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
February 22, 1875.

GENTLEMEN,

I regret that I am unable to accept your decision as final on my two notes, dated respectively Dec. 14 and Jan. 1, and most respectfully inform you that I am compelled to appeal to the Bishop to take up the matter.

I have been requested to forward you the enclosed petition.

I have, &c.,
GEO. GURNEY, B.A.

[Enclosure.]

To the Council of Education, Macquarie-street, Sydney,—
Gentlemen,

We, the undersigned heads of families, and others attending divine worship at St. Paul's Church of England, Emu, having heard with sorrow and indignation of the meeting lately held at the private residence of Mr. W. H. Wood, Emu, a Wesleyan, and attended chiefly by members of that persuasion, in the presence of the Government Inspector of Schools, and from which all were excluded who would not sign a certain petition in the interest of Mr. Justelius, at present teacher of the Church of England Certified Denominational Church of England School, Emu, beg to state as follows:—

- (1.) That, in our humble opinion, the presence of the Inspector at such a one-sided meeting is highly injudicious, as calculated to impair his usefulness and injure his reputation for fair dealing.
- (2.) That we consider ourselves bound in self-defence to state, that the teacher now in charge of the school at Emu does not possess our confidence as an instructor of youth, and that in consequence we are unable to send our children to the said school.
- (3.) That some of us have been obliged to withdraw our children from the school in consequence of the improper language used by the said teacher in the presence of our children, and reported to us by them on their return home.
- (4.) That we consider the teacher's conduct to our Minister as grossly insulting,—degrading, as affecting his own position as a teacher,—and injurious as regards the morals of the pupils under his charge.
- (5.) That his conduct during the late election of a Member for Parliament was most unbecoming a teacher, calculated to degrade the calling to which he belongs, and promote ill-feeling amongst the parents of his scholars.
- (6.) That, whilst we might speak our minds more freely as to our opinion of his late behaviour, we content ourselves with stating that so long as he remains in charge of the above-mentioned school our children shall not attend that institution.

Names.

Name.	Children.
Job Perry, Ry. gate-keeper	5
Alfred Woolls, overseer to W. Dean, Esq.	4
Robt. Jenkins, farmer	5
Mrs. Lane, baker	3
H. Player, farmer	3
Geo. Colless, drayman	1
Henry Walker, drayman	2
Saml. Fayers, labourer	2
Hugh Curry, labourer	2
Henry Stokes, labourer	2
Wm. Dukes, sexton	2
No. of children	25

No. 41.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
5 March, 1875.

GENTLEMEN,

I am no lawyer, and consequently unable to handle your report as would one learned in the law, but as the judgment given by you affects me very seriously—yea, painfully, for it affects my veracity, (upon which it appears to me to reflect),—I may be pardoned if, knowing as I and many others do, that “they have spoken against me with lying lips”, I endeavour to throw additional light upon the subject, by correcting a few mistakes into which the Council have fallen, and supply other information bearing directly upon the matter, though not yet noticed.

And here allow me to say that you have not given the matter that sifting which you yourselves would have demanded had you been in my position.

I lay this down as a fact indisputable: That in judgment No. 1 on my letter, December 14, 1874, either I or Mr. Justelius have lied; and in your report No. 2 on my letter, 1st of February, 1875, that either I, my son (late of the Collegiate School, Glebe Point), and daughter, or Mr. Justelius and his two brothers-in-law, have lied; and however painful the reflection, or however difficult the approach to a decision, I think you are bound to attempt it, by weighing the motives, the temptations, and the effects of the possible issues or results.

Your remarks about the failure of the first charge, and the indelicacy of making another so soon after, are entirely beside the mark. What was the first charge referred to? That the teacher was a Wesleyan. I repeat the charge, and it was only because that he lied that it was not proved, and that I was too truthful. Both the teacher and only witness lied.

If of any denomination, Mr. Justelius is a Wesleyan. His father, mother, brothers and sisters in law are all Wesleyans. His family and wife are Wesleyans; and he told me, and Mrs. Justelius told Mrs. Gurney, that when they were married he joined the Wesleyan persuasion, and was in connection with them during the six years of his residence at Paddington. Enquire of Jarret, of the “Royal Oak,” or Garrett of the butcher’s shop, near the “Royal Oak,” if he was not known as a most quarrelsome man during the time he lived near them employed as a “hide scraper,” or tanner of hides for the tannery, and if he did not attend the Wesleyan Chapel. That he had attended while *here* the Sacrament *once*, and once only, proves nothing, or that he had two children baptised in my church, for he held a Church of England post, he eat church of England bread, lived under a Church of England roof, rent free; had every kindness shown him by the Church of England minister, and the only *school testimonials* that he ever received (and I think ever will) collected and subscribed by myself and daughters, and as he was then pleased to say, that he never met with a more kind and liberal minister, and even told the children in my presence (which I did not care for) that they never had or could have a more generous or kind friend. But to return: had he gone to the Wesleyans to baptise his children (two out of nine, seven being baptised in the Wesleyan Church), would it not have rather unpleasantly compromised his position and have furnished me with a proof (which *unlike* his own word, and repeated assertions for two years) could not be denied, because furnished in black and white.

And besides the custom is common in the country. Some Wesleyans attending the chapel have an *idea* that Wesleyan baptism is not valid. Others do so for the sake of Wesley’s example. Others because they themselves were, and their other children were, and they not being bitter in their antipathies, or extreme in their views, prefer to do so to the end, for they retain a love of the *Mother Church*, and live from other than theological motives. Can you dispute this? In England in the rural districts it is more than common—almost invariable. I am not extreme; but if so, it is extreme *in the liberal sense*. I would like, if possible, the exchange of pulpits where practicable. I say this because I have been unjustly accused of *persecuting Mr. Justelius* for his *Wesleyan views and sympathies*. The census last taken will convince you. When asked how he signed he would not reply. He remembered how he had entered his wife and family as Wesleyans, but forgot when asked how he answered for himself. *Mr. Inspector suggested probably a Protestant*, and he adopted it. He told me that he *was*, in the face of my whole family, and never denied it till the 10th clause was appealed to. Ask in Paddington, where he was employed in preparing hides for the *tannery*, and was known as a most quarrelsome person, so much so that at last no person could look over the dividing-fence of his yard without a threat of Court work. His family were called by a very appropriate expression which I will not adopt here. When Mrs. Lowe, down here, told the Justelius’ of it, he denied the whole most positively, and threatened her with an action for slander and lies. But he knew better, for the young ——— were down here and confirmed every word. He has every Wesleyan in the place with him. With Mr. Gunther, only six months a provisional school, the service was held in the schoolroom, so of course he attended. He was also on trial, so to speak, after six years not under Council. Why did he leave ——— Church of England School? My impression is quarrelsomeness. I may be wrong; but how otherwise account for his six years’ disconnection with the Board, during which time he was very poorly off?

Your

Your report says six. "Five children were examined," all of whom attended the Wesleyan Church and Sunday-school (except one Beasley), concerning whom I will only write he had been better without her. Rayner (the one called in by me) was one of the five called in, and one of the *twelve on his list*. Mr. Justelius had these names on a list. Why?—because he knew he could trust them; and if you will let me see you I will say more, but not here, *about them*.

Now, gentlemen, you accuse me of *ill-feeling*. I have *none* towards Mr. Justelius. I cannot *respect* him after his behaviour, or hold further communication with him, but my worst enemies would hardly accuse me of ill-feeling in your sense. I would do him a good turn to-morrow if I could without the sacrifice of truth or character, but please remember he has called me a *striker*, and has *denied everything he has done*, or so coloured it as to make it appear quite different.

But you say great allowance must be made for a teacher, and who was called an *impudent fellow*, and his children accused of *stealing*. The latter I take first. The charge of stealing is simply ridiculous. The grass was taken, he allowed, by himself and son James, the latter having since cut his hand severely in cutting the said grass, but the *grass is common property*, all who choose being allowed to take it; but you still say the fence was broken. I never saw it. The rails were simply left down, being removed to admit of the grass being more easily passed through. This is *all*, and even this I said not *wilfully* but *carelessly*; and if Mr. Justelius had not interfered all would have been settled in a few words. "*Impudent fellow*" is rather a *mild* mode of addressing one who had shaken his fist in my face, threatened me with different treatment had I been outside, and called me vile and wicked names, and was even then interrupting me when the class were reading the Bible, stamping so loud as to have been heard over at my house, and caused the occupants to come out to see what was up. The threat of suspension after all this was so far justifiable, and I think ought to have been put in execution; and I venture to say that any one of you, being in my position, would have done it. The word "*scoundrel*" was *distinctly heard at the parsonage*, and loud language. I ask you, gentlemen, would you ever again enter the school were you in my place? You have given over the school to him virtually; and all who do not think with him, including nearly all the *Church of England* who used it, have for the present withdrawn from it. I was the only member of the Board who could find time to attend. It is generally so, I think, in small country districts. One member acts and does all, but now he might spit in my face—*deny the fact*. The children *dare* not support me, and so he has *all to himself*, but not for the good of the school, or even himself ultimately.

But may say all this is very well, but it does not leave the master a truth speaker. Does this astonish you? I do not think many down here would be. The story of the snake is too well known to be denied. The habit of romancing is given him by nearly all. But you say he has the confidence of parents representing 39 children. Not so. I venture to say that not one is really satisfied with him in that sense. I asked one why he signed? His reply is:—"I was misled as to the object, and told it would not injure you." (D. Upton.) Another is asked, not from any desire to injure you, or particular liking to Mr. Justelius, but to make it a Public School; and so it goes on. A large number signed the petition out of ill-feeling towards me, but perfect indifference to the teacher, of whom they knew little or nothing. You, gentlemen, ought to live here for a few months in the year, and you would know more. I can say safely for *Mr. Ryan* that the morning after he lost the election he wrote me to take his name off the seat. I voted for Major Shepherd. Ask him about this. I never influenced one vote, or left my house to speak to any about the elections, or cared much which way they went. Mr. Justelius attended his meetings and Paul's public-house—spoke in conjunction with Wood against me in a most disgraceful manner, and was rewarded by *Mr. Ryan's support*.

The Wesleyan clergyman voted for Mr. Ryan. The clergyman from Mulgoa did also. He is of the same lodge as Mr. Ryan. The Rev. J. Vaughan and I gave our votes to Major Shepherd, and this one vote of ours alienated the whole Ryan family, and that embraces in its connections nearly all Bunu.

Now your report on the letter of the 1st January, I need hardly say again that there was most awful lying on one or the other side. It is folly to try and say it may be accounted for by the two sets of witnesses referring to different periods. This supposition, however painful to acknowledge, is simply impossible. I need hardly say that I never struck him; and you will remember that I asked you to put the witnesses on oath. The mere weight of numbers is nothing. You arranged for three on each side, or others could be called, but you must weigh the motives, the probable effect of the truth being spoken, the appearance of the witnesses, their interest in the issue, or that of those for whom they spoke. I know Sir Alfred and his coadjutor S. C. Brown, Esq., felt that Florence Gurney spoke the truth. You say in your report, "who gave her evidence with calmness and with apparent truthfulness." And as regards my son George, I never knew him to tell a lie. As a child he never slept at night if during the day he had unintentionally misled me. Even though the consequences might be serious to himself, he always considered punishment more welcome than untruthfulness. But ask Thomas J. Bowyer, M.A., Principal of the Collegiate School, Glebe Point, what reliance may be placed on George Gurney's word. *Failure* would not permanently hurt me. On the other side the consequences ought to be instant *dismissal*,—that is, if all were to prove true, and were that your judgment, I should be found, I hope, the first to say, "give him another trial," and you would see that I had no ill-feeling. When false witnesses stand up they never agree. Examine the witnesses: *Two* say the blow was deliberate in the *chest*, and that I took hold of his *coat* (the coat was not on him when he came up to me, and I had the baby even after he did reach me, and it was for fear of his striking the baby it was taken out of my arms). But further he told me (and Florence heard him) that he did not remember he was so excited, but so far as he *did* I did not strike him. He told *Mr. Wynne* that the blow was with all my might *between his eyes*. One brother saw the whip held over my head; the other, James, did not see it. James left very early, and saw, he said, no more.

William Boles there throughout heard no abusive language throughout on either side; both say I struck him without any provocation. Now, gentlemen, examine all this: Does it agree?—and if it proves anything does it not prove too much. On the other side you own there is calmness and apparent truthfulness, and in the main as much agreement I think as three witnesses called one by one—two *vidé voce*, and one written weeks before; and yet they agree, so much so as to suggest the thought, perhaps they refer to different periods: No, no!

Moreover, Mr. Justelius has not taken the matter into Court. I never thought he would, because there is with some a difference between an oath and a mere assertion—a foolish and pernicious distinction. As a crime against God they are in every respect equal—though the law can punish one and not the other. Gentlemen, this matter must be sifted, because it is not pleasant for a gentleman

gentleman and a clergyman to have things laid to his charge which are utterly false—a wicked and cruel conspiracy. And Mr. Justelius tells people—and employs the whole of the Sabbath in doing so, that the Council believe all to be lies, and that (in proof thereof) they will not remove him. I must ask the Bishop to inquire further for me. Is the report correct in saying William and James Boles the Gurneys in every particular? No person that I have spoken to believe it to be true that I struck Mr. Justelius, and without provocation? Messrs. William and James Boles both agree that Mr. Justelius wanted to fight me. Did this contradict the Gurneys? Would the excitable E. Justelius take a deliberate blow from me without returning it? Would a clergyman strike another too without provocation? All agree that Mr. J. came whip in hand, except James Boles, and no wonder he did not, for he made off very quickly for the horse—(taken away by the younger Justelius, a very quiet and old horse.) No; I and others think that he might not witness his brother make or attempt an assault which he found he could not prevent. I, my whole family agree, was not excited—never more calm;—there was no need to be excited on our part. Mr. Justelius had a cause, and this is his only excuse, if any could justify such conduct. Then his children were boxed in the ears—not very badly,—and when one of the two was boxed (I am told) the other said, "You dare not touch me." Mr. Justelius's children have often struck mine; and on one occasion one of them laid Willie Gurney down and pressed his knees into his chest till he was almost black in the face. I do not uphold these acts, but who can at times prevent boys from being boys—striking each other? Ask Georgy's school boys at the Glebe school is George a quarrelsome fellow? Ask the chief matron—ask the Principal himself.

I have, &c.,
GEO. GURNEY, B.A.,
Chairman of Local Board, Emu.

No. 42.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.
Council of Education Office,
Sydney, 11 March, 1875.

REV. SIR,

I am directed by the Council of Education to acquaint you that the Council has had under notice your letter of 22nd February ultimo, together with a communication signed by certain residents of Emu, in further reference to your complaints against Mr. Justelius, teacher of the Certified Denominational Church of England School at that place.

2. In reply, I am instructed to state that the Council sees no sufficient reason to reopen this question.

I have, &c.,
W. WILKINS,
Secretary.

No. 43.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.
Council of Education Office,
Sydney, 12 May, 1875.

REV. SIR,

I am directed by the Council of Education to acquaint you that the Council has had under notice your letter, dated 15th March last, in reference to the report furnished to the Council by Sir Alfred Stephen and S. C. Brown, Esq., respecting your charges against Mr. E. Justelius, teacher of the Certified Denominational C.E. School at Emu.

2. In reply, I am instructed to state that, having given the matter due consideration, the Council sees no ground for receding from the decision embodied in the report in question.

3. I am at the same time to point out that you are mistaken in supposing that the report imputes falsehood to you or to any of your witnesses. On the evidence, as it stood in respect to the occurrence in the school-room, the writers of the report could not find the teacher guilty of the charges preferred against him; but they censured him severely for his language on the occasion. And the conclusion arrived at in regard to those charges is quite consistent with the belief, that you preferred them in good faith; although from the excitement of the scene you may have been mistaken as to the facts.

4. These remarks apply also with equal force to the complaint respecting the occurrence or occurrences at the garden gate. As implied in their report, Sir A. Stephen and Mr. Brown never doubted that your version of the affair may have been substantially accurate. But the evidence was too conflicting to justify the expression of a decided opinion; and moreover, the question seemed to be more proper for decision by a legal tribunal.

I have, &c.,
W. WILKINS,
Secretary.

No. 44.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

GENTLEMEN,

I have just received the enclosed note from Mr. Justelius. I consider that he has acted in a grossly insulting manner to Mr. Thos. Player, by removing his name from the list of members of Local Board, affixed by command to the wall of the school.

Mr. Player was appointed on the 13th October, 1872. Mr. Justelius was informed of his appointment in the usual way, and Mr. Player's name was added to the list by him on his receiving the usual notice of such appointment, and so soon as I was myself notified thereof.

Mr.

Mr. Player's name has been on the board in the school for many months past. Was there during the recent disputes and subsequent inquiries. The list was pointed out by me to Sir A. Stephen, and I think read by him on the occasion of his and Mr. S. C. Brown's recent visit of inquiry. Mr. Player has been recognized by Mr. Justelius as a member of the Local Board, and as such appealed to to sign school documents. Mr. Player was the first person appealed to by Mr. Justelius, after the recent "occurrence at my gates." But as Mr. Player did not take the same view as Mr. Justelius did of that matter, or believe his report as then given—hence Mr. Justelius' dislike to his appointment, his subsequent mention of his name to the children in ridicule, and last his unauthorized removal of his name from the notice board.

I, as Chairman, appeal to the Council against such behaviour of the teacher. Mr. Player is a very worthy and highly respected gentleman, and well deserving of a place on the Board. But the question is, is the teacher to take the law into his own hands, and remove his name without authority?

I am, &c.,
GEO. GURNEY, Ch.L.B. of C.C.E.D.S., Emu.

P.S.—Mr. Player is at present from home. As Mr. Player's name *might* have been accidentally omitted, as Chairman I replaced it, hoping the hint would be taken, and no further insult be offered to him, especially during his absence from home. But the teacher's note shows that it was *designedly* omitted by him, without any authority—a very grave offence. The other names stand on the list by the same authority and proceeding as that of Mr. Player.—G.G.

[Enclosure.]

Mr. Edward Justelius to The Rev. G. Gurney.

Certified C.E. School, Emu,
17 May, 1875.

Rev. Sir,

I noticed this morning that the name of Mr. Thos. Player has been during Saturday or Sunday added to the list containing the names of Local Board.

I beg to inform you that I have received instructions not to recognize any additional alleged members on the Local Board until I receive official notice from the Council of such appointment, and I can, therefore, not allow the name of Mr. Player to remain on the list before I receive intimation from the Council of his appointment.

I am, &c.,
EDWARD JUSTELIUS,
Teacher.

No. 45.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.

Council of Education Office,
Sydney, 27 May, 1875.

REV. SIR,

I am directed by the Council of Education to acknowledge the receipt of your letter, without date, in which you represent that the teacher of the Certified Denominational Church of England School at Emu has removed Mr. Thomas Player's name from the list of Members of the Local Board, suspended in the schoolroom.

2. In reply, I am instructed to state that it is found that Mr. Justelius was not, as you allege, informed of Mr. Player's appointment "in the usual way," or furnished with "the usual notice of such appointment," inasmuch as no communication as to Mr. Player's recognition by the Council as a Member of the Local Board has yet been addressed to him.

3. As it appears, however, that Mr. Player has been duly appointed as a member of the Board, the teacher has been apprised of his recognition by the Council, and instructed to place his name on the list of members posted in the schoolroom.

I have, &c.,
W. WILKINS,
Secretary.

No. 46.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Emu,
28 May, 1875.

GENTLEMEN,

I much regret the tone of your Secretary's note (May 27). So far as I am concerned Mr. Justelius was informed of Mr. Player's appointment in the usual way, through Chairman of Local Board, on the receipt of notice from the head of his denomination, *who himself* communicated with the Council.

That the Council failed to notify their *recognition* of the appointment to the teacher in no way *diminished* the force of the insult offered to the Member of Local Board, nor justifies the behaviour of the teacher.

I cannot believe that the Council *approves* of the teacher's conduct towards Mr. Player, though they fail to notice the same in their reply.

I am, &c.,
GEORGE GURNEY.

No. 47.

THE REV. G. GURNEY TO THE COUNCIL OF EDUCATION.

Parsonage, Echu,
28 May, 1875.

GENTLEMEN,

I acknowledge your communication, and will only say that there were not two occasions referred to by the two sets of witnesses. We both spoke to the same and *only* matter, viz., that at the gate, on which occasion only were we *all* present.

Yours, &c.,
GEO. GURNEY.

No. 48.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE REV. G. GURNEY.

Council of Education Office,
Sydney, 8 June, 1875.

REV. SIR,

I am directed by the Council of Education to acknowledge the receipt of your letter, dated 28th May ultimo, on the subject mentioned below, and to acquaint you that it has been duly submitted for the Council's consideration.

I have, &c.,
W. WILKINS,
Secretary.

Respecting the removal of Mr. Player's name from the list of Members of the Local Board by the teacher.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

EDUCATION.

(CERTIFIED DENOMINATIONAL SCHOOL, DUNGOG.)

Ordered by the Legislative Assembly to be printed, 15 July, 1875.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 7 July, 1875, That there be laid upon the Table of this House, a Return showing,—

- “(1.) The average daily attendance of pupils at the Certified Denominational School, Dungog, for the week ending the 5th March, 1875.
- “(2.) A similar Return for the quarter ending the 26th March, 1875,—The classification of the Teacher of such school under the Council of Education.”

(*Mr. W. Watson.*)

THE SECRETARY, COUNCIL OF EDUCATION, to THE UNDER SECRETARY, DEPARTMENT OF JUSTICE AND PUBLIC-INSTRUCTION.

Council of Education Office,
Sydney, 12 July, 1875.

SIR,

I am directed by the Council of Education to acknowledge the receipt of your letter of the 10th July instant, No. 75-4787, in which, by direction of the Honorable the Minister of Justice and Public Instruction, you transmit a copy of an order of the Legislative Assembly for certain information respecting the Certified Denominational Church of England School at Dungog.

2. In reply, the Council desires me to forward herewith the information applied for in your communication.

I have, &c.,
W. WILKINS,
Secretary.

Average daily attendance of pupils at the Certified Denominational Church of England School at Dungog, for the week ending 5th March, 1875	...	...	19.6
Average daily attendance of pupils at the same school, for the quarter ending 26th March, 1875	...	...	30.8
Classification of Teacher, Class III, Section C.			

W. W.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

COUNCIL OF EDUCATION.
(FREE EDUCATION IN SCHOOLS UNDER.)

Ordered by the Legislative Assembly to be printed, 10 August, 1875.

RETURN (*in part*) to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 4th June, 1875, That there be laid upon the Table of this House,—

- “ (1.) The number of Children who have in each year, since 1866, received
“ Free Education in the Schools under the Council.
- “ (2.) The number of Children in the Denominational and Public Schools
“ respectively.
- “ (3.) The number of such Children in each year in the Church of England
“ Schools, Roman Catholic Schools, Presbyterian Schools, and Wesleyan
“ Schools.”

(*Mr. Dibbs.*)

COUNCIL OF EDUCATION.

THE ACTING SECRETARY TO THE COUNCIL OF EDUCATION TO THE UNDER SECRETARY, DEPARTMENT OF JUSTICE AND PUBLIC INSTRUCTION.

Council of Education Office,
Sydney, 30 July, 1875.

SIR,

Adverting to your letter of the 10th June last (No. 75/4049), requesting certain information respecting free education in schools under the Council of Education, and to your memorandum of this day's date, enclosing question to be asked by Mr. Dibbs in the Legislative Assembly, regarding the same subject, I am directed to state, for the information of the Honorable the Minister of Justice and Public Instruction, that in consequence of pressure of work in the Council's office it has been found impossible to proceed with the preparation of the desired particulars.

2. It may be explained, that in order to obtain these particulars it will be necessary to search the separate returns of all the schools under the Council's supervision since the year 1867; and as these returns are put away with the other records of this office a very considerable amount of trouble and labour will have to be incurred in searching for the required details.

3. It will therefore be impossible to furnish replies to Mr. Dibbs's question before the closing of the present Session of Parliament; but I am to intimate that, if desired, the information as to free education in the Council's schools for last year (1874) can be readily supplied.

I have, &c.,

GEORGE MILLER,
For Secretary.

THE SECRETARY TO THE COUNCIL OF EDUCATION TO THE UNDER SECRETARY, DEPARTMENT OF JUSTICE AND PUBLIC INSTRUCTION.

Council of Education Office,
Sydney, 5 August, 1875.

SIR,

With further reference to your letter of 10th June last, respecting a return of the number of free scholars in the schools under the supervision of the Council of Education, since the year 1866, I am now directed to transmit herewith, for the information of the Honorable the Minister of Justice and Public Instruction, the required details for the years 1873 and 1874.

2. I am further to state, that in view of the large amount of time and labour which would be involved in procuring all the information requested by Mr. Dibbs, as already explained in my letter of 30th ultimo, the Council trusts that the enclosed return will be deemed sufficient.

I have, &c.,

W. WILKINS,
Secretary.

[Enclosure.]

RETURN of Free Scholars for the years 1873 and 1874.

	1873.	1874.
In Public Schools*	3,859	3,887
In Denominational Schools	2,714	2,539
Totals	6,573	6,426
In Public Schools	2,652	2,776
„ Provisional Schools	901	833
„ Half-Time Schools	306	278
„ Church of England Schools	932	912
„ Roman Catholic Schools	1,638	1,539
„ Presbyterian Schools	64	32
„ Wesleyan Schools	54	38
Totals	†6,547	‡6,408

Council of Education Office,
Sydney, 5 August, 1875.

* Including Provisional and Half-Time Schools.

† Difference between totals of 1873—26, the number in Hebrew School.

‡ Difference between totals of 1874—18, the number in Hebrew School.

1875.

NEW SOUTH WALES.

SYDNEY FREE PUBLIC LIBRARY.

(REPORT FROM TRUSTEES FOR 1874.)

Presented to both Houses of Parliament, by Command.

THE TRUSTEES OF THE FREE PUBLIC LIBRARY, SYDNEY, to THE MINISTER OF JUSTICE AND
PUBLIC INSTRUCTION.

12 March, 1875.

SIR,

I have the honor to present to you the Report of the Trustees of the Free Public Library, for the year 1874.

The Free Public Library has now completed its fourth year of existence, during which period the use that has been made of it by the public has fully justified the anticipations of those who assisted at its foundation and vindicated the wise liberality of the Legislature in its maintenance.

The Institution, owing to a special cause, to which reference will presently be made, was only open for eleven months of the past year, and after the deduction of Sundays and public holidays, it was on 280 days open to the public. During this period no fewer than 127,400 volumes have been used, averaging about 455 volumes daily. The number of readers who signed their names on entering the Library during the eleven months it was open, is 57,962, averaging 207 daily; but this does not represent, by at least one-fourth, the actual number of visitors who availed themselves of the advantages offered by the Institution, as the limited staff at the disposal of the Trustees will not admit of one man being kept constantly at the door to take the names of visitors, and many readers have a great objection to the irksome process of signing their names, and avoid doing so whenever they can.

The building not having been repaired or painted in any part since a time long prior to the purchase of the property in September, 1869, it became necessary, as the Trustees pointed out in their report of last year, to have the interior of the Institution thoroughly cleaned and painted. Important repairs to the outer portion of the building were also urgently required; and the parapet wall was reported to be in a dangerous condition. A light gallery has been thrown across the north end of the Library, making a communication between the east and west galleries, and in addition to the advantage of greater facilities of access to the books it has provided additional shelf accommodation for nearly 5,000 volumes.

The painting has been neatly executed, and the repairs properly completed; the whole of the work has been carried out under the direction of the Colonial Architect.

To effect these repairs, &c., the Library was necessarily closed from the 11th March to the 11th April, and about 16,000 volumes had to be removed from their places on the shelves and in the Gallery, and again replaced in their respective order.

During the past year the Library has been enlarged by 1,730 volumes and 301 pamphlets, making the total number 25,175 volumes and 1,376 pamphlets,—in all 26,551.

The Trustees, carrying out the arrangements which, in their last report, they informed the Government that they had made, instructed Messrs. Trübner & Co., their agents in London, to send out by the earliest opportunity a limited selection from the latest books published in Europe and America, as soon as funds could be placed at the disposal of the Agent General in England. The first shipment under this arrangement arrived in July last, and by each succeeding mail a choice selection has been regularly received. This arrangement gives to the Library the advantage of possessing the newest publications, and appears to be very much appreciated by a large number of readers.

It is a satisfaction to the Trustees to be able to state that the abstraction and mutilation of books has almost ceased; a few volumes have at various times during the year been taken out of the Library, and after a space of time clandestinely returned to the shelves, or laid upon the tables; but, as a caution to those who abuse the privilege granted to them, the Trustees may remark that they have, with the assistance of the Detective Force, prosecuted to conviction a visitor to the Institution who had at various times removed several volumes, and, having obliterated the Library stamps, had offered the books for sale.

At the close of their last annual report the Trustees informed you that the establishment of a "Lending Branch," in connection with the existing Institution, had formed the subject of frequent and serious consideration on their part. During the past year the matter has again occupied their attention, and from their further observation and augmented experience of the use made of the present Library, they have arrived at the conclusion that, in the interests of higher education, it is desirable that this project should be carried out with the least possible delay. With this object they have devised a scheme, which has already been submitted to you for approval, and which, after considerable hesitation, and a careful consideration of the means employed in Institutions of a like character in Europe, the Trustees deem practicable and sufficient. It is proposed that there shall be two distinct establishments, worked and conducted under one head. The one will be a Free Reference Library, from which books, under no circumstances, will be lent out; the other will be a "Lending Branch," for the circulation only of books, the title to the use of which for limited periods, and under special conditions, will be gained by the permission of the Trustees under effective guarantees as to the safe custody, proper care, and restitution of the books. The Trustees have spared no pains in devising a scheme which will, they humbly hope, largely minister to public convenience, and in no way imperil public property.

I have, &c.,

CHARLES BADHAM,
Chairman.

APPENDIX A.

RETURN of the number of Volumes in the Library on the 31st December, 1874,—showing additions during the year, with average number of Books of each Class used by Readers, and replaced on the shelves by the Attendants, for eleven months during the year 1874.

Presses.	Synopsis of Arrangement.	Number of Books on 31st December, 1873.	Number of Books on 31st December, 1874.	Average number of Books used for 11 months during 1874.	Daily average of Books used.	Number of days open to the Public.	Number of signatures obtained for the 11 months open.
1 to 4	Natural Philosophy, Science, and the Arts	2,252	*2,056	12,600	455	280	57,962—Averaging 207 daily.
5 to 7	History, Chronology, Antiquities, and Mythology	2,108	2,209	5,880			
8 to 10	Biography and Correspondence	1,568	1,662	5,600			
11 to 16	Geography, Topography, Voyages and Travels, and Atlases.	2,136	2,225	9,520			
17 and 18 Gallery.	} Periodical and Serial Literature	3,345	*4,222	42,280			
19 to 23	Law, Politics, Commerce, Statistics, &c.	1,617	1,718	2,800			
24 and 25	Theology, Moral and Mental Philosophy, and Education ...	1,176	1,269	3,640			
26	Poetry and Drama	605	656	5,040			
27 to 29	Miscellaneous Literature and Collected Works, including Greek, Latin, and Foreign Literature	2,333	2,634	8,680			
30 to 33	Encyclopædias, Dictionaries, and other Works of Reference.....	1,791	2,010	10,640			
36 to 37	Prose Fiction	1,353	1,353	20,160			
	Patents	3,161	3,161	560			
		23,445	25,175	127,400			
	Pamphlets.....	1,075	1,876	.....		
		24,520	26,551	.....		

* Some transferred.

APPENDIX B.

ARRANGEMENT of the Books in the Free Public Library, Sydney.

THE presses of the Library are numbered in consecutive order,—the classes to which the books belong being specified on the top thereof. The shelves of the presses are lettered with the alphabet, and the books upon the shelf of every press are numbered from 1 upwards. Every book bears a small label with the number of the press, letter of the shelf, and its number on the shelf.

An inventory is provided for each class, arranged according to subjects, with authors added,—cross references being giving to books containing information appertaining to the same class but necessarily placed in a different compartment. The books so referred to are shown in the volume column by a cypher.

Guide to find a Book.

If a reader wants "The Early Years of H.R.H. the Prince Consort," (by Lieut.-Gen. O. Grey), he will find the work under class "Biography," in press 8, shelf A, book 12.

A general Catalogue, arranged according to authors only, is issued for sale to the public.

APPENDIX C.

LIST OF OFFICERS:—

Trustees:—

The Rev. Charles Badham, D.D., Professor of Classics and Logic in the University of Sydney (*Chairman*.)

The Rev. W. B. Clarke, M.A.
The Honorable W. B. Dalley.
W. A. Duncan, Esq.
The Rev. J. D. Lang, D.D.

Sir William Macarthur, Knt.
William Macleay, Esq.
The Honorable Robert Owen, M.L.C.
W. J. Stephens, Esq., M.A.

John Stewart, Esq.

Librarian:— Robt. Cooper Walker.

Assistant Librarians:— D. R. Hawley; Edward O'Brien.

APPENDIX D.

APPENDIX D.

LIST of Donations during the year 1874.

- Bleasdale Rev. John I., D.D. Report of the Secretary of Agriculture. 8vo.; Melbourne, 1873.
- Brown J. J. A Brief Statement of Facts, in connection with an overland expedition from Lake George to Port Phillip, in 1824. By Hamilton Hume. 8vo.; Yass, 1874.
- Casey Hon. J. J. Five Photographic Views of the City of Melbourne; Victoria, 1873. Report on the Physical Character and Resources of Gippsland. By the Surveyor General and the Secretary for Mines. 8vo.; Melbourne, 1874.
- Campbell Wm. The Crown Lands of Australia. By W. Campbell. 8vo.; Glasgow, 1855.
- Campbell Rev. P. New Revival Hymns and Spiritual Songs. 18mo., pamphlet; Sydney, 1874.
- Cobden Club, The. Cobden and Modern Political Opinion: Essays on Certain Political Topics. By J. E. T. Rogers. 8vo.; London, 1873.
- Greenwood Rev. James, M.A. New South Wales Public School League. 8vo., pamphlet; Sydney, 1874.
- Gibbs, Shallard, & Co. The Illustrated Sydney News Weather Almanac, for 1875. 8vo.
- Hovell W. H. Answer to the Preface to the second edition of Mr. Hamilton Hume's "A Brief Statement of Facts." 8vo., pamphlet; Sydney, 1874.
- Hudson Geo. Twenty-first Annual Report of the Committee of the Free Public Library, Liverpool, for the year 1873.
- Kennedy Hugh. The Sydney University Calendar, for 1874-75. 8vo.; Sydney, 1874.
- Kay Robert. Annual Report of the South Australian Institute, 1874-75. Adelaide, 1874.
- Knaggs R. C. & Co. The Newcastle City and County Almanac, for the year 1875. 8vo. The Newcastle Nautical Almanac and Guide to the Port of Newcastle, for the year 1875. 8vo.
- Lavers Josiah Vincent. The Australian Advocate. Vols. 1 and 2., folio; Sydney, 1871-72.
- Liverpool Free Public Library. (See Hudson, G.)
- Manchester Public Free Libraries. Reports for 1872-73. Roy. 8vo.
- Manchester Geological Society. Transactions. Vol. 13, parts 3, 4, and 5., 8vo.; Manchester, 1873-74.
- Montague H. N. Sydney Punch; vol. 1, 1873.
- New Zealand Institute. Transactions and Proceedings, 1873. Edited by James Hector, M.D.
- Oakes Mrs. The Englishwoman's Review. Vols. 4 and 5., 8vo.; London, 1873-74.
- Page Thomas. The Clarence, New England, Macleay, and Gwydir Almanac for 1874. 8vo.; Grafton, 1874.
- Pearce James. The "Herald" Western Australia Almanac and Commercial Directory for 1874.
- Poppenhagen C. Northern Agricultural Association, Singleton. Members' Pamphlet, 8vo.; West Maitland, 1874.
- Queensland Government. The Acts of the Parliament of Queensland, 37° 38° Vic., Session 1 of 1874.
- Ranken Geo. Economics of construction in relation to framed structures, by R. H. Bow, C.E., &c., 8vo.; London, 1873.
- South Australian Government. Acts of the Parliament of South Australia 37° Vic., A.D. 1873. Proceedings of the Parliament of South Australia, 1873. 3 vols., fol.
- Scott A. W., M.A. Mammalia, recent and extinct, 8vo.; Sydney, 1873.
- Schomburgk Dr. R. Report on the condition of the Botanic Garden and Government Plantations, 1873, fol.; Adelaide, 1873.
- Spagni Antonio. Plutarchi chero nei Græcorum Romanorum que illustrium vitæ. Fol.; Basilea, 1542.
- Smith James. Re-prints from the "Maryborough and Dunolly Advertiser." 8vo.; Maryborough, 1873.
- Tebbutt John. Meteorological Observations, 1867-70, by John Tebbutt; fol.; Sydney, 1874.
- Tasmania, The Government of. Journal of the Legislative Council; vol. 19.
- The Acts of the Parliament of Tasmania, 38° Vic., 1874; vol. 5., part 5.
- Vaughan, The Very Rev. R. B. The Life and Labours of St. Thomas, of Aquin, by the Donor; 2 vols, 8vo.; London, 1872.
- Victoria, The Government of. Votes and Proceedings of the Legislative Assembly, Session of 1873; 3 vols., fol.; Melbourne, 1873.
- Winsor Justin. "Boston Public Library Bulletin," No. 25; April, 1873.
- Willman W. C. The Battle of Waterloo, by an Observer; 8vo.; London, 1815.
- A Narrative of the Campaign in Russia, 1812, by Sir R. K. Porter. 8vo., London, 1815.

APPENDIX E.

LIST of Books added to the Library, &c.

- Abdulla (Bin Abdulkadar). Translations from the Hakayit Abdulla. By J. T. Thomson.
- Abel C. D. Machinery in its Construction, &c. (Weale.) 3 vols.
- Aberdeen Earl of. Grecian Architecture. (Weale.)
- Adams F. O. The History of Japan. Vol. 1.
- Adams J. Q. Memoirs and his Diary 1795 to 1848. Vol. 1.
- Adelaide. (See South Australia.)
- Adolphus J. H. Memoirs of Queen Caroline. 3 vols.
- Agamemnon of Æschylus and the Bacchanals of Euripides, etc. (See Milman.)
- Aglaura. (See Old Plays.)
- Atkin L. Correspondence of W. E. Channing & Lucy Aikin. (See Channing.)
- Ainé H. R. et Barré L. Herculæum et Pompéi. 7 vols.
- Akerman J. Y. Catalogue of Roman Coins. 2 vols.
- Alcedo Col. Don A. de. Dictionary of America and the West Indies. 5 vols.
- Aluin. The Life of. (See Lorenz.)
- Alford H. The Greek Testament. 4 vols.
- Allen C. B. Cottage Building. (Weale.)
- Allen T. A History of the County of Surrey. 2 vols.
- Almanach de Gotha 1872-73-74. 3 vols.
- American Catalogue of Books. (See Kelly J.)
- American Cyclopædia. The New. 16 vols.
- American Journal of Science and Arts. Vols. 5 & 6. 1873.
- American Railroad Manual. (See Vernon E.)
- Ancient English Metrical Romances. (See Riteon.)
- Anderson T. On the Education and habits of the Blind.
- Andrews G. H. Agricultural Engineering. (Weale.)
- Anecdotes of Distinguished Persons. (See Seward Wm.)
- Annales des Mines. Vols. 21, 22, and 23, 1873.
- Annals and Magazine of Natural History. Vols. 11 and 12, 1873.
- Annual Record of Science and Industry. (See Baird S. F.)
- Anthologia Græca: adiecit, F. Jacobs. 4 vols.
- Antoninus Liberalis. Transformationum Congeries.
- Auville J. B. B. d'. Eclaircissement géographiques sur l'Ancienne Gaule.
- Apicius C. De Arte Coquinaria
- Apostolical Acts and Epistles. (See Etheridge J. W.)
- Appleton D. and Co. The New American Cyclopædia. (See American.)
- *Aquinas St. Thos. Life and Labours of, by Dr. Vaughan.
- Arago F. Popular Astronomy: Ed. by Smyth and Grant. 2 vols.
- Treatise on Comets, trans. by Smyth and Grant.
- Meteorological Essays. Introduction by Humboldt.
- Arush-i-Mahfil; or, the Ornament of the Assembly, etc., trans. by Court.
- Arbutnot Dr. J. The Miscellaneous Works of. 2 vols.

APPENDIX E—continued.

LIST of Books added to the Library, &c.—continued.

- Architect, The: January to December, 1873. 2 vols.
- Arctic Experiences. (See Blake E. V.)
- Argyle and Greenwich (Duke of). The Life of. (See Campbell R.)
- Aristoteles. Histoire des Animaux. 2 vols.
- Arman A. Ready Reckoner for Land. (Weale.)
- Haddon's Arithmetic and Key. (Weale.) 2 vols.
- Stepping Stone to Arithmetic and Key. (Weale.) 2 vols.
- Armour J. Iron and Heat. (Weale.)
- Power in Motion. (Weale.)
- Armstrong R. Construction, &c., of Steam Boilers. (Weale.)
- Art Journal, The: New Series. Vol. XI.
- Art Union, or Art Journal. Vols. 1839 to 1848 (10 vols. in 6.)
- Athenæum, The. January to December, 1864; July to December, 1865; July to December, 1868; and January to June, 1873. 5 vols.
- Aulnoy or Aunoy Comtesse d'. Contes des Fées, etc. (See Cabinet des Fées.)
- Annale Le Due d'. (See D'Aumale.)
- Auneuil, Comtesse d'. Contes des Fées. (See Cabinet des Fées.)
- *Australia. Revue Australienne. (See Revue.)
- *Australian Advocate and Weekly Advertiser, 1871-2. 2 vols.
- Avison C. An Essay on Musical Expression.
- Azeglio M. T. Marquis dell'. Recollections of, trans. by Maffei. 2 vols.
- Backer Louis. (See De Backer.)
- Bacon Lord F. The Letters and Life of, &c., by J. Spedding. 6 vols.
- Bailey J. E. The Life of Thomas Fuller, D.D.
- Baines E. History of the County Palatine and Duchy of Lancaster.
- Baird J. The Management of Health. (Weale.)
- Baird S. F. Annual Record of Science and Industry, 1873.
- Baird, Rev. J. The Emigrant's Guide to Australasia, Tasmania, and New Zealand. (Weale.) 2 vols.
- Baker T. Treatise on Mensuration and Measuring. (Weale.)
- Principles and Practice of Statics and Dynamics, &c. (Weale)
- The Elements of Practical Mechanism, &c. (Weale.)
- Land and Engineering Surveying. (Weale.)
- The Mathematical Theory of the Steam Engine. (Weale.)
- Barbaro J. and Contarini A. Travels to Tana and Persia. (See Hakluyt Society.)
- Barbault Mrs. A. L. A Memoir. (See Ellis.)
- Barré L. Herculanum et Pompéi. (See Ainé.)
- Barry Sir E. Observations on the Wines of the Ancients.
- Bastian H. C. The Beginnings of Life. 2 vols.
- Battle of Waterloo. (See Waterloo.)
- Bauerman H. Treatise on the Metallurgy of Iron. (Weale.)
- Bautain M. The Art of Extempore Speaking. (Weale.)
- Beadie J. J. L. The Undeveloped West; or Five Years in the Territories.
- Benton A. C. Quantities and Measurements. (Weale.)
- Beauchamps P. F. G. de Funestine. (See Cabinet des Fées)
- Beaumont M. Contes des Fées. (See Cabinet des Fées.)
- Bede Cuthbert. (See Revd. E. Bradley.)
- Bell Sir Chs. Letters of, selected by G. J. Bell.
- Bellew H. W. From the Indus to the Tigris.
- Benedetti Le Compt. Ma Mission en Prusse.
- *Bentham G. & Mueller Baron. Flora Australiensis. vol 6.
- Berington J. Reign of Henry II, and of Richard & John, his sons, 1154 to 1216.
- History of the Middle Ages.
- Bernard Bayle. The Life of Saml. Lover. 2 vols.
- Berquin Arnaud. The Blossoms of Morality.
- Berry Miss M. Journals and Correspondence of 1783 to 1852. 3 vols.
- Berry Wm. The History of the Island of Guernsey.
- Bewick John. The Blossoms of Morality. (See Berquin Arnaud.)
- Bewick Thomas. Fabliaux or Tales. (See Le Grand d'Aussy.)
- Bewick Thomas. Wild Flowers. (See Bloomfield.)
- Beyle H., otherwise Do Stendahl. A Critical and Biographical Study. (See Paton.)
- Bible, The. Douay Version.
- Bibliotheca Bunavianæ. (See Catalogus.)
- Bidpai. (See Pilpay.)
- Biographical Dictionary of Eminent Scotsmen (See Chambers R.)
- Biographical Dictionary of the Society for the Diffusion of Useful Knowledge. 7 vols.
- Blackie J. S. Horæ Hellenicæ.
- Blackwood's Edinburgh Magazine. vol. 113.
- Blake E. V. Arctic Experiences.
- Bland Wm. The Forms of Ships and Boats. (Weale.)
- Experimental Essays on Arches, Piers, &c., &c. (Weale.)
- Bloomfield Robt. Wild Flowers; cuts by Bewick.
- Blorn Edwd. The Monumental Remains of Noble and Eminent Persons.
- Blossoms of Morality, The.
- Blount T. (See Boscobel Tracts.)
- Boscobel Tracts, The. Edited by Blount.
- *Bow R. H. Economics of Construction.
- Bowman J. E. Handbook of Medical Chemistry. Ed. by Bloxam.
- An Introduction to Practical Chemistry; including Analysis. Ed. by Bloxam.
- Boyle F. To the Cape for Diamonds.
- Brackenbury H. The Ashanti War. 2 vols.
- Bradley Revd. E. (Cuthbert Bede.) Glencregan; or a Highland Home in Cantire. 2 vols.
- Brameld G. W. The Holy Gospels, translated from the Original Greek.
- Brantôme P. de B. Oeuvres Complètes. 7 vols.
- Brassey T. Life and Labours of, 1805-1870, by A. Helps.
- Brenan J. Composition and Punctuation. (Weale.)
- Brenchley J. L. Cruise of H.M.S. Curaçoa.
- Brosslau M. H. Hebrew and English Dictionary. (Weale.)
- Hebrew Grammar. (Weale.)
- Hebrew Dictionary. (Weale.)
- British Museum. Photographs from the Collections of. 12 vols.
- British Quarterly Review. Vol. 57.
- British Rural Sports, by Stonehenge. (See Walsh F. H.) 2 vols.
- Brooks S. H. The Erection of Dwelling-Houses. (Weale.)
- *Broughton W. G. Sermons Preached in Australia.
- Brown C. P. An Epilemoris.
- Browne Patrick. The Civil and Natural History of Jamaica.
- Brydges Sir E. The Autobiography, times, opinions, and contemporaries of. 2 vols.
- Buchanan G. Buchanan Scuti Opera Omnia. 2 vols.
- Buckingham and Chandos, The Duke of. Memoirs of the Court of England. 2 vols.
- Buckingham L. Stanhope F. Memoirs of Mary Stuart, Queen of Scotland. 2 vols.
- Buckland F. Curiosities of Natural History. 4 vols.
- Buckle H. T. Miscellaneous and Posthumous Works of. 6 vols.
- Bulwer Sir H. L., Lord Dalling. Life of Viscount Palmerston.
- Burges E. Vizcaya; or Life in the Land of the Carlists, 1872-3.
- Burgoyne J. A Treatise on Blasting and Quarrying of Stone, &c. (Weale.)
- Maintenance of Roads. (See Hughes.) (Weale.)
- Burnell G. R. Civil Engineering. (See Law H.)
- Well Sinking, &c. (See Swindell J. G.) (Weale.)
- The Rudiments of Hydraulic Engineering. (Weale.)
- Treatise on Limes, Cements, Mortars, &c. &c. (Weale.)
- Burn R. S. Outlines of Modern Farming. Vols. 1 to 5. (Weale.)

APPENDIX E—continued.

LIST of Books added to the Library, &c.—continued.

- Bury T. T. Architecture for Beginners. (Weale.)
 Busk R. H. The Folk-Lore of Rome.
 Butler J. E. Woman's Work and Woman's Culture.
 Butler Saml. Hudibras.
 Butler W. F. The Great Lone Land.
- Cabala Sive Scrinia Sacra. Mysteries of State Government.
 Cabinet des Fées et Les Veillées Persanes. 41 vols.
 Cairnes J. E. Some Leading Principles of Political Economy, newly expounded.
 Cambridge University Calendar for 1874.
 Camden Wm. History of Princess Elizabeth.
 Camden Society Publications. 5 vols., 1873-74.
 Campbell R. Life of Prince John.
 Campbell T. Life, Poems, &c., of Petrarch. (See Petrarch.)
 *Campbell Wm. The Crown Lands of Australia.
 Campin F. W. Law of Patents for Inventions. (Weale.)
 ———— A Treatise on Bridges, Girders, Roofs, &c. (Weale.)
 Candolle A. P. de. Prodromus Regni Vegetabilis. 20 vols.
 Caroline; Queen Consort of Great Britain; Memoirs of. (See Adolphus.)
 Carpenter Wm. B. Principles of Mental Physiology.
 Castro G. de. Some Account of the Life and Writings of. (See Holland.)
 Catalogus Bibliothecae Bunavianae. 6 vols.
 Caulfield J. Portraits, Memoirs, and Characters of Remarkable Persons. 4 vols.
 Cavendish G. The Negotiations of Thos. Woolsey.
 Caylus le Comte de. Les Fées Nouvelles, etc. (See Cabinet des Fées.)
 Cecil Sir R. The Secret Correspondence of, with James 6th, King of Scotland.
 Chambers R. A Biographical Dictionary of Eminent Scotsmen. 5 vols.
 Chambers W. & R. Chambers's Miscellany of Instructive and Entertaining Tracts.
 ———— Chambers's Information for the People. 2 vols.
 Channing W. E. Correspondence of; and Lucy Aikin, from 1826 to 1842. Ed. by A. L. Le Breton.
 Chappell W. The History of Music.
 Charlevoix P. F. de. Histoire du Paraguay. 6 vols.
 Chattaway E. D. Railways, their Capital and Dividends, &c. (Weale.)
 Chatterton T. The Poetical Works of. 2 vols.
 Chaucer G. The Poetical Works of.
 Chemical Society, London: The Journal of; 1870-73. 4 vols.
 Cityo Match, The. (See Old Plays.)
 Civil Engineers: Minutes of the Proceedings of the Institution of; with Abstracts of the Discussions from 1837 to 1872, and Transactions of the Institution 1836-42. 39 vols.
 *Clarence, New England, Macleay, and Gwydir Almanac for 1874. Pub. by T. Page.
 Clarke H. A Grammar of the English Tongue. (Weale.)
 ———— Comparative Philology of the English Anglo-Saxon, &c., &c.: (Weale.)
 ———— Dictionary of the English Language. (Weale.)
 Clarke J. F. Autobiographical Recollections of the Musical Profession.
 Coates C. The History and Antiquities of Reading.
 Cobbe F. P. Essays on the Pursuits of Women.
 Cockburn H. Journal of 1831-1854. 2 vols.
 Collingwood G. L. N. A selection from the correspondence of Vice Admiral Lord Collingwood, with Memoirs of his Life. 2 vols.
 Collins J. H. A First Book of Mining and Quarrying. (Weale.)
 Colonial Office List, The: for 1874.
 Combes G. On the Relation between Science and Religion.
 Comtes Rendus des Séances de l'Académie des Sciences. Vols. 75 and 76. 1872-3.
 Condé Princes de. The History of. (See D'Aumale.)
 Conington J. The Aeneid of Virgil. (See Virgilius.)
 Contemporary Review. Vol. 21.
 Cornhill Magazine. Vol. 27. 1873.
 Corssen W. Ueber die Sprache der Etrusker.
 Cotsell G. Treatise on Ships' Anchors. (Weale.)
 Cotton H. The five books of Macabees in English.
 County Court. Guide for Suitors in. (Weale.)
 Court Major H. (See Aramish-i-Mahfil; also Mirza Rafi-oos-Sauda.)
 Cousin Victor. Etudes sur Pascal.
 Cox G. W. A History of Greece. 2 vols.
 ———— The Mythology of Aryan Nations. 2 vols.
 Cox H. Treatise on the Integral Calculus. (Weale.)
 Cox T. Ecclesiastical and Natural History of Bedfordshire and Buckinghamshire. 2 vols.
 Coypel M. Aglaé ou Nabotine. (See Cabinet des Fées.)
 Creasy E. S. History of England from the Earliest to the present time. Vols. 1 and 2.
 Croker T. C. Researches in the South of Ireland.
 Curtis's Botanical Magazine 1872-3. 2 vols.
- Dalton H. G. The History of British Guiana. 2 vols.
 Dana J. Manual of Geology.
 D'Anvers N. Elementary History of Art.
 Darling J. Cyclopædia Bibliographica. 2 vols.
 Darwin C. Expression of the Emotions in Man and Animals.
 D'Annale Le Duc. History of the Princes de Condé. 2 vols.
 Davies C. M. Heterodox London. 2 vols.
 Davies J. L. and Vaughan D. J. (See Plato.)
 Davison W. Life of. (See Nicolas N. H.)
 Dawes R. Miscellanea Critica.
 D'Azeglio M. T. (See Azeglio.)
 De Backer L. L'Archipel Indien.
 De Candolle. (See Candolle.)
 De Gubernatis A. (See Gubernatis.)
 De Koninck L. & Dietz E. Manual of Chemical Analysis and Assaying.
 De Morgan. (See Morgan A. de.)
 Dempsey G. D. Drainage of Districts and Lands. (Weale.)
 ———— Drainage of Towns and Buildings. (Weale.)
 ———— Tubular and other Iron Girder Bridges. (Weale.)
 ———— On the Locomotive Engine. (Weale.)
- Denina C. Rivoluzioni della Germania. 8 vols.
 Denison R. B. Treatise on Clocks and Watches and Bells. (Weale.)
 Descamps J. B. La vie des Peintres. 4 vols.
 Desmaza C. Les Métiers de Paris.
 De Stondahl. (See Beyle H.)
 Deutsch E., Literary Remains of.
 Dibdin T. F. A Descriptive Catalogue of Books printed in the 15th century.
 Dickens Chas. The Life of, by Forster. Vol. 3.
 Dictionary of Musicians. 2 vols.
 Digby K. H. Mores Catholici, or Ages of Faith. 8 vols.
 Dixon W. H. The Switzers.
 Dobson E. The Art of Building. (Weale.)
 ———— Brick and Tile making. (Weale.)
 ———— Masonry and Stone-cutting. (Weale.)
 ———— Foundations and Concrete Works. (Weale.)
 Dodd S. Historical Account of Woburn.
 Dodwell E. Tour through Greece, 1801, 1805, and 1806. 2 vols.
 Donaldson J. W. Christian Orthodoxy.
 Donaldson Prof. Clay Lands and Loamy Soils. (Weale.)
 Doran Dr. A Lady of the Last Century.
 Doublier L. Geschichte des Altertums.
 Douglas G. The Poetical Works of. 4 vols.
 Downing A. J. The Fruits and Fruit-trees of America.
 Doyle R. In Fairy Land.
 Dozy R. Geschichte der Mauren in Spanien. 2 vols.
 Drake, Dampier, Anson, and Cook. The English Circumnavigators. (See Purves.)
 Draper J. W. Intellectual Development of Europe.
 Dublin University Calendar for 1873-4.
 Dublin Review. Vols. 19 and 20, 1872-3.

The Books marked thus * are donations.

APPENDIX E—continued.

LIST of Books added to the Library, &c.—continued.

- Dublin University Magazine. Vols. 64 and 81.
 Du Bois. Lettres sur l'Italie and Les Musées.
 Du Brouil on the Culture of Fruit Trees. Translated by Wardle and Glenny. (Weale.)
 Ducloux M. Acajou et Zirphile. (See Cabinet des Fées.)
 Duncan P. M. The Transformations of Insects.
 Du Pin L. E. History of the Canon and Writers of the Old and New Testament. 2 vols.
 Dwyer C. P. The Immigrant Builder.
 Dyer G. History of the University and Colleges of Cambridge. 2 vols.
 Edinburgh Review. Vol. 137. 1873.
 ———— General Index, vol. 21 to 50.
 Edwardes H. B., and Merivale H. Life of Sir H. Lawrence. 2 vols.
 Egyptian Antiquities. Catalogue of, by Sir Chas. Nicholson. 1858.
 Eliot George. (See Evans Miss M.)
 Ellis G. A. A Memoir of Mrs. A. L. Barbauld. 2 vols.
 Ellis H. Original Letters; third series. 4 vols.
 Elmes J. Dictionary of the Fine Arts.
 Elwes A. Dictionary of the French, Italian, and English Languages. (Weale.)
 ———— Dictionary. English, French, and Italian Languages.
 ———— Grammar of the Spanish Language. (Weale.)
 ———— Dictionary of the Spanish and English Languages (Weale.)
 ———— Dictionary of the English and Spanish Languages. (Weale.)
 ———— French-English Dictionary. (Weale.)
 ———— English-French Dictionary. (Weale.)
 ———— Grammar of the Italian Language.
 ———— Dictionary of the Italian, English, and French Languages. (Weale.)
 Emerson R. W. Nature. An Essay. The Conduct of Life.
 Emigrant's Guide to Australasia. (See Baird.) (Weale.)
 Emmens S. H. Logic Pure and Applied. Selections from Locke's Essay on the Human Understanding. (Weale.)
 Empire, The; January to June, 1874.
 Encyclopædia Perthensis, or Universal Dictionary of Knowledge. 23 vols.
 Engineer, The; January to December, 1873. 2 vols.
 Engineers: Institution of Civil. (See Civil.)
 Englefield H. C. A Description of the Isle of Wight.
 English Catalogue of Books, 1863-71.
 English Circumnavigators, The. By Purves.
 English Hexapla, The.
 Essays and Addresses by Professors and Lecturers of the Owen's College, Manchester.
 Etheridge J. W. Jerusalem and Tiberias; Tora and Cordova.
 ———— The Apostolical Acts and Epistles, from the Peschito, or Ancient Syriac.
 ———— The Targums: from the Chaldec.
 Eusebius Pamphilus. An Ecclesiastical History of the Christian Era.
 Evagrius. Ecclesiastical History.
 Evans Miss M. Middlemarch. 4 vols.
 ———— The Legend of Jubal and other Poems by "George Eliot."
 Evening News, The; January to June, 1874.
 Fabricius J. A. Bibliotheca Græca. 12 vols.
 Fagnan Mad. Minet-Blen, etc. (See Cabinet des Fées.)
 Fairholt F. W. Miscellanæ Graphica.
 Faraday M. Chemical Manipulation.
 Fawcett H. Manual of Political Economy.
 Fénelon F. de S. Fables et Contes. (See Cabinet des Fées.)
 Fenwick F. & Baker T. Subterraneous Surveying. (Weale.)
 Field Geo. A Grammar of Colouring for Painters and Decorators. (Weale.)
 Figuier L. The Human Race.
 Fisher Thos. Collections Historical, &c., for Bedfordshire.
 Foreign Office List for 1874. 2 vols.
 Förstemann E. Geschichte des deutschen Sprachstammes. Vol. 1.
 Forster J. The Life of Chas. Dickens. Vol. 3.
 Foster J. W. Pre-Historic Races of America.
 Fownes Prof. Rudimentary Chemistry. (Weale.)
 Forsyth Wm. Essays, Critical and Narrative.
 Fortnightly Review. Vol. 19, January to June, 1873.
 Francis P. (See Horace.)
 Fraser's Magazine. Jan. to June, 1873. Vol. 7 n.s.
 Freeman E. A. The History of the Norman Conquest of England. 4 vols.
 ———— The Growth of the English Constitution.
 French and English Phrase Book. (Weale.)
 Freund J. The History of Physick to the 16th Century. 2 vols.
 Frisi P. A. Treatise on Rivers and Torrents. (Weale.)
 Fromberg E. O. Essay on the Art of Painting. (Weale.)
 Froude J. A. The English in Ireland. 3 vols.
 Fuller T. The History of the Worthies of England and Wales.
 ———— The Life of, by Bailey.
 Fuseli H. The Life and Writings of. Edited by Kuowles.
 Garbet E. L. The Principles of Design in Architecture (Weale.)
 Gardener, The. For 1873.
 Gardener's Chronicle, The, for 1873.
 Gardener's Magazine, The. Vol. 16; January to December, 1873.
 Gardiner S. R. Prince Charles and the Spanish Marriage.
 Garrett J. A Classical Dictionary of India.
 Gautier T. Portraits Contemporains.
 Gegier J. J. A Peep at Mexico.
 ———— L. Petrarka.
 Gell W. The Topography of Troy.
 General Hints to Emigrants. Weale.
 Gentleman's Magazine. N.S. Vol. 10, January to June, 1873.
 Geological Magazine, The. Vols. 7 to 9. 1870 and 1873.
 Geological Society, The. Quarterly Journal of. Vol. 29, 1873.
 Gessert Dr. On the Art of Painting Glass. (Weale.)
 Gibbons D. On the Law of Contracts. (Weale.)
 *Gippsland. Report on the Physical Character, &c., by the Surveyor General.
 *——— (See also "Victoria.")
 Gladstone W. E. Studies on Homer and the Homeric Age. 3 vols.
 Glynn J. Treatise on the Power of Water. (Weale.)
 ———— On the Construction of Cranes. (Weale.)
 Goldsmid F. J. Telegraph and Travel.
 Gooding R. A Manual of Domestic Medicine. (Weale.)
 Goodwin T. Latin Grammar.
 ———— Latin-English Dictionary.
 ———— English-Latin Dictionary. (Weale.)
 Gothaischer Genealogischer Hofkalender. 1874.
 Gothaisches Genealogisches Taschenbuch der Freiherrlichen Häuser, für 1874.
 Gothaisches Genealogisches Taschenbuch der Gräflichen Häuser, für 1874.
 Government Gazette, 1873.
 Grætz Dr. H. Geschichte der Juden.
 Graham W. The Brassfounders' Manual. (Weale.)
 Grantham J. Iron Ship-building. (Weale.)
 Graphic, The. Vol. 7, January to June, 1873.
 Greenwood J. Treatise on Navigation. (Weale.)
 Greg W. R. Rocks Ahead; or, the Warnings of Cassandra.
 Grenadier Guards. The History of. (See Hamilton F. W.)
 Greville C. C. F. The Greville Memoirs. A Journal of the Reigns of Geo. IV. and Wm. IV. 3 vols.
 Gubernatis A. de. Zoological Mythology, or the Legends of Animals. 2 vols.
 Guéranger Dom. Sainte Cécile et la Société Romaine.
 Gueulette T. S. Les Contes Chinois, etc. (See Cabinet des Fées.)
 Guillemin A. The Forces of Nature.
 Gullick T. J., and Tibbs J. Painting popularly explained.

The Books marked thus * are donations.

APPENDIX E—continued.

LIST of Books added to the Library, &c.—continued.

- Gunther M. Tales and Legends of the Tyrol.
 Guthrie Mrs. Through Russia, &c. 2 vols.
 Gwilt J. Ancient Architecture. (Weale.)
 Haddon J. Commercial Book-keeping and
 Phraseology in 4 Languages.
 (Weale.)
 ————— Elements of Algebra with Key, &c.
 (Weale.) 2 vols.
 Haddon J. M. A. Differential Calculus. (Weale.)
 Haeckel E. Anthropogenic.
 Hakluyt Societies Publications. Narratives of
 the Rites and Laws of the Yncas.
 Halliwell J. O. The Life of Wm. Shakespeare.
 Hamilton A. Le Bélier Conte, etc. (See Cabinet
 des Fées.)
 Hamilton F. W. The Origin and History of the
 First, or Grenadier Guards. 3 vols.
 Hamilton H. C. Grammar of the Greek Lan-
 guage. (Weale.)
 Hamilton H. R. Greek-English Lexicon.
 ————— English-Greek Lexicon. (Weale.)
 Hamilton N. E. S. A. Dictionary of the English,
 German, and French Languages. (Weale.)
 3 vols.
 Hamilton W. D. Outlines of the History of
 England. (Weale.)
 ————— Chronology of History.
 Hamilton Wm. The Works of Thos. Reid.
 Hamilton and Leven. History of Greece.
 Handel G. F. The Life of. By Victor Schœlcher.
 Hansard T. C. Hansard's Parliamentary Debates.
 3rd Series. Vols. 214 and 215.
 Hann J. Treatise on Analytical Geometry and
 Conic Sections enlarged by Young.
 (Weale.)
 ————— Elements of Plane Trigonometry.
 (Weale.)
 ————— Examples on the Integral Calculus.
 (Weale.)
 Hanway J. An Historical Account of the British
 Trade over the Caspian Sea. 2 vols.
 Harleian Miscellany, The.
 Harrington J. The Oceana and other Works.
 Harris W. S. Rudimentary Electricity. (Weale.)
 ————— Galvanism and the General Princi-
 ples of Animal and Voltaic
 Electricity by Sabine. (Weale.)
 ————— Magnetism, with additions by Noad.
 (Weale.)
 Harvey W. H. Phycologia Australica; or a His-
 tory of Australian Seaweeds. 5 vols.
 Haydn J. Dictionary of Dates—1871.
 Hazard S. Santo Domingo, Past, and Present,
 with a glance at Hayti.
 Hazlitt W. The Round Table. Northcote's
 Conversations, characteristics, &c. Edited by
 W. G. Hazlitt.
 Hazlitt W. C. Hand-book to the Popular,
 Poetical, and Dramatic Literature of Great
 Britain.
 Heather J. F. A Treatise on Mathematical
 Instruments. (Weale.)
 ————— Descriptive Geometry. (Weale.)
 ————— Drawing, Measuring, Optical
 Surveying, and Astronomical
 Instruments. 3 vols. (Weale.)
 ————— Practical Plane Geometry.
 (Weale.)
 Hegel as the National Philosopher of Germany.
 (See Rosenkranz.)
 Helmholtz H. Popular Lectures on Scientific
 Subjects, with Introduction by Tyndall.
 Helps A. Life and Labours of Mr. Brassey,
 1805-1870.
 ————— Brevia; Short Essays and Aphorisms.
 Herbert G. The Works of, in Prose and Verse.
 2 vols.
 Héritier. (See L'Héritier.)
 Heroes of the Art of Medicine. (See Russell
 J. R.)
 Herrera Antonio de. History of the West Indies;
 translated by Stevens. Illustrated. 6 vols.
 Heylyn P. Ecclesia Restaurata.
 Hiller Dr. F. Mendelssohn. Letters and Recol-
 lections. Translated by Glehn.
 Hipsley W. Equatorial Arithmetic. (Weale.)
 Hislop A. The Book of Scottish Anecdote.
 Historical Account of Woburn Abbey. (See Dodd.)
 Hoare C. The Slide-rule, and how to use it.
 (Weale.)
 Hobbes T., of Malmesbury. The English Works
 of. 11 vols.
 Hobbes T., of Malmesbury. Opera Philosophica.
 6 vols.
 Hobbes J. R. The Picture Collector's Manual.
 2 vols.
 Hobbs A. C. The Construction of Locks.
 (Weale.)
 Hodder E. On Holy Ground; or, Scenes and
 Incidents in the Land of Promise.
 Holland H. R. Lives and Writings of Lope Felix
 de Vega, Carpio, and Guillen de Castro. 2 vols.
 Hollingshead J. Miscellanies. 3 vols.
 Holy Gospels, The; translated from the Original
 Greek, by Brameld.
 Homerus. The Iliads and Odyssees of Homer.
 (See Hobbes T.)
 Hooker J. D. (See Curtis's Botanical Magazine.)
 Hosack J. Mary Queen of Scots and her
 Accusers. Vol. 2.
 How H. The Mineralogy of Nova Scotia.
 Hudson H. N. Shakespeare: His Life, Art, and
 Characters, &c. 2 vols.
 Hughes J. (See Boscobel Tracts.)
 Hughes S. A Treatise on Waterworks for the
 Supply of Cities and Towns. (Weale.)
 ————— A Survey of the Metropolitan Roads.
 (Weale.)
 ————— A Treatise on Gasworks. (Weale.)
 Humboldt A. von. Letters of 1827-1858 to Von
 Ense.
 ————— Life of, by Lowenberg and
 others.
 Hume A. Notices of the Life and Works of
 Titian.
 *Hume H. Overland Expedition to Port Phillip
 in 1824. 3rd edition.
 Hunter W. W. Famine Aspects of Bengal Dis-
 tricts.
 Hutchins J. The History and Antiquities of the
 County of Dorset. 3 vols.
 Hutchinson W. The History and Antiquities of
 the County Palatine of Durham. 3 vols.
 Hyacinthe S. Prince Titi. (See Cabinet des Fées.)
 Illustrated Itinerary of the County of Lancaster.
 Illustrated London News. Vol. 62, 1873.
 India. Memoirs of the Geological Survey of
 India. Vols. 8 and 9.
 ————— Records of the Geological Survey of
 India. Vol. 5.
 Indian Army and Civil Service List, July, 1873,
 and January, 1874. 2 vols.
 Indian Antiquary, The. Vol. 1.
 Innes C. Memoir of Dean Ramsay.
 Institution of Civil Engineers. (See Civil.)
 Irby C. L., and Mangles J. Travels in Egypt and
 Nubia, Syria, and Asia Minor. 1817-18.
 Iron. The Journal of Science, Metals, and Manu-
 factures. Vol. 1.
 Jacobs F. (See Anthologia Græca.)
 James C., An Universal Military Dictionary, in
 English and French.
 Jeaffreson J. C. The Life of Robert Stephenson.
 2 vols.
 Jenkins E. Glances at Inner England.
 Jerrold B. The Life of Napoleon III. In 4 vols.
 Vol. 1.
 Jervis W. H. A History of the Church of France.
 2 vols.
 Jevons W. S. The Principles of Science: A
 Treatise on Logic and Scientific Method. 2
 vols.
 Johnson S. Oriental Religions, and their relation
 to Universal Religion.
 Johnson S. J. Eclipses: Past and Future.
 Johnstone J. C. Maoria: A Sketch of the
 Manners and Customs of the Aboriginal Inhabi-
 tants of New Zealand.
 Joinville J. Memoirs of. Written by himself;
 translated by Jones.
 Jordanes; or Jordanus. Jordanis de Getarum
 sive Gothorum Origine et Rebus Gestis.
 Jortin J. Remarks on Ecclesiastical History.
 Edited, with life, &c., of the Author, by Trollope.
 2 vols.
 Journal of the Chemical Society. (See Chemical.)
 Journal des Economistes. Vols. 29 to 32; 1873.
 Journal of the Proceedings of the Linnean Society.
 (See Linnean.)

APPENDIX E—continued.

List of Books added to the Library, &c.—continued.

- Journal of Microscopical Science. (See Microscopical Society.)
 Journal of the Royal Asiatic Society. (See Royal.)
 Journal of Science. (See Quarterly.)
 Justin or Justinus Martyr. Writings and Opinions of. (See Kaye.)
- Kaltenbach J. H. Die Pflanzenfeinde aus der Klasse der Insekten.
 Kaye J. Some Account of the Writings and Opinions of Justin Martyr.
 ——— Some Account of the Council of Nicæa, in connection with the Life of Athanasius.
 Kelly James. The American Catalogue of Books. New York, 1871.
 Kennaway L. J. Crusts: A Settler's Fare due South.
 Khiva and Turkestan. Translated from the Russian. (See Spalding.)
 Kingsley C. (See South by West.)
 Kipping R. Mast-making, Mast-making, and Rigging of Ships. (Weale.)
 ——— Sails, and Sail-making. (Weale.)
 Kirkman T. P. First Mnemonical Lessons in Geometry, Algebra, and Trigonometry. (Weale.)
 Knight C. Old England. 2 vols.
 Knowles J. The Life and Writings of Hy. Fuseli. 3 vols.
 Koldewey K. The German Arctic Expedition of 1869-70, and Narrative of the Wreck of the "Hansa" in the Ice.
 Koninck L. L. de. (See De Koninck.)
 Krahmer Capt. Oberst Wenjukow: Die russisch-asiatischen Grenzlande.
- La Force C. R. Contes des Contes. (See Cabinet des Fées.)
 Lamborn R. H. The Metallurgy of Copper. (Weale.)
 ——— The Metallurgy of Silver and Lead. (Weale.)
 Lancaster. An Illustrated Itinerary of the County of Lancaster.
 Langley T. The History and Antiquities of the Hundred of Desborough, and Deanery of Wycombe, in Buckinghamshire.
 Lanman C. The Japanese in America.
 La Porte l'Abbé de. La Bibliothèque des Fées, etc. (See Cabinet des Fées.)
 Lardner Dr. The Steam Engine for the use of Beginners. (Weale.)
 Law Hy. Constructing Roads. (See Hughes.) (Weale.)
 ——— The Elements of Euclid. (Weale.)
 ——— A Treatise on Logarithms. (Weale.)
 ——— Mathematical Tables. (Weale.)
 ——— Civil Engineering. (Weale.)
 Lawrence G. Reminiscences of 43 years in India.
 Lawrence H. Life of. (See Edwardes and Merivale.)
 Lecky W. E. History of the Rise and Influence of the spirit of Rationalism in Europe. 2 vols.
 Lee J. E. Roman and Imperial Profiles.
 Leeds W. H. Architecture for Beginners and Students. (Weale.)
 Legislative Enactments (six); for the Guidance of Contractors, Merchants, and Tradesmen. (Weale.)
 Le Grand d'Aussy P. J. B. Fabliaux or Tales abridged from French Manuscripts; translated by Way. 3 vols.
 Le Keux J. Memorials of Cambridge. 2 vols.
 Leland C. G. The English Gipsies and their language.
 Leland J. Joannis Lelandi Antiquarii de Rebus Britannicis Collectanea. 6 vols.
 Lenormant F. Les Premières Civilisations. 2 vols.
 ——— La Magic chez les Chaldéens.
 L'Épée Abbé de. The Method of Educating the Deaf and Dumb.
 Lepsius C. R. Standard Alphabet for reducing unwritten Languages and Foreign Graphic Systems to a uniform Orthography in European letters.
 ——— Denkmaeler aus Ægypten und Æthiopen. 12 vols. Elephant fol. 1 vol., 4to.
 Les Veillées Persanes. 4 vols.
 L'Évêque Mad. La Prince de Aigues-Martines, etc. (See Cabinet des Fées.)
- Levien E. Outlines of the History of Rome (Weale.)
 ——— and Hamilton W. D. History of Greece. (Weale.)
 Lewes G. H. Problems of Life and Mind.
 L'Heritier M. J. Contes des Fées. (See Cabinet des Fées.)
 Lindsay J. Notices of Remarkable Medieval Coins.
 ——— View of the History and Coinage of the Parthians.
 ——— A view of the Coinage of the Heph-tarchy.
 Lindsay Lord. Etruscan Inscriptions analysed, translated, and commented upon.
 Lindsay W. S. History of Merchant Shipping and Ancient Commerce. (In 4 vols.) Vols. 1 and 2.
 Linus C. von. A General View of the Writings of.
 Linnæan Society; The Journal of the Proceedings of. 22 vols.
 Lintot M. de. Contes de. (See Cabinet des Fées.)
 Literarisches Centralblatt für Deutschland. Vols. for 1872 and '73.
 Lloyd H. A Treatise on Magnetism.
 Lokman. Contes et Fables. (See Cabinet des Fées.)
 Londina Illustrata. (See Wilkinson.)
 London Journal of Arts and Sciences. (See Newton.)
 London; Post Office London Directory, 1874.
 ——— University Calendar for the Years 1872-1873.
 Lope Felix de Vega Carpio. (See Vega.)
 Lorenz F. The Life of Alcuin; Translated from the German by J. M. Slee.
 Lost Lady, The; A Tragic Comedy. (See Old Plays.)
 Lover S. The Life of. (See Bernard.)
 Löwenberg J., Ave-lallemand R., and Dove A. Life of Alexr. von Humboldt. 2 vols.
 Lower M. A. Wayside Notes in Scandinavia.
 Lubbock J. The origin of Civilization and the Primitive Condition of Man.
 ——— Pre-Historic Times.
 ——— Nature Series on the Origin and Metamorphoses of Insects.
 Lubert Made. du' Trois Contes. (See Cabinet des Fées.)
 Lucretius T. C. T. Lucreti Cari de Rerum Natura libri sex, with notes and a translation by Munro. 2 vols.
 Ludolphus J. A New History of Ethiopia, translated by Gent.
 Lussan M. de. Les Veillées de Thessalie. (See Cabinet des Fées.)
 Lyon C. J. History of St. Andrews. 2 vols.
 Lysons D. The Environs of London. 3 vols.
 Lytton E. Lord. Speeches of; with Memoir by his Son. 2 vols.
- Maccabees. The Five Books of. (See Cotton.)
 McCarthy D. F. The Engineers' Guide to the Royal Mercantile Navies. (Weale.)
 Macmillan's Magazine. Vols. 27, 28, 29.
 Macquoid K. S. Through Normandy. Illustrated by T. R. Macquoid.
 Madox T. The History and Antiquities of the Exchequer of the Kings of England. 2 vols.
 Maffei Count. Recollections of Massimo D'Azeglio. (See Azeglio.)
 Main R. Rudimentary Astronomy. (Weale.)
 Maitland S. R. Eight Essays on Various Subjects.
 *Manchester Public Free Libraries. Report of the Council 1872-73.
 Mapother E. D. The Body and its Health.
 Marchand Mad. Boca. (See Cabinet des Fées.)
 Marey Col. Memoir on Swords. Translated by Maxwell.
 Marey E. J. Animal Mechanism. A Treatise on Terrestrial and Aerial Locomotion, Illustrated.
 Markham C. R. A General Sketch of the History of Persia. 2 vols.
 Marno E. Reisen im Gebiete des blauen und weissen Nil.
 Marryat Cap. Life and Letters of. By Florence Marryat (Mrs. Ross Church.) 2 vols.
 Martyr Justin. (See Justin.)
 Mary-Stuart, Memoirs of; by Buckingham.

The Books marked thus * are donations.

APPENDIX E—continued.

List of Books added to the Library, &c.—continued.

- *Maryborough & Dunolly Advertiser. Reprints from. (See Smith J.)
- Maurer K. Island von seiner ersten Entdeckung bis zum Untergange des Freistaats.
- Maxton J. The Workman's Manual of Engineering Drawing. (Weale.)
- Maxwell H. H. Field Artillery and Swords. (See Taubert & Marey.) (Weale.)
- May T. The History of the Parliament of England.
- Mechanics' Magazine. Vol. 23. New Series.
- Medical Profession. Autobiographical Recollections of. (See Clarke J. F.)
- Medici L. de. II Magnifico. See Reumont A. von.
- Melvil J. The Memoirs of. (See Scott G.)
- Ménago G. Menagiana ou les Bons mots. 4 vols.
- Mendelssohn—Bartholdy F. Letters and Recollections. (See Hiller.)
- Metcyard E. Wedgwood and his Works.
- Metropolis Local Management Act, 1862. (Weale.)
- Meunier S. Cours de Géologie Comparée Professé au Muséum d' Histoire Naturelle.
- Meyrick S. R. The History and Antiquities of the County of Cardigan.
- Microscopical Society of London. Transactions of. New Series. Vols. 1 to 16. 1853 to 1863.
- Microscopical Society of London. Quarterly Journal of. Vols. 1 to 10. 1853-70.
- Millers' Merchants' and Farmers' Ready Reckoner. (Weale.)
- Milman H. H. The Agamemnon of Æschylus and the Bacchanals of Euripides.
— Samor, Lord of the Bright City. An Heroic Poem.
- Mirza Rafi-oo-Sauda. Selections from the Kulliyat, or complete Works of. Translated by Court.
- Mitchell J. A Manual of Practical Assaying. Edited by Crookes.
- Modern Criticism; or, The New Theology. The Battle of the Critics.
- Monckhoven D. A Popular Treatise on Photography. (Weale.)
- Moucrif F. A. de. Les Contes de. (See Cabinet des Fées.)
- Montagu A. A Lady of the Last Century. (See Doran.)
- Month, The. A Magazine and Review. Vols. 14 to 19. 1871-1873.
- Mores Catholicici. (See Digby K. H.)
- Morgan A. de. Arithmetical Books from the Invention of Printing to the present time, 1847.
— A Budget of Paradoxes.
- Morgans W. Manual of Mining Tools. (Weale.)
- Morin A. Salubrité des Habitations.
- Morley J. Rousseau. 2 vols.
- Müller F. Max. The Hymns of the Rig-veda in Pada Text.
— The Hymns of Rig-Veda, in Samhita Text.
- Muller Wm. Sketches of the Age of Francis I.
- Munro H. A. J. (See Lucretius, Titus Carus.)
- Murat Comtesse de. Contes des Fées. (See Cabinet des Fées.)
- Murhard F. M. A. Litteratur der mathematischen Wissenschaften. 5 vols.
- *Murray L. The power of Religion on the Mind in Retirement, Affliction, and the approach of Death.
- Murray J. C. The Ballads and Songs of Scotland.
- Murray R. A Treatise on Marine Engines and Steam-vessels. (Weale.)
- Napier J. Manufacturing Arts in Ancient Times.
- Napoleon III. The Life of. (See Jerrold B.) Nature. Vols. 4 to 8.
- Nautical Magazine, The. N.S., 1873.
- Newman J. H. The Office and Work of Universities.
- New South Wales Government Gazette; January to June, 1874.
- New South Wales The Statute Index of; by Alex. Oliver.
— Reports of Cases Argued and determined in the Supreme Court. Vol. XI.
— The Public General Statutes of New South Wales, from 26th Vic. 1862 to 1874.
- Newton's London Journal of Arts and Sciences. Vols. 1 to 18 and 23.
- New Zealand. Transactions and Proceedings of the New Zealand Institute, 1873. Vol. 6.
- *Nicholson Sir C. (See Egyptian Antiquities.)
- Nicolas N. H. Life of Wm. Davison, Secretary of State and Privy Counsellor to Queen Elizabeth.
- Niebuhr C. Travels through Arabia and other Countries in the East. 2 vols.
- Norfolk. History and Antiquities of the County of Norfolk. 10 vols.
- Norman People, The; and their existing descendants in the British Dominions and the United States of America.
- North American Review. Vol. 116.
- North British Review. October 1870 to January 1871. Vol. 53. (Publication ceased.)
- North O. The Practical Assayer.
- Notes and Queries. 4th S. Vol. XI.
- Nouvelle Legislation Prussienne l'Etat et l'Eglise. (See Prussia.)
- O'Conor C. Dissertations on the Ancient History of Ireland. 1753.
- Oettinger E. M. Bibliographie Biographique Universelle. 2 vols.
- O'Flaherty B. Ogygia, or a Chronological Account of Irish Events. 2 vols.
- Old England. (See Knight C.)
- Old English Drama. 2 vols.
- Old Plays.
- Otiplunt Mrs. M. Historical Sketches of the Reign of George II. 2 vols.
- *Oliver A. The Statute Index: New South Wales.
- Oliver G. Monasticon Diocesis Exoniensis.
- Oliver Prof. D. Illustrations of the Principal Natural Orders of the Vegetable Kingdom.
- Oppert F. Hospitals, Infirmarys, and Dispensaries.
- Osborn S. A Cruise in Japanese Waters.
- Osburn Wm. Ancient Egypt: Her Testimony to the truth of the Bible.
- Owen H., and Blakeway J. B. A History of Shrewsbury. 2 vols.
- Owen R. D. Threading my Way.
- Owens College, Manchester. (See Essays and Addresses.)
- Pacata Hibernia. (See Stafford.)
- *Page T. Clarence, New England, Macleay, and Gwydir Almanac for 1874.
- Painters, Sculptors, and Architects; Lives of the most Eminent; by G. Vasari.
- Pajon. Les Contes de. (See Cabinet des Fées.)
- Pallantus and Eudora, A Tragedie. (See Old Plays.)
- Palmer E. H. The Desert of the Exodus. 2 vols.
- Palmerston Viscount. The Life of: with selections from his correspondence by Bulwer. Vol. 3. 1874.
- Pamphilus, E. (See Eusebius.)
- Pascal B. Etudes sur Pascal. Par M. V. Cousin.
- Paton A. A. Henry Beyle (otherwise De Stendahl). A Critical and Biographical Study.
- Peake J. Rudiments of Naval Architecture. (Weale.)
- Peintres: Flamands, Allemands et Hollandois, La vie des. Par J. B. Descamps.
- Pennant T. A Tour in Scotland, 1769 and 1772. 3 vols.
- Perrault C. Contes des Fées. (See Cabinet des Fées.)
- Persnes: Les Veillées. 4 vols.
- Petermann A. Mittheilungen aus Justus Perthes' geographischer Anstalt. Vol. 19. 1873.
- Petrarch. The Sonnets, Triumphs, and other Poems of Petrarch. Translated by Campbell.
- Petrarka; von Ludwig Geiger.
- Pettenkofer M. von. The Relations of the Air to the Clothes we wear.
- Pettigrew J. B. The Physiology of the Circulation in Plants, in the Lower Animals, and in Man.
- Phillimore R. Commentaries upon International Law. 4 vols.
- Phillips J. A. Elements of Metallurgy.
— J. S. The Explorers', Miners', and Metallurgists' Companion.

The Books marked thus * are donations.

APPENDIX E—continued.

LIST of Books added to the Library, &c.—continued.

- Philosophical Magazine and Journal of Science. Vols. 45 and 46.
- Phonetic Journal, The; for the Year 1873. Vol. 32.
- Piggot J. Persia—Ancient and Modern.
- Pilpay; or, Bidpai. Contes et Fables. (See Cabinet des Fées.)
- Pin L. B. du. (See Du Pin.)
- Planché, J. R. The Conqueror and His Companions. 2 vols.
- Plato. The Republic of Plato. Translated into English, by J. L. Davies.
- The Republic of Plato. Translated by H. Spens.
- Playford F. Practical Hints for Investing Money. (Weale.)
- Plowden F. Jura Anglorum. The Rights of Englishmen.
- *Plutarchus: Plutarchi Chero Nei Græcorum Romanorum que Illustrium Vitæ.
- Popular Science, Monthly. 2 vols. 1873.
- *Porter K. A Narrative of the Campaign in Russia, 1812.
- Portlock Major. Geology. See Tate. (Weale.)
- Portraits Contemporains. (See Gautier T.)
- Poste B. Celtic Inscriptions on Gaulish and British Coins.
- Post Office London Directory, 1874.
- Powell G. S. B. New Homes for the Old Country.
- Presnac le S. de. Contes des Fées. (See Cabinet des Fées.)
- Pridcaux, T. S. The Economy of Fuel. (Weale.)
- Proctor R. A. The Universe and the Coming Transits.
- Light Science for Leisure Hours. 2 series.
- Saturn and its System.
- Prussia: Nouvelle Legislation Prussienne réglant les Rapports entre l'Etat et l'Eglise.
- Public Opinion, 1871-73. 5 vols.
- Pulteney R. A General View of the Writings of Linnæus.
- Punch. Vol. 64. 1873.
- Purves, D. L. The English Circumnavigators.
- Pyne, G. Perspective for Beginners. (Weale.)
- Quarterly Journal of Science. Vol. 3, N. S.
- Quarterly Review. Vol. 134.
- Queene of Arragon, The. (See Old Plays.)
- *Queensland: The Acts of Parliament of Queensland, 37° & 38° Vic: Session 1 of 1874.
- Questions Historiques. (See Revue des.)
- Ramsay A. The Rudiments of Mineralogy. (Weale.)
- Ramsay (Dean.) Reminiscences of Scottish Life and Character with Memoir by Innes.
- Rand E. H. Dates and Events in English History. (Weale.)
- Places and Facts in Physical and Political Geography. (Weale.)
- Randall P. M. The Quartz Operators' Handbook.
- Ranken W. H. L. The Dominion of Australia.
- Rawlinson G. The Five Great Monarchies of the Ancient Eastern World. 4 vols.
- Raymond R. W. Statistics of Mines and Mining in the States and Territories west of the Rocky Mountains.
- Reade W. The Story of the Ashantee Campaign.
- Reclus E. The Ocean. Translated by Woodward. 2 vols.
- Redding C. Personal Reminiscences of Eminent Men. 3 vols.
- Reid T. The works of, with preface and notes, &c., by Hamilton. 2 vols.
- Reinisch L. Der einheitliche Ursprung der Sprachen der alten Welt.
- Reitlinger E. Freie Blicke.
- Rendu M. Le C. Theory of the Glaciers of Savoy. Translated by Willis.
- Reports of Cases in the Supreme Court. (See New South Wales.)
- Reports of the Commissioner of Agriculture, Washington, 1870-71. 2 vols.
- Reports of the Commissioner of Patents, Washington, 1869-71. 7 vols.
- Retrospective Review, 1820-23. 16 vols.
- Reumont A. von. Lorenzo de Medici il Magnifico. 2 vols.
- *Revue Australienne: Journal des intérêts Français, etc., No. 2, January, 1874.
- Revue des Deux Mondes. Vols. 103-109.
- Revue des Questions Historiques. Vols. 13, 14.
- Révy J. J. Hydraulics of Great Rivers.
- Richardson T. A. The Art of Architectural Modelling (Weale.)
- Richter J. P. Sämmtliche Werke. 4 vols.
- Rig-Veda: The Hymns of. (See Müller F. Max.)
- Riley H. T. A Dictionary of Latin and Greek Quotations.
- Ritson J. Annals of the Caledonians, Picts, and Scots.
- Ancient English Metrical Romances.
- Robinson H. C. Diary, Reminiscences, and Correspondence of; by Sadler. 2 vols.
- Robson E. R. School Architecture.
- *Rogers J. E. H. Cobden and Modern Political Opinion.
- Rohlf's G. Adventures in Morocco and Journeys through the Oases of Draa and Tafilet, with Introduction by W. Reade.
- Rollin C. The Ancient History. 6 vols.
- Roofs: A Treatise on the Construction of, as regards Carpentry and Joinery. (Weale.)
- Rosenkranz Dr. K. Hegel as the National Philosopher of Germany. Translated by Hall.
- Rossetti D. G. Poems.
- Rousseau J. J. La Reine Fantasque. (See Cabinet des Fées.)
- Life, &c. (See Morley.)
- Rowbotham J. The Derivative Spelling Book. (Weale.)
- Royal Asiatic Society, The Journal of, N.S. vol. 6.
- Royal Red Book. (See Webster.)
- Royal Society of London: The Philosophical Transactions of. Vol. 162.
- Rudder S. History of Gloucestershire.
- Rule W. H. History of The Inquisition. 2 vols.
- Russell J. R. The History and Heroes of the Art of Medicine; with Portraits.
- Sabine R. The History and Progress of the Electric Telegraph. (Weale.)
- Sacheverell W. An Account of the Isle of Man.
- Sadler T. Diary, &c., of Henry Crabb Robinson.
- Salt H. A Voyage to Abyssinnia.
- Sandys G. Travels containing an History of the Turkish Empire, 1673.
- Sayce A. H. The Principles of Comparative Philology.
- Scherzer C. von. Smyrna.
- Expedition nach Indien, etc.; 1868-71.
- Schliemann H. Trojanische Alterthümer.
- Schœlcher V. The Life of Haudel.
- Scientific American. Vols. 28 and 29.
- Scotland: Tracts Illustrative of the Traditional and Historical Antiquities of Scotland.
- *Scott A. W. Mammalia; Recent and Extinct.
- Scott G. The Memoires of Sir James Melvil, of Hal Hill.
- Scott Sir W. Provincial Antiquities and Picturesque Scenery of Scotland. 2 vols.
- The Border Antiquities of England and Scotland. 2 vols.
- Scott W. B. Half-hour Lectures on the History and Practice of the Fine and Ornamental Arts.
- Selby P. J. Illustrations of British Ornithology. 2 vols.
- Selis M. Le Prince Desiré. (See Cabinet des Fées.)
- Seward W. Anecdotes of Distinguished Persons. 4 vols.
- Shakespeare Wm. The Life of. (See Halliwell.)
- His Life, Art, and Characters by Hudson.
- Shelley C. P. B. Workshop Appliances.
- Silliman B. (See American Journal.)
- Simon J. La Réforme de l'enseignement Secondaire.
- Simpson E. The Dramatic Unities in the present day.
- *Skene A. J. and Smyth R. B. Report on the Physical Character and Resources of Gippsland.
- Skertchly J. A. Dahomey as it is.
- *Smith J. Re-prints from the Maryborough and Dunolly Advertiser.
- Smith J. T. Antiquities of Westminster.
- Smith T. R. Acoustics in relation to Architecture and Building. (Weale.)

APPENDIX E—*continued.*LIST of Books added to the Library, &c.—*continued.*

- Smyth W. H. *Ædes Hartwoliannæ.*
 Smyth W. W. *Treatise on Coal and Coal-Mining.* (Weale.)
 Social Science. (See Transactions of.)
 Society of Useful Knowledge. (See Biographical Dictionary.)
 Somerville M. *On Molecular and Microscopic Science.* 2 vols.
 Sommerfeldt H. A. *The Construction of Ships.* (Weale.)
 Sophy, The. (See Old Plays.)
 *South Australia. *Report of the Progress and Condition of the Botanic Gardens and Government Plantations, 1873.*
 ————— *Acts of the Parliament of 37 Vic., 1873.*
 ————— *Proceedings of the Parliament of South Australia for 1873.* 3 vols.
 South By West; or, Winter in the Rocky Mountains, and Spring in Mexico. Preface by Kingsley.
 Southey R. *The Poetical Works of, complete.*
 Sozomenus; or, Sozomen H. *Ecclesiastical History.*
 Spalding H. *Khiva and Turkestan.* Translated from the Russian.
 Spedding J. *The Letters and the Life of Francis Bacon.*
 Spencer C. C. *Treatise on Music.* (Weale.)
 ————— *The Art of Playing the Pianoforte.* (Weale.)
 Spens H. (See Plato.)
 Stafford T. *Pacata Hibernia.* 2 vols.
 Stamer W. *The Gentleman Emigrant: His daily Life, Sports, and Pastimes in Canada, Australia, and the United States.*
 Stanley H. M. *Coomassie and Magdala.*
 ————— *How I found Livingstone.*
 Statistics of Mines and Mining West of the Rocky Mountains, by Raymond.
 Statute Index, The, of New South Wales.
 Statutes, The; Revised Edition (Great Britain), 1770-1823. 3 vols.
 Stenhouse T. B. H. *The Rocky Mountain Saints.*
 Stent G. C. *The Jade Chaplet, from the Chinese.*
 Stephenson R. *The Life of, by Jeaffreson.*
 Stephenson R. M. *The Science of Railway Construction.* (Weale.)
 Steur C. *Ethnographie des peuples de l'Europe.* 2 vols.
 Stevenson D. *Sketch of the Civil Engineering of North America.* (Weale.)
 ————— *Thos. The Design and Construction of Harbours.*
 Stewart D. *Account of the Life and Writings of Thos. Reid, D.D.*
 Stockmar E. von. *Memoirs of, by his Son.* Translated by Müller. 2 vols.
 "Stonehenge." *British Rural Sports.* (See Walsh.)
 Strauss G. L. *A Grammar of the French Language.* (Weale.)
 ————— *A Grammar of the German Language.* (Weale.)
 ————— *The German Reader.* (Weale.)
 Swinburne A. C. *Bothwell: A Tragedy.*
 Swindell J. G., and Burnell G. R. *Well-digging, Boring, and Pump-work.* (Weale.)
 Sydney Morning Herald. 3 vols., 1874.
 *Sydney Punch, The; N.S. Vol. 1, 1873.
 *Sydney University Calendar for 1874-75.
 Symonds W. S. *Records of the Rocks.*
 Targums, The. (See Etheridge.)
 *Tasmania. *The Acts of the Parliament of, 38 Vic., 1874.* Vol. 5, pt. 5.
 *———— *Journals of the Legislative Council.* Vol. 19.
 Tate R. *Treatise on Geology.* (Weale.)
 Taubert, on the use of Field Artillery on Service. Translated by Maxwell. (Weale.)
 Taylor Isaac. *Etruscan Researches.*
 *Tebbutt J. *Meteorological Observations, 1867-8.*
 Tennyson A. *Gareth and Lynette, &c.*
 Terrell E. *The Records of a Church of Christ Meeting in Broadmead, Bristol.*
 Text Books of Science. 2 vols.
 Thackeray W. M. *Miscellaneous, Prose and Verse.* 4 vols.
 Thirwall C. *The History of Greece.* 8 vols.
 Thompson G. A. *Geographical and Historical Dictionary of America.*
 Thomson J. T. *Translations from the Hakayit Abdulla (Bin Abdulkadar), with Comments.*
 Thomson W. C. *The Depths of the Sea.*
 Thorpe T. E. *Quantitative Chemical Analysis.*
 Timbs J. *The Year Book of Facts, 1874.*
 Titian T. V. *Notices of the Life and Works of, by Hume.*
 Todd H. J. *Memoirs of the Life and Writings of the Right Revd. Brian Walton, D.D.* 2 vols.
 Tomlinson C. *Mechanics.*
 ————— *Pneumatics for Beginners.*
 ————— *Construction of Locks.*
 ————— *Warming and Ventilation.* (Weale.)
 ————— *Experimental Essays.*
 ————— *Essays.* (Weale.)
 ————— *Natural Philosophy.* (Weale.)
 Tracts of Scotland. (See Scotland.)
 Transactions of the Institution of Civil Engineers. (See Civil Engineers.)
 Transactions of the National Association for the Promotion of Social Science, 1873.
 Trench R. C. *English, Past and Present.*
 Trollope A. *Australia and New Zealand.* 2 vols.
 Turner J. M. W. *Picturesque Views in England and Wales.* 3 vols.
 Twining T. *Technical Training.*
 Tyndale W. *Facsimile Texts. The first printed English New Testament.*
 Tyndall J. *Inaugural Address at the British Association for the Advancement of Science at Belfast, 1874.*
 ————— *The Forms of Water in Clouds and Rivers, Ice and Glaciers.*
 ————— (See Helmholtz.)
 Tyrwhitt T. (See Chaucer.)
 Tyson G. *Arctic Experiences.* (See Blake.)
 United States of America. (See Reports of Patents, and Reports of Commissioner of Agriculture.)
 United Service Magazine. 2 vols., 1873.
 Vambéry A. *Central Asia and the Anglo-Russian Frontier Question.*
 Vasari G. *Lives of the Most Eminent Painters, Sculptors, and Architects.* Translated by Foster.
 Vattel E. de. *The Law of Nations.*
 *Vaughan The Most Revd. Roger Bode. *The Life and Labours of St. Thomas of Aquin.* 2 vols.
 Vega Lope F. de C. *Some Account of the Life and Writings of, by Holland.*
 Vernon E. *American Railroad Manual for the United States and the Dominion.* 1874.
 Vertot R. Ade. *Histoire des Chevaliers Hospitaliers.* 5 vols.
 *Victoria. *Votes and Proceedings of the Legislative Assembly, 1873.*
 *———— *Report on the Physical Character and Resources of Gippsland, by Skene and Smyth.*
 *———— *Report of the Secretary for Agriculture, 1873.*
 Vieyra A. *A Grammar of the Portuguese Language.*
 Villeneuve Mad. *La Belle et la Bête.* (See Cabinet des Fées.)
 Virgilius P. M. *The Aeneid of Virgil: translated by Conington.*
 Vitruvius M. P. *Ancient Architecture.* (Weale.)
 Vizcaya, or Life in the Land of the Carlists, by Ellen Burges.
 Walsh F. H. *British Rural Sports by "Stonehenge."*
 Walton B. *Memoirs of the Life and Writings of, by Todd.*
 *Waterloo. *The Battle of.* Published by authority. 1815.
 Watson T. *Lectures on the Principles and Practice of Physic.* 2 vols.
 Watt A. *Electro-Metallurgy.* (Weale.)
 Weale J. *Dictionary of Terms used in Architecture, Building, Engineering, Mining, Metallurgy, Archæology, the Fine Arts, &c., by Hunt.*
 ————— *Weale's Educational Series.* 37 vols.
 ————— *Rudimentary Series.* 151 vols.
 Webb T. W. *Celestial Objects for the Common Telescopes.*

The Books marked thus * are donations.

APPENDIX E—*continued.*LIST of Books added to the Library, &c.—*continued.*

- Webster's Royal Red Book. 1874.
 Wedgwood and his Works, by Eliza Meteyard.
 Wellington, Duke of. Supplementary Despatches, Correspondence, and Memoranda. Vols. 11 to 14.
 Wenjukow M. Die russisch-asiatischem Grenzlande.
 Westminster Review. Vols. 42 and 43.
 Westphal R. Vergleichende Grammatik der indogermanischen Sprachen.
 Wey F. Rome, with an introduction by Story.
 Whelan P. The Numismatic Atlas.
 White N. A Handy Book on the Law of Friendly, Industrial and Provident Building, and Loan Societies. (Weale.)
 Whitelocke B. A Journal of the Swedish Embassy. 2 vols.
 Wieland C. M. Les Aventures Merveilleuses, &c. (See Cabinet des Fées.)
 Wiggins J. Embanking Lands from the Sea. (Weale.)
 Wilkinson R. Londina Illustrata. 2 vols.
 William the Conqueror. (See Planché.)
 Williams C. W. An Elementary Treatise on Coal. (Weale.)
 Willis B. Notitia Parliamentaria.
 Wilson H. History of the Rise and Fall of the Slave Power in America. Vol. 2.
 Winckelmann G. Monumenti Antichi Inediti Spiegati et Illustrati. 3 vols.
 Winton J. G. Modern Workshop Practice. (Weale.)
 Woburn Abbey. (See Dodd.)
- Woman's Work and Woman's Culture, by Butler.
 Wood J. G. Trespassers: Showing how the inhabitants of Earth, Air, and Water are enabled to trespass on domains not their own.
 Woodward S. P. A Manual of the Mollusca. (Weale.)
 Woolhouse W. S. B. Elements of the Differential Calculus. (Weale.)
 ————— Measures, Weights, and Moneys of all Nations. (Weale.)
 Woolsey T. Life and Death of, by Cavendish.
 Wordsworth D. Recollections of a Tour made in Scotland, edited by Shairp.
 Worsaae J. J. A. The Primeval Antiquities of Denmark, translated by Thoms.
 Wright T. Womankind in Western Europe, from the earliest times to the 17th Century.
 ————— Memorials of Cambridge. (See Le Keux.)
- Yelverton T. Teresina Peregrina, or Fifty Thousand Miles of Travel Round the World. 2 vols.
 Yncas. The Rights and Laws of. (See Hakluyt Society.)
 Young J. R. Treatise on Arithmetic and Key.
 ————— Navigation and Astronomy.
 ————— Tables to facilitate the operations of Navigation and Nautical Astronomy. (Weale.)
- Zadé C. Contes Turcs. (See Cabinet des Fées.)
 Zetzsche K. E. Kurzer Abriss der Geschichte der elektrischen Telegraphie.

APPENDIX F.

LIST of Periodicals, &c., received by each Monthly Mail, &c.

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| Animal World. | Fortnightly Review. | North British Agriculturalist. |
| Annales des Mines. | Fraser's Magazine. | Notes and Queries. |
| Annals and Magazine of Natural History. | Gentleman's Magazine. | Navy List. |
| Architect. | Geological Magazine. | North American Review. |
| Army List. | Good Words. | Punch. |
| Art Journal. | Gardener. | Public Opinion. |
| All the Year Round. | Gardener's Magazine. | Philosophical Magazine. |
| Athenaeum. | Gardeners' Chronicle. | Pictorial World. |
| Atti Della Societa Italiana. | Graphic. | Petermann's Geographische Mittheilungen. |
| Blackwood's Magazine. | Illustrated London News. | Phonetic Journal. |
| Botanical Magazine. | Illustrated Sydney News. (A donation) From July, 1873. | Popular Science Monthly. |
| BUILDER. | Indian Antiquary. | Quarterly Journal of the Geological Society. |
| British Quarterly Review. | Iron. | Quarterly Review. |
| Chemical Society's Journal. | Journal des Economistes. | Quarterly Journal of Science. |
| Cornhill Magazine. | Journal of Education. | Quarterly Journal of Education. |
| Contemporary Review. | Journal of the Chamber of Agriculture. | Revue des Questions Historiques. |
| Chambers's Journal. | Journal of the Royal Asiatic Society. | Revue des Deux Mondes. |
| Comptes Rendus des Séances de l'Académie des Sciences. | Le Moniteur Vicole. | Silliman's American Journal. |
| Colonies. (A donation.) | Literarisches Centralblatt. | Scientific American. |
| Dublin University Magazine. | Long Ago. | Sydney Mail. (A donation.) |
| Dublin Review. | Mechanics' Magazine (now Iron.) | Sydney Morning Herald. |
| Edinburgh Review. | Macmillan's Magazine. | United Service Magazine. |
| Englishwoman's Review. (A donation.) | Month. | Verhandlungen der K. K. Reichsanstalt. |
| Empire (Sydney). | Mud. | Veterinarian. |
| Engineer. | Nautical Magazine. | Westminster Review. |
| Farmer. | Nature. | Witness, The. (A donation.) |
| Farmer's Chronicle. | New Quarterly Magazine. | Woman's Journal. |

1875.

NEW SOUTH WALES.

SYDNEY GRAMMAR SCHOOL.

(REPORT, &c., FOR 1874.)

Presented to Parliament, pursuant to Act of Incorporation, 18 Victoria.

THE SECRETARY TO THE TRUSTEES, SYDNEY GRAMMAR SCHOOL, to THE MINISTER OF JUSTICE AND PUBLIC INSTRUCTION.

Sydney Grammar School,
5 July, 1875.

SIR,

I have the honor, by direction of the Trustees of the Sydney Grammar School, to transmit to you, for the purpose of being laid before the Parliament, the following Report of their proceedings, and the progress of the School, during the year 1874.

At a meeting of the Trustees, held on the 19th of January, Professor Pell was unanimously re-elected Chairman of the Board for the current year.

At the February meeting the Trustees unanimously re-elected the Honorable George Allen Vice-Chairman of the Board. The Trustees also accepted tenders to the amount of £144 for the completion of the south wing into class-rooms, and during the year the sum of £849 5s. 6d. was expended in substantial improvements and repairs.

At the June meeting the following resolution was passed in reference to the payment of School fees, viz.,—"That, in future, if any School fee be in arrear for more than twenty-one days after the commencement of the quarter, the boy be not allowed to return to the School until the fee be paid."

At the same meeting it was also decided that the meetings of the Trustees should be held monthly, on the first Monday of each month, at 4 p.m.; and the following by-laws with regard to the regulations and discipline of the School, drawn up by the Masters, were approved by the Trustees, viz. :—

"The Masters of the School have resolved to abolish the daily detention at 4 p.m., and to substitute for this punishment a weekly detention from 9.30 to 11.30 a.m. on Saturday morning.

Whenever any boy is reported for misconduct, or habitual idleness, one or more bad marks (according to the nature of the offence) will be affixed to his name.

"Any boy who shall have five such bad marks affixed to his name in any one week, or eight bad marks in two consecutive weeks, will have to attend upon the following Saturday. Such attendance will be strictly enforced, and no excuse, except on account of serious illness, will be accepted. In the case of those who have conscientious scruples against attending on Saturday the punishment of detention will be commuted for an imposition of 300 lines in the upper, and 150 lines in the lower, school.

"There will be a daily detention at 12.30 for all boys who fail to prepare their home-lessons.

"A. B. WEIGALL,

"Head Master."

On the 3rd August Mr. Wolrige was appointed, on probation, an Assistant Master, at a salary at the rate of £150 per annum.

At the December meeting a letter was read from the Honorable Sir Wm. Macarthur, resigning his trusteeship of the School, which vacancy has since been filled up by the appointment of W. C. Windeyer, Esq.

The number of pupils in attendance during the year averaged *316½, being an increase of 23 over the previous year, and the maximum yearly average since the foundation of the School.

The Trustees are quite satisfied with the state of discipline and efficiency of the School.

The amount of the whole income and expenditure of the School during the year will be found in the annexed Appendix.

I have, &c.,

W. H. CATLETT,

Secretary.

APPENDIX.

* The number in attendance during the quarter ending 18th June, 1875, was 399.

APPENDIX.

RETURN of the Receipts and Disbursements of the Sydney Grammar School in the year 1874.

Receipts.		Amount.	Disbursements.		Amount.
		£ s. d.			£ s. d.
To Balance from 1873		664 10 8	By Salaries	3,390 12 6	5,080 2 3
" Endowment	1,499 10 9	5,683 9 9	" Capitation fees paid to Masters	1,449 10 0	
" School fees from pupils	6,141 0 0		" Allowances	239 19 9	
" Interest on fixed deposits	42 10 0	850 0 0	" Stationery	89 10 9	
" Deposit accounts			" Printing	57 10 4	
			" Advertisements	11 16 4	
			" School prizes	27 10 0	
			" Knox prizes	12 10 0	
			" Repairs and improvements to buildings		
			" Petty expenses	66 12 4	
			" Insurance	9 0 0	
			" Deposit accounts		
			" Balance in Bank on 31st December		
		£ 7,198 0 5		£ 7,198 0 5	

Audited, February 2, 1875,—
 JAMES C. TAYLOR,
 Accountant.

W. H. CATLETT,
 Secretary,
 6 January, 1875.

RETURN of the Sydney Grammar School, for the Year 1874.

Office.	Name.	Salaries.	Allowances.	Fees from Pupils.	Total.	Remarks.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Head Master	Albert Bythesca Weigall	500 0 0		733 0 0	1,233 0 0	Residence allowed.
Mathematical Master	Edward Pratt	400 0 0	50 0 0	416 10 0	866 10 0	
Classical Master	Edwin Whitfield	300 0 0	25 0 0	300 0 0	625 0 0	
Assistant Master	Henry Spendlove Hawkins	300 0 0		300 0 0	300 0 0	
Do. do.	Alfred Paxton Backhouse	300 0 0		300 0 0	300 0 0	Resigned.
Do. do.	Lawrence Stephenson	279 3 4		279 3 4	279 3 4	
Do. do.	Edward Henry Rennie	216 13 4	10 0 0		226 13 4	
Do. do.	Henry Charles Lennox Anderson	166 13 4			166 13 4	
Lecturer in Latin	Rev. William Hillyar	100 0 0			100 0 0	
English Master	Charles John Fache	200 0 0	50 0 0		250 0 0	
Assistant do.	Arthur F. Wolrige	53 2 6			53 2 6	
French Master	Jean Pierre Cravin	100 0 0			100 0 0	
Drawing Master	Joseph Fowler	100 0 0			100 0 0	
Writing Master	Carl Johan Nelson	200 0 0			200 0 0	
Janitor and Drill Sergeant	Sebastian Hodge	100 0 0	40 10 0		140 10 0	Residence allowed.
Secretary and Accountant to Trustees	William Henry Catlett	75 0 0	464 9 9		139 9 9	*£23 1s. 9d., of this item belonged to 1873 acct.
		£ 3,360 12 6	239 19 9	1,449 10 0	5,080 2 3	

Audited, 2 February, 1874,—
 JAMES C. TAYLOR,
 Accountant.

W. H. CATLETT,
 Secretary,
 6th January, 1875.

SYDNEY GRAMMAR SCHOOL.

No. 1.—RETURN of the Number of Teachers employed in 1874.

Eleven engaged for their whole time;
 Three engaged for particular lessons Total, 14.

No. 2.—RETURN of the Number of Scholars.

First Quarter	296½
Second Quarter	312½
Third Quarter	327½
Fourth Quarter	329½
Total	1,266
Average	316½

W. H. CATLETT,
 Secretary,
 6th January, 1875.

1875.

NEW SOUTH WALES.

UNIVERSITY OF SYDNEY.

(REPORT FOR 1874.)

Presented to Parliament, pursuant to Act of Incorporation, 14 Vic. No. 31.

REPORT of the University of Sydney, for the year ended 31st December, 1874.

1. In accordance with the provisions of the Act of Incorporation, the Senate of the University has the honor to transmit to the Honorable the Minister for Justice and Education the report of its proceedings during the year 1874.

2. Twenty students passed the statutory examination and were admitted to Matriculation in Lent Term.

3. Exemption from attendance on lectures was granted to Mr. J. Debenham, an Undergraduate of the first year.

4. The following degrees were conferred after examination, viz.:—M.A.—P. A. Cooper, B.A., J. Coutts, B.A., F. D. Kent, B.A., G. Knox, B.A., G. Sly, B.A., J. J. Teece, B.A.

B.A.—J. J. M. Beatty, E. J. Butler, W. Edmonds, F. Freehill, T. Hill, G. Hurst, R. Kay, J. Morrice, J. Perry, T. Powell, J. Robertson, F. Sheridan, J. Waterhouse.

LL.D.—J. White, LL.B.

M.D.—W. F. Clay, M.B., R. T. Jones, M.B.

5. The following candidates passed the examination for Degrees at the close of Michaelmas Term, viz.:—M.A.—M. Clune.

B.A.—W. Lee, W. Chisholm, J. Oliver, A. Dawson, G. E. R. Jones.

6. The Scholarships and Prizes were awarded as follows, viz.:—"Cooper" Scholarship for proficiency in Classics, J. Oliver. "Barker" do. for proficiency in Mathematics, not given. "Deas Thomson" do. for proficiency in Physics, W. Chisholm. "Lithgow" do. for general proficiency in the second year, T. Butler. "Levey" Scholarship for general proficiency in the first year, G. Renwick. "Gilchrist" do. (tenable by a graduate at the Universities of Edinburgh or London), G. Hurst. "University" do. for general proficiency, 3rd year, W. Chisholm. 2nd year, 1st year, G. B. Allen, N. Russell. The "Belmore" medal for proficiency in Geology and Practical Chemistry, with especial reference to Agriculture, was awarded to E. J. Butler. Professor Pell's medal for Mathematics at the B.A. examination—E. J. Butler. Professor Smith's prize for Physics at the class examinations—J. Oliver.

7. For the public examinations in Michaelmas Term there were 277 candidates, viz.:—Fifty-five senior males, eight senior females, and 169 junior males and forty-five junior females. Of these, 118 were examined at the following centres, viz.:—Mudgee, Young, West Maitland, Grafton, Singleton, Goulburn, Gunning, Kiama, Adelong, and Wagga Wagga. Thirty-six senior males, four senior females, 102 junior males, and twenty-nine junior females received certificates. The number of candidates is in excess of that of previous years, and the Senate desires to record with satisfaction the increasing popularity of these examinations, especially in the country districts. Of the results, the Examiners report that of the candidates who failed to pass, a large proportion was as usual rejected on account of bad spelling. That, in the English language, the same deficiency was found as before, the parsing defective, the explanation of the meaning of words far from satisfactory, and the knowledge of the syntax and of the idioms of the language so scanty as to show that this branch of study, which might so easily be made at once attractive and useful, had been generally neglected by teachers. That in the French language a very small proportion of the candidates passed; the greater number failing alike in translation, inflections, and composition. That the same remarks apply in some degree to the Latin language, and that generally speaking the candidates who passed a satisfactory examination were those who also took up Greek, and the candidates in Greek were generally successful, though their number was small. That in Mathematics there was a marked improvement, and the result satisfactory. That in Geography and History there was some improvement; but that in the latter subject there was great deficiency, especially among the seniors. That in Chemistry one or two candidates displayed a satisfactory knowledge.

The prizes at the public examinations were awarded as follows, viz.:—"Fairfax" for junior females—

M. à Beckett, }
K. Carney. } seq.

"University," for senior males—J. D. S. M'Lardy. "University," for junior males—H. Murray.

8. A communication was received by the Senate, from William Macleay, Esquire, notifying his intention to leave his library and collection of Natural History to the University. The conditions of bequest, as contained in an extract from his will, were—that they should be held in trust for the promotion and advancement of the science of Natural History, and the instruction of the inhabitants of the Colony.

Provision was also made for the maintenance of a Curator, who was to be a person of education and competent acquaintance with the science. With this view, a sum of £6,000 was appropriated; the annual income from which, after investment in public stock in the Colonies or good mortgages, was to be applied for that purpose. Mr. Macleay's munificent offer was accepted by the Senate, subject to the conditions specified by him.

9. A sum of money having been raised for the purpose of perpetuating the memory of the late Reverend John West, Editor of the *Sydney Morning Herald*, the subscribers, through the medium of Sir Alfred Stephen, made a proposition to the Senate that the memorial should take the form of a gold medal, to be awarded annually to the greatest proficient at the Senior public examination. It was decided that the amount £200 when invested in Government debentures should be handed over to the University.

10. The Senate has further to announce the very munificent donation of £1,000 from Mrs. Maurice Alexander, as an endowment to the University, and with a view of perpetuating her husband's name. Mrs. Alexander's proposition, which has been accepted by the Senate, is—that a bursary should be founded to enable a student whose means would be otherwise insufficient, to prosecute his studies as an undergraduate of the Sydney University, and that he should reside in one of the Affiliated Colleges or some other place approved of by the authorities of the University. Mrs. Alexander declared that the object of the foundation was to place the advantages of a University education within the reach of persons living in the country. Further, that students whose parents were resident in Sydney should not be eligible for the bursary. To obviate the necessity of attendance in Sydney for examination, it has been provided that candidates should be required to pass the Senior public examination at any of the places in the Colony where public examinations are held, in those subjects which are taken as equivalent to the examination for Matriculation. The amount of the donation, £1,080, has been invested in ten Government debentures of £100 each, bearing interest at 5 per cent.

11. In accordance with the provisions of the Act incorporating the Alfred Hospital, the Directors laid before the Senate the plans and elevations of the proposed buildings; also a plan of the grounds, showing the reservation made for the Medical School. The plans were approved, but assent was reserved, failing the production of a scheme for the drainage of the ground, as specially provided for in the Act.

12. Two By-laws were passed during the year, copies of which are appended (A.)—the first, exempting candidates for B.A. who should have no desire to devote themselves specially to Natural Science from an examination in Geology, Mineralogy, and Practical Chemistry, and rendering those who should have passed the first and second yearly examinations in Chemistry and Experimental Physics qualified for their Degree as far as Natural Science was concerned; further, allowing candidates who, at the second year, should have exhibited marked proficiency in any one of the three schools of Classics, Mathematics, or Natural Science, to devote themselves in the third year exclusively to the subjects of that school, and to be examined for B.A. in them only. The second by-law provides for an alteration in the scholarships and prizes.

13. At the first meeting of the Senate held in Lent Term, the Honorable Edward Deas Thomson, C.B., was unanimously re-elected Chancellor of the University, his term of tenure of office having expired.

At the same meeting the Reverend Canon Allwood, B.A., was re-elected Vice-Chancellor.

14. An account showing the receipts and expenditure of the University during the year, duly certified by the Auditor, is hereto appended (B).

APPENDIX A.

BY-LAW I.

"To obtain the degree of B.A., candidates shall pass a satisfactory examination in the following subjects, viz.:—1. The Greek and Latin languages—2. Mathematics and Natural Philosophy—3. Chemistry, Experimental Physics, Geology, and Mineralogy.

"Provided always that no candidate may elect to be exempted from examination in either the Classical or the Mathematical schools, unless he shall have obtained at least a second class place in that school at the second yearly examination. Candidates who have passed the second yearly examination, and have displayed a marked proficiency in any one of the three schools, may, on the recommendation of the Examiners, be allowed to attend lectures during the third year in that school only, and to be examined for the degree of B.A. in that school only.

"All persons who have passed the ordinary examination for degrees shall be admissible for Honors in the Classical, Mathematical, and Natural Science schools.

"The candidates in each school shall be arranged in classes and order of merit. The most distinguished candidate for honors in each of the aforesaid schools shall, if he possess sufficient merit, receive a prize of ten pounds."

BY-LAW II.

"In addition to the private foundations, viz., the 'Barker,' 'Deas Thomson,' 'Cooper,' and 'Lithgow' Scholarships—each of the annual value of £50, and the 'Levy' Scholarship, of the annual value of £35, there shall be three University Scholarships, each of the value of £50, payable out of the public endowment.

"The above scholarships tenable for one year, shall be awarded, after examination, in the following manner:—To undergraduates of the first year, three scholarships for general proficiency, viz., two University scholarships and the 'Levy' scholarship. To undergraduates of the second year, three scholarships for general proficiency, viz., two University scholarships, and the 'Lithgow' scholarship founded in 1864. To undergraduates of the third year, three scholarships, viz.:—1. For proficiency in Classics, the 'Cooper' scholarship founded in 1857. 2. For proficiency in Mathematics and Natural Philosophy, the 'Barker' scholarship founded in 1853. 3. For proficiency in Chemistry and Experimental Physics, the 'Deas-Thomson' scholarship founded in 1854."

APPENDIX B.

UNIVERSITY OF SYDNEY.

STATEMENT of Receipts and Expenditure during the Year 1874.

Receipts.			Expenditure		
	£	s. d.		£	s. d.
Received by balance in Commercial Bank, on 1st January, 1874 ...	1,010	22 1	Paid for Salaries, Charges, Improvement of Grounds, &c.	4,763	13 1
" from Government annual endowment	5,000	0 0	" Repairs to Building	426	5 5
" Lecture Fees, after paying Professors their shares ...	197	10 9	" Philosophical Apparatus	69	19 10
" Degree and other fees	169	0 0	" University Scholarships	225	0 0
" Pasturage	95	14 6	" to retire a share in the Old Sydney College	50	0 0
" Mrs. M. Alexander, to found a Bursary	1,000	0 0	" for 10 Debentures on account the "M. Alexander" Bursary	1,088	8 9
" Interest on Debentures and rents of properties belonging to private foundations:—			" for a Debenture for the "Cooper" Scholarship	105	12 0
"Lithgow" Scholarship	£65	0 0	" the following sums on account Private Foundations:—		
"Professor Pell's" Medal	10	0 0	"Lithgow" Scholarship	£50	0 0
"G. W. Allen" Scholarship	15	0 0	"Professor Pell's" Medal	10	0 0
"Levey" Scholarship	45	0 0	"Levey" Scholarship	85	0 0
"Deas Thomson" Scholarship	123	8 4	"Deas Thomson" Scholarship	50	0 0
"Wentworth" Fellowship	80	0 0	Insurance of "Deas Thomson" property	8	15 0
"Nicholson" Scholarship	10	0 0	"Cooper" Scholarship	37	10 0
"Cooper" Scholarship	109	1 11	"Barker" Scholarship	12	10 0
"Barker" Scholarship	101	11 10	Repairs to "Cooper" Scholarship property	207	5 10
"Wentworth" Prize Medal	9	18 11	Repairs to "Barker" Scholarship property	207	5 10
"Belmore" Medal	15	0 0	"Wentworth" Medal	10	19 0
"Fairfax" Prize	30	0 0	"Salting" Exhibition	20	0 0
"Salting" Exhibition	25	0 0			
	588	10 0	By balance in Commercial Bank, on 31st December, 1874.....	758	11 7
	£ 8,161	16 4		£ 8,161	16 4

PUBLIC Examination Fees Account for 1874.

Receipts.		Expenditure.			
	£	s. d.	£	s. d.	
Received from Candidates for Examination	714	1 0	Paid for Expenses of Examination and Fees to Examiners	714	1 0

Audited—
G. EAGAR.

WILLIAM CLARK,
Accountant.

1875.

NEW SOUTH WALES.

ST. JOHN'S COLLEGE.

(BY-LAWS.)

Presented to Parliament, pursuant to Act 21 Vict. No. 11.

ST. JOHN'S COLLEGE WITHIN THE UNIVERSITY OF SYDNEY.

In pursuance of the power vested in us by the Act passed in the twenty-first year of the reign of Her present Majesty, intituled "*An Act to incorporate St. John's College as a College within the University of Sydney*," we, the Rector and Fellows of St. John's College, for the purpose of carrying into effect the provisions and objects of the said Act, do hereby revoke the several By-laws and Rules heretofore made by us, and do, instead thereof, establish the several By-laws and Rules which are contained in the Schedule hereto signed at the end thereof by the present Rector of the said College.

In witness thereof, we hereunto affix our corporate seal, this thirteenth day of October, in the year of our Lord one thousand eight hundred and seventy-four.

By order of the Council,

ROGER BEDE VAUGHAN, D.D.,
Rector.

BY-LAWS OF ST. JOHN'S COLLEGE.

MEMBERSHIP.

1. The ordinary members of St. John's College, in addition to the Rector, the Vice-Rector, Fellows, Lecturers, and students, shall consist of those who, having been students thereof, continue to keep their names on the books; together with such persons as the Rector and Fellows shall admit to honorary membership.

2. Every person, having been a student, whose name is no longer on the College books, may, by leave of the Rector and Fellows, have his name restored.

ADMISSION OF STUDENTS.

3. Residence in College shall not be a necessary condition of membership. Students of St. John's College may be either resident or non-resident.

4. Persons desirous of becoming students of the College shall, if required so to do, produce letters as to character from a Clergyman, and from the Principal of the College or School where the applicant has studied.

5. The name of every student admitted into the College shall be registered in a book provided for that purpose.

6. All students residing in the College shall either have matriculated or be preparing for matriculation at the next ensuing examination for that purpose.

7. The names of resident students shall not be entered in the College Register until they shall have matriculated.

8. Any student failing to pass the matriculation examination shall cease to reside in the College, but may be re-admitted prior to the next matriculation examination, if he shall intend again to present himself for examination.

9. Every student, on being entered on the College Register, shall sign the declaration marked B in the Appendix hereto.

10. Non-resident students, with a view to matriculation, and members of the College having graduated in the University, shall have the same privileges, and shall be subject to the same discipline, except in point of residence, as the resident students.

TERMS AND VACATIONS.

11. The Collegiate terms and vacations shall be the same as those of the University. The Easter recess shall not be considered a vacation.
12. During Term time all resident students shall reside in, and all non-resident students shall attend daily at, the College.
13. The Rector, or in his absence the Vice-Rector, may grant to any student temporary exemption from the preceding rule.
14. Resident students wishing to remain in the College during vacation may do so with the consent of the Rector, and under such regulations as the Rector may establish.

RELIGIOUS EXERCISES.

15. All resident students shall attend morning and evening prayers, mass, and all public services in the College Chapel.
16. Students shall approach the Sacraments at least once in each term.
17. A record shall be kept of the attendance of the resident students at Chapel, and also of their reception of the Sacraments.
18. All students, whether resident or non-resident, shall receive gratuitous and systematic instruction in the doctrines and practice of the Catholic Church.
19. The Rector, with the sanction of the Visitor, shall determine the text-books for such instruction; and every student must provide himself therewith, and attend all lectures on these subjects.

GENERAL INSTRUCTION.

20. Lectures, when deemed by the Rector necessary, shall be given on the subjects of the University course.
21. The course of philosophy commonly distributed into logic, metaphysics, and ethics, shall be taught within the three years of the ordinary University curriculum; and all students, whether resident or not, shall attend the lectures on these subjects.
22. Modern history shall be taught in the College; and the lectures thereon shall be so arranged as to comprise the entire course within the period of the University curriculum. Attendance at these lectures shall be obligatory on all students.
23. Stated hours shall be set apart for private study; and, during the hours so assigned, silence shall be observed by all students.
24. An examination shall be held annually, at a time to be appointed, on the subjects of College instruction other than those taught at the University lectures; and the result of such examination shall be reported at a meeting of the Council.

LIBRARY.

25. The Library shall be open to Members of the College, under such regulations as may be made by the Rector and Fellows.

MEALS.

26. Resident students shall take their meals together in the College Hall, at stated hours, due notice whereof shall be given.
27. No visitor, or non-resident member of the College, shall be admitted to the College Hall without a special invitation from the Rector.

ROOMS.

28. No student shall have more than one room, except by permission from the Rector, and by paying such extra sum as the Rector and Fellows may determine.
29. The furniture of each room shall be provided by the occupant at his own cost, unless otherwise agreed.
30. Any student's room may, at any time, be visited by the Rector, or by any officer to whom the Rector may have delegated authority, who may order the removal of anything therein which he may deem objectionable.

DISCIPLINE.

31. The College gates shall be closed at a stated hour every evening, after which no resident Student shall be outside the College precincts without the permission of the Rector or, in his absence, of the Vice-Rector.
32. Every resident student shall be within the College grounds before the gates are closed; in default thereof, he shall be liable to such penalty as the Council may determine.
33. Visitors to the students may be admitted within the College, subject to such regulations as the Rector may establish.
34. Leave of absence from the College for a portion or for the whole of a night may be granted to any student by the Rector or, in his absence, by the Vice-Rector; but in either case only for very urgent reasons.
35. The academic dress shall invariably be worn by all students and officers of the College in Chapel, hall, and at lectures, and likewise within the precincts of the College or University, except during recreation.
36. The Rector shall have power to expel students, subject to an appeal to the Council.
37. Every student shall repress to the utmost of his power every word and deed of an irreligious or immoral or dishonorable character, or any conduct in the slightest degree unworthy of a Catholic gentleman.

FEES.

3

FEES.

38. The ordinary fees from members shall consist of an admission fee and of annual fees.
 39. The admission fee shall be the same for all students, whether resident or not.
 40. The annual fee for resident students must cover the expenses of room, board, service, lectures, and tuition.
 41. The annual fee for non-resident students must cover the charges for lectures, tuition, and any other College privileges for which the Council may require a fee.
 42. An annual fee shall be payable by all other members (except Fellows and Officers) to entitle them to keep their names on the College books.
 43. The amounts of all College fees shall be fixed by the Council, and paid to the Officer appointed to receive them.
 44. All fees are to be paid in advance; and a Schedule thereof shall be exhibited in the public Hall.

SCHOLARSHIPS.

45. Persons desirous of founding Scholarships or free places within the College for any special purpose, may do so upon any conditions not repugnant to the objects for which the College is established.
 46. Where the Founder shall not have directed the special application of any such Scholarship, the Council shall have the right to do so.
 47. Candidates for Scholarships who shall be admissible to the College under By-law No. 4 shall be examined by at least three Examiners, of whom the Rector shall be Chairman—the others being nominated from time to time by the Council.
 48. The Examiners shall vote for the candidate who shall exhibit the greatest proficiency in the subject or subjects of examination; and the Rector shall report, in writing, at the next meeting of the Council, the result of such examination, and the Council shall award the Scholarship accordingly.
 49. Due notice shall be given of all such Scholarships, and of the time and place of examination.

COUNCIL.

50. The meetings of the Council shall be held at the College, or at some place in Sydney, at such times as shall be appointed for that purpose.
 51. The Rector may at any time, without requisition, convene a special meeting of the Council.
 52. A special meeting of the Council shall be convened by the Rector upon the written requisition of one clerical and two lay Fellows.
 53. Of ordinary meetings every Fellow resident in Sydney, or within 50 miles thereof, shall receive at least two days' written notice; and of special meetings, at least one day's written notice.
 54. At all meetings the Rector, or in his absence the Vice-Rector, shall preside.
 55. All the proceedings of the Council shall be entered in a journal; and at the opening of each meeting the minutes of the previous meeting shall be read, and (unless the then meeting shall be an adjourned meeting) confirmed. In the case of meetings adjourned, the confirmation of the minutes shall be deferred until the next ordinary meeting.
 56. No motion (other than of a merely formal character) shall be made at any meeting unless notice of such motion shall have been given at a previous meeting; but this requirement may be dispensed with in any case where the meeting shall unanimously consent thereto.
 57. Whenever any question shall be submitted by the Chairman for the vote of the meeting, every Fellow present shall vote thereon.
 58. If any Fellow shall, without leave of the Council, be absent from three consecutive ordinary meetings thereof, his office of Fellow shall thereupon become vacant: Provided that, for the purposes of this rule, every adjourned meeting shall be reckoned as part of the original or principal meeting, and not as distinct therefrom.
 59. Upon any vacancy occurring amongst the Fellows, candidates for the vacant office shall be nominated at the next meeting of the Council; and, whether opposed or not at such meeting, they shall be submitted for election at the next ensuing meeting, and their election shall depend upon the result of the votes taken in reference thereto.
 60. No person who has been elected by Fellowship shall take his seat at the Council Board until he has signed the declaration marked A in the Appendix hereto.
 61. The annual certificate required by the Colleges Endowment Act, 18 Victoria, No. 37, section 5, shall be under the hands of any two Fellows.

THE SEAL.

62. The Seal of the College shall be in the custody of the Rector, and shall not be affixed to any document except by order of the Council.

ST. JOHN'S COLLEGE.—RULES AND REGULATIONS.

HORARIUM.

63. The Horarium shall be fixed from time to time by the Rector, under the sanction of the Council.

ANNUAL EXAMINATION.

64. The Annual Examination of Students, under By-law No. 24, shall take place at the beginning of Lent Term.

LIBRARY.

LIBRARY.

65. The Library shall be under the immediate charge of a Librarian appointed by the Council; and he shall be responsible for the custody of the books, and the carrying out of all regulations in respect of the Library.

66. The names of all donors of books, with the number of volumes given, shall be entered in a register to be kept in the Library.

67. No person shall borrow any book from the Library except upon application to the Librarian, who shall, upon delivery of the book, enter in a register the borrower's name and the date of delivery; and afterwards, on the return of the book, the date of return.

68. No more than three volumes, borrowed from the Library, shall be in the possession of the same person at any one time.

69. Any person having borrowed a book from the Library shall, on request of the Librarian, return the book forthwith; and in every other case, in or before the last week of each Term: in default, the borrower shall pay to the Librarian a fine of one shilling per week for each book so long as it shall be detained beyond the time limited.

70. Books of reference shall on no account be removed from the Library.

71. Any person who shall deface or otherwise injure books belonging to the Library shall be required by the Librarian to replace each book so defaced or injured by another of the same edition and of equal value, or to pay the price of such book.

72. Silence shall at all times be observed in the Library.

73. Persons using books in the Library shall return them, after being used, to their proper places on the shelves.

74. No person who shall fail to comply with any of the Library regulations shall be allowed to borrow books from the Library.

75. The Librarian shall from time to time, and specially when necessary, report to the Council (through the Rector) any cases of non-compliance with the Library regulations.

76. All fines paid to the Librarian shall go to form a Library Fund, in respect of which the Librarian shall account to the Council.

77. The Librarian shall make an annual inspection and return of all books belonging to the Library.

78. Persons not members of the College may, upon delivery to the Librarian of a written permission from the Rector, Vice-Rector, or any of the Fellows, have access to the Library during Library hours.

MEETINGS OF THE COUNCIL.

79. The ordinary meetings of the Council shall be held on the first Tuesday in the respective months of February, May, August, and November, in each year.

ROGER BEDE VAUGHAN, D.D.,
Rector.

APPENDIX.

A.

The Form of Declaration to be made by Fellows.

I, _____, solemnly and sincerely declare that I am a member of the Roman Catholic Church, and that as long as I shall hold the office of Fellow of Saint John's College within the University of Sydney, I will continue a member of that Church.

Signed by the said _____, on this _____, 18____, in my presence,— _____ }
Rector.

B.

The form of Declaration to be made by Students, whether resident or non-resident, and other members of the College, except the Rector, Vice-Rector, and Fellows.

I, _____, solemnly and sincerely declare that I am a member of the Roman Catholic Church, and that as long as I shall be a member of Saint John's College within the University of Sydney, I will in all respects conform to the statutes, by-laws, and rules of the said College.

Signed by the said _____, on this _____, 18____, in my presence,— _____ }
Rector.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

FACULTY OF MEDICINE, SYDNEY UNIVERSITY.
(PROCEEDINGS OF EXAMINERS AFFECTING THE DEAN.)

Ordered by the Legislative Assembly to be printed, 12 July, 1875.

THE REGISTRAR, SYDNEY UNIVERSITY, TO THE UNDER SECRETARY OF PUBLIC INSTRUCTION.

University of Sydney,
7 July, 1875.

SIR,

In transmitting replies to the queries submitted in your memorandum of the 3rd instant, I have the honor, by direction of the Senate, to forward for the information of the Honorable the Minister of Public Instruction the following resolution which was passed at a meeting of that body held this day:—

“The Senate is of opinion that the meeting of Examiners referred to had not been so convened as to constitute a regular meeting of the Board of Examiners, and that the resolutions passed at such meeting do not appear to be within the scope of the official duties of that Board.”

I have, &c.,
HUGH KENNEDY,
Registrar.

MEMO. for the Under Secretary of Justice and Education.

Legislative Assembly.

Questions for Wednesday, 7 July, 1875.

Answer I.—Examiners in the Faculty of Medicine in the University of Sydney:—

Professor Smith, M.D., Dean,
H. G. Alleyne, M.D.,
G. Bennett, M.D.,
S. Boyd, M.D.,
J. C. Cox, M.D.,
P. S. Jones, M.D. (absent in England),
F. N. Manning, M.D. (absent in England),
A. Renwick, M.D.,
A. Roberts,
E. Bedford.

Answer II.—The following is a letter addressed to the Senate by Dr. Bennett:—

“To the Chancellor and Senate of the Sydney University.

“Sydney, 10 June, 1875.

“Gentlemen,

“I have the honor to inform you that the Examiners of the Faculty of Medicine held an adjourned meeting on the 9th instant, to consider a speech recently delivered by the Dean of the Faculty of Medicine, in the Legislative Council.

“After full deliberation and with much regret, the resolutions, of which copies are herewith enclosed, were passed unanimously.

“I have, &c.,
“GEORGE BENNETT, M.D.,
“Chairman.”
“Resolutions.

“ Resolutions.

“ I.—Believing that a sound and liberal course of study is the only true foundation for the successful and humane treatment of disease, we desire to express our dissent from certain views contained in a speech delivered by Professor Smith in the Legislative Council on the 13th ultimo. We consider that these views tend to disparage the advantages of scientific education, to undervalue the necessity for steady and persevering application in the acquisition of professional knowledge, and to diminish confidence in the conscientious efforts of the authorized examining bodies to provide a class of medical practitioners possessing the highest educational attainments, and sufficiently numerous to meet the demands of human suffering.

“ II.—That a copy of these resolutions be forwarded to the Chancellor and Senate of the University, and to Professor Smith.

“ G.B.”

Answer III.—The following correspondence has passed on this subject:—

“ G. Bennett, Esq., M.D.

“ University, 5 July, 1875.

“ Sir,

“ With reference to your letter of the 10th ultimo, transmitting certain resolutions of the Examiners of the Faculty of Medicine in this University, I have the honor to request that you will have the goodness to furnish me with the names of the gentlemen present when those resolutions were passed. As this information is required for the Legislative Assembly on the 7th instant, may I request the favour of a reply at your earliest convenience.

“ I have, &c.,

“ HUGH KENNEDY,

“ Registrar.”

“ The Chancellor and Senate of the University.

“ Sydney, 5 July, 1875.

“ Gentlemen,

“ I have the honor to enclose a memorandum agreed to at a meeting of the Examiners in the Faculty of Medicine held on the 2nd instant. I also enclose copy of a letter received from Professor Smith on the 17th ultimo, and beg to state that the Examiners present at the meeting held on the 9th ultimo at which the resolution forwarded to you under date 10th June, were as follows:—Dr. G. Bennett, Dr. Cox, Dr. Renwick, A. Roberts, Esq. Those absent were:—The Dean of the Faculty, not summoned; Dr. Boyd, confined to bed by illness, but concurring in the resolutions; Dr. Alleyne, otherwise engaged, but concurring in the resolution; Dr. Manning, absent in England; Dr. Jones, absent in England; E. Bedford, Esq., absent through ill health, but concurring in the resolutions.

“ I have, &c.,

“ G. BENNETT, M.D.,

“ Chairman.”

“ MEMORANDUM.

“ WE, the undersigned, Examiners in the Faculty of Medicine, beg to acknowledge the letter of Professor Smith of the 15th ultimo, and to thank him for the explanatory observations it contains; but while we are deeply gratified to learn that he has no desire to depreciate the great importance of scientific education as a basis for medical practice, we feel ourselves unable to modify the resolutions referred to, as bearing upon his published speech kindly furnished to us by himself.

“ GEORGE BENNETT.

“ SPROTT BOYD.

“ JAMES C. COX.

“ ARTHUR RENWICK.

“ ALFRED ROBERTS.”

“ University, 15 June, 1875.

“ G. Bennett, Esq., Chairman of the Meeting of Medical Examiners.

“ Sir,

“ I have the honor to acknowledge receipt on 12th instant of your letter of 10th, enclosing copy of resolutions adopted by the Examiners of the Faculty of Medicine, at a meeting held on the 9th instant.

“ It was probably not expected or desired that I should give any reply in the shape of defence or criticism; but I think it right to offer some observations on these resolutions, for the further consideration of the Examiners.

“ In the first place, I beg to assure the Examiners that, in opposing the Medical Bill, I had no thought whatever of disparaging medical education, and I took an early opportunity of disclaiming in the Council any such intention, as soon as it appeared that some of my remarks had been misunderstood. But it may be replied that, granting the absence of INTENTION, the language used by me did convey such disparagement, at least by implication. That evidently is the belief of the Medical Examiners. They consider that my ‘views tend to disparage the advantages of scientific education,’ and they contrast my supposed views with their own, in these terms—‘Believing that a sound and liberal course of study is the only true foundation for the successful and humane treatment of disease, we desire to express our dissent from certain views contained in a speech delivered by Professor Smith, &c.’

“ It is here implied, though not distinctly asserted, that something in my speech shows that I do not believe ‘that a sound and liberal course of study is the only true foundation, &c.’

“ I should have been glad if the Examiners had pointed out the passages in my speech that led them to this erroneous conclusion; but I cannot be far wrong in supposing that they occur in the course of the following argument against the Bill. I stated that the public ‘cannot be effectually protected against ignorant and unqualified men, because, among other reasons, there is ignorance and unskilfulness within

within the profession as well as out of it.' The Examiners, I suppose, will not be prepared to controvert this proposition, but they appear to assume that I hold that the AMOUNT of ignorance is much the same inside the profession as outside, and that therefore preliminary medical education is of no avail.

"That there is no ground for such an assumption clearly appears from what follows:—'That such ignorance should be found OCCASIONALLY in the profession (though it is to be hoped not frequently) is not greatly to be wondered at.' There it is put in so many words that ignorance is the exception, not the rule. Medical practitioners themselves are not always so lenient in their judgment. By mere accident the other day my eyes fell upon the following passage in the *Lancet*, from the pen of their medical correspondent in New Zealand:—'Most of the professional men who have been long in the Colonies are sadly behind the day in their practice. Many are grossly ignorant of the practice of medicine and surgery, and it is wonderful how they ever obtained their qualifications.' In my speech I go on to explain why 'occasional ignorance is not to be wondered at, and here is probably one of the statements from which the Examiners have drawn their wrong inferences. I state that 'the treatment of disease is, up to the present time, more of an art than a science.' If the Examiners dissent from the proposition, I would suggest a simple test: let each take at random the prescriptions he has given on any one day, and arrange under two heads the various drugs prescribed, to wit, those selected on any well-defined scientific principles, and those selected empirically, because he or some other person has found by experience that such drugs have done good in similar cases. If the latter class do not greatly outnumber the former, it will be a very exceptional day's work. To say that the treatment of disease is more of an art than a science is not to disparage medical education. It is an art that ought to be pursued in a scientific spirit and by scientific methods, and it requires all the previous training that can be bestowed; but my line of argument was to show that, after books and lectures and examinations had done their utmost, there was something more required to make a skilful practitioner—keen powers of observation, and an insight which there is no impropriety in calling 'a kind of divine gift,' and if these be wanting the medical man has mistaken his vocation. Education will do a great deal, and I have not denied that it 'is the only true foundation for the successful treatment of disease,' but on the foundation there must be reared a superstructure of personal experience; and if nature has denied sound judgment and discrimination the medical practitioner will never be 'qualified,' however many letters he may have the legal right of appending to his name.

"I trust the Examiners will now be satisfied that I do not hold the views which they have attributed to me, and that nothing in my speech, fairly interpreted, countenances such views. But if unfortunately I have not succeeded in removing erroneous impressions, I must let the matter rest without further explanation or discussion; and I must remind the Examiners that in the Legislative Council I am bound to speak and vote according to my convictions, and not as a representative of the medical profession. If the Senate of the University should think that the views I have expressed in my place in the Council are inconsistent with my office as Dean of the Faculty of Medicine in the University, I shall be glad if they will relieve me from the duties and responsibilities of that office. I have already given them an opportunity of doing so.

"I have, &c.,
"J. SMITH."

"G. Bennett, Esq., M.D.

"University of Sydney,
"8 July, 1875.

"Sir,

"Your letters of the 10th ultimo and 5th instant, enclosing resolutions passed by certain members of the Board of Examiners in the Faculty of Medicine in this University, were brought under the consideration of the Senate at the monthly meeting, and I am instructed to transmit to you the following resolution which was passed on that occasion:—'The Senate, having had under their attention the several communications from Dr. Bennett, dated the 10th June and 5th July, regret that anything should have occurred to disturb the harmony which up to the present time has happily subsisted between the Dean of the Faculty and the gentlemen constituting with him the Board of Examiners in Medicine, but they do not feel called upon to take any action upon the circumstances in question.

"I have, &c.,
"HUGH KENNEDY,
"Registrar."

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

ORPHAN SCHOOLS.
(STATISTICS.)

Ordered by the Legislative Assembly to be printed, 1 June, 1875.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 20 April, 1875, That there be laid upon the Table of this House,—

- “ (1.) A Return of the average daily number of children in the Protestant Orphan School at Parramatta in the year 1874.
 “ (2.) The number of children who died in 1874.
 “ (3.) The number of boys and number of girls apprenticed from the Institution in 1874.
 “ (4.) An account in detail of needlework performed by the girls in 1874.
 “ (5.) A detailed account of any work or labour performed by the boys.
 “ (6.) The total cost in detail of the whole establishment for the year 1874, to be given under the several headings as follows:—Amount paid for salaries, maintenance, clothing, medical attendance, furniture, crockery, &c., fuel, light, forage, and all other miscellaneous expenses not included under the above heads, costs of repairs, building, improvements, &c., made for and on account of the establishment, under the order of the Minister for Works or of the Colonial Architect.
 “ (7.) All other charges or expenditure, of whatsoever kind, in connection with the establishment, entered in detail.
 “ (8.) The like Returns for the year 1874, of the Roman Catholic Orphan School.”

(*Mr. Davies.*)

ORPHAN SCHOOLS.

No. 1.

RETURN of the average daily number of Children in the Protestant Orphan School at Parramatta, in the year 1874.

Boys.	Girls.	Total.
150	100	250

ANNIE O. PRINGLE,
Matron.

No. 2.

RETURN showing the number of Children who died in 1874.

Boys.	Girls.	Total.
1	2	3

ANNIE O. PRINGLE,
Matron.

No. 3.

RETURN showing the number of Boys and number of Girls apprenticed from the Institution in 1874.

Boys.	Girls.	Total.
9	7	16

ANNIE O. PRINGLE,
Matron.

No. 4.

An account in detail of work performed by the Girls, in 1874.

15 chemises.	85 blouses.
330 pinafores.	2 pairs flannel drawers.
82 petticoats.	176 sheets.
60 nightgowns.	163 pillow-cases.
21 hoods.	16 do. ticks.
8 aprons.	22 bed do.
114 collars.	45 „ quilts.
154 handkerchiefs.	37 towels.
27 shirts.	13 bags, 1 for apprentices.

ANNIE O. PRINGLE,
Matron.

No. 5.

A DETAILED account of any work or labour performed by the Boys.

2 boys	employed as pupil teachers.
2 "	" daily as monitors.
1 boy	" as boatboy.
2 boys	" daily in garden.
20 "	(aged 9 to 13) employed daily in cleaning dining-rooms, dormitories, schoolrooms, lavatories, &c.
4 "	employed as officers' servants.
20 "	(aged 10 to 13) employed in garden and about grounds every Friday.
20 "	(aged 11 to 12) " weekly in-washing verandahs, &c., girls' side.
30 "	(aged 7 to 11) " every Saturday in cleaning about grounds.
1 boy	employed daily as woodcutter.
1 "	" as post-boy and messenger.

The following quantities of vegetables were grown in the boys' garden for the use of the establishment:—

1,780 lbs.	turnips.	300 lbs.	pease.	50 doz.	apples.
250 "	broad beans.	60 "	radishes.	20 "	nectarines.
1,920 "	cabbage.	20 "	chess.	150 "	peaches.
480 "	cauliflower.	120 "	grapes.	12 "	figs.
112 "	onions.	336 "	potatoes.	20 "	oranges.

NOTE.—These vegetables were grown in a garden worked by the boys only. The vegetables for the regular supply of the establishment are grown in a separate garden.

ANNIE O. PRINGLE,
Matron.

No. 6.

THE Total Cost, in detail, of the whole Establishment, for the year 1874, to be given under the several headings, as follows:—Amount paid for salaries, maintenance, clothing, medical attendance, furniture, crockery, &c., fuel, light, forage, and all other miscellaneous expenses not included under the above heads; costs of repairs, buildings, improvements, &c., made for and on account of the Establishment, under the order of the Minister for Works or of the Colonial Architect.

	£	s.	d.
Salaries	1,120	17	6
Maintenance	1,427	17	2
Clothing	983	17	0
*Medical attendance ... ..	.....	
Crockery, hardware, &c.	95	3	5
Fuel	86	13	0
Light	28	6	9
Forage	22	9	8
Allowance to Schoolmaster in lieu of rations and quarters ...	70	17	3
Do. First teacher do.	35	0	0
Annual Picnic for children	15	10	0
School books	45	1	6
Medicines	32	1	0
Incidental expenses	186	0	5
	<u>£4,149</u>	<u>14</u>	<u>8</u>

The cost of furniture, repairs, &c., unknown.

ANNIE O. PRINGLE,
Matron.

* The Medical Officer attends two other Government Establishments, and receives £150 per annum.

No. 7.

ALL other Charges or Expenditure, of whatsoever kind, in connection with the Establishment, entered in detail.

Nil.

ANNIE O. PRINGLE,
Matron.

RETURN

RETURN from the Roman Catholic Orphan School, Parramatta, for the year 1874.

No. 1.—Average daily number of children, 318.

No. 2.—Children who died, 1 boy and 1 girl.

No. 3.—Boys apprenticed, 16; girls do., 18.

No. 4.—Needlework done by the girls:—

9 dozen pairs braces.	220 sheets.
50 towels.	2 Communion cloths, 8 yards long.
36 pinafores.	8 merino dresses altered.
39 handkerchiefs.	4 oilcloth bags.
20 coats.	4 wrappers.
20 pairs trowsers.	18 rollers.
6 shirts.	30 dusters.
16 dresses.	1 large screen.
24 table-cloths.	24 white petticoats.
16 mattresses.	20 coloured do.
31 pillow-slips.	13 shirts.
82 counterpanes.	1,000 articles of children's clothing and house
50 chemises.	linen repaired.
49 night-dresses.	

No. 5.—The boys do the entire cleaning of their dormitories; assist in cutting wood and pumping water; fell and cut wood on the farm; assist in farm labour; keep the grounds round the Institution in order.

No. 6.—Total cost in detail:—

	£	s.	d.
Salaries	1,100	0	0
Maintenance	1,834	10	3
Clothing	855	10	4
Medical attendance and comforts	114	18	10
Furniture	5	18	6
Crockery and tinware	10	18	10
Fuel	94	14	10½
Light	34	7	11½
Forage	22	15	9
Ironmongery and household utensils	52	7	9
Blacksmith and ironwork	22	5	0
Saddlery, harness repaired	5	12	2
Paint, glass, &c.	12	10	10
Plumber, and repairs to tinware	11	18	0
Carpenter	1	12	0
Coffins and graves for two children	2	5	0
Matron's bill for freighting, &c.	20	17	1
Timber for building small shed	4	4	6
Stationery, school books, and postage stamps	85	0	0
Expended on repairs to building, &c.	100	0	0
	<u>£4,301</u>	<u>17</u>	<u>7½</u>

Average cost of each child during the year 1874, £13 16s. 2½d. per head.

For Venerable Archpriest SHEEHY,
THOS. J. MAKINSON,
6 May, 1875.

STATEMENT of amounts expended in repairs, building, improvements, furniture, &c., at the Protestant and Roman Catholic Orphan Schools at Parramatta, during the year 1874.

PROTESTANT ORPHAN SCHOOL.

	Amount expended.		
	£	s.	d.
Furniture	39	16	8
Repairs	976	4	2
Additions, improvements, &c.	261	0	0
Total	<u>£1,277</u>	<u>0</u>	<u>10</u>

ROMAN CATHOLIC ORPHAN SCHOOL.

Furniture... ..	17	3	6
Repairs, &c.	377	8	8
Total	<u>£394</u>	<u>12</u>	<u>2</u>

Colonial Architect's Office,
Sydney, 13 May, 1875.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

GOVERNMENT ASYLUMS FOR INFIRM AND DESTITUTE.

(REPORT FROM BOARD RELATIVE TO EXPENDITURE FOR 1874.

Ordered by the Legislative Assembly to be printed, 10 June, 1875.

THE SECRETARY TO THE BOARD, GOVERNMENT ASYLUMS, TO THE PRINCIPAL UNDER SECRETARY.

Board of Government Asylums,
Sydney, 8 June, 1875.

SIR,

I am directed by the Board of Management of the Government Asylums for the Infirm and Destitute to transmit, for the information of the Honorable the Colonial Secretary, returns of the expenditure of the above Institutions for the year 1874, and a comparative return of the expenditure for the twelve years, 1863 to 1874 inclusive, and to request that, as has been customary, they may, with this report, be laid before Parliament.

The Board desire to call attention to the following facts connected with the management of the Asylums, as brought out in these returns.

The number of admissions, discharges, and deaths in the three Asylums were as follows:—

	In Asylum, 31st December, 1873.			Admitted, 1874.		Discharged, 1874.		Died, 1874.		In Asylum, 31st December, 1874.		
	Males.	Females.	Total.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Sydney.....	...	213	...	...	265	...	198	...	52	...	228	...
Parramatta.....	258	...	...	341	...	292	...	49	...	258	...	...
Liverpool.....	604	...	...	745	...	565	...	160	...	624	...	...
Totals.....	862	213	1,075	1,086	265	857	198	209	52	882	228	1,110

The total number of applicants for admission during the year was 1,608; of these 1,351 were admitted, and 257 refused as ineligible for various reasons.

The average number of inmates of the three Asylums during the past year was—

Sydney (Females)	...	...	...	...	227
;	Parramatta (Males)	...	...	...	262
	Liverpool (do. )	...	...	...	651
					913

Total 1,140

Showing an increase on the numbers of the previous year of forty-four persons, viz., eight women and thirty-six men.

The number and per centage of deaths, and the average age of the inmates who have died in the Asylums during the past year, were as follows:—

	Deaths.	Per centage.	Average.
Sydney—Females	52	22.90	64
Parramatta—Males	49	18.70	69
Liverpool— do.	152	23.34	66
Total	253	21.64	66

while the per centage of deaths for the twelve years, 1863 to 1874 inclusive, has been as follows:—

Sydney—Females	21.30
Parramatta—Males	17.75
Liverpool— „	26.74
Total.....	21.93

When it is considered that the admissions are principally old men and women who have been reduced by want, neglect, or disease, to almost a dying state, and frequently are persons who, having been inmates of the Sydney Infirmary or other country hospitals, where every possible means have been resorted to to keep them alive, and when nothing more can be done for them, are admitted into the Asylum to die, the number of deaths, twenty-one out of every hundred, cannot be deemed excessive.

The ages of deceased inmates, as given by themselves, were as follows:—

	Years.									Total.
	Over 20.	Over 30.	Over 40.	Over 50.	Over 60.	Over 70.	Over 80.	Over 90.	Over 100.	
Sydney—Females.....	2	2	6	5	11	18	6	1	1	52
Parramatta—Males .....	...	1	3	6	10	21	7	1	...	49
Liverpool— do.	4	7	13	19	35	42	26	5	1	152
Total	6	10	22	30	56	81	39	7	2	253

In reference to the much larger per centage of deaths at the Liverpool Asylum, as compared with that at Parramatta, the Board desire to repeat the statement made in their report for 1873, that on account of the conveniences connected with the Liverpool Asylum, as a rule all very infirm persons, as well as all admissions from the Sydney Infirmary, are sent to the Liverpool instead of to the Parramatta Asylum. In fact the Liverpool Asylum may be considered the convalescent hospital of the Colony.

The total expenditure for the maintenance of the above 1,140 paupers for the past year, including salaries to staff, rations, medical comforts, medicines, clothing, &c., has amounted to £15,405 18s., showing an average expenditure per head of £13 10s. 3¼d., or 18s. 11¼d. per head more than that for the previous year; this may be accounted for by the increased price of provisions and clothing, the small increases to salaries, and also to the necessarily more expensive treatment of inmates in the new hospital wing at Liverpool, which has been converted very much into a receiving hospital, where patients from the Infirmary and other hospitals throughout the Colony are taken in. The expenditure for medicines alone amounted to £211 9s. 10d., while that for 1873 was £121 8s. 3d., thereby swelling the contingencies by £90 1s. 7d.

As compared with the average cost per head, £13 1s. 4¼d. for the previous eleven years, the past year shows an increase of 8s. 10¼d. per head on the entire expenditure.

During the year 1874 the Board were compelled to seek authority to expend the sum of £246 18s. 2d. on the Hyde Park Asylum in re-roofing, and thereby utilizing the Volunteer quarters for the use of the old women, and the sum of £86 18s. 8d. at the Liverpool Asylum in various repairs; these two sums, amounting to £333 16s. 10d., have not been included in the returns of expenditure, as the work belonged properly to the Public Works Department, and did not legitimately fall upon the vote for the maintenance of the inmates.

The dining-hall of the Hyde Park Asylum is damp, dark, ill-ventilated, and uncomfortable; frequent applications have been made to have the necessary improvements effected but without effect.

The kitchen at Parramatta is totally inadequate for the proper cooking of the food for the inmates of that Institution; a new one is much needed.

A bakery has been erected at the Liverpool Asylum during the last twelve months, which has proved a success in regard to the quality of the bread, and is expected to prove more economical.

The roof of the north wing, which is covered with earthenware tiles, has proved a great failure, the wet penetrating the roof in all directions to the great injury of the walls and ceilings, and discomfort of the inmates; the substitution of slates has been promised by the Colonial Architect.

I have, &c.,
FREDERIC KING,
 Secretary.

RETURN of the Expenditure of the Government Asylums for the Infirm and Destitute, for the year 1874.

Asylum.	Average No. of Inmates.	Salaries and Wages to Inmates.		Rations.		Clothing.		Contingencies.		Total.	
		Total.	Average per head.	Total.	Average per head.	Total.	Average per head.	Total.	Average per head.	Total.	Average per head.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Sydney	227	545 11 6	2 8 0½	1,662 1 10	7 6 5½	394 3 11	1 14 7	375 11 5	1 13 1	2,977 8 8	13 2 3½
Parramatta	262	577 2 5	2 4 0½	2,025 18 5	7 14 7½	677 5 7	2 11 8½	444 10 10	1 13 11	3,724 17 3	14 4 4
Liverpool	651	1,113 19 2	1 14 2½	4,645 11 5	7 2 8½	1,705 19 5	2 12 4½	1,239 2 1	1 18 0½	8,703 12 1	13 7 4½
TOTAL	1,140	2,235 13 1	1 19 2½	8,333 11 8	7 6 2½	2,777 8 11	2 8 8½	2,059 4 4	1 16 1½	15,405 18 0	13 10 3½

Hyde Park Asylum,
 Sydney, 8 June, 1875.

FREDERIC KING,
 Secretary.

DETAILED

DETAILED STATEMENT for 1874.

	Sydney.		Parramatta.		Liverpool.		Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries and wages.....		545 11 6		577 2 5		1,113 19 2	2,236 13 1
Food	1,397 9 0		1,651 9 11		3,794 0 1		
Medical comforts.....	45 10 1		174 19 2		351 4 6		
Vegetables.....	134 7 3		52 1 5		116 11 0		
Gratuities	57 5 0		94 14 10		237 9 0		
Milk.....	27 10 6		52 13 1		146 6 10		
		1,662 1 10		2,025 18 5		4,645 11 5	8,333 11 8
Clothing		394 3 11		677 5 7		1,705 19 5	2,777 8 11
Contingencies							
Travelling expenses	1 4 2		18 7 2		100 10 5		
Advertisements	1 17 4		1 8 4		2 15 4		
Fuel.....	77 15 2		90 0 5		148 2 5		
Medicines	24 0 4		52 8 3		211 9 10		
Water.....			3 15 10		152 16 0		
Burials	80 4 0		64 19 6		182 13 0		
Medical certificates.....	2 2 0						
Light	38 7 0		14 0 0		25 19 0		
Soap.....	31 9 11		27 13 5		71 8 9		
Straw	12 17 4		14 1 8		42 10 10		
Rent.....			55 0 0		50 8 0		
Ironmongery.....	9 12 9		65 7 8		200 3 11		
Sundries.....	96 1 5		36 18 7		49 4 7		
		375 11 5		444 10 10		1,239 2 1	2,059 4 4
		£2,977 8 8		£3,724 17 3		£8,703 12 1	£15,405 18 0

Sydney, 8 June, 1875.

FREDERIC KING,
Secretary.

COMPARATIVE RETURN of the Expenditure of the Government Asylums for the Infirm and Destitute at Sydney, Parramatta, and Liverpool, for the years 1863 to 1874.

Year.	Average No. of Inmates	Salaries, and Wages to Inmates.		Rations.		Clothing.		Contingencies.		Total	
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1863.....	624	1,938 0 9	3 2 9	4,463 5 10	7 6 0½	933 16 8	1 11 8½	1,534 15 0	2 1 9½	8,995 18 3	14 8 3½
1864.....	673	2,013 15 10	2 19 10	4,944 17 0	7 6 11½	1,047 3 9	1 11 1½	1,211 14 6	1 16 0	9,217 11 1	13 13 10½
1865.....	721	2,125 2 2	2 18 11½	4,905 0 7	6 16 0½	2,107 10 10	2 18 8½	1,483 7 0	2 1 2	10,621 0 8	14 14 7
1866.....	856	2,299 15 5	2 13 8½	5,932 14 2	6 19 9½	1,746 7 11	2 0 9½	1,870 12 0	2 3 8½	11,899 9 6	13 18 0½
1867.....	931	2,742 10 10	2 18 10½	5,961 19 8	6 8 0½	2,467 8 7	2 13 0	2,098 10 8	2 5 0½	13,270 9 9	14 5 0½
1868.....	969	2,668 16 0	2 15 1	6,638 18 4	6 17 0½	1,914 11 7	1 19 6	1,727 19 3	1 15 7½	12,950 5 2	13 7 3½
1869.....	970	2,571 6 4	2 13 0	6,324 7 7	6 10 4	1,943 12 10	2 0 0½	1,602 4 1	1 13 0½	12,441 10 10	12 16 6½
1870.....	997	1,781 10 8	1 15 8	6,085 19 1	6 2 1	2,033 18 11	2 0 9½	1,343 16 10	1 6 11	12,245 5 6	11 5 9
1871.....	1,065	1,819 0 5	1 14 2	6,380 16 5	5 19 10	2,148 10 0	2 0 4	1,612 2 2	1 10 3½	11,960 9 0	11 4 7½
1872.....	1,105	1,976 13 0	1 15 9½	6,467 15 2	5 17 0½	2,414 12 9	2 3 8½	1,826 11 3	1 13 0½	12,687 1 5	11 9 7½
1873.....	1,096	2,027 16 4	1 17 0	7,422 19 0	6 15 5½	2,304 11 7	2 2 0½	2,018 9 6	1 16 10	13,773 16 5	12 11 4
1874.....	1,140	2,235 13 1	1 19 2½	8,333 11 8	7 6 2½	2,777 8 11	2 8 8½	2,059 4 4	1 16 1½	15,405 18 0	13 10 3½
Total	929	2,185 1 8	2 8 8½	6,159 7 0	6 13 8½	1,991 4 6	2 2 6	1,703 5 9	1 15 7	12,122 7 11	13 2 3

Hyde Park Asylum,
Sydney, 8 June, 1875.FREDERIC KING,
Secretary.

1875.

NEW SOUTH WALES.

DESTITUTE CHILDREN'S ASYLUM.

(LIST OF DIRECTORS FOR 1875.)

Presented to Parliament, pursuant to Act 20 Vic. No. 19, sec. 4.

LIST OF DIRECTORS OF THE SOCIETY FOR THE RELIEF OF DESTITUTE CHILDREN, RANDWICK.

PRESIDENT—HON. SIR E. DEAS THOMSON, C.B., M.L.C.

VICE-PRESIDENTS—HON. GEORGE ALLEN.

REV. CANON STEPHEN, M.A.

HONORARY TREASURER—ROBERT HILLS.

HONORARY SECRETARY—GEORGE F. WISE.

DIRECTORS :—

ALDERSON, W. M.	HUGHES, JOHN.
ALLEN, H. EDWARD A.	HUMPHREY, CHARLES H.
CROCKER, N. J.	JOSEPHSON, I. J.
CRANE, G. E.	M'COY, RICHARD.
DAVIES, JOHN, M.L.A.	PEARCE, S. H.
DAWSON, JOHN.	PENFOLD, E. T.
DIXON, HUGH.	RENWICK, G.
DONOVAN, JEREMIAH.	SHERIDAN, VERY REV. DEAN.
DWYER, REV. JOHN M.	THOMPSON, JOSEPH.
GARRAVEL, REV. P.	WATKINS, JOHN.
HOLDSWORTH, J. B.	WILSON, REV. THOMAS.

WYNNE, RICHARD.

I certify the above to be a correct list of the Directors of the Destitute Children's Asylum, for 1875.

GEORGE F. WISE,
Honorary Secretary.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PERFORMANCE OF WORKS AT GLADESVILLE
HOSPITAL.

(REPORT FROM COLONIAL ARCHITECT.)

Ordered by the Legislative Assembly to be printed, 19 July, 1875.

THE COLONIAL ARCHITECT TO THE UNDER SECRETARY FOR PUBLIC WORKS.

[Extract.]

Department of Public Works,
Colonial Architect's Office,
Sydney, 29 June, 1875.

SIR,

Having read the Report, dated 28th January last, by the Medical Superintendent of the Hospital for Insane at Gladesville, for the year 1874, I regret to find that it contains a repetition of disparaging statements as to the attention of my department to the wants of the establishment, which were examined and fully refuted in my report of 13th September, 1873.

2. The first allusion which would appear to imply a reflection on my department is as to the amount of energy and expedition displayed by Mr. Tucker in preparing buildings for the reception of patients at his establishment at Cook's River, consisting, I may observe, of building, in four months, temporary accommodation for 68 patients. In my report of September, 1873, I stated that Mr. Tucker possessed advantages which prevented any comparison of his work, or its mode of execution, with that undertaken by the Government. That gentleman was untrammelled in all his arrangements, he was able to make contracts with whom he pleased, was subject to no supervision or control, and was allowed to provide accommodation of a character which was absolutely refused to be accepted at the Government establishments. The facilities for execution of work at Cook's River were moreover far beyond those at Gladesville.

3. Dr. Manning says that, "taking into consideration the slow progress of all works undertaken under immediate Government supervision, the arrears which still exist in the Colonial Architect's Department, &c.," he was constrained to propose the arrangement for removal of a portion of the patients. Dr. Manning seems to have made the alleged rapid and energetic execution of work by Mr. Tucker a standard by which to judge this department and the performance of Government works generally. I must repeat that the work at Cook's River was of an ephemeral character, the buildings were of the most economical description, to meet a special demand and to last a limited time only; on the other hand, all the additions and improvements at the Gladesville Asylum are of a substantial and durable character, every facility being afforded to the medical officers to vary their opinions and have alterations effected during the progress of the works. I do not admit that the progress of work at the Gladesville Asylum has been slow, taking into account the situation of the establishment and the strict supervision exercised to ensure sound and faithful workmanship. At the date of Dr. Manning's report there were in this department no arrears of work at the Gladesville Asylum, and that gentleman was not in a position to make such an accusation with regard to this part of my duty. One paragraph in the report states that the accommodation at Gladesville "is even more deficient in kind than in quantity, a large part of the dormitories are of wood, without attached day-rooms and without any of the necessary offices." To this I can only reply that any deficiency in the *kind* of the accommodation is entirely attributable to the medical officers themselves, as no works have been carried out without frequent consultations with them, and with their entire approval at the time. The statement that "a large part of the dormitories are of wood" conveys a very erroneous impression of the facts; there are no dormitories entirely of wood; those to which I apprehend allusion is made are constructed of galvanized iron, and only lined with wood for the comfort of the inmates. So far from these forming a large part, I should suppose they do not comprise more than one-fourth part of the sleeping accommodation of the establishment, the remainder being of stone. The Medical Superintendent has constantly asked for more accommodation, but I am not aware that the necessity for more single sleeping-rooms specially has been before brought under notice.

4. Instructions have been given by the Government for preparation of plans for a Lunatic Asylum to be erected at Callan Park, and preliminary surveys with that view have been made; but the pressure of business in the office has prevented the completion of a design which demands great time and consideration.

5. A contract for a new laundry, kitchen, and store was taken, not in 1872 as stated by Dr. Manning, but in May, 1873, and the contract time expired in July last. This was the time fixed by the contractor, but it was known from the first that it was insufficient for the quantity of work and the conditions under which it was to be executed. The work had to be done so as not to interfere with the working of the Asylum, consequently the buildings could not be carried on simultaneously; the new store had to be built and occupied before the old one could be taken down, its site being intended for the new kitchen; this site, however, was afterwards altered at Dr. Manning's request, which necessitated the preparation of fresh plans, &c. The old laundry and wash-house had to remain until the new one was so far completed as to admit of its being used, and the new laundry could not be finished while the old one was standing. These facts will serve to show some of the difficulties under which contractors and officers of this department labour in carrying out work at this institution.

6. All the works asked for by Dr. Manning, namely,—enlargement of engine-house, engineer's residence, two cottages for officers, and gatekeeper's lodge (which, although the money is not yet available, are already in hand), also smithy, stabling, coalshed, &c.,—for all these provision has been made on the Estimates for 1875. An estimate of cost of residence for Medical Superintendent was made, but is not included in the Estimates submitted to Parliament. Instructions have been received to prepare plans for temporary accommodation to be erected on the grounds adjoining Gladesville Asylum, but no money has yet been provided for the purpose, and I have not yet been able to complete the required design.

7. I am sorry to learn that the Medical Superintendent has so unfavourable an opinion of the earth-closet system as applied to this establishment. No one who knows the condition of and constant complaints against the old privies will deny that they were an immense improvement upon the system previously in use. I fear that if they be abandoned, the water-closets which Dr. Manning proposes to substitute for them will be productive of evils which will counterbalance the inconvenience of the earth-closet system: the disposal and utilizing of sewage, experience has proved not to be so simple a matter as is assumed in this report.

8. I have endeavoured, for my own vindication, to show that many of Dr. Manning's statements are much exaggerated, and others not borne out by the facts. I have done this in some detail, because, if unanswered, these statements, by repetition, might be received as accurate. As the Report of the Medical Superintendent will be printed and laid before Parliament, I beg to request that, in justice to me, this, and my previous letter of 13th September, 1873, to which I have referred, may be attached to it and laid before the Assembly at the same time.

I have, &c.,

JAMES BARNET,
Col. Archt.

Copy annexed.

The Colonial Architect to The Under Secretary for Public Works.

Department of Public Works,
Colonial Architect's Office,
Sydney, 13 September, 1873.

Sir,

In attention to the instructions of the Minister for Public Works, forwarding for my full report a minute by the Honorable the Colonial Secretary upon an accompanying Report by Dr. Manning, wherein the efficiency of this department is called in question,—

2. I do myself the honor to state that I shall be able, I believe, to show to the satisfaction of the Minister for Works that, so far from the movements of this department, as regards works at the Gladesville Asylum, having been slow and dilatory, the attention of myself and officers to the wants of this institution have been unremitting, and that we have endeavoured to anticipate its requirements; that the greater portion of the improvements and additions have been provided at my instance, and that all despatch has been used consistent with the necessity for obtaining preliminary authority, carrying out the works by contract after competition, and the obstruction to workmen occasioned by the nature of the establishment and its occupants. I may add that, as the views of the officials are rarely matured when the works are undertaken, it has almost always been found necessary during their progress to alter and modify them, of course causing delay.

3. As regards the proposition which has called forth the imputations I am now endeavouring to rebut—to transfer a portion of the patients from Gladesville to a private asylum, in consequence of the want of accommodation at the former—I would point out that no suggestion as to the necessity for additions has been made by Dr. Manning to me, nor, as far as I am aware, to the Government, nor has any proposal by him to provide on the forthcoming Estimates for further accommodation been referred to me; but although thus in ignorance of the views of the Medical Superintendent as to the wants of the establishment, I ventured on my own knowledge of the probabilities of the case, and to remedy what I considered to be an oversight by Dr. Manning, to suggest a vote of £3,500 for 1874.

4. Dr. Manning refers to "the last additions made to the Gladesville Hospital," which, "although the accommodation was urgently needed, were not fit for occupation, and indeed were not occupied until two years from the time at which the contract was taken." Dr. Manning's recollection of the circumstances must have been strangely at fault when he instanced this case as showing the delay attributable to my department. In 1870, notwithstanding that a number of patients had been removed to the temporary Asylum recently built on the Vineyard Estate at Parramatta, it was found that further accommodation was necessary, and Dr. Manning proposed to transfer patients to the private Asylum at Cook's River, of Mr. Tucker, who was to erect buildings for their reception, which it was alleged he could do more quickly than a Government Department; his buildings however it was found were to be of 4½-inch brickwork and galvanized iron, a kind of construction which the Medical Board refused to accept even for temporary purposes at Gladesville. The Colonial Secretary (Mr. Cowper) rejected the proposal to transfer patients, and directed that buildings of a cheap and temporary character, but sufficiently substantial, should be erected at Gladesville, a plan strongly opposed and protested against by Dr. Manning. A contract was in November made with Mr. J. B. Elphinston, a most efficient contractor, who was to complete by the June following; but as the work proceeded repeated applications were made by Dr. Manning for alterations, all tending to more elaborate construction, and finally resulting in converting what was intended to be a temporary structure into a substantial and permanent addition to the Asylum, more perfect in construction and

and arrangement than any part of the original buildings. Although these alterations and the manner in which they occurred occupied much time, still by pressure of this department and the exertions of the contractor the contract time was but slightly exceeded. It was several months after the building was completed and ready for occupation, as far as this department was concerned, before it was occupied, as the Medical Superintendent considered a substantial wall to be necessary to prevent the building being overlooked, and this could not be erected until arrangements were made by the Government for procuring an Act of Parliament enabling them to purchase adjoining land, the property of Mrs. Isler. I quote in confirmation the following extract from Dr. Manning's printed Report, dated 1st March, 1872. "Towards the close of the year some of the dormitories of the new wing of the hospital were opened for the accommodation of the patients, and a temporary relief was thus obtained. The rest of the buildings, which have been fit for occupation for some months, remain unused until the privacy which will admit of their occupation is secured by the purchase of an adjoining property and the erection of the necessary fences."

5. There are at Gladesville two temporary buildings, one now occupied as a church and by patients, the other used as a room for recreation of the inmates; these were erected for dormitories, and for a time furnished accommodation for 150 patients. For relief of present most pressing wants, I would suggest that these buildings might, at all events until some other steps are adopted, be again used for their original purpose; they would provide for about —, and probably render unnecessary any transfer to private establishments. A chapel and recreation room could be formed by enclosing the large sheds in the airing grounds, which need not prevent their use for purposes of shelter.

6. With exception of the building referred to in the 4th paragraph, comparatively little has been done since Dr. Manning's taking charge towards providing additional accommodation for patients; the works carried out have been principally for improvement of the water supply, erecting dining-rooms for attendants, and gardener's cottage, and ordinary repairs and alterations of a minor character. Dr. Manning's demands, although numerous and frequent, have been in the main for such works and for improving the accommodation and providing furniture. A contract is now in progress for a new kitchen, a steam laundry, stores, and workshops.

7. To show that there has been no want of care on my part for the needs of these establishments, and that I have exhibited some interest in providing for and carrying out as far as was in my power such improvements as seemed to be desirable, it is necessary that I should furnish some particulars as to what has been done since my appointment. In addition to a great deal of my own personal attention, one of the Clerks of Works in the office was placed in immediate superintendence of the works, and a large portion of his time has been devoted to them; as a further precaution, a Foreman of Works has for some years been stationed at Gladesville exclusively, to see the works there properly and diligently carried out. I forward returns showing the amounts voted, the various contracts taken, and the annual expenditure since the year 1861 inclusive. These show the nature of the contracts and by whom they were undertaken, giving in general terms a *résumé* of what has been done towards improving and meeting the wants of these institutions, and showing that the attention of my department to them has been continuous. I also forward a report from the Clerk of Works, Mr. Coles, as to the description of the works, and the circumstances under which they have been carried on. Since the year 1861, it will be seen that £73,715 has been expended at Gladesville, £35,549 at the Parramatta Asylum, £1,568 upon the Asylum for Imbeciles at Newcastle, and for the Receiving House at Darlinghurst £7,328, making a total expenditure through my office upon the Lunatics Institutions during the 12½ years, of £118,160.

8. It has always been difficult to find room for the extended accommodation constantly called for in these institutions, and at Gladesville, up to the retirement of Dr. Campbell, the continual increase of patients was met, at a large cost, by adding to and extending the dormitories and single rooms. Amongst other works at this place for the initiation of which I can claim the credit are those for improving and rendering nearly unfailling the supply of pure water, a benefit which only those who are aware of the former state of things can fully appreciate,—by completing an extensive system of underground tanks, enlarging the reservoir at the creek, providing steam pumping machinery with its adjuncts and constructing drinking fountains in the yards, constructing a large bathing-place with rooms and enclosure in a bay of the Parramatta River, providing improved water-closets, fresh-water baths, &c. Many of these improvements were discouraged by the Superintendent, and their failure predicted; the baths, especially, were unused for a long time, the old imperfect arrangements being preferred. The water supply works have proved entirely successful, but to ensure that result it was considered desirable that they should remain under my management for some time after completion. I have refrained from going at length into the works carried out by me at Gladesville, and I have said nothing of those at Parramatta, where extensive additions have been made and the accommodation largely increased, nor of the other asylums, but I trust I have instanced enough to prove that there has been no want of a zealous desire to meet and even to anticipate the wants of these institutions.

9. Reverting to the imputations that the works at these asylums have been carried out slowly by my department, I can affirm that there has never been any delay but such as the circumstances of the case necessitated, and I believe that most of the larger contracts will compare in this respect without disadvantage with those undertaken for private individuals; but it should be remembered that there are many causes of delay peculiar to the mode of proceeding indispensable for Government works, such as the various references required before a work can be contracted for; the necessity for public competition; and the almost invariable acceptance of the lowest tender, by which incompetent contractors are not unfrequently obtained, who are a cause of great trouble to the department and much detriment to the works. Moreover, a quality of work and perfection of structure and arrangement are required of a Government Department which are but rarely looked for by others, and the head of a department being at hand, and responsible for all real or imagined shortcomings, and not unfrequently for changes of views, is compelled to take unusual preliminary precautions. I can venture to say that, under similar circumstances, and subject to no greater restrictions than those imposed on private individuals, my department can carry out works as expeditiously, as cheaply, and at least as satisfactorily, as respects design, arrangement and execution.

I have, &c.,
JAMES BARNET,
 Col. Archt.

1875.

NEW SOUTH WALES.

HOSPITAL FOR THE INSANE, GLADESVILLE.

(REPORT FOR 1874.)

Presented to Parliament by Command.

THE MEDICAL SUPERINTENDENT OF THE HOSPITAL FOR THE INSANE, GLADESVILLE, TO THE COLONIAL SECRETARY.

Lunacy Department,
Hospital for the Insane, Gladesville,
28 January, 1875.

SIR,

I have the honor to submit a Report on the Hospital for the Insane, Gladesville, for the year 1874, with the usual statistical tables.

On December 31st, 1873, the number of patients in hospital was 561, of whom 267 were males and 294 females.

The total number under care during the year was 873—453 males and 420 females—and the average daily number resident was 581.

The number discharged was 267, of whom 92 had recovered, 22 were relieved, and 153 were not improved.

The deaths during the year were 55, of whom 40 were males and 15 females.

The number of patients in hospital on December 31st, 1874, was 304 males, 247 females; total, 551.

These results are set forth in a tabular form in Appendix A, Table I.

The admissions during the year have been 16 in excess of the number admitted during any previous year in the history of the institution.

The character of the cases admitted was even more unfavourable than during the preceding year. 23 were epileptics, 23 idiotic or congenitally imbecile, 19 were suffering from general paralysis, 25 were upwards of 60 years of age, in 30 cases there was known and pronounced hereditary tendency to the malady, and in no less than 71 cases the malady was stated in the papers sent with the patients to have existed upwards of 12 (twelve) months.

The whole of these cases, with perhaps an occasional exception, as well as a number of others, were quite incurable when admitted.

Five of the cases were transferred from other asylums.

Of the patients re-admitted—a total of 50—12 had been previously discharged to the care of friends while still insane, 1 was a re-transfer from the Lunatic Asylum, Parramatta, and 3 had been discharged from the Parramatta Asylum, having been previously transferred thither from this institution.

The number of relapses, therefore, in patients discharged from Gladesville was 34, and of these, 15 were women, who from the troubles incident to the puerperal state are peculiarly liable to a recurrence of their malady.

The average length of time which the relapsed cases were absent from hospital was 2 years and 10 months, the longest being 19 years, and the shortest 3 weeks.

Of the total admissions, 205 came to the hospital through the Reception House, where all the slighter cases and those due to temporary alcoholic excess were weeded out and discharged.

The milder cases from the up-country districts do not pass beyond the up-country gaols, whence a large number are discharged,—the more persistent and chronic cases only being sent to hospital.

The total number of admissions into the Reception House during the year was 240.

A large number of cases from one cause or other reach the hospital direct from the Sydney and other gaols; and it is a melancholy fact that out of the total number of admissions during the year, 37 only have been sent to the hospital by friends under the Act 7 Victoria No. 14, sec. 11 of the Lunacy Statutes. The whole of the remainder have been sent through the gaols and the police. For this, the present condition of the Lunacy Statutes—a sad relic of the barbarous ages—is mainly responsible. The harm that is done by technically treating lunacy as an offence against the law, and dragging these unfortunate creatures through the Police Court and gaol, is incalculable.

I have pleasure, however, in again testifying to the general cleanliness, to the freedom from bruising or injury, and to the satisfactory bodily condition in which the patients have in the large majority of cases reached here. It is only right that such a fact should be placed on record, to the credit of the officers of gaols and to the police charged with their transit.

The discharges during the year include 92 who had recovered, giving a percentage, calculated upon the admissions, of 29.48—a result less satisfactory than has been obtained in any year since I have had charge of the institution.

Of the cases discharged as relieved, 8 males and 13 females were discharged to the care of friends under bond for their safe keeping and peaceable behaviour, and one male escaped and was not subsequently retaken.

Of the total number (153) discharged as not improved, 28 males and 15 females were transferred to the Lunatic Asylum, Parramatta, 1 male and 72 females to the Licensed House for Lunatics at Cook's River, and 19 males and 17 females to the Asylum for Imbeciles at Newcastle. One male, a congenital imbecile, was removed under bond by his friends.

The patients transferred to the Lunatic Asylum, Parramatta were, as a rule, those suffering from chronic insanity, and so far quiet and cleanly in habits that they could be allowed to sleep in associated dormitories, of which the non-criminal part of that asylum consists.

The cases sent to Newcastle were, with one exception, cases of congenital idiocy or imbecility, and were for the most part children. The Newcastle Asylum is so much in the city, its recreation grounds and even its offices and wards are so overlooked, that it is deemed advisable, except in particular cases, to admit the patients for whom it is intended into this institution first, and to forward only such as are fairly quiet and manageable. As these cases are almost invariably incurable, this course is not calculated to raise the percentage of recoveries on the admissions in this hospital, but it has advantages which more than counterbalance this statistical drawback.

At the close of July the Colonial Secretary, after lengthened correspondence and inquiry, assented to an arrangement made with Mr. G. A. Tucker, of Bay View House, Cook's River, by which he was to erect the necessary buildings, and receive 68 female patients in addition to the 32 Government patients already under his care. At the end of November, Mr. Tucker, who had displayed great energy and who had prepared the buildings with unusual expedition, reported them ready for occupation, and on December 1st the patients were removed from Gladsville to his care.

The buildings, which are of weatherboard on brick piers, consist of ten single rooms, each with a minimum space of 800 cubic feet; associated dormitories, with a minimum space of 600 cubic feet; day and dining rooms of such dimensions as are approved by the English Commissioners in Lunacy; with all necessary offices, bath-rooms, &c. They are comfortably fitted and furnished, and well adapted for the temporary accommodation of insane patients.

Although the system of farming out the insane is one which I hold to be wrong in principle, and which even under the most favourable circumstances is open to many and well-founded objections, I have advocated its adoption by the Government in the present instance from reasons of expediency.

Taking into consideration the slow progress of all works undertaken under immediate Government supervision, the arrears which still exist in the Colonial Architect's Department, the overgrown size, the awkward arrangement and the crowded condition of the existing asylums, and the expense which would have been incurred in establishing and working a new asylum on a small scale for female patients, I was constrained to recommend to the Government the arrangement which has now been approved of, and which has afforded a great relief to the female division of this institution, as well as increased the comfort of the patients who were removed, at a cost which, considering the present high price of labour and building materials must, I think, be regarded as very reasonable.

The deaths during the year have been larger than usual in proportion to the average number resident, shewing a percentage for both sexes of 9.46.

The mortality among the female patients was, as in former years, much below that among the males, the percentage on the numbers resident being 4.98 as against 14.28.

Of the total 55 deaths which occurred, 12 died in a less period than one (1) month from the date of admission; 1 was only in hospital a short three hours, 1 less than two days, and 1 three days. These and others were dying when admitted, and might more humanely have been allowed to finish their careers elsewhere. Fortunately no accidental death or suicide has occurred, and it has not been deemed necessary to hold an inquest in any case of death during the year.

The general health of the patients has not been satisfactory. Notwithstanding the abundant diet and the free use of vegetables, milk, and fruit, cases of *purpura*, due to the vitiated atmosphere of the over-crowded dormitories, have been very numerous. *Carbuncles* and *boils*, due mainly I believe to the same cause, have been very troublesome; a fatal case of *erysipelas* occurred, and another of *pyæmia*; and an epidemic of *scarlet fever*, commencing in August during the prevalence of westerly winds, prostrated upward of 60 patients and 16 of the attendants and nurses. Happily none of the cases were fatal, but the epidemic was not only the cause of great anxiety in itself, but in the serious loss of service on the part of valuable and trained attendants, several of whom did not recover the strength and energy necessary for the full performance of their duties for some time.

On a general review of the work of the Hospital for the year, the result, especially when compared with former years, cannot be pronounced satisfactory. A year in which the recoveries have been fewer the deaths more numerous, and disease more prevalent than during any preceding year under his management, does not afford a pleasing retrospect to a Superintendent, and suggests an inquiry into the causes of such a falling-off in the results of care and treatment.

The unsatisfactory nature of this year's statistics may no doubt, to some extent, be attributed to the unfavourable character of the cases admitted, but the overcrowded condition of the hospital has, I am sure, been in no small degree responsible, both for the increase in the number of deaths and the decrease in the number of recoveries. By a reference to Appendix A, Table 3, it will be seen that, excluding the year 1869, which was in many respects exceptional, and in which the altered arrangements of the hospital and the establishment of a new régime materially affected the statistics, the percentage of recoveries has been lower or higher in proportion as the hospital has been more or less overcrowded. In 1870, with 493 as the average number resident, the recoveries were over 38 per cent. on the admissions. In 1871, when the average number resident was 513, the percentage fell to 33. In 1872, when through the establish-
ment

ment of the Newcastle Asylum the average number fell to 487, the percentage of recoveries rose to 44, and it fell again to 33 in 1873, when the average number had again risen to 525. During the past year, with an average number of 581 resident, the percentage has fallen to 29.

Without attaching an undue importance to statistics extending over such a short period as six years, or dealing with them in any partial way, I cannot but state that I think the inference I have drawn from them is correct; and, apart from them, it is not difficult to imagine that overcrowding would be especially deleterious in its influence on both the mental and physical health of the patients, as well as destructive of that order and discipline which are so essential to the successful management of an institution of this character. With reference to this subject, Dr. Isaac Ray, the Nestor of Psychological Medicine in America, has, after a lifetime spent in hospitals for the insane, thus expressed himself:—"When a hospital intended for 200 patients is made to receive 300, they excite and disturb one another—dangerous and even murderous collisions become unavoidable; the means of ventilation are deficient; and, consequently, the air of the house is loaded with effluvia calculated to produce disease; the officers, who need the utmost strength and serenity of mind in performing their allotted work, are constantly filled with apprehension; and the result of it all is that the hospital fails to accomplish that degree of comfort and restoration which it otherwise would. Let it be distinctly understood, therefore, that to place a patient in a hospital already full is to inflict a positive injury on many for the doubtful chance of benefiting one."*

This hospital contains accommodation for a maximum number of 450 patients only. The average number resident during the year has been 581; and before the removal of 68 female patients to the Cook's River Asylum, which did not take place until December 1st, the total number of patients in hospital was 606. The transfer to Cook's River of 68 women rendered the accommodation in the female division sufficient, but at the end of the year the male division contained 304, instead of its proper number, 200; and the extra number crowded every dormitory, corridor, and passage, besides invading the rooms set apart for reading, recreation, and religious service.

The accommodation is even more deficient in kind than in quantity. A large part of the dormitories are of wood, without attached day-rooms, and without any of the necessary offices; and the "single rooms" intended for dormitory accommodation for one patient each are sadly deficient in number.

On December 31st, 1868, the total number of insane persons in Asylums in the Colony was 1,230. On December 31st, 1874, it was 1,588. At the former period the number of single rooms was much below the proper proportion, and the number for male patients has diminished since that date, 6 having been erected at Newcastle and 8 demolished at Parramatta as unfit for habitation, although the number of patients has increased by a total of 358, of whom two-thirds are males.

The present need of single rooms at Gladesville is most urgent. A number of patients whose condition is such that as much for their own welfare as for the safety and comfort of others they should be lodged apart, are now obliged to pass the night (I will not say to sleep) in associated dormitories. One dormitory (at times a perfect pandemonium) and several corridors are filled with patients every one of whom ought properly to be in "single rooms." And it is impossible at times to find "single rooms" for acute cases, in which quiet, undisturbed rest at night is the main requirement to ensure recovery. With such a state of things at night, and with the excitement produced by overcrowded wards by day—with the absence of all indoor associated amusements, owing to the rooms for this purpose having been occupied as dormitories—and with a painful feeling on the part of Superintendent, officers, and staff, that the hospital is retrograding in its usefulness and position, owing to overcrowding, despite all their efforts and anxieties—it is not to be wondered at that the percentage of recoveries has fallen to 29.

The following statement shows the total number of insane persons in the Colony on December 31st, 1874, the distribution amongst the respective institutions, and the increase in the total upon that of 1873, viz. :—

	M.	F.	Total.	
In Hospital for Insane, Gladesville	304	247	551	
Lunatic Asylum, Parramatta	Free	493	199	692
	Convict	24	7	31†
	Criminal	35	1	36‡
Asylum for Imbeciles, &c., Newcastle	115	49	164	
Licensed House for Lunatics, Cook's River	8	106	114§	
Total	979	609	1,588	
Total number on December 31st, 1873	942	584	1,526	
Increase during the year	37	25	62	

The early period at which this Report is presented has prevented a continuation of the table given last year, and showing the proportion of insane to population in each year since 1863 in New South Wales as well as in England and Victoria.

The Report of the English Commissioners for 1873-4 has not yet reached me, and the estimated return of the population of this Colony at the end of last year has not yet been issued from the Registrar General's Department.

A continuation of this table I shall hope to present in subsequent Reports.

Judging from the estimated return of the population of the Colony on June 30, 1874, it is possible that the proportion of insane to population has not greatly increased, but the increase is in itself a large one, and as similar if not larger increases must be expected with each yearly increase of population, the disposal of this growing number of persons requiring hospital accommodation is a question (especially in the present condition of the asylums) calling for the gravest consideration and the most prompt and energetic measures.

The estate at Callan Park, purchased early in last year, has not yet been utilized, and although the sum of £75,000 has been voted for the erection of a new asylum thereon, no decided steps have yet been taken to provide this much needed institution.

The

* "Contributions to Mental Pathology," by Dr. Isaac Ray, 1873.

† British convicts still at charge of Imperial Treasury.

‡ Confined under Criminal Lunacy Act, 24 Vict. No. 19, N.S.W.

§ 100 of these are maintained at the Government expense.

The contracts taken during the year 1872 for new laundry, kitchen and store, at Gladesville are not yet completed, but the store is now occupied, although only partly furnished, and it is hoped that the laundry and kitchen may be in use in the course of the next three months. At the close of the year contracts were taken for a gate-keeper's lodge, and cottages for the chief attendant and dispenser. Tenders have also been accepted for some additions to the engine-house and a cottage for the engineer, whose constant presence at the waterworks is very desirable.

The main requirements, apart from further accommodation for patients, are a residence for the Medical Superintendent, stables, cart sheds, straw store, matting rooms, &c.

In my Report for the year 1869 I noted that earth-closets had been fitted throughout the male division and in part of the female division of the hospital, and I reported that, though an improvement on the old cesspits, they could not be considered, on the whole, as a success. The experience of five years bears out fully the opinion I then expressed. They are a decided improvement on cesspits, but they entail great labour and trouble; they are never without more or less offensive odour, encourage the breeding of swarms of flies, and, except with the greatest care, would be an unbearable nuisance. I am unaware of any large institution in the Colony where they have been so successfully worked as here, and where such trials have been made of the different modes of applying the earth. Various mechanical contrivances made in the Colony and imported from England have been employed, and some specimens of Moule's closets sent out specially from England by the Agent-General at my request have been found very efficient in action. On the establishment of a new asylum, however, I unhesitatingly recommend water-closets in preference to them in any situation where a full and efficient water-supply can be obtained; and I believe that sewage, carried away by water can, under most circumstances and in most situations, be as readily utilized for fertilizing purposes as when mixed with earth in the earth-closet system.

In Appendix C will be found a very valuable report on earth-closets, by the Superintendent of an English asylum.

The increase during the last few years in the number of Chinese patients whilst the Chinese population has been for a long time past rapidly diminishing, calls for some remark. The number of Chinese patients in the Asylums at present is 48, viz.:—Gladesville 8, Parramatta 39, and Newcastle 1.

The Chinese population of the Colony, which in 1861 was 12,988, had fallen in 1871 to 7,220, the decrease being 5,768, or 44·41 per cent.* The Registrar General informs me that he has no means of estimating with exactness the Chinese population at this date, but that he has reason to believe that the diminution in numbers is still continuing. Taking 6,500 as the present estimate—one probably much above the truth—we have one insane Chinaman to every 135 of the Chinese population,—nearly three times the proportion for the population of the Colony generally. This enormous proportion is no doubt partly due to the exodus of our Chinese population, who have left behind them their insane in hospital, partly to the fact that Chinese patients very rarely recover when sent to hospital, whilst they live to an average age there, and partly to the fact that a large part of the present Chinese population is made up of the unsuccessful, the improvident, and the more hopeless classes, the stronger-minded and successful having departed with their gains to China. The recoveries among Chinese patients during the last six years has not averaged 12 per cent. on the admissions, whilst the total recoveries have averaged over 36 per cent. The number of Chinese admitted during the last six years into this hospital and the Parramatta Asylum together has been 32, a total out of all due proportion to the Chinese population.

Early in the year, the purchase of a property adjoining the hospital, and for which arrangements had long been in progress, was completed. Considerable improvements were, as soon as possible, effected, a road at the back of the hospital was closed; the laundry and wood-yard enlarged; a new main entrance formed; and a paddock ploughed, levelled, planted and laid out as a cricket ground, with bowling green and other means of out-door amusements. A house purchased with the property has been repaired and enlarged to form a residence for the Assistant Superintendent.

The religious services have, as in former years, been conducted with regularity, and with all the decorum possible, although the room used for the purpose is now used also as a dormitory. I have again, as in former years, to record the cordial co-operation of the Chaplains in the work of the institution, and to express my appreciation of the readiness with which they have at all times responded to extra calls for their assistance.

The amusements have, as in former years, not been neglected. The fortnightly dances were continued during the earlier winter months, and the Queen's Birthday was celebrated by a ball on a larger scale than usual. Magic lantern entertainments, with new lanterns and gas apparatus kindly given by a friend, were repeatedly held, and at these, on several occasions, Mr. Alfred Cane most kindly undertook all the labour of preparation and exhibition, and lent a number of slides. Various musical, dramatic, and other entertainments were also held, and I am indebted to many kind friends, among whom I would particularize Messrs. Lees, Webster, Craven, Cavanagh, and Wilson, for assistance on these occasions.

During the latter part of the year the over-crowding of the male division of the hospital compelled me to occupy the amusement room as a dormitory, and since that time I have been obliged to discontinue all the indoor associated amusements, and most reluctantly to decline repeated offers of musical and other entertainments made by gentlemen and ladies who have on former occasions left most pleasant recollections of their visits. In October the largest and most successful out-door entertainment which has yet taken place at the hospital was given, through the kindness of a number of ladies and gentlemen resident in the neighbourhood. The whole arrangements were made by a committee of ladies, and the time fixed so as to celebrate the sixth anniversary of my taking charge of the hospital as Medical Superintendent. Athletic sports, aunt sally, swings, fire-balloons, a merry-go-round, Punch and Judy, a grand display of bunting, plenty of music, and a most liberal tea, with attendant et ceteras, made up a most attractive programme, and were thoroughly enjoyed by a larger number of the patients than had ever been previously brought together in this manner. Two days afterwards the attendants, nurses, and staff of the hospital were entertained at a dance given under the same auspices. Later in the year two steam-boat excursions to Middle Harbour afforded a great treat to a number of patients and visitors.

In all the entertainments given at the hospital, Mrs. Darvall, of Ryde, has taken a most kind and active interest. I have especially to thank her for donations of money, for several loads of fruit, and most of all for an active sympathy which makes her presence at the hospital always a pleasure.

This

* Report on Statistical Results of Census of 1871, by the Registrar General.

This hospital is looked upon by many as entirely a Government institution, and as such having no need of assistance from private benevolence; but, as has been well pointed out by Dr. Dewolf in the case of a kindred institution at Halifax, in Nova Scotia:—"It only requires a moderate degree of attention to lead one to admit that while the essentials for care and comfort are due from the Public Treasury, there are yet many, "very many, desirable and important aids to recovery which are more properly provided by benevolent "individuals."*

In providing for the recreation, exercise, and amusement of the patients, in making the wards more home-like and pretty, in erecting aviaries and filling them with occupants,—the "essential extras" of an hospital of this character—private benevolence may, indeed I think should properly co-operate with the public charity. That this has been in a great degree recognized, the above record of facts and the appended list of donations serve to testify; and, whilst expressing my hearty thanks to kind friends who have by their gifts and their active help at concerts and other amusements shown a sympathy with the objects of the institution, I cannot but express a hope that in the future these private contributions towards the comfort, the happiness, and the recovery of the insane—a class whose claims are superior to many others—may increase both in number and value.

The following gifts have been received during the year:—Miss C., £20; Mrs. & Miss W., £5; Mrs. Darvall, £3; Mr. J. Paterson, £1; Mr. Kynaston, £1; The Revd. Father Joly, 2 calves; Dr. Creed, a pair of young cranes and an eagle; Mr. Isler, a Kangaroo; Mrs. Manson, 10 bantam fowls; Captain Truscott, several bags of cocoa-nuts; Mrs. J. Frazer, box of young pines; Mr. Charles Brady, mulberry-cuttings; Mr. Henry, vine-cuttings; Union Club, illustrated papers, &c., a large donation (monthly); Mr. Ernest O. Smith, illustrated papers, &c. (monthly); Australian Club, illustrated and other papers (several packages); Mr. C. Wilson, illustrated papers, &c. (several packages), and copies of *Sydney Mail* and *Punch* each issue; Mr. Grafton Ross, Mr. Henry Wager, Dr. Hall Palmer, Mrs. Brown (Hunter's Hill), Miss Leigh (Hunter's Hill), Mr. R. A. A. Morehead, Mr. Stephen Greenhill, Mr. Charles Cowper, Messrs. S. C. Bown & Company, Mrs. Charles Thorne, Mr. Edey Manning, and Mrs. Vickory, large packages of illustrated and other papers; Mr. S. T. Leigh, almanacs and portraits in *Sydney Mail* series; Mr. William Buchanan, G.P.O., large quantities of foreign and other newspapers; Dr. Strong, two boxes of books; the proprietors of the New South Wales *Good Templar*, several packages of that publication; Anonymous, several packages of illustrated and other papers. From Mr. C. Moore, of the Botanic Gardens, and from Mr. Duff, during Mr. Moore's absence from the Colony, I received several gifts of cuttings, plants, and seeds for the hospital garden, besides a large tortoise and a pair of Egyptian geese. Last, but not least, I have to acknowledge the receipt from the proprietors, free of all charge, of copies of every issue of *Bathurst Free Press*, *Bathurst Times*, *Burrangong Argus*, *Burrangong Chronicle*, *Clarence and Richmond Examiner*, *Deniliquin Chronicle*, *Dubbo Dispatch*, *Goulburn Herald and Chronicle*, *Grafton Observer*, *Illawarra Mercury*, *Kiama Independent*, *Maitland Mercury*, *Monaro Mercury*, *Newcastle Chronicle*, *Newcastle Pilot*, *Queanbeyan Age*, *Richmond River Express*, *Riverine Grazier*, *Social Reformer*, *Southern Argus*, *Wagga Wagga Express*, *Wagga Wagga Advertiser*, *Western Examiner*, *Western Post*, and *Yass Courier*—gifts most welcome and most cordially appreciated by the patients.

I have, as in former years, to acknowledge the ready, active, and most efficient assistance of the staff under my directions, who are called on to perform the most trying and arduous duties, and of whom, as a body, it is difficult for me to speak in terms too eulogistic.

In concluding my Report, I must crave indulgence for its meagreness and want of interesting detail, owing to the short time which I have been able to avail myself of in its preparation. The statistical tables on which it is in great part a comment could not be commenced until January 1st, and, owing to their elaborate nature, could not be completed for some time, and it was necessary for me to forward my Report at an earlier period than usual.

I have the honor to be,

Sir,

Your most obedient servant,

F. NORTON MANNING,

Medical Superintendent.

* Sixteenth Annual Report of Hospital for the Insane, Halifax, 1873.

TABLE III.—Showing the admissions, discharges, and deaths, with the mean annual mortality and proportions of recoveries per cent., since the 1st January, 1869.

Year.	Admitted.			Discharged.									Died.	Remaining on 31st Dec. in each year.	Average number resident.	Percentage of recoveries on admissions.			Percentage of deaths on average numbers resident.								
	Male.	Female.	Total.	Recovered.	Relieved.	Not Improved.			Male.	Female.	Total.	Male.				Female.	Total.	Male.	Female.	Total.							
1869	143	75	218	56	32	88	20	0	20	13	40	53	63	7	60	429	223	652	435	215	650	39.16	42.66	40.30	12.18	3.25	9.23
1870	131	60	197	41	35	76	7	8	10	233	1	231	25	4	29	254	216	500	262	231	493	31.29	53.03	38.67	9.54	1.73	6.88
1871	172	105	277	53	40	93	0	7	13	111	40	151	27	8	35	229	256	485	255	248	513	30.80	38.01	33.57	10.18	3.22	6.82
1872	164	104	268	70	49	119	11	4	16	68	39	107	29	9	38	215	259	474	231	256	487	42.68	47.11	44.44	12.65	3.51	7.80
1873	189	107	296	64	36	100	12	10	22	41	16	57	20	10	30	267	294	561	246	279	525	33.86	33.64	33.78	8.13	3.50	6.71
1874	186	126	312	51	41	92	9	13	22	49	101	153	40	15	55	304	217	551	280	301	581	27.44	32.53	29.48	14.28	4.98	9.46

TABLE IV.—Showing the history of the annual admissions, from the 1st January, 1869, with the discharges and deaths, and the numbers of each year remaining on the 31st December, 1874.

Year.	Admitted.					Of each year's admissions discharged and died in 1873.										Total discharged and died of each year's admissions, to 31st December, 1874.										Remaining of each year's admissions, 31 Dec., 1874.											
	New cases.		Relapsed cases*			Recovered.			Relieved.			Not improved.			Died.			Recovered.			Relieved.			Not improved.			Died.			Male.	Female.	Total.					
	Male.	Female.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.								
1869	120	59	23	16	218	...	...	...	...	...	...	...	...	...	...	...	4	4	...	...	...	43	29	72	17	7	24	48	24	72	26	4	30	9	11	20	
1870	116	60	15	16	197	...	...	...	...	...	...	...	...	...	...	...	1	8	9	...	...	...	46	36	82	5	1	6	55	17	72	20	4	24	6	8	13
1871	143	79	29	26	277	...	1	1	...	...	...	...	...	...	...	...	10	10	4	...	...	4	61	47	111	9	4	13	55	25	86	21	6	27	23	23	46
1872	141	78	23	26	268	3	...	3	1	1	2	7	16	23	1	2	3	39	36	95	12	10	22	54	29	83	21	10	31	18	19	37	37	37	37	102	
1873	157	78	32	20	296	10	19	38	4	5	9	13	11	27	16	4	20	59	39	98	5	6	11	25	22	50	29	6	35	68	31	102	102	102	102		
1874	167	105	29	21	312	29	21	50	3	5	8	15	14	39	15	6	21	20	21	50	3	5	8	25	14	39	18	6	24	111	80	191	191	191			
Totals.	834	449	151	134	1566	61	41	92	8	11	19	46	66	112	39	12	51	360	208	568	51	33	84	265	131	396	135	36	171	234	175	409	409	409			

SUMMARY OF THE TOTAL ADMISSIONS, 1869-70-71-72-73-74.

	Male.	Female.	Both Sexes.
Percentage of cases recovered	30.46	35.67	32.40
" relieved	5.18	5.67	5.36
" not improved	26.90	22.47	25.25
" dead	13.70	6.18	10.91
" remaining	23.76	30.01	26.08
	100	100	100

* A large proportion of these were re-admitted, but not relapsed cases. Some were re-transfers from other institutions for the insane and others had been discharged to the care of friends whilst still insane.

TABLE V.—Showing the causes of death during the year 1874.

Cause of Death.	Males.	Females.	Total.
CEREBRAL DISEASE.			
Apoplexy and paralysis	5	1	6
Epilepsy and convulsions	4	.....	4
General paresis	11	.....	11
Maniacal and melancholic exhaustion or decay	3	1	4
Inflammation and other diseases of the brain, softening, tumours, &c.	5	.....	5
THORACIC DISEASE.			
Inflammation of the lungs, pleura and bronchi	4	2	6
Pulmonary consumption	1	4	5
Disease of the heart and blood-vessels	3	1	4
ABDOMINAL DISEASE.			
Inflammation and ulceration of the stomach, intestines, peritoncum .....	.....	.....	.....
Dysentery and diarrhoea .....	.....	2	2
Albuminuria .....	.....	1	1
Cancer .....	.....	2	2
Erysipelas	1	.....	1
Carbuncle	1	.....	1
Pyæmia	1	.....	1
General debility and old age	1	1	2
Accident .....	.....	.....	.....
Suicide .....	.....	.....	.....
	40	15	55

TABLE VI.—Showing the length of residence in those discharged recovered and in those who have died during the year 1874.

Length of Residence.	Recovered.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.
Under 1 month	2	1	3	8	4	12
From 1 to 3 months	18	10	28	4	4	8
" 3 to 6 "	10	13	23	5	.....	5
" 6 to 9 "	5	8	13	5	.....	5
" 9 to 12 "	11	4	15	5	1	6
" 1 to 2 years	4	4	8	9	2	11
" 2 to 3 "	1	1	2	2	1	3
" 3 to 5 " .....	.....	.....	.....	2	.....	2
" 5 to 7 " .....	.....	.....	.....	.....	1	1
" 7 to 10 " .....	.....	.....	.....	.....	.....	.....
" 10 to 12 " .....	.....	.....	.....	.....	1	1
" 12 to 15 " .....	.....	.....	.....	.....	1	1
	51	41	92	40	15	55

TABLE VII.—Showing the duration of the disorder on admission in the admissions, discharges, and deaths, during the year 1874.

Class.	Duration of disease on admission, in four classes.											
	Admissions.			Recovered.			Removed, relieved, or otherwise.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
First Class— First attack, and within three months on admission	48	38	86	21	14	35	7	18	25	4	4	8
Second Class— First attack, above three and within twelve months on admission	23	10	33	7	4	11	5	13	18	10	2	12
Third Class— Not first attack, and within twelve months on admission	18	22	40	13	17	30	3	21	24	5	1	6
Fourth Class— First attack or not, but of more than twelve months on admission	39	32	71	1	2	3	28	44	72	10	3	13
Fifth Class— Not ascertained	58	24	82	9	4	13	15	21	36	11	5	16
Totals	186	126	312	51	41	92	58	117	175	40	15	55

TABLE VIII.—Showing the ages of the admissions, discharges, and deaths during the year 1874.

Ages.	Admissions.			Discharges.						Deaths.		
				Recovered.			Removed, relieved, or otherwise.					
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
From 5 to 10 years	3	1	4	...	...	...	4	2	6	...	...	...
" 10 to 15 "	4	6	10	...	...	...	7	6	13	...	...	...
" 15 to 20 "	7	8	15	...	5	5	7	3	10	...	...	...
" 20 to 30 "	27	26	53	11	13	24	5	17	22	2	1	3
" 30 to 40 "	58	46	104	17	9	26	19	41	60	11	8	19
" 40 to 50 "	51	22	73	19	9	28	11	20	31	14	3	17
" 50 to 60 "	20	10	30	3	3	6	...	20	20	7	1	8
" 60 to 70 "	11	4	15	1	2	3	3	6	9	4	1	5
" 70 to 80 "	5	3	8	...	...	...	2	2	4	2	1	3
" 80 and upwards .....	...	...	...	...	...	...	...	...	...	...	...	...
Totals	186	126	312	51	41	92	58	117	175	40	15	55

TABLE IX.—Conditions as to marriage, in the admissions, discharges, and deaths, during the year 1874.

Condition in reference to marriage.	Admissions.			Discharges.						Deaths.		
				Recovered.			Removed, relieved, or otherwise.					
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Single	108	40	148	34	16	50	43	54	97	19	2	21
Married	65	77	142	15	23	38	15	51	66	18	8	26
Widowed	13	9	22	2	2	4	...	12	12	3	5	8
Unascertained .....	...	...	...	...	...	...	...	...	...	...	...	...
Totals	186	126	312	51	41	92	58	117	175	40	15	55

TABLE X.—Showing the probable causes, apparent or assigned, of the disorder, in the admissions, discharges, and deaths, for the year 1874.

Causes.	Admissions.			Discharges.						Deaths.		
				Recovered.			Removed, relieved, or otherwise.					
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Moral—												
E.G. Mental anxiety*	13	3	16	5	1	6	2	2	4	3	1	4
Domestic troubles].....	8	3	11	4	1	5	...	8	8	1	2	3
Religious excitement .....	...	2	2	...	...	...	...	2	2	...	...	...
Disappointment in love .....	...	...	...	...	2	2	...	2	2	...	...	...
Isolation.....	11	3	14	...	...	...	3	3	6	...	...	...
Loss of children .....	...	1	1	...	...	...	...	3	3	...	...	...
Nostalgia .....	...	...	...	...	...	...	1	...	1	...	...	...
Fright .....	...	1	1	...	1	1	...	...	...	...	1	1
Physical—												
E.G. Hereditary taint†	13	10	23	2	1	3	3	15	18	1	2	3
Congenital	14	7	21	...	...	...	15	14	29	...	...	...
Intemperance	16	9	25	10	3	13	1	4	5	3	2	5
Onanism	5	...	5	1	...	1	2	...	2	...	...	...
Sunstroke	21	4	25	3	...	3	6	1	7	1	...	1
Injury to head	7	1	8	3	...	3	2	1	3	2	...	2
Puerperal‡	0	19	19	...	11	11	...	7	7	...	...	...
Climacterics .....	...	10	10	...	3	3	...	1	1	...	1	1
Phthisis	3	...	3	...	...	...	...	...	...	1	...	1
Epilepsy	13	8	21	1	...	1	5	9	14	4	...	4
Cancer and other diseases of the brain	2	1	3	...	...	...	2	1	3	7	...	7
Fever, ill-health, and destitution.....	3	11	14	2	8	10	2	6	8	...	2	2
Syphilis	1	4	5	1	1	2	...	...	...	1	...	1
Excess of opium	3	...	3	1	...	1	...	...	...	...	...	...
Old age	6	3	9	...	...	...	2	3	5	5	1	6
Unascertained	47	26	73	18	9	27	12	35	47	11	3	14
Totals	186	126	312	51	41	92	58	117	175	40	15	55

* Including mental excitement in speculation, &c.

† Given as a separate cause only in cases where the immediate cause was not known.

‡ Including over-lactation, &c.

The difficulties still experienced in obtaining trustworthy information concerning patients on their admission have prevented any increase in the number of the statistical tables having a social or domestic interest.

The three following—XI, XII, XIII—are a continuation of those in the Report for the year 1873.

TABLE XI.—Showing the nativities of patients remaining on the 31st December, 1868, and admitted since that date.

Year.	British Colonies.						Great Britain.									France.			Germany.			China.			Other Countries.		
	New South Wales.			Other Colonies.			England.			Scotland.			Ireland.														
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Remaining in hospital, 31st Dec., 1868	45	22	67	12	1	13	115	66	225	35	12	47	126	132	258	3	1	4	13	2	15	18	...	18	17	...	17
Admitted during 1869	23	17	40	5	4	9	58	25	53	12	4	16	33	24	57	...	1	1	4	...	4	3	...	3	5	...	5
Do. 1870	16	18	34	6	1	7	54	14	68	10	7	17	30	26	56	1	...	1	7	...	7	4	...	4	3	...	3
Do. 1871	34	26	60	1	4	5	59	36	95	9	1	10	49	38	87	2	...	2	7	...	7	4	...	4	7	...	7
Do. 1872	27	23	50	2	...	2	70	33	103	13	6	19	40	41	81	1	...	1	5	...	5	2	...	2	4	1	5
Do. 1873	52	35	87	4	...	4	63	27	90	8	9	17	39	35	74	...	...	...	9	...	9	6	...	6	8	1	9
Do. 1874	36	40	76	3	2	5	70	28	98	10	6	16	45	49	94	1	...	1	4	1	5	7	...	7	10	...	10
Totals.....	233	181	414	33	12	45	533	229	762	97	45	142	302	345	707	8	2	10	49	3	52	44	...	44	54	2	56

TABLE XII.—Showing the previous occupation of those admitted during the year 1874.

Males.		Females.	
Blacksmith	1	Domestic servants	26
Bootmakers	2	Dressmakers and needlewomen	4
Bricklayer	1	Governess	1
Builder	1	Nurse	1
Butchers	4	Teacher of music	1
Cabmen and coachmen	2	Vagrants	2
Carpenters, joiners, &c.	12	Wives of cabmen and coachmen	2
Chemist	1	Wife of carrier	1
Clerks	2	Wife of clerk	1
Commission agent	1	Wife of commercial traveller	1
Cooks and bakers	5	Wife of constable	1
Cooper	1	Wives of dealers	4
Chief officer	1	Wives of gardeners	2
Dealers and hawkers	2	Wives and daughters of farmers	12
Drapers	4	Wives and daughters of labourers, shepherds, &c.	16
Farmers and free selectors	11	Wife of milkman	1
Fisherman	1	Wife of messenger	1
Gardeners	2	Wives of miners (coal, gold, &c.)	5
Harness-maker	1	Wife of photographer	1
Labourers	50	Wives of publicans	2
Merchants	2	Wives of seamen	3
Miners (coal, gold, &c.)	12	Wives and daughters of tradesmen, mechanics, &c.	19
Miller	1	Widows (not employed)	5
Painter	1	No occupation	12
Pawnbroker	1	Not ascertained	2
Plasterers	2		
Publicans	3		
Sawyer	1		
Schoolmaster	1		
Seamen and boatmen	13		
Servants and grooms	3		
Shepherds and stockmen	10		
Shipwright	1		
Soldiers and pensioners	3		
Station superintendent and overseer	2		
Stevedore	1		
Student	1		
Squatter	1		
Tailors	5		
Weaver	1		
No occupation	16		
Total	186	Total	126

TABLE XIII.—Showing the religious profession of those admitted during the year 1874.

Religious Profession	Males.	Females.	Total
Protestant—			
Church of England	72	59	131
Presbyterian	18	5	23
Wesleyan	11	6	17
Lutheran	8	...	8
Other Protestant Denominations	9	3	12
Roman Catholic	59	52	111
Pagan	7	...	7
Hebrew	1	...	1
Mahomedan .....	...	1	2
Unascertained	1	1	2
Totals	186	126	312

A.

RETURN showing the number of Patients received at the Lunatic Reception House during the year 1874, and their disposal.

Whence received	Received.			Sent to Gladstone Hospital.		Sent to Parramatta Asylum.		Discharged, of sound mind, by order of His Excellency the Governor.		Discharged to the care of friends.		Died.		Remaining on the 31st December, 1874.	
	Males	Females	Total	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Sydney	93	60	153	71	50	.....	.....	6	5	11	5	.....	.....	6	.....
Goulburn	12	8	20	12	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maitland	9	5	14	9	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newcastle	7	6	13	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mudgee	7	2	9	6	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Parramatta	4	0	4	3	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Armidale	5	0	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kiama .....	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Braidwood	3	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wollongong	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Queanbeyan .....	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Penrith	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gulgong .....	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wagga Wagga	3	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coonua	2	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yass	2	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bombala	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Allury	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	161	89	240	126	79	.....	.....	7	5	11	6	1	.....	6	.....

B.

RETURN of Produce from the Garden of the Hospital for the Insane, Gladesville, during the year 1874.

Description of produce.	Total quantity.	Description of produce.	Total quantity.
Asparagus	113 lbs.	Radishes, beet, artichokes	1,047 lbs.
Beans, French and broad	752 "	Turnips and parsnips	2,167 "
Cabbage	30,459 "	Marrows	173 "
Carrots	3,761 "	Watercress	838 "
Cauliflowers	392 "	Fruit—	
Cucumbers	547 "	Oranges and lemons	238 doz.
Herbs	896 "	Peaches, grapes, &c.,	2,447 lbs.
Lettuces	939 "	Strawberries.....	513 pints
Leeks	4,113 "	Eggs ..	821 doz.
Onions	1,987 "	Fowls	81 "
Pumpkins	4,157 "		
Peas	548 "		
Potatoes	5,700 "		

C.

EXTRACT from the Journal of Mental Science, July, 1874, page 304. Public Asylum Reports for 1873.

THE Court of Quarter Sessions of the Worcester County Asylum requested to know, among other things, why earth-closets could not be adopted throughout. To this we are indebted for a long report from Dr. Sherlock, in which, besides matter in reference to their bathing arrangements, we have a very full and valuable account of the experience of earth-closets in Lunatic Asylums, as to which information was collected from many sources. We think this *resumé* by Dr. Sherlock so valuable that we append it in full:—

"Twenty-seven asylums were using water-closets, but in several of them earth-closets had been tried and found not to answer, as at Northampton, Somerset, and Surrey, and the Superintendents reported unfavourably of them in comparison with water-closets. In twenty-five asylums the Superintendents reported that earth-closets were in use. In two asylums—Broadmoor and Shrewsbury—they were said to be in use in all situations; ten confined their use to out-of-door situations, seven to ground-floor wards only, two to ground and first floor wards only, and four used earth commodes of various construction in special departments. Thirteen of the Superintendents where earth-closets are in use reported unfavourably of them, while the Superintendents of five asylums where they are in use stated that they answer well."

The Superintendents of nearly all the asylums where earth-closets have been in use state that they require more care and attention than water-closets; and the majority of them speak of them as emitting most offensive odours if the least neglect be permitted. In several asylums where they have been in use they have been replaced by water-closets. In the last report of the Isle of Man Asylum, dated July, 1873, the following paragraph occurs:—"Water-closets have been substituted for earth-closets throughout the asylum. The desirability and advantage of this change no words of mine can express."

The Superintendent of Broadmoor Asylum reports that the experiment with earth-closets has there "been a very complete one. The result has proved that they are a shocking nuisance in-doors, and to be avoided wherever the water supply and sewerage are reasonably good." In the pamphlet published and circulated by Moule's Patent Earth-closet Company testimonials from these two last-named asylums are given, speaking favourably of their suitability by the Clerk of Works; but subsequent experience has proved them unsuitable, and the Superintendents of Berks, Caterham, Cobey Hatch, Leavesden, and Rainhill report equally unfavourably of them, and in Kent they have been replaced by water-closets in all the wards, and their use confined to out-of-doors situations. The weight of evidence appears to your Superintendent to prove clearly that they are less effectual than water-closets, that they require much greater attention and care, that they are frequently very offensive and pollute the atmosphere, and that their use should be confined to airing-courts. In constructing a new asylum, some of the objections to their use can be partially removed by placing earth-closets in situations where they can be charged with dry earth and the soil removed from outside of the building; but where the closets are placed, as in this asylum, in exposed situations, much inconvenience and nuisance would arise from the filling and emptying process.

"If the earth-closets were fixed on the first floor wards, considerable inconvenience would result from having daily to carry earth for their supply through the wards occupied by the patients, and this would be much more inconvenient and undesirable in female wards, where men would daily have to enter at an early hour. Where earth-closets are in use it is absolutely essential in an asylum to provide some paid labour for the daily attention and supervision of providing them with dry earth and removing the contents of the tanks. It is also necessary to have some provision by means of which dry earth may be procurable at all seasons for the supply of the closets, and this must entail considerable expense in erecting a building for storage of earth during the summer, or of constantly having some artificial means of drying earth during the winter. The product of the use of water-closets is equally applicable to land in the form of sewage, and at present this is constantly carried out, and entails no charge for labour, and appears to be equally valuable as a fertilizing agent.

"Since the last visit of the Committee several members of the Board, accompanied by the County Surveyor and your Superintendent, visited the Shrewsbury Asylum, where earth-closets were known to be in use both in ground floor and first floor wards. Without exception the whole of these closets were more or less offensive, and some of them painfully so, although it had been attempted to overcome the nuisance by the copious use of chloride of lime, a strong odour of which could be readily perceived everywhere. In the first floor wards, where shoots were employed to conduct the soil to tanks or vaults on the ground underneath, this was specially the case, and much inconvenience was stated to frequently arise from the earth and soil in its passage downwards adhering to the inside of the shoot. In several of the earth-closets examined the deposit of dried ashes upon the pan was accompanied with the rising of so much dust as must necessarily soil the dress of any person using the closet; probably, however, this would be less likely to occur were earth or clay in use. In reply to our inquiries it was reported that in the morning when the tanks or vaults were being emptied from the outside, a most offensive odour was found to enter and penetrate into the building, owing to a back draught from the outside through the pipes. It was said to be perceptible for some considerable time afterwards. In a sanitary point of view your Superintendent is therefore forced to report upon earth-closets very unfavourably, not only in respect of those as seen at Shrewsbury, but in many other asylums of the country where they have been seen and inspected by him.

"The Commissioners in Lunacy, also, in reply to your inquiries, stated that they were less serviceable for asylum use than water-closets, and were found not to answer so well. So far as the examination extended, the members of your Board concluded that they were equally liable to get out of order as water-closets, and several were found without earth or ashes, some acting imperfectly, and a few not at all."

1875.

NEW SOUTH WALES.

AUSTRALIAN MUSEUM.

(REPORT FROM TRUSTEES, FOR 1873.)

Presented to Parliament, pursuant to Act 17 Vict. No. 2, sec. 9.

REPORT OF THE TRUSTEES OF THE AUSTRALIAN MUSEUM, FOR THE YEAR ENDING
31st DECEMBER, 1873.

TO HIS EXCELLENCY THE GOVERNOR-IN-CHIEF,—

1. The Trustees of the Australian Museum have the honor to submit to your Excellency this their twentieth Annual Report.

2. They have to express their great regret that the presentation of this Report should have been, from circumstances within the knowledge of the Government, delayed to so late a period of the present year.

3. The Museum has been open to the public daily (Sundays excepted), and has been visited during the year by about 60,000 persons. This estimated number has been derived from a careful examination of the Visitors' Book, which displays throughout an obviously gross and culpable exaggeration. The false entries during the year amount to a total of nearly 180,000, and on one particular day alone the number of visitors falsely entered exceeded 3,700. The total number of visitors for the year 1873 estimated and returned by the late Curator and Secretary was 239,829, which is about 100,000 in excess of the total population of Sydney and its suburbs for that year.

4. The Trustees regret they cannot afford any trustworthy information in regard to the exchange of specimens with foreign Museums or with private individuals, because the late Curator and Secretary has failed to record them. The donations to the Museum have gradually fallen off, and are of less amount and value than those of preceding years. A list of donations of which a record has been preserved is appended. (*Appendix No. 2.*)

5. Several scientific works have been added to the Museum Library, but a list of them cannot be appended, as no record has been kept by the late Secretary.

6. The taxidermists have been employed during the year in mounting specimens, and in preserving the exhibits from decay.

7. The vacancies at the Board during the past year have been—by death, Dr. Macfarlane, President of the Colonial Medical Board, an official Trustee; and by the retirement of His Excellency the Governor, Dr. Alleyne, and Alexander Oliver, Esquire, elective Trustees. Dr. Macfarlane was succeeded by Dr. Alleyne, now President of the Colonial Medical Board, and Dr. Bellisario was elected to fill one of the vacancies caused by the retirement of the elective Trustees. Archibald Liversidge, Esquire, Professor of Geology in the University of Sydney, was nominated to fill one of the two vacancies remaining at the end of the year.

8. The Trustees have to state that the funds at their disposal are insufficient to meet more than the actual expenses involved in the maintenance of the existing collection; and that it is impossible, without further endowment, to enlarge or improve in any great degree that portion which is now open to public inspection.

9. They also deeply regret to have to report that, on or about the 25th of December last, a robbery of a singular character of the valuable gold specimens given by the Government was effected. The Trustees respectfully but earnestly urge that further inquiries may be instituted by the Government.

10. The contents of the Appendices are, No. 1—abstract of the receipts and payments of the Trustees on account of the Museum, for the year ending 31st December, 1873; and No. 2—list of donations with the names of the donors, during the same period.

A. W. SCOTT, M.A.,
Chairman.

CHAS. ROBINSON,
Acting Secretary.

(T.S.)

APPENDIX No. 1.

CURRENT EXPENDITURE of the Trustees of the Australian Museum, during the year 1873.

1873.		£	s.	d.	Dec. 31, 1873—	£	s.	d.
Jan. 1	To balance	65	5	7	By salaries for the year	1,265	0	4
" 1	" cash, Colonial Treasurer..	39	11	8	" petty cash and postage	93	0	0
" 7	" " "	250	0	0	" keeping grounds in order	30	6	0
Mar. 1	" " "	83	6	8	" stationery	28	3	7
" 15	" " "	200	0	0	" books and periodicals	23	18	6
April 1	" " "	250	0	0	" bookbinding	21	19	0
" 1	" " "	41	13	4	" Taxidermist's department	50	3	9
May 1	" " "	41	13	4	" purchase of specimens.....	33	0	0
June 2	" " "	41	13	4	" cabinets	42	0	0
July 1	" " "	41	13	4	" glass and glazing exhibit cases.....	26	18	2
" 1	" " "	250	0	0	" covering for ditto	4	5	9
Aug. 1	" " "	41	13	4	" timber	18	3	2
Sept. 1	" " "	41	13	3	" ironmongery	7	9	1
Oct. 1	" " "	41	13	3	" ironwork	4	16	6
" 1	" " "	249	19	11	" plaster of Paris.....	7	5	0
Nov. 1	" " "	41	13	3	" tinsmith's work	1	10	6
Dec. 1	" " "	41	13	3	" packing-cases	2	5	0
					" carpenter's work	7	18	0
					" printing and lithographs	3	0	0
					" wood, coal, and charcoal	12	16	0
					" photographic chemicals	4	11	0
					" sundries	5	0	0
					" balance	69	14	2
		£ 1,763	3	6		£ 1,763	3	6

APPENDIX No. 2.

LIST OF DONATIONS TO THE AUSTRALIAN MUSEUM DURING THE YEAR 1873.

MAMMALS.		PRESENTED BY
A small and rare species of Flying Fox, from the Solomon Islands (<i>Pteropus</i>).....	}	Dr. J. C. Cox, F.L.S., &c., &c.
A Phalanger (<i>Cuscus</i>) from the Solomon Islands		
A Porcupine (<i>Hystrix setosa</i>)		
A young Kangaroo (<i>Macropus major</i>)		
A Monkey (<i>Cercopithecus</i>).....		
A Wallaby (<i>Petrogale nanthopus</i>)	}	Charles Moore, Esq., F.L.S., Director of the Botanic Gardens, Sydney.
The head of an Indian Stag		
A Flying Squirrel (<i>Belideus sciureus</i>)		
A Native Cat (<i>Dasyurus viverrinus</i>)		The Hon. Lady Robinson. Mr. J. Green. Master G. Campbell.
BIRDS.		
A Swamp Cuckoo (<i>Centropus phasianus</i>)	}	Mr. J. Wheeler.
A Silver Pheasant (<i>Phasianus</i>)		
A Brush Turkey (<i>Talegalla lathami</i>)		
A White Ibis (<i>Threskiornis struthipectnis</i>)		
A Macaw		
An Australian Bustard (<i>Eupodotis australis</i>)	}	Chas. Moore, Esq., F.L.S., &c., Director of the Botanic Gardens, Sydney.
A Shining Grackle (<i>Calornis metallica</i>)		
A Gull from North Australia		
Two Torres Strait Pigeons (<i>Carpophaga luciuosa</i>).....		
A Scaly-breasted Parrakeet (<i>Trichoglossus chlorolepidotus</i>)		
An Owl (<i>Strix delicatulus</i>)		
A Pigeon		
A Cormorant (<i>Phalacrocorax sp.</i>).....		
A Goatsucker (<i>Agotheles nova hollandia</i>)		
REPTILES.		
Two Night Lizards (<i>Phyllurus platurus</i>)	}	Miss Bradley. Mr. Chas. Bell. Mr. Chas. Blakefield. Mr. E. W. Rudder. Mr. R. Ross. Mr. Hargraves. Wm. Forster, Esq., M.L.A. Mr. W. Strathan. Mr. Wm. Moore. Mr. A. L. Callett. Mr. Percy Wells. Dr. Hankey, F.R.G.S. Mr. E. Sellers. Mr. R. Thatcher. E. S. Hill, Esq., C.M.Z.S.
A Lizard (<i>Diplodactylus ornatus</i>)		
A Lizard (<i>Hinula</i>) from Molong		
A collection of Blind Snakes (<i>Typhlops</i>).....		
A Night Lizard (<i>Phyllurus platurus</i>)		
A Snake (<i>Diemenia superciliosa</i>)		
A Green Tree-snake (<i>Dendrophis punctatula</i>).....		
A Snake (<i>Brachysoma diadema</i>)		
A Spine-tailed Lizard (<i>Phyllurus platurus</i>).....		
Two Blind Snakes (<i>Typhlops</i>)		
A Sea-snake (<i>Pelagus bicolor</i>)		
A small Green Tree-snake (<i>Dendrophis punctatula</i>)		
A Snake (<i>Hoplocephalus signatus</i>)		
A Green Tree-snake (<i>Dendrophis punctatula</i>).....		
A Slow-worm or Blind Snake (<i>Typhlops</i>)		
A Snake (<i>Hoplocephalus sp.</i>).....		
BATRACHIANS.		
A Frog (<i>Hyla aurea</i>)	}	Mr. John Cohen. Mr. J. A. Norton.
A Frog (<i>Pseudophryne australis</i>)		
FISH.		
A rare Fish (<i>Orthooryscus mola</i>)		Mr. H. Moor, of Ulladulla.

MOLLUSCA

MOLLUSCA AND CRUSTACEANS, &c.

PRESENTED BY

A miscellaneous collection of Shells, &c. &c.	Mr. J. E. Tassnidge.
A Fresh-water Cray-fish (<i>Potamobius sp.</i>)	Master J. Stewart.
A Crinoid Star-fish, from the Clarence River Heads	Mr. Pegus.
A Sea-egg or Echinus, allied to the genus <i>Spatangus</i>	E. S. Hill, Esq., C.M.Z.S.
A Crustacean	Mr. R. C. Want.

GORDIIDÆ, &c.

A Hair-worm (<i>Gordius</i>)	Mr. O. Rossbach.
A Worm (<i>Mermis sp.</i>)	Mr. E. B. Daley.

ETHNOGRAPHICAL SPECIMENS.

A "Tally-stick"	Mr. F. A. Dibbs.
An Iron Spear-head, from Wales	The Right Rev. the Bishop of Bathurst.

LEPIDOPTERA.

A Moth	Dr. Milford.
A Moth (<i>Antheræa eucalypti</i>)	Hon. Henry Parkes, M.L.A.

ARACHNIDÆ.

Spiders, &c., in spirits of wine	} The Right Reverend Dr. Turner, Bishop of Grafton and Armidale.
A Spider (<i>Habronestes sp.</i>) .....		Rev. J. C. Corlette, M.A.

SPECIMENS OF GEOLOGY AND MINERALOGY.

A series of specimens of Tin Ore	Mr. W. Langley.
Specimens of Compact Oolitic Limestone from Cooma	Mr. Campbell, District Surveyor.
Specimens of Wolfram	Mr. Thos. Flanders.
A collection of Rock Specimens from the Long Drive Tunnel at Wimbledon	Miss T. M. Lean.
Specimens of Tin from "The Ancient Briton" Tin Mine	} Mr. J. Harris, E.C.
Lignite from Lal-Lal, Victoria .....		Mr. G. Whitcomb.
A specimen of Tasmanian Coal	Mr. J. Orange.
Specimens of Copper Ore, green and blue Carbonate	} Professor Liversidge, University of Sydney.
Specimens of Quartz, Ironstone, &c., from the Diamond-drift of Bingera; also, specimens of Tin-stone, Pyrites, &c. ....		Mr. S. L. Bensusan.
Specimens of Minerals, Precious Opal, &c., &c.	Mr. J. Garvey.
A fragment of Opal from Gulgong	Mr. R. Scott.
Specimens of Wood-tin from Grenfell	

FOSSIL REMAINS.

A fragment of a molar tooth, and portion of the anterior half of first left upper incisor tooth of a <i>Diprotodon</i> , from Young	} Dr. G. Bennett, F.L.S.
The tibia of a Moa (<i>Dinornis sp.</i>) .....		Dr. Bennett, F.L.S.
A fossil Shell	Mr. S. S. Samuels.
Fossil Bones from Gulgong	Mr. L. F. Plunkett.

BOOKS AND PAPERS.

Mammalia, Recent and Extinct: an Elementary Treatise for the use of the Public Schools in the Colony of New South Wales. By A. W. Scott, Esq., M.A. ...	} The Author.
A Catalogue of the described Diurnal Lepidoptera of Australia. By G. Masters...	
The Transactions of the Entomological Society of New South Wales, Part fifth of Vol. II; containing descriptions of numerous Australian Coleoptera, new to Science. By Wm. Macleay, Esq., F.L.S., &c.	} The Author.
Fossil Mammals of Australia: a Review of Professor Owen's papers on this subject, reprinted from the <i>Sydney Mail</i> . By G. Krefft, F.L.S. ....		The Author.

PAINTINGS.

An Oil Painting by A. Claxton, representing an imaginary section of the Diving Cave at Varau, one of the South Sea Islands	} Lady Dowling.
A Painting in oil—Portrait of Dr. Townson, LL.D.	

Australian Museum.

EDWARD P. RAMSAY,
Curator.

1875.

NEW SOUTH WALES.

AUSTRALIAN MUSEUM.

(REPORT FROM TRUSTEES FOR 1874.)

Presented to Parliament pursuant to Act 17 Vict. No. 2, sec. 9.

REPORT OF THE TRUSTEES OF THE AUSTRALIAN MUSEUM, FOR THE YEAR ENDING
31st DECEMBER, 1874.

TO HIS EXCELLENCY THE GOVERNOR-IN-CHIEF,—

The Trustees of the Australian Museum have the honor to submit to Your Excellency this their twenty-first Annual Report.

The Trustees have to express their deep regret that circumstances have occurred during the past year which disclosed an utter want of care and attention in the discharge of his duties on the part of Mr. Krefft, their Curator and Secretary, and which resulted, after repeated acts of disobedience to the lawful orders of the Trustees, in the removal of that officer from his position, and in the closing of the Institution to the public for a short period. It will be necessary, in order to explain and vindicate the course which the Trustees felt themselves compelled to adopt, and for the information of your Excellency, to furnish the history of these transactions in their proper order.

At the beginning of the year some of the Trustees became aware that specimens of gold to the value of £70 had been stolen from the cabinets of the Museum in which they had been deposited for exhibition. A special meeting was called, on requisition signed by three of the Trustees, and was held on the 6th of January, for the purpose of investigating the matter, and the Curator then reported the theft to the Board. While the Board was engaged in the prosecution of this inquiry, a communication was received from the Hon. the Colonial Secretary, conveying his doubts of the propriety of the proposed investigation as a possible frustration of the efforts of the police to bring the offenders to justice. On this intimation being made to the Board, it was decided to leave the matter in the hands of the police; and up to the present time no one has been prosecuted for the offence, nor has the gold been discovered, or its loss in any way accounted for.

At the usual monthly meeting, held on the 5th of March, the Trustees were informed by one of their number that indecent photographs had been seen in the workshop of the Museum. The photographs, some of which were of the most indecent character, were produced, and an immediate inquiry into the matter was instituted. One of the taxidermists (Henry Barnes) stated that he had, by Mr. Krefft's orders, taken from fifty to sixty copies of these indecent pictures. The Curator denied the statement, and asserted that he was the victim of a conspiracy on the part of the servants of the Institution.

On the 4th of June the attention of the Board was called to the circumstance that numerous statements reflecting upon the character and conduct of Mr. Krefft were contained in the evidence given before the Select Committee of the Legislative Assembly, which had been appointed on the 24th day of February, 1874, for the purpose of inquiring into and reporting upon the condition and system of management of the Museum.

It appeared by this report that certain charges had been preferred against some of the Trustees by the Curator. Among other accusations it was alleged that some of the Trustees had used their position for the benefit of themselves, and to the injury of the Institution. After a long and patient Parliamentary investigation, during which a number of the Trustees and all the officers and servants of the Museum were examined, and the Select Committee inspected the Institution, it was found that there was no truth in these or in any other of the charges which had been made against the Trustees by the Curator. The evidence adduced before the Select Committee tended to show that work had been done in the Institution for two of the Trustees (Mr. Parkes and Sir Alfred Stephen), but no evidence was called to establish the fact that either of these gentlemen was aware of the circumstance. And the Select Committee expressly reported that the Curator himself had ordered the work to be done, and that the preponderating evidence given before the Committee showed that he was a most unfit man for a position of trust.

It thus became the imperative duty of the Trustees to institute an immediate rigid inquiry into the conduct of the Curator and the general management of the Institution; and it was resolved at the meeting on the 4th of June, before alluded to, that a special meeting should be held on the 11th June. The Curator was instructed to call such meeting, and in the meanwhile to obtain twenty-four copies of the report and evidence of the Select Committee, and to furnish a copy to each of the Trustees.

Six members of the Board attended the special meeting of the 11th of June, but the Curator having absented himself and locked up the Board-room, the meeting was held in a small room usually appropriated to one of the taxidermists. As none of the members present had received from the Curator a written notice convening the meeting, there was reason to suppose that none had been issued. It was therefore resolved—(1) not to proceed with the business for which the meeting was appointed; (2) that the disobedience of orders and contempt exhibited by the Curator demanded some immediate action on the part of the Trustees; (3) that a special general meeting should be called for the 16th June, for the purpose of taking into consideration the conduct of the Curator on this occasion; and also to carry out the object for which the present meeting had been specially called.

Twelve Trustees attended the special meeting, held on the 16th June, when it was unanimously resolved—“That Messrs. Rolleston, Alleyne, Hill, and Liversidge should be appointed a sub-committee to inquire into the following charges against the Curator, namely :—

- “ 1. Drunkenness.
- “ 2. Proposing to the Barneses to bring a false charge against a man named Tost.
- “ 3. Permitting indecent photographs to be taken in the Museum.
- “ 4. Selling photographs through the servants of the Institution.
- “ 5. Getting furniture made for himself in the Museum out of Museum material.
- “ 6. Ordering the servants of the Museum to make cases and set up specimens with Museum material for private individuals.
- “ 7. Taking receipts from Robert Barnes for work done under the name of William Bradley, with the view of deceiving the Board of Trustees.
- “ 8. Maliciously breaking up a fossil jaw lent to the Museum by Dr. Bennett.
- “ 9. Sending away, as donations in his own name, valuable specimens, the property of the Museum.
- “ 10. Making a false return of the numbers of visitors.
- “ 11. Making a false statement in writing to the Colonial Secretary respecting an attendance of a deputation of the Trustees.
- “ 12. Disobeying the orders of the Trustees given at the last ordinary monthly meeting.”

The next monthly meeting was held on the 2nd of July. The Curator asked for an adjournment for a week. On the Trustees requiring the minute-book they were informed by a message from Mr. Kreffit that it was in Mrs. Kreffit's room, and could not be sent. The chairman of the sub-committee (Mr. Christopher Rolleston) reported that the committee had held three meetings—that the Curator had been supplied with copies of the charges, and repeatedly invited to attend, the second meeting having been adjourned specially to enable him to be present. He, however, refused to attend. At the third meeting the committee, in the prosecution of their inquiry, desired to pass through the Museum. The Curator was applied to for the keys, but he refused to give them up, alleging as the reason for his refusal that it was after 4 o'clock, and the only way to that portion of the premises was down the cellar. Under the circumstances the committee desired to take the opinion of the Board as to the expediency of continuing the inquiry. After much deliberation it was resolved that an application should be made to the Minister of Justice and Public Instruction, under whose department the Museum had been placed in accordance with the altered departmental arrangements of the Government at the commencement of the year, for the services of a sergeant and two members of the Police Force to take charge of the Institution, the Museum not being considered safe under the circumstances.

The Curator refused to attend the adjourned meeting held on the following day, and again declined to send the minute-book, which, as the Trustees subsequently learned from a letter written by the Acting Principal Under Secretary to the Curator on the 3rd of July, had been sent by the Curator to the Honorable the Colonial Secretary without any authorization whatever or consultation with the Trustees.

On the 4th of July the Trustees handed the temporary charge of the Museum over to the Secretary of the Police Department. Before doing so, however, they carefully examined the internal condition of the several parts of the building appropriated for the uses of the Museum, in order to render secure the fastenings of the various windows and doors, which they found very defective and insufficient. They considered that this insecure and unsatisfactory condition of the premises must have existed for a considerable period, and it was evident that, with such careless supervision, any person feloniously disposed could enter the building by the north and west windows into the store room, and pass freely up the stairs, thus gaining an easy access to the cases in which the specimens of gold were deposited, as well as to other valuable exhibits. The key of the Board-room door, leading to the passage behind the show-cases in the old building, and to the stairs communicating with the cellar below, was found to have been removed, although it was seen by the Trustees in the lock the day before.

Fourteen members of the Board were present at the adjourned meeting held on the 7th of July, when it was resolved that, considering the unsatisfactory manner in which the duties of Secretary had been performed, Mr. Kreffit should be suspended from that office; and Mr. Charles Robinson was appointed temporarily to perform the duties of Secretary. At this meeting it was determined that the inquiry already instituted should be proceeded with and completed, and that Mr. Kreffit should be again desired to attend.

In accordance with this determination, the Curator was informed that the inquiry by the sub-committee would be proceeded with on the 13th, and he was invited to attend on that day. He replied that he had forwarded to the Honorable the Attorney General a full statement of his case, and the reasons why he declined to be tried by a tribunal of judges who had ill-will against him. The Honorable the Attorney General informed the Board, of which he was an *ex-officio* member, that he had received a communication from the Curator, which he had returned to him unread. The Curator, on being again requested to attend the Board meeting, sent a reply that he was ill in bed of a bad cold. On being requested by letter from the chairman (Mr. W. A. Duncan) to send the petty cash book, letter book, exchange book, the twenty-four copies of the Select Committee Report, which he had applied for and received, and a number of keys, or to state where they could be found, the Curator sent the petty cash book only. On being further applied to, the Curator sent a message, that he did not know whether the articles were in the Board-room or not—that they might be down in the rooms he was barred out of—and that when he was about he might be able to get them. It was thereupon unanimously resolved, that in the event of the Curator neglecting to hand over the missing books, papers, and keys, before 3 p.m. of the 17th July, the matter should be referred to the next Board meeting, with a view to his dismissal. In reply to a letter from the Acting Secretary,

Secretary, the Curator forwarded a number of keys, books, and papers on the 17th, but the articles specified were not included; and the Board thereupon suspended Mr. Krefft from his office as Curator.

The Honorable the Minister of Justice and Public Instruction was informed on the 18th July that the Trustees were prepared to re-open the Museum to the public, if the protection of the police were continued. On the 31st of July the attention of the Honorable the Minister of Justice was again called to the subject, and he was invited to reply to their letter of the 18th, which still remained unacknowledged. To this communication no reply was received.

The sub-committee appointed to inquire into the charges against the Curator brought up their report, together with the evidence and minutes of proceedings, on the 6th of August, and it was adopted on the 13th of the same month. This report and evidence are appended. (*Vide Appendix 4.*)

Having carefully read and anxiously considered the report and evidence received from the sub-committee, the Trustees felt that there was no alternative left to them but to dismiss Mr. Krefft from his office as Curator and Secretary, and that determination was arrived at on the 20th of August by a majority of ten votes to two,—after Mr. Krefft had been called upon to show cause why he should not be dismissed. On the following day Mr. Krefft was informed of his dismissal, and required to give up possession of his apartments to the Trustees on or before the 31st of that month. Mr. Krefft, not having on that day vacated the rooms occupied by him, the Board, on the 1st of September, again requested him to give up possession, when he replied, that he refused to give up possession until the Government confirmed his dismissal.

Mr. Krefft, being still in possession on the 8th of September, the Trustees resolved to apply to the Honorable the Minister of Justice and Public Instruction to authorize the police to give effect to the decision of the Board by removing Mr. Krefft from the Museum buildings, and they appointed a deputation to explain to him the necessity for prompt action, in order that the Museum might be reopened to the public with the least possible delay. The interference of the Government was thus sought only because the Museum property, although vested in Trustees, was public property, and because the Trustees did not feel it to be their duty to incur any personal liability in a matter in which they were only acting as the guardians of valuable public property. On the 14th of September the Trustees were informed by the Under Secretary to the Department of Justice and Public Instruction that the services of the police could not be authorized for the purpose desired by the Trustees, and it was intimated that as the Trustees had throughout the inquiry acted independently of the Government, and had of their own authority resolved to dismiss the Curator, the Government did not feel called upon to assume the responsibility of giving effect to a decision to which they had been no party.

The Trustees feel constrained to express their surprise and regret that the Government had not thought fit to assist them in the performance of the duty of protecting the valuable public property entrusted to their charge, and to inform the Hon. the Minister of Justice that they had acted throughout this business independently of the Government, because they had been advised that they were entitled and bound to do so in accordance with the Act of Incorporation.

The Trustees having ascertained that Mr. Krefft was storing in the Museum cellar large quantities of fuel, and of provisions and other supplies, with the avowed object of setting the Trustees at defiance, determined that it was their imperative duty in the interests of the public to effect the immediate removal of Mr. Krefft from the Museum buildings, and they thereupon authorized, by writing under their common seal, one Charles H. Pearl to remove Mr. Krefft, his family, and effects from the Museum premises. Mr. Krefft's ejection from the premises was effected without violence on the 21st of September, and Mr. E. P. Ramsay was appointed Curator on the 22nd. On the appointment of the new Curator, the Trustees were enabled to dispense with the assistance of the police, and to re-open the Museum to the public on the 24th of September.

The Honorable the Minister of Justice was apprised of the appointment, by the Trustees, of Mr. Ramsay, on the 23rd of September, and on the 24th the Under Secretary to the Department of Justice intimated that no salary could be paid to the Curator whose appointment had not been sanctioned by the Government. The amount appropriated by Parliament for the salary of the Curator, which had up to that time been paid to the Trustees, has been withheld by the Department of the Treasury, although application for the payment of the sums due have been made in the ordinary course.

From the tenor of the communication addressed to the Trustees from the Department of Justice on the 24th of September, the Board concluded that the Honorable the Minister of Justice was not aware that the question as to the power of the Trustees in regard to the appointment of the Curator had been previously mooted, and that the Government, acting under the advice of the Crown Law Officers, had determined that the power of appointment was vested in the Trustees, and they accordingly caused a copy of the following letter to be transmitted to him:—

Colonial Secretary's Office,
Sydney, 28 April, 1864.

Sir,

Referring to your letter of the 20th instant, and previous communications relative to the appointment of a Curator to the Australian Museum, I am directed by the Colonial Secretary to inform you that the Crown Law Officers, who have been consulted on the point, have advised that the office of Curator should be left in the hands of the Trustees of the Australian Museum.

I have, &c.,
W. ELYARD.

The Acting Curator, Australian Museum.

On the 22nd of September the late Curator and a member of his household caused legal proceedings to be instituted in the Supreme Court against one of the Trustees, who was present at the Museum on behalf of and under instructions from the Board of Trustees, when Mr. Krefft and his family were ejected from the premises. The Board requested the Minister of Justice to direct the Crown Solicitor to defend these actions on the part of the Trustees, seeing that any verdict which might be recovered by the plaintiffs would have to be satisfied out of the endowment, or in default levy might be made by the Sheriff upon the public property committed to the care of the Trustees. In reply to this application the Trustees were informed that the actions appeared to be against Mr. Hill and not against the Trustees in their corporate capacity, and that neither the endowment nor the public property committed to the care of the Trustees could be rendered available for any verdict which might be recovered in these actions. From this communication the Board inferred that the Minister declined to direct the Crown Solicitor to defend the actions, and they drew his attention to the fact that Mr. Hill acted on the occasion in question on behalf of and under instructions from the Board of Trustees in its corporate capacity. The

The action brought by the late Curator against Mr. Edward S. Hill was tried before His Honor Mr. Justice Cheeke and a jury of four, and resulted in a verdict of £250 against the defendant, who has since obtained from the full Court a *Rule Nisi* for a new trial, but the ultimate result of that action cannot be known for a period of several months. The other action, brought by Miss Macintosh, was abandoned by her on condition that she should not be called on to pay any costs, and the solicitor consented to this arrangement as it saved expense to the Museum, and because it was manifest that the plaintiff had not the means of paying any costs.

It was not until some weeks after the suspension of Mr. Krefft that the Trustees obtained possession of the bulk of the records now in their custody. All the books and papers of the Institution had been removed from the Board-room, their proper place of custody, to the private apartments of Mr. Krefft. Much important correspondence which had been entrusted to his care cannot now be discovered. The records returned were badly arranged, exceedingly defective, and on the whole of small importance.

The additions to the Museum by way of exchange with foreign scientific institutions have been of little value. While on this subject the Trustees may be permitted to express their unfeigned regret that any such communication as that addressed by the late Curator to Professor Agassiz, bearing date August 8, 1871, should have ever emanated from the officer of a body devoted to the cause of science. The distinguished attainments and lofty position in the world of science of the illustrious Professor, now no more, entitled him to the most respectful consideration on the part of all scientific societies. And the Trustees deeply lament that the character of the Australian Museum should be lowered in the estimation of the world by such a letter addressed to such a man.

The Trustees cannot pass from the history of the transactions connected with the occupation of his office during the past year, by the late Curator, without an expression of their profound conviction that they have not received from the Executive Government such assistance in the maintenance of the character and efficiency of this important Institution as they had a right to expect. In dealing with the conduct of this officer it was clearly and distinctly shown to the satisfaction of a committee of the Trustees, presided over by a high officer of the Government—and the circumstances were communicated to the Government—that the late Curator had been guilty of drunkenness during office hours, and of consequent incapacity—that he had permitted indecent photographs to be taken in the Museum—had attempted to prefer false charges of theft—that he had deceived the Trustees by the insertion of fictitious names in receipts for work alleged to have been done—that he had sent away as donations in his own name the property of the Institution—that he had grossly falsified the entries in the Visitors' Book—that he had deliberately made a false statement to the Colonial Secretary respecting the attendance of a deputation of the Trustees—and that he had persistently disobeyed the instructions of the Trustees, and endeavoured to frustrate their exertions for the preservation of the public property so grievously imperilled by his occupation of office. But from first to last the Trustees have been compelled to act upon their own responsibility, and, as far as the action of the Executive Government is concerned, have been left entirely unprotected.

Advantage was taken of the closing of the Museum in July last to employ the undivided labour of all officers and servants of the Institution in the preservation of the collection. As the keys of many of the cabinets and compartments were persistently withheld by the late Curator, the Trustees were compelled to cause the locks to be broken open in order to save valuable collections from destruction.

The Museum has been open daily to the public (Sundays excepted) from the beginning of the year to the 14th of July, and from the 24th of September until the 31st of December. The number of persons who have visited the Museum during the last stated period is 17,187. Owing to the systematic falsification of the Visitors' Book, by the late Curator, there is no means of ascertaining correctly the number of visitors during the first half of the year.

The Trustees regret that they have been unable to enrich the collection by the purchase of additional specimens, and that they have been unable to carry out desirable improvements for want of sufficient funds. They have enforced the utmost retrenchment in the management of the Institution, which is consistent with the maintenance of the collections in a proper state of preservation; but during the last six months they have been compelled to pay numerous debts incurred by the late Curator without reference to the Trustees. This unauthorized expenditure has been most wasteful and excessive, and some of it was incurred by the late Curator solely for his own personal advantage. Accounts have been presented to the Trustees for debts contracted by the late Curator subsequent to his suspension. The action of the Government in withholding the salary appropriated by Parliament for the payment of the Curator has still further limited the efficiency of the Institution, and the legal proceedings in which the Trustees have been involved have caused considerable embarrassment.

The Assistant Curator (Mr. Masters) resigned his situation early in the year, and his office still remains vacant. The remaining staff of the Institution have been employed in the conservation of the collection, and in mounting the few specimens acquired during the year by donation or otherwise.

The vacancies in the Board of Trustees, existing at the close of 1873 and arising during the present year, have been filled up by the election of Archibald Liversidge, Esquire (Professor of Geology in the University of Sydney), Alfred Roberts, Esquire, James Norton, Esquire, H. C. Russell, Esquire, B.A. (Government Astronomer), and Patrick Mackay, Esquire. The Trustees accepted the resignation of the Rev. W. B. Clarke with extreme regret. His long connection with the Institution, in the success of which he had uniformly taken a lively interest—his valuable services not merely in its direction and government but to science generally—and his high European reputation, all combined to make the severance of his official connection with the Museum an event deeply to be deplored.

The Appendices contain,—

- I. An abstract of the receipts and payments of the Trustees on behalf of the Museum for the year ending on the 31st of December, 1874.
- II. A list of books purchased for the Museum Library out of the Endowment Fund during the same period.
- III. A list of donations to the Australian Museum from 1st of October to 31st of December, 1874.
- IV. Copies of the Report and Evidence from the Sub-Committee appointed to inquire into certain charges against the Curator.

The Trustees have the honor to submit this their Report for the year 1874, and in testimony thereof have caused their corporate seal to be hereunto affixed this fourth day of February, 1875.

A. W. SCOTT, M.A.,
Chairman.

APPENDIX

APPENDIX No. 1.

CURRENT EXPENDITURE of the Trustees of the Australian Museum, for the year ending
December 31, 1874.

1873.		£ s. d.	1874.		£ s. d.
Dec. 31...	To balance	69 14 2	Dec. 31...	By salaries.....	1,186 11 5
" 31...	" cash, Colonial Treasurer...	41 13 3	"	" petty cash and postage	78 15 3
1874.			"	" keeping grounds in order	18 12 0
Jan. 8...	To cash, Colonial Treasurer...	250 0 0	"	" cleaning Museum	17 17 0
Feb. 2...	" " "	41 13 4	"	" stationery	19 7 8
March 2...	" " "	41 13 4	"	" books and periodicals.....	29 12 3
April 1...	" " "	250 0 0	"	" taxidermist's department	32 1 7
" 1...	" " "	41 13 4	"	" cabinet work and materials	21 8 7
May 1...	" " "	41 13 4	"	" ironwork and material	16 2 9
June 1...	" " "	41 13 3	"	" tinsmith's and plumber's work.....	7 0 3
July 1...	" " "	41 13 4	"	" glass and glazing.....	5 11 3
" 1...	" " "	250 0 0	"	" printing and advertising	5 4 2
Augt. 1...	" " "	41 13 4	"	" fuel	11 18 6
Oct. 1...	" " "	250 0 0	"	" freight	7 9 3
" 13...	" " "	200 0 0	"	" sundries	6 0 10
			"	" balance.....	139 7 11
		£ 1,603 0 8			£ 1,603 0 8
1875.					
Jan. 1...	To balance	£ 139 7 11			

CHAS. ROBINSON,
Acting Secretary.

APPENDIX No. 2.

LIST OF BOOKS PURCHASED OUT OF THE ENDOWMENT FUND FOR THE
MUSEUM LIBRARY.

Athensum.
Birds of Great Britain: Gould, 3 parts.
Annals of Natural History.
Nature.
Ibis.
Iconica.
Transactions of the Entomological Society.
Journal of the Linnean Society.
Journal of the Geological Society.
Zoological Record. Vols. 7, 8, 9.

Haeckel, Syphonophoren.
——— Generelle Morphologie. 2 vols.
——— Radiolarien. 2 vols.
Koch Arachniden Australiens.
Virchow and Holtzendorff's Lectures.
Haessel, Die Russelgusken and Atlas.
Haeckel, Die Kalkschwamme. 3 vols.
Gray, Hand-list of Seals.
Haeckel, Anthropogenie.

CHAS. ROBINSON,
Acting Secretary.

APPENDIX No. 3.

LIST OF DONATIONS TO THE AUSTRALIAN MUSEUM FROM 1st OCTOBER TO THE
31st DECEMBER, 1874.

MAMMALS.

PRESENTED BY

A Monkey (*Semnopithecus sp.*)..... }
A Monkey (*Cercopithecus sp.*)..... } The Director of the Botanic Gardens,
Two Native-dog Pups (*Canis dingo*)..... } Sydney.
A Native Bear (*Phascogaleos cinereus*) Dr. J. C. Cox, Sydney.
Two young Leopards (*Leopardus pardus*) Capt. Payne, from Calcutta.

BIRDS.

An Emu, young (*Dromaius nova-hollandia*) Dr. J. C. Cox, Sydney.
A new species of Parrot (*Cyclopsitta macleayana*) 2 spms. }
A new species of Honey-eater (*Glyciphila subfasciata*) }
Two specimens of a small Wood Swallow (*Artamus minor*)..... } Mr. R. Broadbent, from Cardwell,
Two specimens of dusky Honey-eater (*Myzomela obscura*) } Queensland.
A Yellow-bellied Fly Catcher (*Micræca flavigaster*) }
A Dragon Bird (*Pitta strepitans*) northern variety..... }
A Yellow Honey-eater (*Ptilotis flava*) }
A Rock Warbler (*Origma rubricata*) } Mr. Thorpe, Sydney.
A Goose (*Anser sp. (young)*) } The Director of the Botanic Gardens,
A Penguin (*Spheniscus minor*) } Sydney.
A Crested Penguin (*Eudyptes chrysoloma*) } W. H. Hargraves, Esq., Sydney.
A species of Honey-eater (*Xantholis sp.*) } Mr. Thorpe, Sydney.
Two Cape Pigeons (*Daption capensis*) } W. H. Hargraves, Esq., Sydney.

BIRDS EGGS.

Four specimens of the eggs of the Red-eyebrowed Finch (*Estrela temporalis*) }
Three specimens of the Blue Wren (*Maturus cyaneus*) }
Four specimens of the Fairy Martin (*Lagenoplastes ariel*) } Master Gribbin, Woolloomooloo.
Two specimens of the Soldier Bird (*Myzantha garrula*) }

FISHES.

FISHES.

A Port Jackson Shark (<i>Cestracion phillipii</i>)	James, Norton, Esq., Sydney.
The Rostrum or snout of a large Sword Fish (<i>Pristis sp.</i>)	G. McCoull, Esq., Goulburn.
A rare or new Fish (Fam. <i>Bleenniidae</i>)	Inspector Seymour, Sydney.
A Pipe Fish (<i>Syngnathus sp.</i>) from Fiji	Dr. Corrie, H.M.S. "Pearl."

REPTILES.

A Tree Snake (<i>Dendrophis punctulata</i>)	E. S. Hill, Esq., Sydney.
A Lace Lizard (<i>Hydrosaurus varius</i>)	Mr R. Mawdsley, Sydney.
A Diamond Snake (<i>Morelia spilotes</i>)	Mr. J. Clark, Sydney.
A variegated Black Snake (<i>Hoplocephalus variegatus</i>)	Mr. Williams, Canterbury.

MOLLUSCA.

Two specimens of a new species of Land Shell (<i>Gupa sp.</i> allied to <i>Pupa grandis</i>) ...	W. H. Hargraves, Esq., Sydney.
A Shell (<i>Pelecaria scutellata</i>)	Dr. Corrie, H.M.S. "Pearl."
Two specimens of new Land Shell (<i>Helix planibasis</i>)	Dr. J. C. Cox, Sydney.
An Octopus (<i>Sepia sp.</i>)	} Dr. Corrie, H.M.S. "Pearl."
Three specimens of a Squid (<i>Loligo sp.</i>)	
A collection of fifty-four species of Land Shells	} From Jamaica. } Wm. Roy, Esq., Jamaica.
A collection of 6 species of Freshwater Shells	
A collection of twenty-eight species of Sea Shells	
A collection of four species of Sea Shells .....		From Panama. }

CRUSTACEANS, &c.

A Crustacean (<i>Squilla sp.</i>)	Mr. J. Tilley, Sydney.
A large Crab	Mr. Emerson, Sydney.
A King Crab (<i>Limulus sp.</i>)	Mr. Rudd, of steamer "Kembia."
A Crustacean (<i>Squilla sp.</i>)	Inspector Seymour, Sydney.
A Hermit Crab (<i>Pagurus sp.</i>)	Dr. Corrie, H.M.S. "Pearl."
A Swimming Crab (<i>Thalamites</i>)	Inspector Seymour, Sydney.
A large piece of Red Coral (<i>Tubipora musica</i>)	Dr. Black, S.S. "Somerset."

FOSSIL REMAINS.

Portion of the under jaw of species of <i>Diprotodon</i>	Thos. Buckland, Esq., Milchester.
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MINERALS, &c.

Specimens of Slate from Goulburn	W. Douglass, Esq., Goulburn.
Specimen of Iron Pyrites and Lead from the Upper Hunter	G. S. Stokes, Esq., Hunter River.
Clay stained with Plumbago from Mount Gotthardt	J. P. Christie, Esq., Queensland.

EDWARD P. RAMSAY,
Curator.

APPENDIX No. 4.

REPORT of the Sub-Committee appointed by the Trustees of the Australian Museum on the 16th of June, 1874, to inquire into certain charges against the Curator.

THE Committee held a meeting, to make arrangements for the conduct of the inquiry, and Mr. Rolleston, on the 24th of June, invited the attendance of the Curator at the meeting convened for the 29th. The Curator replied to that communication on the 25th, stating—"I have no wish to obstruct in any way what the Trustees consider to be their duty; but as I do not know yet who my accusers are, and as I have not even received a specification of each charge, I cannot reply to them. Mr. Scott has sent me a memorandum, stating that I am accused of drunkenness, of bribery, &c., but in such general terms that it is really impossible to refute these accusations. I now most respectfully request that you will be good enough to forward me a specification of the charges, as I had reason to expect from the Board, namely: Name of accuser, place where the offence was committed, date and hour when it was committed. I shall then be able to reply to them." On the 26th Mr. Rolleston forwarded to the Curator a copy of the statement of charges referred to the committee. On the 29th the Curator returned this statement, reiterating his objection, that he had "not been supplied with a specified list of these charges," intimating that he should not be in attendance, and requesting that all communications on the subject might be made to him in writing.

At the meeting of the committee, held on the 29th of June, Mr. Rolleston was elected chairman, and a secretary was appointed. It appearing from the statement of the messenger that, in the absence of the Curator, and during his (O'Grady's) attendance upon the committee, the Museum was left to the care of a boy, the investigation was not further proceeded with on that date.

In attention to instructions from the committee, the secretary communicated to the Curator an expression of their regret at his absence, and invited his attendance on the 30th, intimating that they had adjourned the meeting in order to give him time to reconsider the course he proposed to take, and at the same time informing him that the committee would proceed with the inquiry at the hour named whether he were present or not. The secretary remained a short time in the Board-room to write summonses for the witnesses and to perform other clerical business. When the committee re-assembled on the 30th the Curator was not in attendance, but they found a letter from him, addressed to the Trustees "who may require the Board-room key," in which he stated that he had left the key with the porter, "but I shall be obliged to you if you will be good enough to return the Board-room key, and not allow strangers to remain in the room afterwards, as was done yesterday." The evidence of two witnesses was taken. It appearing from their evidence that one of the doors of the Museum had been frequently left open at night—sometimes all night—the committee asked the witnesses to accompany them through the building, and point out the door in question. The messenger was directed to ask for the key, and after a short absence he returned with a message from the Curator to the effect that the Museum was locked, and that Mr. Krefft refused to give up the keys. The committee, however, were shown a way to the back of the premises by the stairs conducting to the basement under the Museum, and they inspected the doors in question. Under the circumstances, and having regard to the refusal of the Curator to attend, the committee resolved to remit the inquiry to the Trustees.

The Trustees having determined that it was expedient to complete the inquiry, the committee resumed the investigation on the 13th of July, having previously again desired the attendance of the Curator. To that invitation the Curator replied, "I have forwarded the Honorable the Attorney General a full statement of my case, and the reasons why I decline to be tried by a tribunal of judges who have ill-will against me—who have shown this ill-will on previous occasions—who insisted that I should supply the men I then accused with a list of my charges, duly specified and signed by me—and who now decline to accord the same privilege to myself; I can only meet men of the same stamp whom your sub-committee have arraigned against me on oath, and in a properly constituted law court."

The committee have not been supplied by the Curator with copies of the report of the Select Committee and the Minutes of Evidence appended thereto.

The committee have examined the following witnesses:—Michael O'Grady, Philipp Brack, Mrs. Brack, Helen Gillespie, Henry Barnes, Robert Barnes, J. A. Thorpe, Denis Mulqueeny, George Masters, James Macnamara, James C. Cox, Esquire, M.D., A. W. Scott, Esquire, M.D., James Chapman, and George Bennett, Esquire, M.D.

CHARGES.

CHARGES.

I.—*Drunkenness.*

THE testimony of the servants of the Museum in regard to this charge points to the conclusion that the Curator was habitually intemperate during the last few years, ending about Christmas time, but Dr. Bennett, who has had a long and intimate connection with the affairs of the Museum, avers that he knows of no single instance in which the Curator has been intoxicated. The witness Philipp Brack is employed at the Botanic Gardens. He and his wife lived on the Museum premises for about six weeks, ending 10th November last year, and their evidence relate wholly to that period. So far as the committee have any knowledge of these persons, or could judge from their demeanour, they appear respectable and trustworthy, but it will be seen from the evidence that they represent the conduct of the Curator towards them as being extremely arbitrary. Macnamara is an old man who attends to the front garden of the Museum a few days in the month, and who, in addition to his wages, has enjoyed the privilege of free quarters on the premises.

Clara Brack states: Mr. Krefft was very often drunk, and in a very bad state too; he was very seldom sober during the time I was here, especially after the men had left in the evening; about 9 o'clock he began to roam about with the candle, and went through the Museum very often; I have seen Mr. Krefft so drunk that he stood against a little shed here, and could not move away from it; one Sunday morning my little boys were plucking some thistles for his little boy's rabbits, and he was so drunk that he rushed out at them; he tumbled after them as well as he could, shouting and raving all the time like a madman; I cannot fix the date; I have seen him drunk often enough, but I cannot say whether it was in the presence of anybody else; I have seen him very much drunk in the presence of Mrs. Krefft in his dining-room; what I saw I saw accidentally; I never looked after him; when I saw him sick here one morning I knew that he was very bad at the time; he was tremendously drunk that morning; he was vomiting over the fence; he could not stand straight; once I found the candle behind where the pigs were; he generally went there to have a sit down, after he was so that he could not travel about much.

Philipp Brack states: I have frequently seen Mr. Krefft drunk—always in the evening; I have seen him a good many times, when I came home, standing behind in the premises there where it is not fit to be mentioned before gentlemen, spuing up, and I have seen him raving about the place; at first going off I did not take any notice, but when he began to tramp on me I could see that it was nothing but the intoxication speaking out of him; as soon as I got dressed on a Sunday morning he got me to go down William-street to fetch him beer; I always brought him a quart of English ale; I have not brought him more than one quart on the same Sunday morning; I could not say whether he wanted it for his dinner or not; I never saw him the worse for liquor in the morning.

Helen Gillespie states: I have been a servant of the Institution five years ending last May; I have seen Mr. Krefft in a state of intoxication mostly every day; I carried away the empty bottles from the Board-room; I cleared the place every morning; there had been ale, brandy, and gin in the bottles; sometimes it was got in in cases; I went for small quantities sometimes—sometimes the men went for some; sometimes he could walk about; sometimes he would go up and lie down in his bedroom; I have often seen him drunk; I cannot call to mind any particular time; I cannot remember any particular time; I cannot remember the day of the month.

Henry Barnes states: I cannot say that I have seen him (meaning the Curator) under the influence of drink early in the morning, but I have in the afternoon, and occasionally at night; on several occasions I have seen him unfit for his duty; he was intoxicated when we fetched the whale from Botany; he caught a death adder on the road; he fell down on two or three occasions, and had to be lifted up; I have seen many a man taken up (meaning by the police) who was not so bad as Mr. Krefft was; I have seen Mr. Krefft drunk about the Museum premises during working hours; I should say it (meaning the Curator's intemperance) has been going on for five or six years, as near as I can remember; it seemed to be growing upon him a little before the disturbance in connection with the Institution; it was a subject of conversation amongst us (meaning the employes); we have often said one to the other, "Mr. Krefft is drunk again"; I cannot name any particular day, as I never kept the date; I can name one particular night—the night I came to take his little boy to see a magic lantern exhibition; that must be seven or eight months ago.

Robert Barnes states: I have often seen him under the influence of drink; I have seen it at all hours of the day—frequently; more so of late than it was a few years ago; but I have known it ever since I have been here, that is for six or seven years; I went to get ale for him very nearly every day; I used to have to go to Hughes', to Tighes', to Roberts'; in fact I have been sent nearly all over Sydney to see where I could get the best and cheapest ale; I have been sent in Museum time as well as my own time; on the 23rd of December he was very drunk; he staggered back off the road a little and fell down into a hollow; there he lay and could not get up; I had to assist him up; ten or eleven months ago a party went out to Botany; when Mr. Krefft came home he was dreadfully drunk—after 5 o'clock; he was not ordinarily sober on the premises; I have seen him throwing up in the cellar.

J. A. Thorpe states: I cannot say that he was always sober; but I cannot say that I have seen him what I call drunk; I have very frequently seen him under the influence of drink; perhaps he came under my notice less than any man in the establishment; the room which I work in is rather isolated; sometimes I have known him to be for a week or ten days without coming into my own room at all.

Michael O'Grady states: I have frequently seen him the worse for liquor; it might be three or four days in the week; I have seen him so from 11 o'clock in the morning; sometimes he was not able to look after his business; I have seen him so often this eight or nine years that I could not mention any particular number of times; I found the candle close to the window-curtains still alight, and he was lying on the floor amidst a whole lot of spue; that was eight or nine years ago; I have seen him in the spirit-room so drunk that he could not get out of it; this was some twelve months ago; since Christmas time he has kept himself more correct than he was before.

Denis Mulqueeny states: Mr. Masters saw a death adder on the road and sang out; Mr. Krefft immediately made me pull up; he then got off the van and picked up the death adder and put it in a bag; when Mr. Krefft was in the cart the horse moved and he fell; he was not on his seat properly at the time; Mr. Krefft had had a drop to drink, but I could not notice that he was not steady; he was jolly; I always saw him jolly and pleasant when he succeeded in getting anything like this; when a man steps down off a cart and catches a death adder he is not drunk; he had had some drink; one of them said to me, "You know he was drunk;" I said I could not swear he was drunk.

George Masters states: He was not as you may say unfit to do his duty; but during the last two or three years it was a very rare thing to see him sober; the habit has grown upon him for the last two or three years; Krefft got beastly drunk; he was not able to get in and out of the vehicle; he fell down on the broad of his back before he got in; when he got out after a death adder he went down on all fours, and the first grab he made at it his hand went five or six inches to the back of it; he was obliged to be helped into the cart again, and would have fallen down again if it had not been for one of the Barneses; he fell back once on to the stinking whale; very frequently he was only just able to walk about the place; you might see his men running out with square bottles for his beer any time during the day.

James Macnamara states: I have slept on the premises for the last six years; I have never been absent a single night, and I never saw the Curator intoxicated; it is 9 o'clock before I come home to the Museum; my time was very short at the Museum.

James C. Cox, Esq., M.D., states: I came in here at 11 o'clock one day; he was sitting on a chair at the table and was quite stupid with drink; he had scarcely any clothes on—a white shirt, a pair of trousers, and socks; I spoke to him a good deal about it, but he was so stupid that I could make nothing of him; I came here about three months afterwards at about 4 o'clock in the evening; I found him trying to get up the stairs; he was perfectly under the influence of drink; it is over two years ago.

A. W. Scott, Esq., M.A., states: I was acquainted with his habits previous to the last six or seven years, but I never knew him to be tipsy; I have had it hinted to me, and I have suspected it myself, not from seeing him, but from that peculiar breath which a person has who takes very strong drinks; but certainly I have never seen him in the state you mention.

George Bennett, Esquire, M.D., states: Not in one single instance have I seen the Curator unfit to discharge his duties from drinking; I have seen him at all hours of the day, and even occasionally at night, and under circumstances of great excitement, but I never saw him in one single instance intoxicated.

II.—*Proposing to the Barneses to bring a false charge of theft against a man named Tost.*

Much evidence was given in regard to the circumstances under which Tost left the Museum, which may be valuable as throwing light upon the management of the Institution, and the relation of the employes to the Curator. The only evidence, however, which bears directly upon the charge specifically referred to the committee is that of the Barneses.

Henry

Henry Barnes states: Mr. Kreffit suggested that we should go down and search Tost's house for property belonging to the Museum; I understood that Tost had some property belonging to the Museum in his house; Mr. Kreffit wished me to go with him to search Tost's house, and he told me to take something belonging to the Museum with me, and in case of our not finding any stolen property I was to drop it in the house, so that it might be found and Tost be apprehended for stealing; I am prepared to make such a statement on oath in any court in the world; I did not inquire of the Curator why he asked me to do that, and I did not obey him; what he said to me was this—"You take something with you belonging to the Museum, and in case we do not find anything, drop it secretly in his house so that it can be found;" so that it could be found and Tost convicted; Mr. Kreffit did not say what was to be dropped; I suppose he meant that he or I was to find it, or the detectives.

Robert Barnes states: On the morning that Tost was to be tried by a sub-committee appointed for the purpose, Kreffit came down to my shop, which was in the cellar, and said to my brother—"I am going to get two detectives," or "I have got two detectives to search Tost's house; and I want you to take something belonging to the Museum, and in case we do not find anything belonging to the Museum there to drop it in his house;" I would swear that Mr. Kreffit invited my brother to drop something in Mr. Tost's house; he said on one occasion—"We must crush Tost; Tost has lots of charges against me and against you too."

The taxidermist affirms that Henry Barnes told him of the proposal to bring a false charge against Tost three or four years ago. The messenger alleges that the Barneses told him the day after it happened—see also Robert Barnes's evidence—and the late Assistant Curator states that he heard of it from the Barneses on his return from Western Australia, about three years and a half ago.

III.—*Permitting Indecent Photographs to be taken in the Museum.*

The direct evidence in support of this charge is given by Henry Barnes, who states that he knows nothing more of the photographs than he told the Select Committee of the Legislative Assembly, and that the evidence he then gave was perfectly true. He says—"I took them for Mr. Kreffit; they were lent to me by Patterson, the herbalist, to show to Mr. Kreffit, who he said was a friend of his."

The taxidermist says: I do not know by whose orders they were taken; but I have seen Henry Barnes frequently bringing them through my room to take to Mr. Kreffit; he said that he was going to Mr. Kreffit with them; I never saw them in Mr. Kreffit's possession.

The messenger states: "I have not seen them in his hands; but I have seen them on the desk where you (meaning the chairman) are sitting, on the Board-room table, in the room beneath, and in the work-shop; that was long before they were shown to the Trustees."

The evidence of the late Assistant Curator on this point is: "The first indecent photographs I ever saw in my life Mr. Kreffit showed me in this very room; I saw them frequently afterwards, when they were being printed, and were lying about the steps in the sun; and Mr. Kreffit was passing backwards and forwards at the time."

In opposition to the testimony of these witnesses it will be remarked that Dr. Bennett observes: "The first time I saw them was here; Mr. Kreffit has shown me an immense number of photographs of all descriptions, but I never saw nude figures in his possession, except the photographs of natives; I was somewhat surprised when I saw them here, because they are things he might have shown to a medical man."

IV.—*Selling Photographs through the Servants of the Institution.*

The evidence in support of this charge is extremely meagre, and the facts, if proved, are not such as would warrant any severe censure upon the Curator.

V.—*Getting Furniture made for himself in the Museum out of Museum materials.*

The testimony in regard to this charge appears to have reference to the conduct of the Curator some five years ago, and to which the sub-committee, to whom was referred the investigation of the charges in regard to Tost, then censured him. (*Vide* Robert Barnes' evidence, and Mr. A. W. Scott's evidence.)

VI.—*Ordering the Servants of the Museum to make cases and set up specimens with Museum materials for private individuals.*

The taxidermist states that he set up a wallaby for Mr. Parkes, and a duck and a ring-tailed opossum for Sir Alfred Stephen; and the late Assistant Curator alleges that a case of humming birds was prepared for Mr. Kreffit by Mrs. Tost. Dr. Bennett says: "I never knew an instance of cases being set up for private individuals"; and the practice seems to have been exceptional.

VII.—*Taking receipts from Robert Barnes for work done in the name of Wm. Bradley, with the view of deceiving the Board of Trustees.*

Robert Barnes alleges that the evidence he gave on this point before the Select Committee of the Legislative Assembly is true. The bills were made out by his nephew in the name of Wm. Bradley, and receipted by him. Mr. Kreffit suggested that another name should be used, but Barnes fixed upon the name of Bradley.

Dr. Cox says: "I remember accounts being frequently presented to the Board meetings for payment in the name of Wm. Bradley"; but he did not know at the time that Wm. Bradley represented one of the Barneses.

The practice appears to have been known to the taxidermist; and the late Assistant Curator states, that on one occasion "Mr. Kreffit told Robert Barnes to make me a dozen setting boards"; and he said—"Get Bradley to make out your bill; he is your man, Bob."

VIII.—*Maliciously breaking up a Fossil Jaw, lent to the Museum by Dr. Bennett.*

Robert and Henry Barnes state:—That Mr. Kreffit broke up the jaw with a hammer and bradawl; and they agree in stating that the Curator swore that Professor Owen should not get the restored jaw perfect. The Curator appears to have made a similar statement to Dr. Cox who, however, thought that he was a good deal under the influence of liquor at the time; and also to Mr. Masters. Dr. Bennett states, that the Curator told him of the breaking of the jaw; that there could not have been a wilful destruction of the fossil, inasmuch as it was important in the interest of Mr. Kreffit's reputation as a naturalist that the fossil should reach Professor Owen in as good a condition as possible.

IX.—*Sending away in his own name valuable Specimens, the property of the Museum.*

Robert Barnes, whose duty it appears to be to pack the cases, states, that five casts of the lower jaw of the diprotodon, and he thinks ten casts of crocodile's head have been sent to different parts of Queensland and to Melbourne. He also enumerates the skull, and a large portion of one of Gray's whales, two or three casts of all the limbs of the diprotodon in the Museum, and describes in general terms numerous other exportations.

Dr. Cox refers to certain alleged donations not authorized by the exchange committee or the Board; to a collection of valuable fishes, presented by him to the Museum, on behalf of Mr. Wood, which the Curator sent to Günther; to a donation of birds, sent by the Curator to Selater; to donations of frogs; a large donation of btrachians, sent to Günther; and to a cast of teeth of the ceratodus, which appear from the Proceedings of the Zoological Society and from Nature to have been forwarded by Mr. Kreffit in his own name. Mr. Scott also states, that the Ibis, the Annals and Magazine of Natural History, the Proceedings of the Zoological Society and Nature, invariably acknowledge donations from and publish thanks to the Curator, and not to the Trustees. Dr. Bennett refers to the donation of birds, as a case which had been dealt with by the Board at his instance some years ago.

The last meeting recorded in the exchange book, is dated August 26th, 1872, and it has not been confirmed. The manner in which that book has been kept precludes the committee from exonerating the Curator from the charges preferred. The evidence of Dr. Cox, Dr. Bennett, and Mr. Scott, in regard to the authorization of exchanges, may be useful in placing that department of the Institution on a more satisfactory basis. The committee hope to be able to obtain the annual report of the Museum, containing a list of the specimens presented, and those collected by Mr. Masters on his different trips; and it may be expected that a comparison of these with the specimens now in the Museum, will throw much additional light on this branch of the inquiry.

X.—*Making a false return of the number of Visitors.*

The visitors' book was in charge of the messenger, who states:—That he was told by the Curator to enter a larger number in the book than the number of visitors who actually attended; and he points to instances, where he says he has done this in obedience to Mr. Kreff's orders, and to entries of the same character in the handwriting of the Curator himself. Helen Gillespie states:—That she has heard Mr. Kreff tell the messenger to put down a good number, whether correct or not. That was always the practice while she was employed in the Museum; and the evidence of the taxidermist shows that he had heard of the practice of putting down a larger number of visitors in the visitors' book than the number who attended. Dr. Bennett recollects an occasion recently, when the Curator tried to get the visitors' book from O'Grady, and states that he told Mr. Kreff he had no right to take it.

XI.—*Making a false statement in writing to the Colonial Secretary respecting the attendance of a deputation of the Trustees.*

This charge is supported by the evidence of Dr. Cox, who alleges that Dr. Alleyne, Captain Onslow, and himself, were appointed to wait upon the Government, for the purpose of asking them to put a certain sum of money on the Estimates for the making of cases. The Colonial Secretary appointed a day, and the hour was fixed for 11 o'clock, but Dr. Cox states that the first intimation he received of that appointment was upon his return home at 1.30 p.m., or two hours and a half after the time fixed for the interview. A second appointment was made by the Colonial Secretary, when Dr. Cox attended and waited for some time, but neither the Curator nor any other member of the deputation attended. On each of these occasions letters were written at the instance of the Colonial Secretary to the Curator, complaining of the failure on the part of the deputation to keep their appointment. When Dr. Cox came to the Museum to inquire how it was that the deputation had not attended, he states that the Curator showed him a letter to the Colonial Secretary in reference to his (Dr. Cox's) alleged non-attendance, which contained statements that were perfectly untrue, and which Mr. Parkes knew to be so. The letter which the Curator showed him was an impression taken by a copying-press. The correspondence—not even Mr. Parkes's letters—was never produced to the Board.

XII.—*Disobeying the orders of the Trustees given at the last ordinary monthly meeting.*

The acts of disobedience to which the attention of the committee has been specifically directed are within the knowledge of the general body of Trustees, and the grounds upon which the charge rests are stated in the minutes of the Board meetings. The committee, however, were formally apprised of the facts by the evidence of Mr. Scott, within whose personal knowledge they were. He states: "I attended a meeting of the Trustees of the Museum, at which orders were given to the Curator to obtain copies of the Report of the Select Committee of the Legislative Assembly, appointed to inquire into the management of the Museum, from the Government Printing Office, and also to issue notices to the Trustees to attend at a subsequent date in order to take that report into consideration; he did not comply with the orders; I attended on the day appointed, but did not receive any notice from the Curator; I found the Board-room locked; I, in conjunction with the other Trustees present, then sent O'Grady with a message for the key from Mr. Kreff; Mrs. Kreff said that her husband had gone out, and that she could not find the key; the key not being forthcoming, after waiting for some time, we decided to go into the taxidermist's room, and there we held our meeting; that was a clear act of disobedience on the part of Mr. Kreff, and Mr. Kreff, in my opinion, is guilty of disobedience in not sending copies of the Report of the Select Committee."

GENERAL.

The committee were not desirous of extending the inquiry to other points than those expressly referred to them; but in the progress of the investigation statements were made in regard to certain circumstances affecting the conduct of the Curator and the interests of the Museum in so important a degree as to require that attention should be directed to them.

The Bracks, for example, appear to have occupied free quarters on the Museum premises, and to have had fuel and light at the expense of the Institution for a period of about six weeks, when, following upon a written notice in the handwriting of the Curator, they were rejected. The minute book contains no record which shows that the Curator was authorized by the Board to invite these persons to live on the premises, and to deal with the Museum property in the manner described by them in their evidence. Mrs. Brack states that she was ordered by Mrs. Kreff to charge the vegetables which she bought for consumption in the Curator's household, in the bill for pigs food, to be submitted to the Trustees. The Brack's distinctly affirm that the doors of the Museum were often left open at night. Helen Gillespie and the late Assistant Curator state that they have found the doors of the Museum open when they have come in the morning; but, on the other hand, James Macnamara states that he never saw them left open.

From the evidence of Robert Barnes, J. A. Thorpe, Gillespie, and O'Grady, it appears that about two years ago a numerous collection of specimens—including two lions, a spotted leopard, two or three small deer, a large reindeer or elk, a pony, &c.—were thrown out into the paddock and burned. R. Barnes states that the Curator spoke of these things as "rubbish," but the taxidermist alleges that the skins were good, and that of almost all of them the Museum has not duplicate specimens. The committee are unable to discover any record in the minute book to show that the destruction of these specimens was reported to the Trustees, or authorized by them. Gillespie also speaks of a large destruction of papers and books about the time of the investigation by the Select Committee.

The taxidermist states that he could have perfectly preserved the large sun-fish, brought to the Institution in December, 1871, and that he did not succeed because he was not allowed by the Curator. The testimony of Mr. Masters and of the servants of the Institution is to the same purport. Dr. Cox states that he paid Mr. Kreff 20s. 6d. for tubs and buckets used in the attempted preservation of the sun-fish, and also £3 6s. for extra labour—Mr. Kreff having rendered him an account charging him with those items. The evidence of the two Barneses, Thorpe, O'Grady, Masters, and Macnamara conclusively establishes, in the opinion of the committee, that neither tubs nor buckets were used in the attempted preservation of this fish, and that no extra labour was employed. O'Grady states that he received 5s. for what he did towards the preservation of the fish; but the other persons employed upon the work state that they received nothing beyond their ordinary wages. The committee having observed a statement by the Curator at page 103 of his evidence before the Select Committee that tubs were buried with the sun-fish, took measures to have the spot examined, and the contents of the hole dug out. One half of the breast bone of the fish, a large quantity of fibrous substance, supposed to be the remains of the fish, and two battered tin cases, containing specimens of fish, which had been preserved in spirits, were found in the hole, but no trace of tubs or buckets could be discovered.

The attention of the committee was called to an entry upon the minutes, under date June 5, where the word "not" has been interpolated before the word "carried," and the words "there being no seconder" added afterwards. Mr. Scott says, "These words have evidently been added afterwards," and "the minute book is written up with an interpolation which is meant to deceive, and it is a very inaccurate minute throughout." Dr. Bennett says: "It appears to me that the word 'not' has been written in since, and that the words 'there being no seconder—G.K.' have been added afterwards. I was present when these minutes were read. Exception was taken to them as being incorrect."

The late Assistant Curator alleges that Mr. Kreff did little or no Museum work; that he only attended to the mineral collection during the last eighteen months, and did not touch any of the birds, shells, or insects. Mr. Scott says, "On my first appointment as Trustee I was highly satisfied with the Curator's conduct, as regards the energy displayed by him in furthering the interests of the Institution; but latterly, say for the last two or three years, I have observed a very great falling off, not only with respect to the exhibits, but also in the exertions made by the Curator in obtaining specimens, or I should rather say in looking after the Institution." Dr. Bennett, on the other hand, states: "As far as I could judge of Mr. Kreff, I should say he is a very hard working and efficient Curator, of high scientific attainments. From what I have recently seen and heard, I do not think that he is fit to take the charge of an establishment; but I think he would work well under any competent director who could control him. I do not think he is fitted by temper, and he is wanting in method. He would work remarkably well under any other man, and that is the case with many foreigners. Under Pittard he worked remarkably well."

CONCLUSION.

Your committee having carefully considered the evidence adduced in regard to the several charges submitted to them, have arrived at the following conclusions:—

I. *Drunkenness.*—The weight of the testimony points to many instances of irregularity on the part of the Curator in this respect; and your committee are of opinion that at least on two occasions he has been drunk during office hours, and then incapable of performing his duty.

II. *Proposing to the Barneses to bring a false charge of theft against a man named Tost;* and III. *Permitting indecent photographs to be taken in the Museum.*—Your committee see no reason to doubt the evidence in support of these charges.

IV. *Selling photographs through the servants of the Institution;* and VI. *Ordering the servants of the Museum to make cases and set up specimens with Museum materials for private individuals.*—Your committee do not, in the light of the facts before them, regard these charges as being of any great importance.

V. *Getting furniture made for himself in the Museum out of Museum materials.*—Your committee see no reason for re-opening the matters referred to in this charge, the Trustees having already adjudicated upon it.

VII. *Taking receipts from Robert Barnes for work done under the name of William Bradley, with the view of deceiving the Board of Trustees.*—Your committee are of opinion that the irregularity charged has been practised, but the object of it has not been disclosed.

VIII. *Maliciously breaking up a fossil jaw, lent to the Museum by Dr. Bennett.*—The fact of breaking the jaw has been sufficiently established. Your committee are of opinion that it was unnecessarily broken, but there is no evidence of malice.

IX. *Sending away as donations in his own name, valuable specimens, the property of the Museum.*—The evidence under this head goes to prove that many specimens have been sent from the Museum, of which no record has been kept, and for which no authority appears to have been given by the Trustees.

X. *Making a false return of the number of Visitors.*—Your committee are of opinion that this charge has been clearly proven by the entries in the visitors' book, some of which are in the Curator's own handwriting.

XI. *Making a false statement in writing to the Colonial Secretary respecting the attendance of a deputation of the Trustees.*—Your committee also consider that this charge is clearly established.

XII. *Disobeying the orders of the Trustees, given at the last ordinary monthly meeting.*—This matter is within the knowledge of the Trustees, and the committee do not consider it necessary to offer any opinion in regard to it.

Your committee desire to call the attention of the Trustees to the circumstances elicited in the course of their inquiry affecting the conduct of the Curator, and the management of the Institution, on some points which were not included in the charges placed before them—circumstances which are set forth in preceding paragraphs headed "General."

Your committee think it right to state, in conclusion, that they have no reason whatever to doubt the general accuracy and truthfulness of the statements made by the witnesses whom they have examined.

Your committee herewith submit the minutes of their proceedings, correspondence, documents, and evidence.

CH. ROLLESTON.
E. S. HILL.
ARCHD. LIVERSIDGE.
H. G. ALLEYNE.

Australian Museum, Sydney, 5th August, 1874.

APPENDIX No. 4.

MINUTES OF EVIDENCE.

MONDAY, 29 JUNE, 1874.

Present:—

H. G. ALLEYNE, Esq., M.D.,	|	PROFESSOR LIVERSIDGE,
E. S. HILL, Esq.,	|	CHRISTOPHER ROLLESTON, Esq.

Michael O'Grady was called in and examined:—

1. *Chairman.*] You are the messenger here? Yes.
2. You have charge of the Museum at the present time, have you not? Yes.
3. Is the Curator now on the premises? No; he is out.
4. What time did he go out? About three-quarters of an hour before the Trustees came.
5. *Dr. Alleyne.*] At what hour was that? He went away at about 2 o'clock.
6. *Chairman.*] Then you are in sole charge of the institution? Yes. Mrs. Krefft is in her house.
7. *Mr. Hill.*] In her private apartments? Yes.
8. *Dr. Alleyne.*] She is not an officer of the establishment? No.
9. *Chairman.*] Did Mr. Krefft leave any message? He told me if any of the Trustees came I was to go up to Mrs. Krefft for the key. When Mr. Krefft went out, a messenger came down to tell me that I was wanted up. I then got a letter for the Chairman, and the key of the room; and I was told that I was to admit the Trustees to the Board-room, but that I was not to admit anybody else.
10. There would be no use in sending for Mr. Krefft? No; he is not here.
11. Did Mr. Krefft give any reason for absenting himself? No.
12. *Mr. Hill.*] Did you know that he was going? He came in and told me.
13. Told you what? That he was going out.
14. But he left no message? Only what I have said about the key.
15. *Chairman.*] Is there no one in the institution with you? Mr. Thorpe is in his workshop.
16. *Mr. Hill.*] He can have no supervision of the institution while he is there? No.
17. Is there no one else in charge? Only the boy whom I have just called to the desk.
18. The institution is left to take care of itself at present? Yes; excepting that there is the boy there.

M. O'Grady.
29 June, 1874.

I certify that this is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 29th June, 1874.

MICHAEL O'GRADY.
24/7/1874.

TUESDAY, 30 JUNE, 1874.

Present:—

H. G. ALLEYNE, Esq., M.D.,	|	E. S. HILL, Esq.,
	|	PROFESSOR LIVERSIDGE.

CHRISTOPHER ROLLESTON, Esq., IN THE CHAIR.

Mrs. Philipp Brack was called in and examined:—

19. *Chairman.*] Have you been in any way connected with the Museum? I have been living here a Mrs. P. Brack short while.
20. In what capacity? If you will allow me, I will explain. Mr. Krefft came to my husband, who was employed in the Gardens, and asked him to come and live at the Museum. We were very comfortable, and I never wished to leave the place where we were living; but Mr. Krefft came several times, and was very coaxing; he sent me a basketful of eggs, and some kind of grain which he had got out from Germany; he sent me some honey; and he promised all that was good if we would come and live at the Museum. At last I consented, and we came to the Museum to live. He told my husband that he would try to get £100 a year granted for him to live at the Museum, and he told him that he ought to give notice to leave the Gardens; but my husband said that he would not give notice to leave the Gardens, because he had a very good billet there.
21. *Mr. Hill.*] When you say the Gardens, do you allude to the Botanic Gardens? Yes. My husband said he did not like to leave there. Mr. Krefft promised to make us very comfortable, and in fact they did all they could to make us comfortable. He had my husband to build a kitchen for my comfort, put up an oven, and did all that he could. They gave us free coke and coal, and wood and kerosene, and we had the house rent-free. He promised my husband all that —
22. Did he promise your husband all that in your presence? No, but he fulfilled it all to me. When we were living here about a fortnight, Denis, the New Guinea pig, had young ones, and Mr. Krefft seemed anxious to rear the litter; he kept feeding them with orange-peel, sugar, and other things. I said to him—“If you want to keep them, let me rear them; I am sure that way won't do; that does not agree with giving the young ones milk to suck; I have reared many in the Colony, and I will rear them.” He said—“Very well; rear them.” In the evening he and Mrs. Krefft came up, and Mr. Krefft gave me half a sovereign to buy them

- Mrs. P. Brack. them food. Mrs. Krefft told me that the greengrocer came round once or twice a week, and I was to get what I wanted. I said I could get what I wanted from the markets, which I did. The first bill I made out in the way Mrs. Krefft told me. It was 10s., and she said—"Lump it for pig's food." I gave her the bill. I put it all down for pig's food—10s. I was planting some vegetables here in the garden for Mr. Krefft. I told her when the second money was wanted, and she said—"Make me out the bill, and I will get you some more money." I said—"Am I to put the vegetables on the same bill as pig's food? You told me it was to be laid before the Board. Do they pay you for the vegetables too?" Mrs. Krefft said—"Oh, never mind; you do just as you did before, and bring me the bill." But I did not do it; I did not like to do it. About ten minutes afterwards Mr. Krefft sent Robert Barnes, who told me it was too much trouble for me—that I was not to bother with the pig any longer. Two or three days afterwards O'Grady came with a message saying that the Trustees did not approve of any one living there, and that I should shift as soon as possible. I said—"O'Grady—you tell Mr. Krefft if he is a man let him face my husband. He ran after my husband for six months to get him to come here. I will not shift. The Trustees know nothing about it." In the evening he sent Robert with directions that I should shift before 8 o'clock in the morning. I said—"Robert, I could not." He sent Robert and O'Grady with a written notice to say that we should be shifted by 8 o'clock the next morning, or he would turn the water off and lock the approaches. He had had three keys made for our convenience for the back gate. He sent word that I should not have any more wood, or coke, or light. My husband went down to Mr. Krefft in the evening, and said that if he would pay him for all that he had done here he would go that night. Mr. Krefft asked him what he wanted, and my husband said that he considered he had earned £5 here. Mrs. Krefft then sang out—"Starve them out. Lock the approaches. Turn the water off!" My husband wanted to get £5 from him; but Mr. Krefft said that he would not give him one fraction, and said that we must leave by to-morrow morning. As we had a written notice, we thought we were compelled to go. It was raining as fast as it could, and the parcels delivery man would not take our things away.
23. *Chairman.*] How long had you been with Mr. Krefft? Six weeks. I reared the little Denises.
24. You were paid by Mr. Krefft—not the Trustees? I was not paid. He only promised that we should have coke, wood, and house free. He promised my husband if he would leave the Gardens he would get the Trustees to give him £100 a year. He said that the Trustees wanted to give him a secretary; he said he would not hear of it; but that he would rather have a man about the place to look after the tools and such things. My husband wanted to leave the Gardens, but it is a lucky job he did not.
25. With reference to the money paid for food for the pigs—did you pay the money yourself;—Mrs. Krefft, I think you said, gave you 10s.? Mr. Krefft gave me 10s.
26. To do what? To buy pig's food.
27. Did the pigs belong to Mr. Krefft or to the Museum? To the Museum.
28. And you bought the pigs food with the 10s.? Yes, and the vegetables went into the same account.
29. In the account you gave Mrs. Krefft was the pig's food in excess of the vegetables, or was the amount for the vegetables in excess of that for the pig's food? The pig's food came to 6s. 9d. and the vegetables the rest.
30. And Mrs. Krefft told you to lump them altogether? Yes. At first I did not know that the money belonged to the Museum. The second time Mrs. Krefft told me she wanted the bill to lay before the Trustees; and I said—"I wonder that you should put the vegetables into the bill then." I passed a remark about the vegetables going into the same bill with the pig's food, and that was the cause of our leaving.
31. *Dr. Alleyne.*] As a matter of fact, all the vegetables did go into the bill with the pig's food? All the vegetables that I bought for Mrs. Krefft, during the time I was at the Museum, went into the bill for pig's food.
32. *Chairman.*] How long is it since you were here? We left about eight months ago.
33. During the time you were here was Mr. Krefft always quite steady and sober? No; Mr. Krefft was very often drunk, very often intoxicated, and in a very bad state too.
34. Are you speaking of during the time you were here? Yes, during the time we were here. I know it more than my husband does, because, as I was here all day, I saw more of him; but my husband has often seen him the worse for drink.
35. On the premises? On the premises; and twice the Museum door was left open. I told Mrs. Krefft that the Museum door was left open.
36. You mean that the door was left open at an improper time? Left open all night. After the men left the Museum, Mr. Krefft generally roamed about. He left the back door of the Museum open. One time I mentioned it to Mrs. Krefft, and she said—"I must tell Mr. Krefft," and in the afternoon she came and told me it was a lie. The second time the door was left open I told her, and I said—"Now it is not a lie, for I saw Mr. Krefft shut it." She said that it was very strange; and in the afternoon she told me that Mr. Krefft had left it open for the purpose of airing some specimens; but she said that I was not to mention it to the men. My husband shut the Museum door several times himself. He was afraid that the children might get in. We have two little boys, and boys are mischievous sometimes.
37. Do you know whether Mr. Krefft had been out on those occasions when you say you saw him drunk? I do not know. What I speak of was when he was at home. I did not see him away from the premises.
38. During the six weeks you were there, on how many occasions did you see him under the influence of drink? I could almost say every day. He was very seldom sober during the time I was here, especially after the men had left in the evening. As soon as the men left in the evening Mr. Krefft commenced with his conduct, and about 9 o'clock he began to roam about with the candle. He went through the Museum very often. He left it open very often, and the room where Bob is working, that was very frequently left open at night. My husband never meddled with that. He only shut the Museum door when he found it open. I have seen Mr. Krefft so drunk that he stood against a little shed here, and could not move away from it. One Sunday morning my little boys were plucking some thistles for his little boy's rabbits, and he was so drunk that he rushed out at them. He tumbled after them as well as he could, shouting and raving all the time like a madman.
39. What time in the day was this? About 11 o'clock one Sunday morning.
40. Can you fix the date exactly? I cannot.
41. Did you see him then? Yes; he came up to the place and told me that I was not to allow my children in front of the Museum, that they would draw all the young blackguards round there. I knew then that he did not know what he was saying. When my husband came, I said—"See what Krefft is

- up to." Mr. Krefft stood on the staircase with a glass of ale in his hand. He would not give my husband any satisfaction. He said—"If you don't like it you can go." When Mr. Krefft spoke to me on the subject, I said—"Mr. Krefft, you are nobody." He had been following my husband for six months to get him to come here; but when my husband came here, Mr. Krefft never showed his face to him.
42. How was your husband employed all the time? In the Botanical Gardens.
43. During the time you were living here? Yes.
44. What advantage did Mr. Krefft get by obtaining your husband and you to live here? I do not know at all.
45. Did you help in the work of the house at all? Mrs. Krefft used to send me on messages during the day, but I did not do any work in the house. When he asked my husband here, he said that Mrs. Krefft liked to go out sometimes, and that she wanted to have a person here that she could trust until she came back again. I reared the little pigs, did a lot of jobs, and grew vegetables.
46. You did? Yes, I helped.
47. *Mr. Hill.*] Your husband grew the vegetables in his spare time? Yes.
48. *Chairman.*] Is your husband still in the Gardens? Yes.
49. *Dr. Alleyne.*] You spoke of the doors of the Museum being opened;—did you see that yourself? Yes.
50. They were left open during the night? Yes.
51. You say that from your own knowledge? I have seen them open.
52. *Professor Liversidge.*] Which door do you speak of? The back door.
53. *Dr. Alleyne.*] Which door is that? The door leading out in front of the little place where I used to live.
54. *Chairman.*] Not the front door? No.
55. *Dr. Alleyne.*] The door leading into the stone area? The door leading into the garden like—the back door next to Thorpe's room.
56. Could any one have got from the door to which you allude all over the building? I think so.
57. They could have got inside the building at all events? Yes. The door I speak of is the main door. When I looked in what I saw was like an elephant.
58. *Chairman.*] Was the door fastened from the inside or the out? I have seen O'Grady locking it from the inside of an evening, and Mr. Krefft opened it from the inside.
59. When Mr. Krefft was in the state which you describe as drunkenness, did he appear openly to any of the other people employed on the premises? It was before the people arrived in the morning.
60. The occasions you have described were before the men arrived in the morning? Yes.
61. Have you seen Mr. Krefft drunk before any of the servants of the institution? I cannot say. I have seen him drunk often enough, but I cannot say whether it was in the presence of anybody else. I have seen him very much drunk in the presence of Mrs. Krefft.
62. Could he walk straight? When I saw him very much the worse for liquor he laid down.
63. Where was that? In the dining-room.
64. In his own room? Yes.
65. It is about eight months since you left? Yes.
66. And you were here about six weeks? Yes; it might have been a little more, but it would not be less.
67. It would be about the beginning of last summer, I suppose? About that. I could not tell you the week or the month.
68. You noticed that Mr. Krefft was drunk particularly on the Sunday morning that he threatened your children? Yes. One of my little boys is six years old and the other going on for nine. Mr. Krefft nearly frightened him into fits—the poor little fellow was trembling nearly all day long after it.
69. *Dr. Alleyne.*] Was it the violence of Mr. Krefft's manner that frightened him? Yes. He told him that he would break his bones.
70. Were your children giving him any annoyance at the time? None whatever. My husband sent my boy round for thistles for Mr. Krefft's little boy's rabbits. Mr. Krefft happened to be at the front door. He was tremendously drunk that morning. He hunted my little boy away from the front, and came tumbling after them as well as he could. He told him he would draw all the young blackguards in front of the Museum, and that he would break every bone in his body.
71. You are sure that Mr. Krefft was drunk then? I am sure he was.
72. *Chairman.*] Did you ever see him in this state of intoxication at the back of the premises amongst the men at any time? They did not work in the little house behind. What I saw, I saw accidentally. I never looked after him. When I saw him sick here one morning I knew that he was very bad at the time. He was tremendously drunk that morning.
73. *Dr. Alleyne.*] What do you mean by being very sick? I do not like to express it.
74. *Mr. Hill.*] Was he vomiting? Yes, he was vomiting over the fence—he could not stand straight then.
75. *Dr. Alleyne.*] What fence do you refer to? The fence towards the school.
76. You have often seen men drunk in the streets? Yes.
77. Do you form your opinion that Mr. Krefft was drunk by comparing what he did with what you have seen drunken men do in the streets? Yes. Generally in the evening after the men had left he came into our place, and you could almost see then that he was very much the worse for liquor. When he left, he commenced roaming about the place. Once I found the candle behind where the pigs were. He generally went there to have a sit down, after he was so that he could not travel about much.
78. *Chairman.*] Your husband has seen him in this state as well as yourself? Not at the time that I have seen him. He can answer for what he has seen.
79. *Dr. Alleyne.*] Were you a servant of Mrs. Krefft, performing household duties? I had nothing at all to do with that.
80. *Mr. Hill.*] During the time you were here, were any of the people taking photographs? I cannot tell. I have not seen them.
81. *Chairman.*] You were not here when a man of the name of Tost was employed at the Museum? No.

This is a true statement of the evidence given by me before the Sub-committee of the Trustees, on the 30th of June last.

CLARA BRACK.
24/7/1874.
Philipp

Mr. Philipp Brack was called in and examined :—

- Mr. P. Brack. 82. *Chairman.*] Your name is Philipp Brack? Yes.
83. You were at one time residing on these premises, were you not? I was.
- 30 June, 1874. 84. When was that? In October last.
85. You were employed by the Director of the Botanic Gardens? I was.
86. And you continued to work for Mr. Moore when you resided here? I did.
87. What brought you to reside here? Because I got acquainted with Mr. Krefft. I had been doing some work some time previous to that, and Mr. Krefft had been asking me if I would come to live on these premises. He said that he wanted a man that he could depend upon to look after the premises in case he wanted to go out of an evening, and on that condition I came here. I did not consent to come at once; but after three or four weeks time, when he had been urging me to come, I consented to come; he promised me a great deal—a house to live in, and wood and coal to burn; and all that he requested of me was that I should keep Mrs. Krefft's garden in order. On those conditions I came to these premises.
88. It was free lodging to you, in fact? I thought it was a great advantage to me.
89. How long did you remain? Between six and seven weeks. I think it was in the latter end of September that I came here, but I am not quite sure.
90. What time did you come here of an evening, and what time did you leave here in the morning? I was at my work in the Gardens at 6 o'clock in the morning, and I left it to come here at 6 o'clock in the evening.
91. Did you come home to dinner? Only sometimes.
92. During the time you were here did you ever observe Mr. Krefft drunk? Frequently.
93. At what time? Always in the evening.
94. Can you specify any particular circumstances on any of these occasions on which you say you saw Mr. Krefft drunk? I have seen him a good many times when I came home standing behind in the premises there, where it is not fit to be mentioned before gentlemen, spuing up, and I have seen him raving about the place. At first going off I did not take any notice, but when he began to tramp on me I could see that it was nothing but the intoxication speaking out of him.
95. This was after you returned home in the evening? Always. I never was here in the day-time, except occasionally at 1 o'clock.
96. Were you here on Sundays? On Sundays. As soon as I got dressed on a Sunday morning he got me to go down William-street to fetch him beer.
97. At what time? At church time—between 11 and 12.
98. And what may you have brought him on those occasions? Always a quart of English ale.
99. Have you brought up more than one quart on the same Sunday morning? I did not.
100. You do not know whether he wanted it for his dinner or not? I could not say; it was not my business to inquire.
101. At the time you came home at nights the men employed in the Museum had left? They had always left.
102. Were you the only other man on the establishment? Yes; excepting the old gardener, who used to come and sleep here of an evening. He always locked up the gates. My sons were here too.
103. What was the old gardener's name? Mr. Mac something.
104. *Mr. Hill.*] Macnamara? I could not say exactly, but he goes by the name of "Mac."
105. *Chairman.*] During the time that you were living here have you observed that the doors of the Museum were left open at night? I have, frequently.
106. During the whole night? During the whole night; and I have been myself at 11 o'clock at night and shut them, when the wind was banging them backwards and forwards. I have gone and shut the back door that leads into the Museum. The workshop door was frequently open.
107. *Mr. Hill.*] That is in the yard? Yes. I shut the back door of the Museum twice.
108. *Chairman.*] Are you aware that the doors have been open all night? I have shut them. I have found them open on a Sunday morning.
109. Was that before Mr. Krefft was up? Yes, before Mr. Krefft was up.
110. Was anybody else on the premises at that time? Not to my knowledge, except myself and my family.
111. O'Grady does not sleep on the premises? I never heard of his doing so.
112. *Mr. Hill.*] Did your wife at any time call your attention to the fact of the Museum doors being opened? I said to my wife—"There is the door open again; I had better go and shut it."
113. Was the door which you speak of a door leading into the Museum? Yes, the door leading into the Museum.
114. Leading all over the premises in fact? Yes.
115. When you have given your evidence will you show us that door? Yes.
116. The door opens from the inside? I could not say whether the door opens from the inside or the outside. I have never examined the door, but I have seen it open, and I have shut it.
117. Do you remember your children being very much frightened one Sunday morning by Mr. Krefft? I do. His children had two or three little rabbits, and I was cleaning out the basket they were kept in. I told my little boy to go in front of the Museum and get some thistles for the rabbits; and almost directly after he had left me, the boy came back almost in a fit, and Mr. Krefft came roaring after him like a wild bull. He said why did I send my children, and I said, "For thistles." He was almost raving mad. I spoke a few words to him; and he said—"If you don't like it you can leave." I said—"Is that the way you are going to serve me, after coaxing me here and making me break up my home?" He got worse and worse every day. He sent O'Grady to tell us that the Trustees did not approve of my living here. I did not take any notice of that; and in a day or two he sent me this written notice to quit the Museum. (*Notice read.*)
118. *Chairman.*] Is that dated? Yes; 10 November, 1873.
119. *Mr. Hill.*] You left the next day? I was forced to sleep on the floor all night. My things were out in the yard, and it was so wet that the man would not take them away. I and my children were forced to sleep on the floor until the man was able to take my things away.
120. *Chairman.*] During the time you lived here were you supplied with fuel—coals and wood? I was. I wanted to buy some; and he said—"Nonsense, man. I don't want you to buy anything. You can get everything here—coke, coals, wood, and kerosene for your light, and everything that you require."

121. You had all these things during the time you were here? I had.
122. Were they Mr. Kreffit's private property, or did they belong to the Museum? That I cannot tell.
123. Had you any reason to think that the fuel and light were the property of Mr. Kreffit or that they were paid for by the Museum? I believe that Mr. Kreffit was supplied by the Museum with coal and all these things; and I do not believe that he would buy them expressly for me.
124. *Mr. Hill.*] Did he say where he got the coals from? The coals were down in the cellar, and the wood was lying in the yard.
125. They came out of a common heap? Yes.
126. Did you notice where the kerosene came from? Mrs. Kreffit mostly brought it up in a bottle. I could not tell where she got it from.
127. *Dr. Alleyne.*] When you got this notice from Mr. Kreffit, did he tell you then that he gave you the notice to quit because the Trustees disapproved of your being here? He gave me that notice first by O'Grady by word of mouth, and then he sent the written notice. When he gave me notice by O'Grady, I went to him, and I said—"You have sent me notice that the Trustees do not approve of my being here. I am not going to shift out of the premises before you pay me for the work I have done for you."
128. He did say that the Trustees did not approve of your living here? He said—"Never mind the Trustees."
129. Did he tell you that the Trustees did not approve of your living here? He did not tell me that personally. He sent word with Mr. O'Grady that the Trustees did not approve of my living here. I went to him then, and told him if the Trustees did not approve of my living here, would he pay me for what I had done. He said—"What is your charge?" I said "I broke up my home to serve you, and I have done a good bit of work here for you. The least I can charge you is £5." At that he sprang up as if he wanted to murder me, and his wife sang out—"Lock up the approaches. Shut off the water on them. Starve them out."
130. *Chairman.*] Did you get anything from Mr. Kreffit for your services? I did not.
131. What had you done? I had done a good bit of work in my own time of an evening. On Saturdays we always knocked off at 4 o'clock in the Gardens, and I worked on here till night. I did a good bit of work in the evenings, and on Sunday mornings I did work mostly to comfort my own place. He ordered me to put up a kitchen, to break down a boiler there was there, and put up a fire-place for a stove he bought for me. He said—"There is plenty of wood in the Museum; carry it up and make a good comfortable home for yourself."
132. *Dr. Alleyne.*] You said you saw Mr. Kreffit drunk and vomiting over the fence? Yes, here in the back.
133. Was there anything else in his conduct or manner besides vomiting, which led you to suppose that he was drunk? Yes. When he began to get a spite against us, as he could not revenge himself on me, he always treated my poor children as if they were animals, and he shouted and roared about them as if he were a mad bull.
134. On any particular day that you saw him vomiting over the fence, was there anything else that occurred which led you to suppose that he was drunk,—anything besides that sickness,—anything in his general conduct or behaviour? —
135. Could he not stand steadily? He could always manage to stagger about.
136. *Mr. Hill.*] He staggered about? Yes.
137. But still kept on his feet? Yes.
138. *Chairman.*] Was this in the morning? I observed this in the evening. I never saw him the worse for liquor in the morning.

This is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 30th of June last.

PHILIPP BRACK.
24/7/1874.

I wish to explain a former portion of my evidence, by stating that while I was living on the Museum premises, I signed a receipt for work done by M'Duggan. That work was trenching in Mr. Kreffit's private garden; I received that money on behalf of M'Duggan, whom I had employed for Mr. Kreffit, and I paid it over to him. For myself, I did not receive one farthing.

PHILIPP BRACK.
24/7/1874.

Mrs. Philipp Brack was further examined:—

139. *Chairman.*] Where did you get your coal and wood and your light from when you lived here? I got the coal and coke from the cellar out of the same heap where Mrs. Kreffit used from. There was very little wood at the time at the Museum, but while there was any I used of it. When that was all gone I used to take some of the branches that had fallen from the trees.
140. You did not find yourselves in coal? No, it was found for us by Mr. Kreffit.
141. You do not know whether it was his private property, or whether it belonged to the Museum? I believe it did, because Mrs. Kreffit came in when I had too little fire, and she said—"Keep a good fire to make the place dry, and let the Museum pay for it."
142. What did you burn? Kerosene.
143. Where did you get it? Very often Mrs. Kreffit brought up a bottle from the cellar where Helen lighted the lamps.
144. You never bought any oil while you were here? No; Mr. Kreffit made out that he had full power to give as he liked, and I never thought there was anything wrong.

This is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 30th June last.

CLARA BRACK.
24/7/1874.

[The Committee went to view the southern door of the Museum, pointed out to them by the two preceding witnesses as that which they had found open at night. Vide Minutes.]

Michael

Mr. P. Brack.
30 June, 1874

Mrs. P. Brack.
30 June, 1874

Michael O'Grady was called in and examined :—

- M. O'Grady. 145. *Mr. Hill.*] When the Trustees left the Board-room and inquired of you for the keys, you said that the Museum door was locked? Yes.
- 30 June, 1874. 146. And that Mrs. Krefft had the keys? Yes.
147. I then asked you to go up and ask Mrs. Krefft to send us down the keys, saying that we wanted to go through the Museum? Yes.
148. You went up-stairs? Yes.
149. Whom did you see? Mrs. Krefft.
150. Whom else? I saw Mr. Krefft—Mr. and Mrs. Krefft.
151. You asked for the keys and said that the Trustees wanted them? Mrs. Krefft brought out the cellar keys. I said—"They want the keys of the back door" because I knew that you wanted to go to the back. She went in and spoke to Mr. Krefft. I heard his voice then. He came out and said—"Who is it wants the keys?" "The Trustees," said I. He said—"The Trustees?" and I said "Yes." He said—"Go down and tell them it is after 4 o'clock, and the Museum is locked." That was Mr. Krefft's message to me.
152. *Chairman.*] And you came down and delivered that message? Yes.
153. *Mr. Hill.*] Did anything else happen up there? No.
154. You saw Mr. Krefft yourself? It was Mr. Krefft who gave me word.
155. That it was after 4 o'clock, that the Museum was locked, and what else? He told me to tell the Trustees that the Museum was locked. He asked me who wanted the keys. I said—"The Trustees;" and he said—"Go you and tell the Trustees the Museum is locked."

I certify that this is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 30th of June, 1874.

MICHAEL O'GRADY.
24/7/1874.

MONDAY, 13 JULY, 1874.

Present :—

H. G. ALLEYNE, Esq., M.D., | E. S. HILL, Esq.,
PROFESSOR LIVERSIDGE.

CHRISTOPHER ROLLESTON, Esq., IN THE CHAIR.

Miss Ellen Gillespie called in and examined :—

- Miss E. Gillespie. 156. *Chairman.*] You have been a servant of this institution, have you not? Yes, I have.
157. For how long? Five years ending last May.
158. What hours were you employed in the Museum? I came at 9 o'clock in the morning, went away for an hour for dinner, then came back and stopped until 4 o'clock in winter-time and 5 o'clock in summer-time.
159. You did not sleep on the premises? No; I went home to my sister's to sleep.
160. You have been employed in the institution five years, you say? Yes.
161. Has Mr. Krefft been Curator of the Museum all that time? Yes; he was here before I came.
162. *Mr. Hill.*] You say your duties at the Museum were from 9 o'clock in the morning until 5 o'clock in the evening—were there any occasions on which you remained here later at night? Yes, I have often been told not to go home at 5 o'clock. When Mr. Krefft had company I have often been here until 9 or 10 o'clock at night; on one or two occasions I have been here until 1 o'clock in the morning.
163. *Chairman.*] Then, in addition to your services to the Museum, you were required to render services to the Curator's family? Yes, after the Museum had closed of an evening.
164. Were you paid entirely by the Museum? Yes, I understood that I was paid out of petty cash, every Saturday evening. Mr. Krefft gave me a cheque for a guinea every Saturday before I went home.
165. You got your wages every Saturday? Yes.
166. At the rate of a guinea per week? Yes.
167. Did you ever get anything else in the way of payment? Yes; sometimes I have had half a sovereign for a Christmas box; sometimes I had 2s.; sometimes 1s. 6d.; but these latter sums were for extra labour.
168. Were you employed in washing and cleaning the Museum? Yes; I used to wash the floors and stairs, and dust the glass cases. I sometimes had to look after the people when the Museum was open.
169. Was Mr. Krefft constantly in the Museum looking after things? No, he was not; sometimes I did not see him there during the whole day.
170. Did you ever see him in a state of intoxication? Yes, mostly every day.
171. Unfit to do his duty? Yes, mostly every day he was in a muddle.
172. He might be in a muddle, and it might not have been caused by drinking too much? I do not know. I know I carried away the empty bottles.
173. Where did you carry the empty bottles from? From there. [*Witness pointed to the south-east corner of the room.*] I cleared the place every morning.
174. What had been in the bottles? Ale, brandy, gin.
175. Do you know where it was obtained—did you get it? Sometimes it was got in in cases. I went for small quantities sometimes; sometimes the man went for some.
176. Did you ever see Mr. Krefft in such a state as to be unfit to do his duty? I have seen him lying in bed up-stairs.
177. At what time of day? In the afternoon—after dinner.
178. Did he dine late? 1 o'clock.
179. Then you mean you saw him in bed after 1 o'clock? Yes.
180. Was he violent under these circumstances? Yes, he was very cross. I never answered him back again, but just kept quiet, as I wanted to remain in my situation.
181. And this, you say, was frequently? Yes, frequently.
182. Can you name any particular day, or any particular circumstances connected with his drinking? Yes. One day Mrs. Krefft called me in and said the master was sick; she told me to bring the floor-cloth or flannel and wipe it up. Mr. Krefft then went to bed, and I did not see him any more. 183.

Miss
E. Gillespie.

13 July, 1874.

183. Do you recollect what day that was? No.
184. How long ago is it? About eighteen months ago.
185. What hour of the day was it? It was about 11 o'clock.
186. Do you recollect the occasion when the Curator of the Museum and some of the men, I think, went to Botany to look after a whale? Yes; it was on the 23rd of last December.
187. Were you at the Museum when the party returned? I remained here until 7 o'clock, when Mrs. Krefft told me not to stop any longer; she thought there was something the matter. O'Grady and I were here all day. I went home about 7 o'clock.
188. You did not see Mr. Krefft that evening? No.
189. *Mr. Hill.*] You did not see him at all? No, not at all that evening. That was the night before Christmas Eve.
190. You were not here when he came home that night? No; I went home at 7 o'clock.
191. At the times that you have seen him drunk, could any of the other employés of the institution have seen him? Yes, they could all see him equally as well as I could.
192. In what part of the institution could they see him? In the cellars below, often, when he was drunk.
193. When you speak of his being drunk, was he helplessly drunk—could he walk about? Sometimes he could walk about; sometimes he would go up and lie down in his bed-room. I have often seen him drunk.
194. You have said that you have often seen him drunk—can you call to mind any particular time? No.
195. But you have occasionally seen him drunk? Yes.
196. And on those occasions, if any one else besides the employés had been down below they could have seen him? Yes.
197. That is to say, if the public had had access to the room he was in they could have seen him drunk? Yes, they could have seen him.
198. *Chairman.*] You cannot name any other time in particular when he was drunk? No, I cannot remember any particular time; I cannot remember the day of the month.
199. *Dr. Alleyne.*] Do you remember any particular time when any one besides yourself saw him drunk? The men must have seen him drunk.
200. Do you recollect any person in particular who saw Mr. Krefft at the time you thought he was drunk? I cannot name any person in particular; the servants were always going backwards and forwards, but I never had any conversation with them.
201. *Chairman.*] Was Mr. Krefft generally kind and civil to you? Yes, he was generally civil.
202. Had you any quarrel with him, or did you entertain any ill-feeling towards him? I never in my life had a quarrel with him.
203. Did you ever complain to anybody that Mr. Krefft was in the habit of getting drunk, or mention the circumstance to anybody? I mentioned it to Mr. Masters often. He said he could not think how anybody could stop here.
204. Mr. Masters was then employed in the institution? Yes, he was.
205. Have you mentioned it to any of the others? Yes, I often mentioned it to O'Grady.
206. *Mr. Hill.*] You have mentioned it to one of the Barneses? Yes.
207. *Chairman.*] Have you ever said anything to Mr. Krefft himself on the subject? Never.
208. *Mr. Hill.*] Why did you not say anything to him? I was too much afraid he would turn me out.
209. *Chairman.*] Have you ever seen anything wrong going on in the Museum in consequence of the state that Mr. Krefft was in? Anything wrong in the building?
210. Yes; any improper use made of the specimens, for instance? No; I do not understand much about specimens; I never bothered myself with those things.
211. You have not observed any injury done to the Museum specimens? Yes. He took two lions, and a rocking-horse, and a little grey pony, and burned and destroyed them in the paddock. I remarked at the time that it was very foolish of him.
212. Was he quite sober when he did that? I cannot say. He was going about, at any rate.
213. You cannot say he was tipsy? No, I cannot say. He might be drunk, and I not notice it.
214. Do you remember some people of the name of Brack living here? Yes.
215. Were they quiet respectable people? Yes, they were very quiet people.
216. Did you ever observe any of the doors of the Museum open when you came in the morning—I mean doors that ought not to have been open? Yes; several mornings that great door at the back was open. I remarked to the man that it was very wrong. He said he fastened all the doors before he went away on the previous evening. That was before the Bracks came to live here.
217. *Mr. Hill.*] Next to Thorpe's room? Yes.
218. The door going into the yard? Yes. I said it was awful. I often wondered how it could get open. I dare not say anything to Mr. Krefft about it lest he should have abused me.
219. *Chairman.*] Was it O'Grady's duty to close and fasten the doors? Yes; I have helped him to do it often.
220. Perhaps it was yours and O'Grady's fault that the doors were open? No; we used to see that all the doors were fastened every evening. I have sometimes called on the Barneses to help me. If they were left open it was not our fault, but Mr. Krefft's. Mr. Krefft had keys to open them himself. He often had candles and sat smoking away.
221. Then the doors must have been opened by him after you had closed them? Yes. I often found the public entrance door open in the morning, with the key in it. We used to hang the keys on a nail before leaving. Sometimes when I have come to the Museum of a morning I have found it open, and the lamp, candles, paper, ink-bottles, scissors, and other things lying about.
222. *Mr. Hill.*] You were speaking just now about some lions, horses, or ponies being burned. Since the inquiry before the Select Committee of the Legislative Assembly do you recollect any other articles or animals or documents being burned? Since that inquiry commenced I have been taking papers by the apronful and burning them. From the time of the inquiry until I left they were burning papers and books.
223. Since which inquiry do you mean? Since the inquiry at the Legislative Assembly.
224. *Chairman.*] Are you still employed at the Museum? No; he sent me away in April or May.
225. Who sent you away? Mr. Krefft. One morning he gave me a cheque for two week's wages, and said

- Miss Gillespie. said he did not require my services any longer. I never came back. I never made any inquiry as to why I was dismissed.
226. Did he not tell you why he dispensed with your services? No, he did not.
227. And you have not been on the premises since? Never, unless I was sent for by a written order.
228. That is since April? Since April.
229. He gave you a week's pay in advance? Yes.
230. *Mr. Hill.*] That was some time after the Barneses were suspended? A long time after they were suspended. I could not think why Mr. Krefft sent me away, unless it was because I could not tell any lies.
231. *Chairman.*] Did Mr. Krefft suggest to you to give any evidence or information that was not true? Nothing but the gold robbery that happened, about the men coming back to work on the premises again.
232. Do you know anything of that gold robbery? No, I know nothing whatever about it. The first I heard of it was on the morning after the robbery. When I came to the Museum O'Grady told me that the doors had been smashed open. The gold was quite safe when I left on the previous evening.
233. Did you give Mr. Krefft any reason to suppose that you had any suspicion of him? No, not the slightest reason.
234. Had he always been civil towards you? Yes, very civil. He never did treat me badly. He used to scold me and domineer over me a bit. He was a hot-tempered man; but I never took any notice of that—I always obeyed his orders.
235. But you suddenly got paid a week's wages in advance and notice to go? Yes.
236. And you did not ask him why he sent you away? No, I did not ask him the reason; I went away.
237. What did you think was the reason? I suggested that it was because I would not tell lies.
238. You gave evidence before the Select Committee appointed by the Legislative Assembly? Yes, I did.
239. And was it before that Committee that Mr. Krefft wished you to give evidence that was not true? It was after that. The inquiry had been going on a good deal before he sacked me. It was something that occurred with respect to the Barneses one day. He called me in; but I could not tell for what reason he called me in.
240. You say you suspected that he turned you away because you would not tell lies. What was it he asked you to say, and before whom did he ask you to say it? There was a meeting here one day, and Mr. Krefft was asking questions as to the evidence given that day by the Barneses before the Committee of the Legislative Assembly. He wanted to know if they came back to the Museum in an excited state, throwing their hands about, and I said no, they did not. They were not excited more than usual. I do not know whether it was for that I was turned away.
241. *Mr. Hill.*] Then you are speaking now with reference to the evidence which you gave concerning the Barneses when he told them to wait outside until he came from the Assembly? Yes.
242. It was at that particular time when the Barneses were waiting for Mr. Krefft to come back from the Assembly? Yes.
243. *Chairman.*] You were usually paid your wages in money, not by cheque? Always by cheque.
244. A cheque signed by any of the Trustees of the Museum? No; signed only by Mr. Krefft. He paid me out of petty cash, as I understood. I gave him a receipt every week. At the monthly meeting I believe the Trustees signed my monthly cheque. He had that to himself, and I was paid out of petty cash every week.
245. *Dr. Alleyne.*] Can you read? I can read, but cannot write.
246. How do you know the cheques were not signed by any of the Trustees? They had only "Gerard Krefft" on them.
247. You mean to say you understand his signature? Yes, I understand his signature.
248. And there was no other signature but his on the cheques? No, there was only the one signature.
249. *Chairman.*] Do you know anything of a man named Tost who was employed in the Museum some years ago? He was dismissed from the institution a month before I came here.
250. Do you know why he was dismissed? I heard that there had been a row, but I never made any inquiries. I heard that he was treated very badly.
251. From whom did you hear it? From the Barneses and O'Grady. I knew nothing of it personally.
252. Did you ever hear what the bad treatment consisted of? I heard something about a conspiracy; that things were put in Tost's shop, and then a policeman was sent for to take charge of them as stolen property.
253. *Dr. Alleyne.*] The fact is you know nothing about the matter? Not personally.
254. *Mr. Hill.*] Do you know how long it was after Tost had gone that you heard this? I had been here about three months when I heard about the row.
255. And how long have you been here? I have been here five years last May.
256. *Chairman.*] Did you ever hear anything about the Curator breaking a fossil jaw? I never heard anything about it. I saw something about it in the paper lately.
257. Had you ever anything to do with the visitors' book? Yes, I always stood at the door when O'Grady was sent with a message anywhere. I used to call upon the visitors to enter their names. When any passed without doing so I used to put down the number.
258. *Mr. Hill.*] Suppose there were forty—did you ever register a large number like that? Sometimes "forty" has been put down when only two or three passed.
259. Whenever forty passed you put down forty? Yes; I have sometimes seen O'Grady put down 200.
260. Did he do that by instructions? Yes, he was told to do it by Mr. Krefft.
261. Did you ever hear Mr. Krefft tell him to do it? Yes.
262. What did Mr. Krefft tell him? He told him to put down a good number; to never mind its being correct, but to let it be a good number.
263. Could you point out any instance where this has been done in the visitors' book? No, I could not point it out in the book.
264. How long ago is this? It has been going on ever since I came here.
265. Constantly? Yes, constantly.
266. *Mr. Hill.*] It has been a continuous thing? A continuous thing.
267. *Dr. Alleyne.*] Do you mean to say that the practice has been not to put down the real numbers of visitors, but to put down imaginary numbers, to make the public believe that the institution was largely visited? Yes, that has always been the practice.

268. *Chairman.*] You have no ill-feeling towards Mr. Kreffit? None whatever.
 269. Would you come back to the institution if he were to ask you? Yes, I would.
 270. Who is doing your duty now? A little boy.
 271. Did you have charge of the Museum stores when you were here? No; I used to make the fires in the offices, and trim the lamps.
 272. Were the stores belonging to the Museum and those belonging to Mr. Kreffit kept separate;—how did you know whether you were using Mr. Kreffit's stores or not? The coal was all kept in one place. Mrs. Kreffit took charge of the kerosene oil. When I wanted any she gave me a little out, and locked up the other again. I do not know who paid for it.

Miss F.
Gillespie.

13 July, 1874.

This is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 13th instant.

her
HELEN + GILLESPIE.
mark

25/7/1874.

Henry Barnes called in and examined:—

273. *Chairman.*] You have been employed in the Museum for some time? Yes.
 274. *Mr. Hill.*] As what? As taxidermist.
 275. As a modeller? No, as setter-up of skeletons.
 276. You are the photographer, not the carpenter? The photographer and the modeller.
 277. *Chairman.*] During the time you were here did you ever observe the Curator under the influence of drink? Yes.
 278. At what hours, or what time in particular? Well, I have seen him at pretty nearly all hours of the day—at different times.
 279. At different times—early in the morning? I cannot say that I have seen him under the influence of drink early in the morning; but I have seen him under the influence of drink in the afternoon, after dinner, and occasionally at night.
 280. Has he on those occasions been unfit to do his duty? On several occasions I have seen him unfit for his duty.
 281. Do you recollect his going to Botany last Christmas Eve after a whale? Yes.
 282. Were you with him? Yes.
 283. Was he intoxicated then? Yes.
 284. Was he intoxicated before he left the Museum? No.
 285. Was he intoxicated before he returned? Yes.
 286. How did he get back? He came back in a spring van.
 287. With the whale? Yes, with the whale; it was a small whale.
 288. Did he not catch a death-adder on the road? Yes.
 289. You were with the Curator on that occasion? Yes.
 290. What time did you leave the Museum to go to Botany? As near as I can remember, it must have been between 10 and 11 o'clock in the morning.
 291. What time did you leave Botany to return home? It was in the evening, just upon dark.
 292. *Mr. Hill.*] It was in the long days? Yes.
 293. And you left Botany just between light and dark? Just between light and dark.
 294. What time did you get to the Museum? I think it was about half-past 7 o'clock.
 295. What part of Botany did you go to—La Perouse's monument? Yes, La Perouse's monument. It was across Botany Bay that we got the whale.
 296. What time was it when you started from La Perouse's monument? I cannot exactly say the hour; it was between light and dark.
 297. How long did it take you to come to the Museum? It must have taken us about an hour and a half.
 298. Did anything happen on the road? Yes; on the road we saw a death-adder; the wheels of the cart passed close by it.
 299. Whereabouts was that? I cannot tell you the spot exactly.
 300. Was it half-way, a third of the way, or a fourth of the way from Sydney? It was some distance before we came to the toll-bar.
 301. You say you started at dark, and yet saw a death-adder on the road? I may have made a mistake in the time we started. I cannot tell the hour exactly; it was still light enough to see the death-adder.
 302. However, you all came home together. What condition were you in? Perfectly sober.
 303. What condition were the others in? Perfectly sober.
 304. Was Mr. Kreffit sober? No; they were all perfectly sober saving Mr. Kreffit; the van-man was not perfectly sober.
 305. Do you know the van-man's name? Yes; his name is Dennis Mulqueaney.
 306. *Chairman.*] Do you know where he lives? No.
 307. *Mr. Hill.*] Do you know where he can be found? He can be found upon the van-stand.
 308. Mr. Kreffit was in the cart? Yes.
 309. Did he get in and out of the cart himself? I do not know.
 310. *Chairman.*] Were you in the hotel at Botany? No.
 311. You took your dinner with you? We took some food with us.
 312. Did you get anything to drink at all of an intoxicating nature? No; Mr. Kreffit got me some water with lemon-juice squeezed into it.
 313. That is all you had? That is all I had, but I saw plenty.
 314. *Mr. Hill.*] Plenty of what? Whiskey.
 315. *Dr. Alleyne.*] What did you see on that occasion that led you to think that Mr. Kreffit was drunk? He fell down two or three times, and had to be lifted up.
 316. Do you mean that he fell down as you have seen drunken men in the streets fall down, and that he had to be picked up again in the same manner as you have seen men in the streets picked up? Yes.

H. Barnes.

13 July, 1874.

- H. Barnes.
13 July, 1874.
317. *Mr. Hill.*] Did you go out from the Museum in the van? Yes, in the spring-cart.
318. Did Macdermott go with you? No; we went across the bay in his boat.
319. Did you take the whiskey with you, or was it supplied by any one? No; it was drunk in Macdermott's house.
320. Was any part of the spirits taken out in the cart? I think Mr. Krefft took a little brandy.
321. And the whiskey was supplied afterwards? Yes.
322. *Dr. Alleyne.*] It was supplied after you got back from the opposite shore of Botany Bay? Yes; whether Mr. Krefft had any before we went over I could not say.
323. *Mr. Hill.*] If Macdermott gave Mr. Krefft a glass of whiskey, would that keep him drunk until he got back to the Museum? He had more than one glass.
324. How do you know? I was in the house and saw him.
325. How long did you stop there? About an hour and a half or two hours.
326. Were there any strangers in the house? Not inside; two gentlemen rode up.
327. Who were they? I do not know.
328. Did they join you in the drinking? No.
329. They came up to the house and went away? Yes.
330. And there were no other persons there besides your own party? No.
331. Do you know Ben James or Mr. Spence? No, I do not know them; but they may have been there.
332. Were they there? There were two gentlemen rode up, but I cannot tell their names; they came up to ask the road to Banks's hotel.
333. Were they on horseback? I could not be certain whether they were on horseback or in a vehicle.
334. What state was Macdermott in? He was, I should say, very drunk.
335. At the time when Krefft was there? Yes.
336. *Dr. Alleyne.*] I presume you know when a man is drunk—and when you talk about a man being drunk, I suppose you mean he is in such a state that if seen in the streets he would be taken up by a policeman? I have seen many a man taken up who was not so bad as Mr. Krefft was.
337. *Chairman.*] Did you ever see Mr. Krefft drunk about the Museum premises on other occasions? Yes.
338. During working hours? Yes.
339. So drunk that he could not walk straight? Well, I have seen him reel a bit; of course he could walk; but I have never seen him worse than he was at Botany.
340. Was this a matter of frequent occurrence do you say? Well, I have seen it pretty frequently.
341. Have you any ill-feeling against him? Not the slightest.
342. *Dr. Alleyne.*] When you say pretty frequently, how often do you mean? Well, I cannot say how often.
343. *Chairman.*] Has this been a matter of long standing, or has it occurred recently? I should say it has been going on five or six years, as near as I can remember.
344. Did you ever say anything to Mr. Krefft about it? No.
345. Did you ever say anything to the Trustees about it? Never.
346. Has it been growing upon him? It seemed to be growing upon him a little before the disturbance in connection with the institution.
347. Was he violent when under the influence of drink? He generally seemed to be in a better temper on those occasions.
348. And you were rather glad to see him in that state? Oh no.
349. *Dr. Alleyne.*] When you speak of Mr. Krefft's being drunk, I want to understand whether you mean that you are sure he was drunk in the popular sense of the term? At Botany do you mean?
350. No, at any time. A man may take a little more brandy than is actually good for him; but it is another thing to be drunk in the ordinary sense of the term—so drunk that he cannot perform his ordinary duties? Yes, that is what I mean.
351. *Mr. Hill.*] When Mr. Krefft was in that state had the other employés of the institution an opportunity of seeing him? Yes.
352. Did they see him? Yes.
353. Did they make remarks about it? Yes.
354. *Chairman.*] It was a subject of conversation amongst you? Yes; we have often said one to the other, "Mr. Krefft is drunk again."
355. *Mr. Hill.*] Besides the day you were at Botany, could you specify any other day on which he was drunk? I cannot name any particular day, as I never kept the date. I can name one particular night; but of course that was after hours, and was in this place—on the Museum premises.
356. *Chairman.*] What night was that? The night I came to take his little boy to see a magic lantern exhibition.
357. You cannot tell us the date? I cannot tell you the date.
358. How long ago is it? It must be seven or eight months ago.
359. Do you know anything about some indecent photographs that were exhibited here? Yes.
360. Do you know anything more in connection with those photographs than you stated in evidence before the Select Committee of the Legislative Assembly? No, I cannot say that I do know anything more about them.
361. You told the Select Committee all you knew about them? Yes.
362. And what you told them was perfectly true? Perfectly true.
363. You knew a man named Tost who was formerly employed in the Museum? Yes, I knew him very well.
364. How long were you in the Museum with him? I was in the Museum with him for some years.
365. Was there any cause for ill-feeling between the Curator and Mr. Tost? At one time they seemed to be on very good terms; but before Tost left the institution there was some disturbance got up between them.
366. Do you know what that disturbance was about? Mr. Krefft charged him with taking things away from the Museum.
367. Mr. Krefft charged him? Yes, he found things in Tost's basket as he was going out, or something of that kind.

368. Was that long before Tost was sent away? No.
369. I think you told the Select Committee of the Legislative Assembly that Mr. Krefft had suggested something to you in connection with Tost;—can you tell us what that was? Yes; Mr. Krefft suggested that we should go down and search Tost's house for property belonging to the Museum. 18 July, 1874.
370. Mr. Krefft had reason to suppose that Tost had been making away with property belonging to the Museum? I understood that Tost had some property belonging to the Museum in his house. Mr. Krefft wished me to go with him to search Tost's house, and he told me to take something belonging to the Museum with me, and, in case of our not finding any stolen property, I was to drop it in the house, so that it might be found and Tost be apprehended for stealing.
371. You told that to the Select Committee of the Legislative Assembly? Yes.
372. *Dr. Alleyn.*] Are you prepared to make a statement on oath to that effect before a Court of Justice? I am prepared to make such a statement on oath in any Court in the world.
373. *Chairman.*] Did you inquire of the Curator why he asked you to do what you have stated? Not a word.
374. Did you obey him? No, I did not.
375. *Mr. Hill.*] Did Mr. Krefft preface his request by any explanation, or make any remark at the time as to why he wished you to do it? No. I have stated all he said to me.
376. What was it he said? "You take something with you belonging to the Museum, and in case we do not find anything, drop it secretly in his house so that it can be found."
377. So that it could be found by whom? So that it could be found, and Tost be convicted.
378. *Chairman.*] Then Mr. Krefft was anxious to get rid of Tost? Yes.
379. *Mr. Hill.*] Who do you suppose was to find what you were asked to drop? Mr. Krefft did not say; I suppose he meant that either he or I was to find it, or the detectives.
380. Since that time you have been on your guard about everything? I have never entertained any very high opinion of Mr. Krefft since. I thought that if ever he took a dislike to me he might perhaps try and serve me in the same way.
381. But you still kept on good terms with him? Yes, I kept on good terms with him.
382. *Chairman.*] The result was that Tost was dismissed? Yes; the result was that he was dismissed without the search.
383. Had you any reason to believe that the charges preferred against Tost by the Curator were not true—that is, did you believe Tost to be an honest man? Well, so far as I know, he always seemed to be pretty honest.
384. You had no occasion to suspect him of taking anything belonging to the Museum? No, I never saw anything dishonest in him.
385. It was the general remark amongst the employés of the institution that he had been ill-treated? It was generally understood in the Museum that he had been ill-treated.
386. *Mr. Hill.*] Did Mr. Krefft ask you, or did he get you, to sign any document in connection with this matter? In connection with Tost's dismissal?
387. Yes; did you sign any document in connection with it for anybody? I may have done so; I do not very well recollect.
388. For what purpose? I have not the slightest idea.
389. *Chairman.*] Was there any one present at the time you were asked by the Curator to drop something in Tost's house? Only my brother.
390. He was there and could testify to the same thing? He was just standing by in the shop.
391. I think you told that before the Select Committee of the Legislative Assembly? Yes.
392. *Professor Liversidge.*] Had you any reason to suspect that Tost took glue, nails, and other things that were Museum property home with him? As far as I recollect of the matter, it was in this way: as Tost was going out, Mr. Krefft took the basket from him, and brought it into the Museum and examined it.
393. You did not see any glue and things in the basket? Yes, I saw nails, and screws, and so on.
394. So far as you know, Mr. Tost did not take those things? Mr. Tost may have taken those things. I have frequently seen him going in and out with his basket. Whether he intended to steal the things or not I do not know.
395. What I want to know is whether you have ever seen him take things away in his basket? No. I have seen him taking his basket away.
396. *Mr. Hill.*] The particular one that you saw Mr. Krefft take away from him? No, not the basket he had when Krefft met him.
397. Did you see him with that basket at any other time? Frequently.
398. It was his own property? I cannot say whether it was his own basket or the Museum basket.
399. *Professor Liversidge.*] Did you see Tost take away those things which Mr. Krefft told you he had taken? No.
400. *Dr. Alleyn.*] Did Tost bear the character of being an honorable man, or was he a disreputable man? I have never heard anything bad against his character.
401. So far as you know, he was always considered to be an honest and decent man? He was always considered so.
402. Do you consider that at the time Krefft examined his basket he was a thief? No.
403. *Chairman.*] Were you present or employed at the packing of any bones for England, from the Museum? Yes.
404. When? It must have been about the month of October, 1873.
405. What was it you packed? It was a large jaw of a diprotodon—a restored jaw.
406. Was that the last thing you packed? It was the only one. We did not exactly pack it. At least, I did not exactly pack it; but I was present at the packing.
407. How was it packed, and what was it packed in? It was packed in a brandy-case.
408. Was not the jaw too large for the case? Yes.
409. And how did you make it fit? We did not do anything to it—Mr. Krefft made it fit.
410. How did he make it fit? He broke it up with a hammer and bradawl.
411. What did he do that for—could he not have got a larger case? Yes, he could have got a larger case.
412. Did he say anything at the time? I do not know whether he said anything at that time, but I know he said that Professor Owen should not get it perfect.
413. So with the hammer and bradawl he smashed it up? Yes, he smashed it up. 414.

- H. Barnes. 414. What was the size of the box it was put in? I think the brandy-case was made to hold about a dozen bottles.
- 19 July, 1874. 415. By how much larger was the jawbone than the case? In the height I think the brandy-case was seven or eight inches; the highest part of the jaw must have been over ten or eleven inches.
416. And what about the length of it? I think it went in in the length.
417. It was in the height that it was too much for the case? Yes.
418. You are quite sure he said that Professor Owen should not get it perfect? Quite certain.
419. Was your brother with you at the time—or who was with you? Only my brother.
420. Tell us again what Mr. Krefft said? If I must use the word, he swore.
421. *Dr. Alleyne.*] You must give us the exact words he used, as far as you can recollect them? He said—“I’ll be damned if Professor Owen shall get it perfect.” I won’t say he used the words at the time we were packing it, or a little while before we commenced it.
422. *Mr. Hill.*] When this bone got into your possession what was it intended for? To be mended and then to have a cast taken of it.
423. To repair it or glue it? To stick it together, and then to take a cast of it.
424. Did you make any additions to it with clay or cement to make it perfect? Yes, I made the top part of the ramus and the back part of the condyle with clay for the model.
425. When that was done it was considered complete for moulding? Yes.
426. Then what did you do? I took the moulding.
427. And then what? The clay part falls off after the moulding is taken—it is no good.
428. Did the clay or bone part fall off? It was only the clay.
429. Then it was not the clay part but actually the bone that was broken? Yes, it was the fossil itself.
430. *Dr. Alleyne.*] How did you get the cast of the condyle? I modelled it.
431. From what? From a drawing.
432. Did you have the bone of a smaller animal to model it from, or did you model it from a drawing, or a sketching, or pencilling? Principally from a sketch, and as near as I could think of myself.
433. *Chairman.*] Who made the sketch? It was, I think, out of one of Professor Owen’s books. I remember now there was a cast of one of the condyles.
434. *Dr. Alleyne.*] Where was the cast got from? From the Museum.
435. What was it made from? That I do not know—it was made before my time.
436. *Chairman.*] You are the photographer here? Yes.
437. You gave evidence before the Select Committee of the Legislative Assembly respecting some indecent photographs? Yes.
438. Have you anything to add to what you stated to the Committee on that occasion—you got them from Dr. Patterson, I think you said? Yes, I got some from Dr. Patterson, and one from a gentleman named Abbey, and some were Mr. Krefft’s own private property.
439. Patterson was a herbalist—not a regular doctor? He was a herbalist, but he used to go by the name of Dr. Patterson.
440. You are speaking of a man who was convicted of procuring abortion for a woman, and who was sentenced to gaol? Yes, that was the man.
441. Did you take copies of the photographs? Yes.
442. Did you take them for your own amusement, or what did you take them for? I took them for Mr. Krefft.
443. Did Mr. Krefft tell you to take them? Yes. They were lent to me by Dr. Patterson to show to Mr. Krefft, who, he said, was a friend of his.
444. Did you ever do work out of the institution for other people? Yes.
445. For whom? Well, I have principally worked for Dr. Cox.
446. I think you were questioned very largely upon that point before the Select Committee of the Legislative Assembly? Yes.
447. And you told the Committee all you knew about it? I told them all that occurred.
448. Did you sell any of the photographs you spoke of? No.
449. You were not employed by Mr. Krefft to sell any of the photographs on his account or on account of the institution? Yes, he employed me and my brother at one time to sell photographs.
450. What were they photographs of? It was a view I took on the occasion of the laying of the foundation stone of Captain Cook’s statue.
451. *Mr. Hill.*] That is the view you took from the roof? Yes.
452. *Chairman.*] What did you do with the proceeds of the sale? Gave them to Mr. Krefft.
453. *Mr. Hill.*] I think you gave evidence before the Select Committee of the Legislative Assembly to the effect that you were ordered by the Curator to make cases and set up specimens for other people? Yes. Set up specimens?
454. Yes? No, I did not give any evidence about setting up specimens.
455. Did you give any evidence about your having used material belonging to the Museum for other people? Yes.
456. Did you use the property of the Museum for other people? Yes.
457. *Chairman.*] Are you still on the Museum staff? Yes.
458. And are you paid? Yes.
459. Do you work here? No, I work at home.
460. Under whose directions? Under Mr. Krefft’s directions.
461. *Dr. Alleyne.*] When did you last receive directions from him? About a fortnight or three weeks ago.
462. What work were you doing? Setting up skeletons.
463. What work are you doing now? I am setting up a wallaby now.
464. Who told you to do that? Mr. Krefft.
465. When did you receive instructions to set up the wallaby? About a fortnight ago it was brought to us; it might not be quite a fortnight.
466. *Chairman.*] Who brought it to you? O’Grady.

This is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 13th instant.

HENRY BARNES.
25/7/1874.

Robert

Robert Barnes called in and examined:—

467. *Chairman.*] How long have you been employed in the Museum? About seven years and a half.
468. In what capacity? General assistant and carpenter.
469. You have had frequent opportunities of seeing the Curator, I suppose? Yes.
470. Did he occasionally go into your room to see you at work? He used to come into our shop almost every day.
471. Any particular hour of the day? No, he would come in at all hours.
472. In any of his visits did you ever observe anything peculiar about him? I have very often seen him under the influence of drink.
473. How did he exhibit it? By not speaking properly—by not walking properly. I can tell when a man has got drink in him.
474. You say he could not speak or walk properly? Not as a sober man should do.
475. What hour of the day was this? I have seen it at all hours of the day.
476. Not very seldom, but very frequently? Frequently.
477. More so of late than it was a few years ago? Well, it has been more so of late than it was a few years ago; but I have known it ever since I have been here,—that is, for six or seven years.
478. Have you any idea what it was he took which brought about such a state of things? His principal drink was ale.
479. Did you ever go to get ale for him? Yes, very nearly every day.
480. Where did you go for it? I used to have to go to Hughes's, to Tigue's, to Roberts's; in fact, I have been sent nearly all over Sydney to see where I could get the best and cheapest ale. I have been to Peate & Harcourt's amongst other places.
481. At what time of the day were you sent on these errands? In Museum time, as well as in my own time.
482. You have been sent all over Sydney to see where you could get the best and cheapest ale? Yes, I have.
483. *Mr. Hill.*] I suppose you never tried the Colonial ale? Yes; that was what I was sent down to Peate & Harcourt's for.
484. Used you to pay for the drink as you got it? I used to pay for the draught ale, and the bottled ale that I got from Roberts's I paid for; I generally paid when I went to the retail houses; at other places I used to tell them to send up the cask.
485. Did Mr. Krefft pay for it? He used to give me the money.
486. And you were constantly employed in going about to get ale? Yes; it is part of my duty to go with messages.
487. Can you call to mind any particular occasion when the Curator was more than usually in a state of beer? I have seen him very far gone frequently.
488. Can you call to mind any particular day or instance? On the 23rd of December he was very drunk, but he was not on the premises at the time.
489. Where were you then? We were out at Botany.
490. Was your brother with you? Yes, and Mr. Masters also.
491. What time did you go out? We started from the Museum between 10 and 11 o'clock, I think.
492. Was Mr. Krefft drunk then? No, he was quite sober then.
493. When was it he began to exhibit signs of drunkenness? After we got the whale, about half-past 3 or 4 o'clock. He went into Macdermott's place and left us outside; and about three-quarters of an hour afterwards he sent for us to go inside to have something to drink. When we went inside we saw a whiskey bottle on the table. He asked us to have some, but we declined. He then gave us some water with some lemon-juice in it.
494. Was Mr. Krefft tipsy at that time? Yes, he was very drunk.
495. How did you get him home? We brought him home in the van.
496. Did you put him into the cart? We did not put him in.
497. Did anything happen on the road home? Just outside the enclosure at Botany, Mr. Krefft was trying to get into the cart over the offside wheel, and Maedermott was trying to shoulder him up. He would not have that, so he passed round by the horse's head, and stopped just where I was sitting; he staggered back off the road a little and fell down into a hollow; there he lay and could not get up; I had to assist him up.
498. You got him home safe? Yes, we got him home safe.
499. Was he able to get out of the cart without assistance? I assisted him out of the cart at the steps.
500. Can you call to mind any other occasion on which Mr. Krefft made a similar exhibition of himself? Yes. It must be some ten or eleven months ago; there was a young German friend of his who had come from the Fijis, and was stopping with him; and the day the young gentleman went back to the Fijis, a party went out to Botany, and when Mr. Krefft came home he was dreadfully drunk.
501. What hour of the day was that? It was after 5 o'clock when he came home.
502. *Chairman.*] On both of the occasions you have mentioned he got drunk when he was away, but he was ordinarily sober when he was on the Museum premises? Oh no; I have seen him throwing up in the cellar.
503. *Mr. Hill.*] Do you mean he was throwing brickbats about? No; he was vomiting.
504. *Dr. Alleyne.*] Did you attribute that to drunkenness—you know what is meant when a man is said to be in a state of drunkenness? I have seen him in all stages.
505. *Mr. Hill.*] You never saw him dead drunk—so drunk that he could not move? I never saw anybody so drunk that they could not move.
506. *Chairman.*] Did you know a man named Tost? Yes.
507. Do you know any circumstances in connection with his leaving the Museum? Yes.
508. Will you tell us what they were? One morning Mr. Krefft called me and my brother, and O'Grady, and old Mac, I believe, into a room underneath this Board-room; he also called Mr. Tost. He had Mr. Tost's tool-basket on the table, and before us all he accused Mr. Tost of taking this tool-basket away with screws, nails, glue, and things like that, belonging to the Museum. Tost did not deny it, and said that he always took his basket home and fetched it back again. There was a good deal of disturbance. Krefft wanted Tost to apologize to him, and threatened to suspend him if he did not. Tost said that Krefft should

R. Barnes.
13 July, 1874.

- R. Barnes. should apologize to him. With that, I believe, Tost took his hat and coat and went up-stairs. He suspended himself, I believe. There was then an inquiry about it, and Tost was dismissed.
- 13 July, 1874. 509. Was there anything unfair in the charges against Tost, so far as you know? There was nothing unfair in the charge that was tried here—in the charge that was tried before the Board.
510. *Mr. Hill.*] How do you mean tried before the Board? Nothing unfair at the Board.
511. At the Board you never were consulted? Yes, I was a witness.
512. What was the result of the inquiry? The result was that Tost got dismissed.
513. *Chairman.*] Was it generally supposed that Tost was unfairly charged? No.
514. Were you present at the packing up of a bone that was to be sent to England? Yes.
515. *Mr. Hill.*] Do you know anything with reference to a request that was made by Mr. Krefft that something should be deposited in Tost's house? Yes.
516. Just state what it was? On the morning that Tost was to be tried by a sub-committee appointed for the purpose, Krefft came down to my shop, which was in the cellar, and said to my brother—"I am going to get two detectives," or "I have got two detectives to search Tost's house, and I want you to take something belonging to the Museum, and in case we do not find anything belonging to the Museum there, to drop it in his house."
517. What other observation did Mr. Krefft make at the time? He made no other observation, so far as I can remember.
518. Now, if you were brought before a Court of Justice would you swear that such a thing took place? I would.
519. Would you swear that Mr. Krefft invited your brother to drop something in Tost's house? I would swear that he did do so. He said on one occasion—"We must crush Tost; Tost has lots of charges against me, and against you too."
520. And he told you that you must assist in crushing Tost? Yes; he said that to three of us on the stairs.
521. You are quite positive as to that? Quite positive.
522. You are sure he did not mean the words to apply to anything else? No; it was all about Tost. He told us that Tost had brought many charges against him, and many charges against us, and that we must assist him in getting Tost out.
523. Did you take anything to drop in Tost's house, as requested? No; nothing.
524. Did you tell any one about this? I think I told O'Grady about half an hour after it occurred.
525. *Dr. Alleyne.*] What kind of charges did Tost bring against Krefft and you and your brother? I do not know that he brought any charges against Mr. Krefft. We only knew what Mr. Krefft said to us. I do not know whether he did actually bring any charges. Mr. Krefft said that Tost had brought charges against him.
526. *Chairman.*] Had you any dread of Tost as to anything he could say against you? I had no particular dread, but I thought he might say something against me.
527. *Dr. Alleyne.*] What charges did Mr. Krefft say that he was bringing against you and your brother? He did not mention the charges that Tost was bringing against us, but he mentioned the charges that Tost had brought against him.
528. *Mr. Hill.*] Do you remember any property belonging to the Museum being burned? Yes; there were two lions, bears, tigers, leopards, antelopes, monkeys, and a Shetland pony, that used to be exhibited in the Museum.
529. What were they destroyed for? I do not know. They were all burned.
530. Were they destroyed before they were burned? Well, the pony was taken out of the Museum and put on a stand for Mr. Krefft's little boy to ride on. It was a Shetland pony that had been given by Mr. Burt.
531. *Chairman.*] What were the lions destroyed for—were they lousy or full of moths? No. Thorpe said he could make fine exhibits of them. The lions were set up—Mr. Tost set them up himself.
532. *Mr. Hill.*] Were they skeletons or skins? Skeletons and skins too.
533. Were they all burned? All except the jaws.
534. *Chairman.*] Did Mr. Krefft assign any reason for burning them? No, except that he said they were all rubbish.
535. *Mr. Hill.*] Were any books or papers destroyed? I have at times burned lots that were thrown away as rubbish.
536. *Chairman.*] Have you any ill feeling against Mr. Krefft? None whatever; I have no ill feeling against any man alive.
537. Did he always treat you well? I cannot say that he has always treated me well; but I have no ill feeling against him—I make allowance for his bad temper.
538. Have you done any work for people outside the institution, and given receipts for it in anybody else's name? Yes.
539. By whose orders? Mr. Krefft's.
540. You gave evidence to that effect before the Select Committee of the Legislative Assembly? I did.
541. Did you tell the Committee all that you knew about that, or is there anything further that you can add? I can add nothing further; it is well known that I used to sign cheques for work done here for "William Bradley."
542. Is the man you represented alive? I never knew William Bradley.
543. You recollect a Bradley? Yes, it was James Bradley.
544. Did you ever speak to him about using his name? No.
545. What suggested to you the name of Bradley? I do not know; it was the first name that came into my head.
546. Did Bradley ever do any work for you? We were boys together, and used to work together.

This is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 13th instant.

ROBERT BARNES.
25/7/1874.

TUESDAY,

TUESDAY, 14 JULY, 1874.

Present:—

H. G. ALLEYNE, Esq., M.D., | EDWD. S. HILL, Esq., J.P.,
PROFESSOR LIVERSIDGE.

CHRISTOPHER ROLLESTON, Esq., IN THE CHAIR.

Robert Barnes was called in and further examined:—

547. *Chairman.*] You say that you adopted the name of "William Bradley" just as you would any other name which might occur to you at the moment? Yes. R. Barnes.
548. What was the reason why your own name was not attached to these papers? Mr. Kreffit said it would not look well for me, being in the employment of the Trustees of the Museum, to be signing my own name to bills for work done out. This was work I did in my own time. 14 July, 1874.
549. For private individuals? No; for the Museum—making bird-stands, glass boxes, or doing any other little jobs.
550. *Mr. Hill.*] Then do I understand that you were working here all day for the institution, and you had the privilege of working after-hours, but as it would not look well for you to be working all day and all night too, you put in another name? Yes; Mr. Kreffit gave me these little jobs to do, because he knew that I had a large family, and could do them as well as anybody else.
551. Who suggested that you should adopt another name than your own? Mr. Kreffit; but he did not suggest the name Bradley.
552. Did he suggest that you should adopt any name other than your own? He did.
553. What words did he use? As near as I can remember, he said—"Don't send the bills in in your own name; it does not look well; put in any other name."
554. Did you do so? Yes.
555. Did you give him a receipt in the name of Bradley for money which he paid you? Yes, always. I used to sign them here myself.
556. Who made out the accounts? My nephew.
557. Who made out the accounts for yourself? I never gave any for myself.
558. You got your own wages without an account, and your nephew made out the accounts for the work done in the assumed name of Bradley? Yes.
559. These accounts appear in your nephew's writing? Yes.
560. Who receipted the accounts? I did; I receipted it "Wm. Bradley" myself.
561. You received the amount and gave the receipt? Yes.
562. Did you ever give any other accounts to Mr. Kreffit for work done in your own name? We were here working over-time at the time of the Exhibition.
563. I mean, did you give any accounts in your own handwriting? None.
564. You do not recollect giving any accounts in your own handwriting? No.
565. These accounts, which appear receipted by Bradley, are in your nephew's handwriting, receipted by you;—is that clear? That is clear.
566. *Chairman.*] Did you prepare a case for some fossil bones that were to be sent Home? No; it was a brandy-case.
567. It was about the premises? It was down in the spirit-room.
568. Had you anything to do with the packing of this bone or these bones? I nailed the lid on.
569. What was it? The restored fossil jaw-bone of a diprotodon. We have a cast of it in the Museum now.
570. About what size? With the ramus and all it would be about 14 inches deep.
571. Was the brandy-case a case for holding a dozen bottles? Yes.
572. Was the case big enough to receive the bone? No.
573. In what way was the case too small—in height? It was wide enough.
574. How did you get the lid on to the box—did you reduce the specimen? I did not reduce it.
575. What was done to make the box hold it? It was broken.
576. By whom? By Mr. Kreffit.
577. With what? With a hammer and bradawl. The bradawl was chiefly used to pick the wires out.
578. Did he say why he used this force in breaking the thing up? I do not know if there was any reason. He said he would be damned if Professor Owen should get it in any other state than what he had it in, and my brother remarked that Professor Owen would not be able to put that together.
579. Was the Curator sober? He was competent to know what he was doing. He had had a glass, but he knew what he was about.
580. It was not done under the influence of a glass? He would not allow us to make it according to the figure of Professor Owen at all. We had to make the skeleton with eleven ribs; Professor Owen's has thirteen. He would not allow us to work the upper skull according to the cast we have inside here, according to the figures of Professor Owen. It was Mr. Kreffit's impression that the diprotodon was a very large bear or wombat, that is, a species of bear or wombat. The form of the skull resembles a bear's skull.
581. *Mr. Hill.*] In this diprotodon which you were restoring, you first secured the true bone together? Yes, out of thousands of fragments.
582. You made that one whole? Yes, what there was of it.
583. The other parts you restored with clay? We modelled the ramus and condyle with clay—portions of the ramus and the whole of the condyle.
584. You did that to make a mould for the model? —
585. Was there any portion of the clay attached to it when you were packing it up? No; the clay falls right off as soon as we have done with it.
586. You are quite sure that there was no clay on it? Nothing to speak of.
587. You are sure also that it was the fossil bone that was broken up by Mr. Kreffit? Yes.
588. You are certain of that? Quite confident of it.
589. Was that in the original joinings where it was put together by you? —
590. *Professor Liversidge.*] Or did he form fresh fractures? Yes, or it would have been easier to put together than we had it to do, because we had to find the small pieces of the bone out of thousands of pieces. 591.

- R. Barnes.
11 July, 1874.
591. In picking up this bone did you fill the spaces up? Yes, with a whole apronful of bones that Mr. Krefft sent up from the cellar.
592. How did you know that they were portions of a diprotodon? Because they came from Dr. Bennett. We fetched all the bones from Dr. Bennett's; they were all mixed up together—pieces of ribs, skulls, jaw, vertebra. We had to separate them to find portions of the jaw. We took what we wanted from this heap, and after we had done with them put the others back again.
593. *Dr. Alleyne.*] You said that you made this diprotodon according to the cast inside;—what cast inside were you referring to? This is not a cast. It is a model that we have made.
594. When you said a cast inside, what were you referring to then? It had been a bear's head—not a diprotodon's.
595. The cast inside was the head of a native bear? Yes.
596. Is that what you mean? Yes.
597. One of the native bears, such as we have got in the bush now? Yes.
598. You were making then, as I understand you, the skull for this supposed diprotodon from the pattern of what is ordinarily called a native bear? Yes, we modelled from a native bear's skull.
599. You were not modelling from the figure or the cast in the Museum? No; nothing more than the teeth and the native bear's skull. It is mostly all manufacture.
600. *Mr. Hill.*] Did you make the cast resemble that of the native bear you were doing it from? Yes, with the exception of the teeth. The lower jaw is from the original diprotodon jaw.
601. The lower jaw was really diprotodon? Yes.
602. And you made something to fit the diprotodon from a bear's head? Yes; to fit the diprotodon lower jaw.
603. And could you make it fit it? Yes.
604. Could you make a bullock's head fit it? Yes.
605. *Chairman.*] You were generally employed in carpentry work in the Museum? Many years ago, in Post's time. The carpentering was stopped then.
606. Did you do work for persons outside the Museum when you were employed here? Yes.
607. By whose direction? I did work for the Museum by Mr. Krefft's direction. I have done private work for Dr. Cox, but I have not done much—a few picture-frames.
608. On the premises? No; at home.
609. Out of material belonging to the institution? No; my own material.
610. Dr. Cox paid you? His money paid for everything.
611. Was the Curator in the habit of getting furniture made for himself on the premises by yourself or any of the employés? He has had a good many things made that he has always told me to make. I have made three tables and a clothes-press which is now up-stairs in his private room. It was to have come into this place to hold papers.
612. A press which he ordered you to make to hold papers has gone up-stairs? Yes.
613. Have you ever been ordered by the Curator to make up specimens for private individuals and send them away? I have packed specimens for Dr. Bennett.
614. Anybody else? Not that I can remember.
615. What were these specimens? A good many of them were the bones we got from Dr. Bennett, and other little things. I have taken small cases. I do not know what Mr. Krefft has put into them. Mr. Krefft has packed them himself.
616. You did not take notice with what—you did what you were ordered by the Curator? Anything he told me to do I did. I pack up nearly everything that goes away.
617. Were many things sent away from the Museum elsewhere? Lots and lots of things.
618. Were they sent out of the Colony, or in the Colony? Out of the Colony. I should suppose they have been for ships.
619. Were they specimens belonging to the Museum? Yes; such as casts and bones. We have sent five casts of the lower jaw of the diprotodon away, and I think ten casts of crocodile's head.
620. *Dr. Alleyne.*] Where did you send them to? That I cannot say. To different parts of Queensland, I think, and to Melbourne.
621. Not sent to Europe? There were lots of things sent to Europe. I have seen the addresses on them.
622. *Mr. Hill.*] When you packed these cases you would know the contents of them? Yes. I have packed a whale's head—the skull of one of Gray's whales.* We sent two or three casts of the whole of the diprotodon, all the limbs, all that we have got. The ribs and things are all modelled.
623. Have you got a diprotodon in this institution in the bone? No, only a copy of one.
624. You cannot send models of things which you have not got in existence? We can if we make models and send casts of them.
625. To whom were these specimens sent or addressed that you packed? I cannot say.
626. You cannot say to whom the packages were addressed? Mr. Krefft sent one lot down to the steamer to Professor M'Coy, Melbourne. I paid the freight and got the receipt.
627. Do you recollect anything addressed to any one else in any other part of the world? No. I have often sent cases addressed to Professor Owen.
628. *Chairman.*] Were they addressed as coming from the Curator, Mr. Krefft, or from the Trustees of the Australian Museum? He did not put the address on in that way. I make the cases and Mr. Krefft addresses them.
629. *Mr. Hill.*] Has there been any marsupial animals packed in these cases? The cases have contained birds, genus homo, skeletons, skulls, reptiles, fishes. I cannot remember at this moment.
630. Do you recollect anything now beyond what you have said in the shape of moulds and casts of fossils? I cannot recollect particular cases.
631. You distinctly remember taking a package down to the steamer for Professor M'Coy, of Melbourne, and paying the freight;—about what time was that? Some three or four months before Christmas.
632. Last Christmas? Yes. We took a lot on board the French man-of-war when she was here.
633. *Chairman.*] The "Atalante"? I do not know. We took them to a gentleman I think of the name of Lieutenant Mudge.
634. *Mr. Hill.*] And about that time you sent a case to Professor M'Coy? Somewhere about that time. It was about the time when we took two or four legs down to the Exchange.
635. *Professor Liversidge.*] You took portions of the casts of the diprotodon down? Yes. 636.

* NOTE (on revision):—A large portion of the skeleton of the whale also went away in the same case.

636. *Mr. Hill.*] That identifies the time? About that time.

637. Is there anything else that you desire to say to the committee about any of these matters—anything which you have forgotten? No.

638. Do you wish to retract anything? The only thing that I should like to say is in justification of myself. Mr. Kreffit accuses me of taking complaints to the Trustees, which I utterly deny. I never went to the Trustees in my life until I was suspended, and I asked them to attend the meeting to see that I got fair play. I never spoke to the Trustees before that. Dr. Bennett says I did on one occasion, but I deny it. I never took complaints to any of the Trustees.

This is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 14th instant.

ROBERT BARNES.

25/7/1874.

R. Barnes.

14 July, 1874.

J. A. Thorpe was called in and examined :—

639. *Chairman.*] You have been employed in the institution for a considerable time? Between five and six years. J. A. Thorpe.

640. In what capacity? Taxidermist.

641. In the course of that time you have had frequent opportunities of conversation with the Curator? Yes.

642. Daily, I suppose? Every week at least.

643. Was he at all times sober and in a competent state for the performance of his duties? I cannot say that he was always sober, but I cannot say that I have seen him what I call drunk. I have very frequently seen him under the influence of drink.

644. What do you call drunk? He can always stand and talk, but there is that in his manner which shows that he has been drinking heavily.

645. Was this early or well on in the day? Generally towards 3 or 4 o'clock in the afternoon—sometimes before that.

646. How did it show itself? Usually in a flushed appearance, in a laughing strange manner. I can hardly describe it.

647. Was he violent in his manner or conduct towards yourself at all? No.

648. Or towards any of the other servants of the institution? Yes, I have seen him very violent.

649. But perhaps they had been doing wrong? I do not know.

650. You cannot say that it was entirely from his having taken too much? I did not always attribute Mr. Kreffit's violence to his having taken too much liquor.

651. You do not? No.

652. He was naturally impetuous, was he? Yes, naturally very violent; and I think he has often been so when he has had no occasion to be so.

653. You think that was infirmity of temper? Yes, I do.

654. Then you cannot say that as a rule he has been unfit to discharge the duties of Curator of the Museum? Perhaps he came under my notice less than any man in the establishment. The room where I work is rather isolated from the rest, and he does not take any particular interest in my branch of the business. He took more interest in bones, fossil remains, and things of that kind that were being set up in the workshops by the Barneses. Sometimes I have known him to be for a week or ten days without coming into my room at all, but I have frequently seen him pass to the workshops during that time. He would not be under my notice at all.

655. Were you here in the time of a man named Tost? No; I succeeded Mr. Tost.

656. You know nothing personally of the circumstances under which he was discharged? No, only from hearsay.

657. Did you know Mr. Tost? No.

658. What did you hear of Tost—was he in good repute here? The men told me that he had not had fair play. They told me that it would be better to keep myself to myself.

659. Who cautioned you? O'Grady and the Barneses.

660. What did they say? They said that Mr. Tost had not had fair play, and one of the Barneses—it was Harry Barnes—told me that Mr. Kreffit told him to put something in Mr. Tost's house, and that a detective was to find it there. That was the purport of what he told me.

661. Was this told to you on your first coming to the Museum? No, I do not think it was. I think it was a year or eighteen months after that I heard it.

662. That would be about four years ago? It must be three or four years ago since I heard it first. I have heard it frequently repeated since.

663. Have you yourself been on good terms with the Curator? Yes, on very good terms; until about the time of the gold robbery, or since I gave evidence before the Select Committee. That was about the first time that Mr. Kreffit began to be cantankerous with me.

664. What did you attribute that change in Mr. Kreffit's conduct to? I could not say, unless it was that he was offended at what I said before the Select Committee; but what I said there was the truth, and I am willing to take my oath upon it.

665. *Dr. Alleyne.*] Did Mr. Kreffit suspect you of being concerned in the gold robbery? No.

666. *Chairman.*] Were you one of the party who went to Botany to get a whale? No.

667. Were you at the Museum on the Christmas Eve? I was here, at the Museum.

668. Did you see the Curator on that day? I do not think I did.

669. Either in the morning or evening? I do not recollect seeing him.

670. Were you here when the party returned from Botany with the whale? No. The day Mr. Kreffit left with the party to get the whale—I think it was on the Tuesday—he came to me and asked me to see that O'Grady, the messenger, was at his post. He said—"Thorpe, you will be good enough to see that O'Grady is at his place. I won't trust him at his place alone. You need not work to-day, but you can go and see that he is at his post." I walked about the Museum all that afternoon, and I saw that O'Grady was always there.

- J. A. Thorpe. 671. *Mr. Hill.*] At the door? Yes.*
672. Did you see the gold specimens there that day? No, I did not.
- 14 July, 1874. 673. You did not look into the cases? Not for three weeks before.
674. Was O'Grady perfectly sober on that day? Yes. I never saw him otherwise. I do not know that he drinks.
675. *Chairman.*] Have you observed the Barneses at all the worse for liquor? I have known Henry Barnes to be the worse for liquor, but not recently. I have not seen Robert Barnes the worse for liquor.
676. Have you seen Henry Barnes the worse for liquor recently? Not for the last two years. I think he turned teetotaler then, and I have not seen him the worse for liquor since.
677. Have you been required by the Curator to make up specimens for private individuals during your employment here? Yes, on a few occasions.
678. Only on a few occasions? Only on a few occasions.
679. Will you name the persons for whom you set up specimens, if you know them? I set up a wallaby for the Honorable Henry Parkes, and a duck and a ring-tailed opossum for Sir Alfred Stephen.
680. The practice has not been a very common one? Not with me.
681. It has been exceptional? Yes, exceptional.
682. Had you anything to do with taking photographs? No.
683. Do you know anything of any indecent photographs being exhibited about here? I have seen them.
684. Do you know by whose orders they were taken, or who were responsible for their being here? I do not know by whose orders they were taken, but I have seen Henry Barnes frequently bringing them through my room to take them to Mr. Kreffit. He said that he was going to Mr. Kreffit with them. I never saw them in Mr. Kreffit's possession.
685. Were they sold outside? I never knew them to be; I never saw the indecent ones outside.
686. Do you know whether any photographs were sold? Only from hearsay.
687. What did you hear were sold? I have heard that some photographs of Captain Cook's statue, taken at the time the Duke of Edinburgh laid the foundation stone, were sold to the value of 7s. 6d.
688. You do not know of anything else? No.
689. Do you know anything of the visitors' book? No, nothing more than what I have heard O'Grady say, that he had to put down a larger number than the actual number of persons.
690. A larger number than absolutely came in? Yes.
691. When did you hear O'Grady say that? I have heard it almost from the time I came here; I have heard that that has been the practice in the institution.
692. *Mr. Hill.*] You got your wages every week? No, every month.
693. Did the Barneses get theirs at the same time? I believe so.
694. Do you know as a fact that they did? Yes.
695. Do you know any particulars with reference to the Barneses getting wages for extra work and giving a receipt at the same time? No; I have heard one of them say that he signed in the name of William Bradley.
696. What was his object? He said—"I do not sign my name for these things." We were talking once about his working overtime, and I was saying that he made up a nice little sum. "But" said he, "William Bradley gets this." He said that in a joke, and in explanation he said that he signed "William Bradley" instead of his own name.
697. You never saw the signature? No, nor did I ever see him sign it.
698. Since the beginning of the Inquiry by the Select Committee of the Legislative Assembly what has Mr. Kreffit's conduct been towards you—since you gave your evidence? At first he began by raving and roaring like a bull at me, speaking to me as if I were a dog. I told him that a little of that would go a long way. I told him, the first time, that I had not been used to being talked to in that way. I was very much annoyed, but I did not give him any impudence, and since then I have seen very little of him. He has been almost invisible for the last three or four months.
699. *Professor Liversidge.*] Why did he roar at you—had you done anything wrong? No, I had not. In the first instance I misunderstood him. He told me to lock a door. It was blowing very hard, and I did not understand what he said. I used to leave work with Masters at 4 o'clock, but Mr. Kreffit made me stop till 5.
700. *Mr. Hill.*] Did he explain to you the reason you were to stop? No; all that he said was that the Trustees were frequently here after 4 o'clock, and that when they asked for me I could not be found.
701. Did he tell you that it was an order of the Trustees that one if not both of you were to stay? No. At the time he made me stay I was very unwell, and I had very disagreeable work to do. The stench was frightful from the decomposed animals upon which I was working.
702. *Chairman.*] Had you anything to do with the attempted preservation of the sun-fish? Yes.
703. Why did you not succeed in preserving it? I was not allowed to do so.
704. By whom were you not allowed? Mr. Kreffit.
705. For what reason? I think it was from some ill feeling between Mr. Kreffit and Dr. Cox.
706. What grounds have you for thinking so? Mr. Krent said that he was not going to have specimens brought from the Trustees to be preserved and then to be taken out of the place—he was not going to let them make a convenience of the institution. That was the purport of what he said, but I do not say that those were his words. I understood that the fish was to leave the institution either temporarily or permanently.
707. Did you make any attempt to preserve the fish? I was working at it for three or four days, and it was then ordered to be taken away by the Health Officer. The fish became very offensive.
708. If prompt steps had been taken for its preservation in the first instance, could it have been preserved before it arrived at that stage of putrefaction? Yes. I have done lots of fish. It is a branch of taxidermy that I take a great interest in, is stuffing fish. When the intestines and stomach were taken away nearly all that would be left would be cartilage, and the only part that would be liable to stink would be the passage from the throat. If I had had a couple of gallons of carbolic acid for a disinfectant, and had diluted it in water and sprinkled it over the fish, it would have kept well enough. A hole was dug in the paddock,

* NOTE (on revision):—On that day O'Grady went to his dinner, as usual, at 12 o'clock. On his return, at 1 o'clock, I went home, and returned a few minutes before 2. I state this in consequence of seeing, in a note on revision of Mr. Kreffit's evidence before the Select Committee of the Legislative Assembly, a statement that O'Grady and I both left at 1 o'clock on the day in question, and did not return for an hour and a half.

paddock, and the old man was employed to wheel the flesh into the hole. When I spoke to Mr. Krefft he J. A. Thorpe. said—"You will never do that fish. Why do you persist in it? Don't you hear that the people are complaining all round the neighbourhood about the stench?" I said—"Mr. Krefft, it is not this, but it is ^{the} putrid mass in the hole." 14 July, 1874.

709. *Mr. Hill.*] Where was the hole? Near Mr. Weigall's fence.

710. About south-east from your back door? Yes. I said—"If you will allow the man to put a few shovelfuls of earth over each coating of flesh it won't stink." He said "Oh no; let it be; we will stink Weigall out."

711. *Chairman.*] The Health Officer came and had the whole thing removed? Yes.

712. What was done with it? The parcels delivery carts took it away.

713. It was not buried in the grounds? Not the skin and the portions to be made into the specimen. They were not buried, but the refuse and offal only.

714. Were the tubs and buckets buried with this putrid flesh? There were no tubs and buckets that I saw. None were required.

715. *Mr. Hill.*] Did the vans that carted away the skin take away the buckets? No; there were none here.

716. Under any circumstances none were used? No.

717. Not to take up the flesh in? No; it was shovelled up and thrown into an old wheelbarrow and wheeled away.

718. Not for the liquid? There was no liquid used. There was no disinfectant—no spirits of wine, until half the skin was thrown into the tank, which of course spoiled it at once.

719. *Chairman.*] If proper steps had been taken there would have been no nuisance in the neighbourhood? None whatever.

720. It was designedly done on the part of Mr. Krefft, so that the sun-fish should not be preserved? That is the plain truth of the matter.

721. He had an idea that Dr. Cox was to take away the specimen? I had that idea, but I have heard since that it would have been only temporarily taken away.

722. Was it a valuable specimen? Very valuable.

723. Have you got one in the Museum? No, not one. I believe that one that was spoilt in preserving was sold the other day for twenty or thirty pounds to go to Melbourne. That was a painted specimen. It only showed the shape.

724. You are perfectly satisfied you could have made a very valuable specimen of it if you had been allowed your own way? I am certain of it. I only wanted three men for three days. That would have been plenty—allowing me to direct them and work myself.

725. Were you not allowed any men at all? I was allowed three at first until we got some of the weight of the flesh removed. Then Harry was called away to do photographs; then Robert; and then I was left with O'Grady.

726. If the whole strength of the institution had been left to the work until it was done, the fish could have been perfectly preserved? There is no question about that. If the fish had been decomposed at the time it came I should have said so, because it was a great deal of trouble.

727. *Mr. Hill.*] I see here a note on revision—"The tubs bought at Lassetter's were purchased after the putrid fish had been buried, and the tubs with it. I had to replace them." Do you recollect anything now of any tubs being buried with the putrid fish? There were no tubs used; and I am almost certain there were none buried. I did not superintend the covering up of the hole where the fish was buried. If there are any tubs in that hole they were put there by design, for they were not used.

728. Could you point out the hole? Yes.

729. *Chairman.*] Was any extra labour outside the Museum obtained to assist you in curing the sun-fish? None whatever. There were no strangers about the place at all. I do not know whether Mac, the gardener, is considered one of the staff. He was assisting in wheeling the stuff away.

730. *Dr. Alleyne.*] Do you know how much money extra he got paid for that? He told me that he got nothing. I never received a shilling for anything extra that I did here. All that I got extra was for specimens of natural history that I sold to the Trustees for the Museum. I never got anything for overtime.

731. *Mr. Hill.*] You have never had anything for overtime or any donations? No; and I have been here at work until 10 o'clock at night. If a specimen comes in, I always consider it my duty to try and save it.

732. Do you know of any stuffed specimens belonging to the Museum that have been destroyed or burnt? Yes.

733. Will you mention any? Two lions, one spotted leopard, two or three small deer, one very large red reindeer or elk, I forget which, with horns—I do not know whether the horns were taken off and kept or not—one fox, one horse, and one or two bears.

734. *Professor Liversidge.*] What bears—native bears? Foreign animals—black bears.

735. *Chairman.*] What were they destroyed for? I wanted Mr. Krefft to let me stuff them over again. I have restuffed a great many specimens. The only fault with them was that they were badly done. The skins were good. There is one specimen in the Museum, the civet cat, that I brought in out of the rain off a heap of rubbish. When I showed it to Mr. Krefft he would hardly believe it was the one which had been thrown out.

736. Were there other specimens besides those which you have described? Of most of them we have not got duplicate specimens.

737. *Mr. Hill.*] We have not got a specimen of a reindeer? No, not one of the kind which was destroyed. I am not sure whether that was an elk or a red deer; it was set up by Becker.

738. You mean to say that these animals were destroyed? Yes; the lions had been very badly done.

739. When did this occur? Two years ago—perhaps more. There was a great quantity of things destroyed.

740. *Chairman.*] Were they got rid of to make room for other specimens? No. These underground cellars are very spacious. Mr. Krefft wanted the cellars cleared out, and he had the whole lot pitched out.

741. Do you know whether that was done by direction of the Trustees or not? No.

742. Did you remonstrate against the destruction of these specimens at all? Yes.

- J. A. Thorpe. 743. To Mr. Krefft? Yes. Mr. Masters could corroborate what I say about that. He has often heard me express a wish to do the lions. I wanted to make one thorough good lion out of the two. One of the lions had a portion of the mane missing; but the two lions would have made one very excellent specimen.
- 14 July, 1874. 744. When you reconstituted with Mr. Krefft against the destruction of these lions, what did Mr. Krefft say? He said I should not do them.
745. *Mr. Hill.*] But you did succeed in setting up one civet cat? Yes.
746. Do you recollect anything of a horse that was burned? Yes; a small Timor pony.
747. *Chairman.*] Have you any knowledge of the destruction of any papers in connection with the Museum by the Curator? Only from hearsay. It was recently, I believe.
748. *Mr. Hill.*] What did you hear they consisted of? I have seen Mr. and Mrs. Krefft in here (the Board-room) on one or two occasions, with the floor strewed with papers. The woman who was discharged from here told me that they were taken out in clothes-baskets and burnt. R. Barnes told me so too. It was done about the time of the inquiry.
749. What was the woman's name? Helen Gillespie.
750. When you say the time of the inquiry, you allude to the inquiry before the Committee of the Legislative Assembly? Yes.

I certify that this is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 14th instant.

J. A. THORPE.
24/7/1874.

Michael O'Grady was called in and examined:—

- M. O'Grady. 751. *Chairman.*] You are the messenger here? Yes.
- 14 July, 1874. 752. And have been so for twenty years? Yes.
753. Have you been employed in the same capacity from the first? Yes.
754. What are your hours? From 9 till 4 in winter, and from 9 to 5 in summer.
755. You keep the visitors' books? Yes.
756. Do you see that every one who enters the institution puts his or her name down in the visitors' book? Yes; and for those who cannot do it I do it, and I have orders from Mr. Krefft to put down a good number.
757. Have you been in the habit of reporting to Mr. Krefft at the end of the day the number of visitors who have come during the day? No, not until about a month or six weeks ago, then he desired me to give him a return on paper.
758. Did he ever inquire about the numbers you put down in the book? Frequently so; and I told him when it was a dull day, and he would tell me to put down a good number to-day.
759. Why did you do that? Because Mr. Krefft told me to do so. He said the place must go ahead. There might be a dull day, and he has seen only a few names down, and he has taken up the pen, and in his own handwriting shown me how to do it. He would say—"Do it that way."
760. Has he shown you in the book? Yes.
761. You do not put down the names of imaginary people? No.
762. Can you show us any of these entries? Yes.
763. Will you get the books in which they are to be found? I will.
- Witness produced visitors' books for 1871 and 1872, and pointed out particular entries made by him to swell the numbers. He was directed to find some of the entries which he said had been made by the Curator.*
764. Were you a servant of the Museum at the time that Tost was here? Yes.
765. Do you know anything of the circumstances which led to Mr. Tost's dismissal? Yes; I heard.
766. I ask you as to your own personal knowledge? Not of my own personal knowledge. Mr. Krefft accused him of stealing glue and screws and nails. That was the first I heard of his dismissal. He was a very hot-tempered man.
767. Who was? Tost was; in fact he put on his cap and went away himself. Mr. Krefft wanted him to apologize and he would not.
768. Was there any inquiry into the charges which Mr. Krefft preferred against him? There was.
769. By the Trustees? Yes.
770. And the result was they condemned him? He was dismissed.
771. Was Tost supposed to know anything of the disparagement of the Curator, or the Barneses, or anybody upon the establishment;—was he in possession of any knowledge that was prejudicial to them or their character? He was in the knowledge of something about the private affairs of Mrs. Krefft. I believe it was through that that some ill-feeling was got up. Tost said something to his wife, and that is how this ill-feeling got up.
772. *Mr. Hill.*] Was that before they were married? Yes.
773. *Chairman.*] Did you ever hear anything from Tost against the Curator, or the Barneses, or any other persons employed in the Museum? No.
774. How came it to your knowledge that Tost knew things in connection with Mrs. Krefft? I heard him speak of it.
775. Was Tost supposed to have been ill-treated by the Trustees in dismissing him, or by the Curator in getting him dismissed? By the Curator in getting him dismissed.
776. Have you any suspicion that the charges made against Tost by the Curator were true—have you any knowledge that he took things away from the Museum? I always considered Tost an honest man until Mr. Krefft shewed me an old basket with six or eight nails and six or eight screws and a bit of glue in it. He said—"Look at this." He used it for bringing this report against Tost for robbery. It seemed to me that he was watching to catch him at something.
777. You believe Tost to have been an honest man? Yes. Mr. Krefft gave him permission to work about the place, and he used to go in and out. Whether the nails and screws were his own property I cannot say.
778. Were you present on any occasion on which Mr. Krefft told the Barneses, or either of them, to take something from the Museum and place it in Tost's house? I was not, but I heard it from the Barneses that Mr. Krefft wanted them to do it, but they would not do it.
779. When did you first hear that such had been the case? About five years ago. 780.

780. Was that soon after Tost was discharged? No.
781. When did you first hear it? About the day after it happened they told me.
782. How could you fix the day when this was told you as being the day after it happened? They told me the day after. They said it was a very cruel thing, and they would never depend on Mr. Krefft again.
783. But you only know that by hearsay? Yes, from the Barneses.
784. But you always believed Tost to be an honest man? Yes.
785. Did Mr. Krefft ever say anything to you about him? Not a word, excepting once on the stairs. Mr. Krefft said to me and the Barneses—"If you don't crush the old man he will have us all out." That was pending the inquiry by the Trustees.
786. Into the charges that Mr. Krefft had brought against Tost before the Trustees? Yes. He said—"Say anything; you must crush him."
787. You think that he was led to this by something which Tost knew which was prejudicial to his wife? Yes.
788. You only suppose so? I only suppose so, but I am almost sure that that is what it was. They had some hot words about it.
789. Had Tost anything to say against the Barneses—their insulting or other conduct—in the Museum? I never heard.
790. Have you ever signed any statement to the effect that you believed Tost to be a dishonest man? I do not think I did. I cannot say—I have signed so many papers for Mr. Krefft.
791. Can you call to mind the fact that you signed a paper to the effect that you believed that Tost was a dishonest man? No. I often sign papers for Mr. Krefft.
792. Did you sign papers for Mr. Krefft without knowing what they were about? No, I did not.
793. Then if you had signed a paper of this kind you would have remembered it? I believe I should.
794. You have signed many papers for Mr. Krefft? Yes.
795. You have always read them? As well as I could see them. Sometimes I had not my glasses with me, and I could not see perfectly well, and then he read them for me.
796. *Mr. Hill.*] You could see what you were going to sign? Yes.
797. You do not recollect the fact that you did sign a paper to the effect that Tost was a dishonest man? I recollect signing a paper about nails and screws—I signed a paper to that.
798. To show that you saw him take out a basket with nails and screws? Yes; about half a dozen nails and half a dozen screws.
799. *Professor Liversidge.*] You saw Tost take the basket away with these things? No, I did not. Mr. Krefft brought the basket to me.
800. *Chairman.*] Was this paper you signed to show to the Trustees? I suppose so.
801. It was a constant habit of yours to increase the number of visitors to the Museum, as you say, by Mr. Krefft's orders? Yes.
802. It was a daily habit? It was a daily habit. He used to say—"Be sure now, O'Grady, and have a good number." Sometimes when there would be a good number of visitors in the day I would come in and tell him that there was such a number during the day. I would tell him that to keep him quiet.
803. Do you know anything of the destruction by Mr. Krefft of any papers or specimens belonging to the Museum? I have seen specimens destroyed—lions and a grey pony, but papers I have not seen; but I heard from the girl who was here that she was carrying away apronsful to be burnt. I have not been allowed into the Board-room since Christmas.
804. *Mr. Hill.*] What do you know about the specimens? Two lions were burnt, a little pony horse was made a rocking-horse for the child, and when that was destroyed by the child it was cut up and burnt. The two lions used to be under the stairs.
805. Do you remember a sun-fish being brought here to be preserved? I do.
806. *Chairman.*] Did it make a great stink? Not while I was at it.
807. Were you helping? Yes, for about two hours.
808. Why did you go away? I was called away. He said—"I don't want that cursed thing done." He paid down 5s. for this. He said—"Charge 5s. for yourself," and I did.
809. What was that for? For what I did. I saw no more of the sun-fish. It was carted away two or three days afterwards.
810. *Mr. Hill.*] Was there any out-door labour employed? No.
811. What did you take the flesh away with? He rolled it away and threw it into a hole.
812. In what? A wheelbarrow.
813. What about the tubs and buckets you used? I never saw any.
814. None were ever buried? Not that I saw.
815. During the time that an attempt was being made to cure this fish, were there any tubs or buckets used? None whatever.
816. The fish was taken away by old Mac in a wheelbarrow? Yes, and thrown into a hole close up to Mr. Weigall's fence.
817. You know the hole? Yes.
818. Has it been covered up since? Yes.
819. How deep is it? I could not say.
820. Could you point out the spot? I dare say I could.
821. Within a foot or two? Yes.
822. *Chairman.*] When Mr. Krefft gave you orders to increase the number of people entered in the visitors' book was he sober? Sometimes he would not be, others he would.
823. Have you ever seen him the worse for liquor? Frequently.
824. What do you call frequently? Very often.
825. How many days in the week? I did not take particular notice of the days. It might be three or four days.
826. Early in the morning or late? I have seen him so from about 11 o'clock.
827. Was he able to go about and look after his business? Sometimes he was not.
828. And this was frequently you say? Yes, I have seen him so often this eight or nine years that I could not mention any particular number of times.
829. Can you state any particular time or particular circumstances? I could. When I was living here, one morning between 2 and 3 o'clock I heard a great noise. I got up to see what it was, and it was Mr.

14 July, 1874.

M. O'Grady
14 July, 1874. Krefft very drunk getting in through the window. I waited. He was fumbling for some time lighting a candle, and when he lighted it he stumbled up-stairs. I waited a little time, and then I went up to see if the candle were out. I found the candle close to the window—curtains still alight, and he was lying on the floor amidst a whole lot of spue. I put the candle out and came away.

830. Could you say when that was? Eight or nine years ago, before he was married.
831. Could you bring to mind recently any time when he was found in that state? I have seen him in the spirit room during business hours, so drunk that he could not get out of it. I told him such and such a gentleman wanted to see him, and he would say—"Say I am out, O'Grady; say I am gone to the Government Printing Office."
832. When was this? Some twelve months ago. Since Christmas time he has kept himself more correct than he has been before.
833. Were you out with him on the Christmas Eve at Botany, looking after a whale? No, I was not.
834. You did not see him on that day? No; I saw him go out, but I did not see him when he came back.
835. Do you remember some people of the name of Brack living here? Yes.
836. What character do they bear? I believe they are very steady proper people. The man works in the Gardens.
837. You never saw them otherwise? No.
838. They were not employed at the Museum by the Trustees? Not by the authority of the Trustees; but they were employed by Mr. Krefft regulating portion of his garden.
839. Do you know why they left? I do not. I heard that it was something they said about pigs' food, but whether that is correct or not I do not know.
840. Whom did you hear it from? From Mrs. Brack herself.
841. But you believe they were honest, decent, respectable people—sober and trustworthy? Yes.
842. How long were they here? About six weeks, I think.
843. And you understood from Mrs. Brack that she was turned out because she said something about the pigs' food? Something about the pigs' food costing so much, and something about vegetables.
844. Were you ever engaged in selling photographs here? Never.
845. Have you ever seen any photographs? I have.
846. Of what kind? Photographs of the Prince laying the foundation-stone; and I heard that Robert and Henry Barnes were sent out to sell them, and they gave the money to Mr. Krefft.
847. Have you seen indecent photographs about the place? I have.
848. Whom did they belong to? I heard that they were Mr. Krefft's.
849. Whom did you hear that from? Henry Barnes.
850. Were they sold? No.
851. You had no hand in selling any of these things? None whatever.
852. Nor in taking the photographs? No, I had nothing at all to do with them. I saw these smutty pictures, and I spoke to Barnes about them. He said Mr. Krefft authorized him to do it. Afterwards I saw them again, and spoke to him about it, and he said that Mr. Krefft authorized him to do them for Mr. Creed.
853. Did you see them in Mr. Krefft's possession? Not in his hands; but I have seen them on the desk where you are sitting. I have seen them on the Board-room table, and in the room beneath, and in the workshop.
854. Was this before they were shown to the Trustees? Yes, many a day.
855. When Mr. Krefft saw them was he surprised to see such nasty things about? I do not know. I never knew from Mr. Krefft anything about them. I only heard from the Barneses that they were done for him.
856. *Mr. Hill.*] Did you ever hear Mr. Krefft refer to them in any way? Never.
857. You never saw him nearer to them than here? No.
858. *Chairman.*] Are you considered to be a sober man yourself? I am not a teetotaller, but no man ever saw me drunk.
859. You remember an inquiry being made by the Trustees for the minute-book? Yes.
860. You were sent up by the Trustees to the Curator to ask for it? Yes.
861. What were you told? I was told it was in Mrs. Krefft's bed-room, and that Mrs. Krefft was too ill to be disturbed.
862. Are you aware that that book was ever out of the building when it was said to be in Mrs. Krefft's room? No.
863. Have you ever seen it taken out of the building or brought into the building? No.
864. You know nothing about it more than that you have seen him write it at the Board-room table? No.
865. Do you wish to add anything in explanation? No.

I certify that this is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 14th of July, 1874.

MICHAEL O'GRADY.
24/7/1874.

THURSDAY, 16 JULY, 1874.

Present:—

H. G. ALLEYNE, Esq., M.D., | E. S. HILL, Esq.,
PROFESSOR LIVERSIDGE.

CHRISTOPHER ROLLESTON, Esq., IN THE CHAIR.

Denis Mulqueaney called in and examined:—

- D. Mulqueaney.
16 July, 1874. 866. *Chairman.*] What is your occupation? Driving a furniture-van.
867. Have you been some time in that occupation? About thirteen years.
868. On the 23rd of December last did you accompany Mr. Krefft and some other persons connected with the Museum to Botany to fetch a whale? Yes. 869.

D.
Mulqueoney.
16 July, 1874

869. Can you tell us what happened on that occasion? I saw nothing happen, at least not very much.
870. What hour did you leave the Museum? I cannot exactly tell you; I think it was about 9 o'clock in the morning.
871. Where did you go to? We went out to Botany Heads.
872. Is that where La Perouse's monument is? Yes.
873. There you stayed? Yes, I stopped there.
874. Did you get the whale? The others went to the other side of the bay, and fetched the whale back with them in the evening.
875. *Mr. Hill.*] The skeleton of the whale I suppose it was, pretty well cleaned? Yes, it was pretty clean.
876. *Chairman.*] And you got it on your van? Yes.
877. About what time did you return to Sydney? It was just before dusk, I think.
878. Who was with you on your trip home? There was Mr. Krefft and the two Barneses, and Mr. Masters—I think that was his name.
879. Were they all sober? Well, they had a drop of drink, some of them; I had a drop myself too—not out of the way though.
880. *Dr. Alleyne.*] Did the Barneses have a drop of drink? I only saw one of them take a drop.
881. *Chairman.*] Which of them? I think it was Robert.
882. *Dr. Alleyne.*] How much did he take? I cannot say. We took it in a bottle.
883. Do you think he took half a bottle? Oh no, the bottle was not full.
884. Do you think he drank a glass? I do not know; he had the bottle to his mouth; but how much he took I do not know.
885. There is a great difference between a glass and two glasses and a bottle;—you say he did not drink the whole bottle because the bottle was not full? There was not much in it.
886. Do you think there were two glasses in it? There might have been.
887. Do you think there were three glasses? I know that I finished it, anyhow.
888. Was the bottle half-full when Barnes got it? I think not more than a couple of glasses; it is a long time ago, and of course I did not take sufficient notice to recollect it.
889. But you finished the bottle? Yes, I finished it.
890. They could not have drank half a bottle of brandy then? Oh no; it was not brandy.
891. *Mr. Hill.*] What was in the bottle—whiskey? It was hard stuff.
892. *Chairman.*] You all came home pretty steady? Yes.
893. Did anything happen on your way home? Yes; Mr. Masters saw a death-adder on the road, and sang out there was a death-adder. Mr. Krefft immediately made me pull up; he then got down off the van, and went and picked up the death-adder—put it in a bag. My horse was a bit fidgety and would not stand quiet, and one of the Barneses ridiculed me for not being able to keep the horse steady; the horse would not stand steady, and when Mr. Krefft was in the cart, the horse moved, and he fell; he was not on his seat properly at the time.
894. *Mr. Hill.*] Did Mr. Krefft get this thing in the bag then? Yes.
895. *Chairman.*] Mr. Krefft at that time was quite steady and sober? Well, he had had a drop of drink, but I could not notice that he was not steady; he was jolly; I always saw him jolly and pleasant when he succeeded in getting anything like this; he went out with me a few times before, and I always saw him very agreeable and pleasant when he succeeded in getting anything.
896. Was he lifted in and out of the van? Well, one of the men went down to open the bag for him; my van has a very awkward step, and Mr. Krefft is a very heavy man, and the man assisted him into the cart again.
897. But he was not what you call very drunk then? He was not indeed; I do not call a man drunk until he is falling; when a man steps down off a cart and catches a death-adder he is not drunk.
898. *Dr. Alleyne.*] You do not call a man drunk until he is falling? He was capable of catching the death-adder any how. On another occasion when he went out with me, there was a man with us who fired at a black snake in a pool of water, just off Long Bay Road. Krefft told him not to kill the snake, and he pulled it out of the water on to dry land, and then he picked the snake up.
899. *Chairman.*] You came to the Museum when you returned home with the whale? Yes, as far as the steps outside.
900. And Mr. Krefft and the Barneses, and Masters got out? Yes.
901. Was Mr. Krefft helped out, or did he get out of the van himself? He got out himself I think; I saw no one take hold of him; some one may have given him a hand down; I did not notice.
902. You saw no more of him? I saw no more of him until the next morning when I came to the Museum to be paid.
903. You have been out with Krefft on previous occasions? I have; one of the men generally engaged me on the stand.
904. *Mr. Hill.*] You brought the whale skeleton home with you, and delivered it here, and you delivered all the parties here? Yes.
905. Did I understand you to say that Mr. Krefft had had some drink—that he was under the influence of drink? Well, he had had some drink.
906. Do you know where he got it? Well, they had some in the boat, I expect.
907. After they had returned in the boat to the tower, how long did they remain there? Well, it might have been an hour or an hour and a half.
908. Do you know the man who lives there? He is a countryman of mine; his name is Macdermott, I think.
909. Did Macdermott go over in the boat with Mr. Krefft? I cannot tell you.
910. It was his boat? Yes, it was his boat.
911. And they were away over an hour? Yes.
912. Did you see Macdermott before you started away? Yes.
913. Was he pretty full? He was just jolly, that was all.
914. You were paid for your services the day after you delivered the specimen here? The next morning.
915. Since this unpleasantness in connection with the Museum commenced—that is, during the last week or two—has Mr. Krefft spoken to you on the subject? I have never spoken a word to him since that.

- D. Mulqueoney. 916. And you never saw any one connected with the Museum since? No, except the men that are here—not Mr. Krefft.
917. What did they say? Well, they talked about many things.
- 16 July, 1874. 918. *Dr. Alleyne.*] Can you mention anything they talked about? One of them said to me one day—"You know he was drunk." I said I could not swear he was drunk—that if I was put on my oath I could not say he was drunk; if he had been drunk he could not have got off the van and picked up a death-adder.

Witness did not attend to revise his evidence.

Mr. George Masters called in and examined:—

- Mr. G. Masters. 919. *Chairman.*] Your name is George Masters, I think? Yes.
920. You were at one time employed in the Museum as Assistant Curator? Yes.
- 16 July, 1874. 921. For how long were you employed in that capacity? For nine years and nine months.
922. How long is it since you left? Four months I think it is.
923. Was Mr. Krefft Curator of the Museum all the time you were connected with it? He was appointed Curator a month before I was appointed Assistant Curator.
924. Have you noticed Mr. Krefft's habits at all;—when you were in the institution was he always steady and able to do his duty? I cannot say that he was always steady; he was pretty boisterous at times.
925. Was he frequently unsteady? Very frequently.
926. Was he ever unfit to do his duty? Well, he was not as you may say unfit to do his duty; but during the last two or three years it was a very rare thing to see him sober.
927. Early or late in the day? Generally after 10 or 11 o'clock in the morning.
928. Do you know what he took? No, I do not.
929. Have you ever seen him quite unfit for his duty? Not in the Museum, but I have out; he has been very bad in the Museum, but he has been able to walk.
930. Did that habit grow upon him latterly, or was it less so or more so than formerly? More so than formerly, especially during the last two or three years.
931. When you have come to the institution in the morning have you ever found any of the doors left open? Yes.
932. Did you ever hear of the doors being left open? I one morning heard of the back door being left open—Thorpe's door; it was said to have been left open all night.
933. Did you generally enter the Museum that way? Up till last Christmas I always did.
934. *Mr. Hill.*] How did you get in at the door? I always had a key of the back gate.
935. But how did you get in at the back door? It was generally open when I came at 9 o'clock. Sometimes when it was not open I used to go round by the cellars and up into the hall.
936. On that particular occasion when you found Thorpe's door open, they were rather astonished to find that you had got in? O'Grady and Ellen were.
937. Did you speak about the door being open or not? I did not.
938. *Chairman.*] Are you aware whether many specimens were sent out of the Museum without the knowledge of the Trustees, either to Europe or elsewhere? I think there must have been a very great many sent away. I have the annual reports of the specimens that were presented to the Museum, and I have a list of things which I collected on different trips.
939. Then a great many things to your knowledge were sent out of the Museum? A great many must have been. I know from what are here now, and the numbers contained in the annual reports of additions made to the Museum, that many must have been sent away. I know by the exchange committee's report that many were sent away, and many other things not specified in it must also have been sent away.
940. *Dr. Alleyne.*] What reason have you to suppose that specimens were sent away, except those sent away under the direction of the exchange committee? In the annual report there is a printed list of everything sent away; there is also a list of things presented as donations; and there was also in it a list of things that I have collected myself; and a great many things sent away to different people have not been entered one way or the other. I know there is not a tenth part of what I collected in the place now—I am certain of that.
941. *Chairman.*] Did you make any remark about the things going away from the Museum? No; it had nothing to do with me.
942. *Mr. Hill.*] Will you refer now to the list you have with you? I have a list of things that I collected, and it will be an easy matter to compare the list with the things that are now in the Museum. For instance, on my first trip to King George's Sound I brought back fifty-four specimens of *Antechinus fuliginosus*. Two years after, when I was down again, eleven were brought. Previous to that Mr. Darnley was collecting at King George's Sound for Mr. William Macleay, and I believe he sold all he collected to the Museum. There is another rare animal that I obtained—that is, the *Tarsipes rostratus*. I brought thirty specimens of that animal back with me on my first trip.
943. Where did you bring them from? King George's Sound.
944. And how many do you say you brought? Thirty.
945. *Chairman.*] Were you sent there by the Museum to collect? Yes, on two different occasions.
946. Did you bring thirty animals back with you on one occasion, or thirty altogether? On my second trip I did not get any of the *Tarsipes*.
947. Will you now refer to the wombats in your list? In the Tasmanian collection—I think it was in 1867—there were seven skins, two skeletons, and two skulls of wombats, brought from Tasmania.
948. Did you on any other occasion go there for wombats? No; that is all I brought from there.
949. Did you bring any from anywhere else? Only one, from Port Lincoln, South Australia.
950. On that occasion, when you went to South Australia, did you bring back any specimens of that rock wallaby? Any one who will look over these lists of mammals that I have collected will see that I collected an enormous lot.
951. *Chairman.*] Were you always on good terms with Mr. Krefft? On very good terms always.
952. From the time you first came to the institution till the time you left? I never had a word with him all the time I was in the place.
953. Had you any ill-feeling towards him? Not at the time I left, but I have now.

954. What has occasioned the change of feeling? It is principally in consequence of statements he made to the Select Committee of the Legislative Assembly, and one thing or other. I think he tried to make out that the only thing I did in the place was simply to look after insects. Ninety out of every hundred labels in the place have been written by myself. The printed labels on the mammals I got done, and Mr. Krefft never even corrected a proof; and every label has been put on by myself—he never put a single thing in its place.

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955. You think that in giving his evidence before the Committee he depreciated your services to the institution? Undoubtedly he did.

956. And whilst you were connected with the Museum you had no ill-feeling towards Mr. Krefft? None at all. He used to be on very friendly terms with me, and would put himself out of the road to shake hands with me when I came to the place. Behind my back he was just the other way. I only know that of course from hearsay. I named all the specimens before I sent them into the Museum. You will see my original labels to every one of them—meaning mammals and birds.

957. *Chairman.*] Are you aware of any specimens belonging to the Museum being destroyed or burned? I never saw any destroyed or burned.

958. Or books or papers? No.

959. *Mr. Hill.*] Do you recollect two big lions that used to be here? I do.

960. Where did they go to? I do not know. They disappeared. I heard that they were burned, but I did not see them burned.

961. *Dr. Alleyne.*] Was there any occasion when specimens had to be renamed, from the incorrectness of your classification? I never heard of a single instance. The birds are there, and the animals are there for any one to refer to. Mr. Krefft mentioned something about my having received some money for a collection that I made. I should like to explain that the only money I received was £25 for the Tasmanian collection. I should be glad if the Chairman would read this letter which I received on the occasion. [*Witness handed the letter to the Chairman.*]

962. *Chairman.*] Are you aware whether Mr. Krefft sent away many valuable specimens from the Museum, to Europe or elsewhere, during the time you were connected with the institution? I am not. I know that many things have been sent away, but I do not know how they have been sent.

963. How do you know that many things were sent away? By missing the specimens. I was here every day, and was continually working amongst them.

964. *Dr. Alleyne.*] You do not know any particular occasion on which things were sent away? No, I do not.

965. Do you know of any specimens having been set up for private persons? Yes.

966. For whom? A wallaby was set up for Mr. Parkes—that was done in the place; and a case was made in the place for it. The same with an opossum that was set up for Sir Alfred Stephen; and a case of humming-birds was also prepared for Mr. Krefft by Mrs. Tost.

967. *Chairman.*] Did you know the man Tost? I did, well.

968. What character did he bear in the institution? Very good, so far as I know.

969. What opinion had you of the man? Very good. I knew him long before he came here. I have known him for seventeen years. I knew him before he came from Hobart Town. He has got a very good situation at Melbourne now.

970. You never knew him to be guilty of peculation? Never.

971. Are you aware of the circumstances under which he was discharged? I was away at the time; I heard of it afterwards.

972. *Mr. Hill.*] You were out collecting specimens for this institution at the time? Yes, I was in Western Australia at the time. I heard Krefft's version of the affair when I got back, and I also heard Tost's version. I would believe Tost before I would believe Mr. Krefft, because from the years I have known him I believe him to be a perfectly honest man.

973. *Chairman.*] Then from what you knew of him you think he was improperly accused? I do undoubtedly.

974. Do you know anything of some indecent photographs that were taken in the institution? I have frequently seen them.

975. Were they sold, do you know? I have heard so.

976. By whom have you heard they were sold? By the Barneses—not the indecent ones, but some others.

977. What were they photographs of? I think it was the celebration of the laying of the foundation stone of Captain Cook's Statue, or something of that kind. The first indecent photographs I ever saw in my life Mr. Krefft showed me in this very room. I saw them frequently afterwards, when they were being printed and were lying about the steps in the sun; and Krefft was passing backwards and forwards at the time.

978. Were they his own property, do you know? I cannot say; I believe they were.

979. Do you know anything of a fossil jaw that was sent Home to Professor Owen? No, I know nothing of that.

980. Was it sent away after you left the institution? I do not think it was after; I think it was about a week or two before; I only heard of it.

981. What did you hear about it? I heard that Mr. Krefft smashed it.

982. From whom did you hear that? One of the Barneses told me. Mr. Krefft told me he did not think it would ever get Home safe.

983. *Dr. Alleyne.*] It has been stated in evidence that Mr. Krefft made a proposal to one of the Barneses to take some property from the Museum or from some other place and leave it in Tost's house, with a view to sending the police afterwards to discover it and raising a criminal charge against him: do you know anything of that? I heard of it some years ago.

984. You do not know anything about it? Only from hearsay; it is three years and a half ago, I dare say.

985. After Tost left the Museum? Yes.

986. From whom did you hear of it first? From one of the Barneses.

987. Did you ever hear Mr. Krefft allude to it in any way? Never.

988. How long was it after Tost had left that you heard of it? I forget how long it is since Tost left; it must be five years or more.

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989. You heard of it about eighteen months after he left then? Yes; considerably more than three years ago; I cannot say the exact time.
990. *Mr. Hill.*] After the information you received on that point, after what you heard from the Barneses, were you requested or told to look out for anything—to be careful what you did? No.
991. Did you take any note of the thing, as if it had been done? I believe it had been done.
992. From what the Barneses told you you believed it had been done? Yes; but I do not think it formed any part of the circumstances which led to Tost's dismissal; everybody knows what he was dismissed for.
993. *Chairman.*] Have you any objection to tell us why you left the Museum—why you resigned your appointment? No objection at all.
994. What were the circumstances;—will you tell us? I received a better appointment, with a salary of £100 a year more.
995. That was the sole cause of your leaving? That was the sole cause—nothing more.
996. You were offered £100 a year more? Yes. It will be for my life. Mr. Macleay told me at the time that he was going to appoint a Curator—that in fact he was going to advertise for one.
997. And Mr. Macleay offered to give you £100 a year more than you had been getting at the Museum, and to make the appointment for life? Yes.
998. You had no quarrel with Mr. Krefft at all? Never in my life.
999. *Mr. Hill.*] Have you given evidence with reference to that whale trip to Botany? No.
1000. *Chairman.*] Were you one of the party? Yes.
1001. Did any circumstance of a peculiar nature occur on the trip? Krefft got beastly drunk; that was the principal thing of the day, I believe.
1002. Where did he get beastly drunk? In the first place he took a bottle of brandy away with him; I think he drank a third of that; after that he got to Macdermott's, where he stayed drinking whiskey for about three hours.
1003. *Dr. Alleyne.*] That was after he got back from the other side of the bay? Yes, after he got the whale.
1004. *Chairman.*] Did you come home with him? I did.
1005. Was he able to get in and out of the vehicle? He was not. He fell down on the broad of his back before he got in. When he got out after a death-adder he went down on all-fours, and the first grab he made at it his hand went five or six inches to the back of it. He was obliged to be helped into the cart again, and would have fallen down if it had not been for one of the Barneses. He fell back once on to the stinking whale.
1006. *Dr. Alleyne.*] You are quite certain that his not being able to move about was occasioned by drink? Yes, I know Krefft too well.
1007. *Chairman.*] There was no suspicion of his having had a sunstroke? Oh no; I have been out with him too often for that. He fell down as soon as he got out of Macdermott's; he would have fallen out of the cart ever so many times if he had not been supported behind.
1008. That was the day before Christmas Day? It was on the 23rd of December.
1009. Did you see Mr. Krefft the day before Christmas Day? I did; he came into my room complaining that he had a frightful headache through Mac's whiskey. He said that Mac's whiskey was too strong.
1010. Did you see him again in the afternoon? Yes, I saw him in the back yard looking at the pigs. He seemed to me to be pretty well on then.
1011. Did you see him on Boxing Day, the 26th of December? Yes, I saw him at the Museum with Detective Lyons. He was standing at the table near the door leading out into the front street.
1012. *Mr. Hill.*] It was the day before Christmas Day you went to Botany for the whale? No, it was the 23rd of December.
1013. *Dr. Alleyne.*] Then it was not Christmas Day, but the 24th that you saw him looking at the pigs? Yes; on that day I first heard of the gold being stolen. [This is a mistake, as it was on the 26th I first heard of it.] It was on the 23rd that we were at Botany; and it was about that time that a reward (meaning the reward offered by the Government, which said on or about the 23rd. The gold was there on the 24th) was offered for the recovery of the stolen gold. It was on the 24th that Mr. Krefft came into my room complaining of a headache through Mac's whiskey. I was naming some butterflies in a case opposite to the place where the gold specimens were. I looked at the gold specimens, and wondered whether they had been dug as they were, or run together afterwards.
1014. *Mr. Hill.*] What time of day was that? Between 10 and 11 o'clock.
1015. *Dr. Alleyne.*] You saw the gold specimens there on that day? Yes.
1016. Was Mr. Krefft sober on the 24th? That was the morning he came to me complaining of a headache. He passed through in the afternoon, but I did not see him to speak to; he went out with somebody to look at the pigs.
1017. You saw no more of him that day? I saw nothing more of him until Boxing Day morning.
1018. What state was he in on the morning of Boxing Day? He was in a frightfully agitated state then. His face was working all over, as if he had strings to his muscles and they were being drawn about by some one. He was talking to Detective Lyons, in the new wing. They were standing at the back of the case close to the door. He said to me—"I suppose you have come to console with us about the gold." I said "What gold?" He said, "All the gold has been stolen." It was quite news to me—I had heard nothing about it.
1019. *Chairman.*] Have you yourself any suspicion as to how that gold disappeared? I have had a suspicion from the very first; but I have no proof.
1020. Would you care to state what your suspicion was? Perhaps you will excuse me. I know the gold was there on the 24th.
1021. Were you connected with the institution when a sun-fish was obtained from Manly? Yes.
1022. Had you anything to do with the attempt to preserve it? I had not. I saw the men at work at it.
1023. Did you see it when it came? Not when it came; but I saw it after it was delivered, lying on the ground in the paddock.
1024. At that time was it in such a condition that it might have been perfectly well preserved? Yes; after the inside was once taken out it was perfectly good; it would have kept another week.
1025. *Mr. Hill.*] It was all cartilage? Yes, it was like a lot of suet.

1026. *Chairman.*] Do you know how it was that it became a nuisance and was ordered away? No. I heard many different tales about it.
1027. But it did not come within your knowledge? No. I saw the men at work at it several times; I saw a hole dug for it to be wheeled into.
1028. Was it a valuable specimen? I should think so; it was the first I had seen.
1029. If proper care had been taken it might have been preserved? There would have been no difficulty in perfectly well preserving the fish; what was left after the inside was taken out was more like gristle.
1030. Did you ever hear Mr. Krefft say anything about the fish—why he would not preserve it? No.
1031. *Mr. Hill.*] I asked you just now about some animals. You say you missed two lions;—did you miss any other animals? I remember a little pony, but I do not know what became of it.
1032. Do you remember a reindeer? I remember a large reindeer that used to be here.
1033. Do you know what became of it? I do not.
1034. Do you remember a civet cat that was here? No.
1035. How many kangaroos were there originally? Ten old ones and one young one (*Petrogale xanthopus*.) There are only ten down in the list; but there were ten adults and one young; the young one is there now.
1036. *Chairman.*] Do you know a person named Bradley who used to work for the Museum? No.
1037. Have you ever heard of the name mentioned? I have.
1038. Under what circumstances? The first time I ever heard of it was one day when I wanted some setting-boards made for setting butterflies and moths. Mr. Krefft told Robert Barnes to make me a dozen setting-boards, and he said to him—"Get Bradley to make out your bill; he is your man, Bob." Barnes made the boards. That was the first I ever heard of the name, but I have heard a great deal since.
1039. Why was the name of Bradley adopted? I do not know.
1040. Did you inquire why Barnes was to use the name of Bradley? No, I did not address him at all.
1041. I understood you to say it was overtime work? Yes, the boards were made in overtime.
1042. Did you ever ask Mr. Krefft why he used the name of Bradley? I have never mentioned the subject to him.
1043. What was it he stated exactly? I forget the exact words, but it was something to this effect: "Bradley is the man who will make out your bill" or "Charge them to Bradley." It was something of that kind.
1044. Did you understand what it meant? Not at the time.
1045. Were you afterwards made acquainted with it? After the evidence given before the Select Committee of the Legislative Assembly.
1046. Not until then? Not until then.
1047. *Dr. Alleyne.*] You spoke of a particular occasion when Mr. Krefft was, in your opinion, without doubt drunk: has it been of frequent occurrence, or was that an exceptional occasion? He was worse then than I had ever seen him before. Very frequently he has been only just able to walk about the place, and if you went within a yard or two of him the smell from him was enough to convince any one that he was in liquor.
1048. *Mr. Hill.*] Did this occur at particular times of the day? First thing in the morning he would appear all right. You might see his men running out with square bottles for his beer any time during the day.
1049. You had no opportunity of seeing him after 4 o'clock? I went home at that hour.
1050. *Chairman.*] Who went out with the square bottles for beer? Robert Barnes and O'Grady.
1051. Where did they principally go to? To Hourigan's. I used to take a run home myself between 11 and 12 o'clock in the morning, and I have frequently met Barnes or O'Grady coming up with a square bottle, and frequently in the afternoon also; in fact, ever so many times during the day they had the bottle.
1052. *Mr. Hill.*] How do you know that what they went for was not for themselves? Simply because they do not drink.
1053. They did drink at one time, did they not? I think Harry Barnes used to drink at one time.
1054. But not during the last year or two? No, during the last year or two I do not think he has touched a drop.
1055. *Dr. Alleyne.*] Has he always appeared a respectable man? So far as I know; I did not see much of him, as our work was not done in the same shop.
1056. If the Barneses had been thieves, I suppose you would have heard of it? I never heard of anything against them. Krefft used to stick up for them through thick and thin.
1057. *Mr. Hill.*] In the taxidermist's room—that was your room—were the cases at the back all full or nearly so? With insects do you mean?
1058. With insects? One cabinet was empty.
1059. Do you know what is in the cabinets in this room where we are now sitting? At one time they used to be full of European birds.
1060. What became of the birds? The greater part of them were mounted; some were too bad to mount, and they were burned; others were put in large boxes down below.
1061. You believe the cabinets to be all empty now? I think so. They were at one time full of papers.
1062. *Mr. Hill.*] You say you recollect something of that sun-fish? I saw it several times.
1063. Were the men employed at it using tubs and buckets? I do not know.
1064. Do you know how the men conveyed the fish away as it was cut up? They conveyed it away in a wheelbarrow.
1065. Do you know where it was buried? Close to Weigall's fence.
1066. Do you know anything of the tubs or buckets that were buried with the fish? I never heard anything of the kind until I saw the printed evidence.
1067. Could you point out the spot where the fish was buried? Not within a few yards.
1068. Do you think the men who wheeled it there could point out the spot? I should think so.
1069. You know nothing of the tubs? No.
1070. *Dr. Alleyne.*] Did you actually see the waste of this fish wheeled away in a wheelbarrow? Yes, I was looking at it several times, and saw Mac busy wheeling it away.
1071. *Mr. Hill.*] Was a hole dug for the purpose of burying it? Yes, it was dug for that purpose; but there were no tubs or buckets used during the time I saw the fish.
1072. Do you recollect anything connected with the visitors' book at all? No. 1073.

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1073. You had nothing to do with that, and know nothing of it? Nothing whatever.
*At his own request, witness was permitted by the Committee to make the following statement:—*Some eighteen months ago I was out shooting at Homebush, and I shot a lark which had only three toes on each foot. I told Mr. Krefft about it, and he said he should like to see it. I brought it to him, and on looking at it he said it would be a grand thing to send to Darwin, and asked me if I would give it him. I said I would give it him; and he then said he would write to Mr. Darwin explaining the circumstances under which it was got. He afterwards told me that he had written Darwin a long letter, and had sent the bird by post. Some few months afterwards, when I thought a sufficient length of time had elapsed to permit of an answer being received, I asked him if he had heard anything. He said that Darwin had received it and was highly pleased with it. One day after that I was in the Board-room with Mr. Krefft; he pulled out one of the drawers for something, and the first thing I noticed was the very bird which he said he had sent to Darwin. It was a lark that had no hind toes.
1074. *Dr. Alleyne.*] Do you know what became of the bird afterwards? No; I never let him know that I saw it.
1075. *Mr. Hill.*] Did you ever hear of it afterwards? No.
1076. *Chairman.*] Did Mr. Krefft work a good deal amongst the specimens himself? Scarcely ever. He used to shift the things about a good deal from one part of the place to another, but he did very little actual work—certainly not in arranging the cases and naming the things.
1077. What was he usually employed in doing? He used to be in the Board-room the greater part of his time—certainly doing nothing connected with Museum things—such as arranging specimens or anything of that kind. The mineral collection was about the only thing he put his hand to during the last eighteen months. For years he has never put a bird into the cases—never put a name to a single bird. And I always looked after everything for the taxidermist.
1078. *Mr. Hill.*] At one time, when donations were made to the Museum, it was the practice to put the donor's name to the specimen;—do you know why that plan was discontinued? I do not know.
1079. *Chairman.*] Who set up the specimens of the mammalia? Mr. Thorpe.
1080. Did he set them up specially under Mr. Krefft's directions? Oh no; I generally used to look out everything for him.
1081. In your time you used to do that? Yes.
1082. Without reference to Mr. Krefft? Without reference to him. At any time we had anything to set up he would say—"Send for Thorpe to mount it." Sometimes I would say we had sufficient.
1083. Skeletons? That was all Barnes's work.
1084. You had nothing to do with the work every month? Every month I used to make out a list of everything that had been mounted or set up. The greater part of the year photographing was going on—fully six or eight months every year. Only six small skeletons were mounted during last season; and two were taken to pieces and remounted.
1085. *Mr. Hill.*] Who has been naming all the insects in the cases? I think I have named every one of them. No one had anything else to do with them but myself; no one touched any of the birds, shells, or insects, but myself.
1086. The birds, shells, and insects were entirely under your care? Yes; every label is in my own handwriting.
1087. *Dr. Alleyne.*] You were not competent to set up the skeletons of the mammalia? No.
1088. Nor were the Barneses competent to do it, I suppose, except under instructions? Well, I do not know; I think they were. I think Harry Barnes is capable of setting up any skeleton without instructions. In fact he set them up without any instructions from Mr. Krefft; he could take them home and mount them.

I certify that this is a correct statement of the evidence given by me before the Sub-committee of Trustees, on the 16th instant.

GEORGE MASTERS.

Mr. James Macnamara called in and examined:—

- Mr. J. Macnamara.
16 July, 1874.
1089. *Chairman.*] Are you employed in the Museum? Very seldom; about five or six days in the month I am employed.
1090. By whom? By Mr. Krefft.
1091. On what duty? Only to keep the place clean.
1092. Keep the garden in order and that sort of work? Yes.
1093. How long have you been engaged in that work for Mr. Krefft? About six years.
1094. Do you remember a large fish, called a sun-fish, being brought here? Yes.
1095. What had you to do with it? Well I hadn't much to do with it; I was for a few days helping the men.
1096. What was your part of the duty? The same as the rest of the men—cutting away the fish.
1097. And what did you do with what you cut away? We buried it.
1098. Where did you bury it? In the paddock.
1099. Can you find the place? No, I cannot.
1100. Did you dig the hole? I did.
1101. How deep? I suppose about 5 feet—4 or 5 feet.
1102. *Mr. Hill.*] As deep as yourself? No.
1103. *Chairman.*] It was a good big hole? Yes.
1104. Did you fill the hole with the fish? Oh no.
1105. Was there much of a smell? There was; I got sick over it.
1106. How did you carry the fish to the hole—what did you carry it with? It was cut up in pieces, and we pulled it to the hole with a crook.
1107. Did you wheel it in a wheelbarrow? No; I pulled it with a crook all along.
1108. Did you use any tubs, buckets, or barrels? I did not see anything of the kind; there might have been some there.
1109. *Dr. Alleyne.*] Do you say you may have put something in a tub or barrel and not know? I did not say I did; I said I did not know that buckets or tubs had been used.
- 1110.

1110. *Chairman.*] Did you cover in the hole again? I did.
1111. Were there any tubs, or buckets, or wheelbarrows buried in the hole along with the fish? Not to my knowledge.
1112. *Dr. Alleyne.*] Did any one help you to cover the hole up? No; I covered it up myself.
1113. *Mr. Hill.*] Did you convey all the fish to the hole and put it in and then cover it up? I helped the men to put it in.
1114. *Chairman.*] You helped what men? There were the two Barneses.
1115. You did not wheel any of the fish at all? No, I did not; I had no wheelbarrow.*
1116. Did the others wheel any? Not to my knowledge. I did not see anybody wheel any. We had a crook and pulled it along the paddock to the hole.
1117. *Mr. Hill.*] And you could not find that hole? I could not.
1118. Where do you live? I sleep at the Museum; I am working now for the Honorable Deas Thomson. I left there to come here.
1119. *Dr. Alleyne.*] Can you remember the spot where the fish was? I cannot.
1120. Was it before this door? It's no use asking any of those questions; it was in some part of the paddock.
1121. Was it in a part of the paddock near to the Public School? It was in the paddock.
1122. Was it in the middle of the paddock? I cannot swear it, it is so long ago.
1123. Can you tell us the spot within a few hundred yards? I cannot tell you the spot at all.
1124. *Mr. Hill.*] Was it over by Mr. Weigall's school fence? It was about that way I think somewhere.
1125. You work in the garden, prune the trees, and so on? Yes.
1126. What wages do you get? I get 6s. a day.
1127. To work here? Yes.
1128. How many days do you work here? Sometimes seven, sometimes eight, sometimes ten days in the month.
1129. You are not discharged from here? No, I sleep here still.
1130. Do you know any man working down in the cellars now? I do.
1131. How long has he been here? He may have been here five or six weeks.
1132. Does he sleep here? No.
1133. Do you know his name? No.
1134. *Chairman.*] How long do you say you have been employed about the place? About six years.
1135. In the course of that time did you ever see Mr. Kreffit in a state of intoxication? I never did, for my time was very short at the Museum. When I am out at work at other places it is 9 o'clock before I come home to the Museum.
1136. Do you sleep on the premises? Yes, I have slept on the premises for the last six years; I have never been absent a single night.
1137. And you never saw the Curator intoxicated? Never.
1138. Did you ever see the doors of the institution open at night? Never. I locked the front gate every night, and I was never later than 9 o'clock or half-past 9.
1139. Have you slept on the premises during the whole six years? During the whole six years.
1140. You know the Barneses well? Yes.
1141. Did you ever see either of them tipsy? I did not.
1142. Are you on good terms with the other people employed in the institution? Yes, with every one of them.
1143. You remember some people of the name of Brack living here? Yes, I think he lived at the back somewhere.
1144. Was he a quiet, sober, steady man? He was; I never saw him anything else.
1145. Where do you work when you are not employed here? For the last fourteen years I have occasionally worked for the Honorable Deas Thomson. I have worked sometimes for Mr. Macleay and other people.

This is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 16th instant.

his
JAMES + MACNAMARA.
mark.

24/7/1874.

MONDAY, 20 JULY, 1874.

Present:—

H. G. ALLEYNE, Esq., M.D.,
ED. S. HILL, Esq., J.P.,

PROFESSOR LIVERSIDGE,
CHRISTOPHER ROLLESTON, Esq.

H. G. ALLEYNE, Esq., IN THE CHAIR.

James C. Cox, Esq., M.D., was called in and examined:—

1146. *Chairman.*] What is your name? James Charles Cox.
1147. You have known Mr. Kreffit for a long time? I have, for many years.
1148. It has been stated by some persons examined before the Select Committee of the Legislative Assembly that he has been habitually intemperate;—do you know anything of his habits in that respect? You refer, I presume, to within the walls of the institution?
1149. No, not specially. I ask you as to your knowledge of his habits generally? I have seen Mr. Kreffit twice very drunk in this institution.
1150. In the house? Once was in this Board-room. I came in here at 11 o'clock one day. He was sitting in the chair at the table, and was quite stupid with drink. I roused him up. He looked up. He had scarcely any clothes on—a white shirt, a pair of trousers, and socks. He asked me not to take any notice of him. I said—"Kreffit, if you get into this state I wish you would keep out of the way of the Trustees."

J. C. Cox,
Esq., M.D.

20 July, 1874.

*NOTE (on revision):—I really forget whether there was a wheelbarrow or not.

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Esq., M.D.
20 July, 1874.

Trustees. You had much better go up into your room." I spoke to him a good deal more about it; but he was so stupid that I could make nothing of him. He began to cry so that I went away. I came here about three months afterwards, at about 4 o'clock in the evening. I came here to consult some books. It was after the doors were shut. I found him trying to get up the stairs outside the room here as I was going out. He was perfectly under the influence of drink.

1151. *Mr. Hill.*] Up-stairs to his own room? Yes, he was going up the stairs.

1152. *Chairman.*] How long ago was this? It is over two years ago.

1153. What time of the day was it, do you remember? The first time was about 11 o'clock in the morning. I came straight from my own house here. The other time was shortly after the doors were shut in the afternoon, shortly after 4 o'clock.

1154. *Mr. Hill.*] Were any of the employes present at either of those times? O'Grady was present, I think, when I was going out of the door, but I am not sure.

1155. Do you know of any charges connected with old Tost—anything about leaving goods in his place? Not further than that I was told so.

1156. How long ago? I never heard of it until this matter was brought before the Legislative Assembly.

1157. You heard something about it then? I did.

1158. Did you hear it from anybody connected with the institution? I believe one of the Barneses told it to me.

1159. That is the first you heard of it? Yes.

1160. Did you hear it from Thorpe or Masters, or any of the others, since that time? Yes; I heard Masters speak of it.

1161. What did he say? I heard him speak of the fact—that it was a rascally thing, that affair about old Tost, the Curator having tried to induce persons to put things into his house.

1162. Did he say anything in reference to the time—as to how long it was since he heard it? No.

1163. Do you know anything about any indecent photographs taken at this establishment? No. The first time I ever saw any here was at the Board meeting when they were produced by the Barneses.

1164. You did not see any a year or two ago when they were lying about this table? No.

1165. You have not seen them in the hands of any private individual? No; that is the first time I ever saw them.

1166. Have you heard of anything in the shape of furniture being manufactured in this establishment other than for the institution? I heard of it at the time when the investigation was made into the conduct of Tost. It was then spoken of, about furniture being made here for Mr. Krefft and Dr. Belisario.

1167. Did you know it as a fact that Dr. Belisario had something made here? Yes; from the investigation made in Tost's case.

1168. That was before he was a Trustee of the institution? Yes; I believe it was quite without Dr. Belisario's knowledge that Tost made it here.

1169. Do you know what the article was? It was a book-case, I understood.

1170. Do you know of your own knowledge of anything else that was made or set up for any other parties? Only the restoration of the diprotodon bones.

1171. Sir Alfred Stephen and Mr. Parkes had something done? I was not aware of it until I saw it in the printed evidence.

1172. Do you know anything connected with a man of the name of Bradley who used to work for this institution—anything about work done in the alleged name of Bradley? I never knew that Bradley represented one of the Barneses until I saw it in evidence, but I remember accounts being frequently presented at the Board meetings for payment under that name.

1173. Do you recollect anything connected with the fossil bone belonging to some one else other than the institution—Dr. Bennett's bone? I do; I remember the circumstance quite well.

1174. Do you know what animal it belonged to? I understood the diprotodon.

1175. What part? Part of the head.

1176. Did you see it? Yes; when first sent here to be restored.

1177. Did you see it after its restoration? I did.

1178. After its restoration with the clay? I saw it perfect. I saw it a day or two before it was packed up and intended to be sent away.

1179. Did you see it packed up? No.

1180. Did you see anybody packing it? No.

1181. Did you see anything connected with its being broken to pieces? Certain statements were made to me about it.

1182. By Mr. Krefft? By Mr. Krefft himself.

1183. What were these statements? I went in with Mr. Krefft to see it after it was restored in the workshop, and I was very pleased with the execution of the work. I thought it was a very great success, and that it was very creditable to the Barneses, and I said so to Mr. Krefft. "Work of that kind will astonish Owen, being done in the Colonies." He said—"Don't you fancy that Owen shall see that. I will be damned if he shall ever see it in that state that you and I see it in." I said—"Oh, nonsense, man! Don't talk in that way." The fact is, that I believe on that day he was a good deal under the influence of liquor, and he was talking in the most braggadocio loud manner.

1184. You had that idea from his appearance? Yes, from his appearance and manner of speaking.

1185. Did he state at any time how it was broken? He did not. I had one other conversation with him on the matter previous to this, which to my mind is an important matter. I was walking across the Race-course with him, and I was talking to him about these fine bones that Dr. Bennett had received. I was talking about an article by Mr. Flower, I think the name was; and he said to me—"If I can only get those bones out of old Bennett, I will get them photographed and measured before they are sent Home. I will send the photographs and measurement Home, and take the wind out of Professor Owen's sails." That was his expression.

1186. When this conversation occurred between you and Mr. Krefft, did anybody else hear it? That man Robert Barnes was close by when the conversation in the workshop took place.

1187. He could have heard it? I believe he could, because Mr. Krefft spoke in such a loud tone.

1188.

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1188. You are perfectly sure that you are not mistaken? I am perfectly sure that I am correct.
1189. *Mr. Hill.*] It was the lower portion of the skull? Yes; there was also the upper jaw replaced standing with it.
1190. What did that upper jaw consist of? It appeared to me to be modelled from white plaster.
1191. What was it a model of? It was an exact representation, as he showed me at the time, of the skull of the native bear.
1192. The wombat or the bear? It was the bear, not the wombat.
1193. *Chairman.*] You mean the animal that we call the native bear? Yes, the native bear.
1194. *Mr. Hill.*] In the comparative anatomy of the native bear and the diprotodon, did he show you anything in particular connected with the condyle? Yes, I remember him explaining something of the sort, but I did not take much notice of it.
1195. Was the upper part of the cranium which you presume to be the native bear—was that much smaller in proportion than the diprotodon—did he make that cast by comparison? I understood him to say that it was ordered to be made by comparison with the skull of the native bear.
1196. Did he show you any particular feature? I do not know that he did. I may state that it was in consequence of my being told subsequently that that head had been smashed up before it went Home that I thought it my duty to mention the matter to Dr. Bennett.
1197. And you did so? I did so. I understood afterwards from Dr. Bennett that Mr. Krefft himself told Dr. Bennett that it was broken before it went Home—that it had to be broken with the lid of the case.
1198. Do you recollect anything else that Dr. Bennett said: that he had another case of bones—that he would take good care that none came here? He told me that distinctly; he told me that on board the "Challenger" one day, and on another occasion also.
1199. *Chairman.*] Dr. Bennett said so? Yes.
1200. *Mr. Hill.*] That, although those bones might be broken, he had a couple of cases of bones from the same place, and he would take care that none came to the Museum? Yes, I recollect him telling me that distinctly.
1201. *Chairman.*] What did you infer from that remark? I inferred that he had been made rather a tool of.
1202. You did not see the breaking up of the bone itself? I did not.
1203. You did not see the box it was packed in? No, I did not. One of the Barneses mentioned to me that it was a shame that, after all his work and care in setting up that specimen, Mr. Krefft should have broken it up before he sent it Home, and it was in consequence of that that I informed Dr. Bennett of it.
1204. Do you know anything about the Curator sending away at any time valuable specimens, or specimens belonging to this institution, in his own name? In the evidence given by Dr. Bennett before the Select Committee of the Legislative Assembly, he says, in his answer to question number 1995—"We have perfect casts in the Museum of the restored jaw, and we have already exchanged specimens with Melbourne." In regard to that, I beg to state that I am on the exchange committee, and I believe I have attended every meeting of the Trustees held at the Museum since that was set up, and no such thing as these exchanges with Melbourne was ever mentioned at the Board meeting, nor was it done with the sanction of the exchange committee.
1205. You mean to say that if what Dr. Bennett has there stated is correct, these things were sent away without any instructions from the exchange committee whatever? Yes.
1206. *Mr. Hill.*] Dr. Bennett also says that they wanted them in Queensland and a great many other places? He does.
1207. *Chairman.*] Who else is on the exchange committee besides yourself? The exchange committee consisted of Mr. W. J. Stephens, Dr. Bennett, and myself. Mr. W. J. Stephens is not now a Trustee, but was then I believe.
1208. Was any proposal to make these exchanges ever at any time brought before the exchange committee? Never. The exchange committee has never been summoned—certainly not for the last twelve months.
1209. It could be no fault of the exchange committee if their opinion was not asked? It could not; and I was anxious to clear myself on that point.
1210. The fact is that Mr. Stephen was not a Trustee at the time, and you were never summoned? Mr. Stephen was a Trustee at that time, I believe.
1211. They must have been sent away, if they were sent away at all, without any reference to the exchange committee? Yes.
1212. *Mr. Hill.*] Did Dr. Bennett subsequent to the time when he made this statement that these things had been already exchanged with Melbourne, say that he knew of the specimen being broken, or that he expected it would be broken? No. I may mention that the exchange committee was ordered by the Board at my request not to send anything away until the specimens were submitted to a general meeting of the Board. I did that for special reasons which had come under my notice.
1213. Some questions were asked of Dr. Bennett as to when he expected to hear from Professor Owen;—have you seen any letter from Professor Owen on the subject? Dr. Bennett read me a portion of a letter on board the "Challenger" one day, in which he said something about being very much pleased with a piece of a jaw that had arrived Home.
1214. Do you know anything as to the date of that letter from Professor Owen, or as to whether it was an acknowledgment of these diprotodon bones? I could not possibly tell. I have since ascertained by a printed circular, headed "A few letters and testimonials from distinguished men of science, addressed to Mr. Gerard Krefft, Curator and Secretary of the Australian Museum," that a letter has been received from Professor Owen. In this circular there is a portion of a letter dated "British Museum, 13th April, 1874," which reads as follows:—
- Dear Bennett,—One of the anticipated pleasures of my return from Egypt was the sight and grasp of the very interesting fossils announced in your letters which my son forwarded to me at Cairo; I have now had that pleasure with a portion of a jaw, &c.* * * * My best regards and good wishes to Krefft. The Museum will owe much to his energy and devotion. As soon as our new Museum is ready to enable us to sort out our accumulated stores, Sydney shall have my first selection of duplicates.—RICHARD OWEN.
1215. There is no record of these specimens having been sent? No; no committee meeting was called.
1216. Do you know of any other cases? Yes. There is one which I may specially mention, because it gave me a very great deal of anxiety and grief. About nine months ago or over, a Mr. Wood brought me from

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from Queensland a most beautiful can of fishes. I brought them to Mr. Krefft, and I asked him to take any out of them that were of use to the Museum. He took them all out, and he found one which he said was quite a new fish. He kept that. But he also found some very fine specimens of another fish of which he said he had not such good specimens. He also took one or two specimens of a third kind, which he said he would value very much for the Museum. I was not at the Board meeting which was held subsequently to my having given this donation in Mr. Wood's name, and I came and asked Mr. Krefft why he had not given me the usual form of thanks for Mr. Wood. He told me that he thought they would be more useful at Home, and that Günther would figure and describe them properly, and that he had sent them to Mr. Günther. I certainly was very vexed indeed at the time about it, and I declared that I never would give any more donations to the Museum unless there were some means of recording them in a proper record book.

1217. Is there a proper book for exchanges? When I was appointed a member of the exchange committee, at the first meeting to which I was summoned, to my surprise, there was no minute-book at all. I was appointed in 1862. The committee consisted of Dr. Bennett, Dr. Cox, and Mr. W. J. Stephens.

1218. What is the last record in that book? The last record in this book is a minute about four pages long; it has never been confirmed, and there has not been a meeting since apparently; it is dated August 26, 1872.

1219. *Chairman.*] The presumption is, then, that there has been no meeting since that time? No. I may mention also that there are several meetings recorded here, but there are no signatures to show that they have been approved of in any way. They appear to me to be all written in the same ink and the same style.

1220. *Mr. Hill.*] Whose writing are they in? Mr. Krefft's writing. There was a very extensive exchange since this meeting. Mr. Krefft submitted the specimens direct at the meeting of the Board of Trustees. I happened to come in after the exchange had been approved of. I stated at the time that the articles had not been submitted to the exchange committee; and Dr. Bennett said that he had looked over them, and they were wanted to be sent away immediately. The Board approved of their being sent away, and I believe it was a very proper exchange. They were for a person who had been waiting a long time for insects.

1221. *Chairman.*] From that book (the exchange book) it would appear that there has been no meeting of the exchange committee summoned since August, 1872? None since then.

1222. Therefore, all the exchanges made since that time, with the exception of those made directly by the Board of Trustees, as has just been mentioned, have been made without any authority whatever? Certainly without any authority from the exchange committee.

1223. *Mr. Hill.*] Do you know of any property of this Museum sent to other parts of the world by Mr. Krefft in his own name? I do. If you will look at the Proceedings of the Zoological Society for 1869, you will see that there is mentioned a very fine donation of birds to Mr. Selater—over thirty species. From the description, I have no doubt that those birds consisted of a can of birds which I saw in this room. I went on board a vessel called the "Chance" to get some shells from Captain Macgregor, who had some for me, and had sent for me. When I went on board he told me that he had two cans of birds and things for the Museum, and he asked me to tell any of the officials, if I saw them, to send down for them. I at once came up and asked Mr. Krefft to send for them. He did send for them; and a couple of days afterwards he told me he had got the birds. He said—"We may as well have a look at them," and he pulled them out on a tray. There was one bird which was very beautiful—black and yellow—which he said was new, and which we both admired. It is described as *Gracæala Krefftii*. It is figured in the Proceedings of the Zoological Society for 1869.

1224. *Chairman.*] Does it say in the article you refer to where the bird came from? It says something about a donation from Mr. Krefft, sent, I think, at the request of Mr. Buttrey.

1225. *Mr. Hill.*] Mr. Buttrey was part owner of that ship? I do not know—I never heard of the name. My attention was called to the fact by seeing the announcement of this large donation in Mr. Krefft's name in the Proceedings of the Zoological Society. In the Proceedings of the Zoological Society for 1868 you will see mentioned a large donation of frogs in Mr. Krefft's name to the British Museum. In the Proceedings of the Zoological Society for 1863 you will also find mentioned a large donation of Batrachians sent to Mr. Günther.

1226. Do you recollect reading at this table a month ago something about a jaw or teeth of the *Ceratodus* in a fossil state? There is a mention of it in *Nature*. The notice to which you refer is about a donation of a cast of teeth of *Ceratodus*.

1227. That was sent from Mr. Krefft? Yes; the notice acknowledges the receipt of it.

1228. Do you recollect any collection of animals made by Mr. Masters being sent away from here—any *Antechinus* or *tarcipes*: do you recollect any being specially ordered to go away by the exchange Committee? The only *Antechinus* that I knew about being sent away were given by Mr. Krefft to my brother, Mr. Edward King Cox, when he was going to England. When my brother was going aboard, I asked Mr. Krefft if he would give him a few letters of introduction to the German institutions, as he was anxious to see the best collections of wool and other things that were on view. Mr. Krefft called at my house with those letters, and he brought a bottle containing what my brother told me were rats which Mr. Krefft had left for him. I did not see them. I saw the bottle, and my brother was directed to give some of them to Professor Peters. But as my brother did not go to Germany as he had intended, he sent the bottle with its contents, as Mr. Krefft gave it to him, to Professor Peters. My brother sent it through his agent, Mr. Edward Stavenhagen, in London. In his examination, at questions 3459 and 3465, Mr. Krefft was asked, "You sent a bottle containing a large number of small mammals, or some sort of animals, Home by Mr. Edward King Cox;—did you not?" He replies, "Yes, Dr. Cox did, with the permission of the exchange committee." He is asked, "Where had they been got?" and he answered, "I must have bought them at some time or other." Again he is asked, "You are sure you purchased the whole of these things with your own money?" He replied, "I have no doubt they must have been mine—I buy lots of things." In a note, added on revision, he says, "The bottle contained a mixture of small marsupials of the genus *Antechinus*, and some mice (or rodents). They were collected for me by Mr. Keper, of Port Stephens; some came from Port Denison. I paid for them, and gave them to Dr. Cox, with letters to Professor Dumeril, of Paris, to Professor Peters, of Berlin, and to Professor Kaup, of Damstadt. These gentlemen never mentioned anything about them, and no return was made." That is perfectly false.

These

These things were never submitted to the exchange committee, and I had nothing whatever to do with them. I desire to lay before the committee my brother's letter, dated "Darling Point, May 28th, 1874." He says: "In answer to yours, I have to state that Mr. Krefft called at your house the evening before I left for England in 1871. He gave me letters of introduction to several persons whose names I cannot now recollect; at the same time he gave me a bottle containing what he called 'rats.' The bottle was a small one. He asked me to take it to Europe and give one of the specimens from the bottle to certain of the persons to whom he gave me letters of introduction, and I was to give two (I think it was) to Professor Peters, of Berlin. I did not go to the various places to which those letters were addressed, so the bottle with its contents, as Mr. Krefft gave it to me, was sent through my agent, Mr. Edward Stavenhagen, to Professor Peters." I was particularly anxious to clear up this matter. I now produce the exchange book. There is no such transaction as that of which Mr. Krefft speaks, on record.

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1229. Is there anything else you would like to state with reference to this matter? No.

1230. Do you know of anything that went from this Museum to the frigate "Atalante?" No, I do not. I heard that things went, but I do not know positively. That was the Spanish frigate, was it not?

1231. No, the French frigate. Do you know of anything that was sent from this Museum on board Her Majesty's ship "Challenger?" Not of my own knowledge. One of the officers told me that a very fine series of photographs were sent.

1232. As a donation from the Museum? I understood it was from Mr. Krefft.

1233. What were they photographs of? I do not know. I did not pursue the subject.

1234. Do you know anything of the charge of making a false return in the visitors' book? I only know what I have been told.

1235. Do you know of any particular occurrence in reference to a written statement to the Colonial Secretary, when you were to have met him? I do.

1236. Will you please state what you know? Prior to the 19th of September, 1873, the Board appointed, if my memory serves me right, Dr. Alleyne, Captain Onslow, and myself to wait upon the Government for the purpose of asking them to put a certain sum of money on the Estimates for the making of cases. The Colonial Secretary appointed a day on which he would meet the deputation. When I got home at 1-30 p.m. I found a message left at my house to say that the deputation was to meet the Colonial Secretary, I think it was at 11. It was then past the time, and I could not possibly attend. I believe none of the other deputation attended. I called on Mr. Krefft and asked him about it. He told me that he had made it all right, and he wrote this letter in explanation to the Colonial Secretary. The fact was that the Colonial Secretary had written back rather a sharp letter, commenting on the fact that the deputation had not treated him with respect in not having kept the appointment. Mr. Krefft asked for another appointment, and I asked him to let me know when I was to attend, in good time. He sent me a written notice to be there on a certain day. I went there. I had to see Mr. Parkes on other public business. When I had finished my business I said to him—"I believe I am to call upon you again in a few minutes as a member of a deputation from the Museum;" and he said, "I believe you are." I went into the ante-room, where I waited a very long time; but as nobody came I went away. I came to the Museum and I asked Mr. Krefft why he had not come, for I thought then that it was his duty to attend with the deputation. He told me that he thought it was not. At a subsequent meeting of the Board, I moved that in future the Secretary should attend all deputations. However, Mr. Krefft had got another letter from the Colonial Secretary, complaining in very strong terms of the deputation not having attended. I said, "Mr. Krefft, I was there, and waited a very long time." He said, "By Jove, I did not know that. I have written this letter in explanation." He showed me the letter, the copy of which was in a book and was taken by a copying-press. It was a long letter. This (*referring to a letter in the letter-book*) is not the letter at all.

1237. Does that purport to be the letter? Yes. The letter to which I refer was in a large copying-press book. I said, "That won't do. Mr. Parkes knows quite well that I was at the Colonial Secretary's Office. What you have stated there to the Colonial Secretary is perfectly untrue, and he knows it." He said that he thought he would have time to rush down to the Colonial Secretary's Office and get the letter probably before Mr. Parkes had seen it, and he would write another one. I presume this letter is the other letter he wrote. These letters were never produced before the Board, not even Mr. Parkes's letters.

1238. *Chairman.*] He accused you of not attending on a certain day when you were actually there? He did. I would not complain so much of the deputation falling through, but when a letter came from the Colonial Secretary, complaining of it, and when I saw a false statement sent in reply, I thought it my duty to take notice of it.

1239. *Mr. Rolleston.*] Those letters of complaint never came before the Board? They were never laid before the Board to my knowledge as Mr. Krefft said that he would do in those letters.

1240. Do they appear in the minute-book at all? They are not there as far as I know.

1241. *Chairman.*] Is it the fact that you have been charged with the price of certain galvanized tubs, presumed to have been used in the attempted preparation of the sun-fish? It is quite true.

1242. What is the sum which you were charged for the tubs? 20s. 6d.

1243. Have you paid it? I paid it to Mr. Krefft.

1244. Were you charged any money for labour employed for the preparation of this fish? I was, in the account which Mr. Krefft rendered me; and I insisted in reimbursing every expense in this matter to the Trustees; he includes a charge of £3 6s. for extra labour. I may state that when I sent the sun-fish here I authorized Mr. Krefft to get any amount of labour he wished if he would provide it.

1245. *Mr. Rolleston.*] Are the tubs specifically mentioned in that charge? They are—tubs and buckets, 20s. 6d. Some reference has been made to an advertisement which appeared in the newspaper. If you will allow me I will read the letter he published:—"Will you kindly allow me to invite those gentlemen who desire to see my original correspondence with Dr. Cox and others, to call at the Museum before 12 o'clock to-morrow morning? I shall be happy to exhibit to them orders to skin and to seal for the doctor's benefit; and shall also produce the original receipt for extra labour anent the sun-fish which Dr. Cox repudiates." Then he quotes this: "The sun-fish labour receipt runs thus:—Sun-fish expenses, extra labour, &c., £3 6s. Received the above sum of £3 6s.,—MICHAEL O'GRADY."

1246. What is the date of it? December 30, 1871.

1247. Is it a fact that you gave orders to skin things and sell them at the Museum for your benefit? It is not. When this letter was published I went to my solicitor's, and asked him to send one of his clerks along and see these things, as it was publicly put in the papers. He came to the Museum before 12

J. C. Cox,
Esq., M.D.

20 July, 1874.

o'clock, and Mr. Krefft was out. He asked for these things, and he could not see them. He called back again at 1 o'clock, and Mr. Krefft was not at home; he could not see them. I insisted upon his getting a view of them; he was to go until he saw them. He came here at 3 o'clock, and he waited until Mr. Krefft came home. The result was that I got a letter from my solicitors informing me that the orders referred to by Mr. Krefft did not relate to the sun-fish or the Museum. When I was leaving my house in Phillip-street to go to where I now reside I had a very fine lot of birds, and I thought that I should not have room for them; I wrote to Mr. Krefft about them, and I now quote this letter from the printed circular of letters and testimonials to which I have already referred:—

My dear Krefft.—I forgot to speak to you the other day about my birds. I have a good number of really good skins, but I am going to move to a house in Macquarie-street, where I shall not have so much room as I have here for such things, and I would like to sell them. What would be best to do with them? They are in strong cases, and I think they might be sent to London or elsewhere and sold. I fancy if you wrote to Williams or Selater, and said you wanted them disposed of for a friend, they would not see them sacrificed. I would at once send them by Pickford & Co. to them or anywhere about. What shall I do? I would offer to the Museum for sale, but I fear you have no funds to spare. Yours sincerely, JAMES C. COX, Phillip-street.—I shall have to sell one of my cabinets of shells also, which I should like to see in the Museum.

That was a private letter to Mr. Krefft; it had nothing to do with the Museum whatever. Mr. Krefft has published it evidently to indicate that I wanted to sell things. The order to skin is this:—

My dear Krefft.—Please have this bird skinned for me early to-morrow. Yours sincerely, J. C. Cox.

In 1866 I was out shooting with my brother one day at Greystances. A bird got up and I shot it; it was a bird that I never saw alive before. I brought it here and left this note. Mr. Krefft said that the bird was common to the north, and that it had got out of some fellow's cage. He threw it on one side, and I thought no more of it. These are the orders which he has announced to the public, and which I have been supposed to give to skin and to sell. As it was put by Mr. Krefft, it would appear that the orders were to skin and to sell the sun-fish.

1248. *Mr. Hill.*] Is there anything more that you would like to add? I may perhaps draw your attention to the sun-fish, as it is a matter of importance to me. This last sun-fish was caught on the 4th of December, 1871. On the 16th I and other gentlemen had subscribed together and bought it from Skinner. He would not give it up, excepting on certain conditions. I could not promise those conditions, but I told him if the Board liked to do it they could. It was sent here; and this unfortunate man was kept here waiting from 4 o'clock in the morning until 9 o'clock before he could get it in. On the 15th of December he writes to the *Herald*:—

Will you allow me to say a few words regarding a large fish about to be presented to the Museum, and which has caused much annoyance in this neighbourhood?

1. There is no shed of any kind in which specimens which a dozen men cannot lift may be preserved.
2. There are only three men available for such labour, and they must necessarily neglect the work in hand when gigantic objects arrive for preservation without notice.
3. All fish should be secured at once, and not carried about till they are rotten. In fact, large specimens, such as the last "sun-fish," should not be brought into the city.
4. If worth having they should be preserved where they are caught.

That is the first attack that Mr. Krefft began to make about it. The fish was here on Thursday, Friday, Saturday, and Sunday. He got Dr. Dansey, the Health Officer, to visit it on Saturday. On the 18th December Mr. Wall wrote to the *Herald*:—

It has been publicly stated that the sun-fish, purchased by the Trustees of the Australian Museum, has been, after all the expense and labour incurred, thrown over the South Head, the fish having rendered the neighbourhood intolerable.

In the cause of science, I very much regret the fact that the opportunity of preserving so fine a specimen has been lost. I was more fortunate with the sun-fish previously caught, which, after seven days exhibition, I succeeded in preserving in a most satisfactory manner; and some years since I articulated the whale now in the Museum, performing the work down the harbour, thus preventing any such offence as that which has led to the loss of the sun-fish.

My long services at the Museum have obtained for me a retiring allowance; but in the cause of science, my services are always freely at the disposal of the Trustees and the public.

In the *Herald* of the 20th December, Mr. Krefft wrote:—

Will you allow me a word in explanation of Mr. W. S. Wall's unfounded statements in this day's *Herald*.

1. The sun-fish removed by the Inspector of Nuisances from the Museum-yard was not purchased by the Trustees.
2. Having no money to attempt its preservation, the Museum could not be at the loss of a single penny, the owners supplying the necessary funds. Only in case of success would the specimen have been presented to this institution.
3. Science lost nothing by the fish, it being well known; and all that was worth having of it were its intestinal worms; these have been secured.
4. The sight-seeing public will probably be afforded an opportunity to admire the "fat" and "carefully painted" caricature of a small sun-fish shortly to be exhibited. The fortunate owner states it cost him £40, of which the taxidermist who stuffed it received £25. Our condemned fish being about six times the bulk of the specimen referred to would have cost £150 to preserve at the above rate, and would have driven me to the "top of King-street."
5. Specimens mounted and "preserved" to Mr. Wall's satisfaction would never satisfy my own demands. I must have the animals true to nature. I disapprove of paint in particular, because it covers a multitude of sins.
6. There are many whales in the Museum. In fact it is the most famous collection of whales in existence; and every specimen as it now stands was mounted by a native of this city, Mr. Henry Barnes, who is a perfect genius in this branch of taxidermy. Mr. Wall certainly articulated the whale to which he refers in the first instance; and when it was about tumbling down he had to take it to pieces again. I discovered it scattered over the Museum grounds, and buried under heaps of rubbish, and at my request it was re-mounted inside the old building where Mr. Wall's "long services" had left "plenty of space" for specimens.

7. I hope Mr. Wall will long enjoy his pension which he received principally because his health had suffered when masecrating the whale, and I also hope that the Government will show the same consideration to his successors.

8. Comparisons are odious. Those who remember the good old times when a few thousand persons visited the miscellaneous collection in College-street may come and judge for themselves."

I must also beg the attention of the Committee to a second letter, signed "Subscriber," published in the *Herald* of the same date. The writer says:—

Allow me to correct an error into which Mr. Wall, and I believe the public at large, have fallen, regarding the purchase from Skinner, for our public Museum, of the large sun-fish recently captured near Manly. Being given to understand that the funds at the disposal of the Board of Directors of the Museum were inadequate to the procuring of this fine specimen, a number of gentlemen subscribed the sum of £10, which was given to Skinner on condition that he would send it to the Museum and permit of its being preserved, which he consented to do, on condition that the specimen when preserved should be returned to him for a short time to exhibit for his benefit. Accordingly, the fish was sent to the Museum on those conditions; but the sanction of the Trustees would of course have to have been obtained to comply with the latter proposal. I should like therefore to know what possible business it is of a public servant of a public institution to dictate to us our business as to what price we should give for the sun-fish or any other fish, as stated in his letter of Saturday. It was evident from the very first that every obstacle was to be placed in our way, and it first showed itself by Skinner's offer to take the fish early in the cool of the morning to the Museum being refused; not even at 8 o'clock would the Curator permit

the

the gates of the grounds to be opened to take the fish in, even after Skinner's arrangement to do so, but was detained till 9 a.m. before the doors were opened to him to deposit the fish in the paddock. The next obstacle showed itself in the want of hands, and although Mr. Krefft was authorized by me of the gentlemen who had taken most trouble in procuring the fish to get hands, and he would have them paid for, not a man could be procured. It then became most noxious to the public; no wonder, but was it owing to the want of Museum accommodation; and were the noxious odours sufficient to justify the loss of the skin of the fish? To get rid of the flesh and refuse of the fish, the Curator engages a man to dig a hole about 3 feet deep and 5 feet wide, which, according to his statement, occupied a full day, and accordingly into this pit the obnoxious refuse was thrown; but fancy our astonishment to learn on the following Monday, after the fish had been sent to the Museum, this pit was left open with its filthy putrid mass still exposed and not covered up, because, as the Curator told our informant, he intended to bury the whole mass of the fish in it, thereby clearly demonstrating its already determined destination. It so happens that at the same time that the fish is to be preserved the putrid bones of a great whale are being boiled by the side of the fish, causing more stench than half a dozen such fishes; but not a complaint is made against it. May we ask, in justice to ourselves, what means were used in order to arrest decomposition or to destroy the obnoxious odour produced by the fish, and we venture to assert that had a few pints of carbolic acid been used for this purpose and the putrid mass in the pit covered up, the fish would have been at this moment preserved and fit to be exhibited to the public. However, we beg to dedicate the further consideration of this subject to the Board of Management; but fear that the treatment of specimens sent to the Museum in such a way will not encourage the development of our objects of natural history.

J. C. Cox,
Esq., M.D.
20 July, 1874.

In the *Herald* of 22nd December, Mr. Krefft published this reply:—

The remarks which "A Subscriber" addressed to you regarding the sun-fish are incorrect, and the conclusions arrived at are totally wrong.

1. Public servants have public duties to perform, and I for one will not be muzzled by the silly threat of the writer to tell "the Directors" of my misdeeds in preventing the expenditure of their money.

2. Let people be liberal with their own, but let them not think that the Museum is a "curiosity shop" and that I am "Barnum," ready at a moment's notice to supply six "mermaids" and such like for the benefit of itinerant showmen.

3. If "A Subscriber" wanted a favour, and was ready to pay for it, why did he not ask the proper authorities—"the Trustees of the Museum," not one mind, but the Board, instead of putting me in a false position? Why was not a cheque for £25 sent to me to cover expenses? If this had been done Mr. Thorpe the taxidermist would have been able to secure the skin, though, of course, unfit to be turned into a specimen. It would have done, however, as a sort of apology for the real thing, and been as good as Mr. Wall's artistic production of an impossible fish, now on view. People who go to such "shows" are not particular; "they pay their money and have their choice."

4. With regard to my refusing admittance, or keeping that "pet fisherman" waiting too long, I can only say that he bullied me, and threatened, like "A Subscriber," with the vengeance of the "Directors." I could not open because the porter had the key, and Skinner's carman had arranged to come at 9 o'clock, the hour when the men arrive.

5. To oblige "A Subscriber's" informant I advanced more money out of my own pocket for preserving material, labour, and disinfecting fluid, than the whole of the "subscribers" put together paid for their fish. I also told "A Subscriber's" friend that a few pints of carbolic acid would not have any effect on two tons of rotten fish; nor would a hundred weight of that stuff save it. He promised to send some, but did not.

I am determined not to saddle the Trustees with my outlay, and I hope the "subscribers" are prepared to pay me, as I have the promise of one of them to refund me every penny. So much for my supposed obstructions.

6. Had I any desire to trick the subscribers I could have had Mr. Seymour at the gate in the "cool of the morning," when Skinner forced his way in against my will, and without my knowledge. I hope that person will be brought up yet for trespass.

7. All further talk about the preservation of the fish is useless, because it was declared rotten by the Health Officers of the port and of the City. I knew it was so, and our taxidermist thought so too, but being very obliging he worked away till he got ill; he had to leave off on that account, as Dr. Fortescue, who attended him, will testify.

8. It was the skin which was carted off; and "Subscriber's" remarks about the hole dug are simply foolish. The pit was 8 x 10, and 4 feet deep, and if it had not been so large could not have contained all the refuse. Dr. Dansey condemned the skin in particular, though Mr. Thorpe pleaded for it. The doctor was inspecting "our beautiful drainage system" when he scented the unfortunate skin, and sternly said,—"Take it away at once, or you will be fined." My money being all expended, and no subscriber near, I had to submit.

9. "Subscriber" had a "nose" only for the whale which never offended my neighbours, because bones do not rot. The smell was not worse than "Circular Quay smell." Perhaps "Subscriber" is not aware that the Museum is indebted to his "informant" for that certainly valuable skeleton which crippled our small resources, and made the sun-fish a perfect "white elephant" in a high state of decomposition to the Museum.

10. I have done with sun-fishes for a while, and in the mean time ordered a small one, well preserved, from England. Should other (less experienced) fishermen come across one, I hope they will communicate with me direct.

11. With a merry Christmas to the "Subscribers," and an assurance that with the return of pure air all my wrath has vanished,—

I remain, &c.,

GERARD KREFFT.

This is a correct statement of the evidence given by me before the Sub-committee of the Trustees of the Museum, on the 20th instant.

JAMES C. COX.

Michael O'Grady was called in and examined:—

1249. *Mr. Hill.*] I think you were asked at a former meeting of this committee to produce one of the visitor's books to show us an instance of the manipulation you accused Mr. Krefft of? Yes.

1250. Have you the book here? Yes.

1251. Will you point out the cases to which you refer? Yes; on Thursday, April 17, 1873, there is an entry of fifty-six visitors.

1252. In whose handwriting? Mr. Krefft's—twenty-one visitors, ten ditto, two ditto.

1253. Are there any more? Fourteen visitors.

1254. On the same date? Yes. Twenty-three ditto,—John Hall and two friends,—R. Pillan and two friends. Here again twenty-five visitors, two ditto.

1255. Here are ten, fifteen, twelve, twenty-one, thirteen, eighteen, twenty-five visitors, on the same day? Yes.

1256. In the continuation of that entry on the next page was any explanation given to you why it should be done that way? I would not be able to say that there was on that particular day, but I have been often told that that was the style to do it in, and he would come and do it.

1257. On this particular occasion, or any other, were these people admitted into the Museum? No, they were not.

1258. Not any of them? Not one of them.

1259. Now show other specimens of fictitious entries? Monday, 29th September, 1873, ten visitors—two ditto.

1260. Were any remarks made when those were entered? No.

1261. Show another? December 26th, 1873. On this day I was not on duty at the book.

1262. The book was taken away? I was sent away. It was the day after the gold was stolen. I only know his handwriting. Robert Barnes was left at my post.

1263.

Michael
O'Grady.

20 July, 1874.

- Michael O'Grady.
20 July, 1874.
1263. How do you know that Robert Barnes was there? He was left at my place. Ten visitors, two ditto, six ditto, ten ditto, nineteen ditto, five ditto, four ditto, C. J. Jacobs and four others, 100 visitors, 200 visitors, 150 visitors, R. S. Hall and twenty visitors.
1264. In that visitors' book, which you generally have the custody of, have these people to whom you have referred been in the Museum at all? The ones that I know of have not.
1265. These are put down for what? To make the book tell up.
1266. To swell the numbers? Yes.
1267. To show that there was a large number of visitors to this Museum? Yes.
1268. *Chairman.*] When they have not been here at all? No.
1269. *Mr. Hill.*] When did you see Mr. Krefft last? I saw him on Friday, when he wanted me to sign a paper.
1270. Who brought the books down? I did.
1271. Who called you up? The boy.
1272. Where was Mr. Krefft? In the bedroom above.
1273. Was he dressed? He was.
1274. He gave you these books to take down to the Board room? Yes.
1275. And wanted you to sign the receipt? I reckoned them, and I told him there were forty-four books. He said—"O'Grady, I want you to take down some more. He gave me some papers and wanted me to sign for them. I said—"I will do no such thing." Mr. Krefft said—"You will have to do it." I said—"I will do no such thing. I will bring them down to Mr. Robinson, the Secretary."
1276. You saw Mrs. Krefft? Yes.
1277. Was she dressed? Yes.
1278. Did she come out and speak to you? She did.
1279. Had you seen her on other days? Yes, on other days when I was sent up by the Trustees. I saw her the day I brought the petty cash book down. Mrs. Krefft gave it to me at the door.
1280. Was Mr. Krefft in bed then? I cannot say. I did not see him.
1281. Since that day and last Friday have you seen Mrs. Krefft? I saw her on Saturday, and got some money that was due to me.
1282. Where did you see her? Up in her bedroom.
1283. Dressed? Yes.
1284. You have not seen her down stairs? No.
1285. Have you seen Mr. Krefft out since then? Yes, on Thursday. He was going out at 9 o'clock in the morning.
1286. Did you see him on the day of the election? No, not that I can call to mind.
1287. You have not seen him since Saturday? No.

This is a correct statement of the evidence given by me before the Sub-committee of the Trustees on the 20th instant.

MICHAEL O'GRADY.
27/7/1874.

WEDNESDAY, 22 JULY, 1874.

Present:—

H. G. ALLEYNE, Esq., M.D., | E. S. HILL, Esq., J.P.,
PROFESSOR LIVERSIDGE.

CHRISTOPHER ROLLESTON, Esq., IN THE CHAIR.

Alexander Walker Scott, Esq., called in and examined:—

- A. W. Scott, Esq.
22 July, 1874.
1288. *Chairman.*] You are one of the Trustees of the Museum, and have been so for some years, I believe? Yes, I have been a Trustee for some time, and am one now. I wish to state that I attend to give evidence here to-day at the request of the Trustees, not having been duly summoned. I state this lest it may be said that I attended without being summoned to give evidence voluntarily.
1289. You have taken great interest in the management of this institution, I believe? Yes, I have.
1290. And you have been very regular in your attendance upon the Board meetings? I should say that of all the Trustees I have been one of the most regular attendants—I have scarcely been absent half-a-dozen times since I was re-elected a Trustee, so far as my memory serves me.
1291. The conducting of the business of the Museum by the Curator and Secretary has continually been under your observation? Yes.
1292. Have you had reason to be satisfied with what you have seen of the management? On my first appointment as Trustee I was highly satisfied with the Curator's conduct, as regards the energy displayed by him in furthering the interests of the institution. But latterly—say for the last two or three years—I have observed a very great falling off, not only with respect to the exhibits but also in the exertions made by the Curator in obtaining specimens, or, I should rather say, in looking after the interests of the institution.
1293. That is within the last two or three years? Yes, about that time—I cannot specify the time exactly.
1294. Can you account for that falling off in any way? I can only account for it in this way: Mr. Krefft seemed to interest himself principally in certain favourite objects of his own—that is, in organic fossil remains of mammals of rare fish and such things; and he was besides constantly keeping up a trifling correspondence with people unconnected with the Museum.
1295. Then you attribute the falling off in his efficiency rather to that than any other cause? That was the cause, so far as I know. For instance, he entered into a very long controversy with Dr. Morris about some species of entozoa. He then, for the first time, took up the study of a subject of which he of course was thoroughly ignorant, mistaking the head of an animal for the tail. That occupied a considerable portion of his time to the detriment of the Museum and neglect of the specimens.
1296. Might not a man of active mind and temperament have done all that, and still have performed his duties efficiently? Certainly he could, but in my opinion Mr. Krefft did not do so.

1297.

1297. Have you ever suspected any other reason for the falling off in his efficiency in the performance of his duties? I cannot say that I have. A. W. Scott,
Esq.
1298. Have you ever seen him tipsy? No, I have not. But I have not associated with Mr. Krefft for the last six or seven years. I was acquainted with his habits previous to that; but I never knew him to be tipsy. 22 July, 1874.
1299. And you do not suspect that his want of efficiency latterly has been caused by his drinking habits? No, I do not; except from what has appeared in the evidence taken before the Select Committee of the Legislative Assembly.
1300. Were you ever a member of the exchange committee of the Museum? Never.
1301. Then you are not acquainted with the system under which exchanges were conducted? I am acquainted with the system under which the Trustees directed that exchanges should be conducted. Nothing was to leave this Museum, of any kind, without the sanction of the exchange committee, and afterwards confirmed by the Board of Trustees.
1302. Are you aware whether things have been sent away from the Museum without the sanction of that committee? I am aware that in one instance specimens were produced before the Board for transmission to Europe, and those specimens were never shown to Dr. Cox, who was one of the exchange committee, and happened to be absent; Dr. Bennett then took upon himself to recommend that the specimens should go Home, without consulting Dr. Cox.*
1303. *Professor Liversidge.*] Were there only two members on the exchange committee? Only two members, so far as I am aware.
1304. Have you been in the habit yourself of exchanging specimens with the Museum? Never, to the best of my belief. I have given a great number of specimens to the Museum.
1305. Have you ever received anything from the Museum? During the eight or nine years I have been Trustee I have received a few small shells only, which Mr. Masters collected at Adelaide. Mr. Masters gave them to me himself; but I do not know whether they belonged to him or to the Museum.† I invariably refused to receive specimens from the Museum—that is, specimens of vertebrated animals or insects.
1306. Have you ever had work done for you at the Museum by the servants of the institution? Not that I am aware of. By-the-by, Barnes came and assisted me to take the measurements of some skulls of dolphins and whales for my treatise on Seals and Whales. I have had no carpentry or taxidermist's work done for me.
1307. *Mr. Hill.*] You have occupied the attention of one or two employes of the institution in taking the measurements of some porpoises and whales? That is all.
1308. Have you had work of any other kind done in this institution? I do not remember it—I may have had; if so, it must have been very trifling. I have had photographs given to me, similar to ones which Mr. Krefft had previously sent to Europe.
1309. *Chairman.*] Of what description? Of the teeth of the *Thylacinus cynocephalus*, or Tasmanian Tiger; the teeth of the *Sarcophilus ursinus*, or Tasmanian Devil; and also of one or two skulls and skeletons of whales.
1310. Then I am to understand that you were never witness to Mr. Krefft's being drunk on the Museum premises at any time? No. I have had it hinted to me, and have suspected it myself, but not from seeing him, but on account of that peculiar breath which a person has who takes very strong drinks. But certainly I have never seen him in the state you mention.
1311. Were you a member of the Board of Trustees at the time the man Tost was discharged? Yes.
1312. And you concurred in Tost's dismissal? Yes, he was dismissed at our recommendation.
1313. Have you had reason since to change your opinion with reference to Tost's guilt, with reference to the charges that were laid against him? I have had no reason to change my opinion as regards the justice of Tost's dismissal; but I have had great reason to change my opinion with respect to Mr. Krefft's conduct on that occasion.
1314. Conduct towards Tost, do you mean? I mean his charges against Tost, and Tost's charges against him.
1315. On what grounds have you changed your opinion with respect to Mr. Krefft's share in the transaction? If you have no objection, I will just refer to the report of the committee, which was read in evidence before the Select Committee of the Legislative Assembly. In their report the Museum committee say, "Your committee, from the high respect they have hitherto entertained, have much pain in reflecting upon the conduct of the Curator; but they now feel it to be their duty to recommend the discharge of the carpenters employed in the Museum, feeling convinced, from the evidence adduced, that the cases, fittings, and other cabinet work required for the Museum would be better and more cheaply obtained by public tender; that the building and valuable collections would be less endangered by fire from shavings and other inflammable materials; and that the attention of the Curator and his assistants would thus be more confined to the legitimate objects of this institution." It was brought out in the evidence of several parties, and also in the evidence of Mr. Krefft himself, that Mr. Krefft had had made, by Tost, some very fine furniture for himself; for instance, the bookcase which is now in his own private room. The reason which Mr. Krefft gave to us was this: That Tost was indebted to him for a considerable amount of money; and that he, Mr. Krefft found the plate-glass for each of the wings of the bookcase. He said he thought the bookcase that had been constructed by Tost would scarcely be of greater value than the sum that Tost was indebted to him for privately. But it turned out afterwards that Tost had paid his debt to Mr. Krefft by partly using Museum timber and other materials, and making them up in Museum time.
1316. *Dr. Alleyne.*] Did it turn out that there was any evidence of Tost having used material belonging to the Museum? It came out in evidence before us; but Tost was not charged with that; he was charged with having made furniture for a gentleman who was not then a Trustee, and entirely free from blame, but the committee considered Mr. Krefft's conduct deserving of censure.

1317.

* I have seen in Dr. Bennett's evidence before the Select Committee of the Legislative Assembly, p. 80, par. 2018, that a cast of the jaw of the diprotodon made at our Museum was sent to Melbourne; and I also read in the *Herald* a report of the speech delivered by Mr. Walter Cooper, wherein he says that Mr. Krefft gave to the "Challenger" specimens of natural history belonging to the Museum,—both of which are at direct variance with the exchange system.

† Mr. Masters, at my request, came to my house to see if any of my duplicate specimens would be of use to the Museum. He took away some, and left in my cabinet the few shells alluded to.

- A. W. Scott,
Esq.
22 July, 1874.
1317. What I want to understand is, whether it came out in evidence that Mr. Krefft allowed Tost to use the materials belonging to the Museum to make the book-case with? Yes, it came out that he winked at it.
1318. He knew it? Knew it; undoubtedly he did.
1319. *Chairman.*] Since that time have you had reason to know or suspect that the property of the Museum has been used for private purposes by the Curator, or by any one else with his consent and connivance? I should be sorry to say what I think; I do not know anything personally; it came out in the course of the investigation that he had allowed other things to be made.
1320. That is six or seven years ago? It is four or five years ago.
1321. Do you know anything about some indecent photographs that were exhibited, and of which there was some notice taken in the evidence given before the Select Committee of the Legislative Assembly? I know nothing more than this: That I was one of the Trustees who were present when Captain Onslow brought a policeman to take charge of the negatives of those indecent photographs.
1322. At the Board meeting? At the Board meeting.
1323. You know nothing further than that? Nothing more; I saw them myself.
1324. You are not aware of any photographs having been sold by any of the employés of the institution? Except from being told so; I know nothing of it personally.
1325. And beyond the large piece of furniture you speak of, you are not aware of any other furniture having been made up of Museum material, by permission of the Curator? I have heard of it, but I know nothing personally.
1326. Do you know anything of receipts for money having been taken, signed in a false name? Not beyond what came out in evidence.
1327. Do you know anything with reference to the breaking up of a fossil jaw, which was ordered to be sent Home? Nothing whatever. I never heard of it until I was told so.
1328. Do you know anything of Mr. Krefft having sent, in his own name, donations to private persons, and not in the name of the Trustees? I know it in this way: I am a pretty constant reader of the proceedings of the Zoological Society, the Ibis, the Annals and Magazine of Natural History, and of a publication called "Nature"; and in these publications I have frequently seen announcements of donations made by the Curator of this Museum to persons at Home.
1329. That circumstance would not of itself prove that he gave them entirely in his own name, ignoring the Museum altogether, as his name would naturally appear as an officer of this Museum? The announcements have invariably contained thanks to the Curator, not to the Trustee of the Museum.
1330. It is only from that circumstance that you have reason to think he has given those things in his own name, rather than in the name of the Trustees? Yes.
1331. It was a rule of the institution, I think, that donations to be sent away should be reported to the Trustees? Yes. First to the exchange committee, and then submitted to the Trustees at their meeting for confirmation.
1332. Are you aware whether those specimens to which you have just alluded were so reported? I have heard one of the exchange committee state that they were not reported, that the donations were not made through the exchange committee. I have only heard so; I am not a member of the exchange committee myself. I know they were not reported to the Trustees at any meeting at which I was present.
1333. Might I ask who it was that stated so? I have heard Dr. Cox say so.
1334. Do you remember in any of your numerous attendances at meetings of the Board of Trustees any report having been made of more donations having been sent with the sanction of the exchange committee? No, not of the donations I allude to.
1335. I suppose if such a report had been made it would have been set forth in the minute-book? Mr. Krefft never put anything in the minute-book, except in general terms. As I stated in my evidence before the Select Committee of the Legislative Assembly, the minute-book contained garbled statements throughout.
1336. *Dr. Alleyne.*] When anything was reported as having been done, either by the Curator or by the exchange committee, was it not expected that it should be recorded in the minute-book? It is not only expected to be done, but it was ordered that it should be done. But it never was done. I have pointed it out over and over again at the Board meetings.
1337. *Chairman.*] Is it to be assumed then, that if those donations do not appear to have been given, by the minute-book, that they were given without the consent of the Trustees or exchange committee, or any other authorized power? I should say so most decidedly.
1338. Do you know anything in connection with the visitors' book, and the additions of large numbers of names beyond those of the persons who actually visited the Museum? A few years ago I was appointed as one of the Trustees to draw up the annual report. There were three of us appointed. Mr. Stephens was one; I forget who the other Trustee was. But Mr. Stephens and I attended in this room, when Mr. Krefft drew up a report and presented to us for our approval. Without referring to any part of that report, except that relating to the number of visitors to the Museum, I have simply to remark that Mr. Krefft gave in a very large number, which terminate with "one" or "two"—that is, so many thousands, so many hundreds, and "one" or "two." I pointed out the absurdity of it to Mr. Stephens; and I also remarked that it was impossible for O'Grady to keep any accurate return, particularly at holiday times, when people crowded in in large numbers. Mr. Krefft then said that O'Grady divided them in batches—twenty in this batch, and twenty in another, and so on, and then entered the numbers in the book; and so he was able to make up the very accurate return which terminated with "one" or "two." Upon that I hesitated to sign the report in the matter of the number of visitors, but which I at length did—not to cause delay.
1339. Was that last year's report? No; it is two or three years ago. I saw the absurdity of the whole thing, and refused for some time to have anything whatever to do with it.
1340. Did you yourself examine the visitors' book at the time? No; I believed the entries to be wholly inaccurate.
1341. Have you seen any entries in that book since? No, never looked at the book.
1342. Were you one of several Trustees who were asked to form a deputation to the Colonial Secretary? No; I have heard Dr. Cox repeatedly mention to the Board something with reference to a letter to the Colonial Secretary.
1343. But you were not one of the Trustees appointed as a deputation? No.
1344. You attended a meeting of the Trustees of the Museum, at which orders were given to the Curator to obtain copies of the Report of the Select Committee of the Legislative Assembly, appointed to inquire
into

into the management of the Museum, from the Government Printing Office; and at which meeting orders were also given to Mr. Krefft to issue notices to the Trustees to attend at a subsequent date, in order to take that report into consideration? Yes, I was present on that occasion. A. W. Scott,
Esq.

1345. You remember those orders being given? Perfectly well; and I distinctly remember hearing Mr. Krefft say he would comply with the orders. 22 July, 1874.

1346. Did he comply with them? He did not.

1347. Did you appear at the Museum at the day appointed for holding the adjourned meeting? I did.

1348. In consequence of that arrangement? In consequence of that arrangement.

1349. Did you receive any notice from the Curator of that special meeting? I did not.

1350. What was the state of things you found when you came to the Museum? I found this Board-room locked. I, in conjunction with the other Trustees present, then sent O'Grady with a message for the key from Mr. Krefft. Mrs. Krefft said that her husband had gone out, and that she had not got the key, and could not find it. We then decided to wait for some time, in the hope that the key would be obtained, that we might get into the Board-room. The key not being forthcoming after waiting for some time, we decided to go into the taxidermist's room, below the staircase of the new building, and there we held our meeting. Five other Trustees besides myself attended. I was put into the chair.

1351. On the part of Mr. Krefft it was a clear disobedience of the orders of the Trustees at a previous meeting? Yes. I may add that I have not received a copy of the evidence taken before the Select Committee of the Legislative Assembly. Mr. Krefft is guilty of disobedience in not sending copies as ordered, in my opinion.

1352. Orders which, in your opinion, could not have been misunderstood? In my opinion they could not possibly have been misunderstood.

1353. At the meeting held on the 5th of June, it was moved by Mr. Macleay, seconded by Captain Onslow, that a special meeting should be called for the following Thursday, at the usual hour, for the appointment of a sub-committee to inquire into the charges that had been brought against Mr. Krefft, and that motion was carried. Then Dr. James C. Cox moved that copies of the evidence given before the Select Committee of the Legislative Assembly be obtained and forwarded to the Trustees as soon as possible? I remember that perfectly well.

1354. In the minute-book it states that Dr. Cox's motion was not carried, as there was no seconder? I remember that it was carried. (*The minute-book was here handed to witness.*)

1355. You recognize that as the Curator's entry upon that point? Yes, I recognize it as his handwriting. I also remember it being read by himself at one of our meetings.

1356. *Professor Liversidge.*] A statement has been made about certain things having been sent on board the "Challenger;"—do you know anything of that? I know nothing more than what I have seen in the papers, or rather in the speech of Mr. Walter Cooper.

1357. Do you know of anything having been sent on board the "Arcona," a German ship? No, I am not aware of anything. The gift, if any, has never been reported to the Trustees.

1358. *Chairman.*] Do you know of any things having been set up for Dr. Bennett? Not personally; nothing further than what I have heard Mr. Krefft talk about himself.

1359. Do you know whether the Curator was in the habit at all of receiving money for specimens set up for private individuals? I do not.

1360. *Mr. Hill.*] Have you received any information from Her Majesty's ship "Challenger," that they could have afforded the Museum any valuable specimens? I have not received any information myself, as a Trustee, nor has the matter been mentioned at the Board.

1361. You have not heard from any of the officers that the "Challenger" could have afforded this institution many valuable presents? I have heard nothing of the kind whatever.

1362. You do not know anything personally of the German ship that was here? No, nothing whatever.

1363. Have you ever heard, or do you know of your own knowledge, anything connected with specimens, the property of this Museum, having been destroyed in the yard? I cannot say precisely of my own knowledge that they have been destroyed; but I know that many specimens are missing.

1364. Is it within your recollection that we had two very large lions here? Yes; they are missing.

1365. Do you remember any tigers or panthers that we had? I remember one or two, at the least.

1366. Do you recollect a reindeer that was in the institution? I think I do.

1367. Do you remember a civet cat we had? I think there was one, but I cannot say positively.

1368. Do you recollect anything of a pony that was presented by Mr. Burt? I do not know who presented it, but I recollect the pony well. I recollect it from this circumstance: that the word pony was spelt "poney"; I pointed out to Mr. Krefft that the word was spelt wrongly. I also know there was such an animal from Mr. Krefft's own little publication called "The Guide to the Museum"; the pony is there mentioned as being a South African pony. It is missing now, and I have been told that it has been destroyed.

1369. *Chairman.*] You do not know anything personally of the destruction of property belonging to the Museum? Not personally, but I have often spoken to Mr. Krefft about articles that have been missing. When Mr. Masters returned after a collecting tour we always had a list of the articles he collected laid before the Board; and after a few of our monthly meetings, it might be, when I inquired about the duplicate specimens, they were not to be found. Either the exchange committee had given them away, or some other reason was assigned for their absence. But I do not know personally how they went.

1370. *Mr. Hill.*] Do you know of any other animals, or other specimens missing from this institution? I cannot think of any at the present moment.

1371. In addition to the evidence you have given before this committee and before the Select Committee of the Legislative Assembly, is there anything else you wish to state as regards the institution or Mr. Krefft? Do you wish me to enter into an explanation with regard to the charges he has made against me.

1372. No, not in addition to that—not in addition to the evidence you have already given upon that point; but do you wish to make any addenda or further explanation? I do not remember anything at this moment. I may say that it was at the request of the Trustees at both meetings which have been referred to that I sent in writing to Mr. Krefft a request that the proceedings of those meetings should be duly entered in the minute-books. He has not done that. I think he says that they were only memos., and in lieu of them he has entered a long rigmarole, which is not true in my opinion. There is another small matter I may be permitted to refer to. Mr. Krefft has more than once in his evidence, and in letters, stated

A. W. Scott, Esq., stated that the Barneses were recommended for dismissal after the Tost inquiry. I beg to state that the two Barneses were never recommended for dismissal; they were only prohibited from being employed as carpenters, and were to be kept at their proper work—that of taxidermists. I merely state this, because Mr. Kreffit lays great stress upon what he says was a recommendation for their dismissal on account of their bad behaviour—they were only discharged as carpenters.

22 July, 1874.

1373. *Chairman.*] I understood you to say the Museum committee felt it their duty to recommend the discharge of the carpenters? Yes; which means, that they were not to be employed as carpenters, and all the tools were directed to be sold; they were taxidermists, and it was recommended that they should be discharged from their work as carpenters; they were held at the time in high estimation by Mr. Kreffit.

1374. Do you know anything of the sun-fish that was destroyed? Nothing whatever.

1375. *Dr. Alleyne.*] You say you recollect that at the meeting of the Trustees, held on the 5th of June, a motion was moved by Dr. James C. Cox, and carried, to the effect that copies of the evidence taken before the Select Committee of the Legislative Assembly should be obtained and forwarded to the Trustees as soon as possible? I remember it perfectly well.

1376. Do you recollect whether the motion was carried unanimously? Yes, unanimously.

1377. There was not a dissentient voice? Not then; I think Dr. Bennett was in the chair.

1378. *Chairman.*] No, I was in the chair? Oh, yes. No, there was not a dissentient voice. (*The minutes of the meeting held on the 5th June were placed before the witness.*)

1379. *Dr. Alleyne.*] Is the entry of the minute to which you have just referred, an accurate entry of the proceedings, of the motions that were carried at the meeting? It is perfectly correct as far as the word "carried," but not correct so far as it contains the inserted words "not," "there being no seconder." These words have evidently been added afterwards. It is an interpolation.

1380. Are you an expert in handwriting? I cannot say I am; but the addition of these words is too palpable altogether.

1381. So far as your experience goes in such matters do you believe it to be an interpolation? Certainly I do.

1382. And therefore equivalent to a fraudulent entry? I will not use so strong a term as fraudulent, but it is evidently meant to deceive; and, as I have over and over again stated, it is another example of what has taken place in many of the entries previously made in this book. In fact the book is garbled.

1383. *Mr. Hill.*] You have a perfect recollection of that meeting? A perfect recollection.

1384. The motion in the entry is followed by the words "not carried";—do you recollect that when the motion was before the Trustees I spoke in favour of some copies of the evidence taken before the Select Committee of the Legislative Assembly being procured, and that I stated that I had not read the evidence, and authority was given to Mr. Kreffit to procure copies—that is after the motion was carried—I said it would be of no use his sending the reports the day before our next meeting, as it would take us a week to read them? Yes, he promised to send them.

1385. And that he would take good care to forward them on the following day? He said he would.

1386. Now, Mr. Kreffit having promised to send those Reports of the Select Committee of the Legislative Assembly, do you think a proper record in the minute-book would have read as the actual entry reads? If he had sent them?

1387. No; if he did say he would send them do you think it is a proper record? The record is an improper one, if that is what you mean.

1388. The motion in favour of procuring copies of the evidence was carried, and after it was carried Mr. Kreffit promised to get the reports and forward them to us, not at an early date, but next day; after his having done that, do you not think that his writing up the minute-book as he has done is a libel, or an attempt to deceive? It is as I have stated before—the minute-book is written up with an interpolation which is meant to deceive, and it is a very inaccurate minute throughout.

1389. And it does not present the true state of facts? I do not recollect that he promised to send them on the following day, but I think he said he would send them at an early date.

1390. *Dr. Alleyne.*] At all events you understood that the motion was carried? It was unanimously carried.

1391. *Chairman.*] I think I understood you to say that the records of the proceedings of the Board of Trustees, as they appear in the minute-book, have been irregularly and imperfectly kept from the time you became a member of the Board? I have considered so for several years past.

1392. You had frequently to find fault with the manner in which that part of the business was conducted? Yes, and on several occasions I have had the minutes altered. I have brought the matter before the Trustees, and they have ordered them to be altered.

1393. Have you ever drawn the attention of the Board of Trustees to that fact? Yes.

1394. Have you ever proposed any remedy? I proposed that we should have a secretary, as the Curator was wholly incapable, in fact not desirous, of keeping proper minute-books, and I was met with the question: "How would you pay his salary?"

1395. You are aware that the records of that meeting, to which we have been referring just now, are not signed by the chairman of the meeting? I am quite aware of it.

1396. Do you remember the cause assigned for it—why exception was taken? Yes; several of the Trustees at a subsequent meeting took exception to the minutes, as they considered the records to be wholly inaccurate, and in fact untrue.

I certify that this is a correct statement of the evidence given by me before the Sub-committee of the Trustees on the 22nd instant, marginal alterations being accepted and adopted.

A. W. SCOTT.
27th July, 1874.

THURSDAY, 23 JULY, 1874.

Present:—

H. G. ALLEYNE, Esq., M.D., | E. S. HILL, Esq.,
PROFESSOR LIVERSIDGE.

CHRISTOPHER ROLLESTON, Esq., IN THE CHAIR.

J. A. Thorpe was called in and examined:—

1397. *Mr. Hill.*] You recollect my making some inquiries with reference to the place where the sun-fish was buried? Yes.

J. A. Thorpe.

1398. As to whether you could find the spot? Yes.

23 July, 1874.

1399. Subsequently I gave you instructions, to accompany the Barneses, to examine that spot for what? To find the place where the sun-fish was buried. You told me to see the Barneses that night, and tell them that you would want them the next morning.

1400. Did I tell you to look for any particular thing? Yes, for the sun-fish.

1401. What else? I was not to tell the Barneses what you wanted them for until they came.

1402. And when they did come, to put them at work at the place where they expected to find the sun-fish? Yes.

1403. Were you told to look for anything else? For tubs and buckets.

1404. That were what? That were said to be buried in the hole where the sun-fish was buried. We went and dug up the place, and all that was found was the bone produced, and part of the fish.

1405. Do you recognize this as the bone that came out of the sun-fish? I recognize that as half the breast-bone.

1406. Who sawed it? I helped to saw it; it was frightfully hard.

1407. Do you recognize it by anything else? Yes, by the turbercular surface of the bone.

1408. Do you know that this is the bone? Yes, I could swear to it on oath; and there is no moral doubt that this other stuff was some stringy part of the fish.

1409. Do you know what became of the other half of the bone? Yes; it was taken away with the skin. When we began to manipulate the fish it was cut into halves. We cut each fin off, and we cut right through from the mouth to the breast.

1410. Did you split it in half? Yes, in half; from the mouth down the belly to the tail.

1411. In doing that it was necessary to cut the only bone in the fish? Yes.

1412. The piece of bone you produce now is one half of the bone? Yes.

1413. What else did you find in that hole? There was nothing but an old tin; I think it has been an old packing-case.

1414. Did you find any stinking fish in the hole in the tin case? No; only the kind of fish now produced.

1415. Did you find any ling fish in the tin? No.

1416. You did not examine the hole particularly? No. There is a tin out there.

1417. What remuneration did you get extra for preserving the fish? Nothing.

1418. Did you work overtime? Yes.

1419. You got no extra pay? None whatever.

1420. Were you at any loss? No.

1421. Was there any extra labour employed, excepting of persons who belonged to the institution? None, unless it was Mac, the gardener.

1422. Tell us who were there? The two Barneses, Macnamara, O'Grady, and myself.

1423. You did not get a fraction of extra wages? Not a fraction—I never did.

I certify that this is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on Thursday, the 23rd of July, 1874.

J. A. THORPE.

Robert Barnes was called in and examined:—

1424. *Mr. Hill.*] You recollect going with Thorpe into the paddock to dig out the place where you thought the sun-fish was? Yes.

R. Barnes.

1425. What day was that? Yesterday, the 22nd.

23 July, 1874.

1426. Did you find the place? Yes.

1427. What did you find there? I found two tins of fish.

1428. What fish? It appeared to me to be like salmon or pike. I did not examine it much. It appeared like preserved fish in spirits—spirit specimens.

1429. In what sort of cases was it? Tin packing cases—about 2 feet long, about 10 inches high, and about a foot broad.

1430. How many cases did you find? Two.

1431. What did they contain? Both contained fish.

1432. What else did you find there? We found this stuff on the table, which is supposed to have been fish, and this breast-bone of the fish.

1433. How do you know that is the breast-bone of the fish? I would almost swear on my oath that it is. I helped to cut it.

1434. Do you recognize it by anything else—Has that been cut with a saw? Yes. Here is some of the skin on it.

1435. What are these skins like—crystals? Yes; some are very rough like a file.

1436. How many rib-bones or other bones were there? There are no bones but the breast-bone and the teeth. We did not examine the fins.

1437. Did you find a quantity of this cartilage? There is a tremendous lot of it.

1438. What depth did you go? To the bottom of the hole.

1439. How deep was the bottom? One side might have been 2 feet, and the other side 2 feet 6.

1440. Two to three feet? Yes.

1441. And in that hole you found part of the breast-bone which you helped to saw, and this cartilage? Yes.

- R. Barnes. 1442. And also two tins of what appeared to be fish? They were spirit specimens. I know by the colour of them.
- 23 July, 1874. 1443. Do they smell badly? They smelled like an old spirit specimen.
1444. What was the condition of the cases you found them in? They are very rusty and battered about.
1445. Did they look like old cases? Yes.
1446. Old, worn-out, useless cases? No, not like that.
1447. Were they straight and new? No; they were crooked and bent in—they were battered.
1448. Did you work any extra time in the attempted preservation of this fish? No.
1449. Did you get any extra pay over and above your ordinary pay? No.
1450. Did you receive any fee or anything? Nothing at all. I only received my wages.
1451. This is the only bone you found in that fish? Yes.
1452. How do you account for the other half of the fish? It was sent away in the cart, and the skin was sent away with it in the cart.
1453. You sent the skin away with the other part of the bone to it? Yes.
1454. Were there, to your knowledge, any tubs or buckets used in the curing of that sun-fish? No.
1455. No galvanized iron or other tubs and buckets used at all? No; there was no occasion for them.
1456. Were you there the whole time the fish was being cured? I was.
1457. Working there all the while, you would have an opportunity of seeing what was used? Yes.
1458. And there were no tubs or buckets? No.

I certify that this is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on Thursday, the 23rd of July.

ROBERT BARNES.

25/7/1874.

Henry Barnes was called in and examined:—

- H. Barnes. 1459. *Mr. Hill.*] You went, under the superintendence of Thorpe, to find the hole where it was supposed the sun-fish was buried? Yes.
- 23 July, 1874. 1460. What did you say before that about finding the place? We said that we could find it.
1461. You went to the place? Yes.
1462. You dug a hole there? Yes.
1463. Tell us what you found? We found two square tins of fish which appeared to be like salmon, and what appears to be the fibre of the fish or of banana roots, I do not know which, and what we supposed to be the breast-bone, or the half of it, of the large fish; that is all we found.
1464. What depth did you go down? From 2 feet 6 to 3 feet.
1465. And in that hole you found these two tins, containing what you supposed to be salmon? They look like preserved salmon.
1466. Were they new tins? No; battered.
1467. Was the lid on them? No; they had been cut open.
1468. Is there any fish in the tins now? There were when we dug them out.
1469. Were they fish that had bones? We did not examine them.
1470. Could you not see with your naked eye? Undoubtedly; they had bones of course.
1471. Do you know this bone? Yes.
1472. What do you know of it? I know that we took it out of the hole.
1473. What does it belong to? The sun-fish.
1474. How do you know that? I cut it in two.
1475. Cut the whole of it? No we took it turn about.
1476. Take the bone in your hands and say what it has been cut with? With a hand-saw.
1477. Do you recognize it at all as part of the bone of the sun-fish? Yes, I could swear to it.
1478. How many ribs or other bones had it? That is the only bone.
1479. The only bone that you saw in that fish? Yes.
1480. Is this the fibre you suppose to be like banana fibre? Yes.
1481. Is it anything like the cartilage of the sun-fish? Not now.
1482. Do you think it is? That I cannot say.
1483. Is there plenty of it there? Yes.
1484. These two tin cases you allege contain fish? Yes, scaly fish.
1485. What is the size of these cases do you say? As near as I can guess, they are 2 feet long, and about 10 inches broad and deep.
1486. Were you at work at that sun-fish all the time it was being cut up and manipulated? Yes.
1487. Had you any overtime to it? No.
1488. You worked in your ordinary time? Yes.
1489. Did you get any present or extra pay for what you did? No.
1490. Did you get anything at all given to you besides your wages? No.
1491. No money extra for working at that fish under any circumstances at all? No, under no circumstances at all.
1492. *Chairman.*] Was there any extra labour employed in connection with that attempt to preserve the sun-fish? None whatever, with the exception of Macnamara the gardener.
1493. *Mr. Hill.*] Who were present assisting at the cutting up of the sun-fish? There were Thorpe, my brother, myself, and O'Grady for a short time.
1494. *Chairman.*] What was Macnamara doing there? He was wheeling away the refuse.
1495. Were there any tubs or buckets employed in the preparation of this sun-fish, or to carry away the flesh? None that I saw.
1496. How was it carried away then? In the barrow, and we had a can—a round can, about 2 feet 6 inches high and about 20 inches across; that was the only tin.
1497. Was it a galvanized bucket? No, a round specimen-can.
1498. What became of that? I believe the same can is in the garden now.
1499. Was it a galvanized tub, or anything of that kind? No.
1500. *Mr. Hill.*] Had the can a handle to it? No.

1501. In digging this hole did you discover anything besides these tin boxes, this fibre, and the fish-bone? *H. Barnes.*
No. 23 July, 1874.
1502. No tubs, or buckets, or anything of that sort? No.
1503. *Dr. Alleyne.*] Did you find the tall can that you have spoken of in the hole? No.
1504. *Mr. Hill.*] Is that in the garden now? I do not know. It was a short time afterwards. It was used in the garden afterwards.
1505. That can was not buried? No.
1506. *Chairman.*] You found no tubs at all in the hole? No.
1507. Nothing but these old tin boxes? No.
1508. And you say that nothing of the kind was used in the attempted preservation of the fish? No; the flesh was taken away with the barrow.

I certify that this is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on Thursday, the 23rd of July, 1874.

HENRY BARNES.
25/7/1874.

James Macnamara was called in and examined:—

1509. *Mr. Hill.*] At the time that you were taking away the sun-fish, you have stated, I think, that there were no buckets or tubs used? Yes. *J. Macnamara.*
23 July, 1874.
1510. Did you work over-time at that? Only the same as the rest.
1511. Did you get any extra pay? No.
1512. No present? No.
1513. No money? Nothing at all.
1514. Did you get anything given to you? Nothing at all.
1515. *Dr. Alleyne.*] You got nothing beyond your ordinary wages? No.
1516. You get two guineas a month? It is according to the work. Sometimes I might get three. I get paid at the rate of 6s. a day.
1517. How many days were you employed in connection with the sun-fish? Three or four days—perhaps two or three—I could not say how many.

I certify that this is a correct statement of my evidence given before the Sub-committee of the Trustees, on the 23rd of July, 1874.

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JAMES + MACNAMARA.
mark.

James Chapman was called in and examined:—

1518. *Mr. Hill.*] You are a member of the Police Force? Yes. *J. Chapman.*
23 July, 1874.
1519. You are one of the police stationed here in charge of the Museum alternately with others? Yes.
1520. Within the last few days or nights have you seen the Curator go out? On Saturday night last I did.
1521. What date was that? On the 18th.
1522. Going out from the institution? Yes.
1523. At what time? About half-past 6 o'clock.
1524. Was any person with him? Mr. Cooper.
1525. How do you know it was Mr. Cooper? He gave his name to the servants as Mr. Walter Cooper.
1526. They went out together? Yes.
1527. What time did they return? Mr. Kreffit returned about twenty minutes to 10 o'clock.
1528. Alone? Yes, alone.
1529. Did he make any remark to you? Yes.
1530. And you know that Mr. Cooper sent up his name? Yes.
1531. But did not go up-stairs? Yes, he did.
1532. They came down together? Yes.
1533. They went away together? Yes, and Mr. Kreffit came home at half-past 9 or twenty minutes to 10 o'clock.
1534. Since you have been in charge of the institution have you seen Mr. Kreffit go out at night before that time? Once before.
1535. Do you recollect the day? No; it was about four or five nights before the 18th.
1536. Do you know what time he went out, and how long he remained away? He left between 8 and 9 o'clock, and he did not return until after I had been relieved.
1537. At what time were you relieved from duty? At 10 o'clock.
1538. Have you seen Mr. Cooper frequently here? Yes, several times; once the night before, and two or three times in the day-time.
1539. Have you ever seen Mr. Cooper or Mr. Kreffit bring a book home, or a parcel about the size of that minute-book? No, I never saw either of them with a parcel. I take my turn here on duty with others.
1540. Since you have been on duty here have you seen any medical man coming to attend the family? I have seen Dr. Milford come here several times.
1541. In the day-time? Yes; not at night.
1542. Do you know of any one being sick in the establishment? I have heard that Mrs. Kreffit was ill, and I heard also that Mr. Kreffit was ill in bed. At half-past 1 o'clock yesterday I heard Mr. Kreffit on the stairs talking to the postman who brought some letters. He was up and dressed yesterday when the postman came.

I certify that this is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on the 23rd of July, 1874.

JAMES CHAPMAN.
21/7/1874.

George

George Bennett, Esq., M.D., was called in and examined :—

- G. Bennett, Esq., M.D. 1543. *Chairman.*] The committee have been anxious to obtain the benefit of your evidence in consequence of your long and intimate connection with the affairs of the Museum, and we thought that you probably could throw some light upon matters now in question. You are aware that it was considered desirable, at a meeting of the Trustees, held in the course of last month, to make some investigation into the charges against the Curator, which came out in the evidence taken before the Committee of the Legislative Assembly? Yes.
- July, 1874. 1544. And that a sub-committee was appointed for the purpose? Yes; I was in the chair at the time it was proposed and carried.
1545. You have had frequent communication with the Curator? Yes.
1546. Have you ever observed, or have had reason to believe, that he has been unfit to discharge his duties from drinking? Not in one single instance that I have seen.
1547. Have you ever heard of his having been so? I never heard of it until it was brought forward at the Committee of the Legislative Assembly. I have seen him at all hours of the day, and, during the last twelve months, even occasionally at night, and under circumstances of great excitement, but I never saw him in one single instance intoxicated. I have seen nothing more than the usual excitement which is perceptible in all Germans and foreigners on occasions.
1548. Do you know anything in connection with the second charge which is preferred against him—that of proposing to the Barneses to bring a false charge against a man named Post? I was present on the committee of investigation; and the whole of the evidence may be seen on the minutes of the Museum.
1549. Had you reason to believe that that man was falsely charged? Not at all. I considered that Mr. Krefft was to blame in many instances, and we reprimanded him; and it was arranged that Post should be dismissed, but he resigned in the mean time.
1550. Do you know anything of indecent photographs referred to in one of the charges? No. The first time I saw them was here. Mr. Krefft has shown me an immense number of photographs of all descriptions, but I never saw nude figures in his possession, except the photographs of natives.
1551. You never saw them until they were brought forward here in the Board-room? No; and I was somewhat surprised at it, because they are things he might have shown to a medical man. I have a great number of nude figures, but not so indecent as one of those; but there are similar photographs from the Pompeii collection. They can be purchased on the Continent but not in England, because they won't allow them to be landed there.
1552. Do you know whether it has been the practice of the servants of the institution to make and set up cases for private individuals out of Museum time and materials? It is very seldom if ever done. In fact I never knew an instance of its being done.
1553. Do you know anything of a practice which has been charged against the Curator, of taking receipts from one of the men employed, under the assumed name of Bradley? I am not aware of that at all. I never heard of it before.
1554. Do you know anything of a fossil jaw that was sent here to be put together to go Home? Yes; that was my property. I lent it to the Museum to make a cast for the Museum.
1555. That is the jaw of the diprotodon? Yes; considered by Mr. Krefft a new diprotodon. The jaw was much smaller. Owen considers it may be a female, but he won't allow it to be another species.
1556. Was it a perfect specimen when you sent it here? No; it was all in fragments.
1557. But there was sufficient of it to allow of its being put together? That was rather an extraordinary case. The jaw was very imperfect, but the Curator managed to get nearly all the pieces and to form a perfect jaw. It was a surprising piece of ingenuity.
1558. *Mr. Hill.*] Whose ingenuity? Mr. Krefft's.
1559. In restoring that jaw? Yes.
1560. *Chairman.*] The fossil was set up for yourself? It was set up to make a cast of it for the Museum, and then the original pieces were to be sent Home to Professor Owen.
1561. Did you see it when it was packed, or being packed, to be sent away? No, I saw it when it was ready to be packed.
1562. Did you hear of it being smashed? Yes; Mr. Krefft told me of it himself. He said that it would arrive at Professor Owen's broken. He said, "Owen will find it in pieces when it arrives Home. Owen will never see that jaw perfect, but he will be able to restore it again." Then he told me he did not put in the upper restored part because the box was not large enough to contain it.
1563. He had broken or reduced it? Yes, in packing; in knocking down the lid of the case. After that Dr. Cox told me of it. He said that he would bet me a new hat that it would arrive broken. I said I knew that it would because Mr. Krefft had told me.
1564. Do you know in what state it has arrived Home? Professor Owen simply mentions that it had arrived.
1565. That is the purport of the letter you received from Professor Owen? Yes; the letter was written on the 13th of April.
1566. Have you got the letter here? No, I have not, but you can see it at any time. He does not mention it further than that he had received it. (*The witness subsequently brought the letter and handed it to the Chairman.*)
1567. You have no reason to suppose that there was a wilful destruction of the fossil? There could not be. I had already sent photographs of it Home, and from the photographs Professor Owen said that he did not consider it would be a new species. His letter does not mention more than that he had received the jaw of which the photographs had been sent before; but Mr. Krefft considered that when he saw the original he would think it was a new species. Mr. Krefft could have no object in breaking it, because he would in that way be destroying his own chances of Professor Owen confirming his opinion.
1568. You have no reason to suppose that it was broken on purpose? No. I considered that it would go to pieces because of the number of minute fragments of which it was composed, and the plaster might have been bad.
1569. The jaw was in fact your property? Yes.
1570. It was not sent by the Museum? No; we have casts in the Museum. I went up to Queensland entirely to assist Professor Owen in this large work of his on fossil mammals. I brought down a large collection of fossils which I sent to Mr. Krefft that he might look at them. He said, "Many of them are

23 July, 1874.

are very valuable; don't let them go to Owen until we get casts of them for the Museum." For the last year and a half I have been receiving fossils. They have been brought here so that the Museum could have casts of them before sending them Home to Professor Owen. They have always been brought to the Museum; and the skeleton in the Museum has been principally set up from them.

1571. *Mr. Hill.*] Is that the one that is called *Bennettii*? Krefft calls it so; but it is not acknowledged yet as a new species by Owen. It ought to be labelled *Diprotodon australis* at present.

1572. Do you know of any casts that have been made from the many bones you have sent here? I know that a great many have been made. The one labelled *Bennettii* was made from several of them.

1573. In regard to that diprotodon, do you know what the upper jaw was prepared from? A good deal of that diprotodon was made from the original casts and a good deal was restored.

1574. Do you know what the upper part of the cranium was like? I do not know anything about that. I only know about the lower jaw.

1575. Was there anything peculiar in the formation of that lower jaw which caused Mr. Krefft to associate it with any other animal? Yes; but that is merely Mr. Krefft's opinion.

1576. Do you know of any other animal from which he made a cast to fit that lower jaw? I think the wombat.

1577. You sent in the fossil bone, the lower jaw of the diprotodon, and Mr. Krefft associated with it here, to make it a whole, the upper part of the cranium of what you think was the wombat? Yes.

1578. How can you get at the form of a skull if you have only the lower jaw? If you put the lower jaw of the koala or native bear with the lower jaw of this diprotodon, you will see that they are very much alike.

1579. You believe it is a connecting link between the wombat and the koala? Yes.*

1580. Your letter from Professor Owen does not state the condition in which the jaw had arrived? No. In another letter, acknowledging the receipt of another fossil I sent, Professor Owen alludes to that being in pieces; but in regard to this he simply says that he has received the jaw of the diprotodon.

1581. Do you know anything as to the practice which the Curator has carried out of sending donations away out of the Museum to other countries? Yes; under the exchange committee.

1582. Are you aware that he ever sent donations away from the Museum in his own name? I am not aware that he has, excepting that instance of Mr. Buttrey's, which I brought before the Board of Trustees here myself some years ago.

1583. You are not aware that he has made it a practice of giving things away belonging to the Museum in his own name? No, except in the way of exchange.

1584. You have been a member of the exchange committee? Yes, almost from the first.

1585. Who were with you on that committee? Mr. Stephens and Dr. Cox.

1586. Were there three members obliged to be present? No, one or two would be sufficient to form a quorum, or to sign a memorandum that would be sufficient. The meeting would be arranged to take place here at 4 o'clock. Sometimes Dr. Cox would not be here, and then I would run over the specimens and sign the memorandum, and when that was signed by Dr. Cox or Mr. Stephens it would be sufficient.

1587. Was there an exchange-book kept? Latterly.

1588. Within how long? The last twelve months. We arranged that there should be an exchange-book, and that it should be signed by those present at the meetings.

1589. Is that the exchange book now before you? Yes.

1590. Was that invariably used? The entry on the second page is signed by me. The entry on the eleventh page is signed by two of us.

1591. Was it invariably used at the exchange committees? Yes, always.

1592. And everything entered in it? Yes.

1593. But no one member authorized exchanges—two were required? I think one, because to some of the entries I see my signature only.

1594. You think then that two could do it? Yes.

1595. Have you yourself exchanged specimens with the Museum? Never. I never sell or exchange them—never in my life. I have a great aversion to it.

1596. You have never had anything from the Museum, either by way of exchange or otherwise? No.

1597. Have you ever had anything done by the employés of the Museum in setting up specimens? Never in any instance. I have lent them my specimens to make casts from for the Museum, and then they were packed up and sent to the wharf, and I have paid the freight in every instance.

1598. You have at different times lent specimens to the Curator of the Museum to take casts from? Yes, fossils; for the last two years I have done that.

1599. Before you sent them away to England? Yes; any that he thought of sufficient value to retain casts of for the Museum he could have for that purpose, but I wished Professor Owen to have the originals. They were produced here at the meetings of the Trustees. To save time and trouble I used to have them sent up here, and they were unpacked when I came. Mr. Krefft would then select those specimens which he thought valuable for casts, and if there were duplicates he retained them. I have a very large collection now which has not yet been sent Home.

1600. *Mr. Hill.*] Fossils? Yes.

1601. Since the noise that has been made about the breaking of that fossil bone you have not sent any here, have you? No.

1602. Since that row about the breaking of the bone you mentioned to me that you would never send any fossils here again? Yes.

1603. And you have kept to that by sending them Home? Yes, by the last mail steamer I sent some.

1604. *Chairman.*] Do you know whether any specimens from the Museum were sent on board the "Atalante"? I do not know.

1605. Not with the knowledge of the exchange committee? No.

1606. Or of the Trustees, as far as you know? I should say not.

1607. Nor to the "Challenger" or "Arcona"? I sent some fossil bones to the "Challenger"—a didunculus and other birds, my own property.

1608. *Mr. Hill.*] It was alleged in the Assembly that the ship got presents from the Trustees? The only presents

* NOTE (on revision).—It is my opinion that the skeleton of the koala will compare with the diprotodon as far as regards the head and vertebrae, but the extremities approximate to those of the wombat.

G. Bennett,
Esq., M.D.
23 July, 1874.

- presents they got from Mr. Krefft were photographs of the New Guinea natives. They were his own property.
1609. *Chairman.*] There is nothing that you have been instrumental in exchanging that has not gone through the exchange book? Nothing. And the exchanges are generally published in the reports.
1610. Were you present at the meeting of Trustees, when the Curator was instructed to obtain from the Government Printing Office twenty-four copies of the Reports of the Select Committee? No; I was not present at that meeting.
1611. Were you one of the Trustees who were appointed or invited to wait upon the Colonial Secretary? No; I was not.
1612. You know nothing of it? No. I recollect Mr. Krefft asking me whether I thought he ought to go, and told him that he had better inquire whether it was proper for him to attend the meeting or not.
1613. You were not at the Museum on that day? No.
1614. The Curator has been unwell;—has he not? I have not been attending him. He sent for Dr. Milford. I attended Mrs. Krefft in her confinement, and that is the reason I was not here on the 2nd of July. I was up all night.
1615. Has Mr. Krefft been too ill of late to attend to his duties? I think it would have been much better for him had he gone away altogether. He has been very depressed and very excitable.
1616. Has he been down to you to consult you on any matters in connection with this inquiry? No; I would not listen to him in that respect. One day I was seeing Mrs. Krefft, when he told me about the minute-book, and I told him the best thing you can do is to do what you are ordered and send it.
1617. Did you ever see this minute-book, excepting on the table of the Board-room? Never.
1618. Did Mr. Krefft consult you at all as to the manner in which he should fill up the proceedings of the Board meeting of the 5th June? No, he never consulted me about filling it up on any date. I would not interfere in the matter.
1619. Did you ever see this minute-book at all? No; with the exception of one instance, when I asked to refer to that matter of Mr. Macleay's, about the birds of Australia. I went to look on that occasion at the date, and to see whether they were returned or not.
1620. Will you look at this entry on the minutes of 5th June, respecting Reports of the Select Committee. What is your opinion of that entry;—do you think that the word "carried" was the original entry, and that the word "not" before it has been written in since? It appears to me that the word "not" has been written in since, and that the words "there being no seconder.—G.K." have been added afterwards. I was present when these minutes were read. Exception was taken to them as being incorrect.
1621. Have you reason to think that Mr. Krefft has done his duty honestly, and efficiently to the Museum? It is difficult to judge on every occasion. I have not been so much in the Museum as to judge of that. As far as I could judge of Mr. Krefft, I should say he is a very hardworking and efficient curator, and of high scientific attainments. From what I have recently seen and heard, I do not think that he is fit to take charge of an establishment; but I think he would work well under any competent director who could control him. I do not think he is fitted by temper, and he is wanting in method. He would act remarkably well under any other man, and that is the case with many foreigners. They work better under control. Under Pittard he worked remarkably well.
1622. You think that Mr. Krefft's shortcomings are attributable in some measure to the lax supervision of the Trustees? I think a great deal so; and to the want of some one to superintend him.
1623. *Mr. Hill.*] The want of some one to bring him to book occasionally? Yes.
1624. *Dr. Alleyne.*] You think he is incompetent to take charge of the establishment? To be at the head of it. His services and knowledge of natural science will be very valuable to the institution. I think you will never get anyone to work like him.
1625. You said the matters in regard to Tost are on record? They ought to be. There was a Sub-committee appointed—Mr. Scott, Dr. Macfarlane, and myself. We investigated the matter and took evidence. The report was sent in to the Trustees.
1626. *Mr. Hill.*] You were the medical attendant of Mrs. Krefft when the misfortune occurred? Yes.
1627. Did you see her on the following day? Yes.
1628. Was Dr. Milford called in? Not at that time.
1629. Did you see Mr. Krefft on the following day? Yes; I think I saw him on the following day. I did not always see him when I saw Mrs. Krefft.
1630. What state of health was he in on that day? He was very depressed altogether.
1631. Do you know whether Dr. Milford was attending him at all? Yes, that very afternoon I think it was. The day that Mrs. Krefft was confined he sent for Dr. Milford to see him.
1632. Are you aware that he wrote a long letter to the Board on that day? No, I am not.
1633. Are you aware that Dr. Milford sent a certificate down here to say that he was completely prostrated, and wanted a week? I heard so.
1634. Would you think a man was completely prostrated who was able to take a pick-axe and break open the place the next day? Not unless he had had a good night's rest.
1635. Did you see Mr. Krefft on that particular day down stairs in the hall of the institution, when he went to resist the constables or the men on that day? No.
1636. Do you recollect when he went to seize the visitors' book, when O'Grady took it from him, and you said, "Do not be a fool"? I heard some confusion, and when I went down I saw him trying to get the book from O'Grady. I recollect that perfectly, and I told him he had no right to take that book.
1637. You said, "Don't be a fool" and "Leave it with him"? Yes.
1638. Did you see anybody else here at that particular time, when you advised him not to carry out that intention? No; I was leaving the building.
1639. Did you see Mr. Walter Cooper? I hardly know him by sight.
1640. Did you see him? No.
1641. It was at your instance that that book was given back to the messenger? Yes.
1642. Did you ever see the minute-book, or any of the written books, off the establishment? Never in any single instance.
1643. Do you remember the copying-press letter-book? Yes.
1644. How long is it since you saw that book? It is some time since. I have never seen it out of the establishment.
1645. Mr. Krefft refers to you in regard to his health. He says in his letter if you were there you could tell how ill he was. Were you attending him at that time for anything in particular? No. 1546.

1546. Do you know anything of him then? Excepting that he was depressed, and was suffering from a severe cold. G. Bennett,
Esq., M.D.

1547. Within the last few days have you heard of or attended Mr. Krefft for diphtheria? No, Dr. Milford is attending him. 23 July, 1874.

1548. Are you attending the little boy? No; they brought him down to me, and he appeared to me as if whooping-cough was coming on. I have not seen him since.

I certify that this is a correct statement of the evidence given by me before the Sub-committee of the Trustees, on Thursday, the 23rd instant.

GEORGE BENNETT, M.D.,
25/7/1874.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

AUSTRALIAN MUSEUM.

(OPINION OF CROWN LAW OFFICERS RESPECTING APPOINTMENT OF CURATOR.)

*Ordered by the Legislative Assembly to be printed, 20 April, 1875.***MEMORANDUM for the Minister of Justice as to whether the appointment of Curator of the Australian Museum is vested in the Trustees or in the Executive Government.**

By the 7th section of 17th Vict. No. 2, the Trustees have full power to appoint all officers and servants of the Museum, and have the entire management and superintendence of the affairs, concerns, and property of the Museum; and, as if these powers were not sufficiently large and comprehensive to enable the Trustees effectually to discharge their duties, there is an extraordinary provision, making it lawful for the Trustees, in all cases not provided for in the Statute itself, to act in such manner as shall appear to them best calculated to advance the objects of the Institution. It is now contended that, since the passing of the Constitution Act, the power of appointment of their officers and servants has been taken away from the Trustees of the Museum; and that the appointment to all public offices under the Government, whether salaried or not, is vested in the Governor.

The first question to be considered is, whether the Curator of the Museum is, in the meaning of this provision, the holder of a public office; and as he is neither appointed by the Government nor engaged in a department of public employment over which they have any control or superintendence—as they have nothing whatever to do with the management of the affairs, concerns, and property of the Museum—I cannot see how he is to be regarded as the holder of a public office, within the meaning of this section.

It would be clearly an inaccurate form of expression to describe a Professor in Sydney University as a public officer. He is individually in no kind of communication with any department of the Government, is in no way under their control, and has no knowledge of any other superintendence or management than that exercised by the Senate, which has full power to appoint and dismiss all professors, tutors, officers, and servants belonging to the University (14 Vic. No. 31, sec. 8), and has the entire management and superintendence over the affairs, concerns, and property of the University. And it appears to me that the relation of the Curator to the Trustees is precisely that of a Professor to the Senate of the University. The powers of the Trustees are as nearly as possible those which the University Incorporation Act bestows upon the Senate. I am clearly of opinion that the office of Curator of the Australian Museum is not one of those offices the right to appointment to which by the Trustees of the Institution has been in any way affected by the 37th section of the Constitution Act.

I am also of opinion that the Trustees, having the entire management of the affairs, concerns, and property of the Institution, and having full power of appointment of all officers and servants of the Museum, had necessarily, if they were satisfied of the delinquency of any officer or servant, the power of dismissal; and that this power is in no way (nor could be in any way) affected by their consenting to the confirmation of their appointment by the Governor: their powers are under the Statute, and can only be affected by some other Act of Parliament. In this case the Trustees appear, after mature consideration, and as the result of an elaborate investigation undertaken by themselves, to have been satisfied that there was evidence that the Curator was a person of habitually intemperate habits, that he had proposed to bring a false charge of theft of public property against a servant of the Museum; that he had permitted indecent photographs to be taken in the Museum; that he had falsified documents to deceive the Trustees, and made false returns in the visitors' book of the Museum. These are only some of the charges contained in the Report of the Sub-committee (sent herewith) appointed by the Trustees on the 16th June, 1874, to inquire into certain charges against the Curator.

I do not think it can be contended that if the Trustees, who have the entire management of the Institution, and who are authorized to act in such manner as shall seem to them best calculated to advance the objects of the Institution, were satisfied that these or any such charges as these were established, they had not the power, for the protection of the public property and public character of the Institution, to dismiss the servant against whom such charges were, in the judgment of the Trustees, established.

I am clearly of opinion that the Trustees, and the Trustees alone, had the power to dismiss the Curator.

March 26, 1875.

WILLIAM B. DALLEY,
Attorney General.

Curator of Australian Museum—as to whether the appointment is vested in the Executive Government or in the Trustees.

WE are of opinion that the office of Curator ought to be left in the hands of the Trustees of the Museum.

The Trustees are incorporated by the Act 17 Vic. No. 2,—the 7th section of which gives the Trustees full power to appoint all officers and servants of the Museum. It was contended, however, by the late Government, as we collect from the accompanying papers, that the 37th section of the Constitution Act (18 and 19 Vic. c. 54) placed the appointment of Curator in the hands of the Governor and Executive Council—either as repealing the 17 Vic. No. 2, s. 7, or on the ground that it was a new office with a salary separately voted by the Parliament, the appointment to which ought therefore to be in the hands of the Government instead of the Trustees. This latter ground we do not think of sufficient weight; for the Curator, when appointed, is clearly an officer of the Museum within the 7th section already referred to, and as such under the direction of the Trustees. Unless, therefore, the 7th section is repealed by the 37th section of the Constitution Act, the appointment must still rest with the Trustees. Now, if the 7th section be repealed, the 5th section of the same Act, which provides for the filling up of vacancies in the Board of Trustees, must be also repealed, for the 37th section of the Constitution Act applies to unsalaried, as well as salaried, officers. There are similar provisions also in the Act incorporating the University (14 Vic. No. 31); and we hardly think that it would be contended that the appointment of a Professor—supposing even a Professor to a new department—has been taken out of the hands of the Senate, and transferred to the Government. The election of a member of the Senate to fill a vacancy, between the passing of the Constitution Act and the passing of the 24 Vic. No. 13 would if Mr. Cowper's view were correct be void.

We are, therefore, of opinion, independently of all considerations that might affect the proper management of the Institution, that the 37th section of the Constitution Act has not taken away from the Trustees the power of appointing to any office under their direction.

The Trustees, we think, suggest the proper course to be followed, viz. :—That the amount of the Curator's salary should be placed on the Estimates as an addition to the Endowment Fund; but whether that course be pursued, or the salary voted annually, we think that, by law, the appointment is vested in the Trustees.

JAMES MARTIN,
Attorney General.

PETER FAUCETT,
Solicitor General.

11th November, 1863.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

GERARD KREFFT.

(PETITION OF.)

Ordered by the Legislative Assembly to be printed, 5 July, 1875.

To the Honorable the Speaker and the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The respectful Petition of the undersigned the Curator of the Australian Museum,—

HUMBLY SHOWETH:—

That your Petitioner is a loyal subject of Her Majesty the Queen.

That your Petitioner is a duly appointed Government servant, and that his appointment as such could only be made by His Excellency the Governor, with the advice of the Executive Council.

That your Petitioner was so appointed, on the 5th May, 1864, to the office of Curator of the Australian Museum, with a salary of five hundred pounds per annum and quarters, and at the recommendation of the Board of Trustees.

That the Trustees, under paragraph 9 of their Annual Report for the year 1864, distinctly state that your Petitioner's appointment had been subject to the approval of His Excellency the Governor and Executive Council, and that your Petitioner can only be dismissed from his office by the same authority.

That the salary of your Petitioner is subject to a yearly vote by your Honorable House, and that it is not derived from the Museum Endowment Fund, over which the Trustees have absolute control.

That the Trustees can appoint and dismiss any officer paid out of this fund, and that the Professors of the University can be dealt with in the same manner, because their salary is not subject to a yearly vote of Parliament.

Your Petitioner desires to draw the attention of your Honorable House that he has held his office of Curator for a period of nine years; that he had been previously appointed Assistant Curator, and at Mr. Pittard's death Acting Curator.

That the Trustees had applied to the Government to be allowed to appoint a Curator on this occasion, but that Mr. Cowper's Law Officers decided that, in accordance with the Constitution Act, His Excellency the Governor, with the advice of the Executive Council, could alone appoint.

Your Petitioner begs to state that the Trustees themselves have acknowledged your Petitioner's zeal and ability, and that no charges of any kind were brought against him, except such as transpired first at a Committee appointed by your Honorable House to inquire into the management of the Museum.

That these charges were brought by inferior servants; that your Petitioner refuted these charges, but that some of the Trustees, hostile to your Petitioner, desired to inquire into them.

That your Petitioner declined to be tried by his enemies (a section of the Trustees and their willing servants), with whom the charges generated.

That he demanded a defined list of them, with the names of his accusers, but that this was refused.

That the Trustees printed the evidence taken before them, which is of a most libellous character, at Her Majesty's Printing Office, and circulated it; but that they refused a copy of the evidence to your Petitioner, who was able to prove it utterly false.

That the Trustees considered they had the right to dismiss your Petitioner, and that the section hostile to him did so.

That they did not give notice to the Members of the Government who have seats on the Board, but that they dismissed your Petitioner forthwith.

That the Government, when appealed to by the Trustees to sanction their action, refused to have anything to do with their illegal proceedings.

That the Trustees then demanded the assistance of the police to remove your Petitioner, but that this was also refused by the Government.

That the Trustees then drew up a paper ordering a man named Charles Pearl to remove your Petitioner and his family, goods, and chattels, from the Museum premises; that Mr. E. S. Hill, a Magistrate of the Colony, engaged a number of pugilists, and ordered them to break into your Petitioner's private apartments; that Mr. Hill had no warrant or any authority whatever to act as he did, but that he nevertheless caused your Petitioner to be ejected into the public street, with his family, servants, and visitors.

That your Petitioner brought an action against Mr. Hill for trespass, in the Supreme Court of the Colony, and gained a verdict with £250 damages, the Counsel for the defendant distinctly stating to His Honor the Judge that your Petitioner continued to receive his salary, which was not true.

That the Trustees still retain your Petitioner's salary for the month of August, 1874, and that your Petitioner has not received any pay since that time.

That your Petitioner has the right to order the payment of his salary to any agent, and that he desired the Treasury to pay it into the Trustees' account, who had always paid him with their cheque monthly when your Petitioner was paid out of their endowment as Assistant Curator. On this account only was the cheque payment continued, and when your Petitioner demanded direct payment at the Treasury he was informed that this could not be done then.

When applying to the Minister for Justice, your Petitioner was informed that his case was *sub judice*, and nothing could be decided.

Your Petitioner did not bring an action against the Trustees, but only against Mr. E. S. Hill, for trespass, and the learned Judge distinctly laid it down that Mr. Hill acted wrong; that your Petitioner's appointment rested solely with His Excellency the Governor and Executive Council, and that by the same authority only your Petitioner could be dismissed.

The defendant, Mr. E. S. Hill, has obtained a *rule nisi*, but the argument whether he is to have a new trial has not come on, having been twice postponed.

Your Petitioner and his family have suffered great hardship through this delay of the law, and your Petitioner prays your Honorable House to cause his salary to be paid by the Treasury, because it must be clear to your Honorable House that your Petitioner remains a duly appointed Government servant until His Excellency the Governor, with the advice of the Executive Council, have dismissed him.

Your Petitioner desires to point out to your Honorable House that, through the printing at the Government Printing Office of the slanderous and false evidence taken before the Trustees' illegal sub-committee at the Museum, your Petitioner's reputation has greatly suffered; but for this your Petitioner would have been able to support his family comfortably. The Trustees were well aware of the damage done to your Petitioner's character and to his honorable name; but, not satisfied with that, they have sent into your Honorable House two Annual Reports full of false statements, one of which is not even dated, and is not the Report submitted to the Board of Trustees. The Report for 1874 is also full of misrepresentations; and, by attaching the libellous and false statements of a number of insubordinate servants to a public document without giving your Petitioner an opportunity to prove them utterly without foundation, the Government has deeply wronged an old and faithful public servant, who now approaches your Honorable House and prays for speedy redress and the payment of the arrears of his salary.

Your Petitioner's wife is laid upon a bed of sickness; the clothes even she urgently requires, and which remain in your Petitioner's rooms at the Museum, are refused to her (under some paltry excuse) by Mr. E. S. Hill, a Magistrate of the Colony, who, it appears, has usurped all the powers of the Corporation, which has no right to delegate their authority to individual members, for the special purpose, it appears, to irritate a poor sick woman, who has already lost two children through the persistent worry of these unfeeling and vindictive men.

Your Petitioner appeals to every husband and father of your Honorable House to assist and obtain speedy redress for all the wrongs your Petitioner has suffered, and he prays that before all other things your Honorable House will take steps to secure to him the salary voted by your Honorable House.

And your Petitioner will ever pray, &c., &c., &c.

GERARD KREFFT,

Curator of the Australian Museum; Fellow of the Linnean Society of London; Fellow of the Royal Society of New South Wales; Corresponding Member of the Royal Society of Tasmania; Honorary Master and Fellow of the German Academy of Frankfort-on-Maine; of the Royal Geographical Society of Saxony; of the Malac Zoological Society of Frankfort-on-Maine; of the Society Humanitaire of Bordeaux; of the Naturalists Society of Hamburg, Bremen, and Frankfort; of the Imperial Geological Society of Austro-Hungary at Vienne; and of the Zoological Society of London; and Chevalier of the Order of the Crown of Italy; holder of two Gold, two Silver, and three Bronze Medals awarded for exhibits in the Colony, France, and England.

Australian Museum Curator's Temporary Office,
230, Palmer-street.
Sydney, 11th May, 1875.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

AUSTRALIAN MUSEUM.

(CORRESPONDENCE, &c., RESPECTING APPOINTMENT AND DISMISSAL OF CURATOR.)

Ordered by the Legislative Assembly to be printed, 11 May, 1875.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 12 November, 1874, That there be laid upon the Table of this House,—

- “ (1.) Copies of all Minutes, Correspondence, and other Papers relating to the appointment and dismissal of the late Curator of the Museum, Mr. Gerard Krefft.
- “ (2.) Copies of the Report of a Committee of the Trustees of the Australian Museum, appointed by the Board of Trustees to investigate certain Charges made against the late Curator, and of the Evidence taken before the said Committee on that inquiry.
- “ (3.) Copies of the Minutes of all Meetings (Special and General) of the Board of Trustees, from the appointment of the aforesaid Committee of Inquiry until the final dismissal of Mr. Krefft.”

(Captain Onslow.)

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CURATOR, AUSTRALIAN MUSEUM.

No. 1.

THE ACTING CURATOR AND SECRETARY, AUSTRALIAN MUSEUM, to THE COLONIAL SECRETARY.

Australian Museum,
Sydney, 8 January, 1863.

SIR,

By direction of the Trustees of the Australian Museum, I have the honor to enclose a copy of a resolution passed at a special meeting of the Board, held this day, and to request that you will have the goodness to communicate to me the decision of the Government, for the information of the Trustees.

I have, &c.,
GERARD KREFFT,
Acting Curator and Secretary.

COPY of a resolution passed at a special meeting of the Trustees of the Australian Museum, held this day,
January 8th, 1863.

Moved by Alfred Roberts, Esq., seconded by William Macleay, Esq., and carried unanimously,—

That notwithstanding the exertions of the Acting Curator, the state of the Museum urgently requires the services of a Curator.

That a letter be addressed to the Honorable the Colonial Secretary, requesting to know whether the amount voted by the Legislature for the salary of a Curator will be paid by the Executive to such person as may be appointed by the Trustees.

That previous to taking any measures for the selection and appointment of a Curator, the Trustees are willing to submit their proposed course of proceeding for the information of the Government.

I certify this to be a correct copy from the Minutes of the Board.

Australian Museum,
January 8, 1863.

GERARD KREFFT,
Acting Curator and Secretary.

No. 2.

THE ACTING CURATOR AND SECRETARY, AUSTRALIAN MUSEUM, to THE COLONIAL SECRETARY.

Australian Museum,
Sydney, 10 March, 1863.

SIR,

By direction of the Trustees of the Australian Museum, I beg to call your attention to the letter which I had the honor to address to you by desire of the Trustees on January 8th, A. C. and to request the favor of an answer at your earliest convenience, because the interests of the Institution, as already pointed out, might necessarily continue to suffer, so long as the office of Curator, for which the Parliament has made the necessary provision, shall remain vacant.

I have, &c.,
GERARD KREFFT,
Acting Curator and Secretary.

No. 3.

THE PRINCIPAL UNDER SECRETARY to THE SECRETARY, CROWN LAW DEPARTMENT.

Colonial Secretary's Office,
Sydney, 3 November, 1863.

SIR,

Besides the endowment provided for in the Act of Incorporation of the Australian Museum, and a supplement to such endowment of £200, the Legislature has voted a sum of £700 as salary for a Curator for some years past. A vacancy having occurred in this office, a question has however been raised as to whether the power of appointment rests with the Executive Government or with the Trustees of the Museum, and I am directed by the Colonial Secretary to request that the Crown Law Officers will favor him with their opinion on this point at their earliest convenience.

2. A printed copy of the correspondence which has passed on this subject between the Trustees and this office is enclosed for the information of the Crown Law Officers.

I have, &c.,
W. ELYARD.

Vide Correspondence—
Re appointment
of Curator in
1862.

No. 4.

No. 4.

THE UNDER SECRETARY, CROWN LAW DEPARTMENT, to THE PRINCIPAL UNDER SECRETARY.

Crown Law Offices,
Sydney, 11 November, 1863.

SIR,

Having submitted your letter of the 3rd instant, with its enclosure, respecting the vacancy of the office of Curator of the Australian Museum, and requesting the Law Officers' opinion as to whether the appointment rests with the Executive Government or with the Trustees of the Museum, I am directed to forward you the accompanying copy of the Honorable the Attorney General, and the Solicitor's General opinion thereon.

Dated 11 November, 1863.

I have, &c.,
W. E. PLUNKETT.

No. 5.

OPINION OF THE CROWN LAW OFFICERS.

Curator of Australian Museum—as to whether the appointment is vested in the Executive Government or in the Trustees.

We are of opinion that the office of Curator ought to be left in the hands of the Trustees of the Museum.

The Trustees are incorporated by the Act 17 Vic. No. 2, the 7th section of which gives the Trustees full power to appoint all officers and servants of the Museum. It was contended however by the late Government, as we collect from the accompanying papers, that the 37th section of the Constitution Act (18 and 19 Vic. c. 54) placed the appointment of Curator in the hands of the Governor and Executive Council—either as repealing the 17 Vic. No. 2, s. 7, or on the ground that it was a new office with a salary separately voted by the Parliament—the appointment to which ought therefore to be in the hands of the Governor instead of the Trustees. This latter ground we do not think of sufficient weight, for the Curator, when appointed, is clearly an officer of the Museum within the 7th section already referred to, and as such under the direction of the Trustees. Unless therefore the 7th section is repealed by the 37th section of the Constitution Act, the appointment must still rest with the Trustees. Now, if the 7th section be repealed, the 5th section of the same Act, which provides for the filling up of vacancies in the Board of Trustees, must be also repealed, for the 37th section of the Constitution Act applies to unsalaried as well as salaried officers. There are similar provisions also in the Act incorporating the University (14 Vic. No. 31), and we hardly think that it would be contended that the appointment of a Professor—supposing even a Professor to a new department—has been taken out of the hands of the Senate and transferred to the Government. The election of a member of the Senate to fill a vacancy between the passing of the Constitution Act and the passing of the 24 Vic. No. 13, would, if Mr. Cowper's view were correct, be void.

We are therefore of opinion, independently of all considerations that might affect the proper management of the Institution, that the 37th section of the Constitution Act has not taken away from the Trustees the power of appointing to any office under their direction.

The Trustees we think suggest the proper course to be followed, viz., that the amount of the Curator's salary should be placed on the Estimates as an addition to the Endowment Fund—but whether that course be pursued, or the salary voted annually, we think that by law the appointment is vested in the Trustees.

JAMES MARTIN,
Attorney General.
PETER FAUCETT,
Solicitor General.

11th November, 1863.

No. 6.

MINUTE THEREON.

RE-SUBMITTED, as it is understood that the Trustees wish some answer to their letter of the 10th March, 1863. Mr. Cowper's answer to a question in the Assembly on the 26th June, 1863, explains what he proposed.

The opinion of the present Law Officers has since been taken, and their report is enclosed. In November last it was decided to let the matter rest for the present.

18th April, 1864.

W.F.

No. 7.

THE ACTING CURATOR, AUSTRALIAN MUSEUM, to THE COLONIAL SECRETARY.

Australian Museum,
Sydney, 20 April, 1864.

SIR,

The Trustees of the Australian Museum have directed me to call your attention to my communications, dated January 8th and March 10th, 1863, and to request the favour of an answer at your earliest convenience.

I have, &c.,
GERARD KREFFT,
Acting Curator and Secretary.

Communicate opinion of Crown Law Officers.—W.F., April 20th, 1864.

No. 8.

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No. 8.

THE PRINCIPAL UNDER SECRETARY TO THE ACTING CURATOR, AUSTRALIAN MUSEUM.

Colonial Secretary's Office,
Sydney, 28 April, 1864.

SIR,

Referring to your letter of the 20th instant and previous communications, relative to the appointment of a Curator of the Australian Museum, I am directed by the Colonial Secretary to inform you that the Crown Law Officers, who have been consulted on the point, have advised that the office of Curator should be left in the hands of the Trustees of the Museum.

I have, &c.,
W. ELYARD.

No. 9.

THE CHAIRMAN OF TRUSTEES, AUSTRALIAN MUSEUM, TO THE COLONIAL SECRETARY.

Australian Museum,
Sydney, 5 May, 1864.

SIR,

I have the honor to acknowledge, on behalf of the Trustees of the Australian Museum, the receipt of your communication of April 28th, 1864, and to express their gratification that the Executive Council has recognized as a principle the proposition which they have long maintained, that the appointment of Curator to the Australian Museum is vested in the Trustees alone.

I have further to report that the Trustees have taken immediate action in the matter by electing Mr. Gerard Krefft to the vacant post, with an annual salary of £500 (five hundred pounds).

The Trustees would further call attention to the fact that, according to the arrangements which they have thus been enabled to make,—a reduction of two hundred pounds (£200) is made upon the annual vote, and beg your favourable consideration to their request that an equal sum be placed upon the annual Estimates, as an addition to the endowment, in order that the Trustees may, by the employment of efficient collectors, be enabled to make the collection as complete as possible, both directly by procuring the Australian forms in which the Museum is still deficient, and indirectly by supplying an abundance of specimens for exchange with similar Institutions in other parts of the world.

As the course of action naturally indicated by the amount of the vote in question (£700) has been to some extent abandoned by the Trustees, they feel that some explanation is due to the Government of the grounds upon which they have acted in the reduction of the proposed salary, and the appointment of Mr. Krefft as Curator.

It has appeared from various evidence that the services of a really distinguished Professor in the various branches of Physiology could not be secured for the proposed salary, especially when the payments are dependent upon the annual vote.

It is also believed to be impossible that any one can perform the incompatible duties of Curator and Lecturer, and that either the care of the collection will be absolutely in the hands of subordinates, owning no sufficient responsibility, or that the lectures will have to be discontinued.

Holding their duties at the present time (in accordance with the abovementioned views) to be limited to the appointment of Curator, they have had no hesitation in immediately electing Mr. Gerard Krefft, who has now been in sole charge of the Museum since August, 1861 (having been also engaged as Assistant since June, 1860), and has during the whole of this period given the most satisfactory evidence of energy, ability, and enthusiasm in his work.

And since Mr. Krefft is to perform as Curator only a portion of the services intended to be secured by the proposed salary of seven hundred pounds (£700), they have thought themselves warranted in reducing this by the sum of two hundred pounds per annum.

I have, &c.,
E. DEAS THOMSON,
Chairman.

No. 10.

MINUTES OF THE COLONIAL SECRETARY THEREON.

IN accordance with the recommendation of the Trustees, I also recommend the appointment of Mr. Gerard Krefft to be Curator of the Australian Museum. But it appears to me, in announcing that Mr. Krefft has been elected, the Trustees make use of a term which implies something more than is contained in the opinion of the Attorney General, any such election, in fact, having no validity until confirmed by the Executive Council.—W.F., 1 June, 1864.

I also concur in the recommendation as to salary which, of course, does not rest with the Trustees, but has to be determined by the Government. The question as to supplementing the endowment will be considered in preparing the Estimates.—W.F., 2 June, 1864.

No. 11.

MINUTE PAPER FOR THE EXECUTIVE COUNCIL.

Colonial Secretary's Office,
Sydney, 3 June, 1864.

IN accordance with the recommendation of the Trustees, I recommend the appointment of Mr. Gerard Krefft to be Curator of the Australian Museum. But it appears to me, that in announcing that Mr. Krefft has been elected, the Trustees make use of a term which implies something more than is contained in the opinion of the Attorney General, any such election in fact having no validity until confirmed by the Executive Council.

I also concur in the recommendation of the Trustees that the salary of the Curator should be paid at the rate of £500 per annum, instead of £700, as hitherto.

The question that a sum of £200 in consequence of the reduced salary be placed upon the annual Estimates as an addition to the endowment will be considered in preparing the Estimates.

WILLIAM FORSTER.

The Executive Council having considered the subject herein set forth concur in the opinion of the Honorable the Colonial Secretary, and advise that Mr. Gerard Krefft be appointed Curator of the Australian Museum, with salary at the rate of £500 per annum.

ALEX. C. BUDGE,
Clerk of the Council.

Min. 64/21, 6th June, 1864. Confirmed, 14th June, 1864. 16 June, /64, Approved.—J.Y.

I see no reason at present for recommending an additional endowment of £200 a year.—W.F.,
Sep. 30, 1864.

No. 12.

THE PRINCIPAL UNDER SECRETARY to THE CHAIRMAN OF TRUSTEES, AUSTRALIAN MUSEUM.

Colonial Secretary's Office,
Sydney, 30 June, 1864.

SIR,

With reference to your letter of the 5th ultimo, I am directed to inform you that His Excellency the Governor, with the advice of the Executive Council, has been pleased to approve of the appointment, by the Trustees of the Australian Museum, of Mr. Gerard Krefft, to be Curator of that Institution.

2. Mr. Forster also concurs in the recommendation of the Trustees that the salary of the Curator should be paid at the rate of £500 per annum, instead of £700, as hitherto.

3. The question that a sum of £200, in consequence of the reduced salary, be placed upon the Annual Estimates as an addition to the endowment, will be considered in preparing the Estimates.

I have, &c.,
W. ELYARD.

No. 13.

THE CHAIRMAN OF TRUSTEES, AUSTRALIAN MUSEUM, REPORTING RESOLUTION, &c.

Australian Museum,
2 July, 1874.

SIR,

I am desired by the Trustees to submit to you copy of a resolution passed at the meeting this afternoon, namely:—

“That for the protection of the Museum an application be made to the Minister for Justice for the services of a sergeant and two members of the Police Force to take charge of the Institution, the Museum not being considered safe under present circumstances.”

I am to request, at the same time, that you will be good enough to take such steps as may be necessary with this object.

I have, &c.,
C. ROLLESTON,
Chairman.

Immediate. The Colonial Secretary.

I have conferred with the Attorney General, who was present at the meeting of Trustees, and he thinks this course desirable.—G.W.A., 3/7/74.

Approved. Mr. Fosbery will select men specially for this purpose. In the meantime every respect is to be paid to Mr. Krefft and family.—H.P., 4/7/74.

Immediate. I.G. of Police. U.S. Law Dept., 4 July, 1874.

No. 14.

THE ACTING PRINCIPAL UNDER SECRETARY to THE INSPECTOR GENERAL OF POLICE.

Colonial Secretary's Office,
Sydney, 4 July, 1874.

SIR,

At the instance of the Minister of Justice and Public Instruction, and in pursuance of a resolution passed by the Trustees of the Australian Museum of the 2nd instant, I am directed by the Colonial Secretary to request that you will immediately send a sergeant and two other members of the Police Force to take charge of the Museum.

2. I am desired to request that you will select men specially for the above purpose, and that instructions be given that in the meantime every respect be paid to Mr. Krefft and his family.

I have, &c.,
WM. GOODMAN.

No. 15.

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No. 15.

THE ACTING PRINCIPAL UNDER SECRETARY TO THE UNDER SECRETARY, DEPARTMENT OF JUSTICE AND PUBLIC INSTRUCTION.

Colonial Secretary's Office,
Sydney, 4 July, 1874.

SIR,

In reply to your blank cover communication of the 3rd instant, forwarding a letter from the Chairman of the Trustees of the Australian Museum, in which is embodied a resolution passed by the Trustees on the 2nd instant, I am directed by the Colonial Secretary to state, for the information of the Minister of Justice and Public Instruction, that the Inspector General of Police has been instructed to send immediately a sergeant and two other members of the Police Force to take charge of the Museum.

2. Instructions have at the same time been given, that the men are to be selected specially for the above purpose, and also that in the meantime every respect is to be paid to Mr. Krefft and his family.

I have, &c.,
(For the Under Secretary),
WM. GOODMAN.

No. 16.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, TO THE MINISTER OF JUSTICE AND PUBLIC INSTRUCTION.

Australian Museum,
Sydney, 18 July, 1874.

SIR,

I have the honor to inform you, by direction of the Trustees of the Australian Museum, that at the meeting of the Board of Trustees, held at the Museum yesterday afternoon, Gerard Krefft, Esq., was suspended from his office as Curator and Secretary of the Museum.

I am also instructed to inform you that the Trustees are now prepared to admit the public to the Museum, provided that the protection of the police be continued.

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

Urgent. Colonial Secretary.—G.W.A. The Principal Under Secretary, B.C., 21st July, 1874.—W.E.P. The Inspector General of Police, for report whether the police are still in attendance, and, if not, whether their services can be conveniently continued.—H.H., B.C., 11th September, 1874. Immediate.

No. 17.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, TO THE MINISTER OF JUSTICE AND PUBLIC INSTRUCTION.

Australian Museum,
Sydney, 31 July, 1874.

SIR,

I have the honor, by direction of the Trustees of the Australian Museum, to invite your attention to the second paragraph of my letter of date the 18th instant, namely, "That the Trustees are now prepared to admit the public to the Museum, provided that the protection of the police be continued."

The Trustees are very desirous of re-opening the Museum to the public, but having regard to the safe custody of the specimens, they do not feel that they can properly do so in the present position of the Institution, unless their request for the continued attendance of the police be complied with.

I am instructed to request the favour of a reply at your earliest convenience.

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

The Colonial Secretary, with whom is the letter referred to.—G.W.A., 31/7/74.
The Principal Under Secretary.—W.E.P., B.C., 1st August, 1874. Submitted, 13/8/74.

No. 18.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, TO THE MINISTER OF JUSTICE AND PUBLIC INSTRUCTION.

The Australian Museum,
Sydney, 20 August, 1874.

SIR,

I have the honor to inform you that the attention of the Trustees has been drawn to the conduct of Mr. Gerard Krefft, as an officer of this Institution, and that after mature consideration they have deemed it their duty to dismiss him from the office of Curator and Secretary to the Australian Museum.

I enclose the following documents:—

1. Copy of the Report of the Sub-committee appointed to inquire into certain charges against the Curator. "A." *
2. A printed copy of the evidence taken before that Committee. "B." *
3. Copy of evidence taken before the Board of Trustees on the 17th ultimo, together with an account for wages paid to one John Milne. "C."

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

[Enclosure.]

* For Enclosures A and B see Appendix No. 4 attached to Report on Australian Museum for 1874, laid on the Table on 9th April, 1875.

[Enclosure.]

C.

Adjourned Monthly Meeting of the Trustees, Friday, 17th July, 1874.

Present:—

W. Macleay, Esq., M.P.,	|	Professor Liversidge,
Ed. S. Hill, Esq., J.P.,		James C. Cox, Esq., M.D.,
A. W. Scott, Esq., M.A.,		George Fortescue, Esq., M.D.,
H. G. Alleyne, Esq., M.D. (President of the Medical Board),		Christopher Rolleston, Esq. (Auditor General).

W. A. Duncan, Esq., Collector of Customs, in the Chair.

J. A. Thorpe was called in and examined:—

Chairman.] What is your name? John Thorpe.

You are the taxidermist? Yes.

You were asked, I believe, by Mr. Hill to try these keys? Yes.

Did you find that they would open the doors of the taxidermist's room? Neither of them would.

Did you try the smaller keys? Yes; I know what they belong to.

Are they the keys that have been in use in the Department? No.

What are they? Duplicate keys of the side-cases—the wall-cases.

We understand that there are some drawers that are supposed to contain specimens that cannot be opened—did you try any of them? No, I did not.

Mr. Hill.] When you went to examine this place did you take a policeman with you? Yes; the policeman came with me, and saw that they would not fit.

You were requested to take a policeman with you? Yes.

Chairman.] Do you know to what doors these two large keys belong? I do not; they never came under my notice before.

Did you find that these keys would open any of the drawers? I did not.

[*Witness was directed to ascertain if the keys would open the recesses under the lepidoptera cases, and to report to the Trustees. He subsequently returned and reported that they would not.*]

I certify that this is a true copy,—

August 20, 1874.

CHAS. ROBINSON,
Acting Secretary, Australian Museum.*In the handwriting of Mr. Krefft.*

RECEIVED from Mr. Gerard Krefft the sum of one pound ten shillings sterling, for two weeks' wages cleaning up back premises and repairing fence, &c.

JOHN MILNE.

June 20th, 1874.

In the handwriting of Dr. Cox.

I CALL special attention to this a/c., and recommend that inquiry be made into it before being paid.

J. C. Cox.

I certify that this is a correct copy,—

August 20, 1874.

CHAS. ROBINSON,
Acting Secretary, Australian Museum.

John Milne was called in and examined:—

Mr. Hill.] What is your name? John Milne.

Are you the party I saw in the cellar one day? Yes.

Were you knocking nails out of cases? I could not say.

What did you tell me when I asked what you were doing? I said that Mr. Krefft sent me in to break up boxes, as it was a wet day, and I could not work in the garden.

Whose garden? Mr. Krefft's garden.

What did I ask you about this other garden? I told you that M'Namara worked in that garden.

What did you say when I wanted to know whose man you were? I said that I was Mr. Krefft's man, and that I signed a note for my money.

On that day you said that you did not work in that room ordinarily? Yes.

You were there because it was a wet day? Yes. I said that I was Mr. Krefft's man, and that I wrote a receipt for my wages every Saturday night.

What wages did you work at? 15s. a week.

And your food? Yes.

What is your ordinary occupation in this Institution? I do not do anything in the Institution but carry wood and water.

What is your ordinary occupation? Just to assist in the kitchen, work in the garden, clean the knives and boots, and so on.

What do you do for the Institution? Nothing but sweep out the hall.

What hall? The hall down below.

You do nothing up here—nothing in the flower-garden? No.

You do nothing but for Mr. Krefft and his family? No.

You never obey any orders of the Trustees? No; I do not know anything about them.

Dr. Cox.] You know M'Namara? Yes, I know him.

Does he live on the premises? He sleeps here.

Mr.

Mr. Scott.] After we saw you in the cellar, who has been working in the front garden? M'Namara.
Mr. Rolleston.] Do you understand that you are the servant of the Museum or the servant of Mr. Krefft?
 The servant of Mr. Krefft.

I certify that this is a correct copy,—

August 20, 1874.

CHAS. ROBINSON,
 Acting Secretary, Australian Museum.

No. 19.

G. KREFFT, ESQ., to THE COLONIAL SECRETARY.

Australian Museum,
 Sydney, 22 August, 1874.

SIR,

Having been dismissed by the Trustees of the Australian Museum from the office of Curator of that Institution, which I have held for upwards of nine years (having been nearly fourteen years in charge of the Museum as Assistant and Acting Curator), and believing that such dismissal cannot take effect until it has been confirmed by His Excellency the Governor, with the advice of the Executive Council,—I do myself the honor to lay before you the whole facts of the case, in order that His Excellency and the Council may be fully informed of the same before they decide, and in the hope that I may be allowed some opportunity of replying to the charges made against me, after those charges and the evidence in support of them have been furnished to me. Some time in the month of May last, I gave evidence before a Select Committee of the Legislative Assembly appointed to report upon the Australian Museum, in the course of which inquiry certain statements were made by some of the witnesses, reflecting upon me, but the charges contained in which statements I afterwards in my further evidence explained, as I believe, to the satisfaction of the Committee.

After the inquiry was closed, the Trustees of the Museum being desirous of re-investigating the charges brought against me at the Committee, a special meeting was ordered by the Trustees to be called, but not receiving the necessary requisition to do so, as required by the by-laws, I could not send out the circulars, and I thought that the meeting had lapsed. It appears, however, that six Trustees *did* meet on the 11th of June, and that they called for a special meeting for the 16th of June, "to take into consideration the conduct of the Secretary in disobeying the orders given to him by the Board, &c., &c., &c." The necessary requisition, calling the meeting and defining the purpose for which the meeting was convened, having been lodged with me, bearing the signature of three Trustees, I called such a special meeting for 3 o'clock on the 16th of June.

On this day it was the intention of the Board to investigate "certain charges," said to have been brought against me, but I pointed out that no charges were on record, and after having done so I was requested to retire, and on my return was informed that A. W. Scott, Esq., had been directed "by the Board" to furnish me with a copy of the charges. Mr. Scott did so, and the list was left by me with a member of the Board, from whom I have not been able to receive it back, because the gentleman is out of town at present. The various accusations were enumerated in very general terms, as far as I remember, in the following manner:—

1. Drunkenness.
2. Bribing servants of the Museum.
3. Making false statements in writing to the Colonial Secretary.
4. Maliciously breaking a fossil jaw lent to the Trustees by Dr. Bennett.
5. Causing the carpenters to make furniture for his (the Curator's) own benefit.
6. Telling a man named Barnes to put some Museum property into the house of a man named Tost to convict him of theft.
7. Ordering the messenger to make false returns of the number of visitors to the Museum.
8. Paying money to a man under a false name.
9. Sending away valuable specimens without the order of the Trustees.
10. Insubordination.
11. Allowing work to be done for Trustees of the Museum.
12. Ordering the Museum photographer to take indecent pictures, and selling photographs for his own benefit.

These are, as far as I can remember, the charges brought against me, and which the Trustees desired to investigate; the name of my accusers and the date when, or the place where, the supposed irregularities took place could not be ascertained. The sheet was signed "A. W. Scott," but I do not think that Mr. Scott was the author of the charges. A sub-committee was appointed to investigate these charges, and having been invited to attend a meeting of the same by Mr. Christopher Rolleston on the 24th of June, I applied to him for a definition or particulars of the charges. Mr. Christopher Rolleston is a public servant of long standing, and I expected to receive a satisfactory reply, because every public servant in my position is entitled to receive his charges specified, and he has the privilege of replying to them in writing. This appears to be the opinion of some of our best legal authorities, and I have been strictly advised by three gentlemen of the legal profession, and by several Members of the Legislative Assembly to request to be furnished again with a specification of the charges, and with the name of my accuser or accusers, and the date when and the locality where the supposed irregularities were committed. I was also advised to ask for a copy of the evidence which the Trustees had printed and which they distributed *only* to the members present at the last meeting of the Board. On or about the 14th day of August I received a letter dated the 13th of August, written by direction of the Trustees, signed Charles Robinson, Acting Secretary, that at a meeting of the Trustees held that afternoon the following resolution had been agreed to:—

"That Mr. Gerard Krefft be called upon to show cause why he should not be dismissed from his office of Curator and Secretary of the Australian Museum."

Mr. Robinson, in forwarding the resolution, said also, "that he was instructed to inform me that any communication I desired to make should reach the Trustees on or before 3 o'clock on Thursday next, 20th instant."

I replied on the 19th, requesting the Trustees to furnish me with the defined grounds of accusations against me, and with a copy of the evidence taken before the Sub-committee appointed to investigate the charges upon which the same were founded, as it would be impossible for me to show cause, as requested, without those documents. I also stated that as soon as I received them I would write, showing, as I believed, sufficient cause, why I should not be dismissed from my office of Curator and Secretary of the Australian Museum. In reply to this letter I received the following communication:—

Sydney, 20 August, 1874.

Sir,

I have the honor to inform you that the Trustees having had under consideration the Report of the Sub-committee and the evidence taken before it, in regard to certain charges reflecting on your conduct as an officer of this Institution, have this day resolved as follows—

“That Mr. Gerard Krefft be dismissed from his office of Curator and Secretary.”

You were furnished by A. W. Scott, Esq., in June last, with a copy of the charges referred to, and also by Christopher Rolleston, Esq., in his letter inviting your attendance at the meetings of the Sub-committee.

The Trustees have arrived at the determination, which it is now my duty to communicate to you, from a conviction that most of the charges remitted to the Sub-committee for investigation have been proved, and they consider that the irregularities which you have committed are of so serious a nature that no milder alternative was left to them.

I am instructed to say, that the Trustees require you to give up possession of your apartments to them on or before the 31st day of August instant. Mr. Thorpe, the taxidermist, is authorized to receive the keys.

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

Gerard Krefft, Esq., Australian Museum.

I believe that I will be able to show “ample cause” why I should not be dismissed from my office of Curator and Secretary of the Australian Museum, provided the Trustees will furnish me with the evidence taken before the Sub-committee. At the same time I deeply regret that charges which are not yet proved, and which the Trustees class only as “irregularities,” should be visited upon me, a faithful public servant for a period of fourteen years, with the utmost severity. I repeat again that I very much regret the consequences of this inquiry, which certainly was not of my seeking, because I only had the welfare of the Institution at heart.

Ready at any time to offer an apology for my shortcomings, I humbly request that before deciding upon this matter the Executive Council will call upon the Trustees to furnish the Council with the evidence upon which they have acted, and that I may be allowed an opportunity of offering my defence to my explanation of any charges that may be brought against me.

I have, &c.,
GERARD KREFFT,
Curator of the Australian Museum.

The Under Secretary, Law Department, B.C., 28 Aug., /74, for the U.S.—W.G.

No. 20.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, to THE MINISTER OF JUSTICE AND PUBLIC INSTRUCTION.

The Australian Museum,
Sydney, 8 September, 1874.

SIR,

I have the honor to inform you that at a meeting of the Trustees of the Australian Museum, held this day, the following resolutions were unanimously passed:—

The Trustees having after full inquiry arrived at the conclusion that the conduct of Mr. Krefft has been such as to require his dismissal, and having dismissed him accordingly, and Mr. Krefft having refused to leave the premises of the Museum, it is resolved:—

- 1st. That an immediate application be made to the Minister of Justice and Education to authorize the police to give effect to the decision of the Board by removing Mr. Krefft from the Museum buildings.
- 2nd. That it is the duty of the Board to keep the property of the Museum under seal until Mr. Krefft's removal.
- 3rd. That a copy of the above resolutions be immediately forwarded to the Minister for Justice and Education, and a deputation, consisting of Jas. Nerton, Esq., and Alfred Roberts, Esq., be appointed to wait upon the Minister for Justice and Education to explain to him the necessity for prompt action in order that the Museum may be re-opened to the public.

I am further instructed to inform you that the deputation will wait upon you on Thursday, 10th instant.

I have, &c.,
EDW. PALMER,
Acting Secretary.

Will receive deputation at 11 o'clock a.m., to-morrow.—G.W.A., 9 Sept., /74.
Very urgent. Inform the Acting Secretary, 9/9/74.

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No. 21.

THE UNDER SECRETARY, DEPARTMENT OF JUSTICE AND PUBLIC INSTRUCTION, to THE ACTING SECRETARY,
AUSTRALIAN MUSEUM.

Department of Justice and Public Instruction,
Sydney, 9 September, 1874.

SIR,

In acknowledging the receipt of your letter of yesterday's date, forwarding copy of certain resolutions passed by the Trustees of the Museum respecting removal of Mr. Krefft, I am directed by the Minister of Justice and Public Instruction to inform you that he will receive the Deputation named at 11 o'clock a.m. to-morrow, Thursday, 10th instant.

I have, &c.,
W. E. PLUNKETT,
Under Secretary.

No. 22.

THE INSPECTOR GENERAL OF POLICE to THE PRINCIPAL UNDER SECRETARY.

Police Department, Inspector General's Office,
Sydney, 14 September, 1874.

POLICE have been stationed at the Museum since the 4th of July last and still there.

This requires a relief of three constables, who can be ill spared from their ordinary duties in the city.

If it be decided to re-open the Museum I conclude some responsible person would be placed in charge, and in that event, I understood from one of the Trustees, the further attendance of the police would not be requisite.

EDMUND FOSBERY,
Acting for I.G.P.

B.C., Principal Under Secretary. The Under Secretary, Department of Justice, B.C., 15th September, 1874.—H.H.

No. 23.

THE UNDER SECRETARY, DEPARTMENT OF JUSTICE AND PUBLIC INSTRUCTION, to THE TRUSTEES,
AUSTRALIAN MUSEUM.

Department of Justice and Public Instruction,
Sydney, 14 September, 1874.

GENTLEMEN,

I have the honor to acknowledge receipt of your letter of 8th September, with a copy of resolutions by the Trustees of the Museum, in reference to the dismissal of Mr. Krefft from his office as Curator, and his removal from the Museum buildings.

I am directed by the Minister of Justice and Public Instruction to say that the matter has engaged the serious attention of the Government, and that the services of the police cannot be authorized for the purposes desired by the Trustees.

The Trustees have throughout the inquiry acted independently of the Government, and have of their own authority resolved to dismiss the Curator, and the Government do not feel called upon to assume the responsibility of giving effect to a decision to which they have been no party.

I am further to intimate that it is the intention of the Government to introduce into Parliament a Bill to deal with the subject of the future management of the Museum.

I have, &c.,
W. E. PLUNKETT,
Under Secretary.

No. 24.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, to THE UNDER SECRETARY, DEPARTMENT OF JUSTICE
AND PUBLIC INSTRUCTION.

Australian Museum,
18 September, 1874.

SIR,

I am directed by the Trustees of the Australian Museum to acknowledge the receipt of your letter of the 14th instant, and to express their surprise and regret that the Government have not thought fit to assist the Trustees in the performance of the duty of protecting the valuable public property entrusted to their charge.

I am further instructed to inform you that the Trustees have acted throughout this business independently of the Government, because they have been advised that they were entitled and bound to do so in accordance with the Act of Incorporation.

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

No. 25.

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No. 25.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, TO THE MINISTER OF JUSTICE AND PUBLIC INSTRUCTION.

Australian Museum,
Sydney, 23 September, 1874.

SIR,

I am instructed by the Trustees of the Australian Museum to inform you that they have appointed Edward P. Ramsay, Esq., Curator of the Museum, in the room of Mr. Gerard Krefft.

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

No. 26.

THE INSPECTOR GENERAL OF POLICE TO THE PRINCIPAL UNDER SECRETARY.

Police Department,
Inspector General's Office,
Sydney, 23 September, 1874.

SIR,

In submitting the attached letter, received by me from the Acting Secretary, Museum, I have the honor to request to be informed if the withdrawal of the police from the Museum meets with the approval of the Honorable the Colonial Secretary.

I have, &c.,
EDMUND FOSBERY,
Acting for Inspector General of Police.

Appd.—H.P., 24/9/74. I. G. of Police, 28th Sept., 1874.

No. 27.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, TO THE INSPECTOR GENERAL OF POLICE.

Australian Museum,
Sydney, 23 September, 1874.

SIR,

I have the honor to inform you, by direction of the Trustees of the Australian Museum, that a Curator has now been appointed, and the assistance of the police at the Museum premises will not therefore be required after Saturday next, the 26th instant.

The Trustees have also desired me to convey to you their acknowledgments for the services rendered by your Department to the Institution.

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

No. 28.

THE PRINCIPAL UNDER SECRETARY TO THE INSPECTOR GENERAL OF POLICE.

Colonial Secretary's Office,
Sydney, 28 September, 1874.

SIR,

In reply to your letter of the 23rd instant, submitting a letter received by you from the Acting Secretary to the Trustees of the Australian Museum, stating that the assistance of the police at the Museum would not be required after Saturday the 26th instant,—I am directed to inform you that the withdrawal of the police from the Museum is approved of by the Colonial Secretary.

I have, &c.,
H.Y. HALLORAN.

No. 29.

THE UNDER SECRETARY, DEPARTMENT OF JUSTICE AND PUBLIC INSTRUCTION, TO THE ACTING SECRETARY, AUSTRALIAN MUSEUM.

Department of Justice and Public Instruction,
Sydney, 24 September, 1874.

SIR,

I am directed by the Minister of Justice and Public Instruction to inform you, that the attention of the Government has been drawn to a paragraph in the *Sydney Morning Herald* of Tuesday last, reporting that the Trustees have caused the forcible ejection of Mr. Gerard Krefft from the Museum premises, of which proceeding no intimation has been made to the Government by the Trustees. I am to remind you that that gentleman was appointed to the office of Curator with the approval of the Governor and Executive Council, and that his dismissal has been determined upon by the Trustees independently of the Government, and without their approval having been sought.

I

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I am also to acknowledge the receipt of your letter of 23rd instant, informing the Minister that the Trustees have appointed Mr. Edward P. Ramsay to the office of Curator, in the room of Mr. Krefft.

I am to intimate that no salary can be paid to any such officer for whose appointment the sanction of the Government has not been obtained, as in the case of the previously appointed Curator.

I have, &c.,
W. E. PLUNKETT,
Under Secretary.

No. 30.

THE UNDER SECRETARY, DEPARTMENT OF JUSTICE AND PUBLIC INSTRUCTION, TO THE UNDER SECRETARY FOR FINANCE AND TRADE.

Department of Justice and Public Instruction,
Sydney, 24 September, 1874.

SIR,

I am directed by the Minister of Justice and Public Instruction to forward, for the information of the Colonial Treasurer, the accompanying copy of a letter which has been addressed to Mr. Charles Robinson, Acting Secretary of Australian Museum, respecting reported ejection of Mr. Gerard Krefft from Museum premises, and in reference to appointment of Mr. Edward P. Ramsay to the office of Curator of the Australian Museum, in the room of Mr. Krefft.

Dated 24th September, 1874.
See No. 23.

I have, &c.,
W. E. PLUNKETT,
Under Secretary.

No. 31.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, TO THE MINISTER OF JUSTICE AND PUBLIC INSTRUCTION.

Australian Museum,
Sydney, 30 September, 1874.

SIR,

In acknowledging the receipt of the letter from your Department, No. 74-5,860, and dated 24th instant, I have the honor, by direction of the Trustees of the Australian Museum, to invite your attention to the fact that the question as to the power of the Trustees in regard to the appointment of Curator was considered in the year 1864, when the Government, acting upon the advice of the Crown Law Officers, concluded that the power of appointment vested in the Trustees.

I am directed to enclose, for your information, copy of a letter on the subject, of date 28th April, 1864, from the Department of the Colonial Secretary.

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

The Colonial Secretary, for perusal.—G.W.A., 1 Oct., /74. The Principal Under Secretary, B.C.,
1 October, 1874.—W.E.P. To be returned.

No. 32.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, TO THE MINISTER OF JUSTICE AND PUBLIC INSTRUCTION.

Australian Museum,
Sydney, 2 October, 1874.

SIR,

I have the honor, by direction of the Trustees of the Australian Museum, to intimate that legal proceedings have been commenced by the solicitors of Mr. Krefft, and of Miss Hannah M'Intosh, a member of the household, against Mr. E. S. Hill, one of their number, for action alleged to have been taken by him in the ejection of the late Curator and his family from the Museum premises.

I am instructed to request that you will be pleased to direct the Crown Solicitor to defend these actions on the part of the Trustees, seeing that any verdict which may be recovered by the plaintiffs will have to be satisfied out of the endowment, or, in default, levy may be made by the Sheriff upon the public property committed to the care of the Trustees.

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

Obtain, by search, particulars of actions reported to have been commenced.—G.W.A., 5/10/74.

The actions brought by Mr. Krefft and Miss M'Intosh appear to be against Mr. Hill and not against the Trustees in their corporate capacity. Neither the endowment nor the public property committed to the care of the Trustees can be rendered available for any verdict which may be recovered in these actions.—G.W.A., 6/10/74.

Prepare letter.—6/10/74. Acting Secretary informed.—7/10/74.

No. 33.

No. 33.

THE UNDER SECRETARY, DEPARTMENT OF JUSTICE AND PUBLIC INSTRUCTION, TO THE ACTING SECRETARY,
AUSTRALIAN MUSEUM.

Department of Justice and Public Instruction,
Sydney, 7 October, 1874.

SIR,

In reply to your letter of 2nd instant, requesting that the Crown Solicitor may be instructed to defend, on behalf of the Trustees of the Australian Museum, certain actions commenced by the solicitors of Mr. Krefft, and of Miss Hannah M'Intosh, a member of his household, arising out of the ejection of the Curator and his family from the Museum premises, I am directed by the Minister of Justice and Public Instruction to state that the actions brought by Mr. Krefft and Miss M'Intosh appear to be against Mr. Hill and not against the Trustees in their *corporate capacity*, and that neither the endowment nor the public property committed to the care of the Trustees can be rendered available for any verdict which may be recovered in these actions.

I have, &c.,
W. E. PLUNKETT,
Under Secretary.

No. 34.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, TO THE UNDER SECRETARY, DEPARTMENT OF JUSTICE
AND PUBLIC INSTRUCTION.

Australian Museum,
Sydney, 28 October, 1874.

SIR,

In reply to your letter of the 7th instant, from which the Trustees infer that the Minister declines to direct the Crown Solicitor to defend the actions *Krefft v. Hill* and *M'Intosh v. Hill*, as requested in my letter of the 2nd instant, I am directed by the Trustees to point out that the Minister of Justice and Public Instruction does not appear to be acquainted with the fact that Mr. Hill acted on the occasion in question on behalf of and under instructions from the Board of Trustees in its corporate capacity.

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

No. 35.

THE ACTING SECRETARY, AUSTRALIAN MUSEUM, TO THE UNDER SECRETARY, DEPARTMENT OF JUSTICE
AND PUBLIC INSTRUCTION.

Australian Museum,
Sydney, 10 February, 1875.

SIR,

I have the honor, by direction of the Trustees of the Australian Museum, to acknowledge the receipt of your letter No. 74/7109, and dated the 5th instant. In reply I beg to forward herewith "Copies of the minutes of all meetings (special and general) of the Board of Trustees, from the appointment of the aforesaid Committee of Inquiry until the final dismissal of Mr. Krefft," as requested by you.

* * * * *

I have, &c.,
CHAS. ROBINSON,
Acting Secretary.

[Enclosure.]

D.

THE AUSTRALIAN MUSEUM.—MINUTES OF MEETINGS.

Australian Museum,
Sydney, 11 June, 1874.

SPECIAL general meeting, held this day by order of the Trustees at the last ordinary monthly meeting of the 4th June instant.

Present:—

A. W. Scott, Esq., M.A., in the Chair.	
H. G. Alleyne, Esq., M.D.,	W. Macleay, Esq., M.P.,
A. Liversidge, Esq.,	Arthur Onslow, Esq., Capt., R.N.,
Edward S. Hill, Esq.	

The Secretary being absent, the Board-room locked, and the key not to be found, the meeting had to be held in a small room usually appropriated to one of the taxidermists.

As none of the members present had received from the Secretary a written notice convening the present special meeting, there is reason to suppose that no notices to other Trustees had been issued. It appears therefore that the orders given to the Secretary at the last ordinary monthly meeting, namely, to call a special meeting for this day, and to immediately furnish each Trustee with a copy of the Report and Evidence taken before the Select Committee of the Legislative Assembly on the management of the Australian Museum, have not been complied with.

It was resolved,—

"That this meeting under such circumstances declines to proceed with the business for which it was appointed.

"That the disobedience of orders and contempt exhibited by the Secretary demand some immediate action on the part of the Trustees.

"That

"That a special general meeting should be called for the earliest possible day, namely, Tuesday next, the 16th of June, for the purpose of taking into consideration the conduct of the Secretary on this occasion, and also to carry out the object duly specified at the ordinary meeting aforesaid, and for which the present meeting was appointed.

"That the Chairman be requested to issue the requisite notices to all of the Trustees, and to the Secretary of the Museum.

"A. W. SCOTT.

"Confirmed,—W. A. DUNCAN, Chairman—14/7/74."

A letter from Mr. A. W. Scott to the Secretary of the Museum, dated 12th June, 1874, was also read, as follows:—

"By desire of the Trustees present at the special meeting of the 11th June, 1874, I transmit you a minute of the proceedings of that date, and have to request that it be duly entered upon the minute-book of the Museum under your care as Secretary, and laid before the next ordinary monthly meeting, for confirmation or otherwise."

The minutes and letter, of which the foregoing is a correct copy, were read by me at the adjourned monthly meeting of the Trustees, held on the 15th instant, and are here transcribed in obedience to the resolution passed at that meeting.

The signature of Mr. W. A. Duncan was affixed in token of their confirmation.

CHAS. ROBINSON,
Acting Secretary.

July 16th, 1874.

Special Meeting, 16th June, 1874.

Australian Museum,
Sydney, 16th June, 1874.

SPECIAL meeting, held this day to take into consideration certain charges against the Curator.

Present:—

<p>Dr. Bennett, M.D., F.L.S., &c, in the Chair, A. W. Scott, Esq., M.A., William Macleay, Esq., M.L.A., &c., H. G. Alleyne, Esq., M.D. (President of the Medical Board), E. S. Hill, Esq.,</p>	<p>Captain Onslow, R.N., Dr. Cox, M.D., A. Liversidge (Professor, Sydney University), C. Rolleston, Esq. (Auditor General), P. F. Adams, Esq. (Surveyor General), Dr. Belisario, M.D., G. Fortescue, Esq., M.B.</p>
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It was proposed by Captain Onslow, and seconded by Mr. Hill, "That Messrs. Rolleston, Alleyne, Hill, and Liversidge, be appointed to inquire into the following charges against the Curator, namely:—

- 1st. Drunkenness.
- 2nd. Proposing to the Barnes's to bring a false charge of theft against a man named Tost.
- 3rd. Permitting indecent photographs to be taken in the Museum.
- 4th. Selling photographs through the servants of the Institution.
- 5th. Getting furniture made for himself in the Museum, out of Museum material.
- 6th. Ordering the servants of the Museum to make cases, and set up specimens with Museum material for private individuals.
- 7th. Taking receipts from Robert Barnes for work done under the name of William Bradley, with the view of deceiving the Board of Trustees.
- 8th. Maliciously breaking up a fossil jaw, lent to the Museum by Dr. Bennett.
- 9th. Sending away as donations in his own name, valuable specimens, the property of the Museum.
- 10th. Making a false return of the number of visitors.
- 11th. Making a false statement in writing, to the Colonial Secretary, respecting the attendance of a deputation of the Trustees.
- 12th. Disobeying the orders of the Trustees, given at the last ordinary monthly meeting."

Carried unanimously.

It was proposed by Dr. Cox, and seconded by Captain Onslow, "That the committee be empowered to employ a shorthand-writer."

Carried unanimously.

W. A. DUNCAN,
Chairman—14/7/74.

A letter, dated 17th June, 1874, from Mr. A. W. Scott, to the Secretary of the Australian Museum, was read as follows:—

"By desire of the Trustees present at the special meeting of the 16th June, 1874, I transmit you a minute of the proceedings of that day, and have to request that it be duly entered in the minute book of the Museum, under your care as Secretary, and laid before the next ordinary monthly meeting of the Trustees for confirmation or otherwise."

The minutes and letter, of which the foregoing is a correct copy, were read by me at the adjourned monthly meeting of the Trustees, held on the 15th instant. They were then confirmed and signed by the Chairman, and are here transcribed, in obedience to a resolution passed at that meeting.

CHAS. ROBINSON,
Acting Secretary.

July 16th, 1874.

Meeting,

Meeting, 2nd July, 1874.

Australian Museum,
2 July, 1874, 4 p.m.

Present:—

The Honorable Geo. A. Lloyd, The Honorable J. G. L. Innes, W. A. Duncan, Esq., W. Macleay, Esq., Dr. J. C. Cox,	E. S. Hill, Esq., Professor Liversidge, Dr. Alleyne, A. W. Scott, Esq., C. Rolleston, Esq.
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Mr. C. Rolleston was moved into the chair.

A letter was read from the Curator, asking for an adjournment of the meeting for a week.

The minute-book was sent for, but an answer was returned that it was in Mrs. Krefft's room, and could not be sent.

The Chairman presented the following Progress Report from the Sub-committee appointed to inquire into the charges against the Curator:—

“The Trustees appointed at the last monthly meeting to inquire into certain charges preferred against the Curator, beg to report that they have held three meetings—the first, to make preliminary arrangements for the conduct of this inquiry, at which it was determined to meet at the Museum for the purpose of examining witnesses, on Monday, the 29th ultimo, at 3 o'clock, p.m.

“Notice of this meeting was given by the Chairman to the Curator by letter, dated 24th June, to which an answer was received, asking for specific charges as to the time, date, and place, to which the Chairman replied, forwarding a copy of the charges preferred against the Curator by the Trustees at their last meeting.

“On the Monday morning the Chairman received a written intimation from Mr. Krefft that he did not intend to be present.

“The Trustees met at the time appointed, but found that the Curator had left the Institution; they, after some discussion, determined to postpone the examination of witnesses to the following day, in order that Mr. Krefft might have an opportunity to reconsider his decision, and directed that Mr. C. Robinson, the gentleman engaged to act as Secretary, and to take down the evidence, inform the Curator of their intention to proceed with the inquiry on the following day, whether he were present or not, and again to invite his attendance.

“The Trustees met at the Museum at 3:30 p.m. on Tuesday, and took the evidence, herewith submitted, in the absence of the Curator, who declined to put in an appearance.

“As the result of the Inquiry in the absence of the accused must be unsatisfactory, the Members composing the Board wish to remit the question as to the expediency of continuing the inquiry under such circumstances to the consideration and determination of the Trustees.

C. ROLLESTON,
Chairman.”

“2nd July, 1874.”

After much discussion it was proposed by Mr. E. S. Hill, and seconded by Mr. Duncan,—“That for the protection of the Museum an application be made to the Minister for Justice and Public Instruction for the services of a sergeant and two members of the police, to take charge of the Institution, the Museum not being considered safe under present circumstances.”

Carried.

The Chairman to communicate this resolution to the Minister for Justice.

[Meeting adjourned to To-morrow, at 4:30 p.m.]

Confirmed,—
W. A. DUNCAN,
Chairman.

The minutes, of which the foregoing is a correct copy, were read by me at the adjourned monthly meeting of the Trustees, held on the 15th instant. They were then confirmed and signed by the Chairman, and are here transcribed in obedience to a resolution passed at that meeting.

CHAS. ROBINSON,
Acting Secretary.

16th July, 1874.

Adjourned Meeting, 3 July, 1874.

Australian Museum,
3 July, 1874, 4:30 p.m.

Present:—

The Honorable J. G. L. Innes, W. A. Duncan, Esq., Professor Liversidge, Dr. Alleyne,	Dr. Cox, W. Macleay, Esq., Ed. S. Hill, Esq., A. W. Scott, Esq.,
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C. Rolleston, Esq.

Mr. Rolleston reported that he had forwarded by letter to the Honorable the Minister for Justice a copy of the resolutions passed yesterday; and that he had called at the Law Offices and found that the letter had been marked off by the Minister to the Colonial Secretary, but had not yet gone on.

The minute-book was sent for, but the Curator sent a letter refusing to attend, and declined to send the books.

Moved

Moved by Mr. Duncan, seconded by Dr. Cox, "That the Museum be closed to-morrow at 11 o'clock till further notice, and given in charge to the police, subject to the Colonial Secretary's approval."

Such Trustees as may be present to see this done.
Meeting adjourned till Tuesday next at 4 o'clock.
The Curator to be informed.

Confirmed,—
W. A. DUNCAN,
Chairman.

The minutes, of which the foregoing is a correct copy, were read by me at the adjourned monthly meeting of the Trustees, held on the 13th instant. They were then confirmed and signed by the Chairman, and are here transcribed in obedience to a resolution passed at that meeting.

16 July, 1874.

CHAS. ROBINSON,
Acting Secretary.

Australian Museum,
4 July, 1874.

In accordance with the resolutions of the Board of Trustees of the Museum, passed at the adjourned meeting of Friday, the 3rd instant, the following Trustees, namely, Messrs. Hill, Liversidge, Cox, and Scott, attended at 11 o'clock a.m., being the hour appointed, for the following purposes, namely:—

- 1st. To carefully examine the present internal condition of the several parts of the building appropriated, for the uses of the Museum, in order to render secure the fastenings of the various windows and doors which give access to the different apartments, so that the property of the Museum should be amply protected before being handed over to the police authorities.
- 2nd. And to hand over temporarily the Museum and its contents for protection into the custody of the police, who were applied for by the Trustee through the Minister of Justice, and approved of by him, and sanctioned by the Colonial Secretary.

The Trustees now beg to lay before the Board at their next adjourned meeting a minute of their proceedings of this day.

The Trustees carefully examined the fastenings of the doors and windows of the store and spirit rooms, both below stairs, and ascertained them to be in a very defective state. One of the windows, that pointing to the north, of the store-room in the new building, was without a bolt, this having been taken off, and was only fastened by a wooden button, which could be readily displaced. Another window, pointing to the west, had a small iron bolt, but was found by the Trustees wide open, affording an easy entrance to any person desirous of so doing.

The Trustees understand that these windows were constructed by the Colonial Architect on the principle of revolving on centre pivots, and that they have been altered to their present form of opening by hinges by the orders of Mr. Krefft. The Trustees also found the store-room door wide open and very ill-provided with fastenings.

The Trustees consider that this insecure and unsatisfactory condition of the premises must have existed for a considerable period.

In the store room the Trustees found a man engaged upon some wood work, who gave his name and address as John Miln, of 75, King-street, and who stated that he was ordered some three weeks ago by Mr. Krefft to dress upon wet days some packing case boards, and this being a rainy forenoon he had resumed work without orders, for he had found the store-room door wide open and went in and out at his own pleasure. He also said he was employed by Mr. Krefft as a gardener.

The passage stair which leads from below to within the old Museum and gives access to the back of the show cases was wide open, the only protection, a wooden grating, being removed. This grating is unprovided with fastenings, unless a small billet of wood, thrown on it, could be considered as such, and could with ease be removed from below, and thus admit any one into the old Museum where the missing gold was kept.

It became, therefore, very evident to the Trustees that with such careless supervision any person, feloniously inclined, could enter the building by the north or west windows into the store-room and pass freely up the stairs, thus gaining an easy access to the cases in which the specimens of gold were deposited, as well as to other valuable exhibits. The Board-room door, leading to the passage behind the show cases in the old building and to the stairs communicating with the cellar below, had the key removed, although it was seen by the Trustees in the lock the day before.

The wretched condition of the various fastenings of the doors and windows of the establishment having been ascertained, and a determination having been arrived at by the Trustees to have them properly secured, the duty of delivering over the keys and property of the Museum to the Police authorities devolved upon Dr. Cox and Mr. Scott, as Messrs. Hill and Liversidge had to leave in consequence of previous important engagements.

Mr. Fosbery, shortly after the departure of Messrs. Hill and Liversidge, arrived, bringing with him official instruction from the Colonial Secretary to take over the charge of the Museum from the Trustees, in accordance with the desire expressed in their application made to and approved of by the Minister of Education.

Mr. Fosbery requested that labor and materials should be provided by the Institution, so that the doors and windows should be securely barred to the satisfaction of the police, before taking possession of the keys and property of the Museum.

The Trustees therefore instructed Mr. Thorpe, in the presence of Mr. Fosbery, to send for the Barneses and see that they, under the supervision of the police, efficiently secured the various entrances within the building.

The Trustees likewise directed the workmen to use screws instead of nails, to avoid creating any noise, so that Mrs. Krefft should not be disturbed during her illness.

Mr. Fosbery requested that when the police officer who accompanied the workmen was satisfied that the security of the property was assured, the keys of the establishment should be placed in a sealed envelope, and then delivered over to him or his agent, which duty the Trustees entrusted to Mr. Thorpe.

The Trustees then left, having placed the Museum under the charge of the police.

ED. S. HILL.
ARCHD. LIVERSIDGE.
A. W. SCOTT.
JAMES C. COX.

Confirmed,—W. A. DUNCAN, Chairman.

The document, of which the foregoing is a correct copy, was read by me at the adjourned monthly meeting of the Trustees, held on the 15th instant. It was then confirmed and signed by the Chairman, and is here transcribed in obedience to a resolution passed at that meeting.

July 16th, 1874.

CHAS. ROBINSON,
Acting Secretary.

Monthly Meeting, 7 July, 1874.

Present :—

<p>The Honorable J. G. L. Innes (Attorney General), W. A. Duncan, Esq. (Collector of Customs), Dr. Belisario, Dr. Bennett, James Barnett, Esq. (Colonial Architect), Dr. Cox, Wm. Macleay, Esq., M.P.,</p>	<p>Ed. S. Hill, Esq., Professor Liversidge, Capt. Onslow, R.N., M.P., A. W. Scott, Esq., M.A., Dr. Alleyne (President of the Medical Board), Dr. Fortescue, and Christopher Rolleston, Esq. (Auditor General), in the Chair.</p>
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The Board met at 3 o'clock p.m. Objection was taken that while several members of the Board had been summoned to attend at 3 o'clock p.m., the adjournment from the last meeting was until 4 o'clock p.m., and that therefore the proceedings of this meeting between 3 and 4 o'clock were irregular.

Dr. Alleyne moved and the Attorney General seconded, "That the meeting do now commence *de novo*."

Agreed to.

The Chairman read the minutes of the meetings held on the 5th and 16th of June. Several members of the Board objected that the minutes as read were not correctly recorded.

Mr. Macleay moved and Captain Onslow seconded, "That the minutes be not confirmed."

Agreed to.

Captain Onslow moved and Mr. Scott seconded, "That having regard to the unsatisfactory manner in which the duties of Secretary have been performed, Mr. Krefft be suspended from his office as Secretary."

The resolution was agreed to.

The Attorney General and the Collector of Customs did not vote.

Mr. William Macleay moved and Dr. Cox seconded, "That Mr. Charles Robinson be appointed temporarily to perform the duties of Secretary."

Agreed to.

On the motion of Dr. Alleyne, the Acting Secretary was instructed to write to the Postmaster General, requesting him to direct that all official correspondence addressed to the Trustees of the Australian Museum, or to the Secretary of the Australian Museum, be delivered to the Acting Secretary.

The Chairman desired some expression of opinion on the part of the Board, as to whether the inquiry, which the Sub-committee had been appointed to conduct into certain charges respecting the conduct of the Curator, should be proceeded with or not. The Curator had been repeatedly requested to attend the meetings of the Sub-committee, but had not attended. As chairman of the Sub-committee he felt that it would be extremely undesirable to proceed with that inquiry in the absence of the Curator, unless it were upon some formal resolutions passed upon the subject by the Trustees to the effect that it is still desirable to continue the inquiry.

Captain Onslow moved and Mr. Macleay seconded, "That the inquiry already instituted be proceeded with and completed."

The Attorney General moved and Dr. Alleyne seconded that the following words be added to the motion, "And that in addition to the written list of charges already furnished to the Curator, he be referred to the evidence given before the Select Committee, and that Mr. Krefft be again apprised of the fact of the inquiry, and be again desired to attend."

The words proposed to be added were so added, and the resolution as amended was agreed to.

The Chairman read a letter from Mr. Ed. P. Ramsay, dated July 6th, 1874, and applying for appointment to the office of Sub-curator.

Mr. Scott moved and Captain Onslow seconded, "That Mr. Hill be empowered to appoint persons to take a catalogue of the exhibits in the Museum."

Agreed to.

The meeting stand adjourned until Wednesday, the 15th instant, at 3 o'clock, p.m.

Confirmed,—
W. A. DUNCAN,
Chairman.

CHAS. ROBINSON,
Acting Secretary—15/7/1874.

Wednesday,

Adjourned Meeting, held Wednesday, 15 July, 1874.

Present:—

The Attorney General (The Hon. J. G. L. Innes, M.L.C.), The Collector of Customs (W. A. Duncan, Esq.), The President of the Medical Board, (H. G. Alleyne, Esq., M.D.),	Archibald Liversidge, Esq. (Professor of Geo- logy, &c., Sydney University), A. W. Scott, Esq., M.A., James C. Cox, Esq., M.D., Captain Onslow, R.N., M.P., Edward S. Hill, Esq., J.P.
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Mr. Duncan was moved into the chair.

The Acting Secretary read the minutes of the last meeting and they were confirmed.

The Acting Secretary read minutes of meetings held on the 11th of June, the 16th of June, the 2nd of July, the 3rd of July, and the 4th of July, which were severally confirmed. He also read certain letters from Mr. Scott, attached to them.

It was moved by Mr. Scott and seconded by Captain Onslow that these minutes and letters be entered in the minute-book.

Agreed to.

The Acting Secretary reported that the cheques which had been handed to him to pay to the employes of the Institution had been declared by the Bank to be informal, inasmuch as they had not been countersigned by the Secretary. The salaries had however been paid, and no inconvenience had arisen.

It was moved by Captain Onslow, and seconded by Mr. Hill, "That the Chairman be requested to write a letter to the Bank of New South Wales, intimating that Mr. Chas. Robinson has been appointed Acting Secretary, and has been authorized to countersign cheques of the Museum, bearing the signature of the Trustees, in lieu of Mr. Gerard Krefft, the Curator, as heretofore."

Agreed to.

A letter to the above effect was thereupon written by the Chairman and posted to the Manager of the Bank of New South Wales, George-street.

The following correspondence was read by the Acting Secretary:—

1. Copy of letter to Mr. E. P. Ramsay, informing him that his letter of date July 6th, 1874, had been laid before the Board.
2. Copy of a letter dated July 8th, 1874, from the Acting Secretary to the Postmaster General, requesting "That all letters addressed to the Trustees of the Australian Museum, or to the Secretary of the Australian Museum," might be delivered to the Acting Secretary.
3. Copy of a letter, date 10th July, 1874, from the Secretary to the Post Office acceding to the arrangement proposed.
4. Copy of a letter, dated July 8th, 1874, from Acting Secretary to the Curator, informing him of the terms of the resolution suspending him from his office as Secretary, passed at the last monthly meeting; adding, "That his services in the capacity of Secretary will not for the present be required by the Trustees," requesting the Curator to forward to the Acting Secretary "any official correspondence intended for the Trustees, which might come into his possession," and enclosing cheque for £41 13s. 4d.
5. Letter from Curator, dated July 8th, 1874, acknowledging receipt of letter last-named, and enclosing a receipt for cheque.

The Secretary reported that, by direction of Mr. Hill he, on the 10th instant, applied to the Curator by letter, for the letter book, exchange book, and petty cash book; and that on the 11th instant he had received the following reply from the Curator, dated July 11th, 1874:—

"I received your two notes of the 10th instant. With regard to the books you require of me, I beg to point out to you that I was turned out of my rooms by the Trustees without a moment's notice, and that I shall hand over to them every book or other property belonging to the Museum as soon as I am at liberty to collect them."

Some members of the Board desiring to have the second letter of the Curator received on the same date, the Acting Secretary reported that that letter was in reply to one from him, informing the Curator that the Sub-committee would meet on the 13th instant to proceed with the inquiry, respecting charges against him, and inviting his attendance. Mr. Krefft's reply was dated July 11th, 1874, and was as follows:—

Dear Sir,

Will you kindly inform the Chairman of the Sub-committee that I have forwarded the Honorable the Attorney General a full statement of my case, and the reasons why I decline to be tried by a tribunal of Judges who have ill-will against me; who have shown this ill-will on previous occasions; who insisted that I should supply the men I then accused with a list of my charges duly specified and signed by me; and who now decline to accord the same privilege to myself. I can only meet men of the stamp whom your Sub-committee have arraigned against me on oath, and in a properly constituted law Court; and

CHAS. ROBINSON, ESQ., &C.

I remain, &c.,
GERARD KREFFT.

The Attorney General said that he had received a communication from Mr. Krefft, which was probably the statement referred to in that letter; observing that that statement was addressed to the Trustees, he returned it to the Curator unread.

The Chairman directed the messenger to request the attendance of the Curator in the Board-room.

The messenger returned with the answer that "Mr. Krefft was in bed with a bad cold, and could not attend." He also handed in a letter from the Curator.

The Chairman then sent the following note to the Curator by the messenger, whom he directed to wait for an answer:—

15th July, 1874.

Sir,

I am requested by the Trustees to obtain from you the petty cash book, the letter book, the exchange book, twenty-four copies of the Report from the Select Committee, and a number of keys, which are wanting. If you cannot leave your room, will you be good enough to state where they can be found.

W. A. DUNCAN,
Chairman.

The messenger returned and delivered to the Chairman half-a-sovereign, the petty cash book, and a number of accounts, particulars of which were entered therein.

The Chairman directed the messenger to ascertain where the articles referred to were to be found, and to ascertain whether they were in the Board-room or not. The

The messenger returned with the following reply:—"Mrs. Krefft says Mr. Krefft does not know whether they are in the Board room or not. They may be down in the rooms that he is barred out of; when he is about he may be able to get them."

It was unanimously resolved, on the motion of Captain Onslow, seconded by Dr. Cox, "That the Acting Secretary be directed to write to Mr. Krefft, requesting him to hand over to the Acting Secretary the missing books, papers, and keys, before 3 p.m. on Friday, 17th July; and to inform him that, in default of this being done, the matter will be referred to the next Board Meeting, with a view to his dismissal."

Mr. Hill explained what he had done in regard to taking a numerical catalogue of the specimens in the Museum. He had obtained the necessary clerical assistance, and had been in daily attendance at the Museum. The work was now so far advanced that the public might be admitted to all parts of the Institution hitherto thrown open to them. The Curator had been applied to for all the keys of the Museum, but all the keys had not been handed over, and he had therefore been unable to complete the catalogue. Among the missing keys were those giving access to the taxidermist's rooms, and the recesses under the lepidoptera cases had not been examined.

A letter, dated 15th July, and a printed statement enclosed therein, handed in from Mr. Krefft at an earlier period of the meeting, were read by the Acting Secretary.

The Acting Secretary was directed to obtain minute books, stationery, &c.

The following requisitions were handed in and read:—

No. 1.

"Australian Museum, 15 July, 1874.

"We, the undersigned, Trustees of the Australian Museum, beg to recommend Alfred Roberts, Esq., to fill the vacancy caused by the retirement of His Excellency the Governor, as Elective Trustee, on account of his scientific and literary attainments.

"A. W. SCOTT.
W. A. DUNCAN.
JAMES C. COX.
ARTHUR ONSLOW.
ARCHIBALD LIVERSIDGE."

No. 2.

"We, the undersigned, Trustees of the Australian Museum, propose Mr. James Norton, for ballot as a Trustee, in consideration of his scientific attainments.

"JAMES C. COX.
ARCHIBALD LIVERSIDGE.
ARTHUR ONSLOW.
W. A. DUNCAN.
A. W. SCOTT."

"Australian Museum, 15th July, 1874.

Confirmed,—

CHAS. ROBINSON,
Acting Secretary—17/7/1874.

W. A. DUNCAN,
Chairman.

Adjourned Meeting, Friday, 17 July, 1874.

Present:—

Wm. Macleay, Esq., M.P.,
Ed. S. Hill, Esq., J.P.,
A. W. Scott, Esq., M.A.,
H. G. Alleyne, M.D. (President of
the Medical Board),

W. A. Duncan, Esq. (Collector of Customs),
Professor Liversidge,
James C. Cox, Esq., M.D.,
Geo. Fortescue, Esq., M.B.,
Chris. Rolleston, Esq. (Auditor General).

Mr. Duncan was called to the chair.

The minutes of the last meeting were read by the Acting Secretary, and confirmed.

The Acting Secretary read the following correspondence:—

1. Letter, dated 16th July instant, from Acting Secretary to the Curator, requesting him to hand over the exchange book, letter book, and all other books, papers, and documents, the property of the Institution; also all the keys of the Museum, and informing him that, in the event of refusal or neglect, the matter would be brought forward at the next Board meeting, with a view to his dismissal.
2. Letter from the Curator, dated 17th July instant, to the Trustees, stating that he complies "with the demand of the Trustees by handing over to Mr. Chas. Robinson such books, papers, documents, and keys as so demanded, as far as he is able to do so, from the rooms at present at his disposal, intimating at the same time that there may be some others which he has not been able at present to collect, which, should he find, he would at once forward as directed."

The Acting Secretary pointed out the books, papers, and keys which the messenger had placed in the room ten minutes before the hour of meeting.

Mr. Hill said that the keys sent in were simply a bunch of duplicate keys, made originally for the cases. There were none which would open the door of the taxidermist's room, and to give access to other parts of the building, where there were valuable specimens. We should have completed the numerical catalogue some days ago but for the want of those keys.

Dr. Alleyne pointed out that the 24 copies of the Report obtained by the Curator from the Government Printing Office, for distribution to the Trustees, had not been distributed, nor were they among the books and papers sent in.

Dr. Cox said that letter-book containing the correspondence taken by the copying-press was not among the papers; he considered that it was important that that book should be in the hands of the Trustees.

It

It was unanimously resolved, on the motion of Dr. Alleyne seconded by Mr. Hill, "That the Curator has not complied with the request of the Trustees, contained in the letter of the Acting Secretary of the 16th instant, inasmuch as he has not produced the original keys of the Institution, nor the keys of the taxidermist's rooms and of certain drawers, nor has he produced the letter-book and certain other documents, known to be in his possession."

J. A. Thorpe was called in and examined with respect to the keys sent by the Curator.

It was resolved, on motion made by Mr. Hill and seconded by Mr. Macleay, "That Mr. Krefft be suspended forthwith from his office as Curator of the Australian Museum."

Mr. Rolleston did not vote.

It was unanimously resolved, on motion made by Mr. Hill and seconded by Mr. Rolleston, "That the Acting Secretary inform Mr. Krefft of his suspension, and request him to hand over, without further delay, the keys of the Museum, and the papers and books belonging to the Institution, still retained by him."

It was unanimously resolved, on motion made by Dr. Cox and seconded by Mr. Scott, "That the Acting Secretary be instructed to inform the Minister for Justice and Public Instruction of the suspension of the Curator, and also to state that the Trustees are ready to open the Museum, provided police protection be continued."

Mr. Hill reported that in that part of the building, the keys of which were not forthcoming, there was a large and valuable collection of insects which ought to be examined to prevent their destruction. The taxidermist informed him they were in danger of being spoiled for want of air, or of being destroyed by insect life.

Mr. Scott said, that he had seen dermestès crawling about in some of the cases, and they would quickly destroy insect specimens.

It was unanimously resolved, on motion made by Mr. Macleay, "That Mr. Hill be empowered to take any steps which may be necessary for the due preservation of the specimens."

Dr. Cox called attention to the item of 30s. put down in the petty cash book for the wages of a man named Milne. He had certified the account as being correct; but he objected to the payment of the amount, for it now appeared that Milne was not in any way a servant of the Museum, but was simply employed by Mr. Krefft for his own personal advantage and convenience.

John Milne was called in and examined as to whether or not he had been employed upon work for the Museum.

The Chairman read a letter from the Acting Secretary respecting the remuneration to be paid to him.

It was unanimously resolved, "That the Acting Secretary be paid by fees from the date of his appointment until the end of the present month, namely, at the rate of one guinea for his attendance at each meeting, and that after that date his salary be fixed at two guineas per week."

It was unanimously resolved, on motion made by Mr. Hill, seconded by Mr. Macleay, "That the Acting Secretary be instructed to request the Postmaster General to send all letters addressed to the 'Curator' to the Acting Secretary."

The meeting stands adjourned until Tuesday next, at 3 p.m.

Confirmed.—

GEORGE BENNETT, M.D.,
Chairman.

CHAS. ROBINSON,
Acting Secretary—21/7/74.

Adjourned Monthly Meeting, held on Tuesday, 21 July, 1874.

Present:—

E. S. Hill, Esq., J.P.,

Professor Liversidge,

A. W. Scott, Esq., M.A.,

H. G. Alleyne, Esq., M.D.

Wm. Macleay, Esq., M.P.,

George Bennett, Esq., M.D.,

James C. Cox, Esq., M.D.,

Dr. Bennett was called to the chair.

The minutes of the last meeting were read and confirmed.

The following correspondence was read:—

1. A letter, dated July 18th, from the Acting Secretary to the Minister of Justice and Public Instruction, informing him of the suspension of the Curator; and also, that the Trustees are prepared to re-open the Museum to the public if the protection of the police be continued.
2. A letter, dated July 18th, from the Acting Secretary to Mr. Krefft, informing him that the Trustees had suspended him from his office as Curator, and that the Trustees require him to hand over, without further delay, the keys of the Museum, and all papers and books belonging to the Institution, still retained by him. Mr. Thorpe, the taxidermist, would receive anything he might have for the Trustees.
3. A paper entitled "copy of medical certificate," with a memo. at the foot, signed "A. Krefft."
4. A letter, dated 20 July, from Mrs. Krefft, asking to be put in possession of a washing-copper and other articles, her private property.

Mr. Hill reported that, as the missing keys of the Institution had not been delivered up, he had called in the assistance of a locksmith and picked the locks. The rooms had been opened to-day and were now being examined. From the close atmosphere in these rooms the specimens were in danger of being spoiled.

Dr. Cox called attention to the insecure state of the building by reason of the east and west windows being open, excepting in so far as they had been temporarily barred by the Trustees. Those windows ought to be permanently closed, as access to all parts of the Institution could be had through them.

The

The Chairman remarked that those windows had been for a long time in this state.

Mr. A. W. Scott pointed out that many articles, the property of the Institution, were missing from the Board room, where they had been ordinarily kept.

It was unanimously resolved, on motion made by Mr. Macleay and seconded by Dr. Cox, "That in the event of the Government acceding to the request of the Trustees for the continuance of police protection, Mr. Hill be appointed to make all necessary arrangements for the opening of the Museum to the public."

The meeting stands adjourned until Thursday, the 30th instant, at 3 o'clock, p.m.

CHAS. ROBINSON,
Acting Secretary—30/7/1874.

Confirmed,—
W. A. DUNCAN,
Chairman.

Adjourned Monthly Meeting, Thursday, 30 July, 1874.

Present:—

The Attorney General (The Hon. J. G. L. Innes),	Wm. Macleay, Esq., M.P.,
The Collector of Customs (W. A. Duncan, Esq.),	Edward S. Hill, Esq., J.P.,
	A. W. Scott, Esq., M.A.,
	James C Cox, Esq., M.D.,
	Geo. Fortescue, Esq., M.D.

W. A. Duncan, Esq., was called to the chair.

The minutes of last meeting were read and confirmed.

The following letters were read:—

1. Trübner & Co., London, June 9, to Trustees, advising shipment of case of books per mail steamer "Hindustan," and enclosing invoice.
2. Rev. W. B. Clarke, M.A., July 21, 1874, requesting leave of absence from Board meetings for six months from the present date, on the ground of ill health.
3. Secretary to the Post Office, July 22, 1874, acceding to arrangement proposed in letter of 17th instant, that letters or newspapers intended for the Curator, the Secretary, or the Trustees of the Museum, be forwarded to the address of the Acting Secretary.
4. Mr. Krefft to Mr. E. S. Hill, July 22, 1874, asking to be permitted to use the cellar for domestic purposes.
5. Mr. E. S. Hill to Mr. Krefft, July 22, 1874, informing him that as the Museum was still in charge of the police he has no discretion in the matter; but offering to hand over any articles the private property of Mr. Krefft.

The Acting Secretary was instructed to write to the Rev. W. B. Clarke, and to inform him that the Trustees had granted the leave of absence applied for, and also to express their sympathy with him.

The Acting Secretary reported that shortly before the hour of meeting to-day, Mr. Krefft had sent down 124 vols. of books, a tin box (locked), and a small case of ten specimens of marine telegraphic cable: These articles were pointed out to the Trustees. He also reported that he had obtained from the agent of the P. & O. Co., the case referred to in Trübner & Co.'s letter. The case was addressed "Gerard Krefft, Esq., Australian Museum," and Mr. Krefft had claimed it from the messenger. The case was opened in the presence of the Board, and its contents were found to correspond with Trübner & Co.'s invoice, which states that the goods were shipped by them "on account and risk of Trustees of the Australian Museum, Sydney." Date of invoice, June 8, 1874. Amount, £6 8s. 2d.

Some conversation took place respecting the re-opening of the Museum to the public. The Attorney General suggested that extra assistance should be employed to enable that to be done. Mr. Hill stated that most of the keys of the Institution were still retained by Mr. Krefft, who was now under suspension, and if the public were to be admitted in the absence of police protection the Trustees would have no guarantee for the safe custody of the specimens.

It was resolved, on motion made by the Attorney General, "That the Acting Secretary be instructed to write to the Minister of Justice and Public Instruction, calling attention to the letter of the 18th instant, and requesting an answer at his earliest convenience."

Mr. Hill reported that the Sub-committee appointed to inquire into certain charges against the Curator had concluded the inquiry so far as taking evidence was concerned, and would be in a position to report to the next monthly meeting of the Board. He had also finished the catalogue of the specimens and of the books in the library.

Some conversation took place with regard to the printing of the evidence taken by the Sub-committee.

The Attorney General thought that the evidence ought to be printed. Mr. Macleay did not consider it necessary that the evidence should be printed.

It was resolved, on motion made by Mr. Macleay, seconded by Mr. Scott, "That the Sub-committee be requested to have the evidence printed, and that the Acting Secretary be instructed to request the Minister for Justice and Public Instruction to obtain the necessary authority for the printing of the evidence confidentially at the Government Printing Office."

CHAS. ROBINSON,
Acting Secretary—6/8/74.

Confirmed,—
W. A. DUNCAN,
Chairman.

Monthly Meeting, Thursday, 6 August, 1874.

Present:—

The Colonial Treasurer (the Hon. G. A. Lloyd),	Wm. Macleay, Esq., M.P.,
The Attorney General (the Hon. J. G. L. Innes),	Capt. Onslow, R.N., M.P.,
The Auditor General (Chris. Rolleston, Esq.),	Geo. Bennett, Esq., M.D.,
The Collector of Customs (W. A. Duncan, Esq.),	Ed. S. Hill, Esq., J.P.,
	James C. Cox, Esq., M.D.,
	A. W. Scott, Esq., M.A.,
	Archibald Liversidge, Esq., Professor, Sydney University.

Dr. Belisario.

W. A. Duncan, Esq., was called to the chair.

The minutes of last meeting were read and confirmed.

Payment of the following accounts was authorized, and cheques were signed for that purpose:—

	£	s.	d.
Acting Secretary, salary to 31 July	14	14	0
J. A. Thorpe, monthly wages	12	10	0
H. Barnes, "	12	10	0
R. Barnes, "	10	0	0
M. O'Grady, "	10	0	0
J. Macnamara, "	1	10	0
Petty cash for July	6	10	0
" August	6	10	0
York } Clerks employed upon numerical catalogue	10	10	0
Clarke }	8	8	0
Edwin Burton, shorthand writing	21	7	0
Chas. Robinson, "	37	7	0
J. Goulde, British birds	9	9	0
Reading & Co., stationery	4	7	6
W. Maddock, books	1	17	8
S. M. Herald, advertising	2	7	2

Letters were read, as follows:—

1. Acting Secretary to Rev. W. B. Clarke, July 31, informing him that the Board has granted six months' leave of absence, and expressing sympathy.
2. Acting Secretary to Minister for Justice, &c., July 31, inviting attention to Acting Secretary's letter of 18th respecting re-opening of the Museum, and requesting a reply at earliest convenience.
3. Acting Secretary to Minister for Justice, &c., requesting authority for printing of evidence taken before the Sub-committee appointed to inquire into certain charges against the Curator.
4. Under Secretary to the Minister for Justice to the Acting Secretary, August 1, informing him that instructions have been given to the Government Printer for the printing of the evidence as requested.
5. E. P. Ramsay to the Trustees, July 28th, requesting an answer to his letter of July 6th, offering his services as Assistant Curator.
6. Gerard Krefft to Trustees, enclosing key of tin box sent in by him with a number of books at last meeting.
7. Gerard Krefft to Collector of Customs, respecting three cases of natural history per "John Knox" from New Zealand.
8. Gerard Krefft to the Trustees, August 6, claiming to be put in possession of any letters, parcels, or cases addressed to him, either in his own name or as Curator of the Australian Museum.
9. Rabone, Feez, & Co., to Acting Secretary, August 5, requesting that three cases of natural history, marked MG, per "John Knox," may be handed to them; and enclosing copy of a letter from Julius Haast, Christ Church, N.Z., advising them of the shipment of said cases, and requesting them to forward cases by first opportunity to the Museum Goddefroy in Hamburg.
10. Geo. Palmer to E. S. Hill, July 20, applying for employment in the Museum.

In regard to the three cases of natural history, referred to in the correspondence, the Acting Secretary reported that three cases, marked MG, as described by Messrs. Rabone, Feez, & Co., and their correspondent, Julius Haast, had been brought to the Museum. They bore no address, but entries had been passed for them by the Customs House Agent of the Trustees, because he had seen them mentioned in the manifest as being consigned to the Australian Museum. The cases were now in the Board-room, and had not been opened.

It was unanimously resolved, on motion made by Mr. E. S. Hill, seconded by Mr. Rolleston, that the three cases, marked MG, be returned to the Queen's Warehouse, in charge of the Collector of Customs—Rabone, Feez, & Co. to be informed.

The Acting Secretary was instructed to inform Mr. Ramsay, in reply to his letter read this day, that the Trustees regret that they are unable to entertain his proposals at present.

A letter from M. de Robillard, addressed to Dr. Bennett and Wm. Macleay, Esq., as Trustees of the Australian Museum, was deferred for consideration to a future day.

A ballot was taken for the election of Trustees. Alfred Roberts, Esq., and James Norton, Esq., were each elected by a unanimous vote.

The Acting Secretary reported the work given out to Henry and Robert Barnes during the month.

The following donations were reported, and letters of thanks were signed by the Chairman:—A flying squirrel (*Belideus sciurus*), by the Hon. Charles Campbell, The Pines, Newtown; a beaver rat (*Hydromys chrysojaster*), by Mr. Crichton, Kiandra; a brush turkey (*Tallegalla Lathamii*), from the Botanic Gardens; a black swan (*Cygnus atratus*), from the Botanic Gardens; a mandarin duck (*Aise galericulata*), from the Botanic Gardens.

Mr.

Mr. Edward S. Hill brought up a report of the numerical contents of the Australian Museum, with an appendix, both dated August 5; and they were read by the Acting Secretary.

It was unanimously resolved, on motion made by Mr. Rolleston, and seconded by Mr. Macleay, "That the Report now read be received, and that the thanks of the Trustees be given to Mr. Hill for the labour he has bestowed upon the work."

Mr. Hill expressed his acknowledgments, and presented the inventories which had been prepared under his direction.

Mr. Rolleston, as chairman of the Sub-committee appointed to inquire into certain charges against the Curator, desired to be informed whether the Sub-committee would be held harmless in the event of legal proceedings—whether in fact the report would be accepted as confidential and privileged?

Discussion ensued.

Mr. Rolleston, understanding that the Trustees were prepared to accept responsibility in regard to the inquiry made by the Sub-committee, and to receive the report as confidential, handed the document to the Chairman.

The report was read by the Acting Secretary.

It was unanimously resolved, on motion made by Mr. Macleay, and seconded by Captain Onslow, "That the report now read be received, and that the thanks of the Board be given to the sub-committee."

Mr. Macleay moved that the meeting be adjourned until Three o'clock to-morrow, for the consideration of the report.

Mr. Scott seconded the motion.

The Attorney General moved, by way of amendment, that the meeting adjourn until this day week.

The Colonial Treasurer seconded the amendment, and it was agreed to by six votes to five.

Printed copies of evidence taken before the Sub-committee were distributed.

The meeting stands adjourned until Thursday next, the 13th instant, at Three o'clock.

Confirmed,—

W. A. DUNCAN,

Chairman.

CHAS. ROBINSON,

Acting Secretary—13/8/1874.

Thursday, 13 August.

Present:—

The Attorney General (The Hon. J. G. L. Innes),	Professor Liversidge,
The Colonial Treasurer (The Hon. G. A. Lloyd),	Edward S. Hill, Esq.,
The Collector of Customs (W. A. Duncan, Esq.),	Wm. Macleay, Esq., M.P.,
The Surveyor General (P. F. Adams, Esq.),	James C. Cox, Esq., M.D.,
	George Bennett, Esq., M.D.,
	Alfred Roberts, Esq.,
	A. W. Scott, Esq., M.A.

The minutes of last meeting were read and confirmed.

The following correspondence was read:—

1. Letter from the Hon. Charles Campbell, August 8, to W. A. Duncan, Esquire, stating that W. G. O'Neill, of Queanbeyan, was the donor of the flying squirrel for which a letter of thanks had been sent to him.
2. Letter from Acting Secretary to Rabone, Feez, & Co., Aug. 7, informing them that the three cases of natural history, per "John Knox," had been returned to the Queen's warehouse.
3. Acting Secretary to E. P. Ramsay, Aug. 7, intimating that the Trustees were unable to entertain his proposal for appointment to the office of Assistant Curator at present.
4. Acting Secretary to Alfred Roberts, Esq., informing him that he had been elected a trustee in the room of His Excellency the Governor.
5. Acting Secretary to James Norton, Esq., informing him that he had been elected a trustee.

The Chairman reported that he had delivered the three cases of natural history, per "John Knox," to Messrs. Rabone, Feez, & Co., they having satisfied him that they were entitled to receive the same.

The Acting Secretary reported that the framed photograph, "View in Venice," had been returned to Mr. J. R. Clarke, the owner of it, and he produced Mr. Clarke's receipt for the same.

A letter of thanks was signed by the Chairman, to W. G. O'Neill, Esq., for his donation of a flying squirrel.

The Acting Secretary, by direction of the Chairman, read the evidence given before the Trustees, on the 17th July, by John Milne, and Milne's receipt for 30s., appended thereto.

The Acting Secretary read the report from Sub-committee appointed to inquire into certain charges against the Curator.

Mr. Scott moved, and Mr. Macleay seconded, "That the report now read be adopted."

Discussion ensued.

Mr. Lloyd moved, "That the further consideration of the matter stand over to this day week."

Dr. Bennett seconded the motion.

The motion for adjournment was negatived. Ayes, 2; noes, 6. Ayes—Mr. Lloyd and Dr. Bennett. Noes—Professor Liversidge, Mr. Hill, Mr. Macleay, Dr. Cox, Mr. Roberts, Mr. Scott.

The motion for the adoption of the report was agreed to. Ayes, 6; noes, 3. Professor Liversidge, Mr. Hill, Mr. Macleay, Dr. Cox, Mr. Roberts, Mr. Scott. Noes—Mr. Innes, Mr. Lloyd, Dr. Bennett.

Mr. Hill moved, "That the Curator be dismissed from the Institution."

Mr. Macleay seconded the motion; and, in doing so, suggested that perhaps the more regular course would be to first call upon Mr. Kreffit to show cause.

Conversation ensued on this point, and finally it was unanimously resolved, on motion made by the Attorney General, seconded by the Colonial Treasurer, "That Mr. Gerard Kreffit be called upon to show cause why he should not be dismissed from his office as Curator and Secretary of the Australian Museum"—the Curator to be informed that he must reply before 3 o'clock on Thursday, the 20th.

The

The Attorney General moved, and the Colonial Treasurer seconded, "That the Curator be informed that he can have a copy of the evidence taken before the Sub-committee if he desires it."

The motion was negatived. Ayes, 3; noes, 6.

The meeting stands adjourned until 3 o'clock on Thursday next.

CHAS. ROBINSON,
Acting Secretary—28/8/1874.

Confirmed,—
W. A. DUNCAN,
Chairman.

Adjourned Monthly Meeting, Thursday, 30th August, 1874.

Present:—

The Collector of Customs (W. A. Duncan, Esq.),	James C. Cox, Esq.,
The Auditor General (Christopher Rolleston, Esq.),	Wm. Macleay, Esq., M.P.,
Captain Onslow, R.N., M.P.,	Edward S. Hill, Esq.,
George Bennett, Esq., M.D.,	James Norton, Esq.,
Alfred Roberts, Esq.,	Professor Liversidge,
	A. W. Scott, Esq., M.A.,
	George Fortescue, Esq., M.B.,

H. G. Alleyne, Esq., M.D.

The Collector of Customs was called to the chair.

The minutes of last meeting were read and confirmed.

The following correspondence was read:—

1. Acting Secretary to Gerard Krefft, August 13, calling upon the Curator and Secretary to show cause why he should not be dismissed.
2. Gerard Krefft to Trustees, August 19, asking to be supplied with the defined grounds of accusation, and the evidence taken before the Sub-committee appointed to inquire into his conduct.
3. Letter from J. Grey to the Manager, Albion Park, August 9, respecting a donation of the head of a guard-fish and a specimen of the trigger-fish.
4. Acting Secretary to J. Grey, August 30, informing him that the donations of which he apprised the Trustees in his letter of the 9th had not yet come to hand.
5. J. A. Henderson, North Creek, Ballina, August 4, 1874, to the Curator, stating that he had forwarded a case containing one bottle of small snakes, lizards, and beetles, also 338 land shells, and asking that a gallon of spirits of wine might be sent to him.
6. A letter from John Dudderidge to the Trustees, enclosing an account for hay, bran, and corn.

Mr. Rolleston moved and Dr. Bennett seconded, "That the Curator be supplied with a copy of the evidence taken before the Sub-committee appointed to inquire into his conduct."

Mr. Hill moved and Mr. Macleay seconded the following amendment, "That all the words after the word 'that' be omitted, with a view to the insertion of the following words 'Mr. Gerard Krefft be dismissed from his office as Curator and Secretary.'"

Discussion ensued.

The amendment was agreed to on the following vote: Ayes, 10; noes, 2,—namely: Ayes: Captain Onslow, Mr. Roberts, Dr. Cox, Mr. Macleay, Mr. Hill, Mr. Norton, Professor Liversidge, Mr. Scott, Dr. Fortescue, and Dr. Alleyne. Noes: Mr. Rolleston and Dr. Bennett.

On the motion of Mr. Roberts, it was unanimously resolved, "That the Acting Secretary be instructed to inform the Minister for Justice and Public Instruction of the course the Trustees have considered it necessary to take in regard to the dismissal of the Curator and Secretary, and to furnish him with a copy of the report of the Sub-committee and evidence taken before it, and also with a copy of Milne's account, and the evidence taken before the Board on the 17th of July last."

On the motion of Mr. Macleay, seconded by Dr. Fortescue, it was unanimously resolved, "That the Acting Secretary be instructed to acquaint Mr. Krefft with the fact of his dismissal, and the grounds upon which the Trustees have felt it their duty to come to that determination, Mr. Krefft also to be required to give up his apartments on or before the 31st day of August instant."

The Acting Secretary explained that it was necessary that he should leave Sydney on urgent business, but that he could arrange for the efficient and satisfactory performance of the duties of his office during his absence.

It was unanimously resolved, on motion made by Mr. Roberts, that one month's leave of absence be granted to the Acting Secretary.

Mr. Roberts draw attention to the importance of providing secure locks to the doors and cases of the Museum, in view of its being re-opened to the public, and—

It was unanimously resolved, on motion made by Dr. Cox, seconded by Mr. Scott, "That Mr. Hill be empowered to see that proper locks be put upon all cases and doors of the Museum."

The meeting stands adjourned until Thursday next, the 27th instant, at 3 o'clock p.m.

CHAS. ROBINSON,
Acting Secretary—27/8/1874.

Confirmed,—
A. W. SCOTT,
Chairman.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PROGRESS REPORT

OF THE

SYDNEY CITY AND SUBURBAN SEWAGE AND HEALTH BOARD,

APPOINTED 12 APRIL, 1875,

TO INQUIRE INTO AND REPORT AS TO THE BEST MEANS OF DISPOSING OF THE
SEWAGE OF THE CITY OF SYDNEY AND ITS SUBURBS,
AS WELL AS OF PROTECTING THE HEALTH OF THE INHABITANTS THEREOF.

ADOPTED 4 MAY, 1875.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
6 May, 1875.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

THE PRINCIPAL UNDER SECRETARY TO THE CHAIRMAN OF THE SYDNEY CITY AND SUBURBAN SEWAGE
AND HEALTH BOARD.

Colonial Secretary's Office,
Sydney, 28 April, 1875.

SIR,

With reference to the matters laid before the Colonial Secretary by a deputation from the Sewage and Health Board on the 21st instant, I am now directed to communicate to the Board the following additional instructions which the Government have determined to give for their guidance.

2. Numerous representations having been made respecting the sickness and death alleged to have been occasioned during the last few months by the unclean state of the city, and by the pollution of the waters of the Harbour by the sewers and drains, and it being certain, whatever the cause, that an unusual amount of sickness, and an unusual number of deaths have recently occurred, I am desired to request that the Board will, at their earliest possible convenience, make such inquiries as will enable them to advise the Government as to the immediate and temporary measures that should be taken—if any are possible—to prevent or mitigate these evils.

3. In consideration of the importance of this matter, the Colonial Secretary trusts that the Board will report upon it without delay, leaving for more mature consideration the general question of the best method to adopt for draining the city and suburbs and disposing of the sewage matter.

4. More detailed instructions will be furnished from time to time respecting the general inquiry entrusted to the Board.

5. Mr. Robertson desires me to request that the Board will determine the number of members that shall form a quorum.

I have, &c.,
HENRY HALLORAN.

THE SYDNEY CITY AND SUBURBAN SEWAGE AND HEALTH BOARD.

PROGRESS REPORT.

To the Honorable the Colonial Secretary,—

SIR,

Having been instructed by you to advise the Government, as soon as possible, as to any measures which might be immediately adopted for removing or mitigating the evils said to have arisen in Sydney and the suburbs from defective drainage and other causes, we lose no time in presenting this Progress Report.

1. In the very earliest stages of our inquiry, a state of things was revealed of so revolting and dangerous a kind that we determined at once to confine our attention at first to the one point which is the subject of this Report.

2. We find that, of 5,400 closets supplied with water from the Sydney water mains, 4,700 are directly connected with the mains. The certain consequence of this most unusual arrangement is, that the water supplied to the inhabitants for household purposes is polluted with matter which some high authorities consider too offensive to be admitted even into the public sewers. The fact that such contamination has occurred has been known since May, 1874, and some of the particulars of the case which came to light during that month have been described in the public Press. The subject is not a pleasant one, but we think it desirable to review the matter in all its revolting details, for the purpose partly of exciting in the public mind a wholesome state of dread and disgust.

3. In the month of May, 1874, in consequence of information received, the Inspector of Nuisances visited a house in Castlereagh-street. He found the discharge pipe of the water-closet completely choked up, the pan full of solid and liquid matter, the supply cock open, so that there was a free and direct communication between the pan of the closet and the water-pipe which supplied several houses. Having drawn off a tumblerful of water from a tap in an adjoining yard, used for household purposes, he found it to contain solid fecal matter. Subsequent examination showed that the water-pipe was partly choked up with similar matter, and the water supplied to several adjoining houses was found to have been thus polluted. The Inspector is of opinion, moreover, that some of the contents of this closet must have found their way into the mains, so that it is impossible to say how far the pollution extended. Those of the public who read the accounts that appeared in the public Press of this affair, no doubt regarded it as an unforeseen and singular accident, and that measures would of course be immediately taken to render it quite impossible that anything so horrible and so dangerous should occur again. Unfortunately, however, it appears that it was not an accident at all, but a necessary and obvious result of the existing arrangements. There was nothing exceptional in this case but its magnitude. It was a particularly aggravated case, and was therefore, as far as we know, the first to be detected. Similar accidents, if they can be called such, on a small, we hope on a very small scale, must be of frequent if not daily occurrence. They form part of the regular routine of the Sydney Water Supply.

4. Before proceeding with our narrative of events relating to this very unpleasant subject, we will describe how it is that the water in the mains is contaminated with what ought to be sewage matter. We are informed that the water supply is now continuous—that the water is never, except under exceptional circumstances, cut off by day or by night. We have the best evidence, however, that it is a matter of daily occurrence that the water is cut off from particular mains for purposes of repair or of making new connections. When this takes place the water retiring from the main produces a very powerful suction,—sufficient, in some cases, to raise water

water from 20 to 25 feet. We are also informed by Mr. Bell, although it does not appear in the evidence, that it frequently happens, when a large quantity of water is drawn from the mains for watering the streets, or other purposes, that a similar powerful suction takes place in the upper parts of the mains. If the valves or cocks directly connecting the water-pipes with the pans of closets were always closed, and were perfectly water-tight and air-tight, even under high-pressure, no harm would arise; but plumber's work is not always perfect, and the best is liable to get out of repair. We have evidence also that it very frequently happens that the communication between the water-pipes and the pan of the closet is left open, either through carelessness or under the mistaken idea that a useless waste of water will purify the closet. Whenever the water is turned off from a main—and this, we repeat, is a matter of daily occurrence—that main sucks at all the closets directly connected with it, with a pressure in some cases sufficient to raise water out of a well 20 feet deep. If the plumber's work is not perfect, or if the cock is left open, the foul air from the pan of the closet must be drawn into the water-pipes, and contaminate the water which the inhabitants drink. This *must* happen daily. If any such closet should be choked, and the pan be full—and such a contingency can hardly be regarded as an extraordinary one—at the time when the water is shut off from the main, then the contents of the pan of the closet, whatever they might be, would necessarily be drawn into the water-pipes, for the benefit not only of the inmates of that particular house, but of the neighbourhood generally. We repeat, and we think the matter cannot be too strongly expressed or too often insisted upon, until a perfect remedy has been applied, that the water mains of Sydney are daily sucking with all their might at the water-closets. It appears in the evidence that about 100 cases have occurred within the last year in which the contamination of the water in this way has been actually observed, and it is probable that a much larger number have occurred which have not come under the notice of the public officers, and a still larger number in which a deadly contamination has been produced without any apparent taint or discolouration.

5. Ever since the matters upon which we are now reporting have been under our notice, we have felt that there should not be a single hour's unnecessary delay in taking measures to prevent the wholesale poisoning of the inhabitants which at present prevails; at the same time we have endeavoured to look at the matter calmly, and have abstained from reporting to the Government until we feel ourselves in a position to do so firmly and definitely.

6. It may, perhaps, be the opinion of ignorant persons that the contamination of water in the manner described, however distasteful and disgusting, is not particularly dangerous to the public health. We have therefore obtained the evidence of Dr. MacLaurin, showing that it is the general and received opinion amongst medical men that the contamination of water used for household purposes by fecal matter is productive of many fatal diseases, and is supposed to be the readiest means by which epidemic and infectious diseases are conveyed from one to another. The members of the medical profession who are members of this Board having unanimously concurred in Dr. MacLaurin's statements as to the generally received opinions of the profession on this point, we did not think it necessary to take any further medical evidence.

7. The opinion of medical men on this matter is not founded upon any theory, but is the result of observation. A passage on this subject, extracted from Parkes "Practical Hygiene"—a work of high authority—will be found appended (*vide* Appendix H), and the valuable evidence of Dr. MacLaurin confirms it. We call particular attention to the fact that water may be so contaminated by the foul air from a closet as to be dangerous to health and life, although perfectly pure in taste and appearance. Such water, as appears by Dr. MacLaurin's evidence, may create some dangerous diseases, and it may be the means—indeed, is supposed to be the readiest means—of communicating other diseases.

8. In order to ascertain what has already been done by the City authorities in this matter, we have taken the evidence of the Mayor, of Messrs. Aldermen Chapman and Goold, and of the Town Clerk. The accident in Castlereagh-street occurred in May, 1874. Mr. Bell sent in a Report dated 2nd July, urging the matter upon the attention of the Council (*Appendix A*), and a further report estimating the cost of the proposed alteration, dated 30th July, 1874 (*vide Appendix B*). The Water Committee sent in a Report dated 25th

August,

August, 1874 (*Appendix F*), recommending that no new connections should be made with closets except through the means of cisterns, which, if properly arranged, prevent all danger. On 9th of September a minute was passed, instructing the City Solicitor to prepare a by-law to enable the Council to enforce the use of cisterns in cases of new connections (*Appendix E*). It does not appear that any such by-law is absolutely necessary, for Mr. Bell informs us that in such cases he has practically no difficulty, and that all new connections are now of a safe kind. On November 20th instructions were given to Mr. Bell to furnish the City Solicitor with particulars for the proposed by-law (*Appendix C*). Mr. Bell tells us that he obeyed this instruction without delay. It appears that no such by-law has yet been submitted. We cannot learn that anything more has been done in the matter, except that a fresh set of Instructions to Licensed Plumbers was drawn up, relating to the subject of this Report which will be found in *Appendix G*; and a plan with an estimate of the cost of a cistern for the purpose of which we are speaking, which is approved of by Mr. Bell, was obtained.

9. We learn from the evidence of Mr. Chapman, confirmed by that of Mr. Goold and by that of the Mayor, that the Council were advised that they have, under the existing law, no power to interfere with existing connections with the mains, nor does it appear that it was even suggested that the gravity of the evils brought to light rendered it desirable that they should endeavour to obtain greater powers through the intervention of the Legislature. We are told by Mr. Chapman,—and he says that, in reference to these matters, he expresses the general feeling of the Council,—that they had no heart to apply to the Government for any such purpose, having experienced so much discouragement in former applications to the Government for assistance of any kind.

10. Having given, as far as we are able, a description and history of the whole case, we now go on to the consideration of the measures which, in the opinion of the Board, should be adopted to put an end to the abominations which we have described. We feel much fortified by the firm attitude assumed in this matter by the Mayor and Messrs. Chapman and Goold, especially as Mr. Chapman tells us that their evidence expresses, as we have said before, the general feeling of the Council.

11. Mr. Chapman proposes that an Act should be passed at once, giving the Council greater powers, and amongst other things requiring that the water should at once and without notice be cut off from all closets directly connected with the mains, and that at the end of one year the landlord of every house where approved connections have not been adopted should be heavily fined. In this opinion the Mayor and Mr. Goold concur, except that they think it would be expedient to give three months notice before cutting off the water; that is, that the water should be cut off three months after the passing of the Act, the fine for neglecting to establish approved connections to be inflicted at the end of an additional nine months.

12. The question as to the time which would be required to make these alterations, and the effect on the health and convenience of the inhabitants which would be produced by cutting off the water from closets, leaving them to be cleaned by buckets or otherwise, has received the anxious consideration of the Board. With respect to the time which would be required, we refer you to the evidence of Mr. Chapman, perhaps as good an authority on such a subject as any in the Colony. His opinion is that the necessary changes could not be effected in less than a year; and it would be of course useless to enact that anything should be done which, with the appliances at hand, could not be done. To cut off the water from the closets at once, or at any time before the end of a year, would of course occasion in many cases great inconvenience, but no such inconvenience should be considered for a moment in comparison with the intolerable evils at present existing. Temporary arrangements might be made at a small expense in each individual case, which, without danger to the purity of the water in the mains, would greatly diminish the temporary inconvenience.

13. We therefore recommend that an Act be passed as soon as possible to the following effect:—

- (1.) That the City Municipal Council be empowered to cut off the water from all closets directly connected with the water-mains, or which, in the opinion of the City Engineer, or other authorized officer, are connected in any such manner as to endanger the purity of the water, immediately after the passing of the Act.
- (2.)

- (2.) That within one year from the passing of the Act every such closet shall be required to be connected with the mains with the intervention of cisterns approved by the City Engineer, or other authorized officer, and of such a construction as, in the opinion of the said Engineer or other authorized officer, shall secure the water from pollution by any solid, liquid, or gaseous matter.
- (3.) Owners of houses failing to comply with the above requirement to be heavily fined, a minimum fine being fixed.
- (4.) Any person connecting, or causing to be connected, any closet with the mains otherwise than as provided, or without authority re-establishing any connection cut off by the authorized officers, or tampering with any connection legally effected, so as to destroy, or diminish, or endanger its efficiency, to be heavily fined.
- (5.) That the City Engineer be authorized to allow, during twelve months from the passing of this Act, temporary arrangements to be made for cleansing closets by water from the mains, provided that there shall be no direct communication between the mains and the pan of any closet.
- (6.) That the City Council be empowered to make regulations to prevent, as far as possible, the use of water in any cistern directly connected with a closet from being used for any other purpose than supplying that closet.

14. In recommending the Government to procure legislative interference in this matter, we feel bound to call their attention to the complaints appearing in the evidence appended to this Report, and which indeed have been notorious for years past,—that the efficiency of the law in abating nuisances has been seriously diminished by the mistaken leniency of certain Magistrates, in inflicting wholly inadequate penalties even in flagrant cases. It is stated that during the recent panic as to the health of the city this evil has disappeared, or has much diminished, but we fear that if the complaints to which we are alluding are well founded, that with the abatement of the panic the evil will recur.

15. Many grave allegations are also made respecting the conduct of Magistrates. It is stated that, in prosecutions for allowing nuisances, Magistrates not on the roster, and from the nature of their occupations interested in the cases brought before the Bench, take their seats and interfere with the efficient enforcement of the law. We have not had time, even if it came within our province, fully to investigate this matter, but we think it desirable that the Government, if they determine to adopt our recommendations, should take it into consideration whether it may not be desirable to make provision that the intentions of the Legislature respecting the abatement of the evils which form the subject of this Report should not be liable to be frustrated in the manner alleged to have occurred in other cases.

16. We have refrained from reporting to you until we feel in a position to make the most unhesitating recommendation of immediate and decisive action; at the same time we do not pretend that our inquiry and report, even upon this part of the subject submitted to us, are so full and exhaustive as we might have made them if the urgency of the case had admitted of further delay.

17. Although the evils to which we now draw your attention have probably been the cause, for a long time past, of much sickness and death, we cannot, for obvious reasons, attribute the excessive mortality of the last few months to this cause alone. These evils have existed for years, and are local. The unusual sickness and mortality have existed for a few months only, and have extended, we believe, over a large part of the Australian continent.

18. Appended to this Report will be found all the documents relating to the subject under consideration which have been submitted to us, and which appear of sufficient importance to be laid before you; also the minutes of the evidence taken before us, with the exception of a portion of the evidence of one witness, which we think it better to withhold for the present, for it relates to a disputed point not especially connected with the matter in hand, and which we have not had time to investigate fully.

19. The state of things revealed by this Report is not an agreeable one, but from our point of view it is not quite so disagreeable as it at first appears.

20. That a wide-spread pestilence has not desolated Sydney is a proof of the general well-being of the inhabitants and of the healthiness of the climate. A similar pollution of the water supplied to any of the great towns of Europe would, we believe, have been followed by some terrible pestilence.

21. Now that this, which is probably the most serious of the preventible evil influences affecting the health of the inhabitants of Sydney, is brought to light, and will no doubt be speedily removed, we may fairly hope for a sensible improvement in the general health.

22. In concluding this Report on one single subject capable of being dealt with immediately and independently of any general scheme of drainage, we wish to draw your attention to the difficulties which will attend any further inquiries by this Board as at present constituted. By a very great effort we have brought our inquiry upon this, our preliminary subject, to a speedy termination; but we feel that we are working under disadvantages which will materially delay and *diminish the value* of any future inquiries in which we may engage. The calm and deliberate thought and discussion which questions of this kind require, especially on the part of the Chairman, who is supposed to direct the deliberations, is scarcely possible—or possible only under great disadvantages—in the presence of a Board so large as this, however excellent its constitution in other respects.

23. There will also, with so large a Board, be a most unusual expense attending this inquiry. We do not consider that any such expense should be considered, if the large number of the Board tended to increase the value of its labours. On the contrary, however, there is no doubt that this large number, and consequently large expense, will operate precisely in the opposite direction.

24. There are several pressing matters requiring immediate consideration, and some upon which it is desirable that the public should be assured by immediate inquiry; and we are desirous in every way in our power to carry out promptly the wishes of the Government, but we should be glad before proceeding further to be informed whether it is your wish that we should go on in face of the drawbacks to which we now draw your attention.

Board Room,
Sydney, 4th May, 1875.

M. B. PELL,
Chairman.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SYDNEY CITY AND SUBURBAN SEWAGE AND HEALTH BOARD.

FRIDAY, 23 APRIL, 1875.

Present:—

M. B. PELL, Esq.,
 E. O. MORIARTY, Esq.,
 HON. J. B. WILSON,
 P. F. ADAMS, Esq.,
 H. G. ALLEYNE, Esq., M.D.,

F. BELL, Esq.,
 G. F. DANSEY, Esq.,
 CHAS. WATT, Esq.,
 HON. J. SMITH,
 W. C. BENNETT, Esq.

M. B. PELL, Esq., B.A., IN THE CHAIR.

G. F. Danscy, Esq., City Health Officer, and Member of the Board, was examined in his place:—

1. *Chairman.*] Are your duties as City Health Officer continuous;—that is to say, are you employed daily by the Corporation, or do you only give your services when called upon to do so? I am on a salary at so much a year, but my services are not given wholly to the Corporation; I am allowed private practice; but I have to hold myself in readiness to attend whenever I am called upon by the Mayor or Corporation. G. F. Danscy, Esq., M.R.C.S. 23 April, 1875.
2. Then you have no daily or routine duties to discharge for them, but when they require your services they send for you? Yes; I am supposed to hold myself in readiness when they want me.
3. Do you receive your instructions from the Mayor? Yes.
4. And you only attend when called upon by the Mayor, in consequence of representations which have been made to him, or matters which have come under his notice, in reference to which your advice is required? Yes; or by the Inspector of Nuisances, who has also the privilege of asking me to inspect any place with him, if he thinks it necessary.
5. Then it is no part of your duty to hunt up nuisances yourself;—you have only to inspect them when you are called upon to do so? No, it is not part of my duty to look after them; I can do it if I like. The duties of the Health Officer are laid down in the Act.
6. The Inspector of Nuisances, in effect, calls you in to confirm him? Yes.
7. Are there often nuisances of that sort which you are called in to inspect? Continually.
8. Are they in the streets or other public places? Not so much in the streets; they are chiefly cases of bad fish, or unwholesome meat, and cases of that kind.
9. Those would hardly come under our present subject of inquiry. Have you often occasion to inspect nuisances arising from water-closets or cesspools? Yes; there are frequently accumulations of filth from those sources.
10. And are prompt measures taken in those cases to remedy the nuisance? Yes, very prompt.

* * * * *

21. But you think the legal powers of the authorities are sufficient? Yes, under the new by-laws, which enable us to carry out the summoning of the owner or occupant of the premises under a penalty of £10, which was formerly only 40s. Previously we could only summons the poor unhappy tenant, and the landlord might have been wholly to blame for not putting down pipes on the premises.

* 136—A

22.

- G. F. Danscy, Esq., M.R.C.S.
23 April, 1875.
22. Have you had any means of judging whether cases of this kind, which have been brought before Magistrates, have been fairly decided, or whether there has been any undue leniency shown—Have the decisions given been what you would call reasonable decisions? I could not say for a certainty. I have had once or twice a suspicion that certain persons appeared on the rostrum when those who belonged to them were in trouble, who were not seen on the Bench at other times.
23. That is not exactly what I mean—I was not alluding to improper or partial feeling on the part of the Magistrates; but Magistrates are sometimes what is called good-natured, and from a sort of love of popularity they do not care to enforce the law in respect to these nuisances;—Do you think that is the case, or have you been satisfied with the decisions as far as you have observed them? I have an opinion that I can always tell whether the parties are going to get off, if I can merely see the faces of the Magistrates sitting on the Bench.
24. Some are lenient and others less inclined to be so? Yes.
25. Are these cases decided by one Magistrate? Some of them by one and some by two. The Sewerage law requires two, and the by-law requires one or more. Mr. Seymour has a copy of the by-law and will show it to you.
26. Has your attention ever been called to nuisances existing in the City which are not removable—that is, nuisances which are not easily removed? Frequently.
27. In what parts of the city? I refer more especially to that part which is called Surry Hills, where it is all open drainage.
28. Do you mean to say that all the sewage—all the offensive matter from the houses—goes into the drains? The whole of the house-slops and filthy water goes into them.
29. But not the drains from the closets? No; that is immediately stopped by the Inspector of Nuisances if any connection is found between the closets and the surface drains.
30. Is there any means of remedying the nuisance arising from open drains of that sort? There is no underground drain in that part of Surry Hills.
31. I do not mean in connection with engineering difficulties; but as a matter of fact, is there any means of remedying those nuisances? No; but that is a matter upon which my friend Mr. Bell, as an engineer, could better express an opinion. As a matter of fact there is one drain in Bourke-street, east of Moore Park and south of Arthur-street. This is the place (*indicating the locality on a map of Sydney.*)
32. Where does that drain discharge its contents? By Alderson's, and then to Waterloo, and on to Shea's Creek.
33. Are there similar nuisances in other parts of the city which there are no means of remedying? Yes, in the low part of Cook Ward, towards Elizabeth-street, between what used to be Mrs. Terry Hughes's paddock and Campbell-street I think it is.
34. But there are many parts of the city not in connection with sewers, are there not? A great many.
35. In those parts how are the kitchen and laundry slops disposed of? The filth runs into the open gutters in the streets.
36. Does that create a serious nuisance? Yes, it is very deleterious to health, and especially if you pass by when the gutters are being swept. I have often experienced it myself.
37. Then, they depend simply upon the rain to cleanse them? Yes.
38. There is no sufficient supply of water to flush these gutters so as to scour them? I believe there is not.
39. What is the nature of the powers which regulate the removal of nuisances—Under what circumstances can you compel a person to remove a nuisance? The carts go round twice a week to remove the refuse of the houses in all parts of the city. They take the west side of George-street every Monday and Thursday, and the east side on Tuesdays and Fridays. The people are supposed to put out, or have ready for removal, all rubbish they want taken away.
40. Any kind of offensive matter, kitchen stuff, or any other matter? Any kind of matter, except fecal matter; they don't take emptyings from earth-closets. And if the people neglect to do this the Inspector of Nuisances can summon them. In that case the landlord is not summoned.
41. Then you think the powers which the authorities possess to remedy these nuisances are sufficiently exercised? Yes, as far as it is possible to exercise them.
42. With regard to cess-pits and the nuisances arising from them, under what circumstances can you advise interference? There is no doubt that the smell from these closets is very offensive indeed, especially where there are fifteen or sixteen houses with perhaps forty or fifty inhabitants using the same one.
43. I wish to know under what circumstances can you take steps in connection with them? We can only take steps when the smell from these closets becomes so offensive to the inhabitants of houses in the locality as to become a public nuisance.
44. Not because the closets have overflowed but because the fact is become a nuisance? Yes.
45. Because some one has observed it and taken notice of it? Yes, generally the stench mostly arises because the walls of the closets are not water-tight.
46. But you do interfere when the smell becomes offensive? Yes.
47. Do you think, as far as you are able to judge, that the powers which the authorities possess in respect to keeping these closets in order have been as far as possible efficiently carried out? I believe that, as far as the Inspector of Nuisances has been able, he has been desirous of carrying them out thoroughly and efficiently.
48. As a matter of fact have they been carried out as far as they could have been? I think he has done so to the utmost.

* * * * *

55. You merely act as Medical Adviser to the authorities, and to the Inspector of Nuisances? Yes.
56. Do you find any disease, such as typhus, or any other disease arising from these nuisances, coming under your notice? I have found typhoid fever during my practice for the last eight years, and in those localities where there are open closets, or which are exposed to bad smells—such as Darling Harbour at low water, the stench of which is unbearable even at a great distance.
57. In those localities where there is great stench from open closets have you found fever? Yes, generally a good deal of fever. Disease takes a low type in the neighbourhood.
58. In the places which you have noted, where there are open drains—such as Surry Hills—have you found a great amount of fever there? Yes, to a great extent, and other diseases have taken a low type; the tendency to typhoid type is increased in these localities.
59. Did you say that these open drains contain matter from closets? No, not matter from closets.
60. And in all those localities where the sewers discharge their matter into the harbour you have observed a great deal of disease? Yes. A great number of the clerks to steam navigation companies have complained of illness, and have even had to leave their duties from attacks of what is commonly called low fever.
61. And persons belonging to the working classes, who live about the borders of Darling Harbour;—have you observed that they suffer from the effects of these sewers? I believe they do.
62. From disorders of the same nature? Yes.
63. Do you know anything about the health of the crews of vessels in the harbour? I do not.
64. Is there anything you would wish to suggest—any measure of a temporary kind to cleanse the city, or to remedy the nuisances to which you have alluded; or do you think as much is being done by the authorities as is possible? I believe that under existing circumstances everything that is in their power at the present time has been attempted.
65. Can you suggest any increase of power? Whether any application could be made at low water to these bays, where the banks are exposed and covered with the black slime from the sewers, so as to destroy the smell which arises from them when they dry after being exposed to the sun,—would be successful? I cannot say. Chloride of lime, &c., was tried some time ago in the Thames, if you recollect.
66. Was that application effective? The effect, I believe, was very slight; it was all washed away with the returning tide.
67. And with regard to the cleansing of the city, can you suggest anything that could be done—anything, I mean, of a temporary kind, not involving a system of sewerage—anything that could be done at once? I do not see that we could do more than is being done at present.
68. Do you think anything could be done to remedy the evils you have mentioned arising from open drains at Surry Hills? No; unless it were possible to have sufficient water to wash away the filth.
69. What kind of sewage matter is it legal for persons to allow to flow into the gutters? No offensive matter is allowed to go into the gutters, except what we term house slops.
70. Bedroom slops for instance? Yes, from wash-hand basins; but I believe bedroom chambers are supposed to be emptied into the privy.
71. Is there any security that these two kinds of slops can be kept separate? No.
72. Do you think the whole of these bedroom slops in many cases find their way into the gutters? Yes; you can perceive it as you walk along the streets.
73. Still there is nothing illegal in allowing house slops only to go into the gutters? It is not legal in cases where there is a sewer in the street, but it is legal in those cases where there is no sewer to which they can connect.
74. *Mr. Moriarty.*] In what districts are the diseases which are supposed by medical men to take their origin from the fermentation of fecal or other matters most rife? I have found that it is in the neighbourhood of the bays, such as Darling Harbour or Blackwattle Swamp. When I was connected with the Odd-fellows I found more diseases of a typhoid character in those localities, and also in the Surry Hills, than in any other parts. In the Surry Hills, especially in that part which I have mentioned, east of Bourke-street and south of Arthur-street, before you come to Baptist's Gardens, on the opposite side.
75. Have you observed any marked difference in the state of public health in those districts which are sewerred and those which are not sewerred? I cannot say. We have found a great deal of disease in the low parts of the city close upon the harbors, near the outflow of the sewers, and every ward of the city is more or less sewerred, though the sewerage is not complete or fully carried out.
76. Have you observed any difference in the amount of disease in long continued dry weather, and other periods when the sewers are supposed to be sufficiently flushed with the ordinary rains? I have not had the means of judging, not having at present the power of obtaining any returns from medical men.
77. *Chairman.*] You have not noticed whether there has been more disease during long-continued dry weather than at other times? Generally speaking at the break up of dry weather there has been more sickness than at other times. The difficulty I have in answering that question is this: whether the flushing of the sewers after heavy rain causes any mischief, or whether the stench caused by the heavy rain upon accumulated vegetable and animal matter, giving forth fetid exhalations, especially when the sun shines upon it afterwards, does not more harm. It would be very difficult to decide what is the cause of it.
78. *Mr. Moriarty.*] Has the prevailing form of disease in Sydney been that which is supposed to take its origin from this cause, or from the poisoned atmosphere, caused by the fermentation of fecal matter? I have noticed, and I have heard several medical men say that the nature of the disease takes a low type from that cause—from the poisoned atmosphere caused by defective sewerage.
79. Is there a greater prevalence of disease of that character? I believe there is more than there would be if the drainage was good.
80. *Mr. Watt.*] Do you think twice a week is often enough for the removal of kitchen refuse in summer time? I do not, in summer time; I have always said so.
81. Have you any information to give as to the condition of the city urinals? You mean the public urinals?
82. Yes? Well, I continually visit those in the Haymarket, &c., and I always find them in particularly good order. The person in charge of them washes them out twice a day and sprinkles carbolic acid upon them.

G. F. Dansey,
Esq., M.R.C.S.

23 April, 1875.

- G. F. Dansey, Esq., M.R.C.S. 83. Are not those at the Railway Station in very bad order? Those are not under the supervision of the Corporation. I am only speaking of those of which the Corporation has charge.
- 23 April, 1875. 84. *Hon. J. B. Wilson.*] Have you any knowledge of the railway urinals? I have not; I have been to them twice with Mr. Seymour, and they seemed to be in a very bad state.
85. I think you have stated that water-closet drainage is not allowed, if known, to go into the gutters? Not if it is known.
86. Has Mr. Seymour ever brought facts of that kind under your notice? Yes, and it has been stopped promptly. Mr. Seymour will give you the cases, and shew you in his book the fines that have been paid.
87. Is it the case that even in George-street some of the houses are not connected with the sewers? Yes.
88. And how is the drainage from those houses carried off? Into the gutter, and thence into a gully-shaft connected under ground with the sewer.
89. Are those gully-shafts in different parts of the city in close proximity to each other? They are apparently; Mr. Bell will be able to tell you about them.
90. Are you aware whether from these gully-shafts connected with the underground sewers any offensive smell comes forth? At times I have found there is.
91. Consequently, in the higher parts of the city the smell from those shafts might be very offensive? I believe it depends upon whether they are fully attended to; for I have understood from my brother officers that if properly attended to there ought to be no smell from them.
92. Are there officers of the Corporation whose duty it is to attend to them? There are.
93. Has the Inspector of Nuisances any power to see that they are attended to? I believe he has the duty of emptying them.
94. Has he sufficient assistance—has he any assistants? Yes.
95. Are they sufficient? I do not consider they are. I think that for the duties he has to fulfil he should have more assistance.
96. You have alluded in the course of your evidence to the great stench that arises from Darling Harbour at low water. Does that stench arise, in your opinion, from the sewerage that goes into Darling Harbour, or from other natural causes, independent of the sewers? I believe it is from the sewers.
97. Do you think that nuisance would be as great if Darling Harbour were sufficiently dredged so as to prevent the sewage matter from ever being exposed at low water? I don't think it would be so bad, because matter covered by water does not throw off the same fumes as matter which is exposed to the sun.
98. Consequently, if the heads of our bays were cleared and deepened this nuisance would be very much abated? Yes; and if also what is called a tidal wall were built outside, so that none of the banks were exposed.
99. Then if that tidal wall were built it would be possible to ensure deep water close in to the banks always? Yes, because the dredge could work close up to them.
100. Have you had any experience in the offensive character of the present system of underground sewerage? Where?
101. What I allude to is the refuse at the mouth of the various sewers? I have often gone away from them sick.
102. Does that stench occur during a very dry period, or is it generally so? It is generally so, but it depends greatly upon the quarter the wind is from.
103. Then we are to gather that there is always a bad smell from the sewers? When the discharge is more under the surface the stench is not so great.
104. Have you ever formed an opinion as to whether that offensive smell arises from fecal matter or from decomposed organic matter of any kind? No, I have not, for this reason: The sewage matter is a mixture of all kinds, the same as experienced on board ship at the Circular Quay, lying off the tank-stream after a thunderstorm. I have experienced it myself, and the stench was unbearable; we had to close all the ports and skylights to keep it out.
105. Do you think the use of dry earth closets would be an improvement upon the present system? Do you think the sewerage would be as offensive and as deleterious to the health of the inhabitants if all fecal matter were excluded from the sewers? If you take away part of the poison that which is left will of course be less injurious; that is no doubt part of the matter which helps to make the sewage so offensive.
106. Can you give the Committee an opinion as to whether the filth from fecal matter is as detrimental and as productive of diseases of a typhoid type and death as other organic matter? Do you mean urine as well?
107. I mean urine as well? I asked that, because dry fecal matter does not give off much offensive smell after the first minute or two.
108. I wish to know which of the two descriptions of filth is more deleterious and productive of diseases of a typhoid type? Well, I should say that the stench from fecal matter would be more deleterious than from vegetable matter, but I should not like to assert it positively.
109. *Hon. J. Smith.*] Is it within your knowledge that Sydney has of late been unusually unhealthy? According to the statistical returns furnished by the Registrar General there have been a greater number of deaths.
110. For how long a period has it been unusually unhealthy? Not until this epidemic of measles took place have we ever had, since the Registrar General recorded them, a greater number of deaths than births—not until the month of January.
111. Have any other diseases besides measles been unusually prevalent? We have had scarlet-fever and measles together.
112. I mean within the last six months? There has been a great deal of scarlatina.
113. Can you connect the prevalence of measles and scarlet-fever with any distinct cause? No.
114. Not with the sewerage—with gases or sewage contamination of any kind? No.
115. Then have you any reason to believe that the prevalence of sickness has any connection with the sewerage of Sydney? I have. I believe the concomitant diseases following measles have been greatly enhanced by the bad atmosphere.
116. If I understand you, while you cannot attribute measles or scarlatina to the defective sewerage, the consequences from these diseases have been more serious? The after claps have been more.
117. You have spoken of the bad smells arising from the mouths of the sewers. Have you observed that disease has been more prevalent in those neighbourhoods? Yes, from the Registrar General's returns,
not

not from my own knowledge. The practice of a medical man is scattered over a large area—he has not a G. F. Dansoy, Esq., M.R.C.S. block of land to which he attends wholly. He may have one patient in one neighbourhood and the next half-a-mile away in another direction.

118. I think this question has been asked before, but I will put it again: Have you been able to trace any difference between the areas supplied with underground sewers, and the areas not so supplied? I believe every ward in the city has more or less underground sewerage, and I could only ascertain the mortality from the Registrar's returns, after finding out which streets are not well sewered and which are. 23 April, 1875.

119. I think you mentioned that some portion of Surry Hills was very bad, where there is no underground sewerage, and you single that out as being unusually unhealthy? According to the Registrar's returns the greatest number of deaths during the worst month were in Cook Ward, which is Surry Hills, Denison Ward, and Gipps Ward.

120. And that has no underground sewers? Only in one part of it, from Mr. Terry Hughes's paddock.

121. In the unhealthy parts which you have described have you been able to trace contamination of wells from privies or cesspools? In Sydney we have no wells; they have supply pipes in every case.

122. Then in those unhealthy places there are no houses which are not supplied with Sydney water? I believe they are all supplied with it.

123. I thought some of these places had no water from town pipes and had deep wells? Not to my knowledge; they have all to pay the water rates at all events.

124. So that you do not know a case where disease can be traced to the contamination of water by any sewage matter? Not in Sydney.

125. *Chairman.*] Has your attention been drawn to any nuisances connected with water-closets proper? Yes, to a great many.

126. What was the nature of the nuisances? They have occurred from the closets not being properly attended to—generally speaking, from the negligence of the persons using them.

127. What was the nature of the evil? Stoppage or breakage.

128. Have the nuisances from these closets been connected in any way with the watermains? Yes, my attention has been drawn to cases of that kind by the Inspector of Nuisances. Mr. Bell will be able to explain to you how by some mode of suction the water has become contaminated.

129. But it has come under your notice? It has come under my notice.

130. Is it the unusual amount of sickness which has caused the authorities to be so active now, or has there been an unusually dirty state of things which has called for that activity? With regard to the state of the city I believe the yards of the inhabitants of Sydney are cleaner than they have been for some years past; they are frightened to leave anything to collect.

131. You think then that the sickness, rather than any particular amount of dirt or neglect, has caused the Corporation to exert themselves? Yes.

132. Have they done as much as they are doing now during the past six months? The city was as well looked after six months ago as it is now; but during the temporary difficulties of the Corporation they could not look after it as well, inasmuch as they were not able to employ the same number of men as they do now, and as they did before.

133. How long did that deficiency of men last? About a month or six weeks. Mr. Bell will tell you.

Francis Bell, Esq., City Engineer, and Member of the Board, examined in his place:—

134. *Chairman.*] You are Engineer for the city? I am.

135. Do you receive your instructions from the Mayor and Corporation? I act under them.

136. Have you the charge of the city works? I have the charge of the sewerage and water.

137. The sewerage and water alone? Alone.

138. Have you any control over the Inspector of Nuisances—have you anything whatever to do with the removal of nuisances? I have nothing whatever to do with the surface; I have merely the charge of the sewers and the water.

139. Does the defective state of the sewers and the health of the inhabitants of Sydney come under your notice at all? The sewerage does.

140. You have to see that they are kept in proper order—anything beyond that? No.

141. Have they been kept in good order during the last six months? Yes; they are in very good order at present.

142. Have you the charge of these gully-shafts? No, that is in the City Surveyor's Department. I believe a great many in the city are not properly trapped, and that a very offensive smell arises from them.

143. Have you had any difficulty lately in connection with the sewers? No, none at all.

144. Nothing of which you are aware that should have occasioned sickness or death in the city? No; and I have been very particular since I came into office, in cases where landlords apply to connect their houses with the sewers, to make them use flap-traps.

145. Have you the power to compel them? Yes; I always make it compulsory. They grumble a good deal, but I always insist upon it.

146. Then this had been neglected before? Yes; formerly the flap-traps were so constructed that they opened into the sewers, and when a rush of water came down the sewer the door of the trap was wrenched off and became useless. I have altered that, and the new doors open in a recess in the pipe itself, and no injury to it can take place.

147. Have you any opportunity of judging whether there is an accumulation of fecal matter in the sewers? In Woolloomooloo they have very little fall; some of the sewers have only an inclination of 1 foot in 350 feet, but all through the city, except Woolloomooloo, there is a good fall.

148. So that there is no accumulation of filth even in dry weather? No.

149. No offensive matter at all? No, none at all.

150. Have you any reason to suppose that there is any escape of deleterious gas? Yes, in a great many parts of the city.

151. In which parts? In the higher parts of the city, where they are making alterations and opening the ground to extend the sewers the gas is very bad.

152. Is that the case in thickly populated parts of the city? There are several places in George-street.

153. Do you know, as a matter of fact, that gas has escaped there? Yes, I have drawn the attention of the City Surveyor to it several times.

154.

F. Bell, Esq.,
C.E.

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- F. Bell, Esq.,
C.E.
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154. Does not most of the gas rise and escape through the pillar in Hyde Park? Unfortunately very few of the sewers are connected with it. I will show you the position of the shaft (*indicating position on map.*)
155. Do you think it would be desirable to take steps to carry off these gases in a similar way in any system of sewerage? Yes; I think every drainage area should have a separate air-shaft.
156. Can you suggest anything to the Board—anything which could be carried out at once—to remedy the evils which are said to exist; or do you think this is only a panic, and that there is nothing necessary beyond what is usually done after a hot season? I think it is desirable that all these drainage areas should be connected with air-shafts.
157. The Government say they are pestered with communications in reference to the state of the city, and that complaints are made that people are dying in consequence of the filth which exists;—do you think there is any foundation for this kind of outcry, or is it merely a panic, which has arisen in consequence of the late epidemic, which has no connection with the sanitary state of the city? That is my opinion.
158. Then you consider there is nothing exceptional in the present state of the city which renders it necessary for the Government to take exceptional steps? I do not know of anything.
159. You know of no local cause which should have produced unhealthiness? No.
160. *Mr. Watt.*] Could the sea water be used temporarily to flush the sewers? I do not think it could; the difficulty would be very great. It would have to be raised by some means or other to a height. The sewers are pretty well flushed as they are.
161. *Chairman.*] Have you any artificial means of flushing them? No.
162. *Mr. Watt.*] With regard to these flap-traps, which you have insisted upon being placed in all the connections with the sewers, are there many places where these traps have not been inserted? A great many.
163. Then you think it would be desirable to pass some measure to compel householders to have these flap-traps? Yes.
164. I think you have stated that it is very necessary to keep these sewers free from foul air; do you think one air-shaft would be sufficient? I think so—one shaft for each drainage area.
165. I suppose you would suggest that it should be placed in the highest spot? Yes.
166. Is the present one in Hyde Park properly attended to by the authorities? Yes, I have been most particular about it. Twice or three times a year we put in fresh charcoal. Formerly we used to put large lumps of charcoal in with spaces for the air to come through; now we put large pieces at the bottom and small stuff at the top. When it is taken out it has apparently no smell, but if you put it in the fire the stench is abominable.
167. *Hon. J. Smith.*] Are these flap-traps effectual in preventing the gas from escaping through the house drains? I think they are.
168. But you say the law does not compel persons to have them? I am not quite sure; we were bringing in fresh by-laws lately, and that was one of them.
169. But, as a matter of fact, some house drains have no flap-traps? Many of them.
170. Can you point out any part of Sydney in that position? Well there is a great part of George-street without them; in short, all parts of the city. Some of the merchants' clerks complained of the smell in their offices, and I made inquiries and I found it was from the want of flap-traps, and I had them put in.
171. So that the evil arising from this cause is not confined to any particular locality, it is spread far and wide, wherever these drains happen to be laid down? Yes.
172. And you think it would be desirable to compel householders generally to have these flap-traps? Yes.
173. It was stated, perhaps in one of your own reports to the Municipal Council, that many houses have pipes direct from the watermains to their private closets? Yes.
174. Is there any law to prevent that? Well, that is another of the new by-laws, but it is not in operation. But I do now insist, when houses are connected with the mains, that they should have cisterns so as to cut off the direct connection.
175. Are there many houses that have direct connection with the main? Yes, about 5,000.
176. So that when the water is cut off from the main for any reason, there would be an indrain from the pipes that are left open, and if the water-closet pipe be left open it may suck in the gas or even liquid matter? Yes.
177. *Chairman.*] Have you known such cases? Yes; that is where the pan gets choked up.
178. And you are doubtful whether you have power to prevent that? Yes. I may mention a flagrant case which came under my notice in Castlereagh-street:—The pan was completely choked; the service-pipe which connected it with the watermain in the street was about 50 feet from the closet. We cut the pipe, and found it completely choked with matter from the closet. The whole neighbourhood round about was poisoned by the water.
179. *Hon. J. Smith.*] But you say there is some measure by which you can enforce the use of cisterns for the future? Yes, but it is not retrospective.
180. *Chairman.*] What would be the expense of making the alteration in each case? About £4 or £5.
181. Would that cover all the expense? Yes.
182. Do you know whether the water served to the people in the neighbourhood, in the case you have just instanced, was contaminated? It was. There was one woman who lived close by who became sick, and gradually got worse and worse, and was all but dying; and one night she went out and got a tumblerfull of water, which was nearly all offensive matter.
183. Do you mean to say that you cannot compel people to adopt proper means to prevent this? We can bring a man up and punish him for keeping his premises in bad order, as we have done.
184. But you have no power to compel him to adopt the cistern system? No, we have no power; hundreds of cases of that sort have taken place.
185. How long would it take do you suppose to effect this reform—would it be unreasonable, for instance, to give people notice to do this, in say six weeks? Yes, that would be too short a time.
186. *Hon. J. Smith.*] I think you stated that you are responsible for the underground drainage? Yes.
187. Does it come under your province to look after the gully-shafts? No, Mr. Seymour attends to them.
188. What kind of a trap have these city shafts? There are two kinds of traps to these shafts—chamber-gully trap and the other a flap-trap, such as I have described, and of which the Board can have a drawing if they require it.

189. And from your experience some of them are not trapped? Some of them are not.
190. *Chairman.*] Would it be difficult to find out where they are not trapped? Yes, it would in house connections, because there is no means of getting at them; the pipes are too small for a man to go up them. In the pipes now constructed there is a flap-trap every fifty feet in the main sewers, ready for connection.
191. Is there no other method that could be devised to prevent the escape of gas in these pipes? The difficulty and the expense is in finding out where the traps are. A flap-trap costs about 10s., and the opening up the ground costs about the same.
192. Then you don't think there would be any difficulty in insisting that flap-traps should be used in all cases? No; but it would spoil the thoroughfares greatly to put them in, which is, however, a minor consideration.
193. *Hon. J. Smith.*] Have any of the inhabitants in the neighbourhood of the Obelisk in Hyde Park complained of the smells? Yes, but I have immediately remedied it. Dr. Renwick did once.
194. And by putting in charcoal twice a year you prevent that? Yes.
195. Have there been any complaints from that neighbourhood lately? No, there have not.
196. *Hon. J. B. Wilson.*] Could a person enter the main sewer and discover whether there were traps in the branch drains or not? Yes, but not in the branch drains, for a man could not go up a 12-in. pipe.
197. Could not traps be put on these branch pipes entering the main sewer? Yes, that could be done.
198. Would not that mitigate the evil in a great measure? Yes, it would.
199. *Chairman.*] Would that be very expensive? Not very.
200. *Mr. Bennett.*] Would that injure the discharge power? No, not with the new pipes.
201. There would be pressure to open the door? Not much pressure; the door is quite loose, hanging on a hinge.

F. Bell, Esq.,
C.E.
23 April, 1875.

TUESDAY, 27 APRIL, 1875.

Present:—

M. B. PELL, Esq.,	P. F. ADAMS, Esq.,
C. WATT, Esq.,	E. O. MORIARTY, Esq.;
F. BELL, Esq.,	HON. J. B. WILSON,
G. F. DANSEY, Esq.,	HON. J. SMITH,
H. G. ALLEYNE, Esq., M.D.,	W. C. BENNETT, Esq.

M. B. PELL, Esq., B.A., IN THE CHAIR.

Mr. Richard Seymour, Inspector of Nuisances, called in and examined:—

202. *Chairman.*] You are Mr. Seymour, I believe? I am.
203. Inspector of Nuisances for the City of Sydney? Yes.
204. You obtain your instructions—from whom? From the Mayor of Sydney.
205. I will first ask you a few questions with respect to the public places in the city. Is it your duty to keep them clean? It is.
206. If you find any nuisance do you cause it to be removed—is it done under your direction? It is done under my direction.
207. It is done by officers in the service of the Corporation? Yes.
208. Are the public places in the City of Sydney at the present time in a cleanly state? The City of Sydney at the present moment is cleaner than I have known it for the last twenty years.
209. For the last few months has it been constantly kept clean? It has—very clean.
210. Is there a sufficient staff to do all that is necessary to keep the city clean? Yes.
211. Has there been a sufficient staff during the last few months? Yes. At the beginning of the year there was a reduction in the number of men employed, which lasted for about six weeks, when it was again increased to the original number, which is sufficient to carry out everything that is necessary for the winter months.
212. Then there is no difficulty in the matter on that score? None at all.
213. With regard to private premises which have to be looked after—do they come under your inspection as well? Yes.
214. Is it your duty to remove nuisances, or merely to report their existence? It is my duty to see them removed.
215. Do you remove them yourself—that is to say, by your own action? Yes, if it is necessary for the public health. If we go into a yard and find it is necessary for the public health, more especially during the summer months, to remove a nuisance, I send a cart and take it away at once, and then I summons the person who is responsible for it.
216. Who finally bears the expense of removal? Yes, by means of the fine.
217. You summons these persons before a Magistrate? I do.
218. Have you sufficient powers for that? I believe I have not the powers which I ought to have.
219. Have you experienced any inconvenience from want of sufficient powers to carry out what you considered necessary? I have.
220. Will you state the nature of the inconvenience? I have been refused by the parties entrance into their premises, and I have had to send back to the Town Hall for my appointment, and even then I have had difficulty in being allowed to enter the premises.
221. Then you have no distinct instructions in these cases—you do not in fact know what powers you have? I have instructions to enter any premises, public or private, to inspect any nuisance. I think there ought to be a distinct power given me to enter any premises without producing my appointment.
222. It is necessary, I suppose, to produce papers of some kind as credentials to persons who deny you entrance? If I were a stranger it would be necessary.
223. Have you found this to be a source of particular inconvenience? No, I have not, except in one or two instances, during the whole time of my appointment as Inspector of Nuisances.
224. Can you enter any house at a reasonable time in order to inspect a nuisance? I can.

Mr.
R. Seymour.
27 April, 1875.

SEWAGE AND HEALTH BOARD—MINUTES OF EVIDENCE.

- Mr. R. Seymour.
27 April, 1875.
225. If you find any nuisance existing, such as, for instance, a closet overflowing, or any other offensive matter, you summon the parties? I do.
226. Suppose the closet is not actually overflowing, but is still offensive, do you summon them? We usually give them notice, and if they do not pay attention to that notice we summon them; but if the nuisance is so bad as to affect the public health I call in the Health Officer, and we summon the party without further notice.
227. Have you had any difficulty which has embarrassed you in performing that part of your duty? In issuing summonses?
228. Yes? No, I have not.
229. Do you find that the result of summoning offending parties is satisfactory to you—that the action of the Magistrates is satisfactory? The result, as far as some of the Magistrates are concerned, is very satisfactory; in fact, the fines inflicted recently by Captain Scott and Mr. Smart have been the means in a great measure of putting down nuisances in the city. We don't find one dirty yard now out of every twenty that we inspect; the others send away all the refuse to be removed by the city carts.
230. Do you mean to say that, in some cases, when those particular Magistrates are not sitting, the fines are not sufficient? They are not sufficient to deter people from keeping their premises in an unclean state. There was an instance occurred lately in which the matter was deleterious to the public health. We brought up a butcher from the Haymarket, for having eighteen sheep, rotten and unfit for human food, on his premises for sale. They were in a fearful state, and we brought him before the Central Police Court. He was liable to a penalty of £10 for each sheep, and Mr. Driver had a long argument with the Bench to show that the penalty ought to be enforced; but the Magistrates said there did not seem to be any intention on the part of the man to do any harm, and they fined him 10s only.
231. Do you think that fine met the ends of justice? I do not, because it was a very bad case, and the City Health Officer inspected it with me.
232. Do you find the same inconvenience with respect to persons who have nuisances on their premises in connection with closets? Yes, they are merely fined as low as 5s. Even in cases where the sickness arising out of the nuisance has carried off four or five persons in a family, and proof has been given that this was from the effects of the closet, or the drainage on the premises, and we have explained this to the Bench, the parties have only been fined 5s.
233. You think that such small penalties interfere with the efficient discharge of your duties as Inspector of Nuisances? I do.
234. Are the summonses in these cases always carried out, or are they sometimes withdrawn? Some of them are withdrawn on representations being made that the nuisances have been abated, or else that the parties are making preparations to connect their premises with the sewer, or are otherwise taking speedy steps to remedy the evil.
235. Are the summonses in such cases withdrawn by you? No, sometimes they are withdrawn by the Bench.
236. But who requests the Bench to withdraw them? They suggest the withdrawal themselves. They say, "Mr. Driver, in this case the party appears to be taking steps to abate the nuisance; would it not be better to withdraw the case?" That has been done frequently by the Bench.
237. Do you think that this has been done frequently to the public detriment? I do, sir.
238. Are there cases where the summonses have been withdrawn before they come into Court? Yes, sometimes; but only when there is a clear understanding that steps are being taken to abate the nuisance, and then they are withdrawn, with payment of costs.
239. Is that done by you? Yes, when I am satisfied.
240. Are you ever directed to withdraw them? No, except in such cases as I have stated, where steps are being taken to abate the nuisance.
241. It has been stated to the Board that very unpleasant smells come up from the gully-shafts;—when that is the case is it any part of your duty to report the fact? Yes.
242. Do you often find that to be the case? Yes. We have two sorts of traps to the gully-shafts; one is an iron chamber; the other is an earthenware pipe, with a flap to it, which opens into the sewer.
243. What steps do you take to remove a nuisance occurring in one of these gully-shafts? I first send a man to clean it out, and if he cannot get at the shoulder or flap-trap I then acquaint Mr. Bradridge, the City Surveyor, and he sends a man to repair the damage whatever it may be. If we can manage to clear out the dirt with a long scraper, which we keep for the purpose, then there is no complaint made. We can always tell when the nuisance exists by the smell.
244. Are there traps in all places, or are there any wanting in some parts of the city? There is a deficiency in the square traps in the summer months. We have not sufficient water to pass along our gutters and keep our gully-shafts full. Some of the old-fashioned traps are iron and some are brick, and the water dries up in them. The only remedy we have is to send a water-cart and fill these gully-shafts up, which is always done.
245. Are there any places where there are no traps and where you think there ought to be? I do not think so, as far as my knowledge goes.
246. Do you find nuisances from water-closets arising frequently? Yes.
247. In what way? I find that the syphons of the water-closets are deficient, and that the most offensive smell is carried through the whole of the building—conveyed from one room to another.
248. Does this arise from the connection between the sewer or drain and the atmosphere of the house? When the syphon of the closet is defective the smell is carried from one room to another.
249. Whereabouts does the stoppage occur? In the syphon—generally at the bend. When that is defective the water leaks out and the smell must come up.
250. When you find this to be the case, what steps do you take? I give notice to the landlord and the occupant of the house.
251. Do you find that these water-closet pipes get choked? Yes, we have found the pans of the closets full in many instances up to the top.
252. There was a case, was there not, recently, where you found the water in the pipe had become contaminated? Yes, that has been frequently the case. There was one case in Castlereagh-street, and in the adjoining yard a lady was very sick. I investigated the case and I found the closet stopped up. I went back to the next yard and turned the water on for about two seconds, and I found night-soil, paper, and everything belonging to the adjoining closet, come down through the pipe.

253. You saw that yourself? Yes, and I went down and brought Alderman Chapman and the City Engineer to see it. We have found two or three cases similar to that in Woolloomooloo since.

254. When did that take place? It was about the latter end of '74.

255. Who was Mayor then? Mr. Goold.

256. Did you call the attention of the Mayor to the circumstance? I did, sir.

257. Did you know of it, or was the case pointed out to you? I knew of it myself; the closet was stopped up.

258. Was the pipe to the closet direct from the main? There was, I should say, about 4 feet difference between the level of the watermain and the closet.

259. Did you ascertain whether any water in the pipes adjoining that house was contaminated by that closet? Yes, the water which supplied the whole row of houses to the Castlereagh-street schools was contaminated.

260. Did you know then that the evil arose from the direct connection of the closets with the water-mains? Yes.

261. What steps were taken in that case? I knocked the pipe out myself so that no water could come or go from the closet. A plumber was then sent for, and I issued a summons next morning, and the parties were fined at the Police Court.

262. Did you take any more active steps than usual to determine whether other and similar nuisances existed? I did; I made it my business in every case when I found a water-closet stopped up to investigate the matter, and I found three similar cases in Woolloomooloo.

263. Where the water had been contaminated by connection with the closets? Yes.

264. Are you aware whether any steps were taken to prevent such nuisances in future? Yes. The Municipal Council passed a by-law, or a minute of Council, I forget which, that for the future all water-closets should have cisterns erected on the top, and that no closets should be connected direct with the main.

265. Are any steps being taken to carry out that decision? Yes; they are being altered every day.

266. Is that being done, do you think, as rapidly as can reasonably be expected? It is being done, but not as quickly, I think, as it ought to be done. I think there ought to be power to compel the alteration.

267. Do I understand you that this is being done by special action—by compulsory action towards the landlords? By compulsory action on the part of the Council. Whether they have the power I cannot say.

268. When was that minute passed? I think about the latter end of the year. Mr. Bell will be able to tell you more about it.

269. There have been great complaints of nuisances existing at the mouths of the sewers entering the harbour;—have you found that to be the case? I have.

270. Have you any means of judging of the amount of sickness existing in various localities? I have.

271. Do you think more sickness exists in those localities which are near the mouths of the sewers which empty themselves into the harbour than in places otherwise similarly situated? I do, sir.

272. Has there been more sickness, as far as you have noticed, this year than there has been in previous years? Yes, I think so, during the dry weather, among infants.

273. Do you know of any unusual local cause to produce this sickness? I do not.

274. In what parts of the city was the sickness most prevalent? Down about Darling Harbour and Blackwattle Swamp there has been a deal of sickness; and in the Surry Hills, where there is a large open drain, near Arthur-street, which goes through Burdekin's paddock—that is a great nuisance. There has been a great deal of sickness, in one family in particular, living close to Moore Park—Mr. Buzacott's. The whole of the drainage from a portion of Paddington, Botany, and other streets, goes into that large paddock in Moore Park, close to the Barrack wall, and that family is nearest to it.

275. Are there many such nuisances in the city which you are unable to remove? Yes. The whole, or the greater portion of the drainage of Redfern, Chippendale, Darlington, and those houses recently built on Shepherd's paddock, goes into a large open pond which is used by the sugar works for some purpose or other, and the smell there at night is something horrible.

276. I suppose it is not the contents of closets that goes there? I am positive that the contents of closets from Redfern, also the dirt from cow-yards, butchers' yards, and house drainage of all sorts, go into it; and the only way it is ever let off, I believe, is when they have a surplus of water in the dam.

277. Has that pond occasioned sickness to your knowledge? I cannot say.

278. What is this water used for? Something in connection with the Sugar-works, because it is brought in and, after going through the pipe, is emptied again into this large reservoir.

279. Have you ever made any representations to the authorities respecting this matter? Yes.

280. To whom? To the Mayor and Aldermen.

281. Have any steps been taken in consequence—any inquiries made? Yes; there was a summons issued in one case in connection with it, and in reference to the burning of bones on the premises; the Corporation proved their case, but the balance of the evidence turned against them. Three persons came forward, who stated that they had resided near the premises for twenty years, and had never enjoyed better health in their lives, and the case was dismissed.

282. What class of persons were these witnesses? They seemed to be working men; but one of them, I think, was a chemist.

283. Were the persons who gave that evidence servants of the Company? I could not say; but, to the best of my belief, some of them were.

284. Who went to inspect the premises on that occasion;—did the Mayor and Aldermen? Yes; or some of them. To the best of my belief, some of the Aldermen went, and I went with the City Health Officer, Dr. Dansey.

285. And the result was that nothing was done? The case was dismissed, and was at an end, and we were powerless.

286. Did you say they burn bones there as well? They say not; but the smell goes on as bad as ever. There is also another great nuisance in that neighbourhood: The drainage from Victoria Barracks is carried into a large waterhole on Moore Park, and, in summer time especially, it is a great nuisance.

287. *Mr. Moriarty.*] Do you perceive much difference in the smell arising from the gully-shafts in dry weather and those times when the sewers are flushed? In dry weather it is worse; it is so offensive at times that we have to send a water-cart to fill them up.

- Mr. R. Seymour. 288. Is that from the accumulation of matter in the sewers? It arises from the want of flushing the sewers.
- 27 April, 1875. 289. Do you perceive any difference in the effluvia from house sewers in dry and in wet weather? In dry weather we often find it offensive, and in wet weather it is oftentimes offensive because they are not properly trapped.
290. Do you attribute that to the drains not being properly trapped, and to the gas escaping? I do, sir.
291. *Mr. Bennett.*] Have you noticed at what time the smell from the harbour is the worst? At low-tide.
292. Is it worse in dry weather or after a flush? I have observed it mostly in dry weather, especially in Woolloomooloo Bay.
293. Is it more offensive at the end of the tank stream in dry weather? That I cannot say; I have never been there but it has been offensive.
294. Are most of the house-traps water-sealed? They are not.
295. That is because of the principle on which they are made, and if they are not water-sealed the difficulty arises from the traps not being filled with water? Many of the water-pipes convey the water from the top of the house down to the sewer, and there is no trap at all. For instance, in Bridge-street you can go to the top of a house and you will be knocked down by the stench from the pipes.
296. I refer to the water-closet pipes? They are all watertight.
297. Then it is not from the scarcity of water that the closets become choked up? No, it is not from the scarcity of water, but from the negligence of the inhabitants.
298. But that is not the case with the gully-shafts? No; that is from want of water to keep them constantly full.
299. Are all the cases you bring before the Corporation prosecuted to conviction? The greater part of them are.
300. And those that are not, are they dropped for want of sufficient evidence? No; when cases are not brought before the Court, it is because there is a desire shown by the persons summoned to abate the nuisance; in that case time is frequently allowed them to enable them to do so.
301. *Mr. Bell.*] Do the old gully-shafts ever get choked up? You mean the chambers?
302. Yes? They do.
303. Is it difficult to get them cleaned out—as difficult as the flap-traps? Not so difficult as the flap-traps.
304. Does the smell arise from sewage matter or from gas which escapes? I cannot say what it is from.
305. I should like you to give the Board some idea of the class of men who clean out these sewers? They are a labouring class of men.
306. How long do they last at it? I don't think they could last more than five or six years.
307. *Chairman.*] Do you mean that they do not live beyond that time? I mean that they cannot keep up that kind of work. There are three or four of them at present in the Liverpool Asylum; they become infirm, and cannot keep up that kind of work.
308. *Mr. Bell.*] They become quite crippled, do they not? Yes, I have seen several of them quite crippled.
309. Will you describe the appearance of the water in that large pond at the Sugar-works, to which you have referred, on the surface? There is a green fatty substance on the surface generally, in the north-west corner; that is nearest to where the pipe conveys the water into the Sugar-works.
310. And I suppose the smell is very bad? Yes, the smell from that corner is really very bad.
311. They use that water over and over again, do they not? Yes, it goes in and comes out, and goes in again.
312. And the overflow, when they let it off, goes down towards Blackwattle Swamp? Yes.
313. Is there a great deal of sickness in that neighbourhood? There is.
314. *Mr. Watt.*] I think you mentioned that the results of your summons at the Central Police Court were satisfactory? I said they were more satisfactory recently.
315. How are they with reference to the other Court—are they equally satisfactory? Within the last month or six weeks they have been, but only since certain articles appeared in the *Sydney Morning Herald*.
316. Do you know of many cases in Sydney where the closets are above the level of the water-pipes? Yes, there are many cases.
317. Can you form an opinion as to what proportion of them are above the level of the supply-pipes? All the water-closets up-stairs in every house are above the pipes.
318. What proportion of the houses do you think are connected directly with the water-mains? I could not say; I believe about 5,000.
319. *Hon. J. B. Wilson.*] You have mentioned certain localities in which you found a large amount of sickness, such as Darling Harbour, Blackwattle Swamp, and Surry Hills—None of these places are connected with the underground sewerage, are they? Blackwattle Swamp is connected, and so is Darling Harbour, and a portion of Surry Hills.
320. Does not much of the offensive smell at Darling Harbour and Blackwattle Swamp arise from the exposure of noxious matter? Yes, and I think if we had large receptacles, which we call silt-chambers, to receive all that matter, it would not be so offensive.
321. Do you think those portions of Sydney which are brought into the underground sewers are better situated than that part of Surry Hills and those other places you spoke of as being entirely dependent upon open surface drainage? The portions of the city where there is underground sewerage are far before those which have open drains, in which we have found urine and frequently human excrement. Our scavengers have found this lying in the gutters repeatedly.
322. There are several distinct systems of sewerage in Sydney, are there not? Yes, there are some sewers constructed of brick and some stoneware.
323. But there are several different systems of sewerage, commencing and ending at different points? There are.
324. And one of them has an obelisk to ventilate it? Yes.
325. Have you ever observed whether the drainage area which has that obelisk connected with it is as offensive as the others? I have not.
326. What is the quantity of refuse which is removed by the Corporation weekly in their carts—Do you know? Yes; for the present week, ending yesterday, 1,007 loads of street sweepings, 432 loads of house rubbish, 25 loads of refuse from the city markets, 36 loads of stuff from earth-closets, and 190 loads of street refuse from gully-shafts, making a total of 1,690 loads for the week. Dead animals for the same week,

week, 542; of all sorts—fowls, rats, cats, dogs, &c. I have a book (*producing it*) which shows everything—the street it is found in, and where it is taken to. I have another book which shows all the street sweepings.

Mr.
R. Seymour,
27 April, 1875.

327. What becomes of these 1,690 loads of rubbish? A great deal of it goes to the City Common; some of it goes to Harris-street to fill up large holes, some of it goes to Macquarie-street for the same purpose, and a great portion of it goes to the Domain for garden use. Some of it has lately gone to Wynyard-square, and some to the Flagstaff.

328. Do people make complaints of that rubbish? They do sometimes.

329. Is it offensive in your opinion? It is offensive for a day or two, but after that it is not. You can pass along Wynyard-square without being offended by it.

330. Has any attempt been made to utilize that refuse by taking it out of the city? There has not to my knowledge. I think there ought to be.

331. Do you think it could be made remunerative? Yes, I think it might be sold. I have had a proof of it during my time in the old city yards. The first year I started to sell it for the City Council we brought in £10, but the last year we brought in £700 or £800. Then Moore Park was commenced, and everything was carted there. I think there have been about 120,000 loads taken to Moore Park.

332. Did any great nuisance exist in Moore Park in consequence of this accumulation of city refuse? No, because it was spread out as soon as it went there.

333. And the noxious elements were got rid of in that way? Yes; when it is spread, after the second or third day there is no smell whatever from it, unless you go there for the purpose of finding it.

334. Where do you at present take the matter from the earth-closets? To Moore Park, and to the back of Steel's Battery, where it is mixed with street sweepings. The house refuse is taken to Moore Park and used for top dressing after being subject to fire and then screened.

335. Are any complaints made by persons residing in that neighbourhood? I have heard none.

336. *Hon. J. Smith.*] Do you make house to house visitations in these cases? I do, sir.

337. From house to house as you go along? I do, sir.

338. Whether the house looks of a respectable character or not? Yes—I go to every house.

339. And do you take all the streets as far as you can? I take every street as far as I can.

340. In this house to house visitation have you met with a great many very crowded localities? I have.

341. Where are they chiefly? In the west end of the city—that is west of York-street chiefly.

342. Do you mean towards Darling Harbour? Yes; I have found rooms with eight stretchers in each room; there was not room to walk between each bed. Those are what they call six-penny lodging-houses. We found in one room in the yard in one of these houses in Clarence-street, and within three feet of a common water-closet, five beds.

343. Is there any law to prevent this crowding in lodging-houses? No, there is not, sir.

344. Apart from these lodging-houses, have you met with cases where families have been over-crowded? Yes, I have. I found a house with four rooms and four families in it—one family in each room; seven persons sleeping in one room.

345. Can you give the Board any idea of the dimensions of that room in which seven persons were sleeping? Yes; it was a room at Miller's Point, 12 feet by 10 feet; the father, mother, and five children slept in it. They were cow keepers, and in a yard not a quarter the size of this room there were four or five cows.

346. Then these over-crowded localities are chiefly along Darling Harbour, are they? Yes, they are.

347. Have you distinctly observed that there has been an unusual amount of disease in these localities? I have seen more disease there.

348. Can you name any doctors whose practice lies in those localities? Dr. Dansey is one, Dr. Gilhooley is another; I cannot remember the names of the others.

349. Is there, in your opinion, a great deal of over-crowding in Sydney? I am sure there is.

350. And you think that is a fruitful cause of disease? It is.

351. And, as far as you know, there are no means of preventing this over-crowding? So far as I know there are not.

352. Which do you consider the filthiest part of Sydney? I always look upon the west end of the city, from York-street down to Darling Harbour, as the worst; it would require an inspector of nuisances for itself; it requires to be gone through every week. In that locality also there is a great deal of prostitution. There is one whole lane containing prostitutes—thirteen, fourteen, and fifteen of them lying in one room without beds, or table or furniture of any kind. That lane is called Exeter-lane, and is of very bad repute. It is inhabited almost entirely by prostitutes of the lowest class.

353. And can you say, from your own knowledge, that disease is much more prevalent in those localities? I am sure it is.

354. You have described some very sickening cases where the water has been contaminated by pipes connected with water-closets;—are you sure that the contaminating matter was fecal matter? Yes, I had a tumbler of it in my hand.

355. Are you quite sure that the water was not contaminated in any other way? I am quite sure, because we turned off the tap from the water-closet, and then turned on the tap of the next house and the water was then quite pure; then we turned on the tap from the closet pipe and the water was full of offensive matter.

356. And you think that in any case it must get back into the main? I am perfectly certain it must.

357. You are not regularly accompanied by a medical man during your visitations, are you? No, I am not.

358. Do you think it would be advisable in certain cases that you should be so accompanied? I do. The City Health Officer's duty does not compel him to accompany me, and the inspection of the city is carried out by me and my assistant. Dr. Dansey is only called in when I require his services in cases where the public health is endangered.

359. You call him in to inspect bad cases only? Yes, I do all the inspection myself.

360. And you think it would be desirable that a medical man should make a regular round of visits himself? I do. I think it ought to be the duty of the Health Officer.

361. You spoke of earth-closets;—are they in general use? No, there are only 109 in use.

362. Are they confined to any one locality? No, they are spread over various parts of the city.

363. Have you had any experience in judging of their value? The present earth-closets I believe to be a perfect

- Mr. R. Seymour. perfect nuisance. In the first place we have no proper earth for them; then the servants empty all the night refuse—everything in fact—into them. I speak from experience, having one in my own house, that they are a perfect nuisance.
- 27 April, 1875. 364. You spoke of Arthur-street as being an unhealthy locality;—where is that? It turns out of Bourke-street. There is a large gutter there which receives a great deal of refuse.
365. And you think that is the cause of a great deal of disease? I think so.
366. You think that places which have only surface drains, which carry away very frequently fecal matter, are more unhealthy than those which have underground sewerage? I do, sir.
367. Do you think you can fairly infer that this unhealthiness is due directly to the exposure of fecal matter? I believe so, from that and the refuse water from the kitchen and laundry lying in the gutters. It has been a general complaint. The parties have said to me, Mr. Inspector, we are all laid up from the dreadful stench from that place—pointing to the drain in the street.
368. The complaint of the inhabitants is that they are all affected by the stench from these open drains? Yes.
369. Are the contents of closets ever removed by the city servants? Only the earth-closets; they are removed by the Corporation servants; the contents of the other places are removed by the owners or occupiers through a night-man. Formerly the Corporation had a contract for removing it all. Then the night-men gave it up and we could get no one to do the work. It is now done by private persons, who make their own contract with the person who removes it.
370. *Chairman.*] Are these places cleaned out as often as they ought to be? I don't think so.
371. Have you power to compel the parties to empty them more frequently? We have the power, if the place creates an unpleasant smell, to compel the party to empty it, and if he does not we bring him up at the Police Court.
372. And if there were no unpleasant smell it would be useless to summon him? Yes.
373. Do you think it would be better for the Corporation to take the cleaning out of these cesspits into their own hands, and to empty them whenever they considered it desirable to do so, and in all cases to charge the occupier of the premises or the landlord, as the case might be? I think it would be a great improvement.
374. Have you any sub-inspectors under you? I have one. My house to house inspection last year comprised 8,000 houses.
375. Could you perform your duties more efficiently if you had more assistance? I could. I may mention a way in which the police might assist me materially:—We have a system of cleaning the city; the centre portion, from Hunter-street to the Railway Bridge, bounded by Elizabeth-street and York-street, is cleaned every morning, and the other portions of the city twice a week and sometimes three times. That has been done during the last two months. But after the streets have been cleaned, parties will shoot the whole of their filth into the gutters in order to avoid being summoned for not having sent it away in the Corporation carts. Now, if the police would give me notice of all such occurrences I should be able to summon the offenders, and that would be a great assistance to me in the discharge of my duties.
376. About how many houses remain unvisited by you? There are about 15,000 houses in the city altogether; but I don't count in my visitation those of which complaints have been made, that is to say, I have inspected other houses which I do not count.
377. Do we quite understand you to say that when you have issued a summons no influence is brought to bear upon you by persons having authority to withdraw that summons? No, only where there is shown a desire to abate the nuisance, and then the Mayor sends for me and asks my opinion, and whether the ends of justice will be served by what has already been done, and if I think so then it is done, and the summons is withdrawn on payment of costs.
378. Is that the way it is always done with you? Yes, as long as I have been in office.
379. *Mr. C. Watt.*] Have you inspected the Railway urinals? Yes, I have.
380. Is it part of your duty to inspect them? It is my duty to inspect every place in Sydney—public or private.
381. *Mr. Bennett.*] You have complained very much of the nuisance in Park Road, Moore Park. Do you think any of that nuisance could percolate into Busby's Bore? I do not think so. It might percolate through the ground; but I don't think it could get into the Bore.
382. Are there any other places where percolation could take place into Busby's Bore? Not to my knowledge.
383. But there might be;—there are a number of cesspits and closets there, are there not? No, not in the direction of the Bore.
384. There is a great deal of refuse matter spread on Moore Park, is there not? Yes.
385. Does the water from Moore Park flow into the water supply, or does it go into Shea's Creek? Only a portion of it; but no refuse has been put on that part of the Park since a complaint was lodged with the Mayor and Council.
386. That was about eighteen months ago? Yes, the portion over which refuse is spread has no connection with the watershed.
387. What proportion of the houses are connected with the sewers? I cannot tell you; that is in Mr. Bell's department.
388. Could any offensive matter percolate through the sand into the Bore without going through the shafts? I don't think so; it might percolate through the sand but not into the Bore.
389. *Chairman.*] We are very anxious to obtain evidence as to the cleanliness of the city. Can you tell us of any person not officially connected with it who is acquainted with the state of the city and is in the habit of going about it? I do not know any one more capable of giving evidence on these matters than the doctors, who are constantly going about the city.
390. Do you know any of the city missionaries. They are supposed to go about a good deal. Do you see them often? Sometimes.
391. Can you give us the name and address of one of these gentlemen whom you see frequently? There is Dean Cowper; I meet him in many portions of the city travelling about; and there is Mr. Shepherd—I meet him also in many parts of the city. We also frequently see Mr. Pidgeon and Mr. Robins.

WEDNESDAY, 28 APRIL, 1875.

Present:—

H. G. ALLEYNE, Esq., M.D.,
E. O. MORIARTY, Esq.,
P. F. ADAMS, Esq.,
HON. J. B. WILSON,

F. BELL, Esq.,
W. C. BENNETT, Esq.,
C. WATT, Esq.,
HON. J. SMITH,

G. F. DANSEY, Esq.

M. B. PELL, Esq., B.A., IN THE CHAIR.

Mr. David Clement Robertson, Inspector of Waste Water, called in and examined:—

392. *Chairman.*] You are Inspector of Waste Water to the Sydney Corporation, I believe? Yes.
393. You have in that capacity, I presume, some knowledge of the connections between private houses and the water-mains? I have.
394. There is one particular matter to which we wish for the present to confine your evidence—the connections between the mains and the water-closets. One case in particular has come under the notice of the Board, which I dare say you remember; it occurred about twelve months ago, in which the water was contaminated in consequence of direct connection with a closet? Yes, I remember it.
395. We are aware of the particulars of that case, and we are also aware that similar cases have occurred elsewhere; in fact we have been told that there are a great many cases of the same kind? There are, sir.
396. We wish to obtain from you some more exact information as to the number of cases in which that direct connection still continues? At present there are 5,400 patent closets in the city; and there are 4,700 which have direct connection with the mains.
397. What do you understand by patent closets? Those closets where the water is laid on for the purpose of flushing the pans.
398. They only go by the name of patent closets; they are not really patents—You mean the ordinary water-closets? Yes, they are called patent closets. This is a plan of such a closet-pan (*producing plan*) with the connecting pipe for flushing it, as was mentioned in Mr. Seymour's evidence yesterday.
399. This plan refers to the ordinary water-closet? Yes; all water-closets have pans like this; that is the pan commonly used.
400. And which was used in the case we are referring to? Yes.
401. You say that out of the 5,400 closets now in use, 4,700 are directly connected with the mains? Yes.
402. Then the difference between these two numbers comprises those which have cisterns? Yes. 700 of them have cisterns.
403. Is it any part of your duty to inspect these places? Yes.
404. Have you received any instructions in reference to alterations necessary in connection with these existing closets? No, not in respect to existing closets,—only for the future.
405. Then nothing has been done, to your knowledge, to enforce a better system in respect to existing closets? No; except that when repairs are needed, or new closets have to be made, then we make the plumbers adopt the cistern principle.
406. And the old closets are allowed to remain as they are? Yes.
407. Are there any closets existing similar to that from which this terrible contamination took place? Several. I may safely say one hundred have come under my notice within the last twelve months.
408. There are hundreds as badly circumstanced as that one was? Yes; whenever the taps or valves are left open, suction takes place, supposing the main to be temporarily empty, and draws offensive matter from the pan.
409. And then if the main is not full the offensive matter drains in? Yes.
410. Do you think that sort of thing is going on now? Yes.
411. That the gaseous matter from the closets is liable to be drawn into the main from which the citizens of Sydney obtain their supplies of water for drinking? Yes, in all cases where there are no cisterns.
412. And you say you have had no instructions whatever in respect to existing closets? None.
413. Are you aware whether it is a common practice, or whether it frequently happens, that taps are left running or open when there is no water in the mains? Yes; the citizens as a rule are in the habit of propping up the handles of the valves so as to leave the tap on, and then if any accident happens, or any repairs are being made, and the water is shut off from the main, this suction takes place, and when the main is charged again, the offensive gases are driven into the service pipes, and thence into the taps.
414. Does it frequently happen that when water is drawn off the mains this suction takes place? Yes; it is frequently necessary to turn off the mains while connections or repairs are being made.
415. Then that is a thing which frequently happens? Yes, it is often necessary.
416. Have you heard frequent complaints about the water being offensive from the citizens of Sydney? Yes, I have.
417. Is it your opinion—because your opinion, considering the nature of your office, ought to be of considerable value—that these complaints are occasioned by the cause we now have under consideration? Yes, I am confident of it.
418. In fact the sewage matter from the closets gets into the pipes? Yes, in one place in Woolloomooloo we tested it.
419. But where no special test has been made you think it frequently happens in cases which have not excited particular notice? I am sure that where these closets have no cisterns, a quantity of bad gas is sucked in when the water is off, and even matter as well.
420. Now with respect to new closets, there is a particular kind of small cistern adopted is there not? Yes.
421. Is that adopted in all cases where new closets are constructed? Yes.
422. Does it work satisfactorily? It does.
423. Are you entirely satisfied with that system? I am.
424. Practically you find it works well? Yes; it has no connection whatever with the sewer.
425. And it is not likely to get out of order? No, not at all likely, and if it does, it is of very simple construction, and can be very easily repaired.

Mr. D. C. Robertson.

28 April, 1875.

- Mr. D. C. Robertson. 426. What, in your opinion, would be the additional expense of using these cisterns? Between three and four pounds each.
- 28 April, 1875. 427. The cost would depend upon circumstances? Yes; some persons like to have them made of lead, and some of iron, and that makes a difference in the expense.
428. I presume from the nature of your office you have some acquaintance with the plumbers in this city, and with plumber's work? Yes.
429. Can you give us any idea of what would be a reasonable time to require that all connections with closets should be made in this way by means of these tanks? It should be fully four months.
430. Do you think if the landlords or householders were required within four months to make the connections with their closets in this way any serious inconvenience would arise with the plumbers in the shape of extortionate demands? Well, that would be the difficulty, because the plumbers are very busy just now, and they are likely to be so for some time.
431. Can you suggest any plan by which this difficulty might be mitigated or overcome. Would they contract to make these connections in a given time? I don't see how that could be done. Every man would like to do his own work, or see to its being done for him by some one else. The Corporation have nothing to do with the inside work of a house.
432. Was there not some plumber who undertook to furnish tanks on this plan at a fixed price? There was; it was Chandler, the plumber.
433. Was it a contract or merely a statement that the work would be done at a certain price? He said he would make cisterns at £2 15s. each; but they were common cisterns of galvanized iron, and most people would like to have them of lead.
434. Do you think the alteration could be enforced without any serious difficulty in four months? Well, I think, upon consideration, it would take between five and six months. If the plumbers saw it had to be done in a limited time they would be apt to ask too much, and the householders would not like to pay. I should say six months would be a fair time to state.
435. What do you think would be the effect of an order that all closets directly connected with the mains should have the water cut off at once, leaving it to the occupier of the house or the landlord to make the proper connection whenever he thought fit? Well, sir, that would answer very well with careful people, who would take the trouble to flush the closets, but I am afraid that in many cases they would be too careless to clean out the pans, and a quantity of the soil would remain festering and causing offensive smells.
436. You think that would create a nuisance in the city? I am sure of it, from experience.
437. Then you would not recommend that plan? I would not.
438. Is there anything you could suggest—any mode of remedying this evil in less than six months? No, I can see nothing else, except to adopt the cistern principle.
439. Are you acquainted with any other effectual mode of connection? No; the water must be discharged into a separate cistern.
440. Have you ever heard of the flexible tube by which water is directed into the pan? I have heard of it.
441. Have you any knowledge of that system? No, it has never come under my consideration.
442. Mr. Moriarty.] Are you aware whether there is any law to compel landlords to put cisterns in their houses? There is no law to compel them.
443. They need not do it unless they choose? No; there are numbers now adopting the system since they have found out that the water is being contaminated by closet matter.
444. Have you found them refuse in any instance to carry out that system? Yes.
445. And they cannot be compelled? There is no law to compel them.
446. Are there not certain parts of the city from which, as a rule, the water is shut off at night? There were sometime ago; I am not aware of it now.
447. Such as the neighbourhood of the Gaol, and the higher parts of Woolloomooloo? I am not aware of it now.
448. A gentleman who lives there told me that they never have any water there now at night? I am not aware of it.
449. Are you acquainted with the mode adopted in Liverpool now in certain parts of the town—the use of flexible tubes? No, I am not.
450. Mr. Bennett.] Is there any difference in these closets which you say are connected directly with the main; are they in any localities more likely to contaminate the water than in others? No.
451. The liability is the same—but a closet connected with a large main would contaminate more water than a closet connected with a small main—the injury would be extended? Yes.
452. And that would be the place where you would commence the alterations? Yes.
453. You stated to the Chairman that you knew absolutely of one hundred cases in which the water had been contaminated by the closets? Yes, where the pans were choked, and the closet soil had got into the pipes.
454. And you have been aware that the water was contaminated? Yes, and the Inspector of Nuisances had been prosecuting the persons.
455. And in all these cases you found the water contaminated? Yes.
456. Have you seen closets such as they have in England in which you can only put one panfull of water, and if you prop up the handle the water ceases running? Yes, I have seen them.
457. Hon. J. Smith.] In the performance of your duty do you make house to house visitation? I have visited the greater part of the city; not the whole city.
458. Do you visit from house to house regularly as a part of your duty? No; I went with the Inspector of Nuisances to the western part of the city about eighteen months ago; we are constantly carrying out this inspection; we travel together.
459. Then in what way did you make up that estimate of so many closets having direct connection with the mains? By taking the numbers as we travelled along.
460. Then you have seen as many as that? I have.
461. And it is likely that there are a great many more which you have not seen? Yes; but a good many have been fixed on the improved principle since then.
462. How many out of the 15,000 houses in Sydney do you suppose you have visited and inspected? Well I suppose I have been in about 14,000 altogether.

463. Then the probability is that you really know the most of the cases—nearly all of them where the closets are in direct connection with the main? I do, sir, but a great many have been connected since the date of my inspection. Mr. D. C. Robertson.
464. But you spoke from your own knowledge when you gave that number? Yes, the number is correct, but it is probably larger now. These are the cases which have come under my notice. 28 April, 1875.
465. And in your own knowledge there are upwards of one hundred cases in which the water in the mains is actually contaminated by the water-closets? Yes, about a hundred cases.
466. Have you heard many people complain of that? I have.
467. And have they attributed the badness of the water to that particular cause? No.
468. But you satisfied yourself that it arose from that cause? I am quite satisfied of it.
469. Do you think an efficient cistern can be put up for £2 15s.? No sir, it cannot, if the work be substantial—not under £3.
470. But you think it can for £3? Yes; a good strong cistern, to hold ten gallons, with a compartment to hold two gallons of water sufficient for one flush. When placed overhead it gives a greater pressure.
471. Are there many cases in which persons have voluntarily replaced the old connections by the improved system of tanks? Since the beginning of the year 200 new cisterns have been erected.
472. Voluntarily by the landlords and occupiers of the houses? Yes. In most cases it has been where closets required to be repaired, and the new system has then been adopted.
473. But still the majority appear to prefer drinking this dirty water to spending £3 or £4? Well, a great many persons won't believe the water is contaminated, and some of the landlords object to fix the cisterns.
474. Even in putting up a new closet? Yes.
475. Have you power to compel them? The only way we can do it is through the license we issue to the plumbers.
476. Supposing a plumber makes a connection without a cistern, how do you deal with him? The only way is summon him before the Committee.
477. What power have they? They can suspend his license for a certain period.
478. Have you any idea of the results of summonses in nuisances of this kind—have they been satisfactory? Yes, we have had the closets cleaned at once.
479. Have the Magistrates dealt satisfactorily with the cases you know of. Have you any knowledge on the subject? Yes, I am in Court every week. As a rule they treat the cases very leniently. But those are Mr. Seymour's cases; mine are only in respect to waste of water.
480. Mr. Seymour issues the summons? Yes, for nuisances.
481. Are you aware whether any complaints have been made that pressure has been brought to bear upon him to induce him to withdraw summons in certain cases? No, I have no knowledge of them. (*Witness put in certain papers. Vide Appendices A, B, C, D.*)

Francis Bell, Esq., City Engineer, further examined:—

482. *Chairman.*] With reference to the cisterns you have recommended for use in the water-closets;— have you had experience as to the working of that system of connection? Yes. F. Bell, Esq.,
O.E.
28 April, 1875.
483. Are you quite satisfied with that mode of connection? Quite so.
484. Then you persist in your recommendation? Yes.
485. Are you acquainted with any other effectual system of connection? I am not.
486. Have you any knowledge of the flexible tube system? Yes; but I have not seen it in operation, and therefore I cannot speak of it.
487. Have you any further information to give us as to the time which would be necessary to make these improved connections throughout the city? I think the evidence Mr. Robertson gave on that subject was very fair. I hardly think less time than six months would be sufficient.
488. Do you think it is possible to obtain any more reliable information on the subject? No, I do not think you could.
489. You do not think any serious difficulty would arise if the landlords were required to make these connections within six months. You think that would be allowing them a reasonable time? Yes; I think now that they know as a fact, which formerly they did not, that the water supply is liable to be contaminated from these closets, they will be anxious to make the alteration; and that if a proclamation to that effect were issued they would do it, if they possibly could, within the time.
490. Is the water turned off from the city frequently, or from any portions of it? Not since the commencement of the year—since we made the new connections, so as to give the Glebe a constant supply independent of the city.
491. Then it is laid on now both night and day? Yes, it is never shut off.
492. You heard what Mr. Robertson said about its being frequently necessary to turn it off, did you not? Yes; when house connections are being made it is necessary.
493. Then you confirm what he said? Yes; the water is shut off only for a short time, while the connections are being made.
494. Then it is never turned off at night? No. If we are afraid of any fires taking place it would not do to turn it off.
495. In dry seasons have you found it necessary to turn it off? No; but occasionally our mains are not full.
496. That would be only for the high level service? Yes, and only for a few hours.
497. You think, if there is a short supply of water it is from the defective pumping power more than anything else? Yes.
498. *Hon. J. Smith.*] Are there any public water-closets in Sydney? Yes, there are a good many—there is one in the market—but they are in the City Surveyor's department, and I really do not know much about them.
499. Have you any knowledge of the mode in which they are supplied with water? I know they have the water from tanks, at least the Police and Railway closets have, but those in the market have not.
500. Then there are a number of public urinals in Sydney, are there not? Yes, a good many.
501. And they are kept flushed by a constant stream of water? They are.
502. Then, in the case of repairs to pipes when the water has to be run off, there might be an indrain through those pipes? Yes, of foul air I am sure there is. 503.

- F. Bell, Esq.,
C.E.
28 April, 1875.
503. And therefore it is quite as necessary to supply the urinals with cisterns? Indeed it is.
504. But I suppose in any case there is a cistern attached to a public urinal? No, except in some instances, such as I have quoted.
505. I see from the papers you have handed in, the Corporation are empowered to make this alteration in the connections in some cases? Yes, in cases where new closets are being put up.
506. But not in existing closets? No.
507. And even in the case of new closets the Corporation have no authority to compel the use of cisterns under the Act? They do it in every case.
508. You have stated that the water is never cut off in any part of Sydney from a scarcity of supply? No, it is not.
509. But that when repairs are being done or new connections made it must be cut off for a time? Yes, between certain locks.
510. In such cases do you run the water off from the tap at the lower level? Yes. We close the nearest locks in the main, draw the plug, and run the water out.
511. Then if there should be any direct connections with water-closets in that area and the taps happen to be open, there will necessarily be an indrain into the main which is being emptied? Yes.
512. And have the mains to be frequently emptied in that way for repairs? Yes, portions of them—say about four or five a day throughout the city.

THURSDAY, 29 APRIL, 1875.

Present:—

HON. J. B. WILSON,
E. O. MORIARTY, Esq.,
W. C. BENNETT, Esq.,
C. WATT, Esq.,

F. BELL, Esq.,
HON. J. SMITH,
G. F. DANSEY, Esq.,
H. G. ALLEYNE, Esq., M.D.

M. B. PELL, Esq., B.A., IN THE CHAIR.

Michael Chapman, Esq., Alderman of the City of Sydney, called in and examined,—Alderman S. Goold being also present by permission of the Board:—

- M. Chapman,
Esq.
29 April, 1875.
513. *Chairman.*] You are an Alderman of the City, are you not, Mr. Chapman? Yes.
514. The Board have taken evidence in reference to a particular case—a gross nuisance—which occurred some time in May last, in connection with a water-closet in Castlereagh-street? Yes, I remember it.
515. We have had full evidence as to the particulars of that case —? I remember the whole affair.
516. I think you were called upon to go and inspect it? During the absence of the Mayor (Mr. Goold) I acted for him; and at the request of Mr. Bell, and I think Mr. Bradridge, I went with them to a house in Castlereagh-street, occupied by a butcher. We went also to the house next door, occupied by McNeilly, a painter.
517. Were you satisfied that the water in the water-pipes supplying the houses in that neighbourhood was contaminated by this nuisance? The pan of the butcher's closet was some 8 or 10 feet above the tap which supplied the next house, and matter from the closet came out of the tap in the next yard. I saw it myself.
518. Then you were quite satisfied of it? We have also been supplied with copy of a report from the City Engineer to the City Council, respecting a number of closets connected in a similar way with the main. Do you remember that report? Yes.
519. What we wish to ascertain from you is what steps were taken by the City Corporation in consequence of communications made to them in consequence of that report? We sent officers to survey all places which were likely to be in that state. We also called for tenders for an improved water-closet cistern, and at my suggestion we offered a prize for the best plan of supplying the water to closets, and also hindering the great waste of water. We had a great number of plans sent in, and a gentleman of the name of Chandler got the prize of £10, and his system was adopted. Since that time numbers of cisterns of that sort have been erected in the City of Sydney—in every instance in fact where the Corporation could have them erected.
520. You mean in every house where a new connection was made? They are doing it in every new connection, but in hundreds of instances we have introduced them into old closets. For instance, I have ordered ten cisterns myself, and I know many other persons who are equally anxious to have them.
521. Are you aware of the number of closets in the City of Sydney which have improper direct connections, and the number of those which have the improved or some improved system of connection? I could not tell you the number.
522. Are you aware that the number of those which have a safe connection with the main by means of a tank is wholly insignificant in comparison with the total number—not more than 10 per cent.? I would not venture to give an opinion.
523. As far as you know, have the City Corporation any power to compel persons to adopt this improved method of connection, or any improved method of connection? They are doing it with all the new connections.
524. But in respect to the old ones? No, we are fully aware that we have not the power.
525. Can you pass a by-law to give the Corporation that power? No, we have no power to compel persons to pull down and erect, but we induce them to erect the cisterns whenever we can.
526. But it is not a question of erection or pulling down—it is simply to cut the pipe and put between the separate portions of the pipe a tank, so as to divide the connection? Whoever told you that—that the method was so simple—told you wrong, because, although the estimate for supplying the tank may be only £2, it costs about £4 if erected. In some instances you have to put down a fresh water-pipe.
527. What would be the extreme expense in each case, do you think? About £4 to £4 10s. For that you could get a very fair one.
528. I am speaking of old closets, now in direct connection with the main. What would be the expense of cutting the pipe and fixing a cistern? About £4 or £5.
529. You think that would be the extreme cost? Yes.

530. And you think that, as you stand, you have no power to insist upon this being done. I am speaking of existing closets entirely? No, I believe we have not the power. M. Chapman,
Esq.
531. And that the passing of a by-law would not enable you to do so? No, I am sure it would not.
532. This particular case which occurred in Castlereagh-street was of such a flagrant character that it was detected. We are informed that some other cases of a similar nature have occurred since. Have you heard of anything of the sort? I have not heard of any. That was a case which would not occur once in a hundred times. The water-closet was 8 or 10 feet above the level of the tap in the next yard. 20 April, 1875.
533. Are you not aware that a great number of the water-closets are upstairs? Yes; but I have never known any closets upstairs that were not supplied with cisterns.
534. Are you aware that out of 5,100 water-closets there are only 700 that have cisterns? I am not aware of it.
535. We have had the information from your own officers? I think they must be mistaken.
536. Were the City Council aware that with this large number of closets, having direct connection with the water-mains, there was constant danger of the water being contaminated? May I ask you whether this is an inquiry into the best method of disposing of the sewage of the City of Sydney, or an inquiry into the working of the Corporation? I understood it was an inquiry in reference to the disposal of the sewage.
537. It is an inquiry as to the best thing to be done to remedy the evils which are said to exist in connection with the health of the city, and we wish to ask you what information you had, and what steps were taken in consequence of that knowledge. Our instructions are very wide, and we are specially urged to inquire into all causes which affect the health of the inhabitants of Sydney. With that object I ask you whether the Corporation were aware of certain things, and what action was taken by them. If we do not know what steps the Corporation have taken how can we advise the Government as to what steps they should take. We wish to know what powers the Corporation possess, so as to be in a position to recommend, if we think those powers are deficient, that they should be enlarged, and we wish to know what has already been done, that we may advise the Government accordingly. I have therefore asked you what has come under your knowledge in respect to these matters. It is natural that the Board should wish to ascertain whether the persons authorized to act are in possession of the information which they have received, and what they have done. If the Corporation have already taken the proper steps then it will not be necessary for us to do more than advise the Government that they have done all that was required? Will all my remarks be printed as well as yours, or will only that portion which suits the Commission?
538. It will all be printed, and a copy of your evidence will be sent to you, in order that you may make any corrections you think necessary: We have been told, and I may I think say we believe, that there are a large number of closets in the City of Sydney so circumstanced that they are liable—not now and then, but frequently, daily—to contaminate the water in the pipes which supply the inhabitants of Sydney with water for domestic use, not perhaps to an excessive degree, as in the very flagrant case to which I have just referred, but to a degree which is both revolting and dangerous. We wish to know if the Corporation have been in possession of the same information? I presume the information has come from the same source that the Corporation have had it from. I don't believe it for all that.
539. What don't you believe? That there is so much danger, or that it is likely so much filth is thrown into the water used by the citizens—I do not believe that report.
540. It is not a report—we have evidence to that effect—we have a report by the City Engineer? Well, there is a difference of opinion on the subject. I believe it is bad, but nothing like so bad as it is represented to be. I believe some of these reports are written by officers when they have never seen the places themselves—it is done by their subordinates.
541. Has it ever been reported to you or to your colleagues that there are a large number of cases in which it has been ascertained, as a matter of fact, that the water has been contaminated by matter from the closets—as a matter of fact? No, I have not heard of it. I have heard of one very glaring case—that in Castlereagh-street; but I question whether there is another like it. That was a case where one house was built on a bank, and the adjoining house in a place that had been excavated, and the closet in one house being 8 or 10 feet above the level of the tap next door, the filth flowed from one to the other.
542. Has it ever been reported to the authorities that the nature of the connections is such as to render it certain—not a question of opinion—that under circumstances frequently occurring, foul gases at all events, and in some instances the contents of these closets, must get into the water-pipes? Has that ever been brought under the notice of the Corporation? I dare say it has.
543. Do you credit this? No, I do not believe it.
544. You think the engineers and men of science, whoever they may be, who assert that to be the case, are mistaken? I believe they do not know so much about these matters as a practical man. I believe a plumber is a better judge than an engineer in reference to matters of this sort.
545. I think I asked you what steps had been taken to remedy these evils, and you stated that the use of cisterns had been enforced in the new connections only? Yes; it is very doubtful whether we have power enough to do that, but we assume the power, and we find the citizens are very willing to act with us to remedy the evil.
546. You think this case in Castlereagh-street was an isolated case, and that there is no present necessity to alter the existing system with respect to these 5,000 closets? I did not say so. I do believe it is necessary to do it, because it is possible that some foul gases may get into the pipes, and I believe it is necessary to have the whole of the closets in the city altered and fitted with cisterns.
547. But you did not think it of such pressing importance as to make it necessary to take any immediate decisive action? We could not do it because we had not the power; in fact, it is doubtful whether we have the power now to do what we have done.
548. At all events you did not think there was anything so pressing as to make it desirable that the Corporation should seek to obtain further powers? We were so sick of seeking further powers from the Government that we thought it was a forlorn hope. Instead of giving us more powers they bereft us of everything they could.
549. This particular case of the water-closet in Castlereagh-street occurred in May, and Mr. Bell's report was written in July. A resolution was passed by the City Council some time in September, instructing the City Engineer to furnish particulars to the City Solicitor to enable him to draw up a by-law, enabling the

M. Chapman, the City Council to enforce the new system of connection in all new cases?— That is quite correct, and it has been carried out.

Esq.
29 April, 1876. 550. That resolution only applied to the new connections? Yes.

551. You did not think it was necessary to obtain powers to enforce the alterations in the existing closets? We thought it necessary, but we considered it a forlorn hope.

552. Then you would be very much obliged to the Board if they should succeed in obtaining these powers for you? The citizens would. But it appears to me that you are inquiring into the working of the Corporation, and it is hardly fair to put these questions without giving the Corporation an opportunity of defending themselves. It has been asserted out of doors by a gentleman on this Commission that the Mayor and Aldermen connive in stopping prosecutions under process of law. Now that is not the case. I have never known a single instance of it. In about every instance when applications have been made to stay proceedings, the Mayor has told the Inspector to do his duty, and that unless some very good reason was shown the case must go on.

553. Without reference to anything that may have been said out of doors, I can only inform you that the evidence given before the Board comprises no such charge whatever. On the contrary, it entirely confirms your statement.

554. *Mr. Moriarty.*] Have you ever heard that in Liverpool—I mean the City of Liverpool, in England—in many cases where the connections between the water-mains and the pans of the closets is direct, the same nuisance has occurred which is alleged to have taken place here? Yes, because the water supply in Liverpool is intermittent, and the water-pipes are occasionally empty; but here we have a continuous supply, and the force of the water in the pipe is greater than the force of the matter from the closet-pan, except in the instance I have mentioned, where the closet-pan was 10 feet above the level of the tap, consequently we are not liable to the same nuisance.

555. Might not the same thing occasionally occur when the water in the pipe was being drawn off? Yes, during the time of repair.

556. *Hon. J. B. Wilson.*] As a matter of fact is not the water in the City of Sydney frequently turned off while repairs are being made, and for other reasons? Only locally, in cases of repairs. It is turned off in the suburbs occasionally.

557. Before May or July last year, when this bad case occurred, was the attention of the Corporation ever turned to the necessity of preventing direct connection between the closets and the water-mains? I think not. We knew that there ought to be some alteration, but we got so little support from those who ought to have represented us in the House that we lost all hope, not only with regard to obtaining powers to carry out these alterations, but to make other improvements.

558. I am speaking of the powers which ought to be given to you by Act of Parliament? I quote from the Act 17 Vic. No. 34: "An Act for the better Sewerage and Cleansing the City of Sydney and portions of the suburbs thereof." Clause 9 provides that—"The said Commissioners shall cause the sewers which shall be from time to time vested in them and all private drains and sewers to be constructed covered and kept so as not to be a nuisance or injurious to health and to be properly cleared cleansed and emptied and for the purpose of clearing cleansing and emptying the same they may construct and place either above or under ground such reservoirs sluices engines and other works as may be necessary and may cause all or any of such sewers to communicate with or be emptied into such places as may be fit and necessary or may cause the sewerage and refuse therefrom to be collected for sale or for any purpose whatsoever but so as not to create a nuisance."

559. Was the attention of the Corporation ever drawn—before May, 1874, I mean—to the powers they possess under this Act, or were any steps taken to enforce the provisions of the clause from which I have quoted? Our attention was not particularly aroused to it until this case occurred at the butcher's in Castlereagh-street.

560. We have had in evidence that out of 5,400 water-closets supplied with water only 700 have cisterns—we have had that in evidence from officers of the Corporation, from actual observation? I quite believe that was the case early in 1874; it is very different now.

561. Consequently, I think you will admit that the fact of 4,600 closets being directly connected with the water-pipes is a matter that ought to be rectified as soon as possible? I have admitted it already—I quite agree with you.

562. How long do you think it would be necessary to give people to make the necessary alterations all through the City, supposing a Bill were passed by the Legislature, compelling all parties to connect their closets by means of cisterns? I would not give them longer than twelve months.

563. Could you not get it done in six months? You could not get the mechanics' work done in that time. I have ordered some to-day, and the man said he could not furnish the number I required at once.

564. Do you think the Board would be justified in recommending that the water should be cut off—do you think it would be judicious or prudent to cut off the water from such houses as are directly connected with the mains? Only in very bad cases.

565. Immediately;—do you think that would answer? I believe so, and make them supply the water necessary for their closets in buckets.

566. Would not danger arise from persons allowing their pans to get full? The pans would become quite useless, and soon would work itself out.

567. And you recommend, that in cases where persons delay making the improved connection, the water should be cut off? I believe in bad cases you are perfectly justified in making such a recommendation. If we go in for the purity of the city we must adopt rigid measures, and cut off the water at once in all such cases.

568. Would you suggest that a discretionary power should be vested in the Corporation, or would you make it absolute? I would make it absolute.

569. I mean to say that there might be some water-closets kept so thoroughly clean that there would be no danger of any nuisance? You could not draw a line between them.

570. *Chairman.*] You do not believe that there is much danger from the contamination of the water, or that it happens often; but supposing you did believe not only that it was likely to occur but that it frequently occurred, what steps would you recommend the Government to adopt? The step I have just recommended—cutting the water off immediately.

571. Without giving the parties any time? I would give them no time at all.

572. You would cut it off at once, and tell the parties it would be laid on again as soon as they had erected cisterns

cisterns on their premises? Yes, making it compulsory that within twelve months every house should be supplied with a cistern. In the meantime I would make them use water from a cask, as scores of them do now.

573. There is one question indirectly connected with this subject I have not asked yet. You were two years Mayor I believe? Yes.

574. Were you much troubled by persons who wanted you to exert your influence to get summonses withdrawn? That was tried once, at the commencement of my office, but it was never tried afterwards.

575. Not after the first time? Never after. Of course these influences are brought to bear, not by the Aldermen but by persons out of doors, but I have never known an instance of the Mayor giving way. The only difficulty we have had to fight against in Court, for breaches of Corporation by-laws generally, has been the miserable fines inflicted by the Magistrates.

576. That has been remedied, has it not? Yes; to-day one man was fined £15. We have had a great deal to contend with. Our officers have been quite disheartened; men have been fined as low as 5s. for very gross cases, where the filth from cow yards has created a great nuisance.

577. Could you name any Magistrates who in that way prevent the proper discharge of their duties by the officers of the Corporation? I could name Magistrates who come down to the Court when it is not their day on the roster, and who fine shillings when they ought to fine pounds.

M. Chapman,
Esq.

29 April, 1875.

Stephen Goold, Esq., M.L.A., called in and examined:—

578. *Chairman.*] You have heard the evidence given by Mr. Alderman Chapman;—do you concur in the answers he has given? My answers would be very similar to those given by Mr. Chapman, except in one particular. I do not think it would be desirable to recommend the Government to cut off the water at once. I think if you gave the people three months' notice you would have double the number of cisterns erected; I believe they would do all they possibly could during that time.

579. You would not object to cut them off after three months' notice? No.

580. Do you think that would be the opinion of the members of the City Council generally? Yes. I believe the answers given by Mr. Chapman are in perfect keeping with the opinions of the whole of the Aldermen in this city. I think that cisterns should be erected with as little delay as possible, and the very reason they have not been erected long ago is that we have been perfectly powerless in the matter; and I do not believe even now that we have power to enforce the erection of cisterns even in new buildings.

581. Is there any other evidence in connection with this particular point which you would like to give us? I must say that I never heard that the water was being rendered impure only in reference to this particular case in Castlereagh-street. No case was ever reported to me.

582. Were there no cases reported of the water being impure? No, only that one. When the dam was being enlarged there were many persons ready to state that they found dog's hair, cow's hair, and all sorts of things in the water, but there was no ground for such statements.

S. Goold, Esq.,
M.L.A.

29 April, 1875.

FRIDAY, 30 APRIL, 1875.

Present:—

H. G. ALLEYNE, Esq., M.D.,
F. H. GRUNDY, Esq.,
C. WATT, Esq.,
HON. J. SMITH,
G. F. DANSEY, Esq.,

HON. J. B. WILSON,
F. BELL, Esq.,
W. C. BENNETT, Esq.,
E. O. MORIARTY, Esq.,
P. F. ADAMS, Esq.

M. P. PELL, Esq., B.A., IN THE CHAIR.

Henry Norman M'Laurin, Esq., M.D., called in and examined:—

583. You are a doctor of medicine? Yes.

584. It has come to the knowledge of the Board that the water supplied to the inhabitants of Sydney has on several occasions been contaminated by fecal matter from the water-closets, and we are anxious to take this matter solely into consideration for the present, as it is one which the public are especially interested, and we wish to inspire them with a wholesome dread of the results which must follow. The Board are anxious to obtain further particulars from members of the medical profession in reference to the received opinion of the faculty as to the danger of using water so contaminated—the recognized opinion of the profession, arising from the introduction of matter of this nature into the water used for house purposes. To that point alone our inquiry is at present directed. Will you be kind enough to state what is the received professional opinion on this subject? There are several diseases which, it is believed, can be produced or propagated by fecal contamination of water. First of all, diarrhoea. It is admitted, I think, by everyone—in fact there is no doubt whatever about it—that diarrhoea can be produced in a great number of cases by this method of contamination. I have myself seen several cases of which I could, if necessary, furnish the details to the Board—

585. Do you mean to say that diarrhoea is produced or communicated by the introduction of fecal matter into the water? It is produced by the fecal contamination of water in certain cases and under certain circumstances.

586. You were alluding to some particular cases which have come under your notice when I interrupted you? I could give the Board the details of a case which came under my own notice in the harbour of Wellington, New Zealand. I have a MSS. book with me, from which I can give them to you if you desire, but I can sufficiently describe the circumstances without them. Up to a certain day in the month of June, 1869, the crew of H.M.S. "Challenger" had been using distilled water. On that day the supply of distilled water ceased, and they commenced to use water supplied from the town. As soon as they began to use this water an outbreak of diarrhoea took place in the ship, which continued for about three weeks. During that time I was making inquiries, and I found out that the water with which they were supplied had been contaminated with fecal matter. In Wellington there are no drains at all, and during the heavy rains there had been a great deal of soakage from the cesspits into the water which was supplied to the ship. I advised the Commodore to cease using that water and to distil water again for the use of his crew; he did so, and as soon as ever they commenced the use of distilled water the diarrhoea ceased.

587. Were you assured of the presence of fecal matter in that water, or did you suspect it only? I was sure

H. N.
M'Laurin,
Esq., M.D.

30 April, 1875.

H. N.
McLaurin,
Esq., M.D.

30 April, 1875.

sure of it, because I examined it. It had a disagreeable smell, and it was of a milky consistency; you could see the granules of matter in it; and I found that it had been contaminated, because during the dry weather the water came from a natural spring in the hills, but after a long period of wet weather there was such a constant soakage produced by the rain that matter passed from the neighbouring cesspits into the spring adjoining.

588. Are there any other diseases which are recognized by the profession as liable to be produced by the use of water so contaminated? With respect to typhoid fever there are two opinions: One is the opinion of Dr. Budd, which is, that typhoid fever can never be *produced* by the contamination of ordinary fecal matter; but the opinion of Dr. Murchison—which I believe is the recognized opinion of the majority of medical men—is, that under certain circumstances ordinary fecal contamination can produce typhoid fever; that water contaminated by healthy feces can produce typhoid fever. On the other hand, Dr. Budd says that to produce typhoid fever the feces which contaminate the water must come from a patient suffering from typhoid fever. Dr. Murchison is of opinion that this disease can be originated even from healthy fecal matter, and that, I think, is the safer opinion of the two. I have myself seen, when I was surgeon in the Parramatta Gaol, an instance of this. We had an outbreak of fever there. We had a number of cases there which I believe sprang from the contaminated condition of the water. The water was analyzed by the Government chemist, and it was found to contain a quantity of fecal matter. We then changed the source of the water supply, and the cases of fever ceased. There was no fever case after that while I was surgeon of the gaol.

589. Where do you suppose this fecal matter came from? I suppose from fecal contamination of the water in the upper part of the Parramatta River.

590. Are there any other diseases which are generally admitted by the profession to be produced by the contamination of water by fecal matter? Yes, cholera.

591. Is it the received opinion of medical men that cholera can be produced from that cause? The received opinion is that Asiatic cholera is communicated by the water which is drunk being contaminated by the feces of patients labouring under cholera.

592. Then it would be communicated, not produced? Yes; whether it is produced or not we have no proof; but that it is communicated, in scores of cases, there can be no doubt whatever.

593. Can you enumerate any other diseases which are believed to be produced in that way? Dysentery is often supposed to be produced in the same way, but I am not prepared to give any facts which have not come under my own notice.

594. We wish to ascertain what diseases are believed to be produced by the contamination of water by fecal matter, according to the recognized uncontroverted opinions of the profession? I think I have given you most of them,—diarrhoea and dysentery, typhoid fever and cholera.

595. Are there any other diseases which are supposed to be communicated by drinking water containing fecal matter? I think I have mentioned most of them.

596. You think then, and the members of your profession think, that these diseases are very likely to be communicated from one person to another, if water is contaminated in this way? They are so certain to be communicated that I will venture to inform the Board of a case which occurred in Over Darwen, in Lancashire, in England. There was no provision for drainage, and the water supply became so contaminated that the local medical officer told the people in spring, 1874, that unless they improved that state of matters there would be an outbreak of fever in the autumn. In the autumn an outbreak took place; on the 7th of November, 1874, there were 1,200 cases of fever, and between the 8th October and the 7th November, forty-five persons died from typhoid fever.

597. You say that in this case the water was contaminated by soakage—by fecal matter soaking into it? Yes, there was no provision for drainage—the population had increased very much within the last few years—that was the second epidemic in fact. In this instance it is interesting to notice that a prophesy was made that an outbreak of fever would take place from certain causes, and that the fever did break out, for, as I have already stated, there were 1,200 fever cases, and forty-five deaths in one month.

598. Do you think that water contaminated in this way, but not so offensive as to be noticed by ordinary persons, might still be dangerous? No doubt of it; there are many forms of contamination which you cannot discern by ordinary examination.

599. Is that an acknowledged fact, recognized by the medical profession? It is an acknowledged fact with regard to cholera; I did not mention this fact. When the epidemic of cholera took place in London in 1865 it was found to be almost entirely confined to one portion of the city which was supplied with water by one company—water drawn from a river called the Lee, near Blackwall.

600. Was the water in that river contaminated? Yes, it was known to be so; it was proved to be so. The water was not offensive to the inhabitants, and there was nothing in its appearance to lead them to suspect that it was contaminated, but when analysed it was found to be so. For you may pass water through a common filtering process and get rid of the smell and make it apparently pure, but unless you adopt some unusual means of filtration, you do not destroy the products of decomposition. I mean to say that the process of filtering, to remove the offensive taste or smell, is not sufficient to remove the products of decomposition.

601. Supposing the air, such as it is, which you find in the pan of a water-closet, is drawn into the water-main, should you think that the water might in that way be contaminated dangerously? Decidedly it might; and that is not my own opinion only, but that of every writer on the subject.

602. Without any solid matter being introduced into the main? Yes; direct communication between the water supply and the pan of a water-closet is exceedingly dangerous, because the gases are to a great extent soluble, and contaminate the water very seriously.

603. You think there would be danger of a disease being produced or aggravated in that way? A great deal of danger.

604. Is it considered that diseases produced by other causes can be aggravated by the use of water so contaminated? There can be no doubt of it. In the case I have mentioned, when the outbreak of diarrhoea took place on board H.M.S. "Challenger," I found that persons suffering from other complaints became much worse while this epidemic prevailed in the ship.

605. You think then that such diseases as measles and scarlatina might assume a more aggravated type in consequence of the use of water contaminated in this way? I believe so. I think I am safe in saying so. There can be no doubt that the use of contaminated water would produce, in a patient suffering from any other disease, similar effects to those which would be produced in a healthy person, only the symptoms would

would be more severe. A healthy person might, for instance, consume contaminated water without any very bad results, but if the same thing was done by a person exhausted with measles, that person would suffer from diarrhoea, which has been the cause of the greatest number of deaths in Sydney.

606. Then you think that where there were a number of persons living near each other, during an epidemic, and subject to these unhealthy influences, the danger to the neighbours of those who were suffering from the disease would be increased by the aggravated type which it would assume? I do not quite understand your question.

607. Would the use of contaminated water during an epidemic be dangerous, not only to the persons who consumed it, but to their neighbours, by aggravating the form of the infectious disease? I could hardly venture to give a definite opinion. I believe that where fecal contamination aggravates the character of such a disease as measles it does so by producing a specific effect upon the person so suffering—that is to say, it produces dysentery, diarrhoea, or some affection of that kind, but I am not prepared to say absolutely that the infection proceeding from that person to another would render the disease more severe. It is exceedingly probable.

608. In the course of your practice have you heard complaints of the water supply from the Sydney water-works being injurious in any way? Occasionally I have, but not frequently.

609. Have you ever had occasion to suspect that any illness was occasioned in that way? I have often suspected it in cases of typhoid.

610. You have suspected that it was caused by drinking bad water? By drinking bad water, because the cases of typhoid fever have chiefly occurred in portions of the city where there is but little provision for cleanliness—the closets, for instance, are connected directly with the main.

611. Do you know from your own knowledge that they are directly connected? Yes.

612. Is that the case in respect to closets up-stairs? It generally refers to small houses.

613. Suppose you were told that, at a rough calculation, there were 5,400 water-closets in the City of Sydney, including the suburbs, and that out of those 5,400 only 700 or 800 had cisterns, and the rest were connected directly with the main, would you consider that a serious cause of danger to the inhabitants? Yes, great danger; I think it is perfectly shocking.

614. Is it all usual, as far as you know, in Europe, for connections to be made in this way direct from the closet to the main? It is always recommended that there should be no direct connection at all; there should be a carefully guarded cistern between.

615. Is that the usual practice, as far as you know? It is the usual practice in well built houses, and it is strongly insisted upon by all writers on the subject.

616. Do you know what is the usual practice from your own knowledge? According to my experience it is very unusual to have anything but cisterns; according to my observations the new houses in London are invariably supplied with them.

617. Do you know anything of any compulsory regulations at Home in regard to this matter? The law in England has been so much changed of late that I am not prepared to state these regulations.

618. I have gathered from your evidence that it is your opinion that this state of things should be remedied without delay? Yes, I think it should be put a stop to as soon as possible.

619. *Dr. Alleyne.*] I wish to ask you one question,—whether in your opinion the reflux of gases with the water-main would not be almost as deleterious—at all events very deleterious—as the introduction of fecal matter? I think it would be.

620. *Chairman.*] Supposing the air from the closet itself were drawn into the main, would that be dangerous? It would not be so bad, but it would be very deleterious.

621. You would not like to drink a glass of water so contaminated? Indeed I should not. I think it is very dangerous that there should be any connection between the closet and the supply of water, in fact it is the first principle of safety to keep them separate.

622. *Mr. Mortley.*] Do you consider that the same danger to the public health would arise from the noxious gases given out from the outlets of sewers? I do not understand you.

623. The sewers here discharge their contents into the sea;—do you think the gas given out by the decomposed matter is likely to be injurious to the public health? If people are living near enough to the sewer mouths the public health will suffer. Gas of that kind is extremely dangerous. I am perfectly certain of it, and the nearer you are to it the worse it is.

624. *Hon. J. Smith.*] You stated, that while you were in charge of the gaol at Parramatta an outbreak of fever took place, and that you had reason to suppose it arose from the use of contaminated water;—what water was used before that outbreak? I had only been in charge of the gaol then for about three months. At the time the fever broke out they were using water from a pool in the Parramatta River, which was very convenient to the gaol.

625. And then they ceased to use that water? Yes, and used other water, and after they ceased using it there were no more cases of fever. I ought to have mentioned also in connection with that, that along with the cases of typhoid fever there was one case of malignant cholera, in which the man died in two hours.

626. Had you reason to suppose that that arose from the use of contaminated water? There was no other case after the use of contaminated water ceased.

627. In that case was the source of the contamination discovered? It was very difficult to say. The Parramatta River at that particular place runs not far from the houses. There are high banks, and houses are built near them, and there is no effective system of drainage at all, so that it is quite possible that some amount of fecal matter may get into the river.

628. In fact it was quite possible that the Government chemist did detect that matter? Yes.

629. There was no other reasonable cause for the outbreak? No; I examined all the drains in the gaol, and found no reason to suppose that there was any other cause.

630. And in that case was there anything in the water apparent—any offensive smell which would lead one to suppose that it was so contaminated? Nothing at all.

631. Had you many cases of typhoid on that occasion? I forget the number—seven or eight, I believe.

632. Is it not the recognized opinion now-a-days that typhoid is communicated chiefly, almost entirely, from water? Do you use the word “communicated” exactly as restricting the infection only from one person to another?

633. Yes, I mean communicated only, not originated, but passing from one person to another;—is it not believed that water is the principal medium of communication? It is; but we must not shut our eyes to the importance of sewage gas. When we remember such a case as that of the man who died at Cambridge from the effects of exposure to sewage gas while engaged in opening a drain.

H. N.
M. Laurin,
Esq., M.D.
30 April, 1875.

H. N.
McLaurin,
Esq., M.D.

30 April, 1875.

634. But that was a case where the fever originated? We cannot tell what matter from a typhoid patient may have been in the drain. I should not like to give an opinion on the disputed point between Dr. Budd and Dr. Murchison. It may be communicated by gas or by water; I believe it is more frequently communicated by water.

635. I think you stated that in the course of your practice you have had reason to suspect that it was communicated by water, but that you had no actual proof of it? In private practice it is very difficult to obtain such proof; it is only in public institutions or in small places that you can really trace the outbreak of fever.

636. Is it a fact that during the last few months there has been an unusual outbreak of typhoid in Sydney? Typhoid usually breaks out in the autumn—about this time. There has been a good deal of it.

637. *Chairman.*] You would recommend that a change be made in these direct connections between the closets and the water-mains, even if it should occasion considerable inconvenience; you think it is a matter of pressing necessity? I think so. I think it should be done at any inconvenience; it should be compulsory, and it ought to be done at once.

638. Have you any knowledge of the case in Golden-square, where people went to get water because it looked so clear, and yet it spread cholera all round? I have heard of it; that was in '54.

Benjamin Palmer, Esq., Mayor of Sydney, called in and examined:—

B. Palmer,
Esq.

30 April, 1875.

639. *Chairman.*] You are Mayor of Sydney? Yes.

640. We are confining our attention for the present to one particular point upon which we shall be glad to have your evidence—to the evils which are said to have arisen from the defective connections between the water-closets in the City of Sydney and its suburbs with the main. We have already obtained evidence on the subject from Alderman Chapman and Alderman Goold. They tell us, as we were already aware, that about twelve months ago—last May, I think—a portion of the contents of closets had been drawn into the water-pipes, and had contaminated the water which people were in the habit of using. The case was pointed out to the City Council, in a Report made to them by the City Engineer, a copy of which we have had before us. We find also that they were aware that other similar cases had occurred. We were told by this gentleman that the City authorities were fully aware of the exigency of the matter and the extreme necessity which existed that steps should be taken to prevent such occurrences, and they were advised that they had no power to do so? I can only say I have been in the Council for four years and it is all new to me. If anyone has told you that he has misinformed you.

641. I am merely giving you the evidence we have received. We have also been told that they considered they had no power to compel the landlords or occupiers of the houses to alter the system of connections between the closets and the mains, but they obtained power by means of a by-law to insist upon improved connections with cisterns in all cases where new buildings were erected. When asked if they had not considered it necessary to apply to the Government for Legislative powers to enable them to remedy the evil, they stated that they had been so much disgusted at the result of all such applications that they had not felt encouraged to do so. Consequently, the old state of things has continued to exist up to the present time. Is that in accordance with your own knowledge of the facts? No; it is all new to me. We have no power to compel any alterations of the kind; the by-law does not give us that power.

642. Does not it give you power in case of new connections? Yes, and during the last month or two—I forget the exact time—we have been compelling all persons making new connections, to adopt the plan suggested by Mr. Bell, and to have cisterns. With regard to those closets which were connected before, we have no power to insist upon any alteration. We tried it, but Mr. Driver said we had no power at all, as the owners had complied with the regulations existing at the time the closets were connected, and had conformed with the law then in force. But since then all new connections have to be made with cisterns. I have only known of one case where the water was contaminated, and that was in Castlereagh-street. There have been reports of other cases, but none of them have been confirmed.

643. Have you ever had reports on the subject from any of your officers, except Mr. Bell? No.

644. Have you ever heard of other cases where water has been contaminated—where it has not been so offensive as this but still bad? No, I believe it is all imagination.

645. You think the officers of the City Council imagine that the water is impure? Yes, for if that was the case and they did not report it they ought to be dismissed. I have only been in office for four months, but I have never heard a word about it. Of course I have come under the new system, the cistern system, which was adopted just before my time.

646. Do you recollect that any steps were taken by the City Council in respect to this matter? No, I have never heard anything about it; the only case I recollect was that one in Castlereagh-street, and that was due chiefly to the way in which the closets were built. Of course, all persons having closets in the upper portions of their houses are obliged to have cisterns; the water would not get to the closets without them.

647. Mr. Chapman is so impressed with the danger to the health of the inhabitants of Sydney, to say nothing of the disgusting nature of the contamination, that he has recommended the Board to advise the Government to empower the Corporation to give instant orders to cut off the water from all closets directly connected with the main. Alderman Goold concurred in the suggestion to cut off the water, but thought it would be only fair to give the parties three months, and then if after a further period of nine months any closets should be found improperly connected, the landlords of the premises should be heavily fined; and they told us that this step would be in accordance with the general opinion and wish of the City Council.—Do you concur with these gentlemen in the opinions they have expressed? Yes; it would be a great advantage I believe if every closet in Sydney had a cistern connected with it, and the inhabitants of the city would all be benefited by it, because as you are all well aware when repairs take place, our water, which is supplied by engine power, is often stopped for two or three hours at a time, and it is to our advantage to have a continuous supply. I know from my own observation that there are hundreds of houses which depend solely on the tap for their supply, and there is not so much as a tank or even a cask on the premises.

648. Then you assent to what these gentlemen say? Oh, yes, certainly.

649. And you think that was the opinion of the Council? Yes.

650. And that they simply delayed taking steps because they were not aware whether they had the power? We knew we had not the power.

651.

651. Do you think it would be advisable to cut off the water in all cases where the connections were direct, at once, as suggested by Alderman Chapman, or to give the landlords three months' notice? Well, considering the great number of houses in Sydney, and the small number of plumbers, it would be very hard to insist upon the alterations in such a short time. In justice to the citizens it would be only fair to give them three months' notice. There are somewhere about 15,000 houses in Sydney, and about fifty or sixty plumbers, and it would be rather hard on the citizens to say, "You must have this work done in three months."

B. Palmer,
Esq.
30 April, 1875.

652. *Hon. J. B. Wilson.*] We have it in evidence that there are 5,400 water-closets in the city, and that out of these there are only 700 which have cisterns—the remainder of them are connected directly with the water-main? I believe that is about the number.

653. It is only proposed to cut the water off from the closets, not the water for house purposes, and it is suggested that people could sluice their closets with buckets of water until the improved connections were made? Well, the question would arise, "Might not these people have complied with the regulations which were in force when their closets were connected?" If so, it would be very hard upon them to cut the water off suddenly without any notice. But if they were allowed three months to do it in, I think it would be an equitable arrangement.

654. I think you have stated that the only case of contaminated water which has been reported to the city authorities that has come under your knowledge was the case in Castlereagh-street? That was the only case I have heard of.

655. We had it from one of the officers of the City Council that he had been connected with the prosecution of about 100 cases of filth in closets which were connected directly with the main—I wish to know whether it has been the custom to report these cases to the Council? I cannot say what has been done before my time. If such cases had occurred they would have been reported. Our excellent officer, Mr. Seymour, would, I am sure, have taken notice of them.

656. *Chairman.*] Would that matter of contamination of water in the main be a matter coming under, or likely to come under, the official notice of Mr. Seymour. Is it his business to report if he finds that the water is contaminated—has he anything to do with the water? I can hardly answer that question, because I don't think any report of the kind has ever taken place. It is Mr. Robertson's business, and he has never reported any cases of the kind to me, though he is constantly reporting to me cases of waste of water.

657. Do you know whose duty it would be to report such cases? It would be in the department of Mr. Bell, our City Engineer—Mr. Robertson being under him. There was a great outcry at one time about the embankment at Randwick; a number of letters appeared in the newspapers, and a great stir was made about it; but after all it turned out to be nothing. The danger only existed in the imagination of certain persons.

658. *Hon. J. B. Wilson.*] It has certainly been stated in evidence that a great many cases of nuisances, arising from foul water-closets—where the closets were in a filthy state and nearly full—have been brought under the notice of the Inspector of Nuisances, and that those closets were in direct connection with the main; and it has also been stated that when the water was turned off, either for repairs or for any other purpose, the foul gas was liable to be sucked into the water-pipes;—have you ever heard of any such cases? No, never; and I am quite certain, from Mr. Seymour's desire to carry out his duties efficiently, that I should have known if any such cases had occurred. Of course I can only speak of my term of office, which has been four months. There is one matter to which I should like to direct your attention, and perhaps this gentleman (the shorthand-writer) will take it down. When any nuisances are reported to Mr. Seymour—for, of course, he cannot travel through the city and find them all out himself; he gets his information in various ways, sometimes by letters from residents in the locality, or by anonymous letters, and he always attends—such as filthy closets—I mean common closets, privies, places where nightsoil has been allowed to accumulate,—he summons the owner of the premises. But it very often happens in cases of this kind that the nuisance has arisen from the neglect of the agent employed by him, who has promised to have it removed the next day or the next week, and has never had it done. The proprietor, of course, comes to the Council Chambers when he gets his summons—calls upon me and makes a statement, which puts his case in a most favourable light. But I make it a rule never to interfere with Mr. Seymour in the discharge of his duty. I hear his statement, and what the parties who are summoned have to say, and I tell them they had better appeal to the Magistrates in Court when their case comes on. I never interfere with Mr. Seymour; and if you will take notice of the fines which have been inflicted lately, you will see that these cases have all been decided in Court. I have never interfered, except once, and that occurred in this way: The man summoned happened to be the wrong man, and we withdrew the summons in his case, and summoned the right man for the next week. That was the only instance. Mr. Seymour never asks my opinion when he takes out a summons, and does not even come to me to sign it. Excepting in one case I have never interfered with him, and I think I can answer for my predecessor, and also for Mr. Chapman. I know there is an impression on the public mind to the contrary, but it is all imagination. I may also mention here that to-day we had a deputation in connection with the cattle sale yards, and I took the trouble to get a return from the manager of the cattle yards as to the number of animals slaughtered last year, which corroborates information I have received from Mr. Clarke and other persons. I find that there were not less than 12,000 lambs sold in 1874, and that out of these there were only twelve slaughtered at the Abattoirs, or one per month.

659. *Hon. J. Smith.*] Since that case occurred in Castlereagh-street, the Municipal Council passed a by-law to prevent any direct connections in future between the water-closets and the main;—did they not? Yes; but as the old connections were made under the old laws, we had no power to interfere with them.

Chas. H. Woolcott, Esq., Town Clerk, called in and examined:—

660. You are Town Clerk, Mr. Woolcott, I believe? Yes.

661. We have asked you to produce certain minutes of the City Council: Will you tell us whether there were any minutes respecting the connections between the water-closets and the mains during the last twelve months? The first intimation which the Council had of the pollution of water in the mains by imperfect closet connections was by a letter from the City Engineer of the 2nd July, 1874. This letter

C. H.
Woolcott,
Esq.
30 April, 1875.

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C. H.
Woolcott,
Esq.
30 April, 1875.

was referred by the Council, on the 14th July, to the Water Committee, and, together with a further letter from the Engineer of the 30th July, was duly considered, and designs were called for a cistern to be attached to water-closets, which would prevent the possibility of any such occurrence as that reported. A premium was subsequently awarded for an approved design, and the Council, on the 9th September, adopted the principle of compelling the use of self-acting cisterns, and instructed their solicitor to prepare a by-law to meet the case. I put in as evidence the report of the Water Committee, the minute of Council authorizing the by-law. (*Vide Appendices E and F.*)

662. We have the report from the City Engineer: Will you read the report from the Water Committee? (*Report read.*)

663. What action was taken upon that report? The City Solicitor was at once instructed by me to prepare the necessary by-law.

664. Has that by-law been submitted to the Council? It has not.

665. That minute was passed in September last: Has any other action been taken? No, nothing further: we are waiting for the production of the by-law.

666. I see you have some other documents with you: Have they any relation to this matter? On the 1st of January last instructions were issued to persons connecting their closets with the mains —

667. We have seen that —? That seems to have been the principal action taken?

668. Have you any other documents in connection with the subject? I have brought with me a copy of the license issued to plumbers, containing conditions as to the mode in which these connections should be made. (*Vide Appendix G.*)

669. Have you full control over these plumbers? Yes; they are licensed under certain conditions, and unless those conditions are complied with the licenses are cancelled.

670. Have you anything further to lay before the Board in reference to this matter? No, sir, I have nothing further.

671. Your duties are chiefly of a clerical nature, I suppose? Yes; but on all these matters you would obtain better information from the heads of the different departments.

672. *Hon. J. Smith.*] The City Solicitor was instructed in September last year? Yes.

673. To regulate future connections between the water-closets and the mains? Yes.

674. Has Mr. Driver advised the Council officially that they have no power to pass that by-law? Mr. Driver has done nothing officially as yet.

THE SYDNEY CITY AND SUBURBAN SEWAGE AND HEALTH BOARD.

APPENDIX.

A.

The City Engineer to The Right Worshipful the Mayor.

Sydney Sewerage Works,
Engineer's Office, Sydney,
2 July, 1874.

Sir,

In accordance with instructions from the Committee to report upon the advisability of compelling all persons requiring to connect with the water-mains, or the branch water-mains, for closet purposes, to erect supply tanks over such closets before any connection is allowed to be made with the mains,—I have the honor to state, that the Council are empowered, by section IX of the "Sydney Water Act," to authorize such operations as they shall think necessary for the conducting of water into dwelling-houses and premises of whatever description, by pipes, which are to be laid and regulated as to ball-cocks, stop-cocks, cisterns, waste-pipes, and other requisites, under the direction and to the satisfaction of the said Council, or such persons as they shall appoint.

This rule of compelling the erection of tanks over closets has not been enforced up to the present, and I might say there is nothing in connection with the water regulations that requires enforcing more strictly than this rule. A most flagrant example came under my notice last month. In this instance a patent closet was found completely choked up, it being supplied with water by a service pipe (after passing and supplying two other houses) directly into the pan of the closet. On cutting the service pipe at the second house, it was ascertained that the contents of the closet had been sucked back and completely filled the pipe. A large portion must have at the same time found its way into the water-main of the city, as there were great complaints of the impurity of the water all around the neighbourhood.

Since the above was found, Messrs. Seymour and Robertson have discovered four more closets similarly choked and connected; and from returns in the office, I find there are about 5,000 closets, in and around the city, connected by service pipes directly into the pan of the closet without the intervention of a tank.

Urinals also should be supplied from tanks, or a break should be made in the service pipe, so that the foul air from the sewers could not ascend through the discharge pipe, and find its way into the vacuum in the mains, and thereby impregnate the water therein.

Apart from the great benefit to the public in preventing the contamination of the water, if this rule be enforced the saving to the Corporation from the wanton waste of water will be great, for at the present time it is the common custom for the greater number of the inhabitants to allow the water to run in these closets continuously, with the idea that it cleanses them; whereas if the water was stored up in tanks, it could be applied with much greater effect to flush the pipes when required.

The complaints that have been made so frequently of the impurity of the water delivered in Sydney were well founded, I have no doubt, and must have arisen from this cause.

There is no comparison whatever between this source of pollution and that arising from drainage into the water reserve, about which so much talk has been made. I would, therefore, strongly advise that some strenuous steps be taken to enforce the powers vested in the Council to prevent the contamination of the water for the future.

I have, &c.,
FRANCIS BELL,
City Engineer.

B.

SYDNEY SEWERAGE WORKS.

The City Engineer to The Right Worshipful the Mayor.

Engineer's Office,
Sydney, 30 July, 1874.

Sir,

In accordance with instructions from the Sewerage and Water Committee to report upon the advisability and cost of compelling all persons requiring to connect with the water-mains or branch water-mains for closet purposes, to erect supply tanks over such closets before any connection is allowed to be made with the mains,—

I have the honor to state that I have seen and examined several kinds of cisterns or tanks, and have made inquiry as to the cost of furnishing one to each closet.

The simplest and cheapest are those made of galvanized iron, and the cost of one with ball, cock, overflow-pipe, &c., complete, will be from 35s. to 40s. The labour and materials in erecting and connecting will be from 15s. to 20s. So that the total cost for the alteration of each closet will be say from £2 10s. to £3.

There is no other method I can think of that will ensure the water in the mains from being occasionally fouled but by the adoption of cisterns to closets.

I may here mention that the English Government have adopted the proposals of the Royal Commission on Water Supply, as given in the Report of 1869, and the "Board of Trade now require that the Water Companies shall give a constant supply, and that the owners and occupiers of property shall be required to provide the proper appliances to prevent undue waste and the fouling of the water." No system of air-valves or other appliances could prevent occasionally the fouling of the water in the mains where the use of cisterns are not enforced.

I have, &c.,
FRANCIS BELL,
Engineer.

C.

Instructions from the City Council to the City Engineer.

20 November, 1874.

"To furnish City Solicitor with necessary particulars to enable him to prepare a by-law to compel the use of cisterns for water-closets, in accordance with resolution of Council, 9th September last."

Particulars were furnished.

D.

INSTRUCTIONS TO BE OBSERVED BY PARTIES CONNECTING DRAINS WITH THE MAIN SEWERS.

1. Before commencing any drainage application in writing must be made to the City Engineer for instructions.
2. Connections with the sewers are to be made only at such places as may be pointed out by the City Engineer.
3. Drains must be laid to a gradient of not less than one in sixty where practicable.
4. Where several drains converge, a brick cess-pit must be built, and the drains connected therewith by stoneware lap junctions.

5. Stoneware pipes are recommended, but existing drains may be made use of, subject to the approval of the City Engineer, and where the cutting is through rock, the drain may be formed by chasing and rendering the rock to either of the forms shewn by drawings, to be seen at the Engineer's Office, Town Hall.
6. Privies are not to be connected. Existing cesspits must be emptied and refilled with earth, and water-closets applied.
7. All yard gullies, or other openings, are to be stench-trapped.
8. All water-closets must have cisterns attached with two compartments and ball-cock, &c. (similar to the prize cistern), so that no more than a certain quantity of water can be used for flushing at one time.
9. No connection direct to the pan of the closet will be allowed.

Town Hall, Sydney,

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City Engineer.

E.

Resolution of the City Council of 9th September, 1874.

That the recommendation of the City Engineer, now submitted by the Water Committee, for making it imperative on persons using self-acting water-closets to attach cisterns thereto, for preventing the pollution of the water in the contiguous mains, be adopted, and that the City Solicitor be instructed to prepare the necessary by-law.

F.

REPORT of the Water Committee recommending that cisterns or tanks be affixed to water-closets connected with the water-mains.

Your Committee have the honor to report to the Council, that the City Engineer has represented that he has met with several instances of water in the mains being polluted by that which has been used in the closets and afterwards sucked back into the service pipes, thereby contaminating the water in the mains, rendering it unfit for use, as well as being most disgusting and unwholesome.

Your Committee consider that prompt measures should be taken to prevent this pollution of the water, and are of opinion that the Council should avail themselves of the power given under section 9 of the Water Act, and they would recommend that a by-law be prepared to compel all persons having closets connected with the water-mains to have placed over their closets, for the purpose of flushing, a cistern which shall have been approved by the City Engineer, or in accordance with a model cistern which shall have been adopted by the Council.

STEPHEN S. GOOLD,
Chairman.

Town Hall,
Sydney, 25 August, 1874.

City Solicitor instructed to prepare necessary By-law.—C.H.W., 9 September, 1874.

G.

WHEREAS, of street, in the City of Sydney, has applied for a license as a plumber for fixing and laying pipes from the several mains in the said city, for the purpose of conveying and distributing water therefrom, to such houses, factories, hospitals, prisons, warehouses, workshops, offices, and other buildings and premises within the said city, and in such manner as shall from time to time be directed: And whereas a license to act as a plumber has been granted to him for the purposes aforesaid, under the restrictions and conditions following: These presents, therefore, are to certify that the Municipal Council of the City of Sydney do hereby grant such license to the said for the purposes for which he has so applied: Provided always that he shall not at any time attach to, or lay on to, any main in the said city any service pipe for the purpose of conveying water to any house or premises in the said city without an authority in writing under the hand of the Inspector of Water Service of the said city being previously delivered to him for that purpose: And further, that whenever he shall lay on any such service pipe as aforesaid, he shall in each case bore the main to which such service pipe shall be laid on with a screw tap, and shall screw into such main a brass screw ferrule, to be connected with such service pipe; and further, that whenever he shall commence to lay on to any main in the said city any service pipe for the purpose aforesaid, he shall complete the same, and clear away all rubbish, and fill up and level all trenches which he may make for that purpose, before sundown of the day on which such work shall be commenced; and shall at all times, in executing such works, conform to such orders as shall from time to time be given to him by the City Engineer or said Inspector in that behalf, and shall make good at his sole expense all injury which he may cause to any man in the said city, in executing the work aforesaid, and shall perform all such work in a tradesmanlike manner, and for moderate and reasonable charges, and shall at all times conform to, and obey such orders and instructions as shall be given from time to time by writing, under the hand of the City Engineer with reference to the powers hereby vested. And the said Municipal Council do reserve to themselves full power, in the event of the said failing to comply with the foregoing conditions, or for any other cause which they may think fit, at any time to revoke this appointment, and such appointment shall be revoked when and as soon as the said Municipal Council shall by writing under the hand of the Town Clerk intimate the same to the said

Given under the common seal of the Municipal Council of the city of Sydney, at Sydney, this day of
in the year of our Lord one thousand eight hundred and

Town Clerk.

A printed copy of regulations is appended hereto.

MUNICIPAL COUNCIL OF THE CITY OF SYDNEY.

Regulations for the Guidance of Licensed Plumbers in Supplying Water to Houses, &c., in the City of Sydney.

(Adopted by the Water Committee of the Municipal Council, on the 19th day of April, 1863.)

1. Notice of intention to connect service pipes or water meters to the mains or to any other service pipe in each case to be lodged at the City Engineer's Office, and for the correct information in such notice the plumber will be strictly held responsible. The premises will then be inspected, and when the agreement is signed and rate paid, the plumber will receive a printed authority to proceed with the work. The ground is not to be opened or pipe connected until he has such authority. Printed forms of the Notice to be obtained at the office of the City Engineer.

2. In all cases where it is intended to connect a service pipe to the service pipe of any other premises, a written permission from the owner or occupier of such premises must be sent to the City Engineer's Office before the authority to connect will be granted.

3. In every case of repairs to service pipes, or where it may be wished to transfer service pipes from one main to another, or to connect with other service pipes, or where any change or alteration to them may be required, in any way, notice of such repair, alteration, &c., must be given in writing, at the office of the City Engineer, at least twenty-four hours before any such work shall be commenced—except in cases of great waste of water, when immediate steps must be taken to stop the leak, and notice given at the City Engineer's Office of the same forthwith.

4. All service pipes must be laid eighteen inches below the surface of the roadway and gutters, and meters fixed in accordance with the direction of the City Engineer or other authorized Officer of the Municipal Council; and on each service connected with the mains must be fixed two stop-cocks, one at the junction with the main, and the other on the footpath, two feet from the building line.

5. All water meters to be enclosed in a wooden box—all keys of both meters and boxes to be lodged at the City Engineer's Office, immediately after the meters are fixed. The Municipal Council reserve the right of affixing their own locks to the meters and boxes—twenty-four hours notice to be given of the day on which it is intended to connect meters, in order that the proper officer may attend and see them fixed correctly.

Adopted by Council 9 September, 1874.—C.H.W. Enclosures, City Engineer's letters 2nd and 30th July, 1874. 17 Vic. 35.

6. The plumber must take care that the portion of the streets and footpath opened by him shall be left in the same state of repair as he found them, the metal or iron stone covering being carefully taken off and put on one side, and the street properly made up by the trench being well rammed, as filled in, and the covering spread evenly over it; and where kerbing, guttering, or flagging may be disturbed, the same is to be carefully and substantially re-laid.

7. The officers connected with the water service are strictly enjoined to report every case of infringement of these Regulations, and the plumber offending against any of them will have his license suspended or cancelled, as may be thought proper in the circumstance of the case, besides being held responsible for any damages occasioned by his so transgressing any of the regulations.

8. All licensed plumbers to attend at the City Engineer's Office on or before the 10th of January in each year to have their names and licenses registered and the latter endorsed. Only such plumbers as comply with this Regulation will be deemed "Licensed Plumbers," and allowed to work as such.

A printed copy of the above Regulations will be given to each licensed plumber.
An annual fee of 10s. 6d. will be charged for each license.

[*Extract from Practical Hygiene by Parkes.*]

H.

Typhoid Fever.

The belief that typhoid fever can spread by means of water as well as air appears to be quite of modern origin, though some epidemics, such as the "Schleim-fieber" of Gottingen in 1760, were attributed in part to the use of impure water. In 1822, Wulz affirmed that an outbreak of "typhus" (typhoid) at Saarlouis, in Rhenish Prussia, was caused by impure water; and in 1843, Müller discovered that 129 cases of typhus abdominalis (typhoid), and 21 deaths, which occurred in the garrison at Mayence, were produced by fecal matter passing into the drinking water, which had a disagreeable putrid smell. In 1848, E. A. W. Richter published an account of an outbreak of the same kind which occurred in a school at Vienna, from the contents of a sewer passing into the drinking water.* In 1852, Dr. Austin Flint † published the particulars of a similar outbreak of typhoid fever at the hamlet of North Boston (Erie, U.S.) in 1843.

In 1852-53 a severe outbreak of typhoid fever took place at Croydon, and was thoroughly investigated by many competent observers; and it was shown by Dr. Carpenter, of Croydon, that it was partly, at any rate, spread by the pollution of the drinking water from the contents of cesspools.

In 1856 Dr. Routh ‡ published a case in which the evacuations of a typhoid patient were thrown into a closet, the pipe of which passed directly into the cistern of the drinking water, in a well-ventilated house at Hastings. No less than eight persons were affected with more or less typhoidal symptoms; many of these had not been brought into any personal contact with the sick person.

In 1859 Dr. W. Budd § published two very conclusive cases, in which well water was contaminated by sewage.

There is no satisfactory evidence that typhoid stools had been in the sewage matter, but their presence is not excluded. I learn, from personal communication with Dr. Budd, that he has long been convinced of the occasional propagation of typhoid fever in this way.

In 1860 an outbreak of typhoid fever occurred at the Convent of Sisters of Charity at Munich. 31 persons out of 120 were attacked between the 15th September and the 4th of October, with severe illness, and 14 of these cases were true typhoid; 4 died. The cause was traced to wells impregnated with much organic matter (and among other things typhoid dejections), and containing nitrates and lime. On the cessation of the use of this water the fever ceased.||

The propagation of typhoid fever in Bedford would certainly appear, from Mr. Simon's report,¶ to have been partly through the medium of the water.

Dr. Schmitt** has for several years paid particular attention to this point, and in 1861 published several very striking cases.

A case bearing on the same point was brought before the Metropolitan Officers of Health in 1862,†† by Mr. Wilkinson, of Sydenham. In this case the water was contaminated by absorption of sewer gases.

In 1862 a very sudden and severe outbreak of typhoid in a barrack at Munich was traced to water impregnated with fecal matter; on ceasing to use the water, the disease disappeared.‡‡ In 1865 a very remarkable outbreak of typhoid occurred at Ratho, in Scotland, and was traced to drinking water contaminated with sewage.§§ In 1866 typhoid fever broke out in a girls' school at Bishopstoke, near Southampton, and was traced unequivocally to the bursting of a sewer pipe into the well. The water was disagreeable both to smell and taste. 17 or 18 persons were affected out of 26 or 28. Several very striking instances are recorded in Mr. Simon's Reports by Drs. Seaton, Buchanan, and Thorne,||| and in some of these cases analyses of the water were made, which showed it to be impure, and to contain organic sewage, or its derivatives. A very good case, at the Garnkirk works in Glasgow, is recorded by Dr. Perry,¶¶ Dr. De Renzy, the Sanitary Commissioner of the Punjab, has also published a remarkable paper on the extinction of typhoid fever in Millbank prison, and shows, from the statistics of many years, that the fever has entirely disappeared since the use of Thames water was given up; the disappearance was coincident with the change in the water supply. Two excellent cases are recorded by Dr. Latham ††† Typhoid was introduced into a village and spread by the agency of contaminated drinking water.

That water may be the medium of propagating typhoid thus seems to be proved by sufficient evidence; and it has been admitted by men who have paid special attention to this subject, as Jenner, W. Budd, and Simon. It does not seem unlikely, indeed, that this mode of spreading will be found to be far more common than is supposed.

* All these cases are related by Riecke in his excellent work "Der Kriegs und Friedens-Typhus." Nordhausen, 1850, pp. 44-48.

† Clinical Reports on Continued Fever. By Austin Flint, M.D. Buffalo, 1852, p. 330.

‡ Faecal Fermentation as a cause of Disease. Pamphlet. Lond. 1856, p. 34.

§ Lancet, Oct. 29, 1859, p. 432.

¶ Edinburgh Medical Journal, Jan. 1862, p. 1153. See also Gielt, Die Ursachen des Enter. Typhus in München, 1865, p. 58.

‡‡ Third Report of the Medical Officer of the Privy Council, 1860.

¶¶ Journ. de Méd. de Bruxelles, Sept. 1861; and Caustatt's Jahrb. for 1861, band iv. pp. 182, 183. See the 2nd edition of this work for a short account of them.

†† British Medical Journal, March 1, 1862.

‡‡ Gielt, Die Ursachen des Ent. Typhus in München, 1865, p. 61. In this little book is much evidence to show the propagation of typhoid by foul water and by deficient arrangements for removal of excreta, as well as many instances of the carrying of the disease from place to place, analogous to those narrated by Bretonneau many years ago.

§§ Edin. Med. Journ. Dec., 1865. In this case a groom came to the house ill with typhoid from Dundee, and thus introduced the disease. This fact was communicated to me by a relation of the owner of the house.

||| Dr. Seaton's Report on Tottenham (Report of Medical Officer to the Privy Council for 1866, p. 215. Dr. Buchanan on Guildford (Ibid. for 1867, p. 34); Dr. Thorne's Report on Testing (Ibid. p. 41); Dr. Buchanan's Report on Wicken-Bonant (12th Report, p. 72). In all these instances the evidence reaches the highest degree of probability, and in the cases of Guildford and Wicken-Bonant of almost absolute certainty.

¶¶ Lancet, June, 1868.

** See my Report on Hygiene, Army Med. Dept. Blue Book, 1860, p. 23.

†† Archiv. der Heilk. vol. xii. p. 134 (1871).

††† Lancet, July 16, 1871.

[*Extract from Corfield's Treatment and Utilization of Sewage.*]

WHENEVER a closet was supplied by a tap direct from the main, the waste was invariably enormous from people leaving the tap open and the water running from sheer carelessness. And also under this plan, when the water in the service main has to be drawn off for repairs the result has been, in Liverpool, that a vacuum has been created and the soil has been sucked back through the supply-pipes and into the service main and so carried on, and has contaminated the water of a whole district. This happened in cases where the service-pipe from the main was connected directly with the soil-pipe of the water-closet.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

SYDNEY CITY AND SUBURBAN SEWAGE
AND HEALTH BOARD.

SECOND PROGRESS REPORT

OF THE

BOARD APPOINTED ON THE 12TH APRIL, 1875,

TO INQUIRE INTO AND REPORT AS TO THE BEST MEANS OF DISPOSING OF THE
SEWAGE OF THE CITY OF SYDNEY AND ITS SUBURBS,
AS WELL AS OF PROTECTING THE HEALTH OF THE INHABITANTS THEREOF ;

ADOPTED BY THE BOARD ON THE 24TH JUNE, 1875 ;

TOGETHER WITH THE

MINUTES OF EVIDENCE.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
25 June, 1875.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

THE SYDNEY CITY AND SUBURBAN SEWAGE AND HEALTH BOARD.

SECOND PROGRESS REPORT.

To the Honorable the Colonial Secretary,—

SIR,

1. We have the honor to report that, since the date of our first Progress Report we have been engaged in inquiring into several matters affecting the health of the inhabitants of Sydney and the Suburbs, and requiring immediate attention.

2. There are many nuisances more offensive to the senses, and apparently therefore more dangerous, than a contamination of the water supplied to the inhabitants for drinking purposes, although perhaps in some cases such contamination may be scarcely if at all perceptible; but it is admitted on all hands, that there is none which is so certain and deadly in its effects. We have, therefore, primarily devoted our attention to this matter, and under special instructions, Professor Liversidge is engaged in a systematic examination of the water supplied to the metropolis, with a view to ascertain its quality, and to detect any sources of contamination beyond those which we have already pointed out. We are not yet able to report upon this matter, as the analyses are not completed, but we are in a position to say that the results of Professor Liversidge's investigations so far fully bear us out in urging the necessity of carrying out with the least possible delay the recommendations of our former Report.

3. So long as the inhabitants are daily drinking, as they undoubtedly are, water in many cases dangerously contaminated with what should be confined to water closets and sewers, it would be the merest affectation to adopt any other measures for improving their sanitary condition.

4. Committees have been appointed to inquire into the following subjects—

- (1.) The state of the Botany watershed.
- (2.) The disposal of blood and other refuse at the Abattoirs.
- (3.) Certain nuisances said to exist on the Sugar Company's premises, Parramatta-street.
- (4.) The state of Busby's Bore with reference to possible contamination by percolation.
- (5.) The fitness of certain localities which have been suggested for depositing night-soil from the metropolis.

5. The principal object of this Report is to draw your attention to an immediate and pressing evil, which seems to require for its removal or mitigation immediate Legislative action. We refer to the present system, if it can be called such, of managing and emptying cesspits in the City and Suburbs. Before proceeding further we beg to remark that in the recommendations made in this Report we are endeavouring to carry out the instructions conveyed to us by the Government to advise them as to any immediate steps that should be taken to remove or mitigate the evils alleged to affect the health of the inhabitants of the Metropolis. We are quite aware that it would be easy to suggest many grave objections to the cesspit system, but we are equally well aware that there is no doubt that for many years to come, in some localities for a great many years to come, that system must continue to prevail. Pending the consideration and preparation of a better system, it is expedient to make the best of things as they are, and to adopt measures to bring existing evils within the smallest possible compass.

6. We would gladly refer you merely to the evidence, and refrain from describing the disgusting, dangerous, and obscene state of things which it discloses, but we feel bound to present it to you in a condensed form. The Municipal authorities of the Metropolis appear to have scarcely any power whatever in regulating privies and cesspits. Any one, so far as they are concerned, may make a cesspit where and how he likes, and unless it comes to their knowledge that it overflows,

or

or from some cause has become a flagrant and intolerable nuisance, they cannot interfere; and then only by the cumbrous process of summoning the owner before the magistrates, who fine the offender more or less, according to their individual proclivities. It is universally admitted that under this system the authorities are entirely powerless to prevent these cesspits from being, especially in crowded localities, an excessive and abiding nuisance, dangerous to public health, and offensive to every sense of decency. In some cases, on account of imperfect construction, surface water flows into them—in others, in porous soil, water percolates into them; in both cases with every shower they fill up and overflow, contaminating the adjacent premises and gutters, and producing the most intolerable nuisance. In the Municipality of Waterloo these evils seem to prevail in the most aggravated form. The soil is moist and sandy. The cesspits are generally mere holes in the sand which absorbs the greater part of the faecal matter. When these holes become full they are often filled in and the closet shifted a few yards. The soil is thus becoming gradually contaminated; and if the present state of things be allowed to continue, the whole district will become unfit for human habitation. It is said that little if any night-soil is ever removed from this district. It is all absorbed or buried in the sand about the houses. In the yards in which these abominations exist are generally wells, which supply the inhabitants with water for household purposes. Between these wells and the faecal deposits a pretty free communication must and as a matter of fact does often exist. Many complaints have been made of the palpable contamination of these wells, which are the principal source from which the inhabitants can obtain a supply of water. It cannot be a matter of surprise that where these evils exist much sickness prevails, that the children are said to be sickly, and that the Registrar General's returns show an excessive rate of mortality.

7. In many cases it appears that, unknown to the municipal authorities, pipes are laid for the purpose of carrying the overflow from the cesspits into the street gutters, and that there is no effectual remedy. From the nature of the case under the existing system the cesspits must at every heavy shower overflow somewhere.

8. As far as we have been able to learn, there is no municipal control over the persons who empty cesspits, except that at Balmain there are contractors bound to a certain price. They generally charge what they like. There is no recognized place of deposit for the night-soil. The nightmen say that they sell it to market gardeners, who receive it in a crude state. If not placed within a certain distance of a highway it appears that no one can interfere. In the morning the carts recking with filth, return to the city where they remain all day. Sometimes, we are told, they bring back garden produce intended, it is presumed, for human food. We are afraid that the statement that the market gardeners receive the greater part of this matter is not a true one, for we have evidence that nightmen have been fined for depositing it in improper places, and that similar deposits have been made without the offenders being detected. At Newtown we are informed there are cesspits which are now full but remain uncleansed, because the nightmen say that they have no means of disposing of the contents. A member of this Board a few days ago observed that a load of this matter had been deposited on the Botany watershed, close to a public road. As he visited the place casually, and without any intention of inspecting its condition, it may be fairly concluded, taking into consideration the acknowledged difficulty of getting rid of night-soil, that similar deposits are frequently made. On these points we refer especially to the valuable evidence of Mr. Seymour, Inspector of Nuisances for the city, and that of Mr. Hales, Inspector of Nuisances for Redfern, Waterloo, and Alexandria.

9. On these subjects we have examined a large number of witnesses connected with the City and Suburban Municipalities, and are glad to say that they almost unanimously concur with us in the opinion that a radical reform should be made as soon as possible in the construction, management, and system of cleansing cesspits. All the municipal authorities whom we have consulted seem willing and anxious to act decisively, but they all complain of want of sufficient powers.

10. We will now go on to consider what in our opinion should be done, without delay, to remedy the evils we have described. The subject is naturally divided into three parts—

- (1.) The construction and management of cesspits.
- (2.) The mode of cleansing them.
- (3.) The disposal of their contents.

THE CONSTRUCTION OF CESSPITS.

11. On this subject there is but one opinion. Cesspits should be constructed of moderate size, they should be made as nearly as possible watertight, so as to prevent the overflow of surface water into them, the percolation of water into them, and to prevent any contamination of the adjoining soil by leakage out of them. The evils resulting from imperfect construction vary greatly with the nature of the soil, the situation, and a variety of other circumstances. It appears to us that full powers should be given to Municipal authorities to regulate cesspits, as to their size, situation, and construction; and in cases of existing cesspits, to enforce such changes in any respects as in the opinion of their authorized officers, may be necessary to health, cleanliness, and decency. So much depends upon local circumstances that we cannot see that any absolute rule could be laid down to be followed in all cases. Much must be left to the discretion of the Municipal authorities in enforcing changes in the construction of existing cesspits. If these authorities, as it has been insinuated, cannot be trusted to exercise their powers in a discreet and impartial manner, they should not be entrusted with any powers whatever in the matter. We believe that in England it has been found expedient in many cases to withdraw the control of sanitary arrangements from the Municipal Corporations; but from the cordial spirit with which all our suggestions for sanitary improvements have been received by the Aldermen and Officers of the Metropolitan Municipalities, and the anxiety which they evince to act decisively, we are induced to recommend that all the necessary powers should be given to them.

12. In the Municipality of Waterloo, and other similarly situated places, it is obvious that watertight cesspits should be at once insisted upon. On this subject we append a memorandum, prepared by a member of this Board, which contains, we think, some valuable practical suggestions. (*Appendix No. 1.*)

THE CLEANSING OF CESSPITS.

13. It seems agreed on all hands that the duty of cleansing cesspits should be transferred to the Municipal authorities, and that the owners of houses should be relieved from all responsibility in the matter, except that of paying the charges according to some scale to be determined. The Municipal authorities should provide all the necessary plant, and all the operations should be conducted under the supervision of their Inspectors. The cesspits should be cleaned at least once in three months. The more frequent cleansing would no doubt tend to increase the expense, but with an improved construction of cesspits, and with improved appliances and systematic management, we doubt whether the expense would be on the whole increased. We have no doubt that most landlords would be glad to be relieved of the trouble and responsibility of attending to these matters, even if it involved some additional expense. In any case, the health of the inhabitants, and common decency require that the change should be made.

14. No suggestions have been made of any serious practical difficulty in carrying out this proposal, nor does it seem that more than three or four months would be required to provide the requisite appliances. It might be necessary perhaps in some cases that some of the smaller Municipalities should combine for this purpose, as they do now for certain purposes; and we have no doubt that the City Council would be willing to undertake the duty for adjoining Municipalities under approved arrangements. It must occur to anyone that it would be desirable that these, and a number of other matters relating to the whole Metropolis, should be under one united management, but we are not prepared at present to recommend any such comprehensive change. We are recommending that certain necessary changes should be made, which ought, and we believe can be made in time to provide against the coming summer, and be the means of preventing much sickness, and saving many hundreds of lives.

15. Mr. Bell, the City Engineer, and some other City Officers, under instructions given to them, on 29th of October, 1874, have presented a Report to the City Council, dated May 31, 1875 (*Appendix No. 2.*) In this Report the use of pneumatic carts for the removal of night-soil is recommended. Mr. Bell tells us (*Evidence p. 28*) that he has not yet had time to make plans and specifications for these carts, nor is he yet prepared to make any definite recommendation as to their construction. On the Continent of Europe they are much used, and they are said to save much labour, and to diminish greatly the well known horrors attending the emptying of cesspits. There are many minor difficulties which seem likely to occur in applying them generally, but none we think that may not be overcome. There are

are several kinds in use in Europe, and it is only by experiment that we can determine the construction best adapted to our requirements. They have one feature in common. The night-soil is placed in air-tight cylinders, which are capable of being transported to any distance without danger of leakage or overflow, and without polluting the atmosphere as they are drawn through the streets. This change is necessary if there is to be any systematic method of disposing of night-soil.

16. As this is a matter affecting the health, comfort, and convenience of the inhabitants of all the larger towns in the Colony, we propose to give much attention to it, and, with the sanction of the Government, to make some experiments and trials, with the object of determining the best mode of constructing these carts, and of ascertaining how far they may be made generally applicable. That, under some form, they will be a great improvement upon the existing appliances, there is no doubt whatever.

DISPOSAL OF THE CONTENTS OF CESSPITS.

17. The authorities of the Metropolitan Municipalities, when called upon to undertake the duty of cleansing cesspits, naturally require that some unobjectionable place of deposit should be pointed out, having none within their own boundaries. In the report of the City Officers, to which we have already alluded (*Appendix No. 2*), it is recommended that this matter should be put into barges at Blackwattle Swamp, and conveyed to sea. We cannot at once endorse this recommendation. It is surrounded with many difficulties, which have not been sufficiently considered, and upon which we do not feel it necessary at present to enter particularly. It would require for its general application the construction of air-tight receptacles for the conveyance of the night-soil,—three large air-tight iron punts, properly constructed for the purpose, and wharfage accommodation, with the requisite appliances. The plans and specifications for carrying out these operations are not yet even commenced, nor have the difficulties connected with them been yet sufficiently considered, so that it seems to us certain that even if this plan were now finally determined upon it could not possibly be brought into use in less than twelve months.

18. It has also been suggested that the night-soil might, under certain regulations, be removed by railway. We think it very probable that this may be its final destination, but time is required, in the first place, to consider the question fully, and in the second, to make the necessary arrangements for carrying out such an operation without creating intolerable local nuisances.

19. It is obvious that for some time to come, certainly during the ensuing summer, the night-soil must be removed by horses, and in carts of some kind. To throw it into the sea we regard as the last resource, when every other plan has been found to be impracticable.

20. The night-soil from Paris, where the cesspit system and others closely resembling it almost universally prevail, has for many years been treated by a process partly mechanical and partly chemical, for the purpose of making a saleable manure. We learn, however, that this system has proved so unsatisfactory in its results that it has recently been given up, and that the night-soil is now applied directly to a sterile tract of land at some distance from the city. We are inclined to believe that, under proper regulations, this will be found ultimately the best and most economical system for us to adopt.

21. A Committee has been appointed to examine and report to this Board upon certain localities which have been suggested as suitable places of deposit, but they have not yet been able to report finally. Some place, however, will no doubt be found, though probably at such a distance as somewhat to increase the cost of removal. Until such a place is found, and placed under proper supervision, there can be no security against many of the evils to which we have drawn your attention in this Report.

22. We have decided not to wait for the results of the inquiry by the Committee for fear that the further delay might render it impossible to obtain the immediate Legislative action which seems to us desirable.

23. It may take a few months to make all the necessary arrangements for bringing into operation the new system which we recommend, and there may be Municipalities in which it may not be desirable that that system should be enforced at present. We therefore recommend that the proposed Act for this purpose shall not apply to any Municipality until a certain date, to be fixed in each case by Proclamation of the Governor and Executive Council.

24. We recommend then that an Act be passed with as little delay as possible, providing—

- (1.) That the Council of every Municipality be required to undertake the duty of emptying cesspits and other similar receptacles by means of their own plant and appliances and under the inspection of their own officers.
- (2.) That Municipalities may combine for this purpose, and one Municipality may undertake the duty for another.
- (3.) That owners and occupiers be relieved from all responsibility in this matter, except that of paying the charges according to some rate to be determined.
- (4.) That the occupier be fined for failing to give notice to the proper officer of any nuisance which may occur in connection with any cesspit upon his premises.
- (5.) That Municipal Councils be required to make regulations as to the construction, situation, and size of cesspits, privies and water-closets to be hereafter made, and in the case of new houses to provide that a sufficient accommodation of this kind be supplied.
- (6.) That, in the case of existing cesspits, privies, and water-closets, Municipal Councils be empowered to require that such alterations be made as may in the opinion of the authorized officers be necessary for the sake of health, decency, and facility of emptying and cleansing; and under similar circumstances to require that sufficient accommodation of this kind be provided.
- (7.) That, a place having been fixed upon for the deposit of night-soil from any Municipality either within or without its boundaries, and approved by the Governor and Executive Council, the Municipal Council be empowered to make such expenditure as may be necessary in preparing the said place for the purpose, in making or repairing roads leading to it, and in burying or otherwise disposing of the matter deposited.
- (8.) That any person depositing night-soil from any Municipality in any place, except the one appointed, without special permission from the Municipal authorities, be heavily fined.
- (9.) The Act to come into force in any Municipality at such date as may be fixed in each case at any time, by Proclamation of the Governor and Executive Council, who shall have power in making such Proclamation to exempt such Municipality from the operation of certain clauses of the Act.
- (10.) If the Municipal Council of any Municipality shall, in the opinion of the Governor and Executive Council, fail to carry out the provisions of this Act, the Governor and Executive Council to have power to cause by-laws for such Municipality to be framed, which, being in accordance with this Act and being duly proclaimed, shall have the force of law.

Board Rooms,
Sydney, 24 June, 1875.

M. B. PELL,
Chairman.

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ERRATUM.—Page 5—Instead of Mr. John Doherty, Inspector of Nuisances, read Mr. John Doherty, "Inspector of Sewers."

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SYDNEY CITY AND SUBURBAN SEWAGE AND
HEALTH BOARD.

WEDNESDAY, 26 MAY, 1875.

Present :—

M. B. PELL, Esq.,	DR. ALLEYNE,
W. C. BENNETT, Esq.,	HON. J. B. WILSON,
E. O. MORIARTY, Esq.,	F. BELL, Esq.,

M. B. PELL, Esq., B.A., IN THE CHAIR.

Francis Bell, Esq., City Engineer, further examined :—

(Witness produced a plan and section of tunnel.)

1. *Chairman.*] That is a section of the tunnel called Busby's Bore? Yes.
2. What difference is there between the vertical and the horizontal scale? The vertical scale is 20 feet to the inch, and the horizontal 3 chains or 198 feet to the inch.
3. We have heard your report to the Municipal Council read, Mr. Bell. What kind of weather had you at the time;—was it wet or dry weather? I cannot remember; the work extended over four or five months.
4. The tunnel had not been much used had it before that report was sent in? Yes; but the quantity of water which passed through it was very limited.
5. Is the tunnel constructed entirely through sandstone? Yes, I may say it is; there are some bands of ironstone and some beds of clay through it, here and there, but it is principally through sandstone.
6. Has any attempt been made to render it water-tight? No, none whatever; the culverts that are built in it are built dry.
7. And I think you stated on a former occasion that there is a very slight fall from the mouth of the tunnel to Hyde Park? From the Lachlan Swamp to Hyde Park there is a fall of about 18 inches.
8. Then it is almost level? Yes.
9. Is that sufficient to allow the water to flow from Lachlan Swamp to Hyde Park? Yes, because we have a head of water at the upper end; we have raised it up to 8 feet 6 inches.
10. Did you observe when the tunnel was cleaned out that water percolated into it from different springs in its course? Yes, particularly at the Rifle Range.
11. Did you observe water dripping through it at the far end? No, only at the upper part; the other was comparatively dry.
12. Have you any means of knowing whether more water comes out of the Bore than goes into it at the Lachlan Swamp? Oh yes, a great deal more; it comes from springs and fissures in the rock; we have proved it.
13. So that the water supplied by that tunnel is not really from the Botany watershed, but soakage water from the different localities through which the tunnel passes? Yes. I may mention that there was very little soakage till we came to Park Road, and I attribute that to the other part being thoroughly drained so that no water could percolate. But when we came to the far end of the Rifle Range there was more water; there was not such a height of ground above the tunnel, and it became very wet.
14. How far below the surface is the tunnel along the South Head Road, as far as you can judge? The deepest shaft is about 62 feet; it is immediately opposite the Court House.
15. And then it gradually diminishes—gets nearer and nearer to the surface? Yes.
16. How deep is the tunnel at Riley-street? 23 feet. At College-street it is 15 feet; and at Hyde Park, at the end of the tunnel, it is just 10 feet.
17. And there it is connected with the mains? Yes. There are one or two mains which go off it before that, but there is a main from it there at the very end.
18. You have locks communicating with the mains, so that you can draw off as much as you choose? Just so. They are all open now. There is one at Liverpool-street—a 12-inch main; another in College-street, also 12 inches; and another 12-inch main at the end of the tunnel.
19. When you cleared out the tunnel, you took out, according to your report, large quantities of what you called muck;—what was the nature of it—was it filth or slush? It was filthy stuff, smelling very badly and as black as ink.
20. Do you consider it of such a nature that water passing through it becomes unfit for use? Well, a good deal of it settles. We scraped up a lot of it, but there was always a good deal remaining. There was 18 inches of water in the tunnel when we tried to take this muck up.
21. But that water had been, as far as you could judge from its appearance, in the swamp before? Yes, as far as we could judge.
22. Then where did all this muck come from do you suppose? It was washed down from some drains formerly cut in the swamp. It was black peaty stuff, and we had no means of straining it, and no way of keeping it back.

F. Bell, Esq.,
C.E.

26 May, 1875.

- F. Bell, Esq.,
C.E.
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23. Do you think that peaty stuff has an offensive smell? No doubt it has. I have often been surprised at it; but take it from where you will it has a bad smell.
24. Did you suspect at any time that there was a drainage of sewage matter into the tunnel? No. I may say, however, that lately the Paddington Municipality made application to the City Corporation to join them in forming a gutter in Dowling-street, and that gutter would have run right over a shaft on the tunnel. So I had the shaft opened, and all the joints thoroughly caulked, and filled in with cement, so that not a drop of liquid could get in; and I had the covering slabs cemented also.
25. Have any alterations or improvements been made near the Rifle Range, in the tunnel itself? Yes. I had the first shaft on the Park Road opened also. There appeared to be beautiful water coming in, but in case it might be impregnated with sewage matter, I had the shaft all cemented the same as the other. You may see the position of those shafts on this plan (*producing plan of Botany and Lachlan watershed.*)
26. What becomes of the drainage from the Victoria Barracks? It goes across the Park Road through a pipe, and runs down into Moore Park. I can show it to you here (*indicating position on plan.*)
27. Are these drains you have shown us surface drains? Yes.
28. Are these cesspits used in the Victoria Barracks? No, I understand they use earth-closets.
29. You say that the drainage of the Victoria Barracks is carried over the tunnel by means of a pipe? Yes; immediately under the road.
30. Are there many habitations about there? No, it is pretty well open ground, and almost all rock.
31. Is there much population along the course of the tunnel from Victoria Barracks down to this end at Hyde Park? Well, all that portion is drained either towards Woolloomooloo, or in the other direction towards Hay-street. All the houses facing the South Head Road are drained into the sewers. I do not think there are any cesspits along that line.
32. What becomes of the cesspits on the other side? They are drained by a sewer which goes to Hay-street.
33. Are those houses connected with the sewers—are there any cesspits there? None that I am aware of, but my foreman will tell you all about them.
34. What used to be the quality of the water then—as far as you could judge? Well, I cannot imagine any sewage matter getting into it at all. I think it is very good, as far as I can judge of it.
35. Has it frequently happened that you have had to cut the water off and nearly close the sluice at the mouth of the tunnel? Very frequently. If we don't do that it goes through with so much force that it bursts through at College-street. It did so frequently at the corner of Hyde Park, and we had to send out word to shut it off at the Swamp.
36. Then there must be a large quantity of soakage water enter into it? Between the Swamp and the Rifle Range it is very wet, and the water percolates through the masonry. But that is high ground, where there is no possibility of sewage matter getting into the tunnel.
37. Had you any grating or other contrivance to prevent large objects from being carried into the Bore at the mouth, or is there any such grating now? There was an iron grating or network inserted near College and Liverpool streets, Hyde Park. It was put in at first to prevent eels from getting in, but it was found not to answer, because the eels came in when they were small, and lived in the pipes and grew larger; and also to prevent *debris* from getting in. But it got choked up with leaves and other matter, and had constantly to be cleaned.
38. Did you ever attempt to prevent leaves and other matter coming into the tunnel by placing something of the kind at the other end of it? Yes; I had two or three floats placed on the surface of the water for that purpose, to rise and fall with the water; and I have now a man stationed there, who has nothing else to do but to skim the scum and different floating objects from the surface of the water.
39. You have no grating of any kind there? No, there is nothing but the sluice itself. It would retard the flow of the water too much, so that we should not be able to keep up the proper supply. I am wrong though, by the by, in reply to a previous question:—There was one place by the Gaol where we found a hole from the tunnel into a shaft, which was afterwards plugged up. From the bottom of the well there was a heading driven right through to our tunnel, with the object, I suppose, of drawing the water from the tunnel into the well. At all events, while we were cleaning out the tunnel we were annoyed by the water coming from the Gaol, and we got the hole plugged up with pieces of wood. They made great complaints about it, and said we were drawing their water away; but that was only a temporary affair.
40. Do you think the water from springs from a country such as that through which the tunnel passes is a desirable kind of water to be supplied to a town? I would certainly much sooner have an iron main laid through to the town, but that would be a very expensive and difficult job.
41. But independently of that it could be done? Oh, it could be done, but you could not bring the water by gravitation on the surface of the ground. You could not bring it by that route at all; it would be very difficult indeed.
42. You would have the same head of water with an iron pipe, would you not? It would be very expensive; for instance, if you came to a hill you would have to go through it—the water would not rise over it.
43. I mean to lay the main in the tunnel itself? Oh, you could lay it in the tunnel. There are one or two places where there would be a slight difficulty. There is one shaft which would cause a little difficulty by reason of its depth. They had not sufficient rock at the crown of the tunnel to support the shaft, and they had to go down deeper for it. That would be a difficult place, as the pipe would have to go down too, but it could be done by means of a syphon-pipe.
44. *Mr. Moriarty.*] Have you ever tried what the discharge of the tunnel is upon shutting the inlet-valve at the other end? I intended to have tried it, but I found the lock was not water-tight.
45. There would be no difficulty in doing it now? We would have to measure the water there now; we have three mains.
46. These drives to which you refer;—do they branch off to one side from the main channel? They do, going towards the swamp to the right; I fancy they intended to have carried the tunnel that way.
47. The first head from the main tunnel, where it terminates, is driven through a sandy tract of country? Yes.
48. Then, I would ask, is it possible for any drainage to come into the main tunnel from that drive? Oh yes, it is possible; at times the water comes in very strong.
49. Where is the next heading? Somewhere about the old Pound (*indicating position on plan.*)
50. Does that go in a considerable distance from the main tunnel? Some two or three chains; it is stated in my report.

51. And the other also? I think it does, and the other three too; they terminate in soft rock.
52. Do these drives leave the tunnel nearly at right angles? No; some of them are at an acute angle with the tunnel.
53. You don't think the object of these drains was to take the water in stratum? No, I think it was to get the shortest road to the swamp; and then when they got to the sand they had to turn back to get into hard ground again. I may mention that this section is not complete, but I have the data to complete it.
54. *Mr. Bennett.*] In your report you mention that you had to pump a large quantity of water? Yes.
55. In which shaft was that done? On the far side of the Rifle Range, between that and the end of Moore Park—between shafts No. 5 and No. 10 (*indicating positions on plan.*)
56. Had you any pumping at shafts Nos. 18 and 22? I think there was; I am not quite sure; Mr. Stacey will be able to tell you.
57. Do you recollect whether the water pumped out of these places was pure, or whether it was offensive? Well, there was some muck at the bottom at first.

F. Bell, Esq.,
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Mr. John Stacey called in and examined:—

58. You have the charge of Busby's Bore, I believe? I have, Sir.
59. You assisted when it was cleaned out a few years ago, did you not? I did.
60. Did you go through it at the time? I was the first that went through it from the middle of the Racecourse to the mouth of the tunnel. I had two men with me.
61. What state did you find it in—say between Hyde Park and the Gaol? From the centre of the Racecourse it was just over your ankles—about 8 inches deep of mud and slush.
62. What was the character of the mud? It was a black sort of stuff, of a fatty substance.
63. Did it smell badly? No, it was a black fatty substance. From there to Riley-street it was half way up to your knees.
64. Of slush? Some kind of slush. From there to Darlinghurst shaft, at the corner of Botany-street and South Head Road, it was rock and sand, and an average depth all the way along—half way up to your knees. Then, from the centre of the Racecourse, where we started, to near Riley-street, there were masonry walls built up, and covered with sandstone slabs —
65. But, generally speaking, it goes through natural sandstone? Then about 1½ chain from Riley-street it was shale.
66. Was the roof dry? Yes, and the walls the same.
67. Was there the same kind of slush all the way through? No; towards Riley-street it was sand, and chippings.
68. Not so much slush? No.
69. And as you went higher up from the Barracks? As we came to the "Ice-house Hotel," from the Darlinghurst shaft to the "Ice-house Hotel"—I was on my belly on the sand with my back rubbing against the crown of the niche, and a little water trickling under me.
70. When you got higher up you did not find so much of this muck and slush? No, not towards the sandhill shaft.
71. Higher up did you find it comparatively clean? Yes, clean sand; although in some places there were pot-holes where a little slush had collected.
72. Did you find where this black stuff came from? It was decomposed vegetable matter.
73. Where did it come from? It came from the mouth of the tunnel—it must have come from there.
74. Then matter of that sort may come in now? No; there was nothing then to stop it at the mouth of the tunnel. Every flood brought the sand down from the hills, and when the flats got filled the stuff was drawn into the mouth of the tunnel.
75. You did not accompany Mr. Liversidge when he took these samples of water from the Bore, did you? No sir—I did not.
76. Are you acquainted with the drainage along the South Head Road;—is it any part of your duty to attend to that? No sir, I have only to look after the tunnel—nothing to do with the drainage.
77. Are you aware of any cesspits or other sources from which country such as that through which the Bore passes could be contaminated? There is nothing that could come into the Bore—nothing on that side, only what comes from the mouth.
78. You mean to say that no water comes out of the tunnel except that which goes into it from the Lachlan Swamp? Yes.
79. Are you quite sure of that? Yes, I am; there was at one time a strong stream of water coming in shaft No. 1, at Park Road, about fifteen feet from the surface.
80. This is rather an important question, and I should like to know what grounds you have for supposing that no water goes out of the tunnel except that which enters it at the mouth? Having been in charge of the main workings in it from one end to the other —
81. I am speaking of the present time. What grounds have you for supposing that no water goes out of the tunnel beyond that which enters it at the mouth of the tunnel? Because we have stopped the soakage that did go through it.
82. As far as you could, I suppose? Yes.
83. And that is your only reason? That is the only reason.
84. Are you aware that not many days ago—about ten days—the water was almost completely turned off at the Lachlan Swamp—only two turns of the screw on—and that at the same time a large portion of the city was being supplied from that source? Yes; the tunnel was cleaned out nearly three years ago, and that the soakage we stopped between Nos. 16 and 17 shafts was stopped with clay, some of which may have been washed away by this time. That is the only way I can account for the tunnel being so full.
85. Where do you suppose the water came from? It was in the tunnel. I have a report here which will show that the tunnel was overcharged. (*Producing report.*)
86. For what length of time was the water cut off at the mouth of the tunnel in this way? I think the report shows it—about four days at the longest.

Mr. J. Stacey.
26 May, 1875.

- Mr. J. Stacey. 87. For four days the water was cut off? Yes (*referring to report*), from 6 p.m. on the 6th instant to 6 p.m. on the 7th instant the lock was shut down close. The head of water at the mouth of the tunnel then was 72 inches. At 6 p.m. on the 7th instant it was opened five turns, and it remained at five turns until 6 p.m. on the 10th, and then we shut it down three and that left it open two, and it remained at that until 6 p.m. on the 14th, when we opened it eight turns, leaving the lock open at ten turns.
88. What is the diameter of the thread screw? That I could not tell.
89. *Mr. Moriarty.*] What was the diameter of the spindle? I never measured it.
90. How many turns does it take altogether? I think it is fifty—I would not be sure.
91. *Chairman.*] When there are two or three turns of the screw on only there is very little perceptible current, I believe? Well, not a great one, from what I have seen of the lock of the same size higher up.
92. If you sink a well in the Sydney sandstone you generally get a supply of water, don't you? No sir, not through sandstone, till you come to a bed of clay. You may sink 50 or 100 feet through sand and not get water.
93. But if you come across a bed of clay you get water? Well, you might; it is just according to whether you strike a spring.
94. Are any arrangements made to prevent solid matter from floating into the mouth of the Bore? Yes, there is a man always there with a sieve to gather up leaves or other matters.
95. Is he always there? Yes, constantly at the water's edge, when there is nothing to skim up he is gathering weeds.
96. There has been no grating there at any time? No sir.
97. *Mr. Moriarty.*] What are the general dimensions of the tunnel? It is all shapes and all sizes; you could not average 10 chains of it anywhere. Under the sandhill—between the sandhill shaft and the Hospital shaft in the Barrack yard—you can go along 3 or 4 chains, with the roof 9 feet high, and about 2 feet 6 inches wide, and then it goes down suddenly.
98. You cannot give an average of the height? No.
99. Can you state the average width? All along the South Head Road it averages about 3 feet wide. Then in one place under the brewery it is 16 or 17 feet wide.
100. Are there any means of getting the water up to any fixed height at the lower end of the tunnel? Yes, by regulating the lock.
101. I am speaking of the lower end of the tunnel? I don't know, sir.
102. The water-lock at the mouth of the tunnel is a circular one, 2 feet in diameter, is it not? Yes.
103. So that two turns of the screw would lift the valve a very little? Not much; it is the weight of the water at the back which forces the water in.
104. What head of water at the back have you? About 70 inches.
105. Then there are about 6 or 7 feet of water standing in the conduit? Yes, about 70 inches.
106. The other day when it was screwed down two turns what head of water had you? 64 inches. When it came down to 57 inches we opened out eight turns. I tried to manage to keep a head of 70 inches, but 40 inches gives them a good supply; when there is more than that it runs out at College-street.
107. *Chairman.*] You said when you had two turns there was a head of 64 inches;—do you mean you had 64 inches of water outside the tunnel? Outside the lock.
108. And although that was kept pretty close the whole time the tunnel remained full? Yes, it kept full during those four days.
109. *Mr. Moriarty.*] I think you said that at one of these new headings there was a large quantity of water came down? Yes, there was a great soakage through the masonry at the sides of the tunnel to the height of the roof; but that has all been pointed with cement and stuff.
110. Is there much masonry through the tunnel? Yes, there is a good deal. Between the Court-house shaft and the Ice-house shaft there is a great deal; when I say a great deal, I suppose there are three or four chains in different places.
111. Do you know what the country is in those places through which the tunnel passes, whether it is soil or rock? I don't know. It is rock at both ends; we go through the soil and then come to rock again.
112. We have heard something about the water coming in from the Gaol? Yes; when I found it out there was a drill hole about the size of your finger, and the water from the Gaol side came into us.
113. Through this drill hole? Through the drill hole. The Government thought we brought the water in, because they put a plug in from the Gaol side to stop it, and made the hole larger. I took the plugs out on my side, and took them to the Town-hall.
114. Then this drive must have come close up to your tunnel? About 9 inches or a foot off it; there was solid rock between their drive and our tunnel.
115. What object do you suppose that drive was made with? I understood it was to draw off the water to supply the Gaol, but instead of that we drew the water from them.
116. Did much water come into the tunnel? No, the hole was only the size of your finger, and they plugged it up.
117. *Hon. J. B. Wilson.*] Has it been plugged up since? I don't know; it was when I went through the tunnel.
118. *Mr. Moriarty.*] Is there much or is there any dripping from the roof of the tunnel? Nothing worth mentioning; you could go through now without wetting your shirt.
119. *Mr. Bennett.*] From which shafts were you obliged to pump when you cleared out the tunnel? Mostly from the last shaft on the Racecourse and the second shaft on the Common; we had three Californian pumps there.
120. Did you pump nearer to Sydney at all? Yes, I did; I had two pumps on the other side of the pound paddock, in the shaft next to it, No. 13, at the bottom of the tunnel; there was about 4 feet 6 inches of water in it.
121. Had you to pump No. 18, what you call Provost shaft? No, sir.
122. How did you get rid of the water at the bottom of the shaft? We had to bale it out.
123. Had you to continue baling it? The other part was not up to your knees.
124. But at No. 18 shaft, had you to bale it out against the next instant;—did you continue to bale it during the progress of the works? No, sir.
125. Why did not any more water come in? There was not more coming in than ran off.

126. But it would appear from this section that there was a hole there, and the water could not run off? *Mr. J. Stacey.*
That was about up to your arm-pits.
127. Did the men work in water up to their arm-pits? No, not in the water; we baled it out. *26 May, 1875.*
128. *Mr. Moriarty.*] Had you to bale it sufficiently to keep it dry while the men were working? —
129. *Chairman.*] We are simply speaking about this Provost shaft. Did you bale it out once, or had you to keep baling it out while the men worked? No, we had to work with the water in it.
130. You have not answered my question. Did you bale it out once for all, or had you to keep on baling it? Yes, we baled it out enough for our purpose.
131. Did you observe any more come in after you had baled it? No; there would be water in some places 3 or 4 feet, in pot-holes, and then it passed by.
132. *Mr. Bennett.*] Was the water offensive? No, sir.
133. Had you any difficulty in getting men after you started that work? No, sir, they worked night and day, and I had the same lot of men when I finished that I started with.
134. *Mr. Bell.*] There were two or three places at the bottom of the tunnel you had to excavate in order to let the water pass, I believe? Yes, where there was a bit of a ridge.
135. Where was that? One was between the Ice-house (No. 21) shaft, and the sand hills (No. 20) shaft. We might have taken from 6 inches to 9 inches off the bottom.
136. What was the next place? Between the Provost shaft and No. 1 Park Road, and between No. 1 and No. 2 Park Road (Nos. 16 & 17 shafts) we had to take out some more rock.
137. Where else had you to excavate? I don't think we had to take out any more till we got to the Rifle Range.
138. Had you to take out any more there? Yes, we had to take out some to get the pump to work.
139. *Hon. J. B. Wilson.*] You stated that in the tunnel between Hyde Park and Riley-street there was a considerable amount of masonry? Yes, it is all masonry.
140. Was any cement used, or was it all dry work? Dry work.

Mr. John Doherty, Inspector of Nuisances, called in and examined:—

141. *Chairman.*] Are you Inspector of Sewers? Yes, sir.
142. Are you well acquainted with the old South Head Road and that neighbourhood? Yes. *Mr. J. Doherty.*
143. Are you aware whether there are cesspits or other sources from which soil may be contaminated in that direction? There is one cesspit at the corner of Brisbane-street and the South Head Road—that leads into a pipe-drain which goes down Brisbane-street—an earthenware pipe. It goes down Brisbane-street, and goes to the main sewers in Hay-street. *26 May, 1875.*
144. Are there any cesspits which are cleaned out and the stuff carted away? Once or twice a week to take the flood-water off the streets.
145. You are referring to gully-shafts; I am speaking of cesspits? No there are no cesspits.
146. No cesspits anywhere along the whole line? No.
147. I mean along the line to the Bore;—do you know the course of the Bore? Well, I have been through it once.
148. Are there any cesspits along that line? No.
149. *Hon. J. B. Wilson.*] Are there any privies along the line of the Bore, from South Head Road to Park Road? Well, as you go south they all go into the sewers.
150. Is that the case as far as the Brewery? As far as Botany-street; after that there is no main sewerage.
151. Are there any privies or cesspits along that line to Park Road. Are the houses there, for instance, in Dowling-street, between South Head Road and Moore Park and in that neighbourhood, supplied with these ordinary privies? I believe they are.
152. And there is no sewerage, properly so called, there; the houses are all supplied with these cesspits? Yes, I believe they are.
153. And that is in the neighbourhood of the Bore? I could not say the exact position of the line of the Bore along there.
154. *Chairman.*] Perhaps this map will assist you. This is the course of the Bore (*indicating course on map*); of course wherever there are houses there must be privies of some kind attached to them. Are there any houses there? There are a few.
155. On the South Head Road, just as you come to the corner of Park Road, are there any sewers to carry off foul or closet matter? No, the only sewer that takes any sewage matter near there is at the corner of Park and Botany Streets.
156. Beyond that there is no sewerage at all? No, there is no main sewer beyond that.
157. Then beyond that, on the South Head Road, all the houses would have cesspits? I should say so, sir; and that sewer that runs down Botany-street, goes down Bourke-street, runs away to Woolloomooloo Bay.
158. *Mr. Moriarty.*] But have the houses there water-closets; because there might be a sewer, but it does not follow that they are connected with the sewer? Well, I have been fourteen years connected with the sewerage, and I believe there is not a single house on the South Head Road, from College-street to Botany-street, that is not connected with a sewer.
159. I want to know whether the houses have all water-closets? Well, I should say, and I have been continually among those buildings, that they have all water-closets; and also that they are connected with the main sewer.
160. *Chairman.*] Do you often find common cesspits connected with the main sewer? Well, I'll tell you how that is done —
161. I merely want to know, as a matter of fact, whether these cesspits are connected with the main sewer? I will tell you. Before they are connected with the main sewer, that is, before the drainage is brought into the premises, they are all cleaned out with sand or soil.

THURSDAY,

THURSDAY, 27 MAY, 1875.

Present:—

HON. J. B. WILSON,	|	E. O. MORIARTY, Esq.,
DR. ALLEYNE,	|	W. C. BENNETT, Esq.,
		F. BELL, Esq.

M. B. PELL, Esq., B.A., IN THE CHAIR.

Mr. R. Seymour, Inspector of Nuisances, called in and further examined:—

Mr.
R. Seymour.
27 May, 1875.

162. *Chairman.*] We have called you to-day, Mr. Seymour, to obtain your evidence as to the best method which, in your opinion, could be adopted for clearing out cesspits in the City of Sydney and its suburbs. You have told us that at some former time some mode of contract was adopted by the Corporation;—will you describe that system? The Corporation, in the month of December each year, called for tenders for emptying the closets for the Corporation. Then, after a tender had been accepted—there would be two or three tenders, perhaps, and of course the lowest was accepted—there was an officer kept by the Corporation (the Assistant Inspector of Nuisances), whose duty it was to look after them, and in every case where there was a closet which was reported, either by letter or verbal complaint, or which we found ourselves to be a public nuisance or a nuisance to the neighbourhood, we gave notice to have it emptied.

163. To the contractor? No, to the owner or occupier of the house. Then an application was made, almost immediately, to the Town Hall, to have the closet emptied. I then gave instructions to the Assistant Inspector of Nuisances to go to the place with a nightman, and have it emptied, and the occupier or owner of the house had to pay the bare cost of emptying it. In that way we had all these closets cleaned to the satisfaction of the public. Afterwards the Council called for tenders again, and no one tendered, and it became a private matter, and was left in the hands of the nightmen, who made the people pay just what they thought fit.

164. Was the contract in the hands of one man, or one firm? One man had it.

165. Was he able to carry out that work for the whole city? He was.

166. Do you think that arrangement worked more satisfactorily than the present one? Yes; it was more satisfactory to the citizens and more satisfactory to us, because we knew when there was an order to clean out a closet, and we knew it was done, for the Assistant Inspector had to go next day to measure the pit, and see the number of feet the occupier or owner of the house would have to pay.

167. Now, I understand, you have nothing to do with the measurement or the payment,—all you have to do is to see that the closets are not in a filthy state? Yes.

168. Would it not be better, in your opinion, that these closets should be cleaned out more frequently than they are at present? Of course it would.

169. Although in some cases they do not create what you would directly call a nuisance, such as would justify your interference, there are a number of these closets, I suppose, which are very objectionable? Yes, it would be much better for the public health if they were cleaned out more frequently.

170. We are inclined to think the Corporation should themselves undertake, by their officers, to clean out these closets, and make a charge of some kind for doing it. Do you think that would be practicable? I do.

171. Then you would recommend that it should be done by the City officers—by their men and carts? Yes.

172. Suppose now that a certain cesspit, which ordinarily requires to be cleaned out, before it becomes nuisance, say once a year—supposing it were found desirable, under the new system, to have it cleaned out every three months—such a case might occur, I suppose? Yes.

173. Would that more frequent cleaning out materially increase the expense? Yes, because there are many of our common cesspits so situated that after a day's rain we have dozens of them overflowing into the yards, but if it is fine for two days they go down again by degrees. Still the smell, after the rain-water gets into the closets, is something very bad.

174. From the rain mixing with the closet-matter? Yes; the smell is sickening.

175. You think then that such a system would materially increase the expense—that it would entail a greater charge upon the owners? I do.

176. But if it were done systematically by the Corporation, under proper arrangements, don't you think that in itself would tend to diminish the expense? I think so, if it were done as you propose, and proper cesspits were constructed.

177. We are not going into that at present? I am speaking of the common cesspits; I think it would be much lighter upon the citizens than it is at present.

178. You mean that the cesspits should be made on an improved system? Yes.

179. Do you think, from your experience in these matters, it would be fair to say that all cesspits should be cleaned out at certain intervals—say once in three months or once in six months; or do you think there should be a distinction made between them? Some closets would not require to be cleaned out so often. I have known instances where closets have had to be cleaned out four times in six weeks.

180. Owing to the imperfect construction of the closets. Have you ever met with a certain kind of cesspit which did not require to be cleaned out at all? Yes.

181. What kind of cesspits were they? Cesspits built on sandy soil, with open brick-work. All the liquid portion of the closet matter went into the sand, and nothing remained but the solid matter. In those cases we have found them to last three or four years without being emptied.

182. It would not be fair in such a case to compel the owners to clean them out, except at long intervals? No.

183. There would be nothing to clean out? There would be nothing to clean out.

184. Do you think it would be a good plan to assess each property for this purpose at an annual sum, and that it should then be simply the duty of the officers of the City Corporation to do the cleaning at the discretion of the Inspector? I think the Corporation should have the powers of cleaning out these common privies, and that a law should be enacted to provide that a charge should be made for doing it; but I think the Corporation should have the power to make that charge. Then it would be the duty of the officers of the Corporation to see that the closets were cleaned out when required.

185. I suggested an assessment, not according to the value of the property but in accordance with the nature of the case: closets that did not require cleaning out should be assessed at a low rate,—which do you think would be the most equitable plan? I think the charge should be according to the work done.

186. And you think it should be left to the discretion of the inspector to decide at what intervals different closets should be cleaned out? I think so.

187. And you think there would be no difficulty in commencing such a system,—that the necessary plant and the labourers required could be obtained? It could easily be done. The Commissioners had all the plant necessary, and then it went to the contractor and from one contractor to another, and it was kept at Carter's Barracks, Haymarket.

188. Are these common closets very close together in many places? Yes; in Sussex-street there are no less than 188 common privies.

189. Is there any sewer there to which connection could be made? Many of them are connected; all that can be are connected, but a good many of them cannot be. We have put a pressure upon the owners by summoning them or threatening to summon them, and that has made them connect their closets with the public sewers wherever they could. I was looking over my instructions this afternoon and I found that from George-street to Darling Harbour, taking in the rocks at Miller's Point and that portion of the north side of Parramatta-street called Athlone-place, and several other smaller streets, there are 1,170 houses in that block which have common privies.

190. And I suppose these privies, although not such a nuisance as to justify you in summoning the parties, are still a perpetual nuisance? They are indeed. We had two cases at the Central Police Court to-day connected with a similar nuisance in Bay-street, Glebe. There were two double privies—common privies—and the stench on approaching was enough to turn your stomach.

191. You say that nuisances are very often increased in these cases by the admission of surface water into the privies? Yes.

192. Would any great additional expense, in your opinion, be involved in taking measures to prevent that? No; it would be a great advantage.

193. And it would have the effect of keeping the closets clean? Yes.

194. Do you think it desirable then that the Corporation should be empowered to insist upon this improvement being made also? Yes. If the closet was made of brick and cement, and about 18 inches above the level of the ground, no rain-water would be able to get in; but at present these closets are mere holes.

195. But that would involve a very considerable expense, would it not? No; the expense need not be so great.

196. Now, speaking generally, if you were making arrangements of this kind, would you consider it desirable to have smaller pits and have them cleaned out more frequently, or larger pits and not have them cleaned out so often? I should consider 4 feet wide and 5 feet deep a proper size; and they should be cleaned out not less than once in every twelve months if they were built in the way I have described.

197. How many persons, speaking roughly, would such a closet accommodate? Say a man and his wife and four children.

198. That would be for one house? For one house.

199. And you think everything that is necessary would be done if it were cleaned out once in twelve months—that no perceptible nuisance would occur? I think so.

200. Now suppose some officer were appointed to take charge of the whole system—not yourself but any officer—we know that officers will occasionally neglect their duties;—do you think there would be any danger of such neglect. Of course the occupier of a house would have no power to compel the Corporation to clean out his privy? I do not think so. I think the tenants would look after that sufficiently, and their neighbours.

201. You think the force of public opinion would be sufficient to prevent any danger from that cause? I believe so.

202. Have you had any experience in the use of any chemicals for deodorising closet matter, such as quick-lime for instance, thrown down the closets? We have what we use now, carbolic acid, and we have a man who gets £2 a week who goes round now and throws some stuff down to destroy the smell.

203. What does he throw down? I cannot say. Mr. Bell may be able to tell you.

204. Some deodoriser? Yes.

205. Under what circumstances do you use the carbolic acid? In common privies or cesspits.

206. Does this man make a regular round of visits for that purpose? No; only when we hear of any nuisance of that sort we send him with a can of stuff which he sprinkles over the place to take away the smell.

207. That is where the closet is not full, but is offensive? Yes.

208. Do you find that plan to be advantageous? We do not.

209. Why does it not answer? In some cases the persons residing in the house do not wish us to use anything of the sort on the premises. We had an instance of that in Kent-street. They said they would sooner have the smell of the closet than have the carbolic acid used. At the same time there was a very severe case of typhoid fever there.

210. Then if you had used something not so offensive as carbolic acid they would not have objected? No.

211. It was not a mere ignorant objection then? No.

212. Was that the only objection? Yes.

213. Then if that could be removed do you think the Corporation might, with advantage, be empowered to use some kind of deodoriser? Yes, they might have the closets cleaned out and deodorised.

214. In speaking of a common privy or closet, you mean not one that is common to a number of people but an ordinary one? Yes.

215. Have you any objection to change the use of the word common to ordinary in your evidence? No; ordinary is what I mean.

216. You think the system you have described would be as effectual, under present circumstances, as any that could be devised? Yes.

217. And of course it would be equally applicable to other Municipalities? I should say so.

218. Have you any knowledge of how the matter taken from these closets is disposed of at present? At present the gardeners take most of it away. A great deal of it goes to Botany Road.

219. It is deposited in a number of places I suppose? Yes, on gardens.

220. Do the people take it away themselves? Yes; we don't take it. The nightmen take it away and sell it to the gardeners.

221. Do you mean to say that these people receive it just as it comes from the closet? Yes.

222. Do you think it desirable that this matter, fresh from the closets, should be taken to these people's premises? I do not.

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- Mr. R. Seymour. 223. Don't you think such a practice must be dangerous, not only to themselves but to their neighbours? I do.
- 27 May, 1875. 224. The Corporation I suppose have no power over these people? Not the slightest; we have no control over them whatever when once they leave the city; except they go anywhere near the watershed, and then we go after them.
225. Has there been any place outside the city set apart for depositing matter of this kind? There was at first, on the western side of Moore Park; there were pits built there some years ago for that purpose.
226. Were they built by the city authorities? Yes; and they had power to compel the contractor to put the stuff wherever they thought proper.
227. That was in his contract I suppose? Yes.
228. That place was not in the city at that time? No; but it is now.
229. How did that system work? It worked very badly; the place was too close to the township. The residents on Surry Hills were always complaining of the stench, more especially when there was a south-east wind.
230. Was the stuff allowed to remain there permanently? No, it went into two large pits close by belonging to the Corporation, and then it was used for plantations.
231. Do you mean that that was done periodically? Yes.
232. How did that end? It ended by the filling up of Moore Park; but previous to that there were so many complaints that the Aldermen had decided to abolish it, and it was abolished.
233. And since that time there has been no place to deposit matter of that kind? No, that was the last place we had.
234. What would be in your opinion the best method of disposing of this closet matter? I think there ought to be a proper place to take it to, and that it ought to be properly cleansed—all the bottles, empty tin cases, and other things taken out of it. I think the soil should be properly cleansed and properly deodorised, and converted to some use.
235. Do you think there is any suitable place sufficiently remote, but not too far from the city, available for such a purpose? I know of no such place at the present time.
236. Do you think such a place could be found? I don't think it is anywhere round Sydney at the present time.
237. But if this matter could be at once deodorised there would be no objection to deposit it almost anywhere, even closer to Sydney? Yes, if it could be deodorised. My opinion is that it will never do to deposit this matter in the neighbourhood of Sydney, or its suburbs; for no matter where it is put the stench will be carried by the wind, if not into the city into some adjoining Municipality.
238. Are you aware whether these gardeners obtain this matter without payment? No, they pay for it in many instances.
239. *Dr. Alleyne.*] When you speak of deodorising this closet matter, you mean depriving it of its disagreeable smell? Yes, of everything offensive.
240. Offensive to the nose? Yes.
241. *Mr. Moriarty.*] You have mentioned, Mr. Seymour, that in many places the soil from the cesspits percolates into the surrounding ground? Yes.
242. Have you noticed anything offensive to arise in the neighbourhood of those places afterwards? Yes; in many instances we found a most deadly smell in those places for days and weeks.
243. Did you attribute that to the saturation of the soil by offensive matter from the cesspits? Yes.
244. You referred to a certain place where this had occurred—Sussex-street and some other place, Parramatta-street, I think;—are there any wells in that neighbourhood from which water is drawn for the use of the inhabitants? I don't think you could find half a dozen wells in Sydney just now. We find that in all instances the wells have been filled up.
245. Then there is no danger of the contamination of wells from that cause? Not that I am aware of.
246. *Mr. Bennett.*] In those closets in sandy places, to which you have referred, you find as I conclude from your answer to Mr. Moriarty, that the sand becomes offensive, and you object to a uniform rate of assessment because it would press heavily upon the owners of such properties. Don't you think it would rather be an advantage to compel them to make their closets retentive? Yes, I think it would be—if not to the owner it would be to the occupant.
247. Do you think these closets which do not require to be emptied so often are more objectionable? Yes.
248. You said you thought there would be a difficulty in obtaining a place near Sydney for the deposit of closet matter. Would the present watershed be a suitable place, supposing that water could be obtained elsewhere? I think it would.
249. Do you know any place on Shea's Creek which would answer? It is on the line of Shea's Creek where it is deposited at present.
250. Do you know any place further on near Cook's River? I do not know any place, because there is a great deal of building all along there. There is one thing you would have to guard against if the soil was brought on to that land. You are aware that we are subject to strong southerly breezes, and the whole of the stench would be brought right into town. It was thought at one time that the Corporation should engage punts and take the stuff out to sea.
251. *Hon. J. B. Wilson.*] You stated, I think, that during the time of the Commissioners, when the night-soil was removed by contract, the parties paid a certain fee for permission to remove it? Yes.
252. Have you formed any opinion which system was the most economical, that or the present plan, of paying the nightmen to do it? The plan carried out by the Commissioners and Corporation, until they were unable to obtain tenders, was much more beneficial.
253. Is it a fact that the charges for removing the night-soil from these closets are very high? Yes; the people have to pay 25s. now or more for emptying a closet, which they used to get done for 10s.
254. Then the system you propose would not be a heavier tax upon the inhabitants than the present one? No, I don't think it would. I think if these ordinary privies are retained there ought to be an arrangement that they should be cleaned out every winter, just at the latter end of the winter, before the summer comes on.
255. *Chairman.*] And at such other periods as the inspector may consider necessary? Yes, because some of them require it oftener on account of bad management.
256. Could any alterations be made, without any great expense, to facilitate the cleaning out of the closets, so that the nightmen could obtain access to them more conveniently? No, I don't think so, sir; they must go through the yard.
- 257.

257. I mean in getting at the pit itself? No, there is no difficulty about it at all. I have been round with the nightmen myself repeatedly.

Mr. R.
Seymour.

258. *Mr. Bennett.*] Was this contract system for the removal of night-soil initiated by the City Commissioners? It was commenced by the City Commissioners, and was carried on for some years afterwards by the City Council.

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259. What was the average charge per cubic foot? We used to get it out as low as 2d., and then it went on increasing until we paid 10d.

260. *Chairman.*] What is the charge now? We have to pay 25s. or 30s. up to £2 for what we could formerly get done for 10s. or 15s.

261. Is that in consequence of the high rate of labour, or from the difference in the system? It is from the different system. The nightmen have it all in their own hands; there are only four of them, and they charge whatever they like.

Mr. David Clement Robertson, Inspector of Waste Waters, called in and further examined:—

262. *Chairman.*] Your duties keep you moving about the city pretty frequently, I think? Yes.

Mr. D. C.
Robertson.

263. We have just examined Mr. Seymour respecting the ordinary privies and cesspits. He tells us there are a great many in Sydney, and that they are a great nuisance. Even in many cases where the nuisance is not of such a character as to justify him in interfering with some of the parties, it is still a nuisance, and he thinks it would be desirable to take steps to remedy the evil. Are you of the same opinion? Yes. There are many closets which might not have a foot of matter in them and yet be very offensive.

27 May, 1875.

264. And he thinks that the Sydney authorities might be empowered to clear out these closets by their own servants at such periods as might be determined, or at the discretion of their officers might be thought necessary. And he thinks this duty should be charged according to the work performed, to the owners or occupiers. Do you think that would be an improvement? I think it would. I think it would be a most effectual way of abating the nuisances and keeping the closets clean.

265. And you think that nuisances of this kind existing in the city and the suburbs—for of course you have some acquaintance with the suburbs—are such as to justify immediate action? I do.

266. Do you think the matter is of such importance that if not attended to before next summer the health of the inhabitants of the city is likely to be seriously affected? Yes; these closets are very offensive—you can perceive it as soon as you approach them.

267. Are there not in some crowded parts of the city, and even in the suburbs, places where there is always more or less an offensive smell? There are.

268. I mean not from any particular nuisance which Mr. Seymour might take notice of, but a constant nuisance? Yes; from the fact of there being such a number of these closets close together.

269. Mr. Seymour thinks that, without any very great expense, an arrangement might be made to prevent the percolation of surface water into these cesspits, which he tells us very much increases the nuisance, and also the expense of keeping them clean. Have you observed that? Yes. I have observed that closets that have been cemented outside have not been so offensive—where they have been comparatively water-tight.

270. He tells us that where there is a cesspit in sand or loose gravelly soil, which absorbs all the liquid matter, the closet seldom becomes full, except after a long time? Yes. In sandy places—in parts of the Surry Hills, for instance, there are closets which have not been cleaned out for years.

271. And Redfern also? Yes, in Redfern too.

272. In cases of that kind, where closets have not been cleaned out for years, and where the liquid matter percolates through the soil, is it your opinion that they still become a nuisance, by contaminating the surrounding soil? I think so; of course they are not so offensive as the others.

273. But you think it would be better if such a state of things should not be allowed, and that it would be an advantage to have the closets water-tight? Yes. There is always a fear of the wells in the locality being contaminated.

274. Can you give us any suggestion which occurs to you for carrying out as soon as possible some general scheme, not only for the City of Sydney but for other municipalities? No. That is more in Mr. Seymour's line. I have not had much experience in these things.

275. Have you heard people complain about these privies in the places you have referred to? Yes; and they have called me in to see them. My attention has been called to them, both in the City and in the suburbs. There are places in Sydney where there is only one cesspit for twelve or thirteen houses, occupied, some of them, by forty souls. There are several such places in the city.

276. Is there any difficulty, or is there anything to prevent them from having more privies in such cases? Well, it is very necessary there should be more.

277. But is there anything to prevent them from having more? In some of the places they could have more. In one place off Kent-street, where they have only one cesspit, I think they are now connected with the sewer. In one place near the Gas-works there are two pits for I think twelve houses. Mr. Seymour summoned a party there some time ago.

278. Not for having so few closets but for having them so offensive? Yes.

279. Have you observed where these cesspits exist in friable loose soil, such as you have described at Surry Hills and Redfern, that there are wells near them which are used for household purposes? Yes; at Waterloo the houses are nearly all supplied with wells.

280. Are these wells near the cesspits? Yes, they are generally near, and in some cases the closet stands higher than the well, so that the drainage goes towards the latter.

281. Have you any reason to suppose that the water has been contaminated in these places? No, sir, I cannot say I have. I have never lived there myself.

282. And you have never heard the people complain of it? No.

283. Are these closets very near the wells? They vary according to the size of the allotment. As a rule they are not very far off. The closet is generally in the corner, and the well about fifteen or twenty feet from it, according to the size of the ground. There is a row of closets on Surry Hills within twenty feet of the back door of the houses, and the drainage from the cesspits goes right under the houses.

284. *Mr. Moriarty.*] What is the character of the soil there? It is a loose soil.

- Mr. D. C. Robertson, 285. And the cesspits, are they bricked or cemented? No; just common cesspits.
 286. And the drainage goes under the houses? Yes; I have lived in one of the houses myself.
 287. What is the name of the place? Agnes-terrace, Surry Hills.
 27 May, 1875. 288. Are there many others of a similar character? Oh, yes; numbers. I used to smell the closet as soon as I went down stairs into the back room.
 289. About how far was the closet from the house? About the breadth of this room. About 20 feet.

FRIDAY, 28 MAY, 1875.

Present:—

HON. J. B. WILSON,	E. O. MORIARTY, Esq.,
W. C. BENNETT, Esq.,	F. BELL, Esq.,
G. F. DANSEY, Esq.,	DR. ALLEYNE,

CHAS. WATT, Esq.

M. B. PELL, Esq., B.A., IN THE CHAIR.

Charles Watt, Esq., Government Analyst, examined in his place:—

- C. Watt, Esq., 290. *Chairman.*] We wish to take your evidence, Mr. Watt, as to what can be done practically—bearing in mind the expense and the practicability—in the way of disinfecting cesspits and similar receptacles for faecal matter, and also for disinfecting the matter which is removed from closets. Can you give us any information on the subject. For instance, there is dry earth;—would you use that as a deodoriser or disinfectant when applied to faecal matter either in the closet or after it has been removed? I have made a list of the ordinary deodorisers and disinfectants, such as can be obtained here, for of course if they are not readily obtainable it would be no use to think of them.
 28 May, 1875. 291. Such as can be employed at a reasonable expense? Yes, at a reasonable expense. I have divided them into two classes. The first class consists of carbolic acid—common commercial carbolic acid.
 292. Impure carbolic acid? Yes.
 293. A substance called carbolate of lime, and the ordinary chloride of lime. These three substances destroy offensive odours and disinfect; they are deodorisers and disinfectants, but they each of them leave their own peculiar odour—that is the first class. The second class is sulphate of iron, chloride of zinc, and sulphate of alumina. These arrest putrefactive fermentation; they do not deodorise thoroughly, but they leave no peculiar smell of their own. That is the second class. These last would cause the closets to be much sweeter, inasmuch as there would be no putrefaction going on in them—only the ordinary smell of faecal matter. With regard to the sulphate of alumina, there is a great deal in favour of it, as it could be obtained in quantity at a reasonable cost, it being a natural product.
 294. Do you know any one who could give us information on that point? I can obtain it for you.
 295. Can you state roughly what it would be likely to cost? The rough price I understand would be about £3 per ton. It would not be serviceable as a thorough deodoriser, but as preventing putrefactive decomposition. Many persons will not, if they can possibly avoid it, use disinfectants which leave odours of their own; that is my experience. There is an advantage in those chemicals which I have mentioned in the second class, that they fix the ammonia, and they do not in any way—except, perhaps, chloride of zinc—interfere with the value of the product as a manure.
 296. Do I understand you to say that if you use one of these substances, chloride of zinc, which takes away the offensive odour and arrests putrefactive fermentation, it would not destroy the noxious gases arising from the closet matter? With regard to anything that arises from the faecal matter, it would not perhaps have any thorough effect unless it were brought in perfect contact with it. These compounds do not destroy the gases; they arrest decomposition, but not being volatile they are not capable of meeting any gases which pass into the air from the faecal matter.
 297. I should like to understand this thoroughly. Supposing a closet contains a certain amount of faecal matter, and chloride of zinc is introduced into it, it arrests the process of decomposition, but you say it does not destroy the ordinary odour which arises from it? If used in large quantity, so that every particle of the matter was covered with it, it certainly would. But you cannot ordinarily—in an ordinary cesspit—mix it well up with the closet matter.
 298. Do you think it would permanently arrest putrefaction;—how long would it last? It would last until fresh matter was thrown on it.
 299. Are you quite sure it destroys the ordinary stench if properly applied? It certainly does; it is a question with all these substances whether they are used thoroughly or not; the great difficulty is that you cannot expect people to stir up the matter so as to mix the ingredient with it.
 300. In this case it would be applied to matter which was in a highly diluted state? If it were well stirred up it would be effective; these things are chiefly effective in preventing or stopping putrefactive fermentation.
 301. We contemplated suggesting some such arrangement as this, to prevent the necessary consequences attending the frequent cleaning out of closets: That the City authorities should be authorized to use disinfectants in the closets themselves;—is that practicable, do you think; is there any disinfectant which would destroy the smell, and also the effect upon the health of the inhabitants of the vapours which arise from the closet matter? Any one of these I have mentioned would render considerable service. Personally, I should prefer the first-mentioned substances.
 302. I wish to have your opinion as to the most practicable method. You say that in certain cases a great deal of mixing would be necessary, which would be difficult to do; practically, what substance would you recommend? I think I should prefer to use carbolic acid.
 303. A great many persons, I believe, refuse to use carbolic acid, on account of its noxious smell, which is a great objection? In that case I should fall back upon the sulphate of iron or sulphate of alumina, and sprinkle it in every two or three days. I suppose the faecal matter in the closets would be pretty stiff, and this would not sink through it. But fresh matter would be thrown on the top, which would still give out its odour, as you would not be able to stir it about.

304. It is clear that the city officers could not be disinfecting closets every two or three days;—would there be any advantage in using disinfectants, supposing the closets were cleaned out every three months, or say once a month? Well, it would of course do some good. C. Watt, Esq.
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305. Do you think disinfectants could be used with much advantage at such intervals as to render it unnecessary to clean out the cesspits so frequently? I do not think so. I think they would have to be cleaned out very frequently.
306. You are aware, I suppose, that they are not cleaned out now until they become a perfect nuisance? I am aware that they are imperfectly constructed and much neglected.
307. You do not think a system of disinfecting these cesspits at certain periods could be carried out successfully? I do not think it could be done with any success.
308. But you think that of all the disinfectants you have enumerated the sulphate of alumina would be the most practicable? Yes, those substances which I have mentioned in the second category, which disinfect but do not thoroughly deodorise.
309. They are not so effective as chloride of lime? No, because that disinfects and deodorises also.
310. Do you think any advantage would arise from the use of quick lime? No, that loses a portion of the ammonia, and it is not a good disinfectant or deodoriser. It sets free a quantity of ammonia, and I think it deceives people in reference to its efficiency on account of the ammoniacal smell.
311. It is not a good deodoriser? No, it sets free the ammonia from the urine, and sends a quantity of it into the atmosphere.
312. You would not recommend the use of lime in this case? No, the most effective thing, but it would cause a great deal of trouble, would be dry burnt clay, as it absorbs the moisture and prevents putrefaction.
313. Would not thoroughly dry clay answer the purpose? No, it would not be so good as burnt clay.
314. But after it was burnt it would still be in a friable state? Yes, if sufficiently burnt to render it more absorbent, but not over-heated.
315. Can you explain the way in which dry earth acts? Simply by absorbing the fluid in which the decomposing matter is suspended.
316. It simply absorbs the moisture from the faecal matter and makes it solid. It has no chemical effect? No.
317. What is the element in dry earth which produces this effect? It is the silicate of alumina principally.
318. The free silica which exists in soil has no such property? When it exists as sand it is of no use.
319. The ordinary clay and loam consists, does it not, of silicate of alumina and free silica? Yes.
320. Then if the free silica were entirely absent it would be equally effective as a deodoriser? If the silica existed as sand it would be useless, but if it existed in the shape of dry powder it would have an absorbing power. It is the compact hard silica which has no power to take in moisture.
321. Would what is the nearest approach to silica in pure clay, such as pipeclay, be of use? Yes, if thoroughly dried; any clay that would absorb moisture.
322. Do you think there is abundance of the proper material for such a purpose in the neighbourhood of Sydney? Yes, in the County of Cumberland.
323. Do you think there would be any advantage in occasionally throwing down into these cesspits some dry earth of the proper kind? Well, if you could put enough of it in to make the closet matter solid, it would be efficacious.
324. So as to cover the stuff in the closets completely? Yes; of course it would entail a good deal more work in removing the soil.
325. About what quantity would be required? Sufficient to make the closet matter not only pasty but to absorb the entire moisture.
326. Are you of opinion that such a plan—to make the matter solid—would be practicable? No, I do not think so; there would be too much of it to remove.
327. I understand generally then that you do not recommend the use of disinfectants in cesspits. We are assuming, of course, the cesspit system to exist as a necessary evil? I may say that if these disinfectants were used by the occupants of the houses regularly they would be useful, but to use them spasmodically, now and then, would be scarcely of any use. I do not think any advantage would be gained by the Corporation employing them once a month.
328. I will now come to another point: Supposing the matter from these cesspits were removed and deposited in some place out of town, and these disinfectants applied to it either when it was removed or afterwards;—would that answer, do you think? Yes; you would have a better chance of dealing with it then.
329. Do you think it could be deodorised in that way at a reasonable expense? I think so.
330. What would you recommend as the most effectual deodoriser? I should recommend sulphate of alumina or sulphate of iron under such circumstances.
331. I don't think the objection to carbolic acid would exist in such a case, because it would not be brought to every man's door? No; I am looking at the question of expense and probable use of the refuse as manure.
332. You think the sulphate of alumina would be the best? Yes, I think so.
333. Supposing a cart-load—containing say two tons of closet matter—were treated in this way, can you give a rough guess as to the quantity of stuff it would take to deodorise it? I could only give a very crude guess, because I have made no experiments of the kind, and it would depend greatly upon how you applied it. At a rough guess I think you might say one hundred-weight of sulphate of alumina—perhaps less.
334. That would cost—how much? £3 per ton—perhaps not so much.
335. If it were obtained on a large scale? Yes. It might be sufficient to throw a little of it on the top of the stuff, if it were deposited in a suitable place, and then it would not take so much.
336. Would that affect the value of the closet matter as manure? I think it would make it rather more valuable, as it would fix the ammonia.
337. If the contents of a cesspit were dealt with in this way, and allowed to remain in a certain depot for a certain time, would it then become valuable as manure? That is a very hard question to answer, because it would depend upon the demand for it. If the persons who made use of it lived close by, it might be of value to them, but it would not be of sufficient value to persons living at a distance, who would have to pay the cost of carriage.

- C. Watt, Esq. 338. Would it be of less value than the ordinary stable manure? Well, it is a different class of manure, and people are not in the habit of using it. It is a very good manure, but having so much fluid in it the weight and the cost of removal would be great objections to its use, unless to persons living close by.
- 28 May, 1876. 339. But still it would be of some value if it were placed in heaps? That would depend upon the demand for it; but in any case there would be some fluid with it, and there would be a great weight to remove for a very small quantity of real manure.
340. What would you recommend as to the conditions under which it should be taken to the receptacles where it would be deodorised in this way? That I am hardly capable of giving an opinion upon. If I were sure the farmers would take it, then I would advise that it be deposited in vessels that would not leak.
341. Suppose it were deposited in hollows in the sand, would the solid matter that remained after the liquid had been absorbed be of any value? Not of much value.
342. Would it be worth anything? Of course it would be worth something.
343. I understand that you do not think it would be of sufficient value to induce people to use it if it had to be transported to any distance—that if there is to be any profit in it, it must be consumed in the neighbourhood of Sydney? Yes; or within a few miles of it.
344. We have had it in evidence that the greater part of the night-soil taken out of Sydney is carried away and sold to market gardeners. If the quantity were confined to what is now taken away for that purpose, could that be treated in the way you describe without much difficulty—could 200 tons of it be so treated without creating a local nuisance—of course not in the neighbourhood of Sydney? That would depend upon a variety of subjects. For instance, during wet seasons it could not well be removed, and it would be considerably increased in bulk. In dry weather I don't think it would create a nuisance.
345. You think this deodorising matter would have completely destroyed the nuisance? If you did not use carbolic acid it would not be thoroughly deodorised. If you only used sulphate of alumina you would still be able to realize what it had been; it would still have what is called a faecal odour.
346. Supposing we had altogether 200 tons a week of this matter, from cesspits to dispose of in the city and suburbs, until some perfect system of sewerage could be devised, what plan would you be disposed to recommend? I think I should lean to the carrying it to sea.
347. And throwing it away in the sea? Yes. I am afraid there would not be a sufficient demand for it by the market gardeners. They would take some of it no doubt, but you would have to remove the remainder. You might let them have a certain quantity until you had made arrangements to take it all away.
348. It appears that at present, as soon as the matter is removed by private individuals beyond the limits of the city, the authorities have no control over it, and the people who take it away put it anywhere they like;—what do you think of that system? That is precisely what I am afraid of. I think it is shocking. That is the reason I think you must keep it out of their hands until a proper use can be found for it. Then comes another question which medical men have been considering a good deal at home, whether this matter is fit for manure for different kinds of crops, or whether it may not lead to some not yet fully realized evils.
349. *Dr. Alleyne.*] Is your objection to the use of quick lime simply a commercial objection? I have no objection to it; but it liberates the ammonia which you want to save if the article is to be used for manure; that is one thing. Then it is not readily soluble, and therefore has no tendency to diffuse throughout the mass to which it is applied.
350. Is it not a powerful caustic? Yes, to anything it touches, but it is not easily soluble.
351. But it is very absorbent—it absorbs the fluids very rapidly; and of course in doing that it comes in contact with animal or vegetable or other matter diffused through the fluids? Oh yes. I may mention a case which has come under my notice, which may be interesting to the Board, as it shows the necessity of making some improvements in connection with the ordinary cesspits: A woman came to me some time ago and brought me some loaves of bread to look at. She said great complaints had been made about the smell of her bread and she did not know what could be the matter with it. She wanted me to find out for her what made it objectionable. I asked her what water she used to make it with, and she said she used water from a well. I then asked her if the closet was anywhere near that well, and she said it was not very far off. I told her to go home at once and have the well emptied, and find out whether there was any connection with the cesspit, and to come back and let me know. She did so and it was found that there was a surface drain running from the closet direct into it, and of course the water was contaminated. She had thus been selling bread to the whole neighbourhood made with polluted water. The matter was rectified and the bread was improved, and there were no more complaints about it.
352. *Chairman.*] Was the water itself offensive? She did not bring me any of the water, but as they were very dirty people I dare say it would have to have been very offensive for them to have complained of it.
353. How was it that the bread was contaminated and not the water? I should say probably water was not an article they used very much.
354. What part of the city was that in? In the upper part of the South Head Road.
355. *Hon. J. B. Wilson.*] What, in your opinion, would be the effect of mixing the ordinary street sweepings with matter from the cesspits in the places to which it was taken. Would it help to make the closet matter less injurious to health. Would the sweepings deodorise it at all? It would tend to part the faecal matter and break it up; I don't know whether it would deodorise it much. It would depend a good deal upon whether it was dry when you mixed it. If it were dry I think it would have a little effect, but not in such weather as this. I look upon the keeping the cesspits water-tight as the most important point to prevent the nuisances we have been referring to.

Mr. Andrew Kayser called in and examined:—

- Mr. 356. *Chairman.*] Are you in the employment of the City Corporation? Yes.
- A. Kayser. 357. In what capacity? I am employed to deodorise closets.
358. You mean public closets and urinals? Yes.
- 28 May, 1875. 359. Do you adopt any particular system of your own in doing so? Yes.
360. Have you any objection to explain to us what the process is? None whatever.

361. Will you explain what the substance is which you use? It is simply a mixture that evolves chlorine.
362. How is it to be made? It is a mixture of my own.
363. Is it an expensive one? No, it is made at a slight cost.
364. It is something which contains an excessive quantity of chlorine? It evolves a large quantity of chlorine, and it keeps working for five days.
365. You are making this stuff yourself? Yes.
366. Do you sell it to the Corporation, or do they pay you for applying it? They pay me so much for supplying it.
367. So much per ton? No, according to the quantity used to deodorise the closets; it does not take anything like a ton.
368. Do you think if it were generally used it would be applicable to the deodorisation of closets—public closets? Yes, provided that wherever you use it you have some little circulation of air.
369. Would it readily mix with the contents of a closet or cesspit? Yes.
370. Would it mix with the fluid—is it soluble? It would not mix with the soil itself, but it would saturate it with chlorine. It is much the same as an effervescing draught; there are three bodies in it which act upon each other just in the same way as anything else which ferments.
371. But when you apply it to a large cesspit would the stuff you put in diffuse itself as a liquid, or would it remain in one place? It would diffuse itself by its gas; the gas would be evolved and saturate the body requiring to be disinfected.
372. The chlorine gas would be circulated through the matter to be deodorised. Then it is simply a contrivance for diffusing chlorine gas? Yes.
373. How much of it would you require to use to deodorise a cesspit containing four or five cubic yards of night-soil? Do you mean to deodorise the whole mass, or simply to deodorise the foul gases arising from it?
374. To do what you can—I do not know whether you can deodorise the whole mass? Not if it were solid.
375. Well to do the best you can with it—how much would you use? It would not require above four pounds.
376. Have you any idea at what price you would be willing to sell this compound? Any quantity of it at sixpence a pound.
377. How long have you been in the employment of the Corporation in this capacity? This is the third month.
378. And what proof did you afford them of the efficacy of your mixture? We had several trials of it—several public trials—in some of the worst places in town. We tried it in the George-street markets.
379. It would not be so applicable, I should imagine from what you say, to a mass of closet matter which had been deposited in the open air, as it would to matter which was confined, as its effect is produced by the generation of gas, and the gas would, in that case, escape? No, the gas would be dissipated to a great extent. The stuff would require to be mixed up with the closet matter.
380. *Mr. Bell.*] In cleaning—emptying out closets, would it be beneficial in any way in keeping down the smell? I think it would.
381. During the process of cleaning out the closets, to prevent the abominable smell which arises? It would perfectly cure that.
382. Would you be able to apply it in an efficient manner? I think so; in fact I think the whole of the matter in the closet could be easily deodorised before the morning; but that is only a supposition—I have not tested it. The offensive savour from the closet could be perfectly cured.
383. *Chairman.*] Am I right in stating that it would take about 1 lb. to the cubic yard of the ordinary contents of a privy? To a cubic yard of solid matter. To deodorise a privy would not take so much. There is a marked difference in the closets; the worst places in Sydney at present cost 6d. per day for each closet.
384. What weight of your substance would be required per cubic yard to deodorise the contents of a closet? As I stated, I have never tried an experiment of that sort, but I should say not over 1 lb., that is sixpence.
385. *Hon. J. B. Wilson.*] Do you put it into the closet in the form of powder? To deodorise the matter in the closet you would require to put it in in a semi-liquid state.

Mr.
A. Kayser.
28 May, 1875.

G. F. Dansey, Esq., City Health Officer, further examined:—

386. *Chairman.*] You have heard the latter part of the evidence? I have.
387. Did you hear Mr. Watt state that he should not anticipate any good results from the use of disinfectants in connection with cesspits? I did, and I believe it.
388. Have you ever made any experiments yourself? I have made one or two trials and have made the inmates of the houses use disinfectants.
389. What substance did you make use of? Sulphate of iron principally, but I had no chance of ascertaining whether the effect was satisfactory, because I persuaded them to try two or three different substances, and I have not yet been acquainted with the results.
390. Do you think the use of disinfectants could be made applicable to mitigate the constant nuisance of these privies? I do not.
391. Is that opinion the result of experience? Yes.
392. You think then that so long as the cesspit system continues there is nothing for it except to remove the contents? Yes, and to prevent the surface water from going into the closets.
393. To make them water-tight? Yes.
394. We find from the evidence we have taken, that a great number of the cesspits which are constructed in sandy soil, where the liquid matter percolates through the sand, do not require emptying for a long time? It is according to where they are placed.
395. Have you ever found any nuisance arise in such cases, from the soil becoming contaminated with faecal matter? I cannot say that I have. I have had my attention drawn to nuisances arising from the deposit of refuse matter upon land. In one case it existed to such an extent that the fumes came up through the chinks of the ground floors of houses in the vicinity, so that they were impregnated with it.

G. F. Dansey,
Esq.
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- G. F. Dansey, Esq.
28 May, 1875.
- it. That was where a quantity of refuse of different kinds was deposited on the land; I could not say it was from the closet.
396. In the construction of cesspits, would you prefer that advantage should be taken of this friable soil, or that the closets should be made water-tight? I think they ought to be made thoroughly water-tight, and cleaned out frequently.
397. Have you ever taken into consideration what would be the best method of disposing of the night-soil, after it has been removed from the cesspits? I can see no better method of disposing of it than to carry it out to sea.
398. You have heard what the last two witnesses said upon this subject? Yes; I may mention that we have had this subject under consideration at the Town Hall, and we have come to the conclusion that the only safe plan is to carry it away.
399. And to get rid of it thoroughly? Get rid of it thoroughly, and not risk its being left on our hands.
400. Do you consider it would be desirable that the City Corporation should have the power to remove this stuff, and to clean out these cesspits by their own officers? I do.
401. Irrespective of the wishes of the inhabitants—by their own officers, and in accordance with some fixed rules? Yes.
402. Do you think such a system would be practicable? I am hardly in a position to say how it would work.
403. You have heard what Mr. Watt said about disinfecting this matter at some place where it would be deposited for that purpose? Yes.
404. Do you agree with him on that point? Well, the chloride of alumina was one of the ingredients with which they watered the streets of Westminster, and no unpleasant effects were found to arise from it. I may mention, in connection with this subject, that in Bombay, the earth-closet system was tried largely, and there they found that 800,000 inhabitants required 400 tons daily of dried clay. Each deposit of an individual of faecal matter in the day required 8 lbs. of clay I think, shewing what an enormous burden it would be to supply a large city with earth, to make it thoroughly effective.

MONDAY, 31 MAY, 1875.

Present:—

W. C. BENNETT, Esq.,	|	E. O. MORIARTY, Esq.,
F. BELL, Esq.,	|	HON. J. B. WILSON.
M. B. PELL, Esq., B.A., IN THE CHAIR.		

Henry Perdriau, Esq., Mayor of Balmain, and Mr. James Roby, Council Clerk, called in.

Mr. Perdriau examined:—

- H. Perdriau, Esq.
31 May, 1875.
405. *Chairman.*] You are Mayor of Balmain, are you not, Mr. Perdriau? Yes.
406. We are at present directing our inquiry to one point—as to the means which are now adopted for the removal of the contents of cesspits—as to the powers possessed by the municipalities in this matter, and the way they exercise them;—and we shall be glad if you will inform us what measures are adopted in Balmain for emptying cesspits or other receptacles of faecal matter? Well, we have the usual cesspits in Balmain, and we have also the dry earth system.
407. With respect to the cesspits, what system do you adopt for emptying them? They are simply emptied at certain intervals—about once every twelve months.
408. Are they emptied by the municipal officers, or privately, by the owners of the houses? It is paid for by them; we do not take it away ourselves.
409. Have you any control over the matter? We let it to a contractor every year.
410. At so much a yard? At so much a yard for each cesspit.
411. Do you exercise any control over the contractor as to when this emptying shall take place? Yes; it has to be done in the night between 12 and 5 o'clock.
412. But I mean as to the frequency of emptying the cesspits? No; we have no control over them until they are overflowing and become a nuisance.
413. And then have you power to insist upon their being immediately cleaned out? We have in respect to the system we have taken up of dry earth closets.
414. We will come to that presently. It appears to be the opinion of some of the municipal officers of Sydney and others that it would be a better system if the municipal authorities themselves were to undertake the cleaning out of these cesspits at such intervals as may seem desirable, making such a charge for doing so as should be determined to be equitable in each case, and not leaving it to the tenant to allow the place to become a nuisance—to make periodical clearances without waiting for any complaints to be made—and to have it done by the officers of the Corporation;—do you think that would be a good system? Yes, I do; I think it would be much better than the present.
415. Do you think such a system would be practicable? Yes, I think it would; it would throw a great deal of expense upon the Municipal Council.
416. That would be recouped by the charge made for emptying the cesspits? Well, we have made no charge for it up to the present time.
417. But, of course, under a system such as I have suggested, the Municipal Council would make a legal charge, upon a scale hereafter to be decided, which would recoup them for all expenses incurred? I think it would be much better for the health of the inhabitants, and would have the effect of keeping the cesspits much cleaner.
418. Do you think the municipal authorities would cordially concur in such an arrangement, to be conducted under proper supervision? Oh, yes, I think they would.
419. How is this matter disposed of at present at Balmain when it is taken out of the cesspits? We never inquire. The contractor takes it away, and we never inquire what he does with it.
420. You do not care what he does with it so long as he takes it away outside the boundary? Yes.
421. Do you think the charges made by the contractor are reasonable at present? Very reasonable. I do not remember at this moment what they are; the Council Clerk will be able to tell you.

422. Still you think it is desirable that the cesspits should be more frequently emptied? I do.
423. Do they ever become a nuisance—not such a nuisance as would justify your interference—but a nuisance nevertheless? Yes, they are a great nuisance to have about a house.
424. Do nuisances also occur through the defective construction of these cesspits? Yes, frequently; we have cases of that sort frequently brought under our notice where there is a cesspit in one corner of an allotment and a well in the other.
425. You have heard frequent complaints of nuisances of that kind? I do not see how they could help it.
426. As a matter of fact have you heard complaints? Yes, a complaint was recently brought before us.
427. How? One of the inhabitants complained that the water was bad.
428. Is Balmain supplied by wells to a great extent? Oh yes.
429. I suppose there are not many water-closets in Balmain where the matter is washed away by means of water from tanks? No, there is nothing of the sort. It is either a cesspit or an earth-closet where the matter is removed twice or thrice a week. We have no drainage, except surface drainage.
430. All the faecal matter is removed by cart? Yes.
431. And all the other drainage—the kitchen and laundry slops—goes away by surface drains? Yes.
432. Does any nuisance arise from that source? Oh yes.
433. It goes into the street gutters I suppose? Yes, and remains there and becomes very offensive. That is the greatest difficulty we have in keeping our streets clean.
434. Do you find that the matter which goes through these drains becomes very offensive in dry weather. From what you have observed of the drainage, independently of faecal matter, in Balmain, do you think it is offensive or not? Yes, very offensive; the soapsuds and black stuff that runs down the gutters is dreadful in Balmain sometimes.
435. With regard to the earth-closet system, it has been in use for some little time in Balmain, has it not? Yes.
436. How long has it been in use? About six years.
437. It was introduced through the instrumentality of Dr. Elliott, I believe? Yes; I think he was in the Town Council at that time.
438. You have no power to enforce it, have you? No, it is merely voluntary.
439. You simply encourage it? We simply encourage it. We have never passed a by-law to enforce it; we just encourage it by pointing out its advantages.
440. And do the municipal authorities, or persons employed by them, remove the matter from these closets? We let it by contract to one man; he removes the matter and supplies the dry earth, and the ratepayers are charged for it.
441. Have you any means of enforcing the use of the dry earth system? No, the people agree to adopt it, and we compel them to pay for it, at the rate of 9d. a room.
442. For each room in a house? Yes.
443. Has this system been adopted in many cases? Yes; we have about 330, I think, in Balmain.
444. Do the people who use the earth-closets complain of the expense, or do they seem satisfied? Well, some of them do. It is more expensive to the people and also to the Corporation; the system itself does not pay.
445. How often does the removal of the matter from the closets take place? At least twice a week, and in large families three times a week.
446. And you make a uniform charge of so much per room to each family? Yes, the lowest charge we make is for four rooms, and we do not charge for more than ten.
447. And do you think the people who adopt the earth-closet system are satisfied with it, independently of the expense? Well, generally speaking, I think they seem satisfied; there is a good deal of trouble attending it.
448. Trouble to whom? To the householder; for instance, the man has to come three times a week, and of course he must come in the night-time.
449. I suppose these earth-closets are chiefly out of doors at Balmain? Yes, they are mostly in the yard.
450. They take the place of the common privy, I suppose? Yes, they take the place of the cesspit.
451. Are there any in the houses, so as to take the place of the ordinary closet? Yes, there are a few—very few.
452. Have you any knowledge whether they are found to answer—whether they are sufficiently free from bad odour as to be desirable? Yes, when attended to properly; but we have difficulty in getting the people to do that.
453. Have you any difficulty with the contractors? Yes, we had, to commence with. During the first part of the year they were not emptied regularly. There is another complaint about the water—the water that goes into the closet.
454. Too much liquid matter goes in? Yes, that is the greatest difficulty we have to contend with; we can get rid of everything else except the water.
455. You find that there are too many slops thrown in? Yes.
456. Have you any means of checking that? No.
457. Have you ascertained whether the matter removed from these closets is offensive or not, or does the dry earth render it inoffensive? Well, I think it is still offensive in passing through the street.
458. Then you could not recommend such a closet being set up inside a house? Oh yes; I think I should recommend it if it were emptied three times a week.
459. That is if it were properly conducted; but, as a matter of fact, as they are at present conducted, with slops thrown in as you say, which might still be thrown in if the closet were in the house, would there not be still that difficulty? Yes, there would still be that difficulty.
460. Do you exercise any control as to the quantity of earth to be used on each occasion, or as to the quality of the earth supplied? We supply the earth and they use it as much as they like.
461. Does the contractor supply it? Yes.
462. Do you oblige him to supply a certain quantity of a certain quality? Yes.
463. What is the quality of the earth? It is loam.
464. Loam—not sand? Yes, loam—the driest we can find.
465. Is it dried artificially? It is taken to a shed and dried and pulverised.

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- H. Perdriau, Esq. 466. Is it sifted? It hardly requires sifting; it falls to pieces when it is dry.
467. Are you particular about its being finely pulverised? Yes.
- 31 May, 1875. 468. What size is it reduced to—about the size of peas, or smaller? Oh, quite fine—like the finest loam.
469. Now, from your experience of the working of the dry earth system in Balmain, taking the carelessness of servants and other practical matters into consideration, should you consider it desirable to introduce it into a city where there must necessarily be closets of some kind or other in the houses? I am afraid not; it would require a great deal of supervision; I don't think you could manage it in a large town.
470. Do you think it is better than the ordinary cesspit system? Yes, I think it is better than that—much better—a great deal better. I think it is a decided improvement on the cesspit; when you have a cesspit about a house in a place like Balmain, the water gets into it and it becomes like a well—the water is a most dreadful thing.
471. Do you think the system would be better if you had greater powers to enforce regulations in connection with it;—do you think it could be worked more effectively? I think so. You see at the present time we cannot enforce anything.
472. *Mr. Moriarty.*] You say that the earth-closet system is a decided improvement upon the cesspits? Yes.
473. Do you think that in a town it would be equal to the water-closet system if it were subject to the same supervision? I think the water-closet system in a thickly populated town, where the water carries everything away, is the best.
474. *Mr. Bennett.*] Do you pay the contractor as you charge the householder—by the room? No; we commenced paying by the closet. We said to him, "We have a large number of closets—say 300. What will you undertake them for?" and if there were any additional closets they were added to the amount.
475. In that case you gave him a proportionate increase? Yes, at so much a room.
476. And you do not know what becomes of the matter from the earth-closets any more than you do of the contents of the cesspits? Oh, yes, we have a place to put it, that was given to us by the Government, on the Garryowen Estate, over which we have control.
477. Is that within the municipality? It is just outside it.
478. Is the matter offensive there? No, it is not bad. You would not know there was anything there.
479. Is it utilised in any way? No, nothing comes of it after it is there. Our contract with the man who takes it is that he shall bury it, and put so much earth on the top of it.
480. How often is he bound to bury it? Every time. Every day he takes it away he has to bury it.
481. Would it be a nuisance if it were not buried? I think it would if it were not properly buried.
482. Do you recollect the price paid for doing this? Yes, £5 per week for 330 closets—three times a week if required.

Mr. James Roby examined:—

- Mr. J. Roby. 483. *Chairman.*] You are Council Clerk at Balmain, I believe? Yes.
- 31 May, 1875. 484. You have heard the evidence given by the Mayor? Yes.
485. Have you any further information upon this matter to give us. Do you endorse what Mr. Perdriau has stated? Yes.
486. He has given us a full account of the matter, you think? Yes, I think so.
487. Do you hear many complaints about these earth-closets? Yes, the people send in complaints, and when the contractor is told of them by us he inspects the places, and it is generally found that the nuisance is caused by the parties themselves throwing slops into the closets.
488. And you have no power at present to control this state of things? No. Of course the parties are told of it, and in many cases they rectify it. The great difficulty is in getting plenty of earth.
489. You mean that in consequence of the quantity of slops thrown into the closets it would not pay the contractor to supply a sufficient quantity of earth, or to remove the stuff? No.
490. Do you hear any complaints of the receptacle outside the municipality, where the contents of the earth-closets is deposited;—is it found to be a nuisance? No; I have been there myself several times, and there is no smell there at all.
491. Does it not give a great deal of trouble to cover the stuff with earth? No, an equal amount of earth is sufficient to cover it; he makes a hole and throws the earth on the top of it.
492. Is there any particular place from which he is supposed to take this earth to supply the closets? No, there is no stated place; he just takes it from the surface of the ground wherever he can find it; it is a sort of gravelly loam.
493. Has he any difficulty in obtaining a sufficient supply? Well, it is getting rather scarce now; there was plenty of it two years ago.
494. Then there is no recognized place—he takes it just wherever people will let him? Yes, sometimes off the footpaths, where it collects—where the footpaths are not formed.
495. Have you any knowledge of what is the best kind of earth for this purpose? I believe the earth we have in Balmain is as good as any that could be got for the purpose.
496. What kind of earth would you call it? A sort of clayey loam.
497. Is it gravel? It is gravelly.
498. Does not that interfere with the process—is it fine enough? Yes, when it is kept inside a shed it becomes very fine.
499. *Mr. Moriarty.*] You said, I think, that even now the contractor is beginning to experience a difficulty in obtaining the proper earth;—do you think he will find that difficulty increase? Yes.
500. Do you think that will become a formidable difficulty? Yes, as building increases there will be more difficulty in finding it. A great deal of land is becoming enclosed.
501. Has he not to trespass upon private property to obtain it? Well, he makes arrangements with the owners of the property.
502. You are also of opinion that the house-slops which are thrown into the closets which are supplied with dry earth are a great nuisance? Yes, the greatest nuisance of all.
503. So that practically the dry earth system does not remove one of the greatest sources of nuisance in the town? No; in fact the dry earth that is supplied is not sufficient to cover the faecal matter, unless it is supplied every night.

504. Have you made any estimate of the quantity of this earth used? No, I have not.
505. Is not the contractor obliged to supply a certain quantity? No, only when the boxes they use become empty he is bound to supply more.
506. Is there not some quantity defined by a self-acting apparatus? No, there are the buckets and the scoop.
507. Are not the receptacles for the matter in the closets? There are iron buckets provided specially. The bucket is larger than an ordinary one; it is fifteen inches high and fifteen inches across;—a strong galvanized iron bucket with a handle on the top, and one at the side to draw it out with.
508. *Chairman.*] Don't you think there should be two of these, so that there would be one left when the other was taken away to be emptied? No, sir, the men take it away to the cart, and empty it at once.
509. *Mr. Bennett.*] Then you would prefer the system of sewers with water-closets to this? Yes, in a town.
510. Or even in Balmain? The earth-closets are a great expense and trouble to the Council. We have lost considerably by the system.
511. *Mr. Bell.*] Are any of these earth-closets in Balmain offensive at the present time? Yes, very offensive.
512. And that arises from neglect on the part of the tenants of the houses you think in most cases? Yes, they do not care to use plenty of earth when they get it.
513. And in some cases it arises from neglect on the part of the contractor? Yes, in some cases he neglects to supply the earth, and in others the families neglect to use it and become careless. There are some exceptions where the closets are kept so clean that you might eat your dinner in them.
514. Does the contractor take any pains to clean the pans after using them? No, he just brings them back.
515. Are they offensive when he brings them back? No, I have never experienced anything offensive in them after they are emptied.
516. *Hon. J. B. Wilson.*] There are a great many ordinary privies or cesspits in Balmain, are there not? Yes, a great number.
517. Are they, as a rule, properly constructed, or merely holes in the ground? Only holes in the ground.
518. Supposing they were properly constructed and made watertight, so that no urine could escape, and no surface drainage could enter, and were properly and periodically cleaned out by the Corporation, or under their supervision, do you think they would be as efficacious as these earth-closets for keeping down nuisances? No, I don't think they would, because there would still be effluvia arising from them all the time, whereas the contents of earth-closets would be removed every night, or two or three times a week. The cesspit, on the other hand, would only be emptied about once in six months, and you would still have the nuisance under your nose.
519. Have you heard many complaints of nuisances from these cesspits? Yes, especially where there is a well alongside, and the water has become partially impregnated, and sometimes not fit to drink.
520. That is to say they have found out that the well has been contaminated by the water from the cesspit? Yes.
521. Have any steps been taken to remedy that state of things? The Inspector of Nuisances had his attention called to it, and if he has considered it a nuisance he has taken steps to remedy it by proceeding against the parties.
522. Where a nuisance occurs which is not such a palpable nuisance as that, but the attention of the Corporation is called to it, do you often take steps to remedy it? No, I do not think we do.
523. You have no power to move in the matter unless it becomes a public nuisance? No.
524. Don't you think it would be much better for the health of the inhabitants and more advantageous in every way if you were in a position to enforce a more frequent emptying of these cesspits? Yes; I think it would be much better if a by-law were passed for that purpose.
525. Have you the power to pass such a by-law? Yes, I think we have, under the Act.
526. Do you think it would be practicable to make any regulations, supposing you had the power to enforce them, to prevent slops from being thrown into these places—is it practicable;—could it be done do you think? Yes, I think so, if a by-law were passed. Of course it would require a great deal of supervision.
527. *Chairman.*] How could you enforce it? By proceeding against the parties for a nuisance, I suppose.
528. Against whom? Against the person who did it.
529. It would not be likely to be the householder himself? It would certainly be a difficult matter.
530. I do not know whether it is the same in Balmain, but in Sydney it is a very common thing for one closet or cesspit to be used by more than one house;—don't you think it would be very difficult to enforce such a regulation? Yes, it would be difficult, no doubt.
531. Those earth-closets have been in use, we are told, for six years? Yes.
532. Is the number increasing? Yes.
533. Is the increase in cases of new houses, or are these closets replacing the cesspits hitherto in use? Generally in new houses.
534. Is there any fixed plan of construction for these earth-closets, or do you leave that to the parties themselves? We generally give them some kind of instruction.
535. How much does one of them cost? It costs somewhere about £2 or £3—that is, to convert an old one into one under the new system.
536. When a new house is built does it cost more, as a rule, to make a cesspit or to put up an earth-closet arrangement? Well, I think making an earth-closet would cost less than a cesspit would come to—if you made a proper cesspit—considerably.
537. Do you often find that people who have cesspits abandon the use of them, and adopt the earth-closet system instead? Oh, yes; we have several abandon the cesspits and use dry earth closets.
538. What has led them to make the change? Well, I suppose it has been a nuisance.
539. It has not been as a matter of expense? In some cases I suppose they thought it would cost less, and it is less because it is paid every quarter, while the other is paid for every six months, or twelve months, according to the size.

Mr. J. Roby.
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Mr. J. Roby. 540. I gather on the whole then that you do not think this earth-closet system is a very great improvement? No, sir; not as it is worked at present, but it is much better than the common cesspits out of doors.

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541. Have you been making any improvements in earth-closets lately? No; there have been no improvements since we started them. (*Witness handed in certain printed regulations relating to earth-closets.*)

Mr. Perdriau further examined:—

Mr. Perdriau. 542. *Chairman.*] You have heard the last witness' evidence, Mr. Perdriau? Yes.

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543. Is there anything further you can suggest? I don't think he quite understood the question asked by this gentleman (Hon. J. B. Wilson), when he stated that if the stuff from a cesspit percolated through the surface of the ground and contaminated a well on private property, we could take action to remedy it. We have no power to interfere, except in cases where the parties apply to us for protection. There is another matter I would like to mention in connection with a remark made about enclosed and cemented cesspits. I had one at my house, a very large one, and properly cemented, and I had it emptied only once in two years, when this new system was introduced, and it became very offensive. I was asked repeatedly by the tenant to have this cesspit abandoned and converted into a dry earth closet on account of it being such a nuisance, and I eventually acceded to his request, and had it filled in, and a dry earth closet substituted, which I consider remedied the evil.

544. Suppose that instead of a cesspit, such as you describe, which only requires emptying after two years, it had been one which required emptying twice a week—do you think if a system like that were introduced, the earth-closet system would be an improvement upon it;—would not a cesspit cleaned out twice a week be nearly as good as an earth-closet? Yes, but there would be the difficulty of cleaning it out twice a week.

545. In some towns a system is adopted which is called the "pail" system; the contents of the cesspit are removed frequently by means of a pail. No earth is used, but the cesspit is small and frequently cleaned out. Would such a system as that, in your opinion, answer as well as the earth-closet system? Well, what we are doing now is something similar to that, for there is a great deal more water than dry earth at present.

546. Do you think the dry earth does good practically? Yes, I prefer it in my own house.

547. What I mean is this: Is it not the frequent removal and not the dry earth which does the good? The frequent removal and also the dry earth, because you begin to have water as well from the very first.

TUESDAY, 1 JUNE, 1875.

Present:—

F. BELL, Esq.,

E. O. MORIARTY, Esq.,

Dr. ALLEYNE,

Hon. J. B. WILSON.

M. B. PELL, Esq., B.A., IN THE CHAIR.

G. A. Mansfield, Esq., A. Thornley, Esq., Aldermen of the Glebe Municipality, and Mr. W. C. Wardropp, Council Clerk, Redfern, called in.

Mr. Mansfield examined:—

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548. *Chairman.*] We are now engaged in investigating one particular point, Mr. Mansfield, in reference to the sanitary condition of Sydney and the suburbs—as to the means adopted at present, and the powers possessed by the municipal authorities for cleaning out common cesspits? Yes.

549. We presume that for some years to come at all events that system must necessarily exist, and we are anxious to advise the Government as to the improvement, should any improvement be found necessary, in the mode of clearing out these places. We understand that in the city it is done by private persons, not under contract, the owners of the premises simply making a bargain with the nightmen to clean out their closets at a charge agreed upon between them. These men are not under the control of the city authorities; at all events the authorities have no control over them when they get beyond the boundaries of the municipality, and when there they deposit the matter wherever they think fit. We are disposed to think, and all the authorities with whom we have hitherto consulted are of the same opinion, that it is much more desirable that the city authorities, and we presume other municipalities also, should be authorized themselves to carry out these operations, and to clean out these cesspits,—not leaving it to the landlords or occupiers of the houses as at present—that they should have no responsibility, but that the municipal authorities should do the work by their own officers; that it should be done during certain hours, and under some fixed system. We are anxious to know what the views of the authorities in other municipalities are in these matters; what system is adopted in the Glebe. What powers do the authorities possess; and what steps do they take to prevent the nuisances arising from overflowing cesspits? The system adopted at the Glebe, if it can be called a system, is precisely the same as that pursued in Sydney. No action is taken by the municipal authorities unless the cesspits are found to be overflowing, when the Inspector of Nuisances summons the parties, and compels them to empty the pits.

550. And with regard to the deposit of matter from these cesspits? It is taken away by private persons, and disposed of as it is in the city, by simply depositing it in a place authorized by the city authorities.

551. The city authorities do not authorize the use of any particular place. They say that when it is beyond their boundaries they do not know what becomes of it, and they do not care—that is to say, they know they have no control over it then, and they do not inquire where it goes to? We are precisely in the same position at the Glebe. These men who make a trade of it take the soil away, and we don't know what becomes of it.

552. Would there be any objection do you think to the responsibility being thrown upon the municipal authorities of keeping these places clean by their own plant and appliances, and by their own servants, under certain regulations, charging the owners or occupiers according to a scale to be determined, and doing it at such intervals as might be fixed upon? I think it is most desirable that the municipal authorities

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authorities should have that power vested in them, and that they should be compelled to exercise it. As a matter of justice, the expense should be borne by the occupiers or owners themselves. Another regulation, I think, should be made and enforced: that all these common cesspits should be made waterproof; I think they should be clay-puddled or cemented, or by some other means made waterproof.

553. With the view of preventing — ? With a double view: First, of preventing the influx of surface water which floods the cesspits and has the effect of generating foul gases; and secondly, of preventing the contamination of the surrounding soil. I believe such a course would have a very decided effect in lessening the evils resulting from common privies.

554. You do not see any practical difficulty in requiring the municipalities to provide the necessary plant, and in shifting the responsibility from the owners to the municipal authorities entirely. Of course in each case the owner would be liable to be summoned; on the other hand he would have a right to complain if his cesspit were not emptied and kept in proper order? That is a matter to which I have not given any previous consideration. I should say, speaking on the spur of the moment, that there would be no objection. I think it a very desirable arrangement that the Corporation should be empowered to inspect the privies and to clean them out when it was thought necessary. It would be difficult, I think, to fix any stated time for emptying them. I think that would have to be left to the discretion of the officers of the municipality, as the condition of the cesspit would vary according to circumstances; the necessity for cleaning out would be much more frequent in some cases than in others. I attach very great importance to the waterproofing of these places.

555. Our present idea is, that it would be desirable, if possible, to get an Act passed requiring the city and suburban municipal authorities to carry out this matter, so far as cleaning the closets is concerned, and empowering them to pass by-laws regulating the construction of cesspits, not requiring, immediately, that all cesspits should be reconstructed upon some efficient plan, but simply giving power to the municipal authorities to do so. It would be rather a strong measure, involving a very considerable expense, to require that all cesspits should be immediately reconstructed according to the most approved plan? It would.

556. But do you think it would be sufficient to give them power to pass by-laws as to the construction of new cesspits and the reconstruction of old ones, leaving it in some degree to their discretion as to how far and how soon these changes should be made? Yes, I think that would be satisfactory and would work well. I think that in the case of all new cesspits an efficient construction should be made imperative.

557. At once? At once. But as regards existing cesspits I think discretionary power should be left to the municipal authorities.

558. I have been informed that in many of these cesspits not soakage but mere surface water which, of course, at times is in large quantity, goes into them and frequently overflows them into the gutters? Yes, that is the case.

559. Do you think any hardship would arise if steps were taken immediately to prevent that state of things, which, as far as I can see, would be a comparatively simple matter? I can see no objection to it; I do not think any hardship would result.

560. You think the municipal authorities might be empowered to take steps to prevent that overflowing? Yes, I see no objection to it. It should be left to the discretion of the officers, as different places would require different treatment.

561. Are you aware whether the municipalities have any power to prevent persons from allowing the overflow of closets to pass into the street gutters? I believe we have; whenever such a matter comes under our cognizance we always prosecute the parties for a nuisance.

562. That is to say you prosecute them for the overflowing? For the overflowing.

563. But I believe, as a matter of fact, that unless the closet becomes a flagrant nuisance, you have no power to interfere in such cases? We have not.

564. And still you think these closets in a crowded neighbourhood are a continual nuisance? Yes.

565. Has any other system been tried at the Glebe except the common cesspits? Not that I know of, except very partially. I have on my own premises some earth-closets, and I think they are almost the only specimens of the kind on the Glebe.

566. They have not been tried generally then? No.

567. What is your opinion of their efficiency, as you say you have them on your own premises? Very satisfactory where the contents can be made available for a garden, but I don't think they could be made available for the city.

568. The matter is put on your garden by your own servants? Yes.

569. And you find them satisfactory? Yes.

570. They require a good deal of supervision, do they not? Yes. I constantly supervise them myself. Of course in my case the fact that I can dispose of the matter in my garden facilitates the arrangement. Before leaving the subject of disposing of closet matter by the municipal authorities, I may mention that the question arises, where is it to be taken to? The Glebe is a case in point. There is no place available within its boundaries, and before the onus is thrown upon us of removing this material we should be in a position to deposit it somewhere. I apprehend that arrangement can only be made by the Government. Some place should be laid out as a place of deposit; otherwise the municipal authorities will be in a difficulty; they will have to cart the stuff away without knowing what to do with it.

571. Do you know, as a matter of fact, where the nightmen take this soil? I do not.

572. We are informed that some apparently considerable portion of this refuse is sold to market gardeners; that is the only recognized mode of disposing of it that we can learn. Do you see any objection to that system? No, I am not aware of any objection to it. I am aware that scientific men have raised objections to that mode of applying sewage, but I am not prepared to point out the faults in it.

573. Looking at it as a nuisance? Regarding it as a nuisance I do not see that there is any objection to it. Applied to the soil and worked as it should be there can be no objection to it. I may state that on one occasion, some years ago, I visited a large market garden near Parramatta, where the refuse from the Gaol closets was used as manure. The proprietor took me over a large bed, which he told me had been manured that very morning with this refuse, and there was then not the slightest perceptible smell from it.

574. It was buried immediately I suppose? Yes, and well worked up with the soil.

575. *Mr. Mortarty.*] You have just stated, Mr. Mansfield, that on visiting a place at Parramatta, where night-soil had been used as manure, you perceived nothing disagreeable. Is that supported by your own observation

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observation of what takes place in your own garden, where the night-soil is deposited? Yes, there is no smell whatever there. There is this difference, which may be worth mentioning, that mine is a mixture of night-soil and dried carth or ashes, and is in a diluted state when applied to the earth; the other is pure night-soil, undiluted.

576. *Hon. J. B. Wilson.*] Are there many of the houses in the Glebe supplied with water from wells? Not many, I think—very few. They are nearly all supplied from the town water-pipes.

577. *Chairman.*] Have you heard many complaints about the quality of the water from the Glebe? I have not heard many complaints; I find the water used on my own premises has a very considerable amount of deposit in it.

578. But it is not offensive? I have not tested it. It is not offensive under the conditions in which the water is ordinarily used.

579. There is a separate service now for the Glebe, is there not—a main proceeding almost directly from the reservoir? I think the same main supplies the Glebe and Redfern, coming from the Crown-street Reservoir.

580. What kind of earth is used in the carth-closets which you have in your own house? I use sifted fire ashes.

581. Does that prevent all unpleasant smell? Yes.

582. Do you use these closets inside your house? No, not inside.

583. Can you give us any rough idea how long it would take to make the new arrangement for transferring the duty of cleaning out cesspits from private persons to the municipal authorities? Assuming a place for deposit to be fixed upon, I think it would take three or four months to make the necessary arrangements.

584. Do you think such an arrangement, even if it involved a greater frequency of removal, and was rather more expensive, would be an improvement? Yes.

585. Do you think it would be a relief to landlords to have this responsibility taken out of their hands, even if they paid a little more? Yes, I think they would concur in it very readily.

Mr. Thornley examined:—

Mr. Thornley. 586. *Chairman.*] You are an alderman of the Glebe, Mr. Thornley? Yes.

587. You have heard Mr. Mansfield's evidence? Yes.

588. Do you concur with him generally in the opinions he has expressed? I do.

589. Have you any further suggestions to make on this particular subject? On the cesspits—no sir.

590. Do you concur entirely with what Mr. Mansfield says? Entirely.

591. And you would be glad to see the responsibility of keeping these places clean, thrown upon the municipal authorities, giving them power to make charges to cover it? Yes, in the event of the Government finding some place to deposit it, and as regards making these cesspits water-tight and preventing their overflowing. It would be requisite that the Government should put the municipal authorities in a position to enter a person's premises and take up a portion of the yard if necessary to prove whether the pipes connected with the drains were attached to the closet, as we know that to be the case in some instances.

592. You mean pipes direct from the cesspits to the gutters? Yes; for instance, all the laundry and house slops are thrown out in the yard and go off by means of a pipe into the gutter; connected with this sometimes there is a small pipe to the closets.

593. Is that put in without the knowledge of the authorities? Yes, we are aware of it, but we have not the power to go into the yard and make a search. It is not supposed to be known to the authorities, but it exists nevertheless. We know it as a positive fact, and we could take up some of the yard and find it out, if we had the power to do so, which we have not.

594. There is no underground drainage, strictly speaking, in the Glebe is there? Not much; we have a little. I will show it to you. (*Producing tracings, and indicating position of drains.*)

595. These merely take the surface water from the gutters? Yes, that is all.

596. Then all matters that do not go into the cesspits, such as kitchen and laundry slops, go into the gutters I suppose? Into the gutters.

597. And thence into some of these drains? Yes, such drains as we have already made.

598. They are carried away then principally by surface drains? Yes, principally. (*Referring to plan.*)

599. Do you find any nuisances arising from these slops and kitchen refuse flowing into the gutters? Yes, especially in dry weather, particularly when there is not sufficient rain to flush the surface gutters.

600. And you have no means of remedying that at present? No, at present we have not.

Mr. Wardropp examined:—

Mr. Wardropp. 601. *Chairman.*] Are you Council Clerk at Redfern? Yes.

602. You have heard the evidence of the last two witnesses? I have.

603. Do you concur in the recommendations they have made? Generally I do.

604. Have you any further recommendation to add? I endorse nearly everything they have said; but it strikes me the Council have the power to examine premises of which they are suspicious about the closets. We have done it frequently in Redfern.

605. Can you go into a yard and pick it up, in order to examine a closet? We have done it several times.

606. Do you think the municipal authorities generally would approve of the changes that have been suggested here to-day? I cannot say that.

607. Do you see any objection to them yourself? I cannot say I have any particular objection. It would require an organization to carry them out. It would be necessary to have proper carts and appliances, and a proper place to deposit the soil.

608. Are there many of these cesspits or common privies in Redfern? Of course there are; there is one attached to each house as a general rule.

609. And the system of cleaning them out is done by private persons, as described by one of the witnesses to-day? Yes, entirely by private persons—by these nightmen.

610. What is the name of the Inspector of Nuisances at Redfern? John Hales.
611. Does not he act also for Waterloo? Yes, for Waterloo and Alexandria, I believe.
612. Have you any idea why he is not here to-day? I have not.
613. Could he give us any further information on the subject we are now inquiring into? Perhaps he might give a little more than I can.
614. Do you hear any complaints of nuisances from the existence of these cesspits in crowded localities in Redfern? Oh yes, frequently sir—especially after heavy rain-falls.
615. How does that affect them? By causing the cesspits to overflow. The surface water in many instances flows into the common cesspits, and causes them to overflow, and then the complaints of nuisances arise chiefly. We don't hear so much of it in dry weather.
616. Are many parts of Redfern crowded? Yes, some parts of it are considerably crowded.
617. Are there many wells in Redfern? No, I don't think there are many now.
618. The houses are supplied by town water? Yes.
619. Are there in the neighbouring Municipalities—in Waterloo for instance? I cannot say for Waterloo; it is supplied by wells principally, I believe.
620. It is all sandy soil about there—is it not? Principally to a certain depth from the surface.
621. *Mr. Moriarty.*] Have you had any opportunity of observing whether in dry weather the contents of cesspits soak into the adjoining wells? No, I have had no opportunity of observing it, but I believe they do.
622. Do you know of any cases in which complaints have been made of the effluvia from the contents of cesspits soaking into them? Oh, yes; we had one very recently. The closet belonging to one party was situated near to the kitchen of another party, and a complaint of the stench arising from it was made. The inspector investigated the matter, and the result was that the party to whom the closet belonged had to remove it to another part of the premises. Several cases like that have occurred. In many instances, I believe, persons do not clean out the cesspit at all. They dig a hole in the ground adjoining it, and draw off the matter.

Mr.
Wardropp.
1 June, 1875.

WEDNESDAY, 2 JUNE, 1875.

Present:—

M. B. PELL, Esq.,	|	E. O. MORIARTY, Esq.,
F. BELL, Esq.,		W. C. BENNETT, Esq.,
DR. ALLEYNE,		HON. J. B. WILSON.

M. B. PELL, Esq., B.A., IN THE CHAIR.

Robert Maze, Esq., Mayor of Darlington; Mr. Charles Harris, Council Clerk, Waterloo; and Mr. John Hales, Inspector of Nuisances, Waterloo, called in.

Mr. Maze examined:—

623. *Chairman.*] We have requested your attendance to-day, Mr. Maze, not only to take evidence upon R. Maze, Esq. a particular point in the inquiry, but to confer upon a matter which is specially engaging our attention, and upon which we have already made some inquiries, and that is, as to the best means of clearing out, and also of constructing the cesspits attached to common privies. It seems to us that whether this system is the best or the worst, it must prevail to a considerable extent in Sydney and the suburbs for some time to come at least; and it is therefore desirable that the best method of managing these places should be adopted. We are told that in Sydney, and some of the suburbs at all events, the municipal authorities have no control over the emptying of cesspits, except when they overflow or otherwise create a nuisance so that the owners can be summoned and compelled to have them cleared out. We find that at present they are cleared out by private persons who make special agreements with the owners for that purpose. It appears to us, so far as we are at present advised, that the municipal authorities by their own servants and with their own plant and appliances should undertake this duty; for we are informed that in many cases these cesspits, although they may not be overflowing, or in such an indecent state as to justify the interference of the municipal officers, are still very offensive, especially in crowded localities; and we think this evil would be much abated if the cesspits were cleaned out by the Corporation at some rate hereafter to be settled. Does a similar system prevail in your municipality? Yes, we have a similar system.
624. And do you concur in what I have stated as being our opinion, and that of the witnesses we have examined, in respect to the state of this and other municipalities? From my own experience of the state of the closets under the present system it is nearly impossible to keep them what we call clean. Sometimes the people try to make them watertight, but they find it very hard to do it.
625. But do you think they might be kept in a better state under such a system as I have described, and that it would be practicable for a municipality—or possibly in case of small municipalities they might join each other for the purpose—to undertake this duty, and to make regulations that the closets should be cleaned out at certain intervals, depending sometimes upon the discretion of the officers as to when it was necessary to do it? Well I believe it would answer. I have not heard of the matter before, and have not given any consideration to it, but I think it would be a great improvement. I was going on to tell you that these closets, when they have been cleaned out, very soon get nearly full of water again, and are as offensive as before.
626. Does that occur from the water flowing in surface water? No, it does not flow in—it oozes in from the bottom principally, so that it is nearly impossible to make them water-tight. Shopherd's Paddock is a place which has all been trenched two feet deep, and I have known closets there which have got full again in a week after being thoroughly cleaned out. I dare say if these places could be made thoroughly watertight, cleaning them out occasionally would be a great help.
627. Do you take steps to compel persons to clean them out? We cannot take steps unless the closets are a nuisance.
628. But if they overflow? Well, they do not overflow very often.
629. They merely fill up? They fill up and there they stand.

630.

- R. Maze, Esq. 630. But still in crowded thoroughfares they are a nuisance? Yes, a great nuisance.
 2 June, 1875. 631. You think the only remedy is to make them watertight? Yes, and to have them cleaned out periodically; that is what I have been thinking of, and I intend, if God spares me till the summer, to try and make mine watertight.
632. Do you think the Municipal authorities should be empowered to compel, at their discretion, persons to construct proper cesspits? I am sure of it.
633. You think no hardship would arise from the exercise of that power? No hardship whatever.
634. Do you think it is necessary to do so in your neighbourhood? I have as many houses there as others, and I can only say I should be most happy. No attention can be given to health or cleanliness without something of the kind is done.
635. You think there would be no practical difficulty in carrying out this arrangement—that the municipal authorities should take the matter into their own hands? None whatever, if we had the power.
636. In about what time do you think the change could be made? It would require some dry weather first.
637. I do not mean that. I mean in taking the matter out of the hands of the nightmen, and giving it to the municipal authorities? I don't think it would signify when the change was made.
638. But it would take some time to get the proper plant and appliances and the requisite number of men? Yes.
639. About how long do you think—about three months? Yes, about that.
640. Would that, you think, be ample time? Yes.
641. You would not anticipate any difficulty in the meantime from the nightmen, if it were known that such a change was about to be made, in getting these places cleaned out? Well, you cannot get these men when you want them, for I have had to wait three weeks for them; and there was no difficulty about the price, as I was prepared to pay whatever they charged me.
642. I want you to understand exactly what we propose: We propose to transfer the responsibility of cleaning out these cesspits from the owner or occupier of the premises to the municipal authorities, so that it would become their duty to see they were kept clean. At the same time it is possible that under this improved system some additional expense would be thrown upon the landlords? Yes, there would be an expense to the landlords.
643. But do not you think the landlords would be glad even with that expense to be relieved of the responsibility? Some of them would no doubt, but a great many would be against it. But if I may interrupt you—supposing we had all these conveniences and the additional powers you mention, we have no place to take the stuff to—where are we to put it?—that is the great drawback; the nightmen have no place to take it to.
644. Of course we should not attempt to obtain Legislative interference without providing some means of disposing of the stuff; that would not be reasonable—that is a matter under consideration. Do you exercise any control over these nightmen as to where they take the night-soil? None, as far as the municipality is concerned—we have no control over them. There is no place within the municipality where they can take it, and they take it wherever they like.
645. They take it away and you know nothing more about it? No.
646. Do you know, as a matter of fact, where they take it to? Sometimes to one place and sometimes another. Any place where they can get rid of it handy, without a breach of the peace. I think it is generally some place in Botany, on this side of the water reserve, belonging to Hardie & Mitchell—private property.
647. They have permission to put it there I suppose? Yes.
648. Have you ever heard of its creating a nuisance? Well, it does if it is left exposed.
649. Are you aware whether there is much of this matter taken away from various places? Yes; there are about 350 houses in the municipality.
650. Is it all taken there, do you think? I do not know. It is not long since they began to take it there. I suppose when they have taken enough there they will look out for a fresh place.
651. Is there any fixed rate of charge, or do these men charge what they like? They charge in proportion to the distance they have to bring the stuff. Sometimes they have to take it into the sandhills, where they have to use two extra horses to draw it. I never thought their charges were unreasonable.
652. Have you ever had reason to suppose that they put the stuff in improper places, where they have no right to deposit it? Well there was a party not long ago fined for shooting a load of it out of his night-cart at a culvert in Myrtle-street I think it was, between Chippendale and Newtown Road. He was fined £2, or a month's imprisonment.
653. You think there should be some place set apart for the deposit of this stuff? Yes, nothing could be done without it.
654. *Mr. Moriarty.*] How are you supplied with water in your municipality? The supply is very good.
655. Is it supplied from the city? Yes, by a pipe.
656. *Mr. Bennett.*] Has any arrangement besides the common cesspit been adopted in your municipality? I do not know of any.
657. *Chairman.*] No earth-closets have been introduced? I never heard of any.
658. Are there any water-closets? I am not aware of any water-closets or earth-closets; they are all open cesspits.
659. And there are very few wells used there? We have no wells at all.
660. Is there not a very great stench from the crowded parts of your municipality in particular localities, in the summer time? Well, I don't believe the stench is greater there than in any other part; we sweep out all the gutters twice a week.
661. I do not mean more in your municipality than in other places, but, as a matter of fact, is there not? Well the closets are tolerably well kept.
662. *Mr. Moriarty.*] Is there any saturation of the soil do you think, from the matter contained in these cesspits? There must be.
663. Do you think it affects the health of any neighbourhood where there are buildings? It is sure to affect the whole neighbourhood, no matter where the locality is.

Mr. Charles Harris examined :—

664. *Chairman.*] Are you Council Clerk at Waterloo? Yes.
665. You have heard the evidence given by Mr. Maze, and you have heard my remarks to him and his replies? I have.
666. Do you concur in the opinions he has expressed? I do.
667. You think it is desirable that some alteration of the present arrangement should be made? I think so.
668. Are there many of these cesspits in your municipality? Oh yes, a great number.
669. That is the general system adopted? Yes, there are 800 houses or more.
670. And the same difficulties are experienced there which Mr. Maze has pointed out? Yes, in a greater degree.
671. Because yours is a larger municipality? Yes.
672. How are you supplied with water? The supply is very indifferent.
673. From what source do you obtain it? From wells.
674. Are those wells close to the cesspits? Yes.
675. Do you think they are contaminated by them? I have reason to believe they are in many instances.
676. Do you know as a matter of fact that they are? Yes; it is low ground in Botany-street, and the water lies on the flat.
677. We are told that in some cases the overflow from these closets is purposely drawn into the ordinary surface drains or gutters by means of underground pipes, without the sanction of the authorities? The Inspector of Nuisances will be able to answer that question better; but with regard to what the Mayor of Darlington said about the filling up of closets, I can speak. They fill up in wet weather, and in dry weather they subside again. There is one thing also I may mention in reference to the time which would be required to bring the improved system you have spoken of into operation—it would be necessary to pass by-laws for that purpose. I may also mention that we applied to the Corporation of Balmain for information about the earth-closet system.
678. You applied to them for information as to their method of carrying it out? Yes.
679. What was the result of your application? The result was that it worked very imperfectly, and they did not think it would be suitable to a place like Waterloo, inasmuch as sand was not a good deodoriser, and therefore the system would not suit us.
680. It would cost too much to bring the proper material from a distance? Yes, it would cost too much to bring the system into operation.
681. Have you any further information to give us? No, sir. - I think if you would call in Mr. Alderman Olive—Ebenezer Olive—of the Waterloo Council, he would give you some very material information.

Mr. C. Harris.

2 June, 1875.

Mr. John Hales examined :—

682. *Chairman.*] You are the Inspector of Nuisances at Waterloo, I believe, Mr. Hales? Inspector of Nuisances for Waterloo, Redfern, and Alexandria.
683. You have heard what has taken place since you entered the room? Yes.
684. Can you give us any further information upon these matters? I am obliged to be out night after night, and I can see the nightmen taking away the contents of these closets all the night through. They shoot the stuff on to different places all about, whenever they have the chance.
685. Does that frequently happen, and can you tell who has done it? You can't tell who it is—there is more work than they can get through. I think there are only eleven carts altogether.
686. You think it is very desirable that such a system as I have mentioned should be introduced? Yes, so long as some place is found to put the stuff. It is no use to summon people for not emptying their closets, when there is no one to do it. You can see carts with this stuff going along all night, sometimes twenty loads in the course of the night; the carts go backwards and forwards as they get emptied, up to 7 or 8 o'clock in the morning—in fact the carts are kept in Sydney.
687. Is there no way of checking this practice? We have no means of checking it; the Police have tried to interfere, but they find they cannot.
688. In fact it has become a very great nuisance in your neighbourhood? Yes; every one is complaining of it. The nightmen get permission to do a garden, and when they shoot the stuff on to the garden they don't cover it over. If the stuff were covered over it would not signify so much, but I have seen as many as thirty loads exposed to the open air.
689. And the nuisance thus becomes offensive not only to the people living on the spot but to the whole neighbourhood? Yes, to the neighbourhood at large. We have summoned them for this, but the cases have always been lost.
690. What has been the cause of that? Because the place was not within a certain distance from a proclaimed road or street. As long as it is within a certain distance from a proclaimed road it is a nuisance under the Act, but not otherwise.
691. Have you any reason to believe that pipes are laid down from some of these cesspits so as to carry the overflow of the water to the gutters? Yes; the week before last I went to the Mayor and got a man to take up portion of a yard where there was one of these pipes, but very likely it was laid down again an hour after I left. It is impossible to do anything; you can't prove it. If you have suspicions of any place and have occasion to go and find it out, all you can do is to give twenty-four hours notice that it must be removed.
692. Do you think much of this matter gets into the gutters? Yes, whenever it rains the closets get full. Two out of every three of them are nothing more than holes in the ground, and the surface water flows right into them. If we have any by-laws on the subject there ought to be a proviso that no cesspit should be nearer than a certain distance to the house or well. At present we cannot carry out our by-laws.
693. Why? Because there is no power to do so. The Municipalities Act is not worth anything.
694. But these places become a complete nuisance don't they? Yes, but what can we do? If we lodge a complaint they only just shift the closet to another part of the ground, so that the whole allotment becomes a deposit of night-soil.

Mr. J. Hales.

2 June, 1875.

- Mr. J. Hales. 695. Do you think it would be a good thing to compel people to make proper cesspits? Yes, but how are you to do it?
- 2 June, 1875. 696. Is there much illness in your municipality? A good deal.
697. You do not consider it a healthy place? No, it lies too low; in fact it is nothing less than a bog.
698. Do the remarks you have made apply in any degree to Redfern also? No, the water is all laid on at Redfern, and I have orders from the Mayor to take a man with me at any time and disconnect any of these places from the street drains if I find them. There are a good many of them connected, and when we know it we put a stop to it as far as we can.
699. Then you think it would be a good thing—to put it generally and finally—that there should be a general system adopted in each municipality under which the municipal authorities should be enjoined and compelled to keep these places in proper order, and cause them to be properly constructed? It would be a good thing to have it done, but I don't see how they could do it. The nightmen have got it all in their own hands.

THURSDAY, 3 JUNE, 1875.

Present:—

M. B. PELL, Esq.,
HON. J. B. WILSON,
DR. ALLEYNE,

E. O. MORIARTY, Esq.,
W. C. BENNETT, Esq.,
F. BELL, Esq.

M. B. PELL, Esq., B.A., IN THE CHAIR.

Mr. William Pidcock, Council Clerk, Camperdown; Mr. Charles Banks, Council Clerk, and Mr. John Flaherty, Inspector of Nuisances, Newtown, called in.

Mr. William Pidcock examined:—

- Mr. W. Pidcock. 700. *Chairman.*] You are Council Clerk at Camperdown? Yes.
- 3 June, 1875. 701. We are now engaged in inquiring into one particular matter which concerns a large part of Sydney and also of the suburbs, and that is the management and the cleansing and also the construction of the ordinary cesspits. We feel sure that whatever system may be adopted eventually, this system must continue in a great many localities for some years at all events, and therefore it is very desirable that the best possible mode that can be devised to carry it out should be adopted. We find that all the witnesses we have as yet examined consider the present method a bad one, and are of opinion that it would be much better for the municipal authorities to take the duty of cleaning and looking after these cesspits into their own hands, and that they should do it at such intervals and in such a way as may be considered advisable, the expense of cleaning out each closet of course to be charged to the owner or occupier. We do not learn that there are likely to be any practical difficulties in making this change, and so far as we have examined persons connected with different municipalities, it is thought to be very desirable. They say that they have no control over the nightmen, and they can only take action in reference to these places when they become a public nuisance, in which case they can summon the landlords and compel them to have their cesspits emptied. Beyond that they have no authority, and in crowded localities these privies, although not such a nuisance as to justify the interference of the municipal officers, are a constant offence, not because they are full or overflowing but simply because they are offensive. We think, and we are supported by the opinions of all the witnesses we have examined, that these cesspits should be more frequently cleansed—that this should be done by the municipal authorities—and that the landlords should be relieved of all responsibility in the matter, except in paying for the work when it is done. Do you see any objection to such a plan. Do you approve of such a change being made? Yes, I do; and I think it is very necessary. I know that in our own municipality there are many of these places exposed which become great nuisances, and as we have no control or authority over the persons who own the premises we cannot compel them to clean them out except in cases of overflow.
702. You say that you have no objection to this charge—that the authorities with their own plant and appliances and their own servants should carry out this work? No; there might be some difficulty in the smaller municipalities with regard to the officers required to carry out the arrangement.
703. You mean that there will be a difficulty in the appointment of officers to inspect? Yes.
704. Could not some of these smaller municipalities combine and appoint joint inspectors? That might be done.
705. Do you find that difficulty existing at present? Yes; there is a difficulty with regard to our own municipality in having no place in which to deposit night-soil. A short time ago the contents of the cesspits were conveyed to a paddock belonging to one of the ratepayers, and became a nuisance.
706. Was that within the municipality? Within the municipality.
707. Was it taken there with the sanction of the owner? Yes.
708. Had you no means of abating the nuisance? Not beyond ordering the man to remove it immediately, which was done.
709. Where do they take this stuff to at present? I do not know.
710. You have no control over these persons? None.
711. We find complaints made that in a great many cases the surface water flows into these closets, in consequence of their improper construction, and that every time it rains they overflow into the surface gutters;—do you find that to be the case? Yes.
712. Would there be any special difficulty in preventing the inflow of surface water? I think not; I think there would be no great difficulty with reference to our own municipality.
713. Do you think any hardship would arise from the owners of houses being compelled to make such alterations in the construction of these cesspits as would prevent this inflow of surface water, and consequent overflow of offensive matter? I think there would be no difficulty about it.
714. It is found in some cases, generally where the soil is porous, that there is a continual soakage into these pits; the water goes into them every time it rains, and although they are cleaned out one day they are full again the next;—do you find that to be the case? I do.

715. What remedy would you suggest for that? I would suggest that pipes be laid on at a certain distance from the surface to carry off the water when it rose to a certain height, the pipes to be connected with some drain or sewer.

716. But as sewers cannot be made in a day, don't you think it desirable that for the present these places should be made tight, so that no water could come in, except in the ordinary way, and that they should be cleaned out frequently? I believe it would be a decided improvement.

717. Do you think that all the suburban municipalities should be empowered to carry out such an arrangement? I do.*

718. How are you supplied with water in your municipality? We have recently had the water conveyed from the city.

719. Does that water supply the municipality? A small portion of it only at present. The pipes have not been laid down in many places, although applications have been made for the water to be laid on to various streets. The city authorities are in difficulties, I believe, just now, and cannot accede to the wishes of the people.

720. Are the people supplied from wells where the water is not laid on? Yes.

721. From wells in their yards? Yes.

722. Is there generally a cesspit in the same yard? Yes.

723. What is the nature of the soil? About a foot from the surface it is a stiff clay, with ironstone.

724. Have any complaints ever been made that the water in the wells has been contaminated by these cesspits? We have not heard that it has been contaminated by cesspits, but we have heard complaints of bad water—brackish and so on.

725. But not in itself stinking or offensive? No; some of the wells have very good water I believe.

726. Is the water supplied from the city good? It has been complained of as being very indifferent.

727. In what respect? It has a bad taste and has a quantity of visible animalcula in it, or something of that kind.

728. Is the water thick? Yes.

729. And it smells badly? It smells badly, but I think a great deal of the bad taste arises from the new pipes having been varnished with coal-tar, or something of that kind to preserve them, which affected the water. But complaints have been made that the water has been affected by other causes than that.

730. You mean that there has been some suspicion of filthy matter getting into it? Yes.

731. Are there any other special nuisances which give you trouble in your municipality now and require immediate attention, such as you have no power to deal with at present? We have had certain small matters complained of, arising from smoke and so forth, but they cannot be avoided.

732. Nothing of particular consequence? Nothing of particular consequence.

733. Are there not some very crowded localities in your municipality? In some portions of it they are rather crowded—between the Parramatta Road and Newtown. From the Missenden Road there are a number of cross streets thickly populated and but small tenements.

734. You have no underground system of sewerage I suppose? No.

735. And all the kitchen and laundry drainage goes—where? It is taken down the gutters of the street into a main open sewer, which conveys it down to Johnson's Bay.

736. Does this open drain create any nuisance? No, I have not heard of any nuisance, except in cases of overflow.

737. As long as the closets do not overflow there is no nuisance? No, I have not heard of any.

738. We are told that there are a number of boiling-down establishments, piggeries, and such places in the municipality of Leichhardt—I suppose you know the situation of them? Yes.

739. Have you heard any complaints from residents in your municipality of the smell arising from those places? We have had complaints of a piggery just off Australia-street, in our own municipality, kept by a man named Reddan, but the nuisance has been abated to some extent.

740. But I am speaking of a nuisance in the municipality of Leichhardt—a nuisance said to be felt at a great distance. Have you felt anything of it in your municipality? We have not.

Mr. Charles Banks, examined:—

741. *Chairman.*] Are you Town Clerk at Newtown? Yes.

742. You have heard the conversation that has taken place between the last witness and myself? Yes.

743. Is the system respecting the cesspits in your municipality pretty much the same as that you have heard described? Yes, it is very similar.

744. You have similar nuisances and a similar organization? Yes, very similar.

745. And do you approve of what is proposed to be done to remedy those evils—transferring the responsibility from the landlords to the municipalities? Yes, I think it will be a good plan.

746. Do you think that any hardship will arise from the introduction of this more efficient system, as although the landlords will be relieved of their responsibility in the matter they will have some additional expense thrown upon them;—do you think there is anything in the system which will be unfair to the landlords? No, I think it would benefit a great number of persons.

747. Do you think it would meet with the general approval of the municipalities? I believe so.

748. It is hardly worth while to go through the different points on which we have been examining the last witness. You have heard the evidence and you find a similar state of things existing in your municipality? Yes, very similar, and I quite agree with Mr. Pidcock in what he has said.

749. When the nightmen take away the contents of these cesspits do you know where they take them to? No.

750. And you have no control over them? No.

751. Have you ever had complaints made to you that they have deposited this stuff in improper places within your municipality? Not within our municipality I think; there is none of it deposited within the Newtown municipality.

752. Have you heard complaints that they have deposited it without a license in any improper place? No, I have not heard of it.

753.

Mr.
W. Pidcock.

3 June, 1875.

Mr. C. Banks.

3 June, 1875.

* NOTE (on revision):—But I think that the dry-earth system of closets would, if practicable and generally adopted, be the safest and most conducive to health.

- Mr. C. Banks. 753. Is much of it taken out to Cook's River, and deposited there? I could not say; the Inspector of Nuisances is here, and may be able to inform you; he has full control over those matters.
- 3 June, 1875. 754. How are you supplied with water at Newtown? Merely by tanks and wells, made by the owners of properties.
755. Are there many wells in the Newtown Municipality? Sufficient to supply the inhabitants, except in a long drought.
756. Generally speaking, each house has a well, I suppose? Yes.
757. Have you heard any complaints of the water being contaminated at all from the proximity of the cesspits to the wells? No, never.
758. The soil in Newtown is generally stiff clay, I believe? It is something similar to that described by Mr. Pidcock.
759. Is not the water in some cases inclined to be brackish? Yes, that is from the nature of the soil.

Mr. John Flaherty, examined:—

- Mr. J. Flaherty. 760. *Chairman.*] Are you Inspector of Nuisances for Newtown? Yes.
- 3 June, 1875. 761. You have heard the evidence which has just been given, and the conversation we have had on matters relating to these cesspits? Yes.
762. Do you concur in what has been said by the other witnesses? Yes.
763. Do you think the change we propose would be a useful one? I think so.
764. Do you find that these cesspits are a great nuisance? Yes; we have several in Newtown which want cleaning out, and we cannot get them cleaned.
765. Do you mean that the nightmen will not take the stuff away because they cannot sell it? They have no place to deposit it in.
766. Where do they take it to, as a rule? For the last few months they have deposited it in Marrickville.
767. On private property? Yes.
768. By permission of the owner? Yes; and they have abused the privilege by shooting some of it into the street, and the Mayor of St. Peter's and Marrickville communicated with the police and summoned the owner. The case has been postponed four times on a point of law taken by Mr. Gannon that, under the Act 2 Vict., No. 2, the Justices have no control, but it is stated that if the case is dismissed at the Police Court they will proceed against the parties under a by-law.
769. You find the subject a difficult one to deal with? Yes, because there is no place to deposit the stuff. Mr. Langhorn is trying to find a place to deposit it in.
770. You think then it would be a great improvement if an arrangement were made to place the whole thing in the hands of the municipalities? Yes, it is wanted very much.
771. Do the closets overflow very much in wet weather? Very frequently.
772. Do they fill rapidly in wet weather? Yes, in half a day.
773. And overflow into the streets? Yes.
774. What do you do in such cases? We endeavour to stop it. We can summon the owners who are not willing to have them cleaned out, but they cannot do it because there is no place to deposit the stuff.
775. Would it not be better if these cesspits were so constructed that no surface water could flow into them? Well, I cannot see how it is to be remedied; even if you put in two or three inches of cement the surface water will find its way in. I know one gentleman who went to a vast deal of expense in making his closet a kind of tank, but the water would get in.
776. Still it would remedy a great part of the difficulty? No doubt it would. The boiling-down establishments in the Alexandria Municipality are very offensive to the inhabitants of Newtown.
777. The smell from them is offensive you mean? Yes, when there is a south wind. Some of these persons who have boiling-down places keep what they call the soup until it becomes offensive, and generally about 7 o'clock in the evening we find the smell is very bad.
778. About how far from the bridge are these places—from the Railway Bridge? Well, Mr. Bell's would be close up half a mile.
779. In the Municipality of ———? Alexandria. There are three boiling-down establishments there.
780. Do you hear people complain of these places frequently? Yes; Mrs. Dixon has frequently complained, and has written a letter to the Council about them.
781. Can you mention any other nuisance in your municipality which you have not been able to deal with? No, the closets are the principal nuisance.
782. Is any of the refuse from these boiling-down establishments, or the scraps of butchers' shops, or any other kind of refuse, taken out in your direction? Yes.
783. And deposited in your municipality? No; it is taken to the boiling-down establishments I have referred to. They pay so much a pound for the fat and offal.
784. Do they keep pigs in connection with these establishments? Yes.

FRIDAY, 4 JUNE, 1875.

Present:—

HON. J. B. WILSON,
F. BELL, Esq.,
W. C. BENNETT, Esq.,

E. O. MORIARTY, Esq.,
Dr. ALLEYNE,
P. F. ADAMS, Esq.

M. B. PELL, Esq., B.A., IN THE CHAIR.

P. F. Adams, Esq., Surveyor General, examined in his place,—

785. *Chairman.*] Can you inform us whether there is any land available on this side Cook's River, within a reasonable distance of the city, which would be available for the disposal of night-soil in large quantities—say 200 tons a week? Not Government lands, except upon the watershed of the Botany reserve. P. F. Adams, Esq.
786. Upon what is called the watershed of Shea's Creek is there any land? Not unalienated. 4 June, 1875.
787. Is there any land there which is alienated, but in respect to which the proprietors would be likely to come to an arrangement with the Government? I think it would be too close to Sydney for the purpose. I could hardly recommend such a locality even if it were available.
788. You think then that any land taken for this purpose should be taken beyond Cook's River? I think it would be advisable.
789. Is there any land available to your knowledge beyond Cook's River suitable to this purpose—any Crown Land? There is none either available or suitable.
790. Do you know of any other land within 7 miles of Sydney? I know of none.
791. Is there any land on the other side of Cook's River available for this purpose? Yes, there is.
792. What kind of land is it? It is sandy or loamy soil.
793. And you think it might be applied to this use? Yes.
794. In what way? By trenching the night-soil into the ground.
795. You would put the stuff in fresh from the pits and bury it and then leave it? Yes, and work the land over again some months hence in the same way until the soil became saturated with it.
796. You would propose to do this for the purpose of fertilizing the land? Yes; and I think the owners of the land ought to assist in carrying out such an arrangement; in fact, if they did not assist materially in the matter it would be better to get rid of the stuff altogether by sending it out to sea.
797. It appears to be pretty well determined now in Europe that it is impossible, except under exceptional circumstances, to make a profit out of this matter. But it is equally certain that a considerable saving may be effected by making use of it to fertilize the land. Therefore if the owners were not willing to render considerable assistance in carrying out an arrangement of this kind it would certainly be better to get rid of it? I quite agree with you.
798. Do you know of any large landowners who would be willing to co-operate with the Government in carrying out such an arrangement? I think Mr. Holt would be the most likely.
799. Have you thought over any arrangement which might be made with the owners of land in such a case? I have not. Of course if the faecal matter is dug into the ground it would be no nuisance to the neighbourhood, and the land would be improved considerably.
800. You don't think there is any land in the direction of Canterbury? I don't think there is any within 7 miles of Sydney which is not too much populated to admit of its being used for such a purpose.
801. Now supposing this faecal matter were put into barges, as I am told is done in Paris at present, and transported by water, and, I presume, pumped by steam-power on to the land afterwards;—do you know any land near Sydney which would be available for such a system as that? Very little indeed, because the peculiar feature of the lands approaching Sydney Harbour, or Middle Harbour, or the bays about here, is, that they are unsuitable to agriculture. There are some tracts of land on the Parramatta River which might be available for this treatment—for pumping out of the barges and spreading the manure.
802. Is there a considerable area available for that purpose, because we should require a considerable area to go into such a scheme? No. I think eventually a considerable portion of the night-soil of the city would be absorbed—that is to say, it would be taken away by proprietors of land by and by when they got used to it. At present I don't think they would take much, and it would all have to go out to sea.
803. You do not think there is any considerable tract there of which we could get possession, on which to utilise this matter on a large scale. What is the objection?—are the banks too precipitous? Yes. I think all that could with advantage be disposed of out of barges in that way would be to private individuals. If the people don't want it, it would be much better to send it out to sea. If they do want it, it could be taken to the place where they require it.
804. There is a considerable extent of sandy country between Cook's River and George's River, is there not, close to the 9-mile Beach? Yes; that is the place I proposed, most of it being Mr. Holt's property.
805. What do you think the purchase of that land would cost the Government, supposing it were purchased compulsorily? From £1 to £3.
806. Supposing that the project were once started—to deposit this faecal matter upon a Government farm—do you think there would be a probability that hereafter, at no very distant time, it would come into favour with the public, and that there would be a considerable demand for it by farmers and other persons? That would depend very much upon the nature of the land, whether the application of this stuff would be an improvement to it or not. I know that in clay or sandy clay there are the necessary ingredients to render the introduction of night-soil to it the best thing possible; but I am afraid to say that it would be a success if applied to pure sand, and as a rule we have nothing but this pure sand near Sydney at a low level. All the better class of land suitable to this treatment, as I imagine, lies in the Wianamatta clay.
807. Do you not think it would be a good thing to encourage the use of this rich manure in the county of Cumberland generally, seeing that the land is generally so poor in quality? Yes; and I think if the proposed arrangement is carried out it will in time get into such favour that, instead of going out to sea, the soil will go along the railway line in vast quantities.
808. But before that we must shew its utility by using it on some farm in the way you have suggested? Well, that could be tried.
809. Don't you think that would have the effect of bringing it into favour much more rapidly than if it were left to the farmers themselves to bring it into notice? I don't think it would make much difference; the people would soon find out the value of it. 810.

- P. F. Adams, Esq., 810. But if it is all sent out to sea at once they will know nothing about it? I do not think the fact of its going out to sea ought to prevent any experiments from being made with portions of it. But considering the magnitude of the question—that you have such a large quantity to deal with—you must obtain plant and appliances to take at any rate the bulk of it away; and I don't see that at present you can do anything else but send it out to sea. My views on this subject might be very considerably modified if some of the large proprietors of land would make a liberal offer to take it, so that it would cost no more, or even less, than it costs to send it away. Certainly it would be our duty to recommend that; but I question whether the demand will arise.
811. *Mr. Bell.*] Is there any land do you think within a reasonable distance of Sydney, say 15 or 20 miles along the line of railway? Yes, there is any quantity of private property within that distance which could be resumed by purchase; but I am not aware of any suitable area or situation that is vacant, that is to say, Crown land.
812. *Chairman.*] Is there a large extent of land in the neighbourhood of the Parramatta Junction? Yes, quite sufficient for the purpose without going 20 miles by railway.
813. Is there any suitable land within 14 miles of Sydney, and near the railway, in any quantity? Yes.
814. And I suppose land of that character is of scarcely any value? Very little in its present state, and would be vastly improved by the application of night-soil.
815. And this land you say is all alienated? All alienated.

Francis Bell, Esq., City Engineer, further examined:—

- F. Bell, Esq., C.E., 816. *Chairman.*] I find, from reading different works on the subject, that there are a great many different systems of employing pneumatic receptacles similar to that which you propose to adopt. Have you formed any definite plan as to the construction of the cart which it will be necessary to use? I propose myself to use cylindrical carts or cylinders.
817. There are also various arrangements employed on the continent for creating a vacuum in the cart;—have you decided upon adopting any particular plan for that purpose? Well, I am not wedded to any particular plan; I should like to inquire a little further into the matter. I think it should be done by some steam power or other.
818. By direct pumping? Yes, by direct pumping.
819. If this system is to be applied at once, taking things as they are—and of course they must remain so for some time at all events—do you think this method could be made applicable in the case of some of these cesspits where, from the nature of the soil the liquid has become absorbed and the residue is comparatively solid. Do you imagine it would be too solid to be sucked up in this way? I think we may have a good deal of difficulty in that way; but wherever the cesspits are improperly constructed they should be filled up and proper ones constructed.
820. You think then that, pending the improvement of these cesspits, this system could not be adopted universally, and that we shall be obliged to have recourse to the old method of cleaning them out in the meantime? Yes; perhaps so.
821. Do you not think it might be possible to make use of these pneumatic carts in the case of large well-formed cesspits, and to adhere provisionally to the old method in other cases, and where common carts were used, to transport the contents by land to some place we might be able to find for depositing it? Yes. It might be possible to use these tanks for that purpose also. Arrangements might be made to do it without creating a nuisance. There was a suggestion made by Mr. Moriarty, which I thought was a very good one, that some of these tanks should be made in compartments suitable to the size of the pits. One compartment could then be filled at a time.
822. Do you think that if very small receptacles were used the method would be practically applicable? I do.
823. Supposing the receptacle to be not more than half a cubic yard? Yes; each compartment would have a valve of its own.
824. Have you ever considered the propriety of introducing what seems to be a very common practice in large towns in England in case of large cesspits or other receptacles for fecal matter—that of throwing ashes produced on the premises into the place as a partial deodoriser? Yes, I think that would do very well. I know that a Commission, which lately sat in Birmingham, brought up a report which recommended that this should be done, and the old Midden system done away with.
825. But, without doing away with the Midden system and using the old cesspits the people have still the opportunity of throwing the ashes into the place. I find that this practice obtains greatly on the continent and seems to be admitted as, at any rate, a mitigation of the evil? No doubt it is. I think you might afterwards have a small engine attached to these tanks, and then you could have a vacuum created at once.
826. That is to say you would pump out the air at once? Yes.
827. If these ashes were thrown in they would of course increase the bulk of the matter to be removed? Yes, and they would increase the difficulty of drawing it out of the pits.
828. By increasing the solidity of the matter? Yes.
829. I understand you then that for some little time, at all events until arrangements are placed on a more satisfactory footing, it will be necessary to adhere to the old method of removal in the case of improperly constructed cesspits, where the matter becomes too solid? Yes; but generally speaking I think they could be emptied in the way I have suggested.
830. But in those places in Waterloo, where the soil is sandy and you would have a solid mass to deal with—in most cases you would have some solid matter which you could not pump up? I am not quite sure that would be the case; the pits are so low that I think they are almost always filled with water.
831. It depends, I suppose, a good deal on the situation of the cesspit? Upon the situation. You know you have only to sink a few feet in the sand anywhere to get water.
832. That may be the case in some places, but there must be others where the fecal matter is left dry and solid. How long now do you suppose it would take to make the necessary plant, the tanks, punts, wharves, &c., and to complete all the arrangements for commencing your system? I should say to complete all the arrangements it would take about six months.

833. That would take us into the middle of next summer. Have you prepared any plan of the cart which would be used, or made any estimate of the expense? No, not yet. F. Bell, Esq.,
C.E.

834. *Mr. Moriarty.*] I think you have stated before, but I will ask you now, whether a great deal of the disagreeable smell caused by cleaning out these closets might not be removed by deodorising the matter so as to render it unnecessary to have recourse to this pneumatic system? Well, you might do some good by diminishing the odour, but you could not remove it. 4 June, 1875.

835. I mean temporarily? It might be of service temporarily, but it would not be effectual.

836. *Mr. Bennett.*] As it would take such a long time to bring your system into operation, and as you are not quite certain about the working of the suction carts, what would you think of using them as they are used now. Would it not be well to commence by trying these carts. The punts will be a large investment? I think so. That would be considered by the Municipal Council. The removal would be a much cleaner process than it is at present.

837. You think that plan might be adopted with advantage as a temporary measure? Yes. I would propose that these carts should be cylindrical tanks, and also sloping towards the centre where the discharge valve would be, so that all the matter would fall towards the bottom and be easily discharged.

838. *Chairman.*] Have you taken into consideration that when this faecal matter is drawn into the cart there will be a considerable liberation of foul gas by suction from the vacuum? Yes. I may mention that in Captain Lierhner's system the carriage-frame is hollow, and the exhausted steam circulates through it before entering the chimney, so as to deaden the noise of the blast, while the *exhausted foul air* is passed under the fire-grate in order to purify it by burning.

Mr. David Clement Robertson, Inspector of Waste Waters, called in and further examined:—

839. *Chairman.*] Are you acquainted with the line of Busby's Bore? Yes.

840. Commencing from Hyde Park and going on to the Lachlan Swamp? Yes.

841. Are there any cesspits to your knowledge anywhere near the Bore? There are on the southern side of the Bore, just on the other side of Botany-street.

842. In the street? Yes.

843. That is somewhere just beyond the Gaol? Yes.

844. And from there how far do the cesspits extend? Well I suppose 200 or 300 yards, to the Barrack-wall.

845. Are there many cesspits there? Yes; there is a block of I suppose sixty or seventy houses.

846. All with cesspits? Yes.

847. Are you acquainted with the Bore—can you point out the situation of the different shafts? No. I know where some of them are, but not the whole of them.

848. We are told that in some parts—more especially in the suburbs—the cesspits become full in rainy weather, and overflow, and frequently run into the gutters, and that in some cases this is purposely done by the people themselves when they can do it? Yes, that is carried on to a considerable extent. Some of the cesspits are so constructed that at a certain level there is a pipe to carry off the liquid matter.

849. The pipe is laid on for that purpose? Yes.

850. Is not that illegal? Yes, and when the Inspector of Nuisances is aware of it he prosecutes the parties.

851. Does this create a nuisance? Yes.

852. The faecal matter goes into the gutter? Yes.

853. Are there any places where that occurs which you have seen yourself? Yes, on the Surry Hills, and many other places it frequently occurs, to the annoyance of the neighbours.

854. Where do these gutters discharge themselves? From Surry Hills the gutters discharge into a large open drain in Arthur-street.

855. Where does that lead? Right down past Alderson's, and away down to Waterloo, to Shea's Creek.

856. Have you observed the same thing in Waterloo? No; I have not taken particular notice. It is not part of my duty. It is our duty if we see anything in the city like that to report it to the Inspector of Nuisances.

857. Your duties carry you to the suburbs, wherever the water goes? Yes.

858. Have you heard complaints of the well-water in the suburbs being bad? No, I have never made any inquiries about it.

859. Have you ever heard complaints of nightmen depositing night-soil in improper places? Yes.

860. Where? I have heard of one or two loads being discharged in Elizabeth-street, near Belmore Gardens, and somewhere in the Municipality of Darlington.

861. Are these people found out as a rule? Yes, the Inspector of Nuisances got on their track, and they were fined for it.

862. I think I understood you to say that there are no cesspits along Oxford-street until you come as far as the Gaol? Well they commence there; there may be two or three along Oxford-street. Then taking the Paddington side, from the northern side of Albion-street, the whole of the drainage from the houses in that locality along the eastern side of Dowling-street discharges into the gutter, and thence it is carried along till it gets within a few feet of the Wesleyan Parsonage, and then it is discharged into the sand. Then a little further along there is a block of houses, newly erected, about forty or fifty of them, in Dowling-street on the same side, and there is a gutter which carries the water on about 150 yards, and then discharges itself into the sand.

863. That is house drainage? Yes.

864. Is that in the neighbourhood of the Bore? It is within eighty or ninety feet of it. That is on the Paddington side. Then on the city or west side it is kerbed and guttered, and the drainage is carried away into the sewer.

865. *Mr. Bell.*] With regard to these cesspits we were speaking of along the South Head Road towards the Park wall, does not the ground slope rapidly there? Yes.

866. So that the drainage is carried off there quickly? Yes, it is; there is a great fall there.

867. Does any of the drainage go into Barcom Glen? The surface drainage does.

Mr. D. C.
Robertson.

4 June, 1875.

TUESDAY, 8 JUNE, 1875.

Present:—

M. B. PELL, Esq.,
HON. J. B. WILSON,
F. BELL, Esq.,

W. C. BENNETT, Esq.,
E. O. MORIARTY, Esq.,
DR. ALLEYNE.

M. B. PELL, Esq., B.A., IN THE CHAIR.

Benjamin Palmer, Esq., Mayor of Sydney, and Michael Chapman, Esq., Alderman, were called in.

Mr. Palmer examined:—

B. Palmer,
Esq.
8 June, 1875.

868. *Chairman.*] I wish to ask you, Mr. Palmer, as we are taking evidence on this subject, whether you consider it desirable that the duty of cleansing the cesspits should be thrown upon the municipal authorities in Sydney and the suburbs? I do. Would the City Council have the power of doing this for the suburbs who have municipalities of their own?

869. I will come to that presently. Is it your opinion that the suburban municipalities would concur in such an arrangement? Yes, I think so.

870. You understand that under such an arrangement the landlords or owners would be relieved of all responsibility in the matter, except that of paying the proper charges for the emptying of these pits? Yes.

871. Do you think it would be reasonable to require that all cesspits should be cleaned out at certain intervals? That would depend in a measure upon the size of the cesspits.

872. It seems to be the prevailing opinion that large cesspits are objectionable—that it is better to have smaller ones, and to clean them out frequently. I may say that the opinion of the Board, as far as we have formed one upon the evidence yet taken, is, that they should be cleaned out at intervals of not more than three months? I think large pits are very objectionable, and I think they should be altered to a certain size.

873. And you think they should be cleaned out frequently? Yes; some might require to be cleaned out much oftener than others. For instance, there might be a cesspit attached to a house in which only a man and his wife were living, while next door the cesspit might be used by a dozen persons.

874. Do you think it would very largely increase the annual expense of keeping these places clean if they were cleaned out more frequently—if one cart, instead of taking away the contents of one, were to take away the contents of a number in the same street, and do it at more frequent intervals. There would be the same quantity to take away, only it would come from a number of different cesspits? I think it is desirable that they should be emptied frequently. I could not exactly say at what intervals.

875. Do you think the city authorities should be empowered to levy a certain rate, in some way or other, to pay for the whole expense of cleaning out these places? I think some specific charges should be made, just enough to cover the actual working expenses.

876. It should be amply sufficient to cover the expense, including interest on the value of the plant, as well as wear and tear? Yes, sufficient to cover the expenses. Of course the amount could only be ascertained by experience.

877. We also propose to recommend that the municipal authorities should have full power to regulate cesspits and water-closets, as to their construction or re-construction, where necessary, and also as to their position;—do you think that would be desirable? I think so.

878. And also as to the sufficiency of accommodation in order to secure decency and cleanliness. Do you think that would be desirable? I think so; I think we ought to have power to regulate these matters, and to fix the size of the cesspits—that they should be so many feet wide and so many feet deep.

879. We understand that at present the municipal authorities have no control whatever over the nightmen to prevent them from placing the contents of these pits wherever they choose; in fact they have no control in the matter at all; the owners may construct what pits they choose, and empty them out as they like? Yes, until they become a nuisance, when Mr. Seymour pays them a visit.

880. We propose to make improvements in all cesspits obligatory upon the owners or landlords—that steps should be taken for instance to prevent the overflow of surface water getting into them;—do you approve of that? Yes, that could be done by raising the cesspit above the level of the ground.

881. And we propose to recommend that this should be done at once? Yes, I think it is very desirable, because there are plenty of cesspits which are only on a level with the ground, mere holes in the ground.

882. We think also that these cesspits should be made watertight, not only to prevent the overflow but to prevent the liquid matter from percolating through the soil? Yes, they should have bottoms as well.

883. But we propose to leave this to the discretion of the municipal authorities? Yes. You must take into consideration the time which would be required for inspection and for our officers to make suggestions as to the improvements which would be required, and also to obtain the men necessary to carry them out.

884. Do you think the municipal officers would be willing to carry out this work as far as possible, and to deal firmly with the people? Yes, I am sure our officers would, but the difficulty will be, if this is to be done at once, to get the men necessary to carry it out.

885. It seems perfectly clear to us that, allowing for the necessary experiments, arrangements could not be made for disposing of the matter from the cesspits in the manner proposed—by sending it out to sea for six months, or probably a year. That is a scheme which could not be carried out until all the arrangements were perfected, even if the Legislature should come to the conclusion that it was the best system to adopt? Yes. I was talking to Mr. Russell the other day about the barges which would have to be employed, and he said they would cost £1,500 each, and of course it would take some time to get everything in working order.

886. It seems to us therefore necessary to make some temporary arrangement for disposing of this matter, which appears to be such a great nuisance? Yes. My own view of the subject is as far as regards temporary arrangements—that if we could get the Government to assist us with the railway and give us some site up the country suitable for the purpose, we might construct trucks with one or two tight compartments and send it up there. There are one or two places on the Harris estate where there is a line already laid down to Darling Harbour. There is some vacant ground there where we might deposit it by means of some kind of shoot, until it could be sent up the line, or otherwise disposed of.

887.

887. Do you know any particular place on the line which would be suitable for such a purpose? Some of it might be taken on the Southern line, and some on the Western. There is plenty of land along the line there, and if you were to send some of our street sweepings along with it, it might be made use of by farmers and other persons in the country. We have hundreds of loads of scrapings off the streets which might be mixed with the night-soil. B. Palmer,
Esq.
8 June, 1876.

888. Do you think the municipal authorities would be willing, in respect to neighbouring municipalities, to undertake, under proper arrangements and with certain fixed charges, the duty of carrying out the provisions I have spoken of, if it were found desirable to consolidate the matter?—Do you think the city authorities would undertake the duty under an equitable arrangement? I think they would. It would be to the interest of the suburban municipalities to combine with us. Bad as the city is represented to be with regard to these matters, some of these municipalities are worse, I believe.

889. We are told that the nightmen take away the night-soil and sell it to market gardeners, but although they profess to do so we are informed that they frequently deposit it in improper places; in fact, nobody knows where it goes to? Yes; we found one man doing that; instead of selling it to a market gardener he deposited it in one of the gully-shafts.

890. We have heard of several other cases, not quite so flagrant as that, where the persons were not detected. Have you reason to suspect that this goes on elsewhere? I do not know. I have heard of some of this stuff being deposited near the Kerosene works. Whether it was done to counteract the effect of the kerosene I cannot say.

891. Could not the evil be mitigated if we could find some place to deposit it at a moderate distance from town?—Would not that improve the present state of things? Yes; there is a good deal of uncertainty as to where it is deposited at present. Some of the nightmen say they take it as far as Bondi, and shoot it over the cliffs, but whether they do so or not I am not of course in a position to state.

892. Do you know the position of certain Church and School lands, not within the Botany watershed, but somewhere near La Perouse's Monument. We have some idea that that would be a good place? I know the Church and School lands as far as the Botany road. It is a long road, and you must consider the distance.

893. Do you think that when once this disgusting job of loading the carts was done the difference of a mile or two along the road would materially increase the expense? Yes; the further you sent it the more you would have to pay.

894. Would it not be better even to incur additional expense than to allow this nuisance to continue? Well, I dare say it would under the circumstances.

895. You do not recommend that this stuff should be thrown over the cliffs at Bondi, do you, but to deposit it on certain land at Bondi? No, to throw it into the sea. There is a place between North Bondi and Mourabray, where people climb down the rocks to fish, where it could be deposited on the land close to the sea, and easily thrown over.

896. How far from Sydney is the locality you refer to? I should say about six miles, and there is a good road all the way. You go down the South Head Road, past Rose Bay, and round the hill, or you can go the other way by Waverley.

897. Would it be necessary to construct a new road for any part of the way? Only from the junction of that road to the sea-coast, about a quarter of a mile.

898. *Mr. Moriarty.*] Would not the cartage of this stuff, if that site were adopted, have to go through a densely-populated part of the city, such as the South Head Road, Rushcutter's Bay, William-street, and that neighbourhood? I don't think it would be so objectionable if it went that way as it would if it went the other way, because in that locality the houses are larger and the premises not so close to each other. If you went to Randwick it would be almost as bad. With regard to the place mentioned by the Chairman, near La Perouse's Monument, the road is very hilly all the way. I believe, too, that Mr. Hill has a house and garden there, and there would be compensation to make.

Alderman Chapman examined:—

899. *Chairman.*] You have heard the evidence given by the Mayor; do you concur generally in the statements he has made? Not in everything. It is one of those questions on which you will find a diversity of opinion. In a great many of his remarks I concur; in others I do not. Alderman
Chapman.
8 June, 1876.

900. Do you approve of what I have stated to be the present intention of the Board to recommend with regard to increasing the powers of the municipalities? Yes, I quite approve of that, and I think it is a step in the right direction. If these cesspits were placed under the direct supervision of the Mayors and Aldermen of the city and suburban municipalities they would be kept much cleaner and there would not be so much pollution.

901. Do you think the City Council will be willing to carry out cordially the provisions of such an Act as we should recommend? I think so; I would make it a matter of compulsion, as it is one which so closely affects the health and even the lives of the citizens; I think they should be made to do it.

902. In respect to certain matters affecting the construction or reconstruction of these cesspits, the Corporation we think should have a discretionary power? That is what I object to. I would not allow the Mayors and Aldermen to say that some cesspits should be allowed and others condemned. I would insist upon every closet being properly constructed and cleaned out after a certain interval.

903. Would not that be rather a revolutionary kind of arrangement? I do not think so.

904. You would have all closets made water-tight? Yes.

905. Would not this involve a very considerable expenditure on the part of landlords? I do not think they would have to expend more than they do now. All landlords ought to have their premises kept clean, and I quite agree with Dr. Wilson, that these cesspits should be cleaned out every three months, and one cart might take away the contents of half a dozen pits.

906. I am referring to the construction of the closets. Would not the reconstruction of these closets entail a considerable increase of expenditure on the part of the landlords? Yes, but it would increase the value of their property; of course they might complain, some of them, of such an innovation upon what they consider their rights, but the improvement is necessary and would have to be made.

907. Do you think the landlords would carry out such an arrangement? I think so; I think they would see the value of it, especially if the Corporation had the power to enforce it.

Alderman
Chapman.

8 June, 1875.

908. You are well acquainted, I believe, with the suburbs as well as the city? Yes.
909. Is it not the case that there are great numbers among the working classes who work for wages, and who with the assistance of building societies become freeholders? Yes, I know numbers of them.
910. These are a very steady and respectable class of men? Very much so.
911. Men whose property in many cases is still under mortgage and whose means are limited? Yes.
912. Would there not be some difficulty in the case of these people if they were called upon to bear an expense, which to a rich landlord would be trifling, but would be heavy to them? No, I think not. The cost of constructing these cesspits would not be so great. In the first place they seldom exceed 4 feet by 4 feet, and they never at any time cost more than 30s. or 35s. to complete; that is for the stone-work; they are built generally of rubble.
913. If cemented to make them watertight would not they cost more? Not much more—a little of course. I don't think the general run of cesspits would cost more than 50s.
914. We find that in Waterloo these cesspits are very often near the wells; in fact they are not regular pits, they are only holes in the ground? We are told by the nightmen that they never have to go there at all, and I should think it must be a terribly unhealthy place. Frequently we find a well not many feet from a water-closet, and the consequence is that the water gets contaminated, and you see a lot of sickly children in the neighbourhood, half of whom, I am sure, will never be reared. I was speaking to a nightman the other day, and I happened to mention Waterloo, and he said, "Oh, we never visit that place; when one pit is filled they dig another alongside it."
915. Don't you think that state of things should be put a stop to at once? Oh yes, certainly.
916. What would you propose to do with a proprietor, supposing he had not the money to reconstruct the place? There is no man who has a house of his own who could not borrow 30s. or 40s. for such a purpose, and it would be his duty as a citizen.
917. It has been suggested that a sufficient arrangement, or at all events something much better than the present pits, might be made by using some of these street pipes? That would be quite as expensive, I think, as it would be to reconstruct the cesspit.
918. I believe that these pits are purposely made porous so as to let the water through? Perhaps so. I apprehend that if they were laid in cement you could get any of them done for £4,—that is, of rubble stone.
919. What would be the best way, do you think, if the municipal authorities undertook the duty of cleansing the closets, to make the charges. Should the price depend upon circumstances—some closets being less accessible and more difficult to empty than others—or upon the actual expense incurred? If you have the closets cleaned out every three months you must levy a rate upon the property, something similar to the sewerage rate, which the Government pretended to give us power to levy.
920. Would it not be better to assess each cesspit? No; you would be continually at war with the people. I do not know how you could collect it in that way. You would have to send a man to examine every closet to see that it was no larger than some other closet, and it would be necessary to have an Appeal Court; whereas, if you levy a rate of so much in the pound upon the property, you make the charge in the easiest and most equitable way, and you adopt the simplest mode of collection. If you compel the Corporation to collect the money in an expensive way you make them lose by this work instead of making it a source of profit. The balance should at all events be on the right side.
921. You think the rates should cover every expense? Yes; I believe myself that the closets ought to be emptied every three months, although in some cases there would not be more than a bucket of stuff to take away.
922. Do you think if that were done it would materially increase the expense? I believe that with a few inspectors or overseers it might easily be done, and the whole city be kept nice and clean.
923. You would require more officers, would you not? Yes, but I would have the work done by contract. I think it would be done much more cheaply and efficiently by contract, taking into consideration the enormous staff as well as the plant which would be necessary if it were done by the Corporation. You might appoint overseers to supervise the work, but my experience is that work done by the Corporation and by public bodies is one-third dearer in almost every case. You might have properly constructed carts for the purpose belonging to the Corporation.
924. It would be necessary to employ certain labourers, and also to exercise a certain supervision over the disposal of the night-soil, to see that every load was deposited in the proper place? Of course that would be necessary.
925. It appears to us that the City Corporation should undertake this duty, receiving of course proper compensation from the other municipalities? Yes, as far as the emptying of the closets and taking the contents and depositing them at the proper place—they would have nothing to do with the construction of closets, except in the city.
926. Would the city authorities, do you think, object to take charge of the ground set apart for the deposit of night-soil, under proper arrangements and with a fair compensation from other municipalities? No, I don't think they would object. It would give them an opportunity of employing a number of idle fellows, who are always hanging about the Town Hall, and who will not work for anyone else.
927. Why do these men prefer to work for the Corporation rather than for anyone else? I do not know.
928. There is a great demand for labour just now, and I understand it is difficult to get men in Sydney? Yes, but these men I speak of have been foisted on the Corporation by the citizens some years ago, and they seem to think we are bound to employ them.
929. *Mr. Bennett.*] Touching your evidence on the subject of contracts, Mr. Chapman, don't you think that in a provisional arrangement, to meet an emergency like this, it might be rather difficult to get the contract system into operation at once, without any delay, and that it might be desirable, if this system is to be promptly enforced, to commence with day-work, hiring the horses only? I believe the Corporation would try it themselves for a few months in order to see what it would cost. I do not mean, if these powers were given to the Corporation, that they should call for tenders immediately.
930. *Chairman.*] You think then it would be better that the Corporation should have their own plant and contract for the labour? Yes, I would have the pits emptied by contract. I think the carts should be supplied by the Corporation according to the improved plan.
931. We have some idea of making some experiments in the construction of carts on the pneumatic principle. Carts of that kind would require very careful management, and it would not do to entrust them to any common labourer;—at all events the men who were employed would have to be thoroughly drilled

drilled in the use of them—would it not be desirable that there should be one such person paid by the Corporation to accompany such a cart? I think it would be desirable to have as little complication as possible. The men you would employ in work of this nature would be men of the lowest class, and you could not expect them to have any very large share of intelligence.

Alderman
Chapman.
8 June, 1875.

932. If the pneumatic system were adopted, there would be very little disagreeable odour attending the operation of emptying a closet, and I think it would be desirable to have a man of the engineer class attending to such work;—do you think there would be any difficulty in that respect? No, I do not suppose there would be much difficulty.

933. And men of that class in charge of such valuable plant would be necessary to the municipality? You would not require a man to go with each cart. If you had one officer to see that the carts were kept in proper order it would be sufficient.

Thos. Henry Bradridge, Esq., City Surveyor, called in and examined:—

934. *Chairman.*] You are the City Surveyor, I believe, Mr. Bradridge? I am.

935. And you have in that capacity frequent occasion to visit various parts of the city? Yes, frequently.

T. H.
Bradridge,
Esq.
8 June, 1875.

936. Do you find that much nuisance is created in crowded localities by the state of the cesspits and water-closets? Yes, and I think it is very prejudicial to the health of the citizens.

937. These cesspits in many cases, though not such a nuisance as to justify interference on the part of the Inspector, are still, a great number of them, in a manner a palpable nuisance? Yes.

938. And you think that is prejudicial to the health of the inhabitants? I do.

939. You think some more systematic mode of cleansing them is necessary to the health of the citizens? I am sure of it.

940. Is there a deficiency of water-closets or common cesspits in different parts of Sydney? I do not know it personally, but it has been brought under my notice that it is so. In some cases there is only one cesspit for a number of tenements. Only this morning I noticed some buildings going on where it was only intended to build one cesspit or privy for the accommodation of four houses.

941. You think it desirable that some steps should be taken to remedy this state of things, and to require the landlords to provide proper accommodation? I think so, and I think that in our Building Act, which has been in course of preparation for about two years, there is some such provision that every house shall have a separate privy, and that such privy shall be at a certain distance from the house.

942. At present the Corporation have no control whatever over these places? No control at all. I think the present system of cleaning out cesspits is most disgusting, and I think the Corporation should have more direct control over them.

943. *Mr. Moriarty.*] Have you formed any opinion as to what would be the most suitable sort of cart to use for emptying these places? Yes; I think we recommended carts of a particular description in our report to the City Council a few days ago. They would be something the shape of a cylinder, so that the pneumatic system of emptying might be resorted to, but they would merely be put on wheels in the ordinary way.

944. Is there anything particular you would like to add to that report as regards the construction of these carts? No; if the pneumatic system is to be carried out of course all the details will have to be gone into very carefully.

945. *Hon. J. B. Wilson.*] You mentioned that you had a Building Act in preparation for two years? Yes.

946. What has been the difficulty in getting that Act brought before the House? I do not know why it has not been laid before Parliament, or whether it has been laid before them or not.

947. Have any steps been taken to present it? I do not know what steps have been taken. I do not think it has been brought before the House, nor do I know the cause of delay, but I know that provision is made in it for dealing with the closets and cesspits, and not only that, but there is a provision that there shall be one for each house, and at a proper distance from the house, and that these cesspits shall be made watertight, so that the liquid matter from them shall not permeate through the soil, which I know is very injurious to health.

TUESDAY, 8 JUNE, 1875.

Present:—

W. C. BENNETT, Esq.,
F. BELL, Esq.,
Hon. J. B. WILSON,

P. F. ADAMS, Esq.,
E. O. MORIARTY, Esq.,
Dr. ALLEYNE.

M. B. PELL, Esq., B.A., IN THE CHAIR.

The Honorable Thomas Holt, M.L.C., examined:—

948. *Chairman.*] You have been kind enough to come here to-day, Mr. Holt, to give us some information as to the lands near Sydney which may be suitable for the disposal of night-soil. Is there any land to your knowledge, either public or private, within a reasonable distance of the city, available for such a purpose? I do not know of any public land, but from Cook's River nearly to George's River I think the land is very suitable, as it is all sand, and has a drainage into Botany Bay.

Hon T. Holt,
M.L.C.
8 June, 1875.

949. And it is not sufficiently inhabited to incur any risk of becoming a nuisance if used for this purpose? No, because if it were, that would be an insuperable objection, but there are scarcely any inhabitants. (*Witness handed in a tracing of certain blocks of land.*)

950. I see in this plan you have given us there is one lot marked 300. Does that mean 300 acres? Yes; it comprises 300 acres altogether, but it has been subdivided in smaller allotments. That belongs principally to Mr. George Lord.

951. Is it settled upon at all? No, I think not; I do not think there is a single house upon it.

- Hon. T. Holt, M.L.C.
8 June, 1875.
952. How far is the nearest part of that land from the dam? About two miles.
953. Is there any land available nearer to the dam? There is plenty of land available, but the inhabitants would strongly object to the deposit of night-soil there.
954. Which is the piece of land nearest the dam which you think would be in every respect the most suitable? This piece (*indicating portion on plan*) belonging to Mr. Lord, and marked John Webb, would be the nearest if there were a bridge across Cook's River from the waterworks.
955. That would involve considerable expense would it not? I was told by the late City Engineer that he could construct a bridge across the river there for £1,200, and then from Cook's River very nearly to George's River there is not a single house. The first house you come to I think is Mr. Seymour's, on the Sandringham Estate.
956. The tract of country you are speaking of lies between the road and Botany Bay, does it not? It lies on the beach.
957. Have you any land of your own there of sufficient area for the purpose? I have 40 acres, adjoining Mr. Lord's, formerly John Webb's, and I have 98 acres which are within two miles of the dam. Then I have three other blocks, comprising 208 acres, a little further on; there are two blocks between, one belonging to Mr. Jacob Marks, and I don't know to whom the other, which contains 56 acres, belongs.
958. You do not appear to have any large quantity in one block? I have one block containing 208 acres. You can see it here (*indicating position on plan*.)
959. And that is within two miles you say from the dam? No, about two and a half miles to the side of it; the 98-acre block is about two miles from the dam.
960. Then it must be eight or nine miles from Sydney? The dam is about six or seven.
961. Is that firm land or is it swampy? No, there is a swamp; you will see it marked, but this land is near the beach, and is not at all swampy; it is all sand.
962. It is covered with scrub, is it not? Yes.
963. Are there any large trees upon it? There are some, but not many; it is chiefly scrub.
964. Are there many market gardeners in the neighbourhood? Yes, a great many, and I think they would be glad to send their carts and take away as much of the night-soil as they could make use of. They would cover it over with stable manure until it became fit for use. I believe they would take large quantities of it if they had the opportunity.
965. Where are these market gardens according to this plan? Here (*pointing out position on map of the parish of St. George, Cumberland.*)
966. They are along the main road then? Yes, a great many; some of them are on the other road leading to the bay. But when once you come to the bay there are no inhabitants at all. There is not a single inhabitant, I think, from Mr. Seymour's house, on a portion of the Sandringham estate, to Cook's River, along the line of beach.
967. How far from the public road would this night-soil have to be carted in order to get into this uninhabited district? Immediately after you get over the dam you turn to the left, and it is about two miles from the Rocky Point or Sans Souci Road.
968. After leaving the dam you can follow the main road, can you not? No; you leave that immediately after passing the dam. You can also go on the main road to the Wesleyan Church, but the distance is greater.
969. Is there a road to this tract of land, after passing the dam? Yes, it is a much better road than it was formerly. I have driven over it scores of times. There is a municipality there, I think, who would assist in making that road.
970. That is the Municipality of West Botany? Yes.
971. Would much expenditure be necessary to make that road for this purpose? No. I should think, there being plenty of stone there, that £500 would go a long way towards it. Mr. Bennett can give you an accurate estimate of the cost.
972. Then you would advise the Board to recommend this district as a convenient place on which to deposit night-soil? Well, I can simply point out what I consider its advantages. I think it is very suitable for the purpose. It is very barren land at present, but Mr. Seymour has made a very nice place of his in a short time, by using either manure of this kind or street sweepings.
973. And would you be disposed—as a large portion of that land appears to be your property—to place it or a portion of it at the disposal of the Government? I would not object. I suppose the projected Illawarra Railway will run parallel with the beach.
974. That would not interfere with the project—it would rather facilitate it? Yes; in getting rid of the sewage matter.
975. What kind of arrangement would you be prepared to make with the Government, or with the city authorities, in respect to this land? I do not know; I have hardly considered the matter. I should advise the Government, or the Mayor and Aldermen, if they thought of taking my land, to endeavour to obtain those two blocks adjoining it—Mr. Jacob Marks' block and the other one. They would then have an area of 425 acres altogether. But this might be increased to about 1,000 acres, if they secured the vacant land north of my land.
976. You would recommend that we should get rid of as much of this stuff as we could to the market gardeners, and dispose of the remainder by trenching it into the land which might be selected as a depot? Yes; because there would be no further expense than the mere expense of carting.
977. You see if we make a recommendation that this plan should be adopted, we should be obliged to state whether it is available as well as suitable? I should have no objection to meet one, two, or more members of the Board, and to talk the matter over with them.
978. If a committee were appointed you would be glad to treat with them for the land in question? Yes. I would not sell it at any price; but I should be quite ready to make it over to the Government for a term of years.
979. *Mr. Moriarty.*] Have you any idea of the probable cost of the adjoining allotments of which you spoke, in the event of the Government wishing to buy them out and out from the owners? No. I only know the owner of one of them—Mr. Jacob Marks. I could write to him or the Commission might. It would be an advantage to have the land in one block. There would be, I should think, an area of about 425 acres; but with the unoccupied land south of the Cook's River, which is equally suitable, about 1,000 acres.
980. *Chairman.*] Do you think Mr. Marks would be willing to sell his land? Yes, I think so; he offered it to me once, but I was afterwards told it was settled upon his wife and children.
981. Do you think the Municipality of West Botany, in which this land lies, would raise any objection to the

the deposit of this soil in that locality? I am quite sure if it were on the beach they would not object to have it brought there. Many of them are market gardeners, who would use it in their gardens.

982. You do not think the municipal authorities would make any objection? I think not, as I do not believe that it would be a nuisance to any of the residents in the municipality.

983. Do you think it would be to the advantage of the neighbourhood in promoting the cultivation of the land? Yes, but you should not look upon this as a permanent arrangement. As soon as the Illawarra Railway is finished you will be able to dispose of any quantity of it on Government land, where for miles there are no inhabitants, and I would suggest that a large block of land should be specially reserved for this purpose.

984. But in the meantime we have the contents of some thousands of cesspits to dispose of? Well, no doubt it would be an advantage to this sandy land on the bay, and no inconvenience would arise to any person, as it is so far removed from every house.

985. *Mr. Moriarty.*] Do you think the water in the swamp there would be contaminated in any way from the deposit of this night-soil? No, because the drainage all leads towards the bay; if that were not the case—if the drainage were in the opposite direction—the objection would be insuperable.

Hon. T. Holt,
M.L.C.
8 June, 1875.

TUESDAY, 15 JUNE, 1875.

Present:—

F. BELL, Esq.,	P. F. ADAMS, Esq.,
W. C. BENNETT, Esq.,	HON. J. B. WILSON,
DR. ALLEYNE.	

M. B. PELL, Esq., B.A., IN THE CHAIR.

George Allen Mansfield, Esq., called in and further examined:—

986. *Chairman.*] We have asked you to attend to-day, Mr. Mansfield, to give us some further evidence in reference to nuisances said to exist in connection with certain establishments in the Leichhardt Municipality;—have you heard any complaints at the Glebe of such nuisances? Yes, I have heard a good many complaints, and I have had occasion to complain myself; the nuisance arising from boiling-down and other similar establishments there is a very serious one.

987. Have you any personal knowledge of the localities in which these nuisances exist—have you observed the nuisances in these establishments? No. I cannot give you any evidence as to the character of the nuisances. I know where some of the establishments are, but I have not examined them, or had an opportunity of knowing all about them, by personal observation.

988. But you have found the stench proceeding from these places a serious nuisance at the Glebe? Yes; at times it is almost unbearable.

989. Is it felt in all parts of the Glebe? Yes, more especially on the upper portion of it.

990. Is this nuisance a matter of long standing, or has it occurred more recently? It has been worse within the last two years.

991. It is gradually increasing then? Gradually increasing for the last three or four years, and it is now worse than ever.

992. Are there any boiling-down establishments at the Glebe? None whatever.

993. Are there any establishments where pigs are kept? Not that I am aware of.

994. Are you aware that there are a number of piggeries in the Leichhardt Municipality? I have heard so, but I cannot speak from my own knowledge. When the wind blows from the Leichhardt Municipality towards the Glebe, or in calm sultry evenings, when there is no wind at all, the smell is intolerable, which is pretty good evidence that some serious nuisance exists there.

995. Have you observed any serious nuisance from blood being discharged into the harbour? I have. Upon that point I can speak confidently, for on many occasions, when passing along the bridge or causeway across the Blackwattle Swamp, I have seen the blood lying in coagulated masses on the sand, and left there by the receding tide.

996. Have you noticed that there was much stench proceeding from the Island when you have passed by it in a boat? I have not been near the Island lately.

997. And you have actually seen the blood lying on the sand near the Blackwattle Bridge? Oh, there can be no question about it—bright crimson blood. I have seen the foreshore perfectly crimson with blood, not upon one occasion only but repeatedly.

998. And you think that part of the harbour is polluted by this blood? There can be no doubt of it, to a most serious extent.

999. I would like to have your opinion on a totally different subject while you are here, Mr. Mansfield. What do you think would be the cost of a cesspit, say four feet each way, made of rubble stone, thoroughly cemented? There would be very little difference between the cost of rubble stone and brick. Either of them would cost about £8, made thoroughly waterproof.

1000. *Dr. Alleyne.*] When the tide recedes and leaves the blood on the sands in the way you have described, does the blood become putrescent and stink? Yes.

1001. Have you ever remarked, even at high tide, any evidence of putrescence going on, indicated by bubbles—have you ever paid attention to it, and observed anything of the kind? No. I have noticed it very closely, but I have never observed that. I have seen the blood mixed with water dashing against the stones, but I have not observed any signs of putrescence. But at low tide, after it has been exposed to the sun for some hours, it becomes quite offensive.

1002. Do you know if there are any manufactories connected with the Glebe Island Abattoir, where glue, catgut, and other articles are manufactured? No, not from my own knowledge; I have not seen them. I should say that in addition to the locality I have mentioned, I have noticed similar nuisances from the Glebe Island Abattoir on what is called Glebe Point—between the extreme angle of the Glebe and the end of the public road.

1003. *Chairman.*] All proceeding from the same source? All from the same source. Alderman Thornley, who was here with me the other day, could have given you some very precise information on that subject.

G. A.
Mansfield,
Esq.
15 June, 1875.

G. A.
Mansfield,
Esq.
15 June, 1875.

1004. I presume that the existence of this nuisance is an incontestable fact, and requires no accumulation of evidence to prove it? Oh, no.
1005. *Hon. J. B. Wilson.*] The offensive smells you have observed from the Leichhardt Municipality, if I understand you rightly, are distinct from those proceeding from Blackwattle Swamp—you don't mix them up together as one nuisance? No, they are quite distinct. I am perfectly clear upon that point. Unhappily I know them both too well.
1006. *Chairman.*] Do you think this practice of feeding pigs upon the offal from slaughter-houses or boiling-down establishments should be allowed within any reasonable distance of the city? Certainly not; it should be abolished at once.
1007. And what distance, do you think, should be fixed as a limit, from the General Post Office? Well, it is difficult to fix the distance from any central point. I do not think it should be allowed within two or three miles from any place at all thickly populated: I should say three miles. In my opinion the whole scheme of having the Abattoirs there at all was a great mistake. These things will inevitably collect in the neighbourhood of slaughter-houses, and they should be removed to places where they can offend no one, and be used to make the land valuable.
1008. To go back to the question of cesspits;—which would you recommend, a cesspit made of rubble stone or brick? Brick decidedly.
1009. Would it not be difficult always to make a good job of the rubble stone? Yes. I should recommend the use of brick, because it would be more quickly made and would be more durable and more effective.
1010. Do you not think it would be desirable that the municipal authorities should have a discretionary power as to the reconstruction of existing pits, instead of enforcing their construction upon some specified plan; because some of these cesspits, although not in strict accordance with such specified plan, might not require alteration, while others would have to be altered at once. Don't you think the municipal authorities should be empowered to use their discretion in such cases without partiality? I think so; but it should be made imperative upon them to secure efficiency. Their discretion should only refer to the mode in which the thing was done. It should be imperative upon them to see that the end was attained, one way or the other.

Mr. R. Seymour, Inspector of Nuisances, called in and further examined:—

Mr. R.
Seymour,
15 June, 1875.

1011. *Chairman.*] We learn that you presented a report upon certain nuisances existing in the Leichhardt Municipality some time ago, which was published? I did.
1012. Under what circumstances was that report made, who instructed you to make it? The Mayor of Sydney. An application was made by the Municipal Council of Leichhardt for me to go and inspect the locality in company with their own Council Clerk, and I received instructions from the Mayor to do so.
1013. Then it was done at their request? Yes, I went out and met the Council Clerk of Leichhardt, and we made the inspection.
1014. And the report which appeared in the papers was a correct report of that inspection? Yes, a true report.
1015. Were any steps taken to remedy the evils it referred to? Nothing was done as far as I know.
1016. Was anything proposed? Nothing that I am aware of, except what I proposed myself, that something should be done at once to remedy such a dreadful state of things.
1017. Do you think the use of offal from the Abattoirs, or the refuse from boiling-down establishments to feed pigs with, should be allowed anywhere near the city? I do not think it should; pigs fed on offal can never be wholesome.
1018. What is done with the pigs fed in this way? They are brought to market and sold.
1019. Just as they are, without any subsequent feeding? Yes, in the condition they are in.
1020. You think then there is no remedy, except to forbid the disposal of offal—within what distance of the city should you say? In my opinion none of it should be disposed of in any of the municipalities near the City of Sydney—that is to say, within 10 miles of it.
1021. You would forbid the use of this offal in any such way within 10 miles of the city? I would.
1022. Have not these establishments been forbidden in other municipalities—was not one of them driven out of Balmain for the same reason? Yes.
1023. Why do they not adopt the same course in the Leichhardt Municipality? I cannot say what is their reason for not doing so.
1024. How are the larger sort of dead animals, such as horses and cows, from the city, disposed of? The dead horses found in the streets are removed by the police, if they cannot find the owner; if they do they compel him to remove the animal himself.
1025. Where are they taken to? They are supposed to be taken 8 miles outside the city and burned.
1026. As a matter of fact do you know where they are taken to? As a matter of fact I do not know. I believe a number of them are taken to Mr. Frederick Fewing's place. He is a person who keeps a number of pigs and fancy dogs. I have repeatedly known him to get dead horses and take them to his place, and give 10s. a piece for them.
1027. What does he do with them? He cuts them up and feeds his dogs and pigs with them.
1028. Do you think that ought to be allowed? I am sure it ought not.
1029. Do the nightmen take any of these dead animals away? I don't think so. There is a man—I don't know his name—who lives in Sussex-street, near Hay-street, who carts away dead animals.
1030. Where does he take them to? To the best of my belief he carts them to these different boiling-down establishments.
1031. What becomes of the smaller animals, such as dogs and cats? They are carted out to a place, supposed at one time to be set apart for the deposit of night-soil, at the back of Moore Park. It has a drainage leading towards Shea's Creek.
1032. Do you send them out? Yes.
1033. At the expense of the city? Yes.
1034. Now what would you recommend as the best way of disposing of these dead animals? I think they should be all taken away and burned.
1035. Where? At some distance from the city, or from any thickly populated locality.
1036. Would not that involve a very considerable expense? It would be expensive no doubt; but I think the

the expense would be repaid by the benefit which would result in the health of the citizens if these carcasses were burned, instead of being buried.

Mr. R. Seymour.

1037. Would it not be sufficient to bury them under proper supervision;—would not that be a cheaper and better way of getting rid of them? It would be cheaper no doubt, but I don't think it would be so beneficial as far as the public health is concerned. 15 June, 1875.

1038. You are acquainted of course with the Crown-street reservoir? I am.

1039. It is surrounded, we are told, entirely by streets? Yes.

1040. Is there any system of sewerage in that neighbourhood? I think a portion of Crown-street is sewered, but not by the reservoir. I don't think it is sewered from Crown-street to Albion-street.

1041. Are the houses in that street supplied with cesspits? Yes—ordinary privies.

1042. Are the yards in which these privies are placed on the same level as the reservoir? The yards from Crown-street eastward are all higher than the reservoir.

1043. And on the other side? On the other side they are lower considerably. They are considerably higher on one side, and considerably lower on the other.

1044. How deep are these cesspits as a rule? The ordinary depth is not more than from 5 feet to 6 feet.

1045. What is the nature of the soil? Hard clayey soil—shaley soil.

1046. *Hon. J. B. Wilson.*] Have you any idea of the proportion of offal-fed pigs, as compared with corn or milk-fed pigs, slaughtered in Sydney? Well, from personal experience, I believe that three parts of the pigs sold in Sydney are fed on offal and refuse from slaughter-houses and boiling-down establishments.

1047. *Chairman.*] Fed entirely on that? Entirely on that and nothing else.

THURSDAY, 17 JUNE, 1875.

Present:—

Dr. ALLEYNE,
E. O. MORIARTY, Esq.,

HON. J. B. WILSON,
W. C. BENNETT, Esq.,

F. BELL, Esq.

M. B. PELL, Esq., B.A., IN THE CHAIR.

Mr. Walter Beames, Council Clerk to the Leichhardt Municipality, called in and examined:—

1048. *Chairman.*] You are Council Clerk at Leichhardt, Mr. Beames, I believe? Yes.

1049. We have observed that a report has been drawn up relating to a nuisance in your municipality, which you have probably seen? Yes, I accompanied Mr. Seymour when he made the inspection.

Mr. W. Beames.

1050. What was the object of obtaining that report? It was the wish of the Council that some evidence should be obtained in reference to the nuisance more than that which they had before them.

17 June, 1875.

1051. Does that report correctly describe the state of things existing in the Leichhardt Municipality? It is very mildly stated.

1052. Did the Council contemplate any action upon it? Well, I don't know. The Council are not agreed upon that point; two of the aldermen are keepers of pigs.

1053. Has any action in the matter been proposed? Well some little time ago an offer was made to the Glebe and Balmain Municipalities to join us in appointing an inspector of nuisances for the three municipalities at a good salary, but they declined. They said they had work enough in Balmain alone for two inspectors.

1054. So you have no inspector of nuisances? No.

1055. Is that the only obstacle which prevents you from getting rid of this nuisance? Yes, we have passed a by-law to prohibit persons from feeding pigs on offal within the municipality.

1056. Are the resources of your municipality not capable of supporting an Inspector of nuisances—is that the difficulty? Not exactly. As I stated before, two of the aldermen are interested in the matter, and there is a difference of opinion in the Council as to the necessity of appointing an Inspector of nuisances.

1057. How many aldermen are there altogether? Six.

1058. And two of them do not want an inspector of nuisances? Two of them do not want him.

1059. Do any large proportion of the inhabitants object to this nuisance? Yes, a very large proportion of them; it arises chiefly from the offal being brought from Glebe Island to feed pigs.

1060. What remedy would you suggest for this state of things? I would suggest that the Government should adopt the same system they adopt in America, and dry everything before it leaves the Island.

1061. But I mean for your own protection. Would you suggest that persons should be prohibited from feeding pigs upon offal within a certain distance from Sydney—say ten miles. Would that, do you think, prevent it? Yes, I think so decidedly. The first by-law the Council of Leichhardt passed was to prohibit persons from feeding pigs on offal; but the magistrates refused to convict upon it. They called it a restraint upon free trade, and said it interfered with the liberty of the subject. The difficulty with us arises principally from the difference of opinion in the Council; that is the worst thing we have to contend with. We have a law passed which would remedy the nuisance; in fact the common law of the land, 2 Vict. No. 2, does not allow pigs being kept within 40 yards of any house.

1062. Then, as far as you know, the Municipality of Leichhardt have power to abate this nuisance? I think they have.

1063. That is rather a difficult position, is it not? It is a very sad position to be in to suffer this nuisance and not to remedy it, because we will not. The cesspools too are very bad in our neighbourhood.

1064. We have been considering, with reference to a number of nuisances which exist, more particularly what additional powers we should recommend to be given by Legislative authority to the various municipal authorities. We generally find that they complain of the want of additional powers, but with you the case appears to be quite different; you appear to have ample powers to do what is required? Not unless a law was passed prohibiting the keeping of pigs within a certain distance of the city.

1065. Is it a fact that the stench from these piggeries and boiling-down establishments is a nuisance to other municipalities? Yes, I think so. We have had complaints from the Glebe, and it was on account

of

Mr.
W. Beames.
17 June, 1875.

of that that we made the proposal to have an Inspector of nuisances in conjunction with that municipality and Balmain.

1066. Which they declined? Yes.

1067. Is there any way of proceeding against persons for nuisances of this kind without an Inspector of nuisances? Not by the Council. The Inspector of nuisances must prosecute; but the municipalities Act does not prevent private persons from prosecuting; it only provides that two parties shall join in the prosecution. That has been done in two or three cases where the Council did not prosecute.

1068. And was it done successfully? Yes, one man got three months.

1069. For what? For depositing offal on his land.

1070. Then it appears that those persons who object to the nuisance have the remedy in their own hands? Quite so. I agree with you entirely. But very often they don't like to take the matter up themselves.

1071. If all these abominable places were cleared out from the municipalities by Legislative authority, do you think it would be a popular measure? Yes, I think so. There are only eleven of them in our municipality.

1072. Can you give us any idea of the number of inhabitants in the Leichhardt Municipality? About 700.

1073. *Hon. J. B. Wilson.*] Are many of these 700 inhabitants employed in these eleven establishments? Not many—not more than fifty at the outside I should say.

1074. *Chairman.*] Is there any slaughtering going on in your municipality? No, we are too near the Glebe Abattoir. The Abattoir Act extends to within three miles of the Island. I see the cattle are not coming down so healthy as they used to be; that is a matter that sadly wants attending to.

1075. What becomes of these diseased cattle which are brought down? They are principally taken to the boiling-down establishments or to feed pigs with. Some of them, perhaps, find their way into the Abattoir, but not many I think; there are very good officers there.

1076. Independently of this feeding of pigs with offal, you consider the Abattoir at Glebe Island is a great nuisance? Oh, yes. I live a mile and a half from the Abattoir, and when the wind is from the north-east, and the tide goes out, the stench is abominable. The harbour is saturated on all sides with blood and matter from the Abattoir.

1077. How many pigs are kept in the Municipality of Leichhardt do you know? About 600. It is not so much the number complained of as the filth in which they are kept.

1078. It is a thinly-populated district, is it not? Yes, we have about 1,800 acres of land, and about 700 inhabitants. In fact people don't care to go out and live there.

1079. I suppose that common cesspits attached to privies are in use in your municipality? Yes.

1080. Are they used exclusively? No, not exclusively—we have some earth-closets; and I would suggest that if anything is done these cesspits should be done away with altogether. In a thinly-populated district like ours there is nothing to prevent earth-closets being used, though they would not do for a large town. We have about a dozen families who use them.

1081. With regard to these cesspits, it has been suggested that the municipal authorities should take the management of them, and have them cleaned out at regular intervals, charging the owners or occupiers of the premises with the cost of doing it. Do you approve of that suggestion? Oh yes.

1082. But you would prefer earth-closets? Yes.

1083. Are those earth-closets under any sort of control, as to their being kept in good order? No, they are emptied by the owners or tenants and the contents buried in their gardens.

1084. Would you make that cleaning out compulsory? Yes.

1085. But you would not recommend the use of earth-closets in cities? No; but I think we might compel all owners of houses to have earth-closets, giving those persons who have cesspits now a certain time, say a year, to make the change.

1086. You would then have the whole system under municipal control? We should have, under a new Act; I think we should have more power in these matters. At present we have all the night-soil brought from Balmain and buried in our municipality—that is in the Garryowen estate, where they are making new gardens.

1087. Is that complained of? I have heard one person, one of our aldermen, complain; and I wrote to the Colonial Secretary about it; but it appears that if the stuff is buried 2 feet deep it is not considered a nuisance.

1088. *Mr. Moriarty.*] Is there any other nuisance of an exaggerated character, except those you have mentioned, in your municipality? No, none, except those I have mentioned.

1089. *Hon. J. B. Wilson.*] You stated that you have seen a great number of the cattle taken to the Glebe Island Abattoir;—do you often remark to yourself that those cattle are diseased? Frequently.

1090. Supposing an animal is diseased, although able to walk, are you aware what is done with it. Is it taken to the Abattoir, or is it picked out from the rest before it gets there? Well I only see them taken to the paddocks;—they are not killed there. I only see them travelling on the road, and when they arrive in the paddocks. I can only suppose that they go to the Abattoir.

1091. *Dr. Alleyne.*] You spoke of one of your aldermen complaining of the deposit of matter from earth-closets being deposited on the Garryowen estate;—have you ever seen that place yourself? Yes.

1092. Did you find it offensive? Not at all.

1093. Then I presume you make this complaint in anticipation that similar complaints would be made by other persons? That I cannot say. I have been there at 10 o'clock in the morning, and there has been no effluvia whatever from it, but if you could manage to get rid of it in any other way it would be a great advantage.

NOTE (on revision).—

Municipality of Leichhardt.
18th June, 1875.

Sir,

You will please add to my evidence what I have this day learnt, that there are in this neighbourhood cesspits that have not been emptied for ten years.

I would respectfully suggest to the Commissioners that, for the purpose of ensuring sound meat for consumption, the Inspector of the Abattoirs should be a veterinary surgeon, and that all Municipal Councils should be compelled by law to keep their municipalities free from nuisances. This in my opinion, and from my experience, I think it should be enforced by a heavy fine, not on the funds of the Councils but on the individual aldermen.

To the Secretary, Sewage and Health Board.

I have, &c.,
WALTER BEAMES.

Mr.

Mr. Thomas Playfair called in and examined:—

1094. *Chairman.*] We are anxious to have your evidence, Mr. Playfair, as to what is the opinion among the trade in respect to the slaughtering of smaller animals, such as lambs and calves, and in what localities it should be carried on;—have you any suggestions to make? Well, I have consulted with several persons about it, and their idea is, that certain premises within the city and suburbs should be licensed to kill what we call small goods.

1095. What animals would you include? Only lambs and calves.

1096. How would you propose to dispose of the blood and offal? The blood would go into the sewer, but we should take the offal away in our own carts. We could not let the offal go into the sewer; we should have too much regard for our own families to allow that.

1097. You think there would be no difficulty about the blood? No, that would be washed away in the sewer.

1098. Would there be any difficulty in removing it in carts? Yes, there would, because being in a liquid state it would have to be put into casks or tubs.

1099. Do you think that if your suggestion were adopted, and a proper system carried out, these smaller animals could be slaughtered in the city without any nuisance being created? Yes, I think so, because at present the offal is stowed away in bags anywhere out of sight, and becomes putrid in about twelve hours or less in the summer time, whereas if the killing was licensed it would be carted away at once openly.

1100. At present I believe it is a great nuisance, and it is carried on extensively? No doubt of it, because after they kill, the butchers put the offal away at the back of the house and hide it. All the stench which now causes such a nuisance would be avoided if they were allowed to kill.

1101. Do they slaughter sheep in this way? No; very few I think. We have every accommodation for that at the slaughter-house. It is only calves and lambs; they are things which require to be dressed nicely, and that cannot be done if they are killed at the slaughter-house and sent backwards and forwards in a cart.

1102. Does the Inspector of Nuisances endeavour to put a stop to this practice? Yes; scarcely a week goes by but some one is brought up for it.

1103. But still a great number of lambs and calves are killed in the city? Yes; the butchers prefer taking the risk, because lambs and calves are actually damaged by being killed at the slaughter-house. Beef and mutton are very different; you can hang them up and clean them, but lambs and calves require a great deal more care or else they are not fit for sale.

1104. If I understand you, it is not worth while for the butchers to deal in veal and lamb if they are compelled to kill the animals at the slaughter-house? No, it does not pay them to do so. Even if the skin is left on the calf it gets dirty in the cart, and we are fined for that also.

1105. In fact this kind of tender meat will not bear transportation from the slaughter-house? No, it gets tough and disfigured, whereas if it is dressed in the shop it is clean and nice. In fact, you can always tell by the look of it when a lamb is slaughtered on the premises, and that is generally the way in which it is discovered by the Inspector.

1106. Do you think if certain places were recognized and licensed for slaughtering these animals in the city and suburbs, that this clandestine slaughtering would cease to a great extent? I think so; but if the slaughter-house is too far off, especially in wet weather, it is impossible to make use of it for this purpose.

1107. But if a certain number of places—a reasonable number—within the city were licensed, would not that have the effect? Yes, I think so, but people would like to be licensed to kill on their own premises—that is to say, supposing they had proper drainage and everything clean about the place. It would be much better than at a slaughter-house.

1108. That is to say, you would propose to grant a license to any butcher whose premises were suitable? Yes. There are many persons in the trade who have only sheds and small places where it would not answer, and the slaughter-house would be the best place for such persons.

1109. In those cases the butchers do not generally deal in veal and lamb? Yes, more or less. The mere killing a lamb or a calf does not create a nuisance—at least it should not. It is keeping the offal on the premises for fear of detection until an opportunity occurs of disposing of it.

1110. How is it generally disposed of? Well, I may say that every possible contrivance is adopted. Sometimes it is buried in the garden; at other times it is carried away at night; and I believe sometimes it goes away in the sewer.

1111. Does not it go into the cesspit sometimes? Very likely it does; they do all manner of things to get rid of it without being seen, so as to avoid being fined. It takes me all the forenoon to go to the slaughter-house to kill a couple of lambs or calves, and in summer they have to be killed on Saturday mornings, or they will be bad by the Sunday morning. Then they are knocked about so in the carts that the meat gets quite spoiled, and there is no fresh water at the slaughter-house to wash them down with.

1112. *Dr. Alleyne*] The butchers have plenty of opportunities of slaughtering lambs and calves at the Abattoir, have they not? Yes, there is the regular place there.

1113. There are places for that purpose leased at so much a year, I believe, and there are other places where animals may be taken and slaughtered at so much a-head? Yes, what are called beef and mutton houses.

1114. Still, I presume, they can have lambs or calves slaughtered there without much trouble? Oh, it is not the trouble; but when lambs or calves are slaughtered there, and put warm into the cart, the meat is not fit to eat. Beef and mutton will set when they are hung up, but I dare say you have often noticed the difference in lamb and veal, which require to be got up to look nice and clean.

1115. Can you suggest any way of getting rid of the blood besides letting it go into the sewers? Yes; if you liked you could put it into a tub or cask, and have it taken away in a cart. It could be done. In an hour perhaps, or an hour and a half, it would be congealed and could be carted away like any other matter.

1116. *Chairman.*] Have you any knowledge of the way in which butchering is carried on in large towns in England? In London I have.

1117. What is the practice there? The lambs and calves are all killed in the very heart of the city.

1118. How long ago was your experience obtained? About seventeen years ago.

1119.

Mr.
T. Playfair.
17 June, 1875.

Mr.
T. Playfair.
17 June, 1875.

1119. Have you any experience of the effect produced on fresh meat by travelling on a railway? It has a very bad effect in the summer time. It would not be so bad if it were kept separately. I have often had meat brought down by railway, and I have found that meat killed at the Abattoir would keep twelve hours longer than that brought by railway. It is handled and knocked about too much. First it is lifted into the cart, then into the train, then from the train into the railway-shed, then into a cart again, and then into the shop. It is handled five or six times before it gets into the hands of the consumer, and that is very bad in summer time. In the winter it does not so much signify.

1120. *Hon. J. B. Wilson.*] Was the meat which used to be brought down from Duck Creek hung up in the cars? Yes.

1121. *Dr. Alleyne.*] Do you attribute the injury done to the meat from its striking against the cars? Yes, and to its being handled so frequently. We used to notice that meat killed at the Abattoir would keep twelve hours longer than the meat brought down by railway train.

1122. *Hon. J. B. Wilson.*] How often are the bones removed from a butchering establishment in town? They are removed once a day in the winter, and twice a day in summer in my own establishment.

1123. Would it not be possible, if these establishments were licensed, to fix certain days for slaughtering these animals, so that the municipal officers might come on those days and take away the offal? You could not do that in the summer time, because sometimes we have to kill on Saturday mornings, and sometimes even at night, or the meat would not keep for Sunday.

1124. Would not twice a day be sufficient? Would there be any hardship in not allowing this slaughtering on the premises to be done at other times? It would be very inconvenient sometimes, because we must kill lambs just when we can get a sale for them. We only kill lamb when we have orders for it, because it goes bad the next morning unless it is killed overnight. But in the slaughtering itself, if the butcher is careful, there is no nuisance.

1125. I was asking you about the removal of the offal: If the municipal officers remove it, could there not be some particular hours fixed for removing it so as to prevent its being kept on the premises—say twice a day, morning and evening? Yes, that might be done; it would be better, especially in summer time. I have had meat covered with millions of flies in twenty-four hours time.

1126. At present you remove the bones in your own cart? Yes, that is to say we pay a man to do it. They are taken away twice a day in the summer and once in the winter.

1127. Where are they taken to? To the boiling-down establishments.*

Mr. R. Seymour, Inspector of Nuisances, called in and further examined:—

Mr.
R. Seymour.
17 June, 1875.

1128. *Chairman.*] We wish to take your evidence, Mr. Seymour, as to the slaughtering which is said to take place in the city. A considerable number of the smaller animals are slaughtered we believe? Yes, the greater portion of the smaller animals are slaughtered in the city, that is, the lambs and calves.

1129. There seems to be some difficulty in preventing it? Yes, there is a great difficulty.

1130. What is the difficulty? Well, first there is this difficulty: the butchers in winter time generally slaughter on Thursday night or Friday afternoon, for Saturday, not later, and there are two officers of the Corporation looking after them. But while one man is slaughtering in one place there are hundreds slaughtering elsewhere, in all parts of the city.

1131. What kind of nuisance must you prove in order to convict a man? You must either bring evidence to prove that you have seen a lamb or a calf killed—many Magistrates will take no other evidence; you must actually see it slaughtered, and the blood flowing from it, or you must bring evidence which other Magistrates will accept, that you found the animal lying on the premises after being slaughtered with the skin on and the entrails in. Other Magistrates will not take that as evidence, although it is a distinct proof of slaughtering.

1132. Will any of the Magistrates accept as evidence of slaughtering the finding the offal and blood on the premises? No, they will not.

1133. This makes it exceedingly difficult to obtain a conviction? Of course it becomes exceedingly difficult.

1134. Does much nuisance arise from this practice in the city? Yes; only the nuisance is not from the slaughtering itself,—it is from the offal and refuse being hidden somewhere on the premises, in the cellars, and other places, more especially when the premises are not connected with the public sewer. If they are connected with a sewer of course everything goes into it.

1135. Offal and all? Yes, everything. In the Hay-street sewer you can see the entrails floating down. Then where there is no sewer they go into the closets or cesspits.

1136. You mean into the cesspits, not water-closets? Into the ordinary privies, both the entrails and the blood. In order to trace them we carry a box of matches and some newspaper, which we light and drop down so that we can see everything in the privy. There was one case in particular in Cumberland-street, where the man was in the habit of throwing everything into the privy.

1137. What would you recommend to be done to remedy this evil? My opinion is that the butchers should hold licenses from the Municipal Council for killing small goods on their premises—that is, lambs and calves, for I don't see how we could arrive at any means of preventing them, so long as they are allowed to bring the animals into their places. If there was a law to prevent them from bringing any live animals on to their premises it would be a very easy task to put a stop to the slaughtering, but there is no law. When Dr. Lang was in Parliament he was going to bring in a law to that effect, but it never went before the House. I believe if the butchers had held licenses to slaughter on their own premises, under certain restrictions necessary for the purpose of cleanliness, making them liable to a fine if their premises were not kept clean, a great deal of the evil which now exists would have been removed.

1138. And you think you could prevent slaughtering in unlicensed places. Supposing for instance a butcher said he did not deal in these things? I would not believe him, because there is not a butcher in the city or suburbs who does not.

1139.

NOTE (on revision):—I wish to add, upon consideration, that I think it would be better to license every butcher to kill small goods, as if this privilege is given only to a few, the unlicensed butchers would be likely to create the same nuisance. But I think the licenses should be small, so as to be within the reach of every man, and in this way a considerable revenue would arise.

1139. But are all the butchers' premises suitable for it? Would you give a license to a man who had not the conveniences necessary for it? Well there is a good deal of argument in that, because those whose premises are not connected with a sewer would not be so fit to be licensed.

Mr.
R. Seymour.

1140. I am now referring to the difficulty in obtaining a conviction in cases of slaughtering in unlicensed places. Don't you think if a man were prohibited under a penalty from having live animals on his premises, or if the finding the offal and blood was a sufficient proof, you would then be able to check slaughtering in unlicensed places? Yes.

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1141. Now supposing some stringent regulations were passed with a view entirely to prevent slaughtering in the city and it was put a stop to, what would be the effect? I do not believe, to tell you the honest truth, that you will ever stop slaughtering in the city. I know a place in Castlereagh-street where a man slaughtered in his bedroom while we were looking out for him week after week, and trying to catch him.

1142. We are told that it would not be worth while to slaughter lambs and calves in the city if the butchers had to go to the Abattoir to do it;—is that correct? Well, from what I have heard from experienced butchers it is correct, because considering the time it takes them to go to the Abattoir, by the time the calves are dressed the meat turns almost black; that would be a great objection.

1143. From your own knowledge don't you think there is a general prejudice against slaughtering in the city; would not there be a great outcry if it were licensed? I dare say there would be in some cases, but it is carried on in the city of London; you can stand on the pavement and see it going on.

1144. How long is it since you had experience of that? I am only speaking from information I have received, not from my own experience.

1145. *Dr. Alleyne.*] Do you propose then to give every butcher in Sydney a license for slaughtering? For slaughtering small goods, yes.

1146. And you think that just having a license would make people more careful in keeping their places clean? No, but I think they would not care about concealing the offal and refuse on their premises. At present they hide it anywhere they can at the back of their premises; they put it in buckets and either empty it into the privies or send it out somewhere at night. I have taken a bucket from a man's back premises and found entrails with hundreds of maggots all over it. Sometimes they keep the offal for days together before they can find an opportunity of getting rid of it. It has been a common practice to put these things into the gully-shafts. If the men were licensed this would be put a stop to, because a cart would go round at a certain time and remove all the refuse at once. At present they always fancy somebody is watching to pull them up for having it on the premises. The only check against any butcher slaughtering on his premises which you can have is to prohibit him from having any live animals there; but I think it is not desirable to stop it; it is carried on in larger cities than ours.

1147. *Mr. Bennett.*] Do you think it is desirable that this blood should be allowed to go into the sewers? No.

1148. Would not it be better to have a proper receptacle for it? My own opinion is that everything should be carted away in close carts.

1149. *Chairman.*] I suppose sucking pigs would be included with the lambs and calves? Yes, sucking pigs. There is no occasion to kill large pigs on the premises; they are things which will keep whatever distance they come from.

1150. *Hon. J. B. Wilson.*] Should there not be some limit as to the age of the animal killed; would it do to have a penalty for every animal killed over six months old? I think nothing should be killed on the premises except lambs, calves, and sucking pigs.

APPENDIX.

No. 1.

To meet the difficulty of making cheap watertight cesspits in the sandy thickly-peopled suburban districts, the adoption of a modification of the largest sized earthenware drain-pipes is suggested.

Mr. Fowler, at Camperdown, is making a sample of what is proposed, consisting of a flat oval bottom, with rim to receive the oval pipe, 2' 3" × 1' 9", and 2 feet long, with collar at upper end to receive a similar pipe, so that by using three a cess-pit, 6 feet deep, could be obtained with a capacity of about 18 cube feet, the cost of which would only be £3 10s. for a perfectly impermeable pit,—£8 being the estimated cost of the ordinary pits, 4' × 4' × 4', of brick in cement, which seldom are made or remain watertight. A pit, 4 feet deep, would only cost £2 10s.

The disadvantage of these pits would be their want of capacity, the 6 feet pit having only one-third of the capacity of the 4' × 4' pit; but as this would necessitate the frequent removal of the soil, though costing more, it would conduce to health and cleanliness, and ultimately, if the periodical cleaning suggested is adopted, would not cost more than the ordinary pit to clean.

Once put up, these pits would be entirely free from liability to leakage, from cracks or settlement, and well burnt earthenware is the best material to resist corrosion in such situations.

Those pits possess the advantage of being able to be set by an ordinary labourer.

No. 2.

SYDNEY MUNICIPAL COUNCIL.

THE following Progress Report, prepared by the officers of the Corporation, was read at a meeting held yesterday :—

"Town Hall, Sydney, 31 May, 1875.

"Sir,

"In accordance with instructions from the Improvement Committee of the 29th October, 1874, on the motion of Alderman Rowe, 'To examine along the sea-coast as to the places eligible for shooting the night-soil from the rocks into the sea, with probable cost'—'To report as to the advisability of collecting the night-soil at certain wharfs, and conveying the same out to sea in covered barges, with probable cost'—and 'To report as to any other mode of removing night-soil which may be considered preferable or advisable',—

"We have the honor to state that we have examined the coast line between Botany Bay and Port Jackson, and find the most suitable site contiguous to the city, and where the least inconvenience would be felt in discharging faecal matter into the sea, is the headland lying to the north of Maroubra Bay.

"If this method be resorted to, the best route, on account of the steepness of the gradients of that by Randwick, would be by the Bunnerong Road, a distance of about 8 miles from the junction of Bourke and Oxford streets. It would be necessary to repair and metal the existing road to the extent of about 190 chains, and make a new road 47 chains in length from the Long Bay Road to the headland before mentioned, and construct discharging chambers, with pipes leading into the sea.

"To bring this plan into operation we estimate the probable outlay at £5,400.

"The quantity to be removed weekly from the city and suburbs is estimated at 80 loads, or 160 tons; and on account of the long lead, we estimate the cost of removing this quantity at 30s. per ton, or £240 per week.

"To dispose of the faecal matter by conveying it in barges to the sea, we propose to construct a wharf on the west side of the Blackwattle Bay embankment, and provide two barges, each to contain 100 tons, with air-tight compartments and the necessary apparatus for discharging, on the pneumatic principle and without smell, the contents of the carts into the barges, which when towed to sea would be emptied in the same manner as the silt punts now in use.

"The site for the wharf was selected on account of its remoteness from habitation, its central position with regard to and easy approach from the surrounding municipalities.

"The estimated cost of carrying out this scheme is for wharf, barges, &c., £4,700; and the cost of removing 160 tons weekly, including cartage to wharf, towage to sea, attendance, &c., £90 per week.

"We have had under our consideration the question of transmitting by railway; but as no demand for this kind of manure has yet arisen along the line, and as no land has been set apart for utilising it, we are not in a position to recommend the adoption of this method.

"As the system of conveying by barges to the sea would not only require a smaller outlay of capital, but would be very much cheaper in its working, and would most effectually dispose of this offensive and dangerous matter, we unhesitatingly recommend it to the consideration of the Council.

"Whatever system the Council may adopt for the final disposal of faecal matter, we would beg to make the following remarks and suggestions :—

"The method now in use in Sydney and the suburban municipalities of emptying the cesspits of privies by means of manual labour, and the use of shovels, buckets, &c., is so repulsive and revolting, and the stench so intolerable during the operation, and householders have so great a repugnance to the system, that they would rather risk the danger to health from the evolving pestiferous gases, with the chance of also being fined for allowing the nuisance to exist, than have their privies cleaned out under such circumstances.

"This method is now nearly exploded in all civilized communities.

"It cannot be expected that the few men at present engaged in this occupation, with inadequate means, and not knowing how long they would be allowed to continue the present pernicious system, could initiate a better. We, therefore, are of opinion that the Corporation should take the control of the removal of faecal matter into their own hands; and we strongly recommend the pneumatic system of emptying closets, as by this method the removal can be effected with great facility, and without creating a nuisance or very little smell in the locality where the operations are being conducted under this system. The mode of emptying the pits is as follows :—A receiving cylinder, placed on a waggon, is exhausted by means of an air-pump, and when a vacuum is obtained it is only necessary to fasten to a coupling socket on the cylinder one end of a 3-inch hose, and lower the other end into the pit. The moment the valve in the socket is opened the air forces the sewage matter into the cylinder, and by the attendant flushing and washing around the pit with some deodorizing mixture the smell would be effectually kept down, and the pit thoroughly cleansed without offence to anyone. The cost of removal would be very much less than under the present system, and the offensive smell being reduced to a minimum, as a consequence householders would be enabled to have their pits cleaned more frequently, with the concomitant advantages to health.

"We have, &c.,

"THOMAS H. BRADBRIDGE, City Surveyor.

"FRANCIS BELL, City Engineer.

"G. F. DANSEY, City Health Officer.

"RICHARD SEYMOUR, Inspector of Nuisances."

"To the Right Worshipful the Mayor."

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

SYDNEY CITY AND SUBURBAN SEWAGE
AND HEALTH BOARD.

THIRD PROGRESS REPORT

OF THE

BOARD APPOINTED ON THE 12TH APRIL, 1875,

TO INQUIRE INTO AND REPORT AS TO THE BEST MEANS OF DISPOSING OF THE
SEWAGE OF THE CITY OF SYDNEY AND ITS SUBURBS,
AS WELL AS OF PROTECTING THE HEALTH OF THE INHABITANTS THEREOF;

ADOPTED BY THE BOARD ON THE 14TH JULY, 1875.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
19 *July*, 1875.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1875.

THE SYDNEY CITY AND SUBURBAN SEWAGE AND HEALTH BOARD.

THIRD PROGRESS REPORT.

To the Honorable the Colonial Secretary,—

SIR,

1. Much discussion having recently taken place on the dry-earth system, we have thought it desirable to report to you at once the result of our inquiries on this subject.

2. We have taken some evidence, which will be found appended to our former Reports; but the whole matter has we find been so thoroughly tried, considered, and discussed for several years past in Europe and in India, that it seems to us unnecessary to take any further evidence here. Any such evidence could only give us the results of a comparatively limited experience.

3. The dry-earth system, under particular circumstances and under very careful management, may be made efficient in country houses and in public establishments, where the inmates are under control, but it is entirely inapplicable in ordinary cases and in large towns, for the following reasons:—

- (1.) It is practically impossible to secure a proper management. It has been found difficult and in some cases impossible to secure this continuously, even in camps and public institutions; and without proper management an earth-closet, especially if within a house, becomes a filthy and dangerous nuisance.
- (2.) It would be practically impossible to procure for a large town a sufficient supply of thoroughly dried and sifted earth of the proper quality.
- (3.) It would be practically impossible to dispose of the refuse, the quantity being so enormous.
- (4.) Earth-closets do not and cannot produce any important effect in diminishing the contamination of the sewers. No sensible improvement is produced where arrangements are made so that the solid matter only shall be retained in the closet; and this is the real dry-earth system, and the only one we believe that any one, entitled by his knowledge of the subject to publish his opinion, would maintain to be even possible in a large town.
- (5.) If the earth-closets become the receptacles of bedroom slops, even if the less offensive kinds are otherwise disposed of, the quantity of dry earth necessary to render the system efficient on a large scale would be so prodigious as to preclude the possibility of carrying it out.
- (6.) It is now acknowledged, even by those who uphold what are called conservancy systems as opposed to the water-carriage or exclusively sewer system, that the product of the dry-earth closets is of little value as a manure. After the earth has been passed three times through a closet, which is possible under proper arrangements, the earth is estimated to be worth in England only 7s. 6d. a ton. On a large scale it would probably be found impossible to use the earth more than once, and in that case it would acquire no value whatever.

4. In the year 1873 a Committee of the British Association "on the Treatment and Utilization of Sewage" issued their 5th Report, from which we submit some extracts.

5. The Committee consisted of Richard B. Grantham, C.E., F.G.S. (Chairman), F. J. Bramwell, C.E., F.R.S., Professor W. H. Corfield, M.A., M.D. (Oxon.), J. H. Gilbert, Ph.D., F.R.S., F.C.S., W. Hope, V.C., and Professor A. W. Williamson, Ph.D., F.R.S., F.C.S.; and their conclusions have undoubtedly the greatest weight.

Their final conclusions respecting conservancy systems are as follows (p. 413):—

All conservancy plans, including midden-heap and cesspool systems, dry-ash and dry-earth closets pail closets, &c., are quite incompetent as solutions of the general question of the removal of the refuse matters of a population.

Such plans deal with only a small part of the liquid manure; towns which resort to one of them require, therefore, to be sewerred, and the sewage requires to be purified.

The manure produced is in all cases (except in that of simple pails or tubs, where no extraneous materials are added) poor, and will only bear the cost of carriage to a short distance, taking into consideration the cost of collection. That produced by the dry-earth system is, even after the earth has been used four times over, but little better than a good garden-mould. Such plans, moreover, all violate one of the most important of sanitary laws, which is that all refuse matters which are liable to become injurious to health should be removed instantly and be dealt with afterwards. With all these plans it is an obvious advantage on the score of economy to keep the refuse about the premises as long as possible; and the use of deodorants of various sorts, or even of disinfectants, proves that this is the case, and that these systems all depend upon a fallacious principle. They should therefore be discouraged as much as possible, and only resorted to as temporary expedients, or with small populations under exceptional circumstances.

They say also (p. 439),

Dr. Gilbert conducted, on behalf of the Committee, some experiments with Moule's earth system. The result showed that earth which had been used even *three times* in the closet could only be considered to be a rich garden-mould; and the Committee remarked "that such a manure, even if disposed of free of charge, would bear carriage to a very short distance only."

And again (p. 440),

While the Committee considered that any such system was impracticable for large populations, on account of the amount of earth that would be required to be carted in and out daily, they added—"It may readily be admitted that it would be a great advantage, in a sanitary point of view, in the cases of sick rooms, detached houses, or even villages, and that it might be even economical where the earth for preparation and absorption and the land for utilization are in close proximity."

6. The following extracts are from a work on the Treatment and Utilization of Sewage, by W. H. Corfield, M.A., M.B. (Oxon.), Member of the Royal College of Physicians, London, Professor of Hygiene and Public Health at University College, London:—

(p. 62.) The Madras Reports have not been so favourable to the system on the whole; they are very important, as they enter in the minutest manner into practical details. In examining carefully these Madras Reports (1867-8-9), we are at once struck with the great practical difficulty that there appears to have been in carrying out this system, even where so much hand-labour can be got cheaply, and with the conviction of every one who has had anything to do with it, that the system inevitably fails where the most efficient supervision is not continually given to it. We find such statements as the following:—

That wherever large numbers of persons *under control* are congregated, Mr. Moule's system of conservancy has been entirely successful, and that it is, so far, a great public benefit.

As in many stations in India a good system of drainage and water supply are both deficient, Mr. Moule's system of dry earth sewage is the best means available for our barracks, hospitals, jails, and other public institutions. (No. 125, 22nd May, 1867, par. 9, 12.)

Great care and constant attention are required in adapting all the parts of the process to each other: mechanical difficulties have been experienced in the use of hoppers for throwing in the earth; scoops for throwing in the earth after using the latrine are imperfectly applied; native servants have had to be appointed to this duty. (*Report on Sanitary Improvements in India*, 1869, p. 209.)

It is insisted in these Reports that 2½ lbs. of dry earth is the least quantity that can be accepted "as the weight of earth necessary to deodorize and maintain in a state of inoffensiveness the solid and fluid dejecta of a healthy adult, as ordinarily passed into a privy-pan or tub of moderate sectional area;" but this, it must be observed, does not include any urine other than such as is passed during the use of the closet. From Surgeon-Major Ross's experiments it appears that 2¼ lbs. of earth are required for each use of the urinal, and that provision must be allowed for three such uses during the twenty-four hours. The aggregate amount of urine passed being thirty fluid ounces or 1½ lbs. (pounds and pints of urine are, practically speaking, convertible terms), it follows that 36 lbs. of earth are required for each gallon of urine, and this is certainly the least estimate. From this it appears that to deodorize the urine of 1,000 men no less than 1,099 tons of earth would be required per annum. It is scarcely wonderful that "in the urinals the Commission think that the difficulty, owing to the enormous quantity of earth to be brought and removed, 'is practically insuperable;'" and that in their suggestions they state that "pans designed to separate the solid and fluid feculence should be adopted if possible." Dr. Ross estimates the total quantity of earth required to deodorize the whole excreta of an adult at 9½ lbs., of which 3 lbs. will be required in the latrines and 6½ lbs. in the urinals. "This raises the amount required to be supplied for 1,000 men to something like 1,588 tons per annum, while the mixed earth and ordure to be removed will amount to 1,995, or say 2,000 tons! This is undoubtedly an enormous mass of soiled earth to transport to the place of deposit." (*Proc. of San. Commissioner for Madras*, 1868.)

(p. 100.) The quantity of earth required in the case of towns would be too great. With regard to this point Dr. Trench states (*First Report, Rivers Pollution Commission*, 1868, vol. 2, p. 305) that Mr. Bateman has calculated "that for London the amount of soil required will be 2,000,000 cubic yards a year, which would

would necessitate the digging of 200 acres to the depth of six feet, or 400 acres three feet deep, every year. The amount required in Liverpool, calculated on the same ratio for population, would be 400,000 cubic yards, or the digging of forty acres to the depth of six feet, or eighty acres to the depth of three feet." If one of the objections to the pail system be found in the blocking of the streets by the scavengers' carts, this objection must hold with increased force where not only the excremental matters have to be removed, but so enormous a quantity of earth has to be brought into the town and taken out again. Mr. Moule indeed believes that this may be done "*without any increase of traffic in the streets,*" by some underground method. Whether it would be likely to cost less, or even as little, to make underground tunnels communicating with the lowest part of every house in a town, tunnels which to be of any use would have to be sufficiently large to allow the construction of a tramway in them, as to use the existing sewers for the removal of excrement, or even to construct a special set (as proposed by Mr. Menzies) of pipe-sewers for this purpose, and leave the large old sewers for drainage, we leave the reader to judge for himself.

7. When the patentee of the earth-closet is driven so far as to suggest, in answer to obvious practical objections to his system as applied to large towns, that the refuse should be removed by some underground method, it appears scarcely necessary to continue the discussion.

8. We add the following extract (p. 103):—

From the First Report (vol. i. p. 50) of the Rivers' Pollution Commissioners, 1868, who, having remarked on the special service and attention which these closets require, thus conclude:—

Add to these circumstances the enormous aggravation of all the difficulties of the plan, when not 50 but 50,000 households have to be provided with the necessary appliances and induced to work them properly, and we can have no hesitation in pronouncing the dry-earth system, however suitable for institutions, villages, and camps, where personal or official regulations can be enforced, entirely unfitted to the circumstances of large towns.

9. On the 21st May, 1874, Professor Corfield delivered a lecture upon the Sewage question before the Chemical Society of London, in which he confirms the opinions expressed by the Committee of the British Association to which we have referred. In this lecture all conservancy systems, including the dry-earth system, are emphatically condemned. In this condemnation Dr. Frankland and several other persons present, distinguished by their knowledge of the subject, cordially concurred. A report of this lecture and of the subsequent proceedings will be found in *Chemical News*, vol. 29, p. 238. The following is extracted from it:—

Of the conservancy systems, three of the most important varieties were—(1) the employment of tubs or pails with or without disinfectants and deodorizers; (2) ash closets; (3) dry-earth closets. In these the faeces were retained, and it was advocated that they would be extremely valuable as manures, especially from the latter. It was found, however, that the earth, after having been used three times in the dry-earth closets, did not contain more nitrogenous matter than a rich garden-mould, viz., 0.446 per cent., and consequently its value as a manure was so small that it would only pay for carriage to a very short distance. Dr. Voelcker had estimated it to be worth about 7s. 6d. per ton. This arises from the fact that the total amount of nitrogen excreted in the faecal matter is not more than one-fifth that in the urine, the former only containing 1.5 per cent. of nitrogen.

On the same occasion it is reported (p. 239) that—

Dr. Frankland said he had very little to add to what Dr. Corfield had already stated in his very lucid treatment of the subject. He quite agreed with him as to the comparatively small value of the manures obtained by the conservancy systems, and he thought that the proportion of nitrogen in the solid and liquid excremental matter was rather under- than over-stated; he should himself be inclined to say that it was six or seven times as great in the latter as in the former.

10. It appears then, and is indeed we believe generally acknowledged by all who are well acquainted with the subject, that the polluting effects of the liquid refuse of which we are speaking are at least four or five times as great as that of the solid, and that if any perceptible purification of the sewers is to be effected by the introduction of earth-closets, and the nuisances arising from cesspits in crowded places effectually removed, it would be necessary to use enormous quantities of earth such as are mentioned in the Indian Reports from which we have quoted.

11. We will now quote a few passages from the writings of E. C. C. Stanford, F.C.S., who maintains the superiority of some conservancy system, and disputes the conclusions of Professor Corfield and of the Committee of the British Association; but although combating their views, he joins with them in a total condemnation of the dry-earth system. From his letter published in the *Chemical News*, June 12th, 1874, we quote the following (p. 261):—

Prof. Corfield, in speaking of dry conservancy, still refers to earth and ashes as the only deodorants, and unfairly criticises *all* dry systems, because he appears to think these must be based on such clumsy and inefficient substances. Now one of the important advantages of a dry carrier over any wet system is that, whilst the latter necessarily confines us to the use of water, the former affords the chemist a large choice of deodorizers, and of these, as I have repeatedly pointed out, earth and ashes are certainly the worst.

The lecturer has not hit the true reason why the manure from earth-closets is so valueless. I fully agree with Drs. Frankland, Gilbert, and Voelcker, as to the poverty of this manure; numerous analyses

have led me to the same conclusion. A manure after three uses in the earth-closet ought to contain at least five times as much nitrogen as it does. The fact is that, while charcoal, for instance, preserves an organic nitrogenous substance, earth decomposes it.

It appears then that, for general use, the dry-earth system is condemned on all hands.

12. We will in conclusion quote one more passage from Professor Corfield's work, from which it appears that Dr. Parkes, an eminent authority on these matters, considers it doubtful whether earth-closets are safe however efficiently managed (p. 334):—

We know that the poisonous ingredient *par excellence* of coal gas—the carbonic oxide—is perfectly inodorous; we know also that the emanations which produce typhoid fever are not offensive or disagreeable to the smell; and it is a *presumption*, as Dr. Parkes says, to suppose that all danger of their production is removed by mixing the excrement with earth. But even were this presumption to become a demonstrated fact, the greatest objection to the earth system (one which is essential to it because it is a dry system) would still be as strong as ever; viz., that whenever the earth supplied happened to be in too small quantity, too moist, or of bad quality, or the air to be very damp, or the compost wetted through carelessness or otherwise, the danger of infection would at once arise. How frequently one or more of these conditions would be fulfilled need hardly be pointed out.

Miss Nightingale well says, in her remarks on the *Progress Reports* in the Indian Sanitary Report (1870), p. 45: "The true key to sanitary progress in cities is, water supply and sewerage. No city can be purified sufficiently by mere hand-labour in fetching and carrying."

"As civilization has advanced, people have always enlisted natural forces or machinery to supplant hand-labour, as being much less costly and greatly more efficient."

Board Room,
Sydney, 14th July, 1875.

W. B. PELL,
Chairman.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

REPORT

TO THE

SEWAGE AND HEALTH BOARD,

UPON THE

SYDNEY CITY AND SUBURBAN WATER SUPPLY.

BY

A. LIVERSIDGE, F.C.S., F.G.S.,
PROFESSOR OF GEOLOGY AND MINERALOGY, SYDNEY UNIVERSITY.

ORDERED BY THE CHAIRMAN OF THE SYDNEY CITY AND SUBURBAN SEWAGE
AND HEALTH BOARD ON THE 6TH MAY, 1875.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
24 *July*, 1875, A.M.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

TO THE HONORABLE THE COLONIAL SECRETARY.

SIR,

I have the honor, at your request, to lay before you Professor Liversidge's very valuable Report upon the state of the Sydney Water Supply on certain dates, and which was presented to the Sydney and Suburban Sewage and Health Board on the instant.

We have been for some time inquiring into the subject, upon which the accompanying Report throws so much light, but we are not yet able to report finally upon it. We have directed our attention particularly to Busby's Bore and to the Lachlan Swamp, but we are not yet in a position to report definitely as to whether the contamination of the water which undoubtedly existed when Professor Liversidge took his samples, can in any practicable way be prevented, or whether this source of water supply for household purposes will have to be abandoned.

Neither are we able to give any decided opinion as to the causes of the very serious impurities in the Crown-street and Paddington Reservoirs. Why the water in them should be so bad in comparison with what is pumped into them it is very difficult to understand, but we will endeavour to ascertain the reason, and if possible to point out how the evil may be remedied.

It seems perfectly clear, whatever else may be doubtful, that the two Reservoirs should be cleaned and examined with the least possible delay.

I have the honor to be,

Sir,

Your obedient servant,

M. B. PELL,

Chairman.

Board Room, Sydney,
23 July, 1875.



THE SECRETARY OF THE SYDNEY CITY AND SUBURBAN SEWAGE AND HEALTH BOARD TO PROFESSOR
LIVERSIDGE.

Sydney City and Suburban Sewage and Health Board,
(Office, Colonial Secretary's Department,
Sydney, 6 May, 1875.

SIR,

I am instructed by the Chairman of the Sydney Sewage and Health Board to request that you will do him the favour to procure samples of the water supplied to Sydney and its suburbs, and to make analysis of the same in the manner and for the purposes herein specified.

A sample of water to be taken from the Botany Reservoir as near as possible to where the water enters the mains which supply Sydney.

A sample from the Crown-street Reservoir and another from the Paddington Reservoir, to be taken from points as near as possible to where the water enters the mains.

A sample to be taken of the water at its entrance into Busby's Bore.

Samples to be taken, twenty to thirty in number, from various points in the mains and pipes supplying Sydney and its suburbs, taking care that a fair number be taken from each of the districts supplied from the above three sources.

It is requested that the samples be taken under your own personal supervision, so that you may be able to testify as to the state of the water in the reservoirs and in the mains and supply pipes on certain days.

It is further requested that the samples taken from any one source, and from the pipes and mains supplied from that source, be taken as nearly simultaneously as may be found practicable.

You are requested to direct your attention, in the first instance, to Busby's Bore, taking samples from pipes supplying houses, and also from the Bore itself, with a view to ascertain whether the water therein is contaminated by soakage.

The object of the inquiry entrusted to you is to ascertain whether the water supplied to Sydney is or is not so contaminated with sewage or other deleterious matter as to endanger the health of the inhabitants, and it is therefore requested that your analyses may be conducted with a view to report to the Board upon this point.

The services of an officer of the City Council to accompany you in taking samples have, with the concurrence of the Mayor, been obtained.

I have, &c.,
CHS. H. BARLEE,
Secretary.

REPORT TO THE SYDNEY CITY AND SUBURBAN SEWAGE AND HEALTH BOARD,
UPON THE QUALITY OF THE SYDNEY CITY AND SUBURBAN WATER SUPPLY.

The University,

Sydney, 6 July, 1875.

IN accordance with the request of the Chairman of the Sydney City and Suburban Sewage and Health Board, transmitted to me by letter dated May 6th, 1875, I have personally procured samples of the water supplied to the various parts of Sydney and its suburbs, and have submitted the same to a careful chemical and microscopical examination, and the results of which are embodied in the following Report.

The samples collected from each of the sources, and from the mains supplied by those sources, were collected as simultaneously as possible, and, except where otherwise stated, the last sample obtained was taken not later than three or four hours after the time at which the first of the series was collected.

PRELIMINARY REMARKS.

Before considering the results furnished by the examination of the samples of Sydney water, it will, perhaps, be advisable for me to briefly refer to some of the properties which we may reasonably expect a water suitable for domestic use to present.

It should be colourless, tasteless, and free from smell; but a water may answer to each of these requirements and yet be very unwholesome.

Now, all natural waters are more or less impure, and the impurities are of many kinds—some of which may be visible to the senses, and others not.

When the impurities are present in a form visible to the eye: they may either impart a colour to the water; they may render it turbid or milky; or we may merely see isolated fragments and particles of foreign matter.

Water which has a decided colour is usually very impure and unwholesome, unless the tint be due to the presence of peaty matter, a very minute quantity of which has the power to impart a decided brown tinge to a water; such peaty waters are used in many places without any injurious effects upon the inhabitants; all the water supplied to Sydney has a slight brown shade, probably arising from the presence of a similar vegetable colouring matter, so that the colour of the Sydney water need not cause much concern, and more especially as it can be readily removed by proper filtration. The main objection to a peaty water is that it has not a pleasant appearance.

Apart from colouring matter, that portion of the impurity present in a visible form in a water is merely mixed with it, or as it is termed, it is held in mechanical suspension, and it is to impurity thus held in suspension that the turbidity of many waters are due; finely divided clay is one of the most common substances causing turbidity, but in certain cases it may be due to much more dangerous matter, *e.g.* infusoria, decaying animal, vegetable, and other matters.

This turbidity can usually be very easily removed by allowing the water to remain quiescent for a time so as to permit the foreign matter to deposit itself as a sediment. In all well arranged schemes for a water supply this process takes place more or less completely in the "settling tanks" before the water is passed through the filter beds from which it should issue in a perfectly clear and bright condition.

But the most dangerous impurities present in ordinary waters are certain of those which are present in a form invisible to the eye, *viz.*, those which are dissolved or held in solution in the water.

And just as organic matter mechanically mixed with a water is usually more dangerous than inorganic matter, so also is organic matter held in solution generally far more noxious than inorganic matter existing in the same state.

Amongst the more common inorganic substances, which we usually find in water, are common salt or sodium chloride, calcium carbonate, calcium sulphate, magnesium chloride, magnesium sulphate, silica, &c.; these exist in rather small proportion in Sydney water; as an example of which I cannot do better than cite the analysis given in Dr. Smith's Report to the Water Commission of 1869:—

Sodium chloride	...	...	...	...	2·863 grains per gallon.
Potassium chloride	...	...	...	...	·112 "
Magnesium	„	...	...	...	·118 "
„ carbonate	...	...	...	...	·059 "
„ sulphate	...	...	...	...	·128 "
Calcium	„	...	...	...	·233 "
Silica...	...	...	...	...	·222 "
Iron oxide, trace of calcium phosphate, &c.	...	...	...	...	·082 "

3·817 grains per gallon.

Total solids, 5·2 grains per gallon.

The

The quantity of such salts varies exceedingly in different waters; it is often thought that a water containing but a small proportion of soluble saline matter is more wholesome than one containing a moderately large proportion, like the water from chalk and limestone districts, but it does not appear that this is much more than an idea—that such is actually the case remains to be proved. Lime water is often recommended to supply the deficiency of that base in the Sydney water; but it is very questionable whether it be necessary. The native blacks used no other water, and they had notably sound teeth and bones; neither I believe do people in other countries, who have to use similar waters, find any necessity to make good the lack of lime salts; so that the quality of the Sydney water need not be disparaged on that account. But we do know that an excess of salts is bad, *e.g.* sea water is on this account absolutely undrinkable.

Some few forms of organic substances are comparatively harmless; *e.g.* peaty matter and some other vegetable substances may not do much harm; but the presence of animal matter must always be looked upon with the greatest possible suspicion, on account of the readiness with which it undergoes putrefaction or decomposition. Waters which have been proved to carry death and disease with their use have in nearly all cases been found to contain animal matter, or the decomposition products of animal matter.

Animal matters, and the substances to which they give rise when undergoing decomposition, are usually rich in nitrogen; hence animal matter is commonly spoken of as nitrogenous matter. Now the excess of nitrogen, or the excess of any of its compounds, found in a water over and above that naturally existing in what are *known* to be good and wholesome waters, is regarded as the exponent of the contamination due to animal impurities. And it is on this account that every endeavour is made to determine the amount, and, where possible, the form in which the nitrogen may exist in a water.

The quantity of organic matter which makes the difference between a pure wholesome water and a bad one is extremely minute—so exceedingly small is the amount that ordinary methods of chemical analysis have to be rejected.

Formerly the amount of organic matter was estimated in a very expeditious but at the same time very rough and unsatisfactory way, *viz.*, by evaporating a given volume of the water down to dryness in a weighed platinum dish; the increase in weight gave the amount of total solid impurities. The dish and its contents was then ignited, and any loss which the residue might thereby sustain was put down as representing the organic matter which had been burnt off; but in reality the case is by no means so simple:—

- (a.) For in the first place, if the residue left on evaporation be dried at 100° C., *i.e.*, the boiling point of water, then much of the loss on ignition may be due to the expulsion of water of crystallization from such salts as calcium and magnesium sulphates and chlorides—to the volatilization of ammoniacal salts—to the decomposition of nitrites, nitrates, carbonates, magnesium chloride, and other compounds. Some water residues which are *free* from organic matter undergo much loss on ignition.
- (b.) It is sometimes sought to reduce this discrepancy by drying the residue at 130° C. before weighing, so as to get rid of the water of crystallization; but then this only causes another source of error, for there is a danger of some organic matter being thereby destroyed and lost. Some waters even lose organic matter during the process of mere evaporation over the water bath; hence the amount would be under represented.
- (c.) Neglecting many other considerations which might be adduced there is still the possibility of some of the organic matter becoming combined in such a way that it remains fixed in the residue, and does not figure as organic matter at all.

These errors and sources of errors may seem very trifling; but the amount of organic matter in a water residue is usually so exceedingly small that too careful and minute precautions cannot be taken. The error from any one of the above sources of fallacy may easily be far greater than the total amount of organic matter present.

And moreover even if it were trustworthy as a quantitative method its results are almost without value, since it does not tell us the nature of the organic impurity, which, as I have already stated, is of primary importance. Sometimes the behaviour of the residue during ignition yields useful information—certainly far more valuable inferences can be drawn from it, such as when the blackening is very intense and when deflagration takes place than from actual loss exhibited.

The method which would most probably have been employed in this present case is that known as the “Frankland & Armstrong process,” a most delicate and accurate micro-chemical method of analysis; but as the elaborate and rather costly apparatus required was not to hand, Messrs. Wanklyn & Chapman’s process was substituted—one which while it is but little less exact in certain respects is more convenient in others; and perhaps, taking all things into consideration, for the present investigation the better of the two.

By

By this process we are able to estimate the amount of ammoniacal salts, existing as such in the water; and the nitrogenous organic matter is estimated by the amount of ammonia which it can be made to yield by boiling and distilling it with a strongly alkaline solution of potassium permanganate. The ammonia so obtained is termed "albumenoid ammonia."

From the results of the examination of a very large number of water supplies by this process, Messrs. Wanklyn & Chapman draw the conclusion that a water for domestic purposes may reasonably be required to contain not more than 0.08 milligrammes per litre, or .08 parts of albumenoid ammonia in a million; and if it naturally contain more than this, then endeavours must be made to reduce it by filtration or other treatment.

As instances of fair water, the following may be cited:—

During Summer Months.

Thames water (filtered by Companies) ..	.06 to .08 parts of albumenoid ammonia per 1,000,000.
New River water, London ... ..	.05 to .06½ " " "
Manchester ... ..	.06 to .07 " " "
Edinburgh ... ..	.063 to .075 " " "
Glasgow (Loch Katrin)... ..	.08 " " "

And they think, and not unreasonably, that not more than .03 parts of albumenoid ammonia in the million of water might be insisted upon.

.06 parts in the million of course is 6 parts in one hundred millions; but by this process one part of ammonia can be readily and easily detected in two hundred million parts of water.

Now, for the sake of comparison, and in order that we may know the value of these numbers, let us consider a few samples of water known to be bad.

Parts in 1,000,000 (milligrammes per litre).

	Free ammonia.	Albumenoid ammonia.
River Thames, mid stream, London Bridge, after filtration through filter-paper (18th June, 1867)	1.76	0.35
Thames, London Bridge, high-tide	1.02	0.59
Water from a pump, Edinboro'	0.21	0.29
Well-water No. 1	0.12	0.30
" No. 2	0.18	0.36

The well-waters Nos. 1 and 2 are supposed to have been the cause of two attacks of English cholera.

Now we see, from a consideration of the above, that the quantities of ammonia yielded by different waters are extremely small, and the difference between the abominably filthy and stinking water at London Bridge and the clear wholesome water of the New River is represented by the difference between $\frac{1}{1000000}$ of one part of albumenoid ammonia per million in the one case, and $\frac{1}{1000000}$ of one part of albumenoid ammonia in the other, or $\frac{1}{1000000}$ against $\frac{1}{1000000}$.

Determination of the Chlorine in water.

This also is of great importance, for the presence of an unusual amount very often indicates the presence of sewage contamination.

Presence of Nitrites.

Whenever these are present in any quantity the water is usually totally unfit to drink. Even minute quantities should be looked upon with suspicion.

Method of examination employed.

In all cases the samples were collected in stoppered half-gallon bottles (the kind known as Winchester quarts). Usually two such were taken from each point, so that sufficient of each sample was obtained to satisfactorily perform all the operations in duplicate, without any of the inconveniences entailed by a limited supply, and with, of course, diminished chances of obtaining erroneous results.

Except where mentioned otherwise, the samples were examined with the matter which they contained in suspension; that is, any solid matter which they contained was not allowed to deposit as a sediment, but the matter was well shaken up and thoroughly diffused throughout the water, so that it was examined in just the same state as it is used by the consumer who takes it directly from the tap.

TUNNEL OR BORE WATER.

Sample No. 1.—Lachlan Swamp.

A specimen of the water from the Lachlan Swamps was collected on the morning of May 11th. The specimen was taken at the entrance to the tunnel from between the stonework in front of the lock.

The surface of the water was at the time covered with scum, and had a very dirty and uninviting appearance; as I could perceive no motion in the water, I thought that the lock might perhaps be closed, and as a sample taken under those circumstances would not have been a fair one, I sent for the man in charge of the lock and he informed me that the lock was open, and that water was passing through it into Sydney—the lock being “up two turns,” at which height it would be left until he received further orders; on the previous day it was “up five turns.” I could gather no information from him as to the probable size of the aperture, but from the absence of any perceptible current the amount of water then passing through it must have been very small.

To prevent the access of the scum into the collecting bottles as they were being filled, their mouths were depressed some inches below the surface of the water.

Colour.—When viewed in a large clear colourless glass flask it was seen to have a somewhat cloudy appearance, and to possess a brown tinge and to be slightly turbid.

Smell.—None; but on warming it gave off a slight earthy odour.

Residue left on evaporation to dryness.—Brown in colour, and closely adherent to the platinum dish. On ignition this blackened intensely, and deflagrated slightly; after the whole of the carbonaceous matter had been burnt off the residue was whitish with brown spots.

Total solids	...	...	...	97·00	parts per million or milligrammes per litre.
Loss on ignition	...	...	...	65·00	” ” ”
Fixed residue	...	...	...	32·00	” ” ”
—					
Chlorine	...	...	...	24·00	” ” ”
Free ammonia	...	...	...	·06	” ” ”
Albumenoid ammonia	...	...	...	·20	” ” ”
Nitrites	...	...	...	absent.	” ” ”
Nitrogen existing as nitrates	...	...	...	·62	” ” ”

Microscopical examination of sediment deposited by the water.—It was seen to contain various infusoria, such as diatoms, desmids, amœba, paramœcia, and entomostraca, including cypris, daphnia, and cyclops, which were freely swimming about, together with rotifera.

Sample No. 2.—Francis-street plug.

Taken at this point to ascertain the quality of the water in the Bore—after it had travelled some distance—but before it was in any way connected with closets or even houses.

When the plug was opened a thick pea soup-like fluid made its escape—it was allowed to flow until this had all disappeared, and a sample was then taken.

Colour.—As seen in large clear glass flask, the water had a pale brownish tint, and was somewhat turbid from the presence of small particles of pale brown flocculent matter.

Smell.—Somewhat earthy.

Residue left on evaporation to dryness.—Brown, but white in places. On ignition it blackened intensely, leaving a white residue with brown dendritic shaped patches; these consisted principally of sesquioxide of iron. Evolved white fumes; from the volatilization of certain salts.

Total solids	...	...	...	114·00	parts per 1,000,000.
Loss on ignition	...	...	...	40·00	” ”
Fixed residue	...	...	...	74·00	” ”
—					
Chlorine	...	...	...	23·90	” ”
Free ammonia	...	...	...	·06	” ”
Albumenoid ammonia	...	...	...	·21	” ”
Nitrites	...	...	...	barest trace.	” ”
Nitrogen, existing as nitrates, and nitrites	...	...	...	·22	” ”

Microscopical examination of sediment.—Much brown matter without definite structure—a few small organisms, such as diatoms, paramœcia, &c.

No. 3.—45, Stanley-street.

Taken from a tap in the yard at the back of the house.

Colour.—Fairly clear and bright, but on holding it up to the light a small amount of matter could be seen in suspension; it also had a faint brown tinge.

Smell.—None; but on warming it gave off a slight earthy smell.

Residue.—Whitish, with pale brown patches; blackened much on ignition; gave off white fumes; residue white, with hardly a trace of the brownish patches noticed in Nos. 1 and 2.

Total solids	...	...	...	76 00	
Loss on ignition	...	...	...	38 00	
Fixed residue	...	...	...	38 00	
<i>Chlorine</i>	...	...	...	23 80	a slight decrease on 1 and 2.
<i>Free ammonia</i>	...	...	...	04	
<i>Albumenoid ammonia</i>	...	...	...	20	
<i>Nitrogen, as nitrites and nitrates</i>	...	...	...	44	
<i>Nitrites</i>	...	...	...	traces.	

Microscopical examination of sediment.—Loose cases of dead entomostraca, and apparently the remains of organic matter; without definite structure.

No. 4.—“ Grenfell Hotel,” Woolloomooloo-street.

Taken from a tap in the yard at back of house; a patent closet some 15 to 20 feet off (the distance is given from memory).

Colour, &c.—Water fairly bright, but on holding it up to the light was seen to contain suspended flocc. matter; had a faint tinge of brown.

Smell.—Somewhat earthy.

Residue.—Same as last.

On ignition it blackened much, deflagrated slightly, and gave off white fumes; residue white, with brown patches.

Total solids	...	...	...	72 00	per 1,000,000
Loss on ignition	...	...	...	43 00	
Fixed residue	...	...	...	29 00	
<i>Chlorine</i>	...	...	...	23 70	” ”
<i>Free ammonia</i>	...	...	...	03	” ”
<i>Albumenoid ammonia</i>	...	...	...	26	” ” (Increase on 1, 2, and 3.)
<i>Nitrites</i>	...	...	...	traces.	
<i>Nitrogen, as nitrites and nitrates</i>	...	...	...	35	” ”

Microscopical examination of sediment.—Not materially different from last.

No. 5.—702, George-street, corner of Goulburn-street.

Tap in the yard, closely connected with closet, being placed against the closet wall. The yard is apparently surrounded by several small houses, and a number of closets are here grouped together in a small space.

Colour, &c.—Water rather brighter than the previous specimens, but a slight trace of colour, and only a small quantity of flocculent pale brown matter in suspension.

Smell.—Faint unpleasant smell, hardly perceptible.

Residue, &c.—Had same appearances as last; on ignition it blackened much, gave off white fumes, and left white residue with brown patches.

Total solids	...	...	...	80 00	parts per 1,000,000
Loss on ignition	...	...	...	54 00	” ”
Fixed residue	...	...	...	35 00	” ”
<i>Chlorine</i>	...	...	...	25 4	parts per 1,000,000. This shows an increase of nearly two parts per 1,000,000 over the previous specimens.
<i>Free ammonia</i>	...	...	...	02	
<i>Albumenoid ammonia</i>	...	...	...	26	
<i>Nitrites</i>	...	...	...	Present	in rather large quantity.
<i>Nitrogen, as nitrites and nitrates</i>	...	...	...	1 06	

Microscopical examination of sediment.—Very much the same as the others, except that there were numerous worms present (larval entozoa?) cyclops, diatom frustules, and apparently dead vegetable matter; also small particles of grit.

No. 6.—Fowler-square, Sussex-street.

Taken from the tap in the yard, situated some 6 to 8 feet from a patent closet. Occupants complained of the water being sometimes rusty in the summer months.

Colour, &c.—Water fairly bright, with however a slight amount of turbidity, and tinge of brown.

Smell.—None; faint earthy on warming.

Residue.—Much the same as the other. On ignition blackened very much; deflagrated slightly; left a white residue, with but a very small amount of the before mentioned brown stains.

Total solids	...	...	92.00	mgms. per litre or parts per 1,000,000.
Loss on ignition	...	...	50.00	" "
Fixed residue	...	...	42.00	" "
<i>Chlorine</i>	...	...	24.50	" "
<i>Free ammonia</i>	...	...	.00	" "
<i>Albumenoid ammonia</i>	...	...	.18	" "
<i>Nitrites</i>	...	...	traces.	" "
<i>Nitrogen as nitrites and nitrates</i>	...	...	.62	" "

Microscopical examination of sediment.—About the same as the Stanley-street deposit.

No. 7.—No. 30, Windmill-street.

Taken from a tap in the yard. Occupants mentioned that sometimes the water was full of "hairs" and rusty.

Colour, &c.—Fairly clear and bright, but on holding it up to the light it was seen to be slightly turbid. Had a very slight brown tinge; perhaps the least coloured of any of the samples of Bore water.

Smell.—None. On warming a faint earthy smell.

Residue.—Same as others. On ignition blackened very much; at a red heat gave off white fumes; left a white residue, with pale yellowish brown patches. Evidently contained less ferruginous matter than any of the others.

Total solids	...	...	84.00	mgms. per litre or parts per 1,000,000.
Loss on ignition	...	...	44.00	" "
Fixed residue	...	...	40.00	" "
<i>Chlorine</i>	...	...	24.50	" "
<i>Free ammonia</i>	...	...	.03	" "
<i>Albumenoid ammonia</i>	...	...	.18	" "
<i>Nitrites</i>	...	...	traces.	" "
<i>Nitrogen as nitrites and nitrates</i>	...	...	.62	" "

Microscopical examination of sediment.—Much the same as last.

It will be seen that the water tends to become somewhat purer during its passage through the mains; *i.e.*, apart from local contamination. This has been observed also in other towns.

Busby's Bore Supply.—Collected May 11th, 1875.

Parts per 1,000,000 or Milligrammes per litre.

No.	Name.	Total Solids.	Loss.	Fixed Residue.	Chlorine.	Free Ammonia.	Albumenoid Ammonia.	Nitrogen, as Nitrates, &c.	Nitrates.
1	Lachlan Swamp	97.00	65.00	32.00	24.00	.06	.20	.62	Absent.
2	Francis-street (plug)	114.00	40.00	74.00	23.00	.06	.21	.22	Barest trace.
3	Stanley-street	76.00	38.00	38.00	23.50	.04	.20	.44	Trace.
4	Woolloomooloo-street	72.00	43.00	29.00	23.70	.03	.26	.35	"
5	Goulburn-street	89.00	64.00	35.00	25.40	.02	.26	1.06	Present in quantity.
6	Fowler-square	92.00	50.00	42.00	24.50	.00	.18	.62	Absent.
7	Windmill-street	84.00	44.00	40.00	24.50	.03	.18	.62	Traces.

Remarks.

An examination of the above tables will show how little reliance can be placed upon the numerical information yielded by the process of evaporation to dryness and subsequent ignition of the water residue. Had those results only been obtainable, the Lachlan Swamp sample would have appeared as the worst of the series, whereas sample No. 5, from Goulburn-street, although it showed less loss on ignition, was in reality far more impure, containing as it did a larger proportion of chlorine, albumenoid ammonia, and nitrates, and moreover nitrites were present in quantity—all of which strongly indicate contamination by sewage matter. The presence of the nitrites alone would have been sufficient to condemn the sample.

The

The water pipes were here evidently in direct communication with a closet or some other source of animal impurity. The increase in the chlorine of Nos. 6 and 7, and of the albumenoid ammonia in No. 4, also indicate contamination.

On taking the results furnished by the seven samples into consideration, the quality of the supply from the Lachlan Swamp and Busby's Bore cannot be considered satisfactory; throughout, the water yields nearly three times as much albumenoid ammonia as a fair average water should, and contains twice as much as the Botany water; this is probably caused by the drainage of sewage into the Lachlan Swamp Reserves and also into the Bore.

Owing to the low pressure of the water supply from this source, I do not think that local contamination from closets takes place to so great an extent as it does in the other services.

By means of a proper system of filtration the quality of this water might be brought up to the requisite standard of purity. In its present state, although examined at the most favourable time of the year, it cannot, as I have before said, be regarded as a good wholesome water, and unless it be properly and effectually purified, its use for domestic supply should be discarded as soon as possible.

LOW LEVEL SUPPLY.

As in the case of the Bore water, samples were taken from various points in the area supplied by this service, and, for the sake of comparison, water was also collected at the Botany Water Works on the morning of the same day.

Seven samples of the water from this service were taken on the 26th May last, and four others subsequently.

Sample No. 8.—Botany Water Works.

This sample was taken on the morning of May 26th, at little before noon, and was drawn from a tap connected with the 30-inch main, and distant some 6 yards from the air vessels. The sample of water from this tap should represent that which is pumped out into the service mains before it has had any opportunity whatever to pick up foreign matter, as it is the first outlet of any kind from the mains after the water is pumped up.

Colour, &c.—Possessed a pale brownish tinge, fairly bright, but a small amount of very finely divided matter could be seen held in suspension.

Smell.—None; slight earthy odour when warmed.

Residue left on evaporation.—White, with brownish patches, which on ignition, blackened, deflagrated somewhat, and burnt white.

Total solids...	...	...	124.00	parts per 100,000 or milligrammes per litre.
Loss on ignition	...	...	40.00	" "
Fixed residue	...	...	84.00	" "
—				
Chlorine	...	...	26.40	" "
Free ammonia	...	...	.03	
Albumenoid Ammonia	...	...	.10	
Nitrites	...	...	absent	
Nitrogen as nitrates	...	...	.13	

Microscopical examination of sediment.—It was found to contain minute animal and vegetable infusoria, such as we might expect in water from an open reservoir—nothing calling for special comment.

Sample No. 9.—Crown-street Reservoir.

Sample collected at about 11.20, May 26th, from inside reservoir, at a spot as close to the outlet main as possible, and from a few inches below the surface of the water, so as to avoid the scum floating on it. This scum gave a dirty and unpleasant appearance to the water. The air inside the reservoir had a dank and earthy smell.

I was informed by the turncock in charge that the water was running out at the time, pumping into this reservoir having ceased at 6 a.m., in order that the Paddington reservoir might be supplied.

The reservoir was at the time full to within a few inches of the coping stone of the causeway.

Colour, &c.—Of a very faint brown tinge, fairly bright in appearance, but on holding it up to the light in a clear glass flask it was seen to hold a small quantity of brown flocculent matter in suspension, and in a larger proportion than the specimen from the Botany Water Works, taken shortly afterwards.

For convenience the Botany Water Works specimen was obtained after this one.

Smell.—None, but on warming, a faint earthy odour.

Residue

Residue left on evaporation to dryness.—White, with a somewhat crystalline appearance in places. On ignition it blackened, gave off white fumes, and left a white, somewhat incoherent, residue.

Total solids	...	...	...	124.00	parts per million.
Loss on ignition	...	...	...	44.00	"
Fixed residue	...	...	...	80.00	"
<i>Chlorine</i>	...	...	...	28.00	"
<i>Free ammonia</i>	...	...	...	.10	"
<i>Albumenoid ammonia</i>	...	...	...	.40	"
<i>Nitrites</i>	...	...	...	Traces	"
<i>Nitrogen as nitrites and nitrates</i>	...	...	...	.18	"

Microscopical, &c., contained the loose cases of dead entomostraca, dead vegetable matter, vegetable fibre, &c., diatoms, such as *D. triceratium*, *D. vulgaris*, and others.

The amount of albumenoid ammonia yielded by this specimen is unusually high, about five times as much as a good ordinary drinking water should contain; it will also be seen that it contains three parts per million of chlorine in excess of the amount contained by the other low level specimens collected on this day.

Sample No. 10.

On account of the extraordinary amount of impurities in the above, fresh samples were taken from this reservoir at 10.30 a.m. on Friday, 19th June. On this occasion the reservoir was very full, the water rising about 6 inches over the top of the causeway. I was informed that pumping had ceased at 4 a.m. that morning. This sample presented much the same characteristics as the former one. It was considered unnecessary to determine the solid matter, &c., but the amounts of the more important constituents, *i.e.*, the ammonia compounds, and chlorine were estimated.

<i>Free ammonia</i>	...	...	...	...	.15	parts per million.
<i>Albumenoid ammonia</i>	...	...	...	...	.22	"
<i>Chlorine</i>	...	...	...	...	23.70	"
<i>Nitrites</i>	...	...	...	...	traces.	"

Sample No. 11.

A sample of the bottom water, or rather of the sediment, was also obtained on the same occasion, by means of a can attached to a string, the can having a square mouth, around which it was heavily weighted with lead, so that it should scrape the bottom. This arrangement answered fairly well, for it brought up a great deal of the foul sediment from the bottom, the accumulation of which in the reservoir is, I am informed, very great and very rapid.

Under the microscope this was seen to consist mainly of a brown flocculent matter, containing large numbers of infusorial animalcula and confervæ, together with a little sand. Amongst others there were *rotifers*, *amœba*, *paramœcium*, various *entomostraca*, such as *daphnia*, *cypris*, *cyclops*, &c.; also large numbers of small ciliated and non-ciliated colourless worms, a small *acarus* and encysted forms of some unknown infusoria.

Also diatoms and a minute kind of fungoid growth, somewhat like penicillum interlacing the dead matter. For the most part the organisms were dead or dying, but the worms, paramœcia, were very lively.

Sample No. 12—24, Burton-street.

In order to ascertain the quality of the water after leaving the reservoir and before the mains had been connected with many houses, a sample was collected on the same day, 19th June, within two hours time, and as near as possible to the reservoir, *viz.*, at 24, Burton-street, corner of Oxford-street.

Colour, &c.—The water had a pale brownish tinge and slight turbidity, and contained,—

<i>Free ammonia</i>	...	...	...	...	...	.06	parts per million or mgms. per litre.
<i>Albumenoid ammonia</i>	...	...	...	...	...	.10	" "
<i>Chlorine</i>	...	...	...	...	...	21.50	" "
<i>Nitrites</i>	...	...	...	...	...	traces.	" "

Here we see that a wonderful improvement has taken place in the water after having travelled only the above comparatively short distance. It has lost 2.2 parts of chlorine, 12 parts of albumenoid ammonia, and 9 parts of free ammonia.

Sample No. 13.—Botany Road.—May 26th.

Taken from a tap in an entry or passage opposite to Hudson Bros. factory; could see no number to house.

Colour,

Colour, &c.—Water brighter and less coloured than Nos. 1 and 2 ; also less matter held in suspension.

Smell.—None ; on warming it had a faint earthy smell.

Residue left on evaporation.—Was white with a few brown stains. On ignition it blackened much but did not deflagrate ; gave off white fumes ; left white residue free from brown patches.

Total solids	...	...	...	76.00	parts per million.
Loss on ignition	...	...	...	36.00	"
Fixed residue	...	...	...	40.00	"
<hr/>					
Chlorine	...	...	...	25.00	"
Free ammonia	...	...	...	.01	"
Albumenoid ammonia	...	...	...	.11	"
Nitrites	...	...	...	traces	"
Nitrogen existing as nitrites and nitrates	...	...	...	.35	"

Microscopical examination of sediment.—Same general characteristics as others, but much less in

Sample No. 14.—198, Castlereagh-street.

From a tap in the yard at back of house—pipe connected with a closet some 5 or 6 feet distant.

Colour, &c.—Water just about the same as the last.

Smell.— Do. do.

Residue left on evaporation.—White with brown stains ; on ignition blackened much, and gave off white fumes ; left white residue free from brown stains.

Total solids	...	...	...	124.00	parts per million.
Loss on ignition	...	...	...	84.00	"
Fixed residue	...	...	...	40.00	"
<hr/>					
Chlorine	...	...	...	25.00	"
Free ammonia	...	...	...	.01	"
Albumenoid ammonia	...	...	...	.17	"
Nitrites	...	...	...	none	"
Nitrogen existing as nitrates	...	...	...	.18	"

This specimen of water is rather an unusual one in this series ; for, although containing an exceedingly high proportion of matter lost on ignition, it yet contains but a small proportion of nitrogenous compounds.

Microscopical examination of sediment.—Presented only the general characters—small in amount.

Sample No. 15.—149, Pitt-street.

From tap in yard ; the pipe not connected with the closets.

Colour, &c.—In common with all the low level waters examined it had a brownish tinge. More turbid than Nos. 5 and 6.

Smell.—A very faint earthy smell ; increased somewhat by warming.

Residue left on evaporation.—White, with stains and patches of a brown colour ; on ignition blackened much and left a white residue, with dense patches of brown, mainly consisting of sesquioxide of iron.

Total solids	...	...	...	80.00	parts per million.
Loss on ignition	...	...	...	40.00	"
Fixed residue	...	...	...	40.00	"
<hr/>					
Chlorine	...	...	...	25.00	"
Free ammonia	...	...	...	.01	"
Albumenoid ammonia	...	...	...	.10	"
Nitrites	...	...	...	none	"
Nitrogen existing as nitrates	...	...	...	.09	"

This is the purest of all the Low Level samples examined.

Microscopical examination of sediment.—Principally consisted of brown structureless matter, which probably consists, in part, of ferric hydrate from the pipes, and decomposed vegetable matter ; some diatom frustules were observed, grit and similar substances.

Sample No. 16.—Drinking Fountain, Castlereagh-street, Circular Quay.

Colour, &c.—The clearest and brightest of all ; but still it possessed a slight turbidity and tinge of brown.

Smell.—None ; faint earthy, on warming.

Residue

Residue left on evaporation.—White, with faint brown stains in parts. On ignition, blackened; gave off fumes and left white residue.

Total solids...	...	...	76·00 parts per million.
Loss on ignition	...	...	34·00 "
Fixed residue	...	...	42·00 "
<i>Chlorine</i>	...	...	25·10 "
<i>Free ammonia</i>	...	...	·015 "
<i>Albumenoid ammonia</i>	...	...	·10 "
<i>Nitrites</i>	...	...	traces, but largest quantity in this series.
<i>Nitrogen existing as nitrites and nitrates</i>...	...	...	·13

Microscopical examination of sediment.—Same as last.

Sample No. 17.—54, *Bridge-street*, from tap in a bath-room; closet supplied from a cistern.

Colour, &c.—Same as that from drinking fountain.

Smell.—None.

Residue left on evaporation.—White, with a brown tinge in parts. On ignition, blackened much, deflagrated slightly in several places; gave off white fumes; residue white, free from brown stains.

Total solids...	...	...	120·00 parts per million.
Loss on ignition	...	...	42·00 "
Fixed residue	...	...	78·00 "
<i>Chlorine</i>	...	...	25·10 "
<i>Free ammonia</i>	...	...	·015 "
<i>Albumenoid ammonia</i>	...	...	·14 "
<i>Nitrites</i>	...	...	barest trace.
<i>Nitrogen existing as nitrites and nitrates</i>...	...	...	·13

Microscopical examination of sediment.—Same as last.

ADDITIONAL SAMPLES.

Sample No. 18.—54, *Bridge-street*; collected, April 30th.

This sample was obtained before I had been communicated with by the Chairman of the Commission. It serves to show that the quality of the water is sometimes much worse than at others.

Colour, &c.—Of rather a dark brown; contained an exceedingly large amount of matter in suspension, which, on standing, was deposited as a very thick dark brown sediment.

Smell.—None, but gave off a slight disagreeable odour when warmed and treated with caustic potash.

Residue left on evaporation.—Of a full brown colour; loose in structure. On ignition, blackened intensely; deflagrated a good deal; residue friable in parts; in colour brown, due to presence of sesquioxide of iron.

Total solids...	...	...	250·00 parts per million.
Loss on ignition	...	...	100·00 "
Fixed residue	...	...	150·00 "
<i>Chlorine</i>	...	...	30·50 "
<i>Free ammonia</i>	...	...	·015 "
<i>Albumenoid ammonia</i>	...	...	1·22 "
<i>Nitrites</i>	...	...	Present in large amount.
<i>Nitrogen existing as nitrites and nitrates</i> ...	...	...	·71 parts per million.

Microscopical examination of the sediment.—There were not many remains of organisms present. The sediment consisted principally of a dark brown structureless flocculent looking substance, and mixed with it were a few diatom frustules, cases of entomostraca, and living paramæcia.

The almost total absence of life and the small quantity of free ammonia present in this sample of extremely impure water is probably due to its having been kept for so long a period prior to examination, *i.e.*, from April 30th to June 10th.

Sample No. 19.—No. 141, *York-street*.

Sample collected May 31st, taken from a tap in the yard. In this case the closet was situated some distance from the tap, being at the other end of the yard and about 50 ft. distant, but at a higher level. It was found that when the tap was turned on that the flow of water into the closet-pan ceased; hence if the pan were full and the closet tap open or leaky, on regurgitation taking place in the pipe the soil must necessarily

necessarily be drawn up into it and pass into the domestic supply pipes. The analysis of the sample taken on this occasion *proves* that such is actually the case, for it will be seen that faecal matter was present.

I may mention that just before this sample was drawn the water had been momentarily turned off at the main.

Colour, &c.—Comparatively bright after standing; had a brownish tinge, and deposited much sediment of a brown colour.

Smell.—That of sewage, not very strong at first, but after being kept for a few days it became intolerable.

Residue left on evaporation to dryness.—Of a brown colour and possessing a foul faecal smell.

On ignition it blackened intensely, and gave off strong nitrogenous (*i.e.*, like burnt hairs) and urinous smell; deflagrated very much; finally becoming almost white with grayish patches. These represented the former solid particles floating in the fluid.

Total solids	...	...	...	120.00	parts per million.
Loss on ignition	...	...	...	60.00	" "
Fixed residue	...	...	...	60.00	" "
<i>Chlorine</i>	...	...	...	26.00	" "
<i>Free ammonia</i>	...	...	...	.33	" "
<i>Albumenoid ammonia</i>	...	...	...	1.48	" "
<i>Nitrites</i>	...	...	...	Present.	" "
<i>Nitrogen existing as nitrites and nitrates</i>	...	...	...	.35	" "

Microscopical examination of sediment.—Contained much brown structureless matter; also the undigested remains of meat fibrillæ, together with both spiral and scalariform vegetable fibres and what appeared to be the empty cases of large starch (probably potato starch) granules. It was teeming with life; the paramæcium and small wormlike forms (larval entozoa?) being particularly abundant.

Low-level Supply.—Collected May 26th, 1875.

Parts per 1,000,000 or Milligrammes per litre.

No.		Total Solids.	Loss.	Fixed Residue.	Chlorine	Free Ammonia.	Albumenoid Ammonia.	Nitrogen, as Nitrates, &c.	Nitrites.
8	Botany pumps.....	124.00	40.00	84.00	26.40	.03	.10	.18	Absent.
9	Crown-street Reservoir	124.00	44.00	80.00	28.00	.10	.40	.18	Traces.
18	Botany Road (opposite Hudson's)	76.00	36.00	40.00	25.00	.01	.11	.35	Absent.
14	Castlereagh-street, No. 189	124.00	84.00	40.00	25.00	.01	.17	.18	"
15	Phil-street, No. 140	80.00	40.00	40.00	25.00	.01	.10	.00	"
16	Drinking Fountain, Castlereagh-street	76.00	34.00	42.00	25.10	.015	.10	.13	Present.
17	Bridge-street, No. 51	120.00	42.00	78.00	25.10	.015	.14	.13	Barest traces.
18	" (April 3rd)	250.00	100.00	150.00	30.50	.015	1.22	.71	Present in quantity
19	York-street, No. 141 (May 31st)	120.00	60.00	60.00	28.00	.33	1.48	.36	"
<i>Additional samples—Collected June 19th, 1875.</i>									
10	Crown-street Reservoir (surface water) .....	.....	.....	.....	23.7	.15	.22	.....	Traces.
12	Burton-street, No. 24 .....	.....	.....	.....	21.5	.06	.10	.....	Traces.

Concluding Remarks.

The quality of the supply from Botany is on the whole very good, and if it were properly filtered before being pumped into the mains it would satisfy the requirements of even the most fastidious. The water as delivered is somewhat discoloured and turbid, and contains various animal and vegetable organisms; now the majority of these are probably harmless, but some may have a pernicious effect upon the consumer, so that every effort should be made to keep them out of the water supply; neither should the matters washed into the watershed by storm waters be allowed to pass unarrested into the mains. Certain diseases breaking out amongst the residents upon the watershed might readily, in the present absence of proper filtration, be the cause of a serious epidemic throughout nearly the whole of Sydney.

The water, however, in the Crown-street Reservoir was strangely and unaccountably bad, and I think that no time should be lost in having it effectually cleaned out and carefully examined; it may, perchance, be caused by the soakage of sewage matter into it; both the excess of free and of albumenoid ammonia and the presence of nitrites point to this.

There

There is an extraordinary increase in the amount of nitrates present in the sample from Botany Road, strangely unaccompanied by an increase in the other impurities.

Both No. 16 (Drinking Fountain) and No. 17 (Bridge-street) show the presence of nitrites, and a slight increase in the quantity of chlorine, and the latter a larger amount of albumenoid ammonia; and as neither of the pipes from which they were drawn were directly connected with closets, they show how the impurities are disseminated through the water in the mains. It is true the quantities of impurity were but small; but then they had probably been greatly diluted by diffusion through a large body of water.

The York-street sample was the only one from the low level supply in which actual fecal matter was detected.

HIGH-LEVEL SUPPLY.

The samples were all collected on the morning of Monday, May 31st, with the exception of two collected on Friday, June 19th.

For the sake of comparison a specimen, to serve as a standard, was again taken from the Botany Water Works.

Sample No. 20.—Botany Water Works.

Sample taken from the tap, previously mentioned under the Low Level supply.

Colour, &c.—Fairly bright, but seen to contain matter in suspension when held up to the light; but faintly tinged with brown, as before.

Smell.—None; very slight earthy odour when warmed.

Residue left on evaporation to dryness.—Was of a brownish colour, and in the form of a thin closely adherent film; on ignition, this blackened considerably; did not deflagrate; gave off copious white fumes, and left a white residue without any trace of brown matter.

Total solids	...	...	...	76.00	parts per 1,000,000
Loss on ignition	...	...	...	40.00	„ „
Fixed residue	...	...	...	36.00	„ „
<i>Chlorine</i>	...	...	...	23.00	„ „
<i>Free ammonia</i>	...	...	...	.02	
<i>Albumenoid ammonia</i>	...	...	...	.11	
<i>Nitrites</i>	...	...	...	absent.	
<i>Nitrogen as nitrites</i>	...	...	...	.13	

Microscopical examination of sediment.—Presented same characteristics as previous sample.

Sample No. 21.—Paddington Reservoir.

One main I was informed serves both as outlet and inlet pipe to this reservoir. It is allowed to run dry every night, usually being empty at about 12 p.m. At the time this sample was collected the reservoir contained about 5 feet 8 inches of water.

Colour, &c., much the same as the last, but rather more turbid.

Residue left on evaporation to dryness.—Was of a brownish colour; on ignition blackened very much; it also deflagrated very much, leaving a white residue, having a few brownish patches.

Total solids	...	...	...	100.00	parts per 1,000,000
Loss on ignition	...	...	...	40.00	„ „
Fixed residue	...	...	...	60.00	„ „
<i>Chlorine</i>	...	...	...	23.50	
<i>Free ammonia</i>	...	...	...	.05	
<i>Albumenoid ammonia</i>	...	...	...	.15	
<i>Nitrites</i>	...	...	...	absent.	
<i>Nitrogen existing as nitrates</i>	...	...	...	.13	

Microscopical examination of sediment.—Brown flocculent matter; diatoms of several species, &c.

Sample No. 22.—Paddington Reservoir.

Two additional samples were taken from this reservoir on Friday, June 19th, at 10.45 a.m.—one from near the surface, and the other from as near the bottom as possible, which was obtained by means of the weighted can, as mentioned under the Crown-street reservoir water.

Surface

Surface water.—Tolerably clear, but slightly turbid from the presence of floating particles, and possessing the usual brownish tint of Botany water. There was 7 feet of water in the reservoir at the time the sample was taken.

Free ammonia	...	...	...	05	parts per million.
Albumenoid ammonia	...	...	...	22	" "
Chlorine	...	...	...	25.50	" "
Nitrites	...	...	...		traces.

Sample No. 23.—Lower water.

The can brought up a very large quantity of black more or less slimy matter. As it would have been perfectly useless to submit this to analysis, the sample was allowed to stand until the upper portion had become tolerably clear; this was decanted and examined.

This water had an exceedingly bad smell, similar to that given off by the decomposing slime and vegetable matter brought up from the bottom of a stagnant pond—a smell much more powerful than that given off by the waters containing sewage matter, but probably not at all so noxious.

Free ammonia	...	...	...	30	parts per million.
Albumenoid ammonia	...	...	...	52	" "
Chlorine	...	...	...	31.00	" "
Nitrites	...	...	...		Present in large quantity.

Microscopical examination of the sediment.—The principal portion of this consisted of dark brown and black structureless matter, probably of organic origin, mixed with grains of sand. In common with the deposit from the Crown-street reservoir, much of the sediment had a more or less rough cylindrical form, as if it had passed through the intestines of some small creature.

Amongst the living forms present were many small worms (larval entozoa?) paramœcia, amœba, diatoms, and others—just such as we should expect to find in the stinking mud from some foul ditch.

The character of this sediment shows that the reservoir is not entirely emptied in all parts every night, otherwise the deposit would not be of so offensive a nature.

No. 24—19, Botany-street.

From a tap in the yard, situated some 10 or 12 feet from the closet.

I was informed by the occupier of the house that the water was at times very bad, full of brown floating matter.

Colour, &c.—Of a brown tinge; contained a good deal of matter in suspension; some of it in the form of rather large brown particles.

Smell.—None; on warming a hardly perceptible sewage smell was given off.

Residue left on evaporation to dryness.—The main portion was of a brown colour, with darker patches; on ignition blackened intensely, deflagrated and gave off a very strong nitrogenous odour, or the smell of burning hairs, and left a gray residue.

Total solids	...	...	...	100.00	parts per million.
Loss on ignition	...	...	...	44.00	" "
Fixed residue	...	...	...	56.00	" "
Chlorine	...	...	...	23.90	" "
Free ammonia	...	...	...	.02	" "
Albumenoid ammonia	...	...	...	.30	" "
Nitrites	...	...	...		absent.
Nitrogen as nitrates	...	...	...	.18	" "

Microscopical examination of sediment.—This was seen to consist mainly of a brown substance devoid of structure, but mixed with it were other substances which showed that it was undoubtedly faecal matter; amongst such, the remains of partly digested food, were portions of muscular fibres and vegetable tissues, such as spiral and scalariform fibres, together with bodies which have the appearance of empty starch granules, probably potato starch from their large size. And in addition were the common living forms, paramœcia, &c., and the frustules of diatoms.

Some portion of the brown matter in this and in other cases consists merely of rust from the pipes, but under the microscope the differences between the two are perfectly distinguishable.

No. 25.—No. 13, Roslyn-street.

Taken from tap in the yard; closet about 7 or 8 feet distant. The occupant of the house had often noticed the water to be discoloured and full of brown stuff in the summer.

Colour, &c.—But very faintly tinged brown, and but very slightly turbid.

Smell.—None. On warming, the usual faint earthy smell of all the Sydney water.

Residue left on evaporation to dryness.—White, with slightly brown patches. On ignition, blackened; deflagrated slightly; gave off white fumes; residue white.

Total solids...	...	...	76·00 parts per million.
Loss on ignition	...	...	40·00 "
Fixed residue	...	...	36·00 "
<hr/>			
Chlorine	...	...	23·20 "
Free ammonia	...	...	·02 "
Albumenoid ammonia	...	...	·12 "
Nitrites	...	...	absent.
Nitrogen existing as nitrates	...	...	·13 "

No. 26.—222, Duke-street, off William-street.

From a tap within 2 or 3 feet of the closet.

In order to test the statement I had heard, that the contents of the closet-pans were liable to be sucked back into the water pipes on shutting the water off at the main, I had the lock of the main in William-street closed that I might watch the effect. Immediately that the water was shut off violent suction of air took place through the open tap leading to the closet, and on filling the pan up with water that also was drawn in. The water was at once turned on again at the main, and after allowing it to run to waste for a time a sample was taken.

Colour, &c.—After allowing the matter in suspension to subside, this in a few days became one of the brightest and clearest waters examined.

Smell.—Faint sewage smell. On warming very decided. After this sample had been kept some time the smell was extremely bad.

Residue left on evaporation to dryness.—Of a brown colour, with very dark patches. On ignition, blackened intensely; gave very strong nitrogenous smell; deflagrated; the whole of the carbonaceous matter was difficult to consume; left a loose grey ash.

Total solids	132 parts per million.
Loss on ignition	·80 "
Fixed residue	·52 "
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Chlorine	29·00 "
Free ammonia	·20 "
Albumenoid ammonia...	1·32 "
Nitrites	rather abundant.
Nitrogen existing as nitrites and nitrates	...	...	·40 "

Microscopical examination of sediment.—Possessing the same characteristics as the 19, Botany-street sample, only that the faecal matter was present in much larger quantity.

The faecal matter had a flaky structure, such as might be given to it by the passage of water over it when adherent to the inside of a pipe; and it is most probable that the whole of this matter contained in the sample of water examined was detached from the interior of the pipe leading into the closet by the backward flow.

No. 27.—Drinking Fountain in front of Fort-street School.

Colour, &c.—Fairly bright, and with only the faintest tinge of brown.

Smell.—None; faint earthy on warming.

Residue left on evaporation to dryness.—Almost entirely white. On ignition, blackened; gave off white fumes, and left white residue.

Total solids	80·00 parts per million.
Loss on ignition	40·00 "
Fixed residue	40·00 "
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Chlorine	23·10 "
Free ammonia	·02 "
Albumenoid ammonia	·13 "
Nitrites	absent.
Nitrogen existing as nitrates	·09 "

No. 28.—101, *Princes-street.*

From tap in the yard close to the house; closet some distance off, at the other end of the yard. Tap at a lower level than the closet, and when both were turned on the water ceased to run in the closet.

Colour, &c.—Bright, and almost free from the faintest tinge, but contained large masses of brown flocculent and other matter—evidently faecal, together with human hairs.

Smell.—At first faint smell, but after having been kept some days it became extremely bad.

Residue left on evaporation to dryness.—Consisted principally of faecal matter; the smell exceedingly strong. On ignition blackened exceedingly, and deflagrated very much, giving off a very strong nitrogenous odour, the carbonaceous matter burning off with difficulty. The residue left was greyish white.

Total solids	...	...	...	140·00	parts per million.
Loss on ignition	...	...	...	80·00	"
Fixed residuc	...	...	...	60·00	"
<i>Chlorine</i>	...	...	...	24·00	"
<i>Free ammonia</i>	...	...	...	·18	"
<i>Albumenoid ammonia</i>	...	...	...	·70	"
<i>Nitrites</i>	...	...	...	present.	
<i>Nitrogen as nitrites and nitrates</i>	...	...	...	·27	"

Microscopical examination of sediment.—Of the same general character as that met with in Duke-street and Botany-street; but in addition to the remains of partially digested food, human hairs were present with the faeces.

No. 29.—26, *Princes-street, at the far end of the street.*

Taken from a tap in the yard. Pipe not connected with closet, a cesspit being used.

Colour, &c.—Virtually colourless, bright; but a slight turbidity could be seen on holding the water up to the light, but less than that of the Botany Waterworks sample.

Smell.—None. On warming, the usual slight earthy smell.

Residue left on evaporation to dryness.—White, with small patches of faint brown. On ignition, blackened; gave off white fumes, and left a white residue.

Total solids	...	...	...	80·00	parts per million.
Loss on ignition	...	...	...	44·00	"
Fixed residue	...	...	...	36·00	"
<i>Chlorine</i>	...	...	...	23·00	"
<i>Free ammonia</i>	...	...	...	·03	"
<i>Albumenoid ammonia</i>	...	...	...	·11	"
<i>Nitrites</i>	...	...	...	absent.	
<i>Nitrogen existing as nitrates</i>	...	...	...	·18	"

. *High Level Supply.—Collected May 31st, 1875.*

Parts per 1,000,000 or Milligrammes per litre.

No.		Total Solids.	Loss.	Fixed Residue.	Chlorine.	Free Ammonia.	Albumenoid Ammonia.	Nitrogen, as Nitrates, &c.	Nitrites.
20	Botany Pumps.....	76·00	40·00	36·00	23·00	·02	·11	·13	Absent.
21	Paddington Reservoir	100·00	40·00	60·00	23·50	·05	·15	·13	"
24	Botany-street, No. 19.....	100·00	44·00	56·00	23·90	·02	·30	·18	"
25	Roslyn-street	78·00	40·00	38·00	23·20	·02	·12	·13	"
26	Duke-street, No. 222	132·00	80·00	52·00	29·00	·20	1·32	·10	Present in quantity.
27	Drinking Fountain, Princes-street	80·00	40·00	40·00	23·10	·02	·13	·09	Absent.
28	Princes-street, No. 101	140·00	80·00	60·00	24·00	·18	·70	·27	Present.
29	" " 20	80·00	44·00	36·00	23·00	·03	·11	·18	Absent.
<i>Additional Samples.—Collected June 19th, 1875.</i>									
22	Paddington Reservoir—Surface water...	Not determined .....	.....	.....	25·50	·05	·22	Not determined.	Traces.
23	" " Lower water ...	" .....	.....	.....	31·00	·30	·62	"	Present in large quantity.

Remarks.

Remarks.

The remarks made upon the necessity for properly filtering the water before delivery to the consumers, under the head of the Low Level supply, apply equally of course to this service.

It will be seen that the Paddington Reservoir water is also less pure than the Botany water, but it is not so bad as the Crown-street Reservoir sample; still it requires immediate attention. The necessity for cleaning it out is shown by the filthy state of the bottom water as brought up on June 19th.

It will be seen also that out of six samples taken, on the morning of May 31st, from different parts of the City supplied by this service, three were most grossly contaminated with faecal matter.

The very large amount of faecal matter is due to the high pressure of this service combined with the practice of nightly allowing the reservoir to run empty. In similar cases at Home, at Lewes and Hull, they have sought to remedy the matter by making the supply constant; but the cases at 101, Princes-street, and at 141, York-street, show that this would by no means be sufficient; the closets must not on any account communicate directly with the water pipes.

It will be noticed that two of the samples were taken from points very close together, viz.:—No. 27, from the drinking fountain in Princes-street, and No. 28, from a house in the same street. It arose in the following way:—No. 28 was collected, next No. 29, from the far end of the street, and as I wanted a sample direct from the main I had to take it from the fountain, the only direct outlet I could see in this neighbourhood.

It must be borne in mind that the above investigation cannot be regarded as an exhaustive one; the results of the examination of the samples only show the state of the water at a few scattered points during the few moments actually occupied in filling the bottles, and although the results are sufficiently alarming, they might have been even more startling. In some of the cases where the water was pretty fair the next lot drawn off might have been of the worst possible character; and where bad samples were obtained there is also the possibility, on the other hand, that fair ones might have been obtained.

The results, however, are quite sufficient to show that a most gross contamination does take place, and this too in numerous localities.

It must also be borne in mind that the examination was made at the most favourable time of the year—when the water supply is most abundant and when the mains undergo less disturbance—for I understand that it is no uncommon thing during the summer months for all the services to be more or less intermittent.

One or two questions of a scientific nature have arisen out of this examination—such as the alteration in quality which the water undergoes during its passage through the mains, and the nature of the deposit which takes place in them. These questions are not new—they have been previously observed elsewhere; but they are well worthy of further investigation, and I hope to be able to take them up at some future date.

I may mention, that while examining the above samples I was three times attacked by sore throat, a complaint to which I am not at all subject, and two of the attacks came on within fifteen or twenty minutes after inhaling the gases given off by the samples numbered 19 and 26. The attacks were separated by an interval of two days, and in each case I managed to remove the ill effects within two or three hours' time by inhaling large quantities of sulphurous acid gas, as given off from a capsule of burning sulphur. As I happened to have a chlorine gas generator at work at the time I occasionally inhaled a little of that gas in a diluted form.

The first attack was also probably due to the same cause; but I could not trace the connection so distinctly. But it is only right to state that the samples had then been kept for a week or ten days. Water containing *fresh healthy* faecal matter would probably have no such effect.

By the courtesy and permission of the Mayor, when collecting the samples I was accompanied by Mr. Robertson, the inspector for waste water, who drew the samples under my supervision. Without the aid of his knowledge of the boundaries of the three services and able assistance it would have been almost impossible for me to have carried out the collection in a systematic manner.

ARCHIBALD LIVERSIDGE.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

SYDNEY CITY AND SUBURBAN SEWAGE AND
HEALTH BOARD.

(REPORT FROM, RESPECTING DISPOSAL OF NIGHT-SOIL IN MELBOURNE.)

Ordered by the Legislative Assembly to be printed, 29 July, 1875.

Sydney City and Suburban Sewage and Health Board,
Office, Colonial Secretary's Department,
Sydney, 26 July, 1875.

SIR,

I have the honor by direction of the Chairman, to furnish, for the Honorable the Colonial Secretary, the following particulars in reference to the disposal of night-soil in Melbourne, just to hand, viz. :—

For the city of Melbourne there are 12,663 tenements.

10,560 overground receptacles for night-soil of about 10 galls. each.

2,103 underground cesspits of the ordinary kind.

Under a contract for the year commencing July 1st, 1875, the smaller receptacles are emptied once a week, or, if oftener, with an additional charge of sixpence (6d.) each emptying.

The underground cesspits are emptied as often as the contractor is required to do so.

The contractor supplies everything except the carts, and is required to deliver the soil at a distance not exceeding eight miles.

The contract price for the year is £7,450.

I gather from the returns that the total cost, all of which is borne by the Corporation, is under (£10,000) ten thousand pounds per annum, and certainly under one pound (£1) per annum for each tenement, or say one pound (£1) for every six of the inhabitants.

No dry earth or disinfectant is required to be used in the receptacles, nor, as a rule, is any used.

This system of emptying has been in operation for about five years, and I am informed that the nuisances on this account still existing in Melbourne are very great, and only tolerable in comparison with the still more horrible state of things previously existing.

I have, &c.,
CHAS. H. BARLEE,
Secretary.

1875.

NEW SOUTH WALES.

SYDNEY SEWERAGE AND WATER SUPPLY.

(EIGHTEENTH ANNUAL REPORT FROM MUNICIPAL COUNCIL—1874.)

Presented to both Houses of Parliament, pursuant to Act 30 Vic. No. 36, sec. 75.

THE TOWN CLERK TO THE PRINCIPAL UNDER SECRETARY.

Town Clerk's Office,
Sydney, 17 February, 1875.

SIR,

I have the honor, by direction of the Right Worshipful the Mayor, to submit, for the information of the Parliament of New South Wales, the Eighteenth Annual Report of the proceedings of the Municipal Council of Sydney, under the Water and Sewerage Acts, during the year 1874.

I have, &c.,
CHAS. H. WOOLCOTT,
Town Clerk.

EIGHTEENTH YEARLY REPORT of the Municipal Council of Sydney, of their proceedings under the Water and Sewerage Acts.

THE Municipal Council of the City of Sydney have the honor to furnish, for the information of the Parliament of New South Wales, the following Report of their proceedings in connection with the Water and Sewerage Works, together with Statements of their Receipts and Expenditure during the year 1874.

WATER WORKS.

The engines and pumping machinery at Botany have been efficiently working throughout the year. Two engines out of the three have been constantly at work, excepting occasionally for three or four hours at a time, when the reservoirs have been signalled full.

Early in December it was found necessary to put on the third engine to keep up the supply, owing to the great demand for water during the dry weather, and since then the three engines have been continuously at work night and day, except when on the high level, when two engines only can be employed.

During the year no casualties have occurred to either the machinery at Botany or the 30-inch main.

In consequence of the heavy floods in the early part of May considerable damage was done to the dams on the Botany watershed. Nos. 1, 2, 4, and 5, with the mill-pond dam, gave way, the rush of water carrying with it the bridge and approaches at Botany Road—the approaches to the bridge over Black-water Creek, with fences, gates, &c.—and injuring house property and lands on the eastern side of the new embankment to the engine-pond reservoir. Immediate steps were taken to effect the necessary repairs, and at the same time great improvements were made, both in the construction of the works and the enlargement of the reservoirs. The alterations are as follow:—In No. 1 dam an additional 24-inch sluice was inserted, with 20-inch iron pipes, through the embankment, to assist the existing one, and which would facilitate the discharge of water during floods. No. 2 dam was restored by making up the embankment as before, the material for which was taken from the inside of the reservoir, thereby increasing its capacity by one million gallons. The embankment of No. 4 dam was raised 4 feet 6 inches higher, and strengthened very considerably, both by widening it and making the slopes much flatter. The weir in the embankment was done away with, and advantage was taken of a natural outlet at the west end of the reservoir to improve and form it into a waste weir 100 feet wide, to discharge into a series of lagoons, with a very gentle inclination, until it reached No. 1 dam. The area of No. 4 has thus been increased from 30 acres and 11 perches to 36 acres and 13 perches, and the capacity from 57 million gallons to 116½ million gallons. Since the repair this dam has been full of water for over three months.

The embankment and sluices of No. 5 dam have been done away with, as by raising No. 4 dam the water was brought to the same level, so that the former two dams are now one large reservoir.

No. 6 dam has been similarly treated to No. 4 by raising and widening the embankment and constructing a new waste weir through the solid ground on the southern side, with the overflow into No. 4. The area of No. 6 has been increased from 16 acres 3 roods to 24 acres 3 roods and 24 perches, and the capacity from 43 million gallons to 68 million gallons.

All the works in connection with the enlargement of the engine-pond reservoir have been completed and have proved most effective. The sluice gates and waste weir have been raised 6 feet 6 inches higher than they were formerly, or 8 feet over the highest spring tides. This precludes the possibility of the salt water ever getting into the dam. The puddling of the embankment down to the bed clay along its entire length has also proved to be efficiently done, as no water now escapes into the sea, and the water has been much longer retained in the dams above than on former years.

The raising of the water in the engine-pond reservoir has necessitated the raising of the wells in the engine house to a corresponding height. This work has also been satisfactorily completed.

There is now no anxiety felt for the safety of the dams during floods, as every precaution has been taken in forming the embankments to keep them sufficiently high above the water, and the width or solidity sufficient to resist the pressure; and by removing the waste weirs away from the embankments altogether the flood waters are diverted entirely from them.

The quantity of water that can be stored in the existing dams for Botany supply, independent of the Lachlan dams for the gravitation supply, is as follows:—

Name of Reservoir.	Area.	Capacity.
Engine-pond reservoir	50 acres.	100 million gallons.
Upper do	15 do	44 do
No. 1 do	20½ do	30 do
No. 2 do	26 do	36 do
Nos 4 & 5 do	40½ do	137 do
No. 6 do	25 do	68 do
Randwick do	35 do	49 do
Total	220½ acres.	464 million gallons.

For the supply of Botany engines, exclusive of the permanent stream, which by measurement has been found to be over 2 millions of gallons per day.

By this it will be seen how largely the storing capacity has been increased. At the time when the Water Commissioners made their report (May, 1869) they estimated the total quantity of water that could be stored in the existing dams to be ninety-seven million (97,000,000) gallons, and now the quantity is four hundred and sixty-four million (464,000,000) gallons.

Great alterations have been made, and extensive works constructed in the Lachlan Reserve to increase the supply by gravitation through the tunnel to the city. The first of the newly constructed dams is across the creek, about half a mile south of Waverley, being No. 1 or Waverley dam. The length of embankment is 5·33 chains—depth of sluice, 14 feet—area, 3½ acres—capacity, 9½ million gallons.

No. 2 dam, or "Fewings," is merely a filter dam, without any pipes or sluices. The embankment is formed entirely of pure sand, and the water escapes by percolation. The length of this embankment is 2·10 chains—depth, 8 feet—area, 1½ acre—capacity, 5½ million gallons.

No. 3, or Spring Creek, is fed entirely by percolation from the sandhills around, and a constant stream is flowing from it. To increase this stream a brick well is being sunk at the very source, the effect of which already, although not finished, is to largely increase the supply. The length of this embankment is 3 chains—depth, 19 feet 2 inches—area, 1½ acre—capacity, 5 million gallons.

No. 4 dam is formed where the waters from the other three converge. Length of embankment, 18·13 chains—depth, 9 feet 9 inches—area, 3 acres—capacity 8½ million gallons.

No. 5 dam is a large receiving reservoir, and has been completed but a few months, and since then no rain has fallen to fill it. Length of embankment, 31·48 chains—depth at sluice, 10 feet 9 inches—area, 15½ acres—capacity, 28 million gallons.

No. 6 dam, or "Cutts," receives its supply from the large area of land above Cutts', as well as from the overflow of No. 5 dam. Length of embankment, 23·29 chains—depth, 10 feet at sluice—area, 7 acres—capacity, 6 million gallons.

No. 7 dam, or "Fenwick's," the lowest of all, directly supplies the tunnel which conveys the water into the city by gravitation. Length of embankment, 27·26 chains—depth of water at tunnel mouth when full, 8 feet 6 inches—area, 13½ acres—capacity, 15 million gallons.

All these works have been constructed during the last three years, and their summarized capacities are as follow:—

Names of Reservoirs.	Area.	Capacity.
No. 1 or Waverley	3½ acres.	9½ million gallons.
No. 2 or Fewing's	1½ do	5½ do
No. 3 or Spring Creek	½ do	5 do
No. 4	3 do	8½ do
No. 5	15½ do	28 do
No. 6 or Cutts'	7 do	6 do
No. 7 or Fenwick's	13½ do	15½ do
Total	44½ do	77½ do

During the year 1874 the estimated quantity of water sent into the city by gravitation alone from this source was five hundred and fifty million (550,000,000) gallons. About the end of November all the water stored in the several dams was expended, and since then the permanent stream has been able to supply all the western parts of the city by Kent and Sussex streets.

The time has now arrived that something must be done, and that soon, to relieve the pumping machinery at Botany, as it will not do to wait until some gigantic scheme for future supply is inaugurated. Additional pumping power is necessary to deliver the requisite quantity of water required during the summer months; the demand for water of late has enormously increased, owing to the great growth of the City and suburbs.

The additional number of houses supplied since the Commissioners made their report in 1869 is three thousand three hundred and eighty-two (3,382), and the length of mains laid since the same period is twenty-five and a half (25½) miles.

The entire engine power has been employed continuously now for over two months, and if anything happened to either of the engines to necessitate its stoppage, the want of water would be severely felt.

Considerable additions and improvements have been made in the reticulation of the mains throughout the City. Formerly the districts of Redfern, Waterloo, Darlington, Camperdown, Forest Lodge, the Glebe, and Pyrmont were supplied by a 12-inch pipe off the 20-inch main, which supplies the City from Crown-street reservoir. A new 20-inch main has now been laid direct from the reservoir down Gipps-street to Elizabeth-street, where a junction has been made with the old mains, thus giving this large district a supply independent of the City supply, and considerably benefiting both.

The districts of Darlinghurst, Woolloomooloo, Potts' Point, Darling Point, and portions of Woollahra and Paddington were supplied off the 12-inch main at the junction of Bourke and Oxford streets, from the high service reservoir. A new 12-inch main has been laid direct from the 20-inch main in Botany-street, along that street to opposite the Darlinghurst Court House, where it joins the old mains, giving this district also a supply independent of the City.

The total quantity of water pumped up from Botany into the service reservoirs during the year 1874 was fifteen hundred and two millions four hundred and forty-four thousand four hundred and fifty eight (1,502,444,458) gallons (weekly average twenty-eight millions eight hundred and ninety-three thousand one hundred and sixty-three (28,893,163) gallons), being an increase on the year 1873 of one hundred and sixty millions eight hundred and thirty-four thousand nine hundred and six (160,834,906) gallons. This increase is accounted for by the extended dry season, and the extension of the mains to different parts of the City and suburbs.

The quantity of coal consumed by the Botany engines during the year 1874 was 6,120 tons, being an increase on the previous years of only 139 tons.

The number of new houses connected during the year was eight hundred and twenty-eight (828), and the total number of houses now receiving and paying for water is nineteen thousand eight hundred and seventy-four (19,874).

The number of meters fixed is two hundred and thirty-three (233); and the quantity of water registered as passing through them was fifty millions nine hundred and seventy-three thousand (50,973,000) gallons, yielding a revenue of five thousand eight hundred and eleven pounds fifteen shillings (£5,811 15s.)

The quantity of pipes laid during the year for the extension of water supply to the City and Suburbs, has been four miles and ninety-eight yards (4 $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$). (See Appendix A.)

SEWERAGE.

The main sewers throughout the City are in good order, and no repairs were required during the year.

Many of the minor sewers and pipe-drains were found to be either choked up, burst, or leaking badly, and had to be repaired, or taken up, cleared out, and relaid, whilst in some cases the levels had to be altered, and others puddled all round to prevent leakage. These improvements were effectual in the following places:—William and Forbes streets; Tank Stream, south of Hunter-street; Gipps and George streets; Kent-street, south of Bathurst-street; King-street West; Dowling-street, near William-street; Elizabeth-lane; at Barker's Tweed Factory; Washington-street; Castlemaine-lane; Burton-street and Gordon's-lane; Macquarie-street North; Elizabeth Bay Road; Broughton-place; Sussex-street, from Druitt-street northwards; Liverpool-street, between Crown and Riley streets.

The following additions to the main sewers have been completed or are in progress:—

A 3 feet 6 inch brick sewer opposite the New Post Office, from George-street to the Tank Stream, has been constructed, length, 225 feet.

An extensive sewerage work is now in course of construction for the Government, from the end of the stone sewer in Hay-street, to Darling Harbour, a length of about 1,170 feet. The works consist of an inlet and outlet 10 feet stone sewer, with a silt-pit intervening, which silt-pit is composed of six compartments with inlet and outlet chambers. Three hundred and twenty (320) feet of this sewer are now constructed, and the remainder of the work is being carried out most satisfactorily by the Contractor, Mr. W. Watkins.

Three hundred and four (304) additional house connections have been made with the sewers, making a total of seven thousand two hundred and six (7,206) houses throughout the city.

During the year six hundred and twelve (612) yards of stoneware pipe drains have been laid, of the dimensions and in the localities detailed in Appendix B.

FINANCIAL.

The Annual Statements of Receipts and Expenditure on account of the Water and Sewerage Works for the year 1874, certified by the City Auditors, are attached hereto.

Adopted by the Municipal Council of the City of Sydney, this sixteenth day of February, A.D. 1875.

CHAS. H. WOOLCOTT,
Town Clerk.

B. PALMER,
Mayor.

APPENDIX A.

WATER-MAINS laid during 1874.

3-INCH.			4-INCH—contd.		
	Pipes.	Yards.		Pipes.	Yards.
Hill-street, Surry Hills	9	28	Dowling-street, Surry Hills	22	67
Johnstone's Terrace, Darling Point	73	219	Campbell-street, Camperdown	46	136
Crown lane, off Campbell-street ...	5	14	Bennett-street, do	41	123
Denman-street, Glebe	43	125	Wyndham-street, Alexandria	83	249
Junction-street, Chippendale.....	16	46	Miller's Road, off Kent-street	32	96
West-street, Darlinghurst	10	30	Clyde-street, off Miller's Road	31	93
Crown-street, Ultimo.....	35	103	Gloucester-street, off George-street		
Dowling-street, Surry Hills	7	21	North	63	185
Total.....	198	586	Quarry-street, Ultimo ..	39	116
			A lane off Rose-lane, Darlington ...	27	79
			Leichhardt-street, Glebe	13	38
			Total.....	1,464	4,375
4-INCH.			6-INCH.		
Missenden Road, Camperdown.....	17	49	Essex-street, off George-st North	43	128
York-lane, off Clarence-street	11	33	Castlereagh-street, Redfern	133	398
Gordon-street, Camperdown	26	79	Redfern-street, Redfern.....	14	40
Pymont Bridge Road	13	39	Elizabeth-street, from Albion-street		
Johnson's-lane, off Bay-st., Glebe	34	103	southwards	78	233
A street off Glebe Road.....	119	356	Foveaux-street, from Elizabeth-st.		
Australia-street, Camperdown	51	153	to Macquarie-st. South	50	150
Derby-street, do	26	77	Macquarie-st. South, from Foveaux-		
Denison-street, do	129	385	street to Albion-street	71	211
Eaton-street, do	15	45	Total.....	389	1,160
Dowling-street, do	66	197			
Stephen-street, do	81	243	12-INCH.		
Ross-street, do	44	131	Botany-street, from Hill-street to		
Crown-street, Ultimo.....	10	29	the South Head Road	159	475
Gas-lane, off Kent-street.....	41	123			
Jenkins-street	18	54	20-INCH.		
Government Printing Office	44	133	Trunk-main in Gipps-street, from		
Woolloomooloo-lane, off Forbes-st..	26	76	Reservoir to Elizabeth-street ..	173	517
Johnson's-lane, off Palmer-st.	25	75			
Redfern-street, Redfern, and Eliza-					
beth-street South, off Redfern-	258	774			
street					
Ross-street, Camperdown	13	39			

APPENDIX B.

STONEWARE SEWERS laid during 1874.

9-INCH.		12-INCH.—contd.	
	feet.		feet.
Elizabeth-street South, continuation from end		Wright's-lane, off Gipps-street	100
of 12-inch.....	35	Rose-lane, north of Gipps-street	30
Margaret-lane, between York and Margaret		Kensington-street, off Paramatta-street	320
streets	115	Gipps-street, extension	60
		Johnson's-lane, off Bay-street	200
		Cumberland-street, between Gipps-lane and	
		Long's-lane	125
		Total.....	1,435
12-INCH.		18-INCH.	
Elizabeth-street South, from Bedford-street		Gipps-street, from the end of the brick sewer	
southwards	200	at Macquarie-street South.....	250
Kellett-street, off Upper William-street North	275		
Lower Campbell-street, off East-street	125		

APPENDIX C.

ABSTRACT of the Receipts and Disbursements of the Municipal Council of the City of Sydney, on account of the Water Fund, for the half-year ending 30 June, 1874.

Receipts.			Disbursements.		
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
From Water Works	17,872 19 1		The Colonial Government	213,337 19 3	
Miscellaneous receipts	133 16 10		Debentures outstanding	68,000 0 0	
Interest and premium	1,482 3 5	19,488 19 4	Union Bank	19,049 14 1	300,387 13 4
Balances due—			General Works	7,026 6 1	
The Colonial Government	213,337 19 3		Botany Works	13,003 12 0	
Debentures outstanding	86,500 0 0		Salaries of Officers	1,074 0 4	
Union Bank	5,493 16 9	305,331 16 0	Office expenses	320 6 9	
			Incidental expenses	37 12 0	
			Interest expense	2,362 4 10	21,433 2 0
		£324,820 15 4			£324,820 15 4

We have audited and examined the accounts from which the above statement is made up, and found the same to be correct.

R. A. TAYLOR,
PHILIP CALLACHOR, } City Auditors.

ABSTRACT

ABSTRACT of the Receipts and Disbursements of the Municipal Council of the City of Sydney, on account of the Water Fund, for the half-year ending 31 December, 1874.

Receipts.			Disbursements.				
	£	s. d.	£	s. d.			
Water Works	17,008	0 2	18,713	2 8	By General Works	9,560	16 1
Miscellaneous Receipts	7 5	2 6			Botany Works	10,110	9 4
Balances, 31 December, 1874—					Salaries of Officers	1,683	6 8
The Colonial Government	213,337	19 3			Office Expenses	631	8 11
Debentures	86,500	0 0			Incidental Expenses	411	8 8
Union Bank	12,654	3 10			Salaries of Auditors	25	0 0
			312,492	3 1	Interest Expenses	2,981	0 1
					Balances, June 30, 1874—		
					The Colonial Government	213,337	19 3
					Debentures	86,500	0 0
					Union Bank	5,493	10 0
			£331,235	5 9			
						305,331	16 0
						£331,235	5 9

City Treasurer's Office,
Sydney, 30 January, 1875.

Audited, examined, and found correct,
R. A. TAYLOR,
PHILIP CALLACHOR.

ABSTRACT of the Receipts and Disbursements of the Municipal Council of the City of Sydney, on account of the Sewerage Fund, for the half-year ending 30 June, 1874.

Receipts.			Disbursements.				
	£	s. d.	£	s. d.			
Balances due—					Balance due 1 January, 1874—		
The Colonial Government	200,000	0 0			The Colonial Government	200,000	0 0
Debentures outstanding	167,000	0 0			Debentures outstanding	162,860	0 0
Union Bank	28,061	3 11			Union Bank	21,218	16 10
Advance Acct. of Debentures	4,000	0 0					
			394,061	3 11			
					General Works	1,379	3 7
					Interest expenses	5,920	8 2
					Salaries of officers	342	15 4
			£394,061	3 11			
						7,612	7 1
						£394,061	3 11

We have audited and examined the accounts from which the above statement is made up, and find the same to be correct.

R. A. TAYLOR,
PHILIP CALLACHOR, } City Auditors.

ABSTRACT of the Receipts and Disbursements of the Municipal Council of the City of Sydney, on account of the Sewerage Fund, for the half-year ending 31 December, 1874.

Receipts.			Expenditure.				
	£	s. d.	£	s. d.			
Premium and Interest on Sale of Debentures	1,617	9 0	6,077	9 1	General Works	1,465	18 11
Miscellaneous Receipts	30	0 0			Interest Expenses	5,578	5 8
Sinking Fund	4,430	0 1			Salaries of Officers	317	1 8
Balances, 31 December, 1874—					Balances due 30 January, 1874—		
The Colonial Government	200,000	0 0			The Colonial Government	200,000	0 0
Debentures	189,390	0 0			Debentures	162,000	0 0
Union Bank	6,003	1 1			Union Bank	25,061	3 11
			595,993	1 1	Debenture Advance Account	4,000	0 0
			£402,070	10 2			
						394,661	3 11
						£402,070	10 2

City Treasurer's Office,
Sydney, 30 January, 1875.

Audited, examined, and found correct,
R. A. TAYLOR,
PHILIP CALLACHOR, } Auditors.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

METROPOLITAN WATER SUPPLY.

(NEPEAN AND CATARACT RIVERS—RETURN SHOWING QUANTITY OF WATER THAT WOULD HAVE BEEN AVAILABLE FROM 30th NOVEMBER, 1874, TO 31st JANUARY, 1875.)

Ordered by the Legislative Assembly to be printed, 24 March, 1875.

QUESTION FOR TUESDAY, 23 MARCH, 1875.

MR. MACINTOSH *to ask* THE COLONIAL SECRETARY.—

(1.) Will he be pleased to lay a Return on the Table of the House, showing the estimated quantity of Water that would have been available, in accordance with the Report of the Royal Water Commission for the Metropolitan Water Supply in the Nepean River, at the Pheasant's Nest, during each month of 1874?

(2.) The same information with reference to the Cataract River, where the proposed tunnel will intersect that watercourse?

(3.) The quantity of water that would have been available for such supply from each source during each week from November 30th, 1874, to January 31st, 1875, under same conditions as recommended by the Water Commission?

(4.) Has the Government received any information with reference to the engagement of an Hydraulic Engineer from England?

STATEMENT showing the estimated quantity of Water that would have been available, in accordance with the Report of the Royal Water Commission for the Metropolitan Water Supply, in the Nepean River, at the Pheasant's Nest, during each month of 1874; and the same information with reference to the Cataract River, where the proposed tunnel will intersect that watercourse, together with the quantity of Water available for such supply from each source during each week from November 30th, 1874, to January 31st, 1875, under same conditions as recommended by the Water Commission.

Questions 1 and 2.

Date.	Quantity of Water measured as flowing over Weir.			Stored in Reservoir and available for supply to Sydney.
	Nepean River.	Cataract River.	Total— Nepean and Cataract Rivers.	
1874.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.
Month of—				
January ...	1,313	1,107	2,420	7,000, equal to 583½ days' supply, at 12,000,000 gallons daily.
February ...	33,592	4,100	37,692	7,000, " " " " " "
March	3,503	2,145	5,648	7,000, " " " " " "
April	1,850	1,132	2,982	7,000, " " " " " "
May	4,559	2,515	7,074	7,000, " " " " " "
June	5,341	4,610	9,951	7,000, " " " " " "
July	8,307	5,744	14,051	7,000, " " " " " "
August ...	7,267	3,430	10,697	7,000, " " " " " "
September..	888	306	1,194	7,000, " " " " " "
October ...	1,375	420	1,795	7,000, " " " " " "
November..	457	328	785	7,000, " " " " " "
December..	254	66	320	6,917,* " 576½ " " " "
Total ...	68,706	25,903	94,609	
<i>Return continued to the 28th February, 1875.</i>				
1875.				
January ...	174	21	195	6,744, equal to 562 days' supply, at 12,000,000 gallons daily.
February ...	2,978	1,547	4,525	7,000,† " 683½ " " " "
Total ...	3,152	1,568	4,720	

* Reservoir full till the 11th December.

† Reservoir full again on 8th February.

Question 3.

Date.	Quantity of Water measured as flowing over Weir.			Stored in Reservoir and available for supply to Sydney.
	Nepean River.	Cataract River.	Total— Nepean and Cataract Rivers.	
1874.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.
Week ending—				
7 Dec.	82	29	111	7,000, equal to 583½ days' supply, at 12,000,000 gallons daily.
14 "	63	17	80	..... " 583 " " "
21 "	48	11	59	6,971, " 581 " " "
28 "	46	7	53	6,940, " 578½ " " "
1875.				
4 Jan.	39	5	44	6,900, " 575 " " "
11 "	44	4	48	6,864, " 572 " " "
18 "	44	7	51	6,831, " 569½ " " "
25 "	35	4	39	6,786, " 565½ " " "
1 Feb.	31	3	34	6,736, " 561½ " " "
Total ...	432	87	519	
		<i>Return continued to the 28th February, 1875.</i>		
1875.				
8 Feb.	628	281	909	7,000, equal to 583½ days' supply, at 12,000,000 gallons daily.
15 "	634	202	836	7,000, " " " " "
22 "	775	601	1,376	7,000, " " " " "
28* "	937	463	1,400	7,000, " " " " "
Total ...	2,974	1,547	4,521	

* Six days only.

E. O. MORIARTY.
23 March, 1875.

1874.

NEW SOUTH WALES.

REPORT,

MINUTES OF PROCEEDINGS, RESOLUTIONS, &c.,

OF THE

CONFERENCE OF THE CHIEF INSPECTORS OF STOCK
FOR THE SEVERAL AUSTRALIAN COLONIES,

HELD IN SYDNEY, IN NOVEMBER, 1874.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

C O N T E N T S .

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CONFERENCE of the CHIEF INSPECTORS of STOCK for the Australian Colonies, held in Sydney, in November, 1874.

REPORT OF THE PROCEEDINGS OF THE CONFERENCE.

THE Conference was convened, at the instance of the Government of New South Wales, to consider the best means to be adopted for securing joint and simultaneous legislative action, on the part of all the Australian Colonies, in dealing with Infectious and Contagious Diseases in Stock.

The undermentioned Colonies were represented :—

<i>New South Wales :</i>	MR. ALEXANDER BRUCE.
<i>Queensland :</i>	MR. P. R. GORDON.
<i>South Australia :</i>	MR. C. J. VALENTINE.
<i>Tasmania :</i>	THE HONORABLE JAMES WHYTE.
<i>Victoria :</i>	MR. E. M. CURR.

Mr. Bruce having been appointed the Chairman of the Conference, laid before the Members a Statement of proposed proceedings, which was unanimously adopted, and ordered to be printed, to form portion of the proceedings.

After mature deliberation, the Conference agreed to the Resolutions submitted herewith on the undermentioned subjects :—

- (1.) Definition of Terms.
- (2.) Pleuro-pneumonia.
- (3.) The importation of Stock from places beyond the Australian Colonies.
- (4.) The extinction of Infectious and Contagious Diseases in Stock, and the conduct of the Stock Traffic between the different Colonies.
- (5.) The appointment of Quarantine Stations.
- (6.) Scab in Australia.
- (7.) Inspection Fee on Stock.
- (8.) Catarrh in Sheep.
- (9.) Foot-rot, Worms, and Fluke.
- (10.) Overstocking.
- (11.) Stock Statistics.
- (12.) Experiments for ascertaining the nature, cause, prevention and cure of Diseases in Stock.
- (13.) Co-operation of other Colonies invited.

In reporting these Resolutions, the Conference would earnestly express a hope that the Governments of the several Colonies will take measures, as soon as possible, to carry them into effect.

The Conference have considered it their duty to recommend the continuance of the existing prohibition on the importation of stock, with the exception of horses, and the extension of such prohibition until it shall be ascertained that certain diseases not now in Australia have been eradicated in Great Britain, when importations from thence may be resumed, under strict quarantine regulations, the nature of which are indicated in the proceedings of the Conference.

On

On reference to these proceedings, it will be observed that the Members of the Conference were not unanimous in opinion as to the mode of carrying out an extension of the prohibition. Mr. Curr desired to go further than the resolution arrived at by the majority, and thus continue prohibition until all infectious and contagious diseases, except scab, shall have ceased to exist in Great Britain.

Mr. Bruce was of opinion that importations from Great Britain alone might be admitted, when it has been ascertained that there are no cases of foot and mouth disease, or only a few isolated ones, and no rinderpest or sheep-pox, nor any other infectious or contagious disease in stock not known in Australia.

Mr. Valentine proposed determining the period for which the existing prohibition should be enforced.

Considering the magnitude of the interest involved, and the frightful results that must inevitably follow the introduction of rinderpest, foot and mouth disease, or sheep-pox, into the flocks and herds of Australia, and in view of recent fresh outbreaks of foot and mouth disease in Great Britain, the Conference has come to the conclusion that, for the present, the only safe and prudent course is to continue the prohibition, and watch the course of events there with reference to the suppression of infectious and contagious diseases.

In arriving at this conclusion, the Conference has been influenced by the consideration that foot and mouth disease, if introduced into the stock of Australia, would prove infinitely more destructive than it has done in England, where each individual case can be and is attended to with as much care as would be bestowed upon human beings; whereas in the Colonies any such course of treatment would be altogether impracticable.

The Resolutions arrived at were in most cases unanimously agreed to, but when any difference of opinion existed, it will be made apparent by reference to the proceedings herewith submitted.

The Conference would also draw the attention of the respective Governments to the papers on Pleuro-pneumonia, Scab in Sheep, Catarrh, Fluke, Worm Disease, and Foot-rot, and suggest that publicity should be given to them in such manner as may be deemed most expedient, more particularly for the purpose of stimulating inquiry into the subjects of Fluke, Worms, and Foot-rot.

Many other matters will be found in the proceedings of much interest to stockowners and the public, although the Conference does not consider it necessary to enumerate them in the Report.

In concluding the labours of the Conference, Mr. Bruce, as Chairman, begged to express to the Members of the Conference, on his own behalf, as well as on behalf of the Government of this Colony, his thanks for the careful and attentive consideration they have given to the subjects submitted to them, which he trusted would result in lasting benefit to the respective Colonies.

Votes of thanks were then heartily accorded to the Chairman and Secretary.

ALEX. BRUCE.
P. R. GORDON.
C. J. VALENTINE.
JAMES WHYTE.
E. M. CURR.

CONFERENCE OF THE CHIEF INSPECTORS OF STOCK OF THE SEVERAL AUSTRALIAN COLONIES.

RESOLUTIONS PASSED BY THE CONFERENCE.

1. Definition of terms—"disease," "infected," and "stock."
 2. Pleuro-pneumonia.
 3. Regulating the importation of Stock from places outside the Australian Colonies.
 4. Principles for Intercolonial Regulations for the extinction of Infectious or Contagious Diseases in Stock, and the conduct of Stock Traffic between the different Colonies.
 5. Appointment of Quarantine Stations.
 6. Scab in Australia.
 7. Inspection Fee on Stock.
 8. Catarrh in Sheep.
 9. Fluke, Foot-rot, and Worms.
 10. Overstocking.
 11. Stock Statistics.
 12. Experiments with the view of ascertaining the nature, cause, prevention and cure of Diseases in Stock.
 13. Co-operation of the other Colonies invited.
-

No. 1.**DEFINITION OF TERMS.**

That "disease" shall mean the diseases specified in the Programme of Proceedings of the Conference calling for legislative interference, as well as any other disease which the Governor in Council may declare to be an infectious or contagious disease for the purposes of the Act.

That "infected" shall mean and apply to stock actually suffering from or affected with any such infectious or contagious disease, or which have within the next preceding six months been in direct or indirect contact with stock so suffering or affected, or been dressed or dipped for scab within that period, and one infected animal in a mob is held to render the mob or flock infected.

That "stock" shall mean horses, cattle, sheep, goats, and pigs, and any animal whatsoever that the Governor in Council may declare to be subject to the provisions of the Act.

No. 2.**PLEURO-PNEUMONIA.****LEGISLATION SUGGESTED.**

1. That every mob of cattle which has become infected be inoculated when the virus can be obtained in the mob or in any cattle within a practicable distance.
2. That owners give notice of every outbreak of the disease to their neighbours, to Inspectors, and to the public.
3. That no inoculators but those authorized by the Government be allowed to inoculate for others.
4. That properly inoculated cattle depasturing on a run, on the expiry of *six weeks* from the last case of disease, be allowed to leave the run and to pass over infected ground without being deemed infected.
5. That all travelling cattle actually affected with or suffering from pleuro-pneumonia be killed immediately they are found to be so.
6. That if the travelling cattle in which any animal is thus found to be actually affected be fat stock, they be taken by day to their destination by the roads least likely in the opinion of an Inspector to spread the disease, and timely notice be given by their drovers to all owners of horned stock on or near the road that the mob is infected.
7. That where the travelling cattle in which any animal is thus found to be actually affected with pleuro-pneumonia are store stock, they be stopped and inoculated as soon as practicable, and afterwards taken to their destination, as provided for in the next preceding regulation; but such cattle be not required to travel more than six miles a day for the first thirty days after being inoculated.
8. That in Colonies in which pleuro-pneumonia exists, the owner of travelling cattle give notice of his intention to cross or pass along runs where stock of the same description are kept, if the road be not separated from the run by a sufficient fence.
9. That drovers do not abandon any travelling stock, nor leave the carcasses of any stock which may die undestroyed.

No. 3.**SUGGESTIONS FOR REGULATING THE IMPORTATION OF STOCK FROM PLACES OUTSIDE THE AUSTRALIAN COLONIES.**

1. That the existing prohibition against the introduction of all stock, except horses, from places outside the Australian Colonies, be allowed to stand.
2. That, with the view of keeping the respective Governments informed on the subject, their Agents-General be instructed to obtain from the Secretary of Her Majesty's Veterinary Department, London, a monthly report as to what infectious and contagious diseases then exist among the live stock of the United Kingdom, and to what extent they are each known to prevail; and that the Agents-General transmit this report by mail, and when necessary by telegram, to their respective Governments.
3. That on the expiry of the existing prohibition it be again renewed, and maintained until it is ascertained that no foot and mouth disease, rinderpest, nor sheep-pox, nor any other infectious or contagious disease in stock not known in Australia exists in Great Britain and Ireland, when importations might be allowed under the conditions hereinafter mentioned.*
 - (1.) That the introduction of all stock except horses shall be absolutely prohibited from all other Countries, except Great Britain and Ireland, and also from all Colonies except those agreeing to these Regulations.
 - (2.) That when importations from the United Kingdom are renewed, all stock intended to be introduced from thence into Australia be examined at the port of shipment by a duly qualified veterinary surgeon, appointed conjointly by the Agents-General for the several Colonies, who shall make a declaration that to the best of his knowledge and belief such stock are free from any infectious or contagious disease.
 - (3.) That the live stock (if any) for the use of the passengers put on board the same ship as the stock intended to be introduced into the Colonies, be examined by the same veterinary surgeon, and certified in like manner to be also free from infection.
 - (4.) That every ship from places beyond the Australian Colonies, on arrival there, be boarded by an Inspector, and all stock intended to be landed from such ship, previous to being so, be examined by a duly qualified veterinary surgeon, or medical man when a veterinary surgeon cannot be obtained.
 - (5.) That if such stock, or any stock whatever on board such ship, be found to be infected with any infectious or contagious disease not already introduced into any of the Colonies, all such stock be forthwith destroyed.
 - (6.) That if apparently free from disease not known in the Colonies, the stock intended to be landed be disinfected on board ship, and conveyed to a thoroughly isolated quarantine, to be there properly disinfected and to undergo a probationary detention, at the owner's expense, of fifty days at least.

* The Conference were not unanimous on this Resolution.

No. 4.

PRINCIPLES FOR INTERCOLONIAL REGULATIONS FOR THE EXTINCTION OF INFECTIOUS OR CONTAGIOUS DISEASES IN STOCK, AND THE CONDUCT OF THE STOCK TRAFFIC BETWEEN THE DIFFERENT COLONIES.

I.—INFORMATION TO NEIGHBOURING COLONIES.

1. That the Chief Inspector in each Colony communicate by telegraph full and distinct information as to the position, extent, and nature of every outbreak of infectious or contagious disease in stock, as quickly as possible, to the Chief Inspectors of the other Colonies.
2. That the Inspectors in the border districts be instructed to send immediate information by telegram to the nearest Inspectors of the neighbouring Colonies of every outbreak of such disease which occurs within fifty miles of the border.
3. That the road by which the disease was introduced, and the history of the outbreak, as well as the possibility of its extension, are to be carefully examined into, and the Inspectors for the districts into which this road leads in the neighbouring Colonies are to be always put in possession of these particulars with the least possible delay.
4. That every Colony in which any such disease exists shall publish quarterly in the Government Gazette a report upon the state of the disease, what prohibitory measures have been issued, their alteration or rescindment.
5. That this report be sent direct to the Chief Inspectors for the different Colonies.

II.—MEASURES FOR THE ERADICATION OF DISEASE.

6. That a Fund to be called the Stock Fund be raised by a contribution on stock, to defray the payment of compensation and other expenses incurred in the prevention and extinction of Infectious Diseases in Stock.
7. That each Colony forthwith initiate such measures as shall effect the speedy extinction of all infectious or contagious diseases in stock which are controllable by quarantine, and shall take such measures with respect to all these diseases not so controllable as shall prevent their spread and tend to their gradual extinction.
8. That while provision should be made in all such measures for the punishment of owners who keep or move infected stock to the detriment of others,—the means chiefly to be relied upon for the eradication of disease should not be the enforcement of penalties, but the initiation and maintenance of such a system of inspection as will insure the discovery by the authorities and the public of every outbreak of disease *immediately it is observable*, with the view to the infected stock being at once placed in quarantine, and steps taken for the speedy eradication of the infection on the ground where the outbreak occurs.
9. That in order to remove every inducement to the owners of infected stock to conceal the fact of their being so, all animals killed and goods destroyed by order of the Government, for the purpose of suppressing disease, be paid for by the Government, at a rate equal to their value at the time they are destroyed; and the expenses incurred in destroying such stock or goods be also borne by the Government.
10. That all conveyances which have served for the transport of live stock, and all fittings and articles which have been used by or with such stock, and from which there is any risk whatever of infection spreading, shall be disinfected before being again used; as well as all conveyances, fittings, and articles which have served or been used in the transport of manure, fodder, litter, or other matters which have had their origin or been in contact with animals suspected of disease.

III.—CONDUCT OF INTERCOLONIAL STOCK TRADE.

11. That where there is no infectious or contagious disease in the stock of any two or more Colonies, nor any risk of infection being conveyed, such stock be introduced *overland*, from one Colony to the other, without being obliged to cross at specified crossing-places or to wait for inspection; and sheep arriving by *sea* from a Colony in which no scab exists, undergo a quarantine of fourteen days with two (2) dressings.
12. That where an outbreak of disease occurs in any Colony, the neighbouring Colonies may, pending the extent and risk of the outbreak being definitely ascertained, at once issue a prohibition against the introduction of stock from such Colony; and the duration of such prohibition shall depend upon the amount of risk arising from such outbreak.
13. That if it be clearly shown that the outbreak in such Colony is only an isolated one, or only of a limited extent, and confined to only one or two districts, and that the measures for isolation and extinction are there being effectually carried out—in that case the stock from the remaining non-infected portions of such Colony, situated at a safe distance from any spot where infection exists, may be introduced into the neighbouring Colonies under the following conditions, namely:—

1. *As regards all stock,—*

- (1) That they are admitted at appointed crossing-places only.
- (2) That the stock be accompanied by a certificate from the Inspector of the District from which they started, containing the following particulars:—(a.) Whether or not the stock are infected. (b.) The place from which they started. (c.) The nearest infected stock to such place. (d.) The nature and extent of the disease affecting such stock. (e.) The route by which the stock intended to be introduced are to travel to the crossing-place. (f.) The nearest infected stock to any portion of such route.
- (3) That they are inspected at such place previous to crossing or landing, and be found to be apparently sound.

2. *As regards sheep,—*

- (4.) That when introduced overland they be branded with a letter, to indicate the Colony from which they are to be introduced,—say N for New South Wales, Q for Queensland, A for South Australia, and V for Victoria.
 - (5.) That where they are conveyed by train, the trucks in which they are carried shall have been thoroughly cleansed and disinfected, to the satisfaction of the Inspector, previous to the sheep being put into them; and when introduced by water, that the portion of the vessel where they are to be penned shall have been cleansed and disinfected in the same way.
 - (6.) That sheep proposed to be introduced by land into any Colony undergo a quarantine of fourteen days within the border of such Colony, and during that period be dipped not less than twice to the satisfaction of an Inspector; but the conditions contained in this suggestion may be modified by any two Colonies by mutual agreement.*
 - (7.) That they do not leave the quarantine until the Inspector in charge shall certify that they are free from disease.
14. That all certificates shall state for how long they are available.
15. That when any disease is equally prevalent in the cattle stock of two or more Colonies, these Colonies allow cattle to cross their borders without compelling them to do so at specified crossing-places, or to wait for inspection.*
16. That the trade in thoroughly dry skins, bones, horns, hoofs, melted tallow in casks or skins, cow-hair, and goats' hair, in so far as those latter objects are packed in sacks or bales, as well as straw, hay, and other substances, between a non-infected and an infected Colony, be exempt from the operation of these suggestions.
17. That a Colony be not bound to compensate for any stock which may be attacked by disease and have to be killed, if such stock have not been the preceding sixty days at least within such Colony, unless it can be proved that the infection took place in the Colony itself.

* The Conference were not unanimous in this Resolution. See Proceedings.

No. 5.

APPOINTMENT OF BORDER QUARANTINE STATIONS.

1. The Conference is of opinion that it is desirable that quarantine stations for the admission of sheep from Victoria and Tasmania into New South Wales should be established without delay at Moama and Albury, inasmuch as the present restrictions operate most prejudicially to the interests of sheepowners in Riverina, Victoria, and Tasmania, without being at all necessary on sanitary grounds, because the same precautions which are now taken against the introduction of disease at the port of Sydney may as easily be observed at quarantine stations on the river Murray.
2. The Conference is also of opinion that a quarantine station should be established at or near Apsley, on the borders of South Australia and Victoria.

No. 6.

SCAB IN AUSTRALIA.

That while acknowledging the magnitude of the undertaking of eradicating scab in Victoria (where the number of infected sheep at one time exceeded 5,000,000) and the innumerable difficulties encountered in carrying out the work, as well as fully appreciating the progress already made in that direction, there being now only about 120,000 sheep in quarantine in that Colony, as well as the fact that nearly the whole of the sheep in Tasmania, amounting to 1,700,000, once infected, have now been reduced to 27,000,—this Conference is of opinion that it is most desirable that all sheep henceforward found scabby in Australia, as well as the flocks in which they are found running, should be destroyed as soon as practicable, but in no case later than the 1st January, 1876.

The reasons that induce the Conference to pass this resolution are the following:—

- (1.) The existence of scab in any of the Colonies is a source of real danger to the flocks in the other Colonies.
- (2.) It entails very great expense on some of the Colonies, and a considerable amount on them all, in the protection of their sheep from infection.
- (3.) It puts a stoppage to free trade in sheep in Australia, and thus causes very heavy losses to all the other Colonies, not only through preventing the trade in store and breeding sheep, but also in the impediments it throws in the way of the introduction of improved stud sheep from one Colony to another.
- (4.) The immense losses that are sustained by all the other Colonies through the existence of scab in Victoria and Tasmania, in various ways, even when the disease is not allowed to spread beyond these Colonies.

These considerations are altogether irrespective of the incalculable losses sustained by Victoria and Tasmania through the continued existence of scab within their own borders.

No. 7.**INSPECTION FEE ON STOCK.**

That it is undesirable that any inspection fee be charged by one Colony on the stock introduced from another Colony, inasmuch as such a charge would tend to prevent the initiation of uniform legislation and combined action by the different Colonies for the eradication of disease.*

* The Conference were not unanimous in this Resolution.

No. 8.**CATARRH IN SHEEP.**

The Conference advise that all sheep infected with catarrh be destroyed.

No. 9.**FOOT-ROT, WORMS, AND FLUKE.**

That although the Conference expresses no opinion on the paper submitted by Mr. Valentine respecting the destruction in South Australia of sheep affected with fluke, they consider that it is unjust towards those owners whose sheep are free from such diseases as foot-rot, worms, and fluke, and especially to those whose country is not decidedly safe from infection (and they amount to about 30 per cent. of the whole), that sheep infected with any of these ailments should be allowed to travel over such country and infect sound sheep; but that with the information at present before them, they are not yet prepared to say how the evil should be met by legislation.

No. 10.**OVERSTOCKING.**

That this Conference desires to point out that the system of overstocking, so generally carried out over the whole of the Colonies, has had a most injurious effect on the pastures and stock; that it has reduced the size and injured the constitution, and is a great source of disease in stock generally.

No. 11.**STOCK STATISTICS.**

That the several Governments be invited to take power, where they do not possess it, to obtain returns from owners of the number of their stock and of all diseases affecting them.

No. 12.**EXPERIMENTS WITH THE VIEW OF ASCERTAINING THE NATURE, CAUSE, PREVENTION AND CURE OF DISEASES IN STOCK.**

That the several Governments be invited to follow the example of Queensland, and authorize the expenditure of a sum of money for the purpose of meeting the expense of making experiments for ascertaining the nature, cause, prevention and cure of Diseases in Stock; and that the Chief Inspectors for the different Colonies regularly transmit the results of these experiments to each other, and otherwise compare experience.

No. 13.**CO-OPERATION OF THE OTHER COLONIES INVITED.**

That, although the Colonies of New Zealand, Western Australia, and Fiji are separated by long distances from the Colonies represented at this Conference, they should be invited to consider the opinions expressed and the Resolutions agreed to at the Conference, with a view to their adoption.

ALEX. BRUCE.
P. R. GORDON.
C. J. VALENTINE.
JAMES WHYTE.
E. M. CURR.

MINUTES OF PROCEEDINGS of the CONFERENCE of the Chief Inspectors of Stock for the several Australian Colonies herein specified, held at the Office of the Chief Inspector of Stock, Sydney, in November, 1874.

Office of the Chief Inspector of Stock, Sydney, 10th November, 1874.

THE undermentioned gentlemen were present, and represented the Colonies named respectively :—

New South Wales : MR. ALEXANDER BRUCE.
Queensland : MR. P. R. GORDON.
Tasmania : THE HONORABLE JAMES WHITE.
Victoria : MR. F. M. CURR.

Mr. Bruce informed the Conference that Mr. Valentine, the Representative of South Australia, would arrive by steamer to-day.

Mr. Whyte moved, and it was unanimously agreed to, that Mr. Bruce be appointed Chairman.

The Conference agreed to meet daily, at $\frac{1}{2}$ past 10 o'clock A.M., Saturday excepted; also, that the proceedings should not for the present be made public, except in so far as the Conference might consider to be necessary.

It was then resolved that the Secretary should prepare Minutes of each day's proceedings, which shall be read over and confirmed at the next sitting prior to any other business being entered upon.

The Chairman laid on the Table a copy of the letter forwarded by the Government of New South Wales to the Governments of the other Colonies calling the Conference,—also a short paper setting forth the reasons for taking that course, and submitting a Programme of Proceedings for consideration, which was adopted by the Conference. (See papers, Nos. 1 and 2, pages 18, 19, and 20.)

The undermentioned papers were then laid before the Conference, and directed to be printed :—

Mr. Bruce, on Pleuro-pneumonia.	} See papers appended.
Mr. Gordon, on Worms.	
Mr. Whyte, on Scab in Sheep.	
Mr. Curr, on Fluke.	

PLEURO-PNEUMONIA.

The Chairman stated his views on this disease, and the conclusions he had arrived at, after the most careful inquiry, and submitted for the consideration of the Conference the following Resolutions on the subject. (See paper No. 5, page 25.)

The Conference having maturely deliberated on the Resolutions in question, and proposed certain amendments, resolved that Resolutions 1, 2, 3, 5, 7, 8, 9, 10, and 11, as amended, be adopted, and that Resolutions 4 and 6 be expunged.

During the discussion on the above subject—

Mr. Whyte stated that pleuro-pneumonia was not known in Tasmania;

Mr. Curr, that it was prevalent to some extent in Victoria;

Mr. Gordon, that it prevailed in the North and Central Districts of Queensland; and

Mr. Bruce, that it was more or less prevalent throughout New South Wales.

PRINCIPLES FOR INTERCOLONIAL REGULATIONS FOR THE EXTINCTION OF INFECTIOUS OR CONTAGIOUS DISEASES IN STOCK, AND THE CONDUCT OF THE STOCK TRAFFIC BETWEEN THE DIFFERENT COLONIES.

The Conference then proceeded to consider the resolutions tabled on these subjects (see paper No. 3, page 21); and, after amending them in several respects, agreed to postpone their final consideration, as well as that of the interpretation of the word "infected," until Mr. Valentine was present.

The Conference adjourned at a quarter past 4 o'clock.

ALEX. BRUCE,
Chairman.

Office of Chief Inspector of Stock, Sydney, 11th November, 1874.

Present:—

New South Wales : MR. BRUCE.
Queensland : MR. GORDON.
South Australia : MR. VALENTINE.
Tasmania : MR. WHYTE.
Victoria : (Absent.)

The Conference having met at $\frac{1}{2}$ past 10 o'clock,—

Mr. Bruce intimated that he had received a communication from Mr. Curr, stating his inability to attend to-day in consequence of indisposition.

The Chairman informed the Conference that the papers ordered to be printed were not quite ready, and suggested that an adjournment should take place until the usual hour of meeting to-morrow, which was unanimously agreed to.

ALEX. BRUCE,
Chairman.

Sydney,

Sydney, Thursday, 12th November, 1874.

Present:—

New South Wales: MR. BRUCE.
Queensland: MR. GORDON.
South Australia: MR. VALENTINE.
Tasmania: MR. WHYTE.
Victoria: MR. CURR.

The Conference having assembled at the usual hour, the minutes of the proceedings on the 10th and 11th instant were read and confirmed.

Mr. Whyte proposed, and Mr. Curr seconded the following motion:—"That the business already decided by the Conference be re-opened, with the view of allowing Mr. Valentine an opportunity of expressing his opinion."

The Chairman then read the order of business agreed to on the 10th instant, which was affirmed.

The Resolutions relating to pleuro-pneumonia were then read *seriatim*, amended in certain particulars, and agreed to.

During the discussion upon "pleuro-pneumonia," Mr. Valentine stated that the disease only existed, in South Australia, in isolated cases, and came from travelling stock.

The Conference then resumed consideration of the meaning of the word "infected" in the Resolutions of the Conference.

Mr. Bruce moved that the meaning attached to the said word be as follows:—"Infected" shall be held to apply to any stock which are actually suffering from or affected with any infectious or contagious disease, or which have within the next preceding six months been in direct or indirect contact with stock so suffering or affected, or been dressed or dipped for scab, within that period; and one infected animal in a mob or flock shall be held to render the mob or flock infected.

"Stock" shall mean and include horses, cattle, sheep, pigs, and goats, as usually defined.

Mr. Curr thereupon moved the following amendment:—"That the meaning of the terms "infected stock" or "infected animals" (for the purposes of an Act) be "any live stock or animals suffering from any disease which at any time shall be declared under such Act or in Regulations thereunder to be infectious or contagious, as also any animal or stock which shall have been lately exposed to a serious risk of contracting any such disease."

After the fullest consideration of the subject, the Conference resolved as follows:—

That "disease" shall mean the diseases specified in the programme of proceedings of the Conference calling for legislative interference, as well as any other disease in stock which the Governor in Council may declare to be an infectious or contagious disease for the purposes of the Act.

That "infected" shall mean and apply to stock actually suffering from or affected with any such infectious or contagious disease, or which have within the next preceding six months been in direct or indirect contact with stock so suffering or affected, or been dressed or dipped for scab within that period; and that one infected animal in a mob or flock be held to render the mob or flock infected.

That "stock" shall mean horses, cattle, sheep, goats, and pigs, and any animal whatsoever that the Governor in Council may declare to be subject to the provisions of the Act.

The Conference then proceeded to discuss the subject of "REGULATIONS FOR THE IMPORTATION OF STOCK FROM PLACES OUTSIDE THE AUSTRALIAN COLONIES," as tabled. (See paper No. 4, page 22.)

And the Resolutions having been put *seriatim*,—

No. 1 was agreed to unanimously.

No. 2 having been proposed—

Mr. Curr proposed the following amended Resolution, viz.:—

"That in our opinion the introduction from Great Britain into the Australasian Colonies of sheep, cattle, pigs and goats, should be prohibited as long as infectious and contagious diseases (excepting scab) exist in that country."

Which having been put to the Conference, was negatived upon the following division:—

Aye.	Noes.
Mr. Curr.	Mr. Bruce, Mr. Gordon, Mr. Whyte, Mr. Valentine.

The following amendment was then proposed by Mr. Bruce:—

"That on the expiry of the existing prohibition, it be again renewed and maintained until it be ascertained that there are no cases of foot and mouth disease, or only a few isolated ones, and no rinderpest or sheep-pox, nor any other infectious or contagious disease in stock not known in Australia, existing in Great Britain."

Upon division the amendment was negatived as follows:—

Aye.	Noes.
Mr. Bruce.	Mr. Curr, Mr. Whyte, Mr. Gordon, Mr. Valentine.

A further amendment by Mr. Valentine for the insertion of the words "for twelve months" in lieu of the words "and be maintained," was then proposed and negatived upon the following division:—

Aye.	Noes.
Mr. Valentine.	Mr. Bruce, Mr. Curr, Mr. Gordon, Mr. Whyte.

The

The original Resolution was then proposed by Mr. Whyte, and carried upon the following division:—

Ayes.	No.
Mr. Whyte,	Mr. Curr.
Mr. Bruce,	
Mr. Gordon,	
Mr. Valentine.	

The sub-clauses were then proposed, and having been amended in a few minor particulars, were adopted.

No. 3 was agreed to.

Mr. Curr handed to the Conference a paper on the subject of Scab in Victoria, which was directed to be printed.

The Conference having reconsidered the "Principles of Intercolonial Regulations for the extinction of Infectious and Contagious Diseases in Stock, and the conduct of the Stock Traffic between the different Colonies," are of opinion that the further consideration of the subject be postponed until the next meeting.

The Conference adjourned at 5 o'clock.

ALEX. BRUCE,
Chairman.

Sydney, 13th November, 1874.

Present:—

<i>New South Wales</i> :	MR. BRUCE.
<i>Queensland</i> :	MR. GORDON.
<i>South Australia</i> :	MR. VALENTINE.
<i>Tasmania</i> :	MR. WHYTE.
<i>Victoria</i> :	MR. CURR.

The Conference met according to adjournment yesterday.

SUGGESTIONS FOR REGULATING THE IMPORTATION OF STOCK FROM PLACES OUTSIDE THE AUSTRALIAN COLONIES.

This subject was recommitted, and after amendment in certain particulars was finally adopted as in Resolutions, No. 3, page 6.

PRINCIPLES FOR INTERCOLONIAL REGULATIONS FOR THE EXTINCTION OF INFECTIOUS AND CONTAGIOUS DISEASES IN STOCK, AND THE CONDUCT OF THE STOCK TRAFFIC BETWEEN THE DIFFERENT COLONIES.

The Conference then resumed consideration of these subjects.

Clauses 1 to 10 having been proposed, were adopted with certain amendments.

Clause 11 was then considered.

Mr. Curr proposed the following Regulation under sub-section 7 of that clause.

"That sheep proposed to be introduced by land into any Colony undergo a quarantine of fourteen days within the border of such Colony, and during that period be dipped not less than twice, to the satisfaction of an Inspector."

Mr. Gordon proposed as an amendment that the words "not less than" be inserted before the words "fourteen days," which was negatived.

Mr. Bruce then proposed, as a further amendment, that the words "thirty days and three dressings" be inserted in lieu of the words "fourteen days and two dressings," which was negatived upon the following division:—

Aye.	Noes.
Mr. Bruce.	Mr. Curr,
	Mr. Whyte,
	Mr. Valentine,
	Mr. Gordon.

Mr. Curr's motion was then put, and carried on the following division:—

Ayes.	Noes.
Mr. Curr,	Mr. Bruce,
Mr. Whyte,	Mr. Gordon.
Mr. Valentine.	

Mr. Gordon moved the following new Regulation:—

"That sheep introduced by water from a Colony in which scab exists into any other Colony shall undergo a quarantine of thirty days, and be dressed not less than twice to the satisfaction of an Inspector."

Upon which an amendment was moved by Mr. Whyte, that "fourteen days" be inserted for "thirty" days, which was carried upon the following division:—

Ayes.	Noes.
Mr. Whyte,	Mr. Bruce,
Mr. Curr,	Mr. Gordon.
Mr. Valentine.	

The Chairman at this stage laid before the Conference a communication addressed by the Chief Secretary of Victoria to the Colonial Secretary of New South Wales, with respect to the establishment of a quarantine ground for sheep at Moama, or one of the other crossing-places on the Murray; and the same having been read by the Secretary,—

Mr. Whyte proposed, and Mr. Gordon seconded the following Resolution, which was unanimously adopted:—

"The Conference is of opinion that it is desirable that quarantine stations for the admission of sheep from Victoria and Tasmania into New South Wales should be established without delay at Moama and Albury, inasmuch as the present restrictions operate most prejudicially to the interests of sheepowners in Riverina, Victoria, and Tasmania, without being at all necessary

on sanitary grounds ; because the same precautions, which are now taken against the introduction of disease at the port of Sydney, may as easily be observed at quarantine stations on the river Murray."

Mr. Valentine proposed the following Resolution, which was unanimously adopted :—

"That a quarantine station be established at or near Apsley, on the borders of South Australia and Victoria."

The Conference having again resumed consideration of the proposed Intercolonial Stock Regulations, Mr. Bruce proposed the following Resolution, to stand as No. 11 :—

"That where there is no infectious or contagious disease in the stock of any two or more Colonies, nor any risk of infection being conveyed, such stock be introduced overland from the one Colony to the other, without being obliged to cross at specified crossing-places or to wait for inspection ; and sheep coming by sea from a Colony in which no such disease exists, to undergo a quarantine of fourteen days and two dressings."

The Resolution was agreed to.

Mr. Bruce then proposed the following new clause, to stand as No. 15 :—

"That where any disease is equally prevalent in the cattle stock of two or more Colonies, those Colonies allow cattle to cross their borders without compelling them to do so at specified crossing-places or to wait for inspection."

And the same having been put to the Conference, was agreed to upon the following division :—

Ayes.	No.
Mr. Bruce,	Mr. Curr.
Mr. Gordon,	
Mr. Valentine.	

Mr. Whyte did not vote.

Mr. Bruce proposed, and the Conference agreed to, the following clause to stand as No. 14 :—

"That all certificates shall state for how long they are available."

INSPECTION FEE ON STOCK.

Mr. Bruce proposed the following new Resolution to stand as No. 7 :—

"That no inspection fee be charged by any Colony on the stock introduced from any other Colony."

Upon which Mr. Curr moved as an amendment,—“That, in the opinion of the Conference, the motion is one affecting matters which do not come within the scope of the subjects to be dealt with by them.”

The further consideration of the subject was postponed until the next meeting.

The Conference adjourned at half-past 5 o'clock, until Monday next, at half-past 10.

ALEX. BRUCE,
Chairman.

Sydney, 16th November, 1874.

Present :—

New South Wales : MR. BRUCE.
Queensland : MR. GORDON.
South Australia : MR. VALENTINE.
Tasmania : MR. WHYTE.
Victoria : MR. CURR.

The Conference having met at half-past 10 o'clock,—

Scab in Sheep.

The paper furnished by Mr. Whyte on the nature, causes, and introduction of “Scab in Sheep” was fully considered.

Mr. Valentine stated that South Australia was clean as regards the disease ;

Mr. Gordon stated that Queensland was clean ;

Mr. Bruce stated that New South Wales was clean ;

Mr. Curr stated that about 120,000 were in quarantine in Victoria ; and

Mr. Whyte that 27,000 were in quarantine in Tasmania.

The Conference expressed its opinion that scab was not a disease of spontaneous generation, but was contracted by contagion ; and concurred in the opinions expressed by Mr. Whyte in his valuable paper, as to its nature and treatment.

SCAB IN AUSTRALIA.

With respect to scab now existing in Australia, the Conference unanimously agreed to the following resolution :—

That,—while acknowledging the magnitude of the undertaking of eradicating scab in Victoria (where the number of infected sheep at one time exceeded 5,000,000), and the innumerable difficulties encountered in carrying out the work, as well as fully appreciating the progress already made in that direction, there being now only about 120,000 sheep in quarantine in that Colony, as well as the fact that nearly the whole of the sheep in Tasmania, amounting to 1,700,000, once infected, have now been reduced to 27,000,—this Conference is of opinion that it is most desirable that all sheep henceforward found scabby, as well as the flocks in which they are found running, should be destroyed, as soon as practicable, but in no case later than the 1st January, 1876.

The reasons that induce the Conference to make the above recommendation are as follow :—

- (1.) The existence of scab in any of the Colonies is a source of real danger to the flocks in the other Colonies.

(2.)

- (2.) It entails very great expense on some of the Colonies, and a considerable amount on them all in the protection of their sheep from infection.
- (3.) It puts a stoppage to free trade in sheep in Australia, and thus causes very heavy losses to all the other Colonies, not only through preventing the trade in store and breeding sheep, but also in the impediments it throws in the way of the introduction of improved stud sheep from one Colony to another.
- (4.) The immense losses that are sustained by all the other Colonies through the existence of scab in Victoria and Tasmania, in various ways, even when the disease is not allowed to spread beyond the infected Colonies.

These considerations are altogether irrespective of the incalculable losses sustained by Victoria and Tasmania through the continued existence of scab within their own borders.

CATARRH IN SHEEP.

Mr. Bruce brought before the Conference a paper which he had prepared and published in the year 1869 on this subject, and the Conference, having duly considered the same, are of opinion that it should be printed and form portion of the series of papers laid before them for consideration.

During the discussion on the subject, Mr. Curr stated that he had been informed upon reliable authority, although he had no personal experience of the matter, that sheep suffering from catarrh camped for several nights upon newly-ploughed ground have, in some cases, recovered.

It was also stated that there had for several years been no outbreak of catarrh in any of the Colonies, and it was believed to have been finally eradicated.

The Conference having maturely deliberated on the subject, resolve that it would be expedient that all sheep infected with catarrh be destroyed.

WORMS IN SHEEP.

Mr. Gordon's paper on this disease was then considered, and the following information as to its extent in the several Colonies afforded.

Mr. Gordon stated that the disease prevailed in the Coast Country, and the southern portion of the western watershed of the Coast Range of Queensland.

Mr. Valentine stated that the disease was not known in South Australia.

Mr. Whyte stated that the disease was not known in Tasmania.

Mr. Curr stated that the disease prevailed to some extent in Victoria.

Mr. Bruce stated that it prevailed in the upland districts of New South Wales, excepting those of the Murray.

The Conference then considered how the disease spread, and, after careful consideration, arrived at the following conclusions as the principal causes:—

1. The deterioration of the pasture through overstocking.
2. The travelling of worm-infested sheep.
3. The absence of salts.

Further consideration and inquiry was however considered to be necessary, and the Members promised to make due inquiry in the Colonies represented by them.

The Conference then proceeded to discuss the best mode of dealing with the disease, and agreed to recommend the following treatment:—

- 1st.—*Preventive*. 1. Light stocking. 2. Debarring sheep infected from travelling. 3. Liberal supply of salt, *i.e.*, as much as the sheep will take.
- 2nd.—*Curative*. 1. Nitre and sulphur. 2. Sulphur and salt. 3. Decoction of horehound. 4. Oil and turpentine. 5. Areca nut.

The opinions expressed in Mr. Gordon's paper, and the conclusions he had come to, met with their entire concurrence.

FLUKE IN SHEEP.

Mr. Curr's paper upon this subject was then brought before the Conference for consideration, when it was elicited that—

1. The disease prevails very largely in Victoria.
2. Is generally prevalent in the upland districts of New South Wales.
3. Prevails in some portions of the Colony of Tasmania.
4. Exists in South Australia, but is confined to part of the south-eastern district.
5. Exists very little in Queensland, in consequence of sheep having been removed from districts in which it was prevalent.

The Conference quite agree with Mr. Curr in his remarks on the subject, and express their opinion that returns should be obtained and published from time to time, for general information, indicating where fluke, worms, and foot-rot in sheep exist, as a step towards staying the spread of these diseases, and the protection of sound sheep.

The Conference also advise the following preventive and curative treatment:—

1. Salt in abundance, and occasional doses of salt and sulphate of iron; or Mr. Thomas's remedy as set forth in Mr. Curr's paper.

FOOT-ROT IN SHEEP.

Mr. Valentine's paper upon this subject was then considered, when Mr. Curr stated that some cases of the disease existed in Victoria; Mr. Bruce, that it prevails to some extent in the upland districts of New South Wales; Mr. Whyte, that none exists in Tasmania; Mr. Gordon, that it is scarcely known in Queensland; and Mr. Valentine, that it does not exist to any very great extent in South Australia.

The Conference are of opinion that the disease in many instances and in several forms is caused by wet weather and the nature of the soil; and they are further of opinion (by a majority) that malignant foot-rot is decidedly contagious.

Mr. Gordon stated his views upon the subject, and promised to supply the Conference with a short statement of his experience in regard to the contagious nature of the disease, which was directed to be appended to Mr. Valentine's paper.

The Conference then considered the means for its prevention and cure, and recommend the following treatment:—

That the sheep be run through arsenic-water at a strength of 2 ozs. to the gallon, dissolved in water, or carbolic acid in proportion of 4 ozs. to 15 gallons, both heated to a temperature of 100° Fahrenheit.

Thorough paring and removing hoof where disease exists.

The Conference expressed their concurrence in the views expressed by Mr. Valentine, and the means for treating the disease recommended by him.

Mr. Valentine then proposed and the Conference unanimously adopted the following motion:—

“That this Conference desires to point out that the system of overstocking, so generally carried out over the whole of the Colonies, has had a most injurious effect on the pastures and stock: that it has reduced the size and injured the constitution, and is a great source of disease in stock generally.”

The Conference adjourned at 5 o'clock, until to-morrow at half-past 10 a.m.

ALEX. BRUCE,
Chairman.

Sydney, 17th November, 1874.

Present:—

New South Wales: MR. BRUCE.
Queensland: MR. GORDON.
South Australia: MR. VALENTINE.
Tasmania: MR. WHYTE.
Victoria: MR. CURR.

The Conference having met at half-past 10 o'clock, the minutes of the proceedings on the 13th and 16th instant were read and confirmed.

The Conference then resumed consideration of the motion respecting the abolition of an “inspection fee,” upon which Mr. Curr had moved an amendment; and Mr. Bruce having obtained permission to amend the motion, proposed the following:—

That it is undesirable that any inspection fee be charged by one Colony on the stock introduced from another, inasmuch as such a charge would tend to prevent the initiation of uniform legislation and combined action by the different Colonies for the eradication of disease.

Mr. Curr proposed the following amendment:—

That the motion before the Conference does not come within the scope of this Conference, and that the levying of inspection fees does not necessarily interfere with uniform legislation on the subject of the suppression of the diseases of animals.

The amendment having been proposed, was negatived upon the following division:—

Aye.	Noes.
Mr. Curr.	Mr. Bruce, Mr. Gordon, Mr. Whyte, Mr. Valentine.

The original motion was then put and carried—Mr. Curr did not vote.

TREATMENT OF FOOT-ROT, WORMS, AND FLUKE.

Mr. Bruce then proposed the following resolution, with respect to the papers laid before the Conference, by Mr. Valentine, on the subject of fluke in travelling sheep in South Australia, which was agreed to:—

“That although the Conference expresses no opinion on the action taken in this case, it considers that it is unjust towards those owners whose sheep are free from such diseases as foot-rot, worms, and fluke, and especially to those whose country is not decidedly safe from infection (and they amount to about 30 per cent. of the whole), that sheep infected with any of these ailments should be allowed to travel over such country and infect sound sheep; but that, with the information at present before them, they are not prepared to say how the evil should be met by legislation.”

Mr. Bruce also submitted the following motions, which the Conference agreed to:—

DISEASES IN STOCK STATISTICS.

That the several Governments be invited to take power, where they do not now possess it, to obtain returns from owners of the number of their stock and of all diseases affecting them.

EXPERIMENTS.

That the several Governments be invited to follow the example of Queensland, and authorize the expenditure of a sum of money for the purpose of meeting the expense of making experiments for ascertaining the nature, cause, prevention and cure of diseases in stock.

That the Chief Inspectors of the different Colonies regularly transmit the result of these experiments to each other, and otherwise compare experience.

Mr. Bruce then laid before the Conference a paper which he had prepared upon “Inoculation,” which the Conference resolved should be appended to, and form portion of, Mr. Bruce’s paper upon “Pleuro-pneumonia.” (See No. 6, page 27.)

Mr. Curr proposed, and the Conference unanimously agreed to, the following motion:—

That although the Colonies of New Zealand, Western Australia, and Fiji, are separated by long distances from the Colonies represented at this Conference, they should be invited to consider the suggestions and resolutions agreed to at the Conference.

The Conference then went into committee upon the subjects brought forward for discussion, and after much deliberation agreed to the Report herewith submitted.

Notes of thanks having been accorded to the Chairman and Secretary, the Conference adjourned
sine die.
ALEX. BRUCE,
Chairman.

CONFERENCE OF CHIEF INSPECTORS OF STOCK OF THE AUSTRALIAN COLONIES.

(HELD AT SYDNEY IN NOVEMBER, 1874.)

PAPERS SUBMITTED TO THE CONFERENCE, VIZ. :—

1. Introductory statement by the Chairman, and proposed programme of proceedings.
 2. Circular letter by the Government of New South Wales to the Governments of the several Australian Colonies.
 3. Principles of Intercolonial Regulations for the eradication of Diseases in Stock and conduct of Stock Traffic.
 4. Suggestions for regulating the Importation of Stock from places outside the Australian Colonies.
 5. Pleuro-pneumonia, by Mr. Alexander Bruce.
 6. Inoculation for Pleuro-pneumonia, by Mr. Alexander Bruce.
 7. Scab in Sheep, by The Honorable James Whyte.
 8. Do. in Victoria, by Mr. Edward M. Curr.
 9. Do. in New South Wales, by Mr. Alexander Bruce.
 10. Do. in South Australia, by Mr. C. J. Valentine.
 11. Catarrh in Sheep, by Mr. Alexander Bruce.
 12. Worms in Sheep, by Mr. P. R. Gordon.
 13. Fluke in Sheep, by Mr. Edward M. Curr.
 14. Foot-rot in Sheep, by Mr. C. J. Valentine.
 15. Do. by Mr. P. R. Gordon.
 16. Letter from the Chief Secretary of Victoria to the Colonial Secretary of New South Wales, in regard to Border Quarantine.
 17. Correspondence with respect to destruction of Sheep for Fluke in South Australia.
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No. 1.

INTRODUCTORY Statement by Mr. Alexander Bruce, Chairman of the Conference of the Chief Inspectors of Stock of the Australian Colonies, held in Sydney, in November, 1874, and proposed Programme of Proceedings.

I.—THE REASONS FOR CALLING THE CONFERENCE.

These I will give under two heads or branches.

1.—THE IMPORTANCE OF THE INTEREST INVOLVED.

The importance of the pastoral interest will be best seen by taking the latest available returns of the Horses, Cattle, and Sheep in the five Colonies represented at this meeting, and estimating their value and the Annual Return from them.

STATEMENT of the number and approximate estimate of the value of the Horses, Cattle, and Sheep, in New South Wales, Victoria, Queensland, South Australia, and Tasmania, in 1873.

Colony.	Horses.			Cattle.			Sheep.			Total value of Horses, Cattle, and Sheep in each Colony.
	Number.	Average rate per head.	Value.	Number.	Average rate per head.	Value.	Number.	Average rate per head.	Value.	
New South Wales...	328,074	5	1,640,370	2,710,374	4 0 0	10,841,496 0 0	20,000,000	10	10,000,000 0 0	22,481,566 0 0
Victoria	185,796	12	2,229,552	812,289	4 10 0	3,655,300 10 0	10,575,219	10	5,287,609 10 0	11,172,462 0 0
Queensland	90,000	5	450,000	1,400,000	4 0 0	5,600,000 0 0	7,403,334	8	2,961,333 12 0	9,011,333 12 0
South Australia ...	87,455	8	699,640	174,381	5 0 0	871,905 0 0	5,617,419	8	2,246,967 12 0	3,818,512 12 0
Tasmania	22,612	12	271,344	106,308	4 10 0	637,848 0 0	1,490,746	10	745,373 0 0	1,634,365 0 0
	713,877	.....	5,290,606	5,203,352	.....	21,668,549 10 0	45,086,718	.....	21,241,283 14 0	48,138,439 4 0

This makes the total value of the Horse, Cattle, and Sheep Stock of the five Colonies amount to more than £48,000,000,—a very large sum, and, as will be noticed, entirely exclusive of the value of the runs on which the stock are depastured, which of course is also affected to a very considerable extent by the state of the health of the stock.

APPROXIMATE Estimate of the Annual Return from the Horses, Cattle, and Sheep in the Colonies of New South Wales, Victoria, Queensland, South Australia, and Tasmania, taking the Annual "Cost" of Horses at $\frac{1}{4}$ th of the whole number, of Cattle at $\frac{1}{4}$ th, and of Sheep at $\frac{1}{4}$ th; and the average weight of the Clip in Victoria at 3 lbs. of washed wool per Sheep, and in New South Wales, Queensland, and South Australia at 2½ lbs. per Sheep. For Tasmania the average actual quantity of wool exported during the last four years is taken.

Colony.	Horses.			Cattle.			Sheep.			Wool.			Total Value of Annual Return from Stock in each Colony.
	Annual Cost.	Rate per head.	Value.	Annual Cost.	Rate per head.	Value.	Annual Cost.	Rate per sheep.	Value.	Clip.	Rate per lb.	Value.	
New South Wales...	41,011	6	246,066	451,729	5	2,258,645	4,000,000	10	2,000,000	50,000,000	1 6	3,750,000	8,254,711
Victoria	23,224	12	278,688	135,381	6	812,286	2,115,043	10	1,057,521	31,725,000	1 6	2,379,375	4,527,870
Queensland ...	11,250	6	67,500	233,333	5	1,166,665	1,480,666	10	740,333	18,500,000	1 3	1,156,250	3,130,748
South Australia ..	10,931	9	98,379	29,063	7	203,441	1,123,483	10	561,741	14,043,547	1 4	936,236	1,799,797
Tasmania	2,826	12	33,912	17,718	10	177,180	298,149	12	178,889	5,000,000	1 6	375,000	764,981
	89,242	...	724,545	867,224	...	4,618,217	9,017,341	...	4,538,484	119,068,547	...	8,596,861	18,478,107

The sum here shown as the annual return from the pastoral properties in the five Colonies, (say) £18,478,107, is a very large one, and proves the great importance of the pastoral interest to the Colonies. There is no doubt however but this amount, large though it be, might be considerably increased if the stock were as far as possible protected from diseases which are preventable; for were I to estimate the loss now sustained in the five Colonies by preventable diseases at only 5 per cent. of the annual return estimated as above at £18,478,107, that would give £923,905,—nearly a million sterling a year. If this be the case,—and there is very little question but that the loss is more than double that amount,—a determined and simultaneous effort ought surely to be made by all the Colonies to eradicate these diseases as far as circumstances will allow; and where that course cannot be entirely carried out with regard to some diseases, the endeavour should be made to circumscribe their scope and effect as much as possible.

Losses by Disease.

Approximate estimate of the Losses sustained by the Australian Colonies up to this date through preventable diseases in Stock:—

By pleuro pneumonia in Cattle	...	...	...	...	...	£8,000,000
By Scab in Sheep	...	...	...	...	...	20,000,000
By Catarrh	...	...	...	...	...	2,000,000
						<u>£30,000,000</u>

This

This is exclusive of the losses from Foot-rot, Fluke, and Worms, which are also to a certain extent at least infectious or contagious and preventable, and which must amount to a good many millions sterling. While the correctness of the estimate here given of the losses through disease cannot be fully established, it cannot, I am sure, on the other hand, be shown to be far from the truth.

At any rate, the amount set down as loss by Pleuro-pneumonia is within the mark, for it is now allowed on all hands that the first attack of that disease carried off from 30 to 40 per cent. of all the stock in New South Wales, and there have in some instances been two, three, and even four attacks since the first.

As to Scab, the losses from that disease have from first to last in this Colony been very great. In Victoria, some twenty years ago, it was estimated that there were 5,000,000 of infected sheep, and the losses in that Colony alone through the existence of the disease must be over 10 millions sterling. In Tasmania again, four years ago, almost all the sheep were infected, and had been for a great many years; while in South Australia and even in Queensland very severe losses have been sustained through this disease.

The losses from Catarrh,—which is now it is hoped finally eradicated,—were very heavy in this Colony, and also in Queensland and Victoria.

2.—CIRCUMSTANCES OF THE COLONIES.

1. The circumstances of the Colonies, as regards the keeping and moving of live stock, are such as to make the establishment and maintenance of a perfect quarantine impracticable, so far as regards cattle, and to render it a matter of certainty that if an infectious or contagious disease obtain a footing among that description of stock in any of the Colonies, it will soon spread to them all. The circumstances here alluded to are the following:—

- (1.) The extensive and constant intercolonial traffic in cattle, by which, if an infectious or contagious disease exist in any of the Colonies, it is certain to be spread to all the others—passing, as cattle frequently do, over a thousand miles of country, and through perhaps two or three different Colonies.
- (2.) The constant passing of bullock teams all over the Colonies and from one Colony to another, after, it may be, travelling through and camping on infected runs and mixing with infected stock.
- (3.) The straying of stock from one run to another, and from one Colony to another, and thus where they are infected carrying disease with them, in spite of any number of boundary riders.

As, therefore, the maintenance of a perfect quarantine is impracticable, it is useless for one Colony to attempt to protect itself against the introduction of any infectious disease which may appear in the cattle stock of any of the neighbouring Colonies, by issuing a proclamation against the introduction of cattle from the infected Colony.

2. Even where a quarantine can be maintained such as in the case of sheep, the want of similar and simultaneous action by all the Colonies has been a source of constant inconvenience and expense, and has led to the loss of millions of money to stockowners in the different Colonies, in the following ways:—

- (1.) By the issuing of prohibitions against the introduction of stock, and thus stopping the trade in stock which would otherwise exist.
- (2.) By the enforcement of regulations calling for the inspection and quarantine of stock on their introduction from other Colonies, thereby entailing inconvenience, expense, and loss of time.

II.—OBJECTS OF CONFERENCE.

1. To deliberate on subjects relating to the prevention of diseases in stock which are of Intercolonial importance.
2. With that view, to propose and discuss motions relating to such subjects.
3. To submit resolutions for the consideration of the Governments of the different Colonies.

III.—PROGRAMME OF PROCEEDINGS.

With the sole view of expediting the business of the meeting, and without the least desire to forestall the decision of the Conference in regard to the selection of questions for discussion, I beg leave to submit the following list of subjects for your consideration:—

1.—DISEASES CALLING FOR LEGISLATION.

1. What Diseases in Stock call for legislative interference, and which of them have obtained a footing in the Colonies and which not.

Diseases already in Australia.

1. Pleuro-pneumonia.
2. Scab in sheep.
3. Catarrh.

Diseases not yet in Australia.

4. Rinderpest.
5. Foot and mouth disease.
6. Small-pox in sheep.
7. Glanders in horses.

2.—DISEASES CALLING FOR CONSIDERATION.

1. Worms.
2. Fluke.
3. Foot-rot.
4. Cumberland disease.

3.—ORDER OF BUSINESS.

I would also, with the same view, propose that these subjects be discussed in the following order :—

1. Pleuro-pneumonia.
2. Importations from places beyond the Colonies.
3. Scab in sheep.
4. Worms in sheep.
5. Foot-rot.
6. Fluke.
7. Catarrh.
8. Cumberland disease in cattle and sheep.

4.—POINTS RELATING TO DISEASES TO BE DISCUSSED.

With respect to each of the diseases already in the Colonies, the following points might perhaps be discussed :—

- (a.) Nature.
- (b.) Cause.
- (c.) How it was introduced.
- (d.) To what extent it prevails.
- (e.) How it has spread.
- (f.) How it is to be dealt with.
- (g.) And, generally, any other questions relating to diseases in the colonial stock (whether infectious or not), and their prevention.

With respect to the diseases not now in Australia, the following questions will have to be discussed :—

- (a.) Which of these diseases are liable to be introduced?
- (b.) From what parts of the world is their introduction to be guarded against?
- (c.) Effect of their introduction?
- (d.) How is their introduction to be prevented?

5.—GENERAL SUBJECTS.

1. The framing of Intercolonial Regulations for the extinction of infectious and contagious diseases in stock, and the conduct of the stock traffic between the different Colonies.
2. The collection and publication of statistics with respect to disease, under the authority of the law in each Colony.
3. The carrying out, reporting, and comparing experiments for ascertaining the nature, cause, and cure of diseases in stock.

No. 2.

CIRCULAR Letter by the Government of New South Wales to the Governments of the several Australian Colonies.

THE COLONIAL SECRETARY, NEW SOUTH WALES, to THE CHIEF SECRETARY, VICTORIA.

New South Wales.
Colonial Secretary's Office,
Sydney, 14 July, 1874.

SIR,

I have the honor to transmit to you, herewith, a copy of the printed Report of the Chief Inspector of Stock for this Colony on the Infectious and Contagious Diseases in Stock prevailing in Europe, which affect or are likely to affect Australian live stock; and to request that the attention of your Government may be invited to the 6th and concluding section of that Report, in which it is suggested that, with the view of securing joint and simultaneous legislative action on the part of all the Australian Colonies in dealing with those diseases, the Chief Inspectors of all the Colonies concerned (each accompanied by a veterinary surgeon) should be invited to meet in Sydney to consider the question and report to their respective Governments on the subject.

2. The Governments of South Australia, Tasmania, and Queensland have been communicated with on the subject; and I have the honor to request that your Government may be invited to consider Mr. Bruce's suggestion, and that I may be apprised as early as convenient whether your Colony is prepared to assist in giving effect to his proposal.

3. It is proposed that the projected meeting of Chief Inspectors, &c., should be fixed for Monday, the 31st of August next.

I have, &c.,
HENRY PARKES.

Under separate cover.

No. 3.

PRINCIPLES for Intercolonial Regulations for the extinction of Infectious or Contagious Diseases in Stock, and the conduct of the Stock Traffic between the different Colonies, as submitted to the Conference.

I.—INFORMATION TO NEIGHBOURING COLONIES.

1. That each Colony communicate by telegraph full and distinct information as to the position, extent, and nature of every outbreak of infectious or contagious disease in stock as quickly as possible to the Chief Inspectors of the other Colonies.
2. That the Inspectors in the border districts be instructed to send immediate information by telegram to the nearest Inspectors of the neighbouring Colonies of every outbreak of such disease which occurs within fifty miles of the border.
3. That the track by which the disease was introduced, and the history of the outbreak, as well as the possibility of its extension, are to be carefully examined into, and the Inspectors for the districts into which this track leads in the neighbouring Colonies are to be always put in possession of these particulars with the least possible delay.
4. That every Colony in which any such disease exists shall publish quarterly in the Government Gazette a report upon the state of the disease, what prohibitory measures have been issued, their alterations or rescindment.
5. That this report be sent direct to the Chief Inspectors for the different Colonies.

II.—MEASURES FOR THE ERADICATION OF DISEASE.

6. In these suggestions the term "infected" is held to apply to any stock which are actually suffering from or affected with any infectious or contagious disease, or which have within the next preceding six months been in direct or indirect contact with stock so suffering or affected, or been dressed or dipped for scab within that period; and one infected animal in a mob or flock is held to render the mob or flock infected.

The term "stock" shall mean and include horses, cattle, sheep, pigs, and goats, as usually defined.

7. That each Colony forthwith initiate such measures as shall effect the speedy extinction of all infectious or contagious diseases in stock which are controllable by quarantine, and shall take such measures with respect to all these diseases not so controllable as shall prevent their spread and tend to their gradual extinction.

8. That in order to remove every inducement to the owners of infected stock to conceal the fact of their being so, all animals killed and goods destroyed by order of the Government, for the purpose of suppressing disease to be paid for by the Government, at a rate equal to their value at the time they are destroyed; and the expenses incurred in destroying such stock or goods be borne equally by the Government and the owners.

9. That all conveyances which have served for the transport of live stock, and all fittings and articles which have been used by or with such stock, and from which there is any risk whatever of infection spreading, shall be disinfected before being again utilized; as well as all conveyances, fittings, and articles which have served or been used in the transport of manure, fodder, litter, or other matters which have their origin or been in contact with animals suspected of disease.

III.—CONDUCT OF INTERCOLONIAL STOCK TRADE.

10. That where an outbreak of disease occurs in any Colony, the neighbouring Colonies may, pending the extent and risk of the outbreak being definitely ascertained, at once issue a prohibition against the introduction of stock from such Colony, and the duration of such prohibition shall depend upon the amount of risk arising from such outbreak.

11. That if it be clearly shown that the outbreak is only an isolated one, or only of a limited extent, and confined to only one or two districts, and that the measures for isolation and extinction are there carried out according to the same principles and with the same stringency as in neighbouring Colonies,—in that case the export of stock from the remaining non-infected portions of the first-mentioned Colony, situated at a safe distance from any spot in such Colony where infection exists, may be allowed to the neighbouring Colonies under the following conditions, namely:—

1. *As regards all stock,*—

- (1.) That they are admitted at appointed places only.
- (2.) That the drover shall supply a written statement giving the following particulars:—
(a.) Whether or not the stock have within the next preceding six months been in direct or indirect contact with infected stock. (b.) The place from which they started. (c.) The nearest centre to such place of any infectious or contagious disease in stock of the same description as those presented for inspection. (d.) The nature and extent of such disease. (e.) The route by which such stock travelled to the place on the border where they are inspected. (f.) The nearest centre of infectious or contagious disease as aforesaid to any portion of such route.
- (3.) That they are inspected at such place previous to crossing or landing, and be found to be apparently sound.

2. *As regards sheep,*—

- (4.) That when introduced overland they be branded with a letter, to indicate the Colony from which they are to be introduced—say N for New South Wales, Q for Queensland, A for South Australia, and V for Victoria.
- (5.) That they in every case be accompanied by a certificate of their freedom from disease, and of their not having been in direct or indirect contact with infected sheep during the next preceding six months: and that they have not been dressed for disease for six months previously.

(6.)

- (6.) That where they are conveyed by train, the trucks in which they are carried shall have been thoroughly cleansed and disinfected previous to the sheep being put into them; and when introduced by sea, that the portion of the vessel where they are to be penned was cleansed and disinfected in the same way.
- (7.) That they undergo a quarantine of a sufficient duration at the port of debarkation, or on the border, and be properly dressed with some thoroughly effectual dressing, to the satisfaction of the Chief Inspector.
- (8.) That they do not leave the quarantine until the Inspector in charge shall certify that they are free from disease.
12. That the individual Colonies shall communicate to one another by whom and in what manner these certificates have been drawn up, and for how long they are available.
13. That the trade in thoroughly dry skins, bones, horns, hoofs, melted tallow in casks or skins, cow-hair, and goats' hair, in so far as these latter objects are packed in sacks or bales, as well as straw, hay, and other substances, between a non-infected and an infected Colony, is exempt from the operation of these Regulations.
14. That a Colony be not bound to compensate for any stock which may be attacked by disease and have to be killed, if such stock have not been the preceding sixty days at least within such Colony, unless it can be proved that the infection took place in the Colony itself.
15. That the suggestions be recommended for the adoption of and be held to be binding upon the Governments of the Colonies represented at this Conference; and where the law in any of these Colonies does not place the Government in a position to carry out these suggestions, it is further recommended that in such cases the Government take the very earliest opportunity of obtaining the necessary Parliamentary sanction.
16. That the Colonies of Western Australia and New Zealand be invited to adopt these suggestions.

No. 4.

SUGGESTIONS for regulating the Importation of Stock from places outside the Australian Colonies, as submitted to the Conference.

1. That the existing prohibition against the introduction of all stock, except horses, from places outside the Australian Colonies, be allowed to stand.
2. That on its expiry it be again renewed, and maintained until it is ascertained that no foot and mouth disease, rinderpest or sheep-pox, nor any other infectious or contagious disease in stock not known in Australia exists in Great Britain, when importations from these Countries might be allowed under the conditions hereinafter mentioned.
- (1.) That the introduction of all stock except horses shall be absolutely prohibited from all other Countries, and also from all Colonies except those agreeing to these Regulations.
 - (2.) That, with the view of placing the Governments of the several Colonies in a position to carry out these proposals, their Agents-General be instructed to obtain from the Secretary of Her Majesty's Veterinary Department, London, prior to the departure of each mail for the Colonies, a report as to what infectious and contagious diseases then exist among the live stock of the United Kingdom, and to what extent they are each known to prevail.
 - (3.) That the Agents-General transmit this report by each mail, and when necessary by telegram, to the respective Governments.
 - (4.) That when importations from the United Kingdom are renewed, all pedigree stock intended to be introduced from thence into Australia be examined at the port of shipment by a duly qualified veterinary surgeon, appointed conjointly by the Agents-General for the General Colonies, who shall make a satisfactory declaration that to the best of his knowledge and belief such stock are free from any infectious or contagious disease.
 - (5.) That the live stock (if any) for the use of the passengers put on board the same ship as the stock intended to be introduced into the Colonies, be also examined by the same veterinary surgeon, and certified in like manner to be also free from infection.
 - (6.) That every ship from places beyond the Australian Colonies, on arrival there, be boarded by an Inspector, and all stock intended to be landed from such ship, previous to being so, be examined by a duly qualified veterinary surgeon, or medical man.
 - (7.) That if such stock, or any stock whatever on board such ship, be found to be infected with any infectious or contagious disease not already introduced into any of the Colonies, all such stock be forthwith destroyed.
 - (8.) That if apparently free from disease not known in the Colonies, the stock intended to be landed be disinfected on board ship, and conveyed to a thoroughly isolated quarantine, to be there properly disinfected and to undergo a probationary detention, at the owner's expense, of *fifty* days at least.
3. That the Colonies of New Zealand and Western Australia be invited to adopt these Regulations.

No. 5.

PLEURO-PNEUMONIA.

PAPER prepared by Mr. Alexander Bruce, Chief Inspector of Stock, New South Wales.

(Laid before the Conference of Chief Inspectors of Stock, held in Sydney in November, 1874.)

1.—NATURE.

Pleuro-pneumonia in cattle has its seat in the first instance in the blood, being febrile in its earliest stages, but becoming typhoid in its second and third or last stages, with a specific termination in disease of the lungs and pleuræ, the changes in which (in the shape of inflammatory exudation) hold the same relation to the true disease that the eruption in small-pox does to the blood state in that disease.

The best authorities are in favour of not regarding this as a local disease originating in and confined to the lungs and pleuræ. It is, therefore, properly speaking a misnomer to call it pleuro-pneumonia, for it may never reach the second or third stages and affect the lungs, but exhaust itself in the first or febrile stage; and it is upon this fact that the efficacy of inoculation is based.

2.—CAUSE.

It has now been settled beyond all question that the cause of pleuro-pneumonia is infection or contagion conveyed either directly or indirectly from the diseased animal to the sound.

In proof of this I might quote the opinions given by six authorities of the highest standing in Great Britain, in reply to a question put to them by the Directors of the Scottish Chamber of Agriculture, in September, 1868. The gentlemen I refer to were—

James B. Simonds, Royal Veterinary College, London ;
 Professor Williams, Principal of the Veterinary College, Edinburgh ;
 Professor M'Call, Principal of the Veterinary College, Glasgow ;
 Professor Hugh Fergusson, H.M.V.S., Veterinary Department, Ireland ;
 John Edwards, Esq., Abergele, North Wales ; and
 Finlay Dunn, Esq.

The question was—"Is the disease contagious, or how does it continue to exist?" and their answers were as follows:—

Simonds—Infectious.
Williams—Decidedly contagious.
M'Call—Do
Edwards—Very contagious.
Fergusson—Decidedly infectious and contagious.
Dunn—Distinctly contagious.

I may also add that every intelligent unprejudiced stockowner in the Colonies has arrived at the same conclusions from his own personal observations.

3.—INTRODUCTION AND SPREAD OF PLEURO-PNEUMONIA IN AUSTRALIA, AND THE LOSSES CAUSED BY IT.

Pleuro-pneumonia was introduced by a cow brought from England by Mr. Boadle, of the Plenty District in Victoria, and landed in Melbourne in 1858.

When the disease was first discovered among Boadle's cattle, steps were promptly taken to eradicate it. All the cattle on the farm were paid for by private subscription and destroyed, and the farm placed in quarantine; but through a greedy, ignorant neighbour putting some of his cattle into one of the infected paddocks, the measures adopted were rendered nugatory, and the disease spread throughout Victoria and to all the other Colonies. On its doing so, attempts were made one after another to stamp it out; but for the reasons which I have stated in my opening paper—the impossibility of establishing a perfect quarantine—these efforts all proved worse than useless, and the disease is now more or less prevalent in them all, and likely to be so without fresh legislation; for travelling stock are so frequently affected that, no sooner has a fresh race of animals grown up which have neither had the disease nor been inoculated, than they are infected by cattle travelling through their runs.

The losses caused by the disease during the thirteen years it has prevailed (it did not spread to any great extent till 1860) cannot be estimated at less than 40 per cent. of the whole number of cattle (say 5,000,000)—that is about 1,750,000 head, which at (say) £4 10s. a head, makes the total loss to the Colonies, through this disease, amount to nearly £8,000,000.

That

That this is a very moderate statement of the losses sustained throughout the Colonies will, I think, be allowed when it is recollected that the losses sustained by dealers and butchers on the roads are not included in the above percentage—that some herds have, during the period referred to, been attacked two, three, and even four times—and that while there are now three times as many sheep in this Colony as there were in 1862, there were, up to last year, actually fewer cattle in the Colony than in 1862.

4.—INOCULATION IN AUSTRALIA AND THE RESULT.

Upon the failure of these attempts to stamp out pleuro-pneumonia, which was caused, as has been explained, through the impossibility of maintaining a perfect quarantine, stockowners began to look round for some other means of combating the disease. They saw at once that their cattle were too wild, and of comparatively too little value to be doctored; they therefore turned to inoculation, which was recommended by Mr. Cleote, of Zandoliet, Cape Colony, in a letter published in the Sydney and Melbourne papers of December 1861; and the first to make the attempt was Mr. Thomas Mitchell, Little River, Victoria. Shortly afterwards the Messrs. M'Laurin, of Yarra Yarra, New South Wales, and other owners in their neighbourhood, also tried inoculation with decided success. These experiments, which were fully reported by me and published from time to time by the Government of New South Wales, speedily induced other stockowners, in all the Colonies, to try the operation; and inoculation, as a preventive for pleuro-pneumonia, is now generally practised in all the Colonies with decided success. I am quite within the mark when I say that up to this time a million and a half of cattle have been inoculated in Australia.

Notwithstanding that the first attempts at inoculation were made under the most unfavourable circumstances, a very large majority of the stockowners in all the Colonies from the first expressed themselves strongly in favour of the operation, and that majority has since gone on steadily increasing. Thus, when the opinion of the stockowners in New South Wales was asked in 1867, it was found that only in six districts out of thirty-four were they reported by the Inspectors as "not in favour of inoculation," and in only one of these six districts did the owners express themselves decidedly against it.

In April, 1869, again, 1,200 copies of a circular, containing a series of questions with respect to inoculation and its efficacy, were distributed by the Inspectors of Sheep among owners possessed of more than 200 head of cattle.

To those questions 501 replies were received, of which 279 were from owners who inoculated their herds, and 222 from those who did not do so. In the case of the former, the greater part of these replies convey the required information, but in many of the latter they are both meagre and incomplete.

Tabulated lists of these returns by owners were prepared by me, giving the substance of the more important replies; and from these lists again two abstracts were made up, which showed, with respect to owners *who inoculated* their herds, that there were 25 neither for nor against inoculation, 237 in favour of it, and 17 against it; or *about 14 for, to 1 against, inoculation*. Of the returns by owners *who did not inoculate*, there were 75 neither for nor against inoculation, 102 in favour of it, and 45 against it; or *about 7 for, to 3 against, inoculation*. While taking *both classes* of returns together, there were in all 100 neither for nor against inoculation, 339 in favour of it, and 62 against it; or, *upon the whole returns, about 5½ for, to 1 against, inoculation*.

The foregoing figures exhibit a very strong case in favour of inoculation—indeed, they establish its efficacy; but although they do so, it may not, perhaps, be out of place to call attention to an additional fact, elicited by this inquiry, which is strongly confirmatory of that result; it is,—that while the returns by the owners who inoculated show on the one hand that the disease, according to the size of the herd and the extent of the infection when inoculated, disappeared in the course of a *few weeks*, or at most of a few months, after the cattle were inoculated, those by the owners who did not do so show that, in many cases, the disease existed in their herds for *several years*. *In no case can it be gathered that the disease lasted over six months in a herd which had been properly inoculated*. On the other hand, again, it will be seen that the disease has in the uninoculated herds existed in 3 herds for 6 years, in 9 herds for 5 years, in 6 for 3 years, in 2 for more than 2 years, in 13 for 2 years, in 6 for 18 months, in 2 for 15 months, in 2 for 14 months, in 1 for 13 months, in 2 for more than 12 months, and in 11 for 12 months; *while it still exists in 18 of these herds, and has done so for periods of from 2 to 6 years*.

Since that inquiry was made, the practice of inoculation has become still more general in proportion to the extent of the prevalence of the disease,—the number of cattle affected being of course fewer than at first,—while the results have been far more satisfactory, the owners having gained more experience in the mode of inoculating. This is borne out by the returns annually received by me since that time, from the District Inspectors; but I need only trouble you with those for 1872 and 1873.

In 1872 the Inspectors in *twenty-two* districts report the owners as in favour of inoculation; in one district as against it, and in *one*, divided, while in *ten* districts no returns were received from owners on this subject. In 1873 again, the Inspectors in *twenty-six* districts report the owners in favour of that treatment, and in *three* districts as divided, while in *five* districts owners failed to return answers in regard to inoculation.

Stockowners found their belief in the efficacy of inoculation on the following grounds:—

1. That in almost every instance where inoculation is properly tried, the disease shortly disappeared from the herd, in a shorter or longer period, according to the size of the herd, but always before *three months* from the date of inoculation.

2. That while the disease thus disappears in a short time from the herds which are properly inoculated, it continues in those which are not inoculated for periods of from *two to six years*, according to the size of the herd.

3. That cattle which have been properly inoculated when sound, with a few solitary exceptions, never afterwards become diseased, although they may frequently mix and sometimes even be put into the same paddock as inoculated cattle which are dying of the disease.

4. That where the right sort of virus is used and the operation properly performed, and the weather not too hot, the deaths from inoculation never exceed more than *two* and seldom more than *one* per cent.

There have certainly been frequent instances of the failure of inoculation, but these could always be traced to one or other of the following causes:—

1. *To the cattle being badly diseased when operated upon.*—In most cases the owner did not inoculate until he was thoroughly alarmed, and he did not become so until he lost perhaps 15 or 20 per cent. of his cattle by the disease. The consequence was, that when he did inoculate *three-fourths* at least of his herd were diseased, although they perhaps did not appear to be so; and the operation would require to be a cure, as well as a preventive, to be thoroughly or even moderately efficacious under such circumstances.

2. *To the use of improper virus.*—The directions first received for selecting the right sort of lung and virus were very vague and meagre, and a great deal of virus which was worse than useless, in fact actually deleterious, was used by those who were most anxious to perform the operation correctly. Not only was a great deal of virus which was thoroughly unfit used in those ways by owners and others who were most anxious to perform the operation correctly, but many pretended professional inoculators, who knew little or nothing as to how the operation ought to be performed, and who did not care what sort of stuff they used, so long as they made, as they often did, from £5 to £10 a day, went about from station to station inoculating, and it was quite impossible that in their case the operation could be attended with success.

3. *To a wrong mode of operating.*—The first instructions on this head also were very defective, or rather erroneous. Even after better information had been obtained, and considerable experience acquired in taking the virus and inoculating, the operation was frequently badly performed through carelessness and haste.

4. *To the great heat of the weather when the cattle were inoculated.*—At certain seasons of the year the weather in Australia is by far too hot for an operation of this description when performed on quiet cattle, and it can easily be seen how very much worse it would be, and how many more cases there would be of mal-inoculation in such weather, with comparatively wild "bush" cattle, which are always heated and excited when driven into the yard, and almost maddened by the operation in the inoculating pen.

5.—INOCULATION IN ENGLAND.

Until the last few years, Professor Gamgee, late Principal of the New Veterinary College, London, was the only authority of standing in England who upheld inoculation for pleuro-pneumonia, and he is still a consistent supporter of that treatment.

I only met with two other veterinary surgeons in England who were so—Mr. Duguid of "The Browns" Institution, Wandsworth Road, and Mr. Priestman, Caledonian Road, London. Mr. Priestman had inoculated about a thousand cows with uniform success.

Although not an advocate for the practice, Professor Brown, Chief Inspector for Her Majesty's Veterinary Department, London, is a believer to a certain extent in its efficacy. He admitted to me, in December last, that the belief in it was gaining ground in England, and that the best course which could be adopted in Australia with infected cattle was to inoculate them.

Inoculation is also practised by the dairymen in the suburbs of London; and in the end of last year an inquiry was carried out, at the suggestion of Professor Gamgee, by Mr. Morgan Evans, among the dairies in those localities, when he found that of thirty-two dairymen who had inoculated their cattle there were thirty decidedly in favour of the practice.

INOCULATION ON THE CONTINENT OF EUROPE.

So far back as 1863 a resolution was passed by the First International Veterinary Congress of veterinary surgeons from all parts of Europe,—held at Hamburg, in July of that year at the suggestion of Professor Gamgee of London—"That all cattle suspected of being infected with pleuro-pneumonia should be inoculated"; and that while not a single voice was raised against the efficacy of inoculation, some of the members of the Congress—which included such men as Professors Gerlach and Hertwig of Berlin, Roll of Vienna, Nicklas of Munich, Haubner of Dresden, Hering of Stuttgart, and Gamgee of London—went so far as to propose that a law should be passed making the operation compulsory in all such cases.

I also found from personal inquiry, in November and December last, that the efficacy of inoculation was fully established in Belgium, Holland, Germany, Austria, France, and Italy. The heads of the veterinary departments in these Countries one and all expressed themselves decidedly in favour of inoculation, and, on learning from my letter to the "Veterinarian" the manner in which our cattle are kept and managed, strongly recommended its practice in Australia; in fact, they went so far as to say that no veterinary authority of any note on the Continent now disputed the efficacy of inoculation.

I further learned from Professor Muller, of Berlin, that the practice in Germany is,—when an outbreak occurs in such places as the beetroot sugar factories, where large numbers of cattle are fattened off on the refuse of the beet, and where there are, of course, frequent changes of stock,—to kill the diseased animal and inoculate the others. This practice is also generally followed in the case of outbreaks of pleuro-pneumonia in the large dairies where fresh cows are being constantly introduced.

RESOLUTIONS SUGGESTED.

From what has been said it will be gathered that the efficacy of inoculation for this disease is now thoroughly established on the Continent of Europe. I think I may safely say that it has long been so in Australia and also in South Africa, and it has latterly been practised with decided success in the United States of America. As, therefore, cattle affected with pleuro-pneumonia are still frequently kept and travelled, not only by those owners who are prejudiced against the practice of inoculation, but also by many who believe in its efficacy, but who defer inoculating until they send their fat cattle to market, or in other ways suit their own convenience,—I would suggest that a law should be passed in all the Colonies in which pleuro-pneumonia exists, containing some such provisions as the following:—

- (1.) That every mob of cattle which has become legally infected, *i.e.*,—in which there is any one or more animals which have been in direct or indirect contact with infected cattle,—be inoculated when the virus can be obtained in the mob or in any cattle within sixty miles of the place where the mob was found to be infected.
- (2.) That owners give notice of every outbreak of the disease to their neighbours, to Inspectors, and to the public.

- (3.) That none but properly qualified and licensed inoculators be allowed to inoculate for others.
- (4.) That all inoculated cattle be branded as such with a brand to be fixed upon.
- (5.) That properly inoculated cattle depasturing on a run, on the expiry of *six weeks* from the last case of disease, be allowed to leave the run and to pass over infected ground without being deemed infected.
- (6.) That cattle which become infected and are not inoculated should not be allowed to leave their run for *three months* after the last case of disease, nor to travel over infected ground.
- (7.) That all individual travelling cattle showing that they are actually affected with or suffering from pleuro-pneumonia be killed immediately they are found to be so.
- (8.) That if the travelling cattle in which any animal is thus found to be actually affected be fat stock, they be taken by day to their destination by the roads least likely to spread the disease, and timely notice be given by their drovers to all owners of horned stock on or near the road that the mob is infected.
- (9.) That where the travelling cattle in which any animal is thus found to be actually affected with pleuro-pneumonia are store stock, they be forthwith stopped and inoculated, and afterwards taken to their destination, as provided for in the next preceding regulation; but such cattle be not required to travel more than six miles a day for the first thirty days after being inoculated.
- (10.) That the owner of travelling cattle give notice of his intention to cross or pass along runs where stock of the same description are kept, if the road be not separated from the run by a sufficient fence.
- (11.) That the drover do not abandon any travelling stock, nor leave the carcasses of any stock which may die undestroyed, under a penalty not exceeding £1 when the stock are not infected and £50 when they are.

The conclusions then at which I arrive in regard to pleuro-pneumonia and its proper treatment in these Colonies are the following:—

1. That as in all other parts of the world, so in Australia, every attempt to cure this disease has proved utterly futile.
2. That the endeavours which were made in the Colonies to stamp it out by destroying the infected herds were complete failures, through the impossibility of maintaining a perfect quarantine.
3. That inoculation for pleuro-pneumonia is now very generally practised, and has proved a thorough preventive against the disease.
4. That under these circumstances the only course left for us is, either—
 - 1st. To let matters stand as they are, and allow those owners who are either too selfish or too prejudiced to inoculate their infected cattle, to travel them, as they are now doing, from one end of Australia to the other, leaving the dead and dying, and spreading the infection in all directions, whereby the Colonies suffer a loss of something like half a million a year; or,
 - 2nd. We must pass some such measure in all the Colonies as that here indicated, making the inoculation of infected cattle compulsory, and otherwise regulating the cattle traffic.

Reduced to these two alternatives the decision must be easily arrived at; for it is simply barbarous that the law should continue to allow mobs of diseased cattle to be driven through, it may be, scores of runs on which the stock are free from infection, and infect them; and the only course left is for all the Colonies to pass some such measure as that here suggested. It is to be hoped that they will adopt this course; and if they do, there is every reason to believe that the losses from pleuro-pneumonia will be speedily reduced to a tithe of what they now are, and that the disease will eventually be eradicated.

While there is no doubt as to the efficacy of inoculation for pleuro-pneumonia, it is very essential that the best mode of carrying out that treatment, both as regards the sort of virus to be used and the manner of operating, should be ascertained; and I would suggest that the different modes of inoculating as practised by the owners in the several Colonies should, wherever the operation is at all properly carried out, be strictly watched by the Inspectors of Stock, and that full and careful reports on each case should be regularly transmitted to their Chief Inspector, who would arrange the information thus obtained, and compare it with that collected in a similar way in the other Colonies.

ALEXANDER BRUCE.

No. 6.

INOCULATION FOR PLEURO-PNEUMONIA.

PAPER prepared by Mr. Alexander Bruce, Chief Inspector of Stock, New South Wales.

MODES OF OPERATING.

The operation has been performed in many different ways. At first a portion of the diseased lung was tied to or inserted under the skin of the tail; but this mode was soon found to be altogether erroneous and was discarded.

At present cattle are usually inoculated on the outside of the tail, about 1 to 1½ inch from the tip, in one or other of the four following ways, namely:—

1. With a lancet or knife dipped into the virus.
2. With a grooved inoculating knife.
3. With a needle like an elongated spaying one, about 5 inches long, and a thread saturated with virus.
4. With a needle fastened in a handle like a bradawl, with an eye in the point, by means of which short threads saturated with virus are inserted in the tail.

Of the four modes, I would give the preference to No. 3, as experience has proved that bad swellings are less likely to arise from the use of the needle and thread than the knife or lancet; and it is impossible to exercise the same care and exactness with the handled needle as with the other.

REMEDY FOR EXCESSIVE SWELLINGS.

The best mode of guarding against losses from excessive swellings is to examine the animals operated upon carefully, once, or, if possible, twice a day, from the 4th to the 30th day after they have been inoculated; and if there is the slightest puffing or swelling at the root of the tail or in the hind-quarters, to cut well into it with a good sized pocket-knife, however small and soft it may be, and insert in the wound a small pledget of tow saturated with Venice turpentine and butyr of antimony, black oil, or blistering ointment. When the gathering has been allowed to become at all indurated, a hot iron raised to a white heat might be tried in an incision made right through the gathering.

VIRUS USED.

Up to a comparatively recent period, the virus used for inoculating has been, (1) that taken from the lung in the second stage of the disease; and (2) that found in the cavity of the chest near the lung, which has just exuded from it. Lately, however, some owners have been inoculating with (3) the water found in the chest in cases where hydro-thorax has set in, and others have been using (4) preserved virus, prepared by adding to Nos. 1 or 2 glycerine in the proportion of 1 to 1.

There is no doubt as to the efficacy of sorts 1 and 2; but there is often considerable difficulty in selecting the animal that will, when slaughtered, yield the right sort of these descriptions of virus; and if No. 3 prove thoroughly effective, there is no doubt but it will be generally used in preference to Nos. 1 or 2, for it is much more easily found; and, as it is a great deal weaker, fewer dangerous swellings will follow its use. If this is the case, the question also arises whether or not the virus from the lung or its surroundings, *i.e.* sorts 1 and 2 is not too powerful, and has caused the dangerous swellings which have not unfrequently occurred even in cases when the inoculation was carefully performed. If this again be answered in the affirmative, a very great advantage indeed will be gained; for not only will virus, as we have seen, be more readily and plentifully obtained and used with less risk, but it will be possible by adding an equal quantity of glycerine to sorts 1 and 2 to preserve the virus for any length of time, and thus have a thoroughly effective virus when required. It is to be hoped that this will be the case, as it would put us in a very much better position for eradicating the disease by inoculation; and every possible endeavour should be made to settle the question by inducing owners to try the water in the chest and report the result.

No. 7.

SCAB IN SHEEP.

PAPER prepared by the Honorable James Whyte, Chief Inspector of Stock,
Tasmania.

(Laid before the Conference of Chief Inspectors of Stock, held in Sydney in November, 1874.)

Having, at the request of Mr. Bruce, undertaken to write a paper on the subject of "Scab in Sheep," embracing at the same time some account of what has been done in Tasmania to eradicate the disease there, I find, on sitting down to redeem my promise, that I am placed in a much greater difficulty than might be supposed, considering I have had considerable experience in connection with the subject.

On various occasions during the last six years, through the Press and otherwise, I have written a good deal on this question, by way of advice and instruction, addressed to the sheepowners of Tasmania; but it has been done in a disconnected and desultory manner, from time to time, to suit circumstances as they arose, and to meet the fanciful objections of those who held to the belief in *spontaneous generation* and the impossibility of completely eradicating scab in a Country with the physical conditions of Tasmania. Such articles, therefore, even if I had them with me to refer to, would not be of much service for the present purpose.

Moreover, so much has been written by others, and written so well, during the last ten years, on the subject of this disease and its cure, that there is really nothing new to be said regarding it which can be expected to prove of much practical value to the sheepowner. I will not, therefore, attempt to travel out of the path so clearly indicated in Mr. Alexander Bruce's Treatise on "*Scab in Sheep and its Cure*," published in 1864, and "*An Essay on Scab in Sheep, its causes, symptoms, pathology, best means of treatment, and practical hints for its avoidance and extermination, &c.*," by Mr. Edward M. Curr, published in 1864 or 1865. In short—I believe it would be sufficient for the present Conference of Inspectors in dealing with "Scab and its Cure" simply to recommend the republication and sale of the pamphlets referred to at a cheap rate, in order to secure to the least informed sheep owner in Australia all the knowledge he requires to enable him to deal speedily and successfully with scabby sheep, if he should be unfortunate enough to become the possessor of such very undesirable property.

At a meeting of this kind composed of practical men, called together for the purpose of devising and recommending to the several Australian Governments the adoption of Regulations for the eradication and prevention of diseases in cattle, horses, and sheep, &c, in a paper on the "Scab Disease" it may be interesting to those I am addressing, and possibly useful to others, if I give a brief sketch of my experience in connection with the working of the Scab Act and the history of previous legislation on the question in Tasmania.

The first effort to free the flocks of Tasmania from scab was made during the government of Sir W. Denison, nearly thirty years ago; when a Scab Act was passed which, like some of the first Scab Acts of New South Wales, failed to accomplish the object of its framer, and remained a dead letter on the Statute Book. It did not provide any machinery for carrying out the law; and, so far as I know, it was never acted upon in a single instance.

The question was often discussed amongst a few of the settlers who had visited the neighbouring Colonies and had observed the superior condition of the flocks there, and the greater advantages derived from clean sheep as compared with the condition of their own flocks and the smaller amount of profit arising from them; but nothing further in the way of legislation was attempted until 1863, when I caused a Bill to be introduced to Parliament which proposed to repeal the obsolete Act of Sir William Denison's time and provide a more practical method of dealing with the subject. When the second reading of this Bill came on, I found so many of my country supporters were opposed to a Scab Act of any kind that it became a political necessity to withdraw the measure. The result was that the matter was shelved for a further period of five years.

In the meantime the necessity for legislation had become more generally felt amongst sheepowners in the Principal sheep districts; and at their instance, I believe, the late Mr. George Gibson, then a Member of the House of Assembly, and a warm advocate for a stringent Scab Act, introduced and carried a Bill through that Chamber in 1868. When this Bill came on for consideration in the Legislative Council, I observed that it was somewhat crude in its nature, and, like its obsolete predecessor, failed to provide the machinery to carry it out. It was therefore evident to me that it would share the same fate as the Act it proposed to repeal. At a meeting of gentlemen deeply interested in the subject, when I pointed out wherein the Bill was, in my opinion, defective, I was asked if I could frame a better one. My reply was, "Yes, I think so, if I have time." It was then agreed that the Bill then before the Council should be allowed to pass, postponing the time for its coming in force until after the next Session of Parliament; and I thereupon undertook to prepare a more practical and comprehensive measure to bring forward in 1869.

During the recess I prepared the "Scab Act 1870," and after meeting a violent opposition in the House of Assembly, arising from a variety of causes it is unnecessary to specify here, the Bill was passed, although in a crippled form, both as to penal provisions and the means for carrying them out.

I felt satisfied, however, that defective and crippled as the measure was, it yet contained sufficient powers for good to prove something more than the "thin end of the wedge," and would demonstrate to the sheepowners, as a body, that it was quite practicable to clean sheep in Tasmania as easily, if not more easily, than in the neighbouring colonies.

One of the difficulties I had to contend with in framing the Bill was to provide for a state of things which did not exist in any of the neighbouring Colonies, where infected and diseased sheep were exceptional, the majority of the flocks being clean when the various Scab Acts then existing were passed. The whole of the Tasmanian flocks being infected, with a very few exceptions, it was necessary so to frame the Act that its operation would not all at once harshly or oppressively interfere with commercial transactions, while at the same time it would check to a large extent the dissemination of infection by the travelling of diseased sheep, and provide compulsory measures for eradicating the disease as rapidly as possible under the circumstances. Another difficulty, and the greatest one of all, was that a very large proportion of the sheepowners were unbelievers in the possibility of effectually curing sheep at all; inasmuch as they thought the disease was one which sheep were always subject to more or less; and that the terms *clean* and *scabby*, were comparative terms dependent upon the amount of scab which might exist in one flock as compared with another; and also dependent upon the amount of care bestowed upon them by their owners in the way of dressing. Another considerable section believed that sheep were clean elsewhere; but they believed at the same time that the nature of the country in Tasmania was such that it was hopeless to expect the sheep could be collected so closely as to ensure a perfect and effectual dipping and therefore anything beyond a mere compulsory dipping Act would be useless and vexatious to boot. The number of sheepowners who thoroughly believed that it was as practicable to cure sheep of scab in Tasmania as elsewhere, and who were earnestly determined to support me in carrying out any measure to that end, no matter how stringent it might be in its provisions, was so small that I believe I could name them on a page of foolscap paper without any difficulty, even if I were to add the names of their residences and the districts in which they reside. Fortunately for the interests of the Country, a considerable number of the latter class had seats in both Houses of Parliament, and their influence effectually defeated the efforts of those who opposed the Bill.

The section of sheepowners favourable to the Bill, although desirous of having a stringent Act, agreed with me that for a period which we fixed at eighteen months the Act should be very mild, not only in its provisions but also in its administration; that it should be, in fact, merely a compulsory dipping Act for that period, combined with the prevention of visibly diseased sheep travelling on the public highways; and when this *probationary period* had expired, then the more stringent clauses of the Act should come into operation. The mode in which this view was carried out will be explained as I proceed.

While preparing the measure, naturally I had occasion to have much correspondence with sheepowners throughout the island, conveying to them on my part reasons deduced from my own personal experience, in the Colony of Victoria, with scabby sheep in the first place, from 1838 up to 1841-2 and 3, and afterwards with the same sheep, clean up to 1854. Doubtless, the fact of my having prepared the Bill, and having in the course of a violent opposition to it shown that I was practically acquainted with the subject, induced a desire amongst some leading settlers that I should undertake the administration of the Act as Chief Inspector. Consequently, the Government proposed to me that I should carry out my own measure. Having committed myself to very confident statements regarding the absolute certainty of success, fully believing in the certainty of results if it should be prudently carried out, and fearing its failure and almost certain repeal within eighteen months, if committed to the care of an inexperienced or injudicious administrator, I undertook to carry out the law.

It must be borne in mind that in 1869 the whole of the Tasmanian flocks were infected and diseased, more or less, with the exception of a few—certainly not embracing a larger number than between 20,000 and 30,000 sheep, chiefly in the Midland and Northern Districts.

The leading features of the Act were—compulsory dipping twice immediately after shearing, at an interval of not less than ten nor more than fourteen days, in some reputed scab-destroying preparation, and the prevention of *visibly diseased* sheep from travelling on the highways or being exposed for sale in public sale yards. The last-mentioned provision was only to remain in force for eighteen months, but was, at my instance, subsequently extended by Parliament to twenty-six months, giving, at the same time, power to the Governor in Council, on the recommendation of the Chief Inspector, to extend the time for any further period not beyond the 1st day of March, 1873. On my recommendation, this period, *which may be termed the probationary period of the Act*, was extended only to the 1st November, 1872.

Up to this date licenses to cleanse were issued without any fee. On the 1st November, 1872, all sheep still infected had their licenses renewed for six months on payment of one farthing per head; and on the 1st of May, 1873, all infected sheep were liable to a license fee of 3d. per head, the Chief Inspector having the power to issue the license for any period not exceeding six months. As a rule they were and are issued for three months only.

The "Scab Act, 1870," was passed during the Session of 1869, and it was intended by me that it should come into operation on the 1st of January, 1870; but, unfortunately, through some misconception of the probable results which might arise if a later date should be fixed upon, an amendment proposed by an enemy of the Bill was carried, which postponed the date when the Act should become law until the 1st of March, 1870.

As the general shearing season terminates early in January, the postponement of the Act taking effect until the 1st of March acted generally as a postponement of the operation of the compulsory dipping provisions for twelve months, or until after the termination of the shearing season of 1870-71. But although this was the general result of the change in the date of the Act becoming law from the 1st January, 1870, to the 1st of March of the same year, there were many sheepowners who acted upon the impression that dipping was compulsory immediately after the shearing of 1869-70, and in many cases with such satisfactory results that some gentlemen who had very strongly and earnestly opposed the introduction of a Scab Act, in the firm belief that it would be so detrimental to the interests of sheepowners that possibly, nay probably, it would involve the ruin of themselves and that of hundreds of others of the same class,—on finding how beneficial their compliance with the dipping provisions of the Scab Act had proved, wrote and otherwise informed me of the fact; and ever after that time heartily lent me the weight of their influence upon public opinion, and the benefit of their advice in enabling me to frame the Scab Act Amendment Act, No. 2, which became law on the 21st December, 1871.

Since

Since then the Act has been amended and added to on three several occasions to meet defects which its working had disclosed, and to have re-inserted the same or similar provisions to those which had been struck out of the first Bill in its progress through Parliament in 1869.

One of the leading features of the Act as it stands now provides that any person found in possession of infected sheep is liable to a penalty of not more than £50, and a license fee of 3d. per head for any period the Chief Inspector may fix, not exceeding six months. An Inspector in any case of this kind may take possession of the sheep and report the same to the Chief Inspector, who may direct such steps to be taken for the purpose of cleansing the said sheep as he may think fit; and if the owner refuses to comply with the directions of the Chief Inspector in any such case, the Act empowers him to destroy the sheep.

Several cases have arisen where it has become necessary to take possession of sheep and have them dipped under efficient direction; but in no case have I found it necessary to destroy a flock, and I believe no such case will ever arise.

When any portion of country has been declared a "clean sheep district," no sheep of any kind can enter therein without a written permit from an Inspector. In other respects the law is much the same as in the neighbouring Colonies with reference to registration of brands, returns, &c., &c.

The owner of infected sheep, in addition to the license fee of 3d. per head, is also, in the event of a mixture with clean sheep through defective fences or otherwise, liable for the cost of dipping the flock so infected, and damage to the amount of not more than £50. This has been felt to be an absurdly low amount in several cases, but nevertheless up to the present time the full amount has never been exacted.

The penalties generally are much smaller than in any of the other Australian Acts, and as a rule there was a strong disinclination on the part of country Benchers to inflict a maximum penalty. This feeling, however, has become very much modified of late—so much so indeed that I shall be in no way surprised, when the several Acts come to be consolidated next Session of Parliament, if I am requested to propose an increase of 50 per cent. at least to some of these penalties. I have no doubt whatever that the disinclination to inflict anything like sufficient penalties during the years 1871 and 1872 considerably retarded the cleansing process. This I took occasion to point out from time to time, but I am sorry to say without much avail.

The progress of the work accomplished by the Scab Act in Tasmania may be shortly stated as follows:—

All the sheep in the island, excepting between 20,000 and 30,000, were infected and diseased, more or less, when the Act was passed on the 22nd of October, 1869, to come into operation on the 1st of March, 1870.

On the 1st of May, 1871, 126,916 sheep were under clean certificates, but double that number were believed to be in a condition to claim it.

In the month of December, 1872, in compliance with an order of the House of Assembly, I furnished a rough progress return of the number of sheep on the 1st of that month in the several sheep districts, as being under clean certificates, clean certificates applied for, and other sheep supposed to be clean at that date, as follows:—

Sheep under clean certificates	...	...	...	688,064
Sheep certificates applied for	...	...	...	120,000
Sheep supposed to be clean, but for which the owners had not applied for clean certificates, or for which strictly they would not be legally entitled to certificates of cleanness	...	...	...	100,000
Estimated number clean on 1st December, 1872...	...	...	...	908,064
On the 1st of May, 1873, the following return was furnished to Parliament:—				
Sheep under clean certificate	...	...	...	1,002,104
90 per cent. of 243,514 sheep for which clean certificates have been applied for	...	...	...	219,162
80 per cent. of 82,992 sheep for which no applications for clean certificates have been made in accordance with the Act	...	...	...	66,393
Estimated number clean on 1st May, 1873	...	...	...	1,287,659
Number under license on 1st May, and other sheep considered doubtful	...	...	...	84,398
				1,372,057

The last return laid before Parliament was made up to the 1st of June, 1874. The summary of that return gives the total number of sheep in the island on the 1st of January last, and their condition on the 1st of June, as follows:—

Number of sheep clean	...	...	...	1,503,846
Number under license	...	...	...	27,396
Total...	...	...	...	1,531,242

The report has the following remarks on the above returns:—

The appended return shows that only 27,396 sheep are now known to be infected. I may observe, however, that all these sheep have been carefully dipped, and I believe that many of the lots are now clean. Certainly 50 per cent. of the 27,396 sheep are only nominally infected. A considerable number of these have been dipped as a precaution, and having come in contact with infected sheep, are consequently under license; but notwithstanding this they may be considered virtually clean, although they cannot be moved as clean sheep under the Act until the expiration of their license, and a clean certificate obtained from the Inspector.

At this date, the 1st of November, I may safely state that the number of sheep actually infected is under 10,000, and I feel assured that it is not an unreasonable thing to believe that in another year the island of Tasmania and the islands in the Straits will be wholly freed from scab disease.

The complete eradication would have been accomplished, I believe, in 1873, but for the postponement of the Act coming in force having postponed compulsory dipping until the shearing season of 1871-72, and the inadequate provision made in the first place for an efficient inspecting staff. Until November, 1870, I could only afford to have two sub-inspectors, then three more were appointed, and in the following year an additional

additional one, for itinerating purposes, and to assist the others on occasions of emergency. In 1873, and for the current year, the assessment was increased from one farthing to one half-penny per sheep, which will barely suffice to maintain the existing staff during 1875, when the assessment will again be reduced to the original amount viz., one farthing per head, unless Parliament may think it requisite to continue the half-penny per head another year. At present I am not prepared to say whether or not it will be necessary. Had the assessment been one half-penny per head from the first, as I proposed it should be, and which would have passed but for the violent feeling against a Scab Act of any kind whatever, which was entertained by a very considerable section of the House of Assembly in 1869, I have no hesitation in again repeating my firm conviction that in 1873 the disease would have been eradicated. It was a wretched piece of parsimony, miscalled, or rather alleged to be economy; whereas, in truth, the real design lurking in the minds of its advocates was an anxious desire and intention to destroy the Bill.

When I began to prepare material to frame the Bill in 1869, I made in the first place a calculation of the loss fairly attributable to the existence of scab, and embodied it in a letter addressed to sheepowners, through the Press. This calculation showed an annual loss of £120,749, arising from the following causes, viz. :—Loss in quantity of wool, loss in value of wool, cost of dressing, cost of profitless labour, and loss on stud and fat sheep.

Another calculation was made at the same time, at my request, without any knowledge of each other's opinions on the several points, by Mr. Robert Clerk, of Malahide, who had had many years experience in Victoria as a sheepowner in the Western District, and his estimate was £145,676 per annum. At the time I had no doubt of Mr. Clerk's estimate being more accurate than mine with regard to the total amount, but I preferred adhering to my own, as the smaller and safer calculation to base arguments upon.

In 1872, after the Scab Act had accomplished much that had been predicted, I revised my calculation of 1869, and arrived at the conclusion that when the scab disease should be wholly eradicated, the increased income of sheepowners would amount to £153,000 per annum, as follows :—

Revised Estimate of probable Annual Gain to be derived from the complete eradication of Scab.

1. Increased quantity of wool, say 562,500 lbs., or 6 ozs. per sheep, at 1s. 4d. per lb.	£ 37,500
2. Increased value of present quantity, taking 5,000,000 lbs. as an average, at 3d. per lb.	62,083
3. Cost of dressing annually for tobacco, drugs, and additional labour in dressing under the old system of spotting every few weeks	13,500
4. Saving of the labour of 500 men at £50 each	25,000
5. Increased number and value of fat sheep, say	10,000
6. Increased export of rams and ewes to the neighbouring Colonies, say	5,000
Total	<u>£153,000</u>

Now I am satisfied that the above amount was fully realized in 1873, and will certainly not fall short of it in 1874 and future years.

The first item I have ascertained by reference to the books of settlers, who were good managers under the old system with scabby sheep, is 8 oz. instead of 6 oz. increased weight of fleece, with hot water washed wool got up in the best style. With regard to the increase of weight on badly managed flocks, in many instances I believe from $\frac{3}{4}$ to 1 lb. per sheep is not an exaggerated quantity. Taking the numbers of sheep for a series of years, from 1863 to 1869 inclusive, with the average quantity of wool produced, and comparing them with the years 1870 to 1873 inclusive, an increase of nearly 10 oz. per sheep is clearly demonstrated as the result of the Scab Act.

The calculations of 1869 and 1872 were laughed at by many settlers at the time, and pronounced to be absurd exaggerations; but now many of these unbelievers who thought them the delusions of mere theoretical dreamers, admit that their own experience has proved to them that the scouted calculations were not the dreams of enthusiasm, but the sober and careful conclusions of practical men, based upon data derived from the results of their own former experience in the early years of the settlement of the Colony of Victoria.

All the items in the calculations, excepting the 4th, are under the mark, the two last more particularly. For instance, in 1873 the value of stud sheep exported to the neighbouring colonies was nearly, if not quite, £20,000. It is true the Scab Act did not make these sheep, but it preserved if it did not create the market for them.

In a letter which I addressed to sheepowners in 1869 or 1870, when I was endeavouring to arouse them to a sense of the enormous loss the Colony had sustained through the presence and almost universal prevalence of scab, I made a statement that during the last forty years a sum of not less than £3,500,000 had been lost from that cause alone. The statement to many minds appeared to be a rash one; but now, after a fuller, and I believe more intelligent and matured consideration of the subject, I feel justified in stating my conviction that if another £1,000,000 had been added it would have been an understated amount instead of an exaggeration.

Ten years ago Mr. Curr, the Chief Inspector of Victoria, stated that that Colony was then losing half a million per annum on, I think, about 5,000,000 of infected sheep, and I have no reason to believe it was other than a moderate estimate. What amount all the Colonies collectively, directly and indirectly, have lost from scab it would be difficult to estimate with any degree of accuracy; but certainly it cannot fall much short of £20,000,000 sterling since 1835,—a sum nearly equal to the cost of construction of all the railways now open in Australia.

CAUSE OF SCAB.

Notwithstanding all that has been written on this subject, we are still utterly in the dark as to the origin of a disease which we have reason to believe existed in Italy in the early days of the Roman Empire. And I think it is of small importance to us what was its origin, when we know from the experience of half a century in New South Wales and over thirty years in Victoria that in the climatic conditions which exist

exist in this part of the world, scabby sheep once freed from the disease never contract it again, unless from contact with diseased or infected animals, or from contact with places where such animals have recently been.

This subject has been so well handled by Mr. Edward M. Curr that I think I cannot do better than give a quotation from his "Essay on Scab." After referring to various authorities on the subject, he dismisses the theory of spontaneous generation with the following observations:—

But however undecidedly Youatt, Gamgee, and others may have expressed themselves on this head, it is stated by some sheep-owners in Victoria, roundly enough, that scab is occasionally the result of spontaneous generation, and that they know instances of it. As far as my experience of sheep has gone in this and the neighbouring Colonies during five-and-twenty years, I must acknowledge I have never been able to hear of scab having appeared in flocks under circumstances which could not be accounted for without having recourse to the hypothesis of spontaneous generation. But on this subject the very loosest ideas obtain; and to such of my readers as interest themselves in the matter, I would recommend the perusal of Carl Theodor von Siebold's remarks in his opening chapter on tape and cystic worms, in which he makes some very pertinent reflections on the whole subject of equivocal generation.

To finish with this subject then. It is clear that the scab could not originally, and in the first instance, have been the result of contact; but that it must either have been created with the sheep, or have resulted from some other principle or process of nature. My ideas lead me to the latter belief, and to the probability of this disease being eventually traced to some other form of living thing, as has already happened in the cases of other parasites. Be this as it may, it will remove all reasonable fears of the frequent occurrence of spontaneous generation of scab by calling to mind that this question may be considered to have been set at rest for all practical purposes by the well-known and undeniable results of sheep-farming in New South Wales. There, upon large tracts of country, subject to many varieties of climate, feed, and other circumstances, millions of sheep have been depastured for forty years, without the occurrence of scab in any one instance until it was imported from this Colony. New Zealand and Queensland verify the same fact. Hence we may conclude that the spontaneous generation of scab, if possible, can only, at all events, be of the rarest occurrence, and that its consideration may be safely left to the man of science, postponing the discussion of "*How does spontaneous generation take place?*" until it be proved that spontaneous generation has actually occurred.

SYMPTOMS AND BEST MODE OF CURE WITH SULPHUR AND TOBACCO.

The symptoms of the disease, and the best mode of cure with a mixture of tobacco and sulphur, have been so fully dealt with in the pamphlets of Messrs. Alexander Bruce and Edward M. Curr, referred to at the commencement of this paper, that I think it would be a mere waste of time, if not a piece of presumption on my part, to attempt to add anything by way of improvement to what they have written. I therefore recommend any person desirous of getting valuable information with reference to the symptoms of the disease and its cure to purchase one or both of the pamphlets referred to.

I may observe, however, that the mode of mixing sulphur and tobacco, recommended by Messrs. Bruce and Curr, does not contemplate the sulphur being dissolved—the tobacco is in fact the cure, and the sulphur is to preserve the sheep from re-infection.

Doubtless if the tobacco is good, and the mixture properly applied, it is a very effective and certain cure; but it is possible for the tobacco to be bad, particularly if home-grown "knock-me-down," cut perhaps at an improper time.

My experience in Tasmania during the last three years leads me to prefer a mixture of sulphur and lime as being the most certain cure, without any risk of the article being bad in quality.

The following correspondence discloses how the subject came under my notice in June, 1870, and how I brought it before the sheepowners afterwards:—

TO THE EDITOR OF THE MERCURY.

Sir,

As the season of the year is rapidly approaching when sheepowners will be called upon to dip their sheep in accordance with the provisions of the "Scab Act 1870," it appears to me to be very desirable that publicity ought to be given to any interesting information bearing upon a question not only of importance to the owners of sheep, but of vast importance to the public at large, from its bearing upon the value of the export of wool from Tasmania, and the supply of wholesome food to its inhabitants.

Notwithstanding all that has been said and written on the subject, and the varied experience of sheepowners not only here but in every Colony in Australia and New Zealand, there is still a great diversity of opinion amongst sheepowners here as to the best and cheapest mode of effecting a cure. There are many known certain remedies, but some of them are highly objectionable on account of the danger to the constitution of the sheep; such as arsenic and corrosive sublimate, both of which are certain remedies if properly applied, but so liable to accidents, and so troublesome to those using them, that I would strongly advise their being abandoned as a dressing for sheep in any shape or form whatever. And as we cannot be certain that some of the "specifics" that have of late years been used in this Colony and elsewhere are not to some extent composed of these objectionable and dangerous drugs, it seems to me unwise to use them when simpler, cheaper, and more certain curative mixtures can readily be procured.

In seeking to clean his sheep the settler ought to satisfy himself that the dress he uses is a certain remedy if properly applied. This is the most important consideration no doubt; but if two mixtures are equally certain as a cure, the next important consideration is, which is the safest for the sheep, as well as the cheapest for the sheepowner.

I have invariably recommended a mixture of sulphur and tobacco, as the cure is certain and it cannot injure the sheep; but from recent observation of the effect of sulphur and lime, as recommended by Dr. Rowe, of Victoria, I am inclined to think that its use as a dipping mixture is well worthy the consideration of sheepowners, before the arrival of the shearing season.

These remarks have been induced by the result of an experiment with sulphur and lime by Mr. Barnard, a settler on the banks of the Tamar, who called upon me in June last, to inspect two sheep very much diseased which had got into his flock.

I visited Mr. Barnard's farm on the 10th of June, and after examining the sheep referred to, authorized him to destroy them. In the whole course of my experience I never saw sheep in a worse condition with scab than one of them exhibited. After some conversation with Mr. Barnard, who appeared to take a lively interest in the question generally, and what was considered the best mode of cure, it struck me that, instead of destroying the two scabby sheep, they would be excellent material to experimentize upon, and on naming this to Mr. Barnard, he readily adopted the idea, and promised to dip them in the mixture of sulphur and lime, the efficiency of which we had been talking about.

The result of the experiment I received in a letter from Mr. Barnard to-day, a copy of which is appended.

The quantity of sulphur per gallon, used by Mr. Barnard, is only half the quantity recommended by Dr. Rowe; and although in the present case two ounces of sulphur per gallon appear to have been sufficient, I should prefer the larger quantity, as the article is so cheap.

August 15, 1870.

I am, &c.,
JAMES WHYTE.

Sir,

In compliance with your request I dipped the two sheep that you examined on the 10th June in a preparation of sulphur and lime, and I have now the honor to inform you of the manner in which I treated them, and with what results.

On the evening of your inspection I dipped them for the first time, using 2 ozs. of sulphur and 2 ozs. of slack lime to the gallon, at a temperature of 120 degrees, allowing the sheep to soak for rather more than a minute. On the 20th of June—ten days—they were dipped again in a mixture of the same strength and at the same temperature. You will remember

remember that one of the sheep was a mass of hard scab across the shoulders and a large part of the back, and there were also many large lumps containing matter, the remainder of the sheep was covered with hard spots of scab; the other sheep was not quite so much diseased. Of course the hard parts were well scarified before dipping. They have been kept apart from other sheep, and now a period of fifty-four days having elapsed since they were last dipped, I believe them to be, after careful examination, perfectly clean. The late inclement weather would surely have caused them to break out afresh if the scab were not completely killed.

James Whyte, Esq.

I remain, &c.,
THOS. BARNARD.

TO THE EDITOR OF THE MERCURY.

Sir,

At the present time when the shearing season is about to commence, and the compulsory dipping provisions of the Scab Act come into operation, any information bearing upon the question of what is an effective, and at the same time a cheap, dipping mixture is of much interest to a large number of your country subscribers. I would, therefore, recommend you to republish the following letters from Dr. John P. Rowe and Mr. John Sanderson, bearing upon the curative properties of a mixture of sulphur and lime.

I have known Dr. Rowe for more than twenty years as a large sheepowner who has had a most extensive experience with both clean and scabby sheep; and from my knowledge of his personal character, I have perfect faith in the truthfulness of his relations as to the results of his own experiments with sulphur and lime.

The cheapness of this mixture is a great recommendation; and the evidence we have of its effects from Dr. Rowe in Victoria, and from those who in several instances used it in Tasmania last season, leaves no doubt whatever on my mind that as a cure for scab, if properly applied, it is a certain one.

There is a diversity of opinion as to its effect upon the wool, if used when the staple has a few months' growth, but this is not of much importance as regards dipping immediately after shearing. To settle the disputed point as to the alleged injury a mixture of sulphur and lime inflicts upon the wool, by depriving it of one of the properties the manufacturer prizes so highly, viz, softness, it would be very desirable if some of our sheepowners would try an experiment with a sufficient number of sheep from a flock, and send the wool home with the bulk of the clip to be examined and tested by the most competent judges in the London market, who could compare the wool from the sheep which had been dipped in lime and sulphur when the wool had attained a considerable, or even a full growth, with wool from the remainder of the flock which had not been subjected to the same application, but had been dipped in some other mixture, say tobacco and sulphur or carbolic acid.

Both of the last-mentioned mixtures are no doubt certain scab-destroying agents, but they are both also more expensive than sulphur and lime. The duty having been removed from carbolic acid will materially reduce its cost, but even then it will prove more expensive than sulphur and lime. There are two advantages, I am told, which carbolic acid possesses over the other mixtures referred to; the first is, that it in no way injures the wool; and secondly, that it may be applied cold with equally certain results as if applied in a heated state. If this be true, and I shall certainly look upon it with doubt until I have fuller evidence of its being a fact, it would give to carbolic the first place amongst scab-destroying preparations, even although its first cost might exceed either of the other curative mixtures I have referred to, inasmuch as the saving of trouble and labour in preparing the heated mixtures would more than counterbalance the extra cost of the article which could be used cold. I am only referring, however, to what I have heard, and not to what I have seen. I should certainly not think of using the cold carbolic acid mixture, excepting by way of experiment.

To the class of smaller sheepowners, if there be a mixture that can be used effectively in a cold state, it would doubtless be of very considerable importance, but to the larger class of sheepowners it appears to me a matter of very small consequence the additional labour and expense of heating the dipping mixture, as compared with the saving which would arise from being enabled to use it in a cold state.

The consideration of every sheepowner at the present time, in my opinion, ought to be not so much which is the cheapest mixture to dip their sheep in, but which is the most certain in its effects, and at the same time not injurious to the constitution of the sheep.

Specifics of all kinds should be looked upon with the greatest suspicion, and be carefully avoided. The makers and vendors of such medicines are in many instances trading upon the ignorance and credulity of their customers. They pretend to be possessed of some superior knowledge. They offer to the settler, in fact, valuable results in a mysterious way, and keep him in ignorance of possible contingencies which may result from the use of their nostrums, the danger of which can be avoided by using simple compounds, the results of which are well known, and are, moreover, more certain than any specifics we have yet seen, and which cannot possibly injure the animals operated upon.

I would strongly advise sheepowners not to use arsenic or corrosive sublimate in any form whatever. They are dangerous applications, although certain cures, if properly applied. With the greatest care heavy losses have often resulted from their use, arising from atmospheric or other causes, which have never been as yet satisfactorily ascertained. Then why use such objectionable drugs when there are so many simple mixtures to choose from, equal, if not superior, as curative applications, and perfectly harmless to the sheep?

I append the letters referred to, which were published in the *Australasian* of the 22nd instant.

Your obedient servant,
JAMES WHYTE.

Hobart Town, 29th October, 1870.

LIME AND SULPHUR CURE FOR SCAB IN SHEEP.

TO THE EDITOR OF THE MANSFIELD INDEPENDENT.

Sir,

The solution of sulphur and lime (hydro-sulphuret of lime) is now pretty well known and acknowledged to be the cheapest and most reliable cure yet discovered for scab in sheep. It is quite equal in efficiency to the old and very unscientific mixture of tobacco and sulphur; is much cheaper and more reliable. The quality of tobacco cannot always be depended upon; sulphur is always genuine. At this period of the year, after our sheep are shorn, all diseases of the skin to which they are liable are more easily cured, and there is less risk of deteriorating the value of the wool by soiling, which all dippings, even in simple hot water are apt to do when the staple has advanced in growth to any extent. It cannot therefore be too extensively known that even one dipping in the above solution is sufficient to cure the most inveterate case of scab in sheep (even when its pelt has assumed the rhinoceros character) without in the slightest degree injuring the health of the animal or the fibre of its wool; and to assist sheepowners in endeavouring to banish at once and for ever the bane of the wool-growing interest, I am induced to ask you to publish again the recipe for its preparation and use.

Take of flour of sulphur 100 lbs., 50 lbs. of quick-lime (a large proportion of it partially slacked.) Put these together in a boiler with 100 galls. of water, keep mixed by constantly stirring for about ten minutes, or until a clear dark-brown orange-coloured solution supervenes. Then mix 1 gull. of this solution with 3 galls. of hot water, and make your dip or bath heated to from 100 deg. to 114 deg. Fahrenheit, and plunge your sheep over head in it, keeping them swimming in it for about one minute; when they are dry the cure is complete; but to prevent risk of re-infection, and to secure a more perfect muster, a second dip after about ten days, in a bath one-half the above strength will render assurance doubly sure. A compulsory simultaneous dipping of all the sheep in Victoria during next January would save the Country thousands of pounds, and render Scab Inspectors and Boards of Advice quite unnecessary. As the most valuable testimony of the effects of this cure on the wool of dipped sheep, I send you a letter I have received from Mr. Sanderson, the eminent wool merchant of Melbourne. It will also be found interesting just now to persons about to wash their sheep in the hot water soak. Mr. Sanderson, I believe, dipped his sheep in lime and sulphur when the fleece was about half grown, and if he is now able to get up his wool, as he says, "in colour perfect," nothing more can be desired. I regret this gentleman has not given us the contents of his soak, as we would then know the quantity of soap requisite; but perhaps he will supply this omission.

Your obedient servant,
JOHN P. ROWE.

Mount Battery, 12th October.

Brio

Brie Bric, Glen Thompson,
8th October, 1870.

My dear Dr. Rowe,

I have purposely delayed, until now, writing to you the result of dipping my sheep with your mixture of lime and sulphur, so that I could speak with certainty as to its effect on the wool when washed. I have now been waiting about a week, and I think I cannot give you a better report upon the wool than by sending you a sample of it, from which you will see that the colour is perfect, and that the dip does not leave the slightest stain. We are, however, obliged to use more soap than when the sheep were undipped. This is to be expected from the presence of sulphur requiring a strong soak to remove it. I began washing with the same quantity of soap as was used last year, and at first could not imagine what was wrong with the sheep, they were so dingy after leaving the spouts. We are using soft soap, which my manager thought was the cause; we then tried hard soap with the same result, but found that as we increased the quantity of soap in the soak the whiter the sheep left the spouts. Last season we used 12 lbs. of soap to the soak, now we use 24 lbs., and the wool was as well washed as I could wish. I was not on the station when the sheep were dipped, but my manager reports as follows:—“I used it in the following proportions —(I should mention we were dipping for ticks):—100 lbs. sulphur and 50 lbs. of lime to 400 gallons of water; put in the sulphur and add the lime as the water begins to boil; let it boil 10 to 15 minutes; let the boiler be only three parts full when the lime is added, else they will boil over. The result is certain destruction of all ticks in the sheep.” I have examined the sheep at various times during the year, and they have thriven well, the fleeces being particularly free and well grown. As to the extra quantity of soap required, the same would apply I imagine to all dips where sulphur is employed [yes, and to all where sulphur is not used.—J.P.R.], as I know from experience of scouring how difficult it is to get it out of the wool, and I have no hesitation in saying that sheepowners are greatly indebted to you for the discovery of the curative properties of lime and sulphur. Happily I have not had occasion to use the mixture for scab, but for ticks I would give it the preference over any other dipping stuff I have ever used.

With kindest regards and many thanks for your hints, believe me, faithfully yours,

JOHN SANDERSON.

J. P. ROWE, Esq.,
Mount Battery, Mansfield.

Since writing the letter to the *Mercury* of the 29th October, 1870, to which is appended Dr. Rowe's and Mr. Sanderson's letters as to the efficacy of the sulphur and lime mixture, I have had many conflicting accounts as to the virtues of carbolic acid. From all that I can learn, it appears to be susceptible of adulteration, and in a number of instances failure has been the result of its use; but at the same time I am not prepared to say that some of those failures may not have been as much to be attributed to want of care on the part of the sheepowner as to the inferior or spurious character of the carbolic acid. There is one thing very certain, that so far as the reports I have received enable me to judge, the great bulk of the flocks in which a thorough cure has been effected up to the present time were dipped in sulphur and tobacco and sulphur and lime. Some few sheepowners have used arsenic in various proportions from $\frac{1}{4}$ an ounce and under down to a very small quantity per gallon of tobacco water and sulphur, and report that they have been successful in effecting a cure without loss of sheep; others who have used arsenic have met with losses by deaths, although not to any considerable extent.

On more than one occasion I have publicly stated my dislike to arsenic,—although I know from my own experience that properly applied it is a very certain remedy,—and my objection to it is as strong as ever. I consider it a dangerous application, inasmuch as you can never be quite certain that from unexplained causes, possibly of an atmospherical nature, a number of sheep may be destroyed when the greatest amount of care has been exercised by the sheepowner both in preparing and applying the mixture.

Specifics and nostrums of all kinds, puff'd in the Press by agents of empirical pretenders, I would strongly advise sheepowners to refrain from using. I could name more than one sheepowner who has had during the past season reason to regret having been induced to use an application, the component parts of which are known only to the compounder. It appears to me to be the height of folly for any sensible man to run the risk of using a mixture, the nature of which he is profoundly ignorant of, when he can choose more than one mixture now well known to be thorough cures, while they are harmless to the constitution of the animal.

There is one point on which I fear some of those sheepowners who fail in the first place to effect a cure do not give sufficient attention to, and that is the necessity for a very minute examination of the sheep for spots of scab before they are dipped. When any exist they should be carefully hand dressed with a stronger mixture than the ordinary dip.

Melbourne, 12 January, 1872.

Sir,

I have the honor to thank you for your Report and copy of amended Scab Act, enclosed in your letter of the 5th instant, which has just reached me.

Whilst doing so I will take occasion to bring under your notice how very effective the lime and sulphur dressing has proved in this Colony. The failures which have followed its use have been fewer than what have succeeded any other sort of dipping; whilst its inexpensiveness, and the simplicity with which it may be prepared for use, and the speed with which it is made ready, are very much in its favour. As compared with tobacco it has another great advantage, that it has no variety in strength or quality, so that no selection of material is necessary.

Congratulating you on the success of your Scab Act,—

The Chief Inspector of Sheep, Tasmania.

I have, &c.,
EDWARD M. CURR.

The above letter from Mr. Curr shows that in the beginning of 1872 lime and sulphur had become the most highly esteemed scab-destroying preparation in Victoria.

I may state with safety that since 1871 more sheep have been cleansed in Tasmania with sulphur and lime than with any other mixture, and for two years past I have invariably recommended its use in preference to all other preparations.

I always recommend at the same time that in addition to the quantity of sulphur required to kill the scab insect, a quantity of raw sulphur should also be mixed with the dipping material, in order to remain on the sheep as a protection from re-infection when turned back on the same run, which generally had to be done in Tasmania, particularly in the case of very small settlers, of which the sheep-owning body there largely consist.

JAMES WHYTE.

No. 8.

SCAB IN SHEEP IN VICTORIA.

PAPER by Mr. Edward M. Curr, Chief Inspector of Stock, Victoria.

(Laid before the Conference of Chief Inspectors of Stock, in November, 1874.)

THE Conference having expressed their wish to be put in possession of the principal facts connected with scab in sheep in Victoria during the last twelve years, I may state shortly that at the end of the year 1862, when the eradication of scab was undertaken, that there were at least 5,000,000 of sheep in the Colony suffering from that malady. With few exceptions these sheep were running in flocks of two or three thousand each, in paddocks which were often insecure, which, coupled with the fact that the law provided no means by which the travelling of doubtful flocks could be prevented, led to the reinfection of runs which had already been cleaned, so that large bodies of sheep had to be cleaned twice over. Notwithstanding those disadvantages and drawbacks, however, the numbers of clean sheep slowly but steadily increased under the pressure of fines and licenses to the extent of (say) £50,000.

In the meantime, about three years since, the Scab Act now in force, in which for the first time power was taken to prevent the travelling of diseased flocks, came into operation, and under it the disease has been reduced to 120,000 sheep now in quarantine. This result has been effected at the cost of a very great (but necessary) inconvenience to the owners of sheep, as it might almost be said that the travelling of sheep during the last three years, except under the authority of an Inspector, has not been allowed. In carrying out this policy the support of the Boards of Advice has been a great advantage. The use of lime and sulphur, as a dressing for scab, has also largely contributed to the eradication of the disease.

Of the 120,000 sheep still in quarantine in Victoria, it may be stated that the majority of them are depasturing in country in which it is most difficult to muster sheep. Still, of these, I am in hopes that the moiety, at least, will prove clean. Could they be all mustered, a fortnight certainly would dispose of this remnant, and finally rid the Colony of scab. The difficulty lies in their collection alone, some stragglers carrying the germs of infection usually being left out. To meet this it will, in my opinion, be necessary in some cases to remove the sheep from the runs in question, so as to ensure the destruction of all the stragglers.

12th November, 1874.

EDWARD M. CURR.

No. 9.

SCAB IN SHEEP IN NEW SOUTH WALES.

PAPER by Mr. Alexander Bruce, Chief Inspector of Stock, New South Wales.

STATEMENT showing the number of Sheep infected during the outbreak of Scab in 1862-3, the progress made in cleansing them, and the result of the several dressings used.

DEALT WITH AND ACCOUNTED FOR UNDER THE ACT OF 1861.

Ascertained Numbers.

Number destroyed and paid for by the Government	40,503
Do. do. by owners of adjoining lands	2,339
	42,842

Estimated Numbers.

Died of poverty and disease	15,000
Drowned in the Floods	8,000
Boiled down	21,000
Destroyed without compensation	1,000
Killed by arsenic and other poisonous dressings	20,349
Do. tobacco and sulphur	2,000
	22,349
Cleansed before the present Act came into force	33,000
	100,349

DEALT WITH AND ACCOUNTED FOR UNDER THE ACT OF 1863. 143,191

Ascertained Numbers.

Number licensed and cleansed	199,809
Destroyed and boiled down	7,000
	206,809

Total number of Sheep infected during the late outbreak ... 350,000

PROGRESS MADE IN CLEANSING.

Cleansed between March, 1864 (when the Act of 1863 came into force), and 30th November, same year	102,252
Do. 30th November, 1864, and 30th November, 1865	82,433
Do. 30th November, 1865, and 14th July, 1866	15,094
	199,809

The Colony was declared clean on 1st July, 1866,—in something less than two years and a half after the Act came into operation,—but an outbreak occurred in a small lot after that in the County of Cumberland, which were soon cleaned.

RESULT

RESULT OF DRESSINGS USED.

Description of Dressing.	Numbers dressed.	Result of Dressing		Result of Dressing.	
		Failure, and other dressings tried.	Cleansed.	Failure, and other dressings tried.	Cleansed.
Allen's Specific	80,021	80,021	.....	.....	.....
Hayes' Specific	87,186	80,931	6,255	.....	.....
Arsenic, and arsenic and tobacco	18,555	9,271	9,284	170,223	15,539
Tobacco and sulphur	184,270	.....	92,530	.....	.....
Do. and lime.....			30,299	.....	.....
Do. and mercurial dip.....			61,441	.....	184,270
			As above		199,809

From this it will be observed that tobacco and sulphur was by far the most effective dressing.

13th November, 1874.

ALEX. BRUCE.

No. 10.

SCAB IN SHEEP IN SOUTH AUSTRALIA.

PAPER by Mr. C. J. Valentine, Chief Inspector of Sheep, South Australia.

In submitting a statement relative to Scab in South Australia, I will confine myself to the last nine and a-half years. At the beginning of that period the flocks were clean but in the latter part of 1865 some doubtful flocks existed, and scab appeared in 1866 in about 4,000 sheep. Several other outbreaks occurred during the next few years. In 1867 over 3,000 sheep were destroyed, when a Quarantine Act was passed, which provided for the detention of infected and doubtful sheep within prescribed boundaries. This proved a very useful measure. Quarantine districts were continued until 1870, when diseased or doubtful sheep no longer existed in South Australia. During the four years referred to, about 70,000 sheep were infected. The sheep were cleansed with tobacco and sulphur, and lime and sulphur dressings. An Act which has been in force since 1859, providing that any travelling sheep found scabby should be destroyed, had a most beneficial effect in preventing the spread of disease.

C. J. VALENTINE.

No. 11.

CATARRH IN SHEEP.

PAPER prepared by Mr. Alexander Bruce, Chief Inspector of Sheep, New South Wales.

(Laid before the Conference of Chief Inspectors of Stock, held in Sydney in November, 1874.)

THE term catarrh is derived from the Greek word, *Karrappeo*, to flow down, and the disease may be described in general terms as a catarrhal fever, attended with an excessive flow of mucus from the nose and eyes.

There are two descriptions of catarrh—1st, what is known as *common catarrh*, a non-infectious disease affecting sheep at times in all parts of the world; and 2nd, *malignant catarrh*, peculiar to Australia. For the sake of convenience, the former will, in dealing with the subject, be termed *common catarrh*, and the latter simply *catarrh*, as it is the name by which it is known in these Colonies—not that it is the correct one.

Common catarrh may be either confined to individual sheep, or it may affect the greater part of a flock. In Australia it usually occurs in the winter or beginning of spring, and the sheep attacked are generally poor and weakly. It is most common among sheep which are housed. Those affected exhibit the usual catarrhal symptoms of discharge from the nostrils, defluxion from the eyes, coughing, and sneezing; but they do not, as in malignant catarrh, altogether stop feeding. This form of the disease is also distinguishable from malignant catarrh by the slightness of the discharge, the mildness of the attendant fever, and the absence of the laboured breathing which is always present in the latter. The chief tests, however, as to whether the disease is *malignant* catarrh are, its infectious character, the rapid development of virulent symptoms, and the large ratio of deaths. A flock should never be pronounced catarrhed because the symptoms in one or two sheep or the *post mortem* appearances are the same as those in some cases of malignant catarrh. In the absence of decidedly characteristic symptoms, the circumstantial evidence (so to speak) must be exceedingly strong to warrant the opinion that the attack is anything but *common* catarrh. Although this description of catarrh sometimes kills through the destruction of the nasal passages and gullet like *malignant*, it is more to be dreaded for its sequel, as the inflammation of the lining of the nostrils and gullet which accompanies the disease extends at times to the wind-pipe and the respiratory organs of the chest, terminating in consumption, which sooner or later carries off the sheep.

Common

Common catarrh is sometimes caused by cold and exposure; and the sheep should, in that case, where practicable, be removed to a more sheltered locality. At other times the affection is clearly epidemic, and must be allowed to run its course. Care, however, should always be taken not to allow sheep showing any catarrhal symptoms to come in contact with others, until it has been ascertained with certainty that the ailment is not *malignant* catarrh.

Malignant catarrh was first observed in June, 1834, among the flocks of Mr. Robert Campbell, of Burrowa; and although that may not have been the first outbreak of the disease, it then assumed a virulence which it never previously exhibited; for such a disease—carrying off as it did more than *three-fourths* of the infected flocks—could not possibly have existed without at once attracting attention. In the following March, April, and May, catarrh showed itself on several stations on the Lachlan River in the Binalong District, and appeared to spread from the one station to the other. It shortly afterwards broke out in the Goulburn and Yass Districts; and from these centres it seems to have spread throughout this Colony, and even to the southern parts of Victoria. To such an extent were its ravages carried that in 1838 a very restrictive Catarrh Act was passed to stay the further spread of the disease, and was renewed from time to time till 1842. It was then amended, and again in 1843 and 1846, and lastly in 1853 by the Act 17 Victoria No. 27, which is still in force. These measures had the effect of greatly diminishing the disease, and of confining it to the more upland and colder portions of the Colony, where, in some instances it seems to be constitutional, but is even there now fortunately of rare occurrence, through the improved management of the sheep, and partly also through some of the runs on which sheep were at one time kept being now stocked with cattle.

CAUSES OF CATARRH.

The causes of catarrh may be considered as *originating* and *existing*.

Originating causes.—Catarrh has been held by some to be a specific disease introduced with Saxon sheep imported shortly before its outbreak in this Colony; by others it is considered to have been caused by the lowering effect which the cross with these importations had upon the stamina of colonial sheep; and by some again the disease has been set down as an epidemic; while others hold that, as it did not appear for a considerable time after the introduction of sheep into this Colony, it is a disease which originated here through mismanagement.

The assumption that catarrh was introduced by Saxon sheep would appear to be unfounded, for there is no record whatever of malignant or infectious catarrh existing in Saxony or in any other part of Europe. It may be, however, that the crossing of the Australian sheep with the comparatively delicate and carefully nurtured Saxon Merino tended to assist the deterioration which the gross mismanagement of some sheepowners was then bringing about; and the opinions of those who take the second view of the question may be so far correct.

The opinion that catarrh is an epidemic, or rather an epizootic disease, is erroneous; for, if it were an epizootic, it would have occurred frequently and generally in all parts of this and the neighbouring Colonies, which it has not, and no legislation could possibly have arrested its spread, as we know the Catarrh Acts have so effectually done.

We now come to the opinion that catarrh originated in Australia, and through mismanagement of the sheep; and there is no doubt but that it did so, in the injurious system of breeding followed, and the maltreatment and neglect of the sheep on the part of some of the sheepowners who had taken to sheep-farming in the colder and more upland districts without any previous knowledge or experience. Those, then, were the true originating causes of catarrh in its malignant form, and would again produce the same disease under similar circumstances. They will be shortly noticed in detail, and for the sake of perspicuity are treated in two sub-divisions—the Predisposing and Exciting Originating causes—which again will be particularized in the order of the degree in which it is considered they affected the sheep.

PREDISPOSING CAUSES.

1. Breeding "in and in" for a lengthened period without selection.
2. Breeding and rearing lambs twice a year from the same ewes.
3. A continued system of breeding from rams or ewes which were weak or sickly, or too old, or too young.
4. The weakening of the constitution of the sheep by the use of mercurial preparations in curing scab.
5. Previous general debilitating diseases, such as fluké or foot-rot.

There cannot be a doubt but that No. 1 under this head was one of the chief, if not the chief predisposing originating cause of the disease. "In and in" breeding, when carried out in a healthy flock or herd under a proper system of selection, by a competent judge of the stock which he is breeding, both as regards their shape and their constitutional organization, need not deteriorate. It is only when attempted by incompetent or careless breeders who fail to make the proper selections, or perhaps, as was apparently done by many of the sheepowners at the time catarrh first showed itself, make no selection whatever, that "in and in" breeding is hurtful. This is now a well established fact; and while we know on the one hand that the healthiest and most valuable flocks and herds in the world are reared up under this system with proper selection, we see on the other the most worthless sheep and cattle produced by "in and in" breeding without selection. We thus find that the rule of like begetting like which pervades this system is a power either for good or evil, according as it is controlled and directed; and we can easily understand how a predisposition to disease would be intensified in the progeny of sheep, where the ewe and ram had, from a lengthened course of mismanagement of the flock to which they both belonged, become constitutionally weak and misshapen, and low comparatively harmless common catarrh became in such sheep, under a system of ill treatment, over-crowding, and exposure, on bleak upland runs, both a highly virulent and infectious or contagious disease.

Cause 2.—*Breeding and rearing lambs twice a year from the same ewes.*—This course was followed to a considerable extent, by many of the sheep-farmers of that period, on runs and in seasons wholly unsuitable for such a mode of management, and it is scarcely possible to imagine anything that would have a more debilitating effect, both on the ewes themselves and their progeny. To withstand the evil effects of even an occasional double crop of lambs in the same year, the ewes must be young and strong, and on the best pasture, while the climate must be mild and the season favourable.

The

The effects of *Clause 3*, although not so apparent in sheep which arrive quickly at maturity as in cattle, are undeniable both on the size and stamina of the sheep. If proof of this were required, it can be readily found in the small size of cattle on stations where breeding and fattening are combined, where there are no heifer paddocks, and where the spaying of the old cows is not followed.

Causes 4 and 5.—Although there is no proof on record that sheep which had been dressed with mercurial preparations for the cure of scab or which had suffered from fluke or foot-rot were more subject to catarrh than others, there is little doubt but that the general and indiscriminate use of preparations of mercury in the cure of scab and prevalence of fluke and foot-rot in sheep depastured on the upland runs, all tended to assist in the weakening of the constitution which preceded many of the outbreaks of catarrh.

That such flagrant violations of the correct principles of breeding as the predisposing causes here mentioned, and especially causes 1 and 2, should have brought on this disease, is only what might have been expected; and when in conjunction with these the exciting causes which will next be enumerated are considered, the only wonder is that the disease did not break out before it did.

SECONDARY OR EXCITING ORIGINATING CAUSES.

These causes may be enumerated as follow:—

1. Disorder of the digestive organs, arising from dry, innutritious, burnt, or frost-bitten food, and bad water.
2. Sending sheep out in cold mornings from an over-crowded yard, causing them to get chilled.
3. Dogging and overheating sheep full of grass and yarding them while a cold wind or frost is prevalent, especially when newly shorn.
4. A long course of dry, cold, windy, or frosty weather, following a dry summer.
5. Sudden changes in the temperature, such as sometimes take place, inducing chills and suppression of perspiration.
6. Folding sheep on low-lying damp ground, on the banks of rivers or creeks, or in wet, dirty yards.

These exciting or secondary originating causes have, like the predisposing, been arranged in the order of the degree in which it is considered they were most liable to have affected sheep at the time catarrh broke out. The bare enumeration of them will be enough to show the deadly influence they must have exercised upon sheep which had been rendered so susceptible to disease by the predisposing causes which have already been mentioned. It may, however, be remarked that, in by far the greater number of outbreaks which occurred in early times, disorder of the digestive organs was the exciting cause, and that it is so in the few cases which now occur.

To show that these exciting causes were prevalent at the time catarrh broke out in the Colony, we have only to remind our readers that sheep farming was then in its infancy, and that even those who had acquired a knowledge of the management of stock in the Old Country had many trials and difficulties to encounter in the Colonies. With Government men for servants, droughts, floods, cold winters, scab, and native dogs, the best managers had the hardest of battles to fight to keep their flocks in health and obtain a fair increase from them. If such was the case, with all their previous knowledge and experience, what, after a few years of these trials, must have been the condition of the flocks of those who commenced sheep-farming without any home or colonial experience,—especially on the cold upland country, on the coast range, where many of the runs were then situated, but one as it actually was of poverty and deterioration, followed by disease of a most virulent and infectious nature.

EXISTING CAUSES.

At the present day the causes of catarrh are hereditary or constitutional predisposition, and infection or contagion. There is no properly authenticated case on record of a fresh outbreak of catarrh originating in sheep after the disease was noticed in 1834, without hereditary predisposition or predisposition arising from the effects of a previous attack. These existing causes are still, of course, materially influenced by—or rather they never operate without—some of the exciting or secondary causes which have been enumerated, and principally, as has already been remarked, by disorder of the digestive organs.

As outbreaks of catarrh, of greater or lesser magnitude, occurred almost every other year in certain localities, it is apparent that the disease must be either constitutional or endemic (local). That it is constitutional and not endemic, is proved by the fact that sheep which have been once affected and removed to another part of the Colony have after a lapse of perhaps six or eight months and even longer, suffered again and again from the disease in the warmer localities to which they were taken, and where no fresh infection could have reached them. Then, again, this predisposition may be either the effect of a previous attack occasioned by infection, or it may be hereditary. That one attack will render sheep liable to another, even although moved to fresh pasture in another part of the Colony—salt bush excepted—is now quite certain; and there is no doubt but the disease is also hereditary; indeed, some good authorities even go so far as to say that it is so to the second and third generations, and instance cases in support of their views.

That catarrh is either infectious or contagious, or perhaps both, there does not now seem to be any doubt, and the general opinion is that the infection (the term is used in a general sense) is spread by the discharge from the nostrils of the diseased sheep. It is most probable, however, that, as in the rinderpest and other plagues, the nature of which have been carefully investigated, the fomites, or germs of the disease, are diffused, to a large extent, by the excretions of the animal, so also the infection, in cases of catarrh, may be spread in the same manner. In whatever way it is conveyed, the most certain means of infecting a flock—even more so than by inoculating the nostrils of the sound sheep with the discharge from the affected—is to put a few diseased sheep into a sound flock; and even feeding sound sheep over infected ground seems more certain to convey the disease than by inoculating in the manner described.

All breeds and ages of sheep are liable to infection, but young sheep under three years old are very much more susceptible than old or full grown. Old sheep not unfrequently escape scatheless where young sheep would have been certain to have been infected. This fact may perhaps account for the opinion still held by some that catarrh is not infectious or contagious. Like every other infectious or contagious disease, however, it spreads by no known certain rule. Sometimes sound sheep have been folded for the night with infected sheep, and for many nights in adjoining yards, without being attacked; and the discharge from the nostril of a diseased sheep has been placed in that of a sound one without communicating

communicating the disease. Again, sound sheep have sometimes been infected by merely crossing a run over which catarrhed sheep have passed, while on other occasions sound sheep have under apparently similar circumstances escaped infection.

The infection or non-infection of sheep must also depend upon the length of time which has elapsed between the passing of the infected and sound flocks over the same ground, the state of the weather in the interval, and the health of the sheep. How long under different circumstances the infection will remain potent in the vehicles in which it is ordinarily transmitted from the one sheep to the other is doubtful, but that it will do so for a considerable time is certain; for sheep have received the infection on ground from which catarrhed sheep had been removed for more than seven months; and it is the opinion of those best qualified to judge that sound sheep ought not to be allowed to go upon ground where a catarrhed flock had been running until twelve months have expired from the time the diseased sheep left it.

It has been found that, by carefully weeding out and destroying every sheep in an infected flock which shows the least symptom of disease, and changing the sheep to other ground, the disease will generally leave them; it is, therefore, reasonable to presume that catarrh is not infectious until the symptoms are pretty clearly developed.

NATURE OF CATARRH.

Catarrh, or as it is sometimes termed Australian catarrh, like consumption in the human subject, as we have seen, sometimes arises from exciting causes working upon a frame constitutionally predisposed to the disease, and, like consumption, the predisposition may be either hereditary or the effect of a previous attack. Here, however, the resemblance ceases, for catarrh may be conveyed from one sheep to another by infection, and its most correct definition seems to be that it is a hereditary or constitutional disease, which becomes on its outbreak a decidedly infectious or contagious catarrhal fever, and runs its course with great rapidity. Of all diseases, however, in the human subject or among the lower animals, catarrh seems to be more analogous to rinderpest than to any other in its origin and cause and the manner in which it spreads—although not so infectious as that terrible scourge, and differing from it also in other respects. Like the spontaneous outbreaks (*i.e.*, outbreaks arising from predisposition and not from infection) of rinderpest, those of catarrh are always traceable to stock or the progeny of stock brought from a cold, exposed, upland country,* and, like rinderpest, catarrh is not nearly so destructive in its natural habitat in that class of country as in a more genial climate. Farther, it is not at all improbable, that the same mismanagement and bad treatment which it is believed were the *originating causes* of catarrh in this Colony may have also originated rinderpest; and we know that the same causes which keep the germs of catarrh alive in our flocks are also continuing to perpetuate rinderpest in Asia and Europe.

Catarrh is rarely seen in the saltbush country, nor does it exist for any length of time when taken there by infected sheep. This is so well known that infected and doubtful sheep were, when it was practicable to do so, removed to this class of country from the higher, and cured, at least during their stay.

Outbreaks of catarrh usually occur in the months from April to September inclusive, and of these most frequently, perhaps, in June and July. Outbreaks in the autumn generally prevail more or less during the whole of the winter,—the weather having a most material effect on the number and virulence of the attacks. When catarrh attacks sheep at other seasons than those mentioned, the outbreak is traceable to some sudden and violent change of the temperature, especially after shearing.

The first outbreak of catarrh noticed (that already alluded to, on Mr. Campbell's station) took place in a dry frosty winter following upon a droughty summer; and a very large majority of the outbreaks which have occurred since that time have done so under similar circumstances in respect to weather.

The deaths in an infected flock range from five to seventy-five per cent., according to the season of the year, the state of the weather, the nature of the feed, the locality in which the outbreak occurs, the age and stamina of the sheep, and their treatment. Summer attacks are much more deadly than winter; but at whatever season and under whatever circumstances they do take place, they are generally comparatively mild at first, and gradually become more virulent till they reach the climax, when they moderate in something like the same ratio as they increase. Young sheep in good condition about the age of eighteen months are found not only to be the most susceptible of infection, but also to lose the largest percentage in deaths. In full-grown and aged sheep, again, fat sheep are both more liable to become infected and to be carried off than poor sheep.

Death occurs in some cases within six hours of the first symptom of the sheep being infected; sometimes in twelve hours, and sometimes not before ninety-six hours. In the majority of cases, however, death occurs in twenty-four hours after the first decided symptoms of the disease are discerned.

Like other infectious or contagious diseases, catarrh neither attacks nor kills by any rule; in fact, it seems even more capricious in this respect, as well as in its spread, than most other diseases. Sometimes the ewe is the victim while her lamb is spared, and at other times the lamb is taken and its mother escapes.

It has been said that flocks crossed with sheep of the coarser breeds, such as Leicester or South Downs, were less liable to catarrh than the Merino. This has been disputed; and some owners who have tried crossing, without getting rid of the disease, have done so by again taking to the Merino. In either case, where the change was attended with success, it is believed that the result was attained more by the introduction of healthier blood into the flocks than by the crossing with any particular breed.

SYMPTOMS.

The course of the disease in catarrh is generally divided into three stages, and that arrangement will be adopted here in detailing the symptoms.

First stage.—In this stage (which lasts from two to twenty-six hours) there may be all or any of the following symptoms:—

1st. Sneezing, snorting, or coughing—especially at night—perhaps as long as thirty-six hours previous to the sheep ceasing to feed. These sounds are to be heard more or less in different forms in all stages of the disease, and a combination of them—a peculiar snorting or croupy cough—is one of the most decided symptoms; but it is more prevalent in the first than in the later stages of the disease.

2.

* The sheep first observed to be affected with catarrh, although then in a comparatively low-lying and warm part of the Colony, had been brought from a run on the Coast Range in the county of Argyll, some twelve months previous to the disease breaking out.

2. Hanging head, drooping ears, general lassitude, listlessness, dulness, lingering behind and hanging back from the flock, unwillingness to move, indisposition to feed, ceasing to ruminate.

3. The nostrils hot and humid, their lining membrane inflamed and red, with increased secretion of mucus from that membrane, and a discharge, at first of a clear limpid colour, but gradually becoming thick andropy.

4. The eyes languid and suffused, in some cases a profuse flow of tears, while in others a discharge of matter encrusts the eyelids, and the inner part of the eyelids of a red or a yellowish red colour.

5. The tongue parched, general fever, perspiration obstructed, pulse quick, hard, and irregular, throbbing of the heart, diminution of secretions, except in the inflamed membranes.

Second stage (duration from four to forty-eight hours).—All the symptoms of the first stage will have increased in force, with the exception of the coughing, which is not always present at this stage; but when it is, it is evidently painful, and is brought on by the least movement. There will now also be all or either of the following symptoms:—

1. Great restlessness, heaviness of the head, and a desire to rest it. No appetite for food, stupid appearance, and frequently symptoms of great pain.

2. External surface and internal membrane of the nose and other portions of the head swollen.

3. The interior of the nose of an intense florid hue, with the blood-vessels filled with minute injections; the secretions from the nostrils—which are frequently large, thick, and of a yellow colour—harden on the nostrils and impede respiration, and they may be from one or both nostrils.

4. Respiration impeded, and evidently painful, through the secretions plugging up the nostrils. The animal gasps for breath, seems in dread of suffocation, and throws the head up in its attempts to clear the nostrils by snorting and sneezing.

5. The eyes are more and more suffused, red, and inflamed, especially at the conjunctiva, and there is generally a considerable discharge from them.

6. The general fever is great, and suppression of the urine and costiveness frequently set in.

Third Stage (lasting from eight hours to four days).—1. In this stage the fever will have passed, and general debility ensued. The sheep will frequently be found lying down resting its head, or it may become stupid and stagger about unable to direct its steps, going up against trees, and into water-holes or camp-fires; and those symptoms increase as death approaches.

2. In some cases the face, lips, and tongue are now much swollen, as are also the nostrils, which exhibit the highest state of inflammation, the deadly purple or leaden hue. These are stopped or nearly so by the discharge from them, which has lessened in quantity, but become thick and glutinous, and sometimes streaked with blood, generally from both nostrils. The snorting and sneezing to clear the respiratory passages will be increased, and will not unfrequently be accompanied by coughing, and expectorations of fetid matter mixed with blood.

3. The eyes are greatly inflamed, and there is generally a profuse flow of tears, while incrustations of hardened mucus are formed around the eyelids.

4. The mouth is dry and parched, the pulse feeble, the eye becomes more and more glassy, trembling, vertigo, blindness, and insensibility ensue, with deliriousness, and wringing and throwing up of the head, and the sheep lies down and dies.

These symptoms will, however, in all the stages, like the *post mortem* appearances, depend in a great measure upon the seat of the disease. If it be in the sinuses of the head and gullet,—then the attack may be termed “nasal catarrh,”—swelling of the nose and lips, with a discharge from the nose and eyes, will be present: while if the lower portion of the bronchial tubes and the lungs are involved—when it may be designated “pulmonary catarrh”—there may be little or no swelling of the head or discharge, and the only noticeable symptoms will likely be coughing and laboured breathing. It would seem also that the climate and season of the year have a considerable influence in determining the seat of the disease and the class of symptoms. Thus, nasal catarrh is more common in a cold country and in winter than pulmonary, while that form is much oftener to be met with in districts where the climate is genial, and during the warm weather of autumn, than in the colder districts and winter season.

In some cases the catarrh kills by the destruction of the windpipe and bronchial tubes, and the head and lungs display little or no symptoms of the disease. In these cases the sheep will die as from suffocation, and on examination the lining of the windpipe and bronchial tubes will display symptoms of having undergone intense inflammation—being completely destroyed, and so rotten as to be easily pinched or torn to pieces. The lungs will be slightly congested, and around them will be a considerable quantity of a pink-coloured frothy mucus.

POST MORTEM APPEARANCES.

The stomach is generally impacted with undigested hard food, while the feces accumulate in both the large and small intestines in large hard lumps, producing abrasions of the mucus membrane. The liver is usually perfectly free from disease, but the gall bladder is frequently very much distended. The rest of the abdominal viscera and bladder are generally in a healthy state. These appearances vary with the different forms of the disease, and may be treated as those of 1st, *Nasal Catarrh*; 2nd, *Pulmonary Catarrh*; and 3rd, of the *Combined form*, partaking more or less of both Nasal and Pulmonary Catarrh.

1. *Nasal Catarrh*.—In this form of the disease the brain is not found to be affected, but the little brain (the *cerebellum*) is, and its blood vessels show decided symptoms of inflammation, being highly injected or gorged with blood. There are also occasional secretions of a serous fluid in the cavity of the little brain, and in the lateral ventricles. The frontal sinuses (the continuation of the nostrils) show indications of intense inflammation, and are plugged up with sero-purulent matter or black clotted blood. The whole of the nasal cavity presents the most intense redness, from a florid to a dark red, mingled with patches of a leaden hue. The turbinated bones (the thin knife-like bones in the nose) are exceedingly florid throughout, as if they had been filled with a very minute injection. This is not confined to the membrane covering their surface, but extends to the whole of their substance. Indeed, the enlarged injected blood-vessels present themselves, in this form of the disease, in every part of the interior of the nasal cavity, and a very thick viscid matter is effused in the turbinated bones as well as on the *septimnaris* (the division between the nostrils), which could be scraped off with a knife. On cutting the substance of the nostrils a quantity of serous fluid or florid blood is discharged. In this form of the disease the heart and large veins are generally found to be gorged with black blood.

2. In *Pulmonary Catarrh* it is found, on dissection, that generally in both the right and left lobes of the lungs, but sometimes in only one of them, and then generally in the right, the mucus membrane is red to a greater or less extent, with the appearance of small red points aggregated closely together; while the pleuræ *pulmonalis* and *costalis* exhibit traces of a high degree of inflammation, and there are frothy mucus effusions in the cavity of the chest. In others again, where pneumonia prevails, the lungs present an increase of weight and density, are infiltrated with a frothy mucus of a bloody tinge and clotted blood, and their external surface is of a gray or violet colour; while in others the lungs assume the density of hepatization, and the vessels are full of hardened lymph, displaying, when cut into, the appearance of marble. In most of these cases the mucus membrane lining the bronchial tubes and windpipe is highly inflamed, and mucus effused all along the course of the respiratory passages. In this—the pulmonary form of the disease—all the large veins are generally full, and the right auricle of the heart is invariably gorged, while the left auricle and right and left ventricles, are empty.

3. *Combined form*.—Here there will be a combination of the different symptoms and *post mortem* appearances which have already been noticed, but they will vary in these cases according to the class of causes which predominate.

Of the two forms of the disease, the pulmonary is not only the most common, but also by far the most fatal.

In some of the cases mentioned by Dr. Bennett in his able Report on the first outbreak of Catarrh in 1834 (from which I have freely culled in compiling the technical portions of this paper) the stomach was healthy and filled with well digested food, while the whole of the alimentary canal was free from disorder, and the gall-bladder filled with healthy bile; the disease carrying off the sheep through the destruction of the respiratory organs of the chest, the bronchial tubes, and the sinuses of the head.

The cause of the difference in the *post mortem* appearances noticed by Dr. Bennett, and those described above as being almost always present in the outbreaks of catarrh which now occur, seems to lie in the cause of the attack. The outbreaks which he then investigated must have originated from contagion or infection, and not, as they almost invariably now do, from secondary causes working upon a frame predisposed to the disease. Thus, where infection or contagion is the cause, the sheep require little or no preparation, so to speak, to enable the disease to incubate and ripen; and therefore, the *post mortem* symptoms and appearances, such as constipation and inflammation of the intestines, which are present in sheep where the attack has been caused by bad food and predisposition to the disease, are not present.

Both classes of symptoms and *post mortem* appearances are to be met with, but that described by Dr. Bennett is now very seldom met with, as the effect of the Catarrh Act has been to confine diseased sheep to their own runs, and to protect the sound flocks from infection and contagion.

PREVENTIVE AND REMEDIAL MEASURES.

If the history, causes, and nature of catarrh be considered, it may with safety be affirmed that the development of fresh cases can be easily prevented, and are unlikely to occur except from infection and contagion. And to show that this is the case, we will briefly review the causes of the disease and the amount of risk which may be now apprehended from them.

In the present day, the prejudice against "*in and in*" breeding is so strong and general as to leave little room for fear of fresh cases of catarrh arising from that cause; for it is unlikely, with the prevalence of this feeling, that even close breeding will be attempted by any but those whose flocks are of considerable excellence; and the fact that they are so is a sufficient guarantee that the breeder is qualified to make the proper selections, and may be safely allowed to follow this system of breeding.

While on this subject, although not strictly within the scope of this paper, it may be remarked that the dislike to "*in and in*" or even "*close*" breeding has in this Colony been carried a great deal too far; and the frequent and sometimes even violent changes in breed and blood which have been made, have prevented owners from obtaining that improvement in their sheep, or that uniformity of type and character, which their heavy outlay for stud rams entitle them to expect. If owners are unable, from the inferiority of their sheep or their want of knowledge, to adopt a system of "*close*" breeding, they might at least obtain their stud sheep from the same breeder, so long as his flocks were of sufficient excellence and were sound and healthy, and thus secure a large share of the advantages of "*in and in*" breeding with comparatively little risk.

In adopting this or any other course of purchasing rams, a careful selection of a well-developed healthy frame, devoid as far as possible of the defects of the ewes to which they are to be put, ought always to be kept in view, as well as a valuable fleece: and if it is so, the risk of catarrh and other disorders would be greatly diminished. The hap-hazard system now followed by many breeders of purchasing stud rams from different improved flocks, both imported and colonial, without regard to the strain of blood, and without selection, is not only a source of disappointment and loss to the purchaser, but also to a certain extent of risk to our flocks.

The practice of *breeding and rearing two crops of lambs in one year* from the same ewes is now seldom or never adopted, for its folly is too apparent, and the inducement, with the present low price of sheep, too small to lead owners to follow it.

Breeding from *too old* or *too young* or *weakly* sheep is still too common; and although the effect is not immediately noticed, and may not of itself bring about catarrh, the practice is a deteriorating and thriftless one, and ought to cease.

Fluke in sheep is still prevalent, but with due care and the use of the proper medicine (sulphate of iron and Liverpool salt in proportions of 1 in 10), stations upon which it was next to impossible to keep sheep healthy are now almost entirely free from fluke. As to *foot-rot*, the turning out of the sheep and ordinary care will in most cases remove all risk from this cause. And with regard to the debilitating effect of *mercurial dressings* for scab, which were so generally used when catarrh broke out, it may be said that the risk from this cause has entirely ceased; for not only are these dressings now never used, but there is no scab in the Colony.

There cannot be a doubt but that the fencing in of the runs and turning out the sheep would be the most effectual way of removing the exciting or secondary causes of catarrh. If left to themselves on an ordinarily large run, even in the colder parts of the Colony, sheep can always, and in all weathers, obtain shelter, and find comparatively dry and comfortable quarters day and night; for not only does their natural instinct lead them to seek the higher ground to camp at night and in bad weather, but it enables them

them also to detect, sooner than any shepherd can, the approach of bad weather, and from what quarter it is to be expected, and to take shelter accordingly. It would thus be scarcely possible, except perhaps in the more thickly grassed intermediate districts, after a long drought, for catarrh to break out, even in sheep predisposed to the disease; and it would certainly never originate in sound sheep managed in this way. It is to shepherding and folding, or rather to the mismanagement to which shepherded sheep are always more or less liable, that we owe the exciting causes of catarrh; and if sheep were turned out and fresh healthy blood freely introduced into the flocks whose blood was tainted with catarrh, that, as well as many other diseases to which sheep are now subject, would with ordinary attention disappear. Great, however, as these advantages would be, they are not a tithe of those which would be secured to the Colony in every way, by fencing in the runs and turning out sheep.*

Till this can be brought about, the best course would be to destroy the native dogs and camp the sheep out; and if a combined and simultaneous effort in this direction were made, either voluntarily or under legislative enactment, by the owners in the different districts, the eradication of the dogs might be readily and cheaply effected. In the meantime, those who continue to shepherd and fold their sheep should erect large brush yards, or rather small paddocks, on the best sites, sheltered from all weathers. Hitherto, the convenience of a water supply for the shepherd, more than the best position for the sheep, has too frequently been the chief study in the selection of sites for sheep stations.

Where again there is a taint or suspicion of catarrh in the sheep, fresh healthy blood should be frequently and freely introduced; and, as the climate of the districts in which the flocks requiring fresh blood are depastured is cold and trying, the introductions should be made, as far as possible, from healthy flocks reared in a comparatively cold climate.

CURE.

There is no really practical cure for catarrh. The immersion and swimming of the sheep in cold water (in a river or lagoon) has been said by some to be a specific for catarrh, while others who have tried it, report that it is utterly useless; and the proof that it is so lies in the fact that this treatment is now never followed. Bleeding and physicing again have been tried with varied results; but here the trouble and cost of the treatment, even if it were successful, would be a bar to its adoption. The only way in which the disease has been successfully dealt with was to take the sheep to fresh pasture, especially to salt-bush, and while doing so, to kill every sheep showing any symptoms of disease. This, however, the law very properly prohibits, as other sheep would be certain to be contaminated by the infected flocks. The next best course is to move them from station to station on their own run, and keep destroying those showing any symptoms of the infection; but, even although this course should be successful in stopping the disease in the infected flock, it would be attended with all but certain risk of infecting the other sheep on the same run, as well as those on the adjoining runs. If, again, the infected sheep are kept upon the ground on which they were depastured when the disease broke out, it is not unlikely that twenty or even fifty per cent. of them will die; and although the sheep are confined in this way, the risk of the infection spreading to other flocks while the disease is running its course is too great to be safely encountered. Besides, as such sheep are liable to periodical outbreaks, all this risk and trouble would, in that case, have to be frequently encountered, for the sheep that recover are almost certain to be again affected. There certainly is not the same risk of the disease showing in such sheep at certain seasons as at others; and, if they were close to market they might then be fattened and disposed of; but by the time they would be allowed by the law to travel, after an attack, the safest season would be over, and the losses and damages which would attend an outbreak on the road are too heavy for the owner who has to drive his sheep any distance to risk.

Looking, therefore, at the subject, in all its bearings, it would seem that the safest course for an owner of catarrhed sheep, both as regards his own interest and that of the Colony, is to boil down the whole flock at once. But while this course is recommended to the owner, it is considered that here, as in the case of scab, the sheepowners as a class should, for the sake of the greater protection this course would afford, come to the assistance of the owner who takes it, and that a measure should at once be introduced into the Legislature dealing with catarrh the same as with scab. Catarrhed sheep would thus be destroyed, and their owner would receive as compensation two-thirds of their market value, supposing they were free from infection when they were destroyed. There are but few districts in which the disease is now likely to show itself, and the compensation required would not amount to a large sum; while it would nevertheless be a great boon to the owners of the catarrhed sheep amidst the heavy losses which such a visitation entails. The present law is, to say the least of it, a rigorous and impolitic one. It quarantines an owner's sheep on his run for six months, and even prevents him from coming within a quarter of a mile of its boundaries, or of any road passing through it, without allowing him any compensation. The consequence is that outbreaks of catarrh have frequently been concealed, and the disease has spread through this concealment.

There is certainly at times considerable difficulty in saying what is catarrh and what is not. This is only what might be expected in outbreaks occurring from predisposition, for in these attacks the part or organ affected would depend upon circumstances, which would of course vary in different flocks. That is, the part or organ in which the disease finds its principal seat would (within certain limits) be the weakest in its frame, and that, of course, would be different in different flocks. The question, however, with which legislation has to deal, is not to what class of disorders an outbreak belongs, but whether or not the disease is infectious or contagious. Whether, therefore, the outbreak be one of catarrh properly so called, or of some other infectious or contagious disorder, means should be adopted to stay its spread; and if sheep showing any of the symptoms of catarrh are quarantined, as they ought to be for a time, the presence or absence of infectious or contagious symptoms will soon determine whether or not the disease is catarrh, or any other calling for legislative control. If this point be settled, the necessary steps for controlling and eradicating the disease could be adopted; and, to avoid all risk of any failure through inability to identify the disease, the measure should be made so comprehensive as to allow the Governor and the Executive Council to issue regulations for the eradication of *any* infectious or contagious disease in sheep, other than scab or catarrh.

ALEX. BRUCE.

* See the valuable treatise on Fencing, by Mr. Gordon, Chief Inspector of Sheep for Queensland.

No. 12.

WORM DISEASE IN SHEEP.

PAPER prepared by Mr. P. R. Gordon, Chief Inspector of Sheep, Queensland.

(Laid before the Conference of Chief Inspectors of Stock, held in Sydney in November, 1874.)

I do not claim in the following remarks to have made any new discovery as to the causes or cure of worms in sheep—a disease that has occasioned immense losses amongst the flocks in many portions of Queensland. My object is to lay before the Members of the Conference a few practical facts in connection with the disease in the experience of Queensland sheepowners, in the hope that they may assist in directing inquiry on the subject into the proper channel.

Worm disease first made its appearance in Queensland, in its present epizootic form, in 1871; but for fourteen years preceding that date intestinal worms were periodically to be met with in sheep in various portions of the Coast Districts. Many owners recognize the disease as identical with that which decimated the flocks in the Clarence and Richmond Districts many years ago. It is only within the last three years however that the disease has been known to exist west of the Main Coast Range.

OPINIONS AS TO THE NATURE AND CAUSE OF THE DISEASE.

It is now well known that the disease is caused by a description of worm infesting the stomach, intestines, and frequently the lungs of sheep, and known as *Strongylus*.

The opinions of practical men in Queensland—so far as they have come under my notice—as to the cause of the disease, may be summarized as follows:—

First.—The most generally accepted theory is that worms originated from overstocking, and the consequent disappearance from the pastures of many saline herbs and plants.

Second.—That they are due to certain geological formations, and

Third.—By some it is supposed that they are propagated and disseminated by kangaroos, wallabies, and other marsupials.

In support of the first the following facts are adduced:—

- 1.—Worms are unknown in sheep pastured in newly occupied country.
- 2.—That they can to a very large extent be prevented by a liberal use of salt, and
- 3.—They are but of recent development in most portions of Australia.

Those who attribute their presence to certain geological formations point to the well-known fact that whilst sheep pastured on granite or slate formations are the first to be attacked, trap, basalt, or soils abounding in salts of lime, have—except in rare instances, where it has been introduced by travelling sheep—enjoyed an immunity from the disease.

With respect to the third supposed cause, the circumstance already mentioned, of worms being unknown in recently occupied country, would, to some extent, appear to set aside the theory that they originated with the marsupials; but the fact that in some districts the centres of large plains are sound whilst sheep pastured on the margins of the same plains (the feeding grounds of the wallabies and kangaroos) are infested with worms, would seem to indicate that they are in some instances disseminated in this way.

It is now generally believed that, whatever the cause of worms, they are to a large extent disseminated by the dung of sheep, and this opinion is in perfect harmony with the opinions of Cobbold in Europe, and the best authorities in Australia.

My own deductions, based on information supplied me by my staff, as well as by many sheepowners in different parts of the Colony, favour the belief that each of these causes, and all combined, may tend to produce and spread the disease, and for the following amongst other reasons:—

1. In the case of sheep affected with worms travelling from the coast interiorward, it is found that whilst they establish the disease on previously healthy pasturage along their line of route, this has never been found to be the case beyond a point where recently taken-up under-stocked country commences.

2. Having reference to geological considerations, we find that country of trap-rock formation on the margin of the Downs are exempt from worms, although completely surrounded by runs of granite formation, on which the disease has for years prevailed.

A circumstance came within my observation a few weeks ago which I consider valuable, not only as throwing light on this phase of the question, but as verifying in a remarkable manner the correctness of Mr. Farrer's deductions—in his valuable pamphlet on grasses and sheep-farming—as to granite soils being favourable to worms. Mr. Donald Gunn, of Pikedale, forwarded to me a sample of salt collected by him on a run in his District, the soil of which is composed principally of disintegrated granite. The sample was taken from the surface of a small flat which had recently been temporarily under water, the salt having been deposited during the process of evaporation. Mr. Gunn's object in forwarding it to me was to challenge the correctness of my views as to the value of salt in the prevention of worms; because, on the run where this sample of salt was found, worms had to some extent been present in the sheep for years. On my showing the salt to Mr. Staiger, our Government Analytical Chemist, he at once pronounced it to contain a large amount of potash, and the usual test confirmed his statement. Mr. Farrer shows that by analysis granite contains a large percentage of potassic salts, and that the pasturage of soils composed of disintegrated granite must therefore be unhealthy.

Independently of the above incident, my experience confirms Mr. Farrer's statement as to granite soils favouring the presence of worms.

3. I am not prepared with evidence to authorize me in hazarding an opinion as to the worms being propagated by marsupials, nor do I attach much importance to the circumstance, as kangaroos and wallabies have invariably been found to be the prey of parasites infesting cattle depasturing on the same grounds. The same cause would operate alike in both cases.

That the disease has been sown broadcast by means of travelling sheep over country in which, in all probability it never would have originated, is, I think, beyond doubt. I must guard myself against being understood as holding the opinion that worm-disease is contagious in the usual acceptation of that term; but in the sense in which fluke may be understood to be contagious—that is, by contaminating the pasturage,—I consider worms to be highly contagious, and hence my reason for so strongly urging upon my Government, at various times, the necessity for joint action by the Colonies on the matter. In America there does not appear to be two opinions on the subject. It is there believed that the worms were imported with sheep from England, and burning pasture and camping grounds appears to be the only successful mode known to the Americans of checking its spread.

But one or two well authenticated facts in my own Colony would appear to me to establish this beyond a doubt. Thus, for instance, the circumstance before alluded to, of the disease having been established by sheep travelled inland on country previously free from it. And again, the circumstance that in certain districts, the soils of which we should consider inimical to the disease—such for instance as the black volcanic soil of the Darling Downs, through which there is constant traffic in travelling sheep—the disease has obtained a footing, whereas in other districts, possessing exactly similar soil and pasturage, but through which no travelling sheep from diseased districts have passed, worms are as yet entirely unknown.

MEANS OF CURE AND PREVENTION SUGGESTED.

Cure.—In speaking of a cure I would wish it to be understood as referring only to means adopted for destroying worms in the case of sheep already affected. I have had no opportunity of testing the sulphur and nitre cure so highly spoken of in Victoria, although experiments with this and powdered arceonut are being conducted at the present moment in Queensland. Should the latter be successful in effecting a cure, as I have strong hopes will be the case, it will open the question as to the value of strong astringents (of which there is an endless variety in these Colonies) as sheep medicines. Turpentine and linseed oil was found successful, as was also salt and sulphur, in many instances, in expelling the worms in the early history of the disease in Queensland; but strange to say, both completely failed to effect a cure in second and subsequent attacks of the disease on the same runs. Salt, where given in unlimited quantities, has in some instances been successful in effecting a cure in the case of young sheep, but I have been assured that it has failed in others.

Prevention.—As the cause or causes of worms are still matter of speculation, the means of prevention suggested or recommended must also be looked upon as speculative. We have been most fortunate in Queensland in having—in Mr. Haly, of Taabinga—a gentleman who, sparing neither trouble nor expense, has gone into an enquiry of the subject with a determination and intelligence unequalled perhaps by any other sheepowner in the Colonies. To the unceasing exertions of this gentleman we are indebted for the duty on salt having been entirely removed, and also for a vote of £500 to initiate an inquiry by a practical and scientific Board into the causes of disease in animals and plants. Mr. Haly has been a heavy sufferer by worms, but after experimenting with many agents, he has at last, by the unlimited use of salt in his flocks, and by lightly stocking his runs, succeeded in reducing his losses to the smallest minimum, about 1½ per cent. and that in a district where the losses on some of the neighbouring runs have been alarmingly heavy. I consider it also due to this gentleman to state that more than eight years ago, when a Member of the Legislative Assembly, he predicted an outbreak of disease similar to that now decimating our flocks, in consequence of impoverishing our pastures by overstocking.

If, as is very generally supposed, the rapid development of worms is due to the disappearance from our pastures of herbs and grasses which contained more or less of saline properties, the direction in which preventive measures should be attempted is plainly indicated. If, as has been authoritatively stated, some descriptions of herbs and grasses possess the property more than others, of taking up the salts from the soil, enquiry should be directed to such, and means adopted for testing their suitability in different soils. I believe that much can be done in this way and by preventing overstocking. For instance, salt bush and myall have been transplanted to, and found to flourish in soils not the natural habitat of saline plants. And although they are found not to be so strongly impregnated with salt as when grown in their natural soil, they still retain their character as that of salt plants.

Of the value of light stocking, I cannot adduce a more striking instance than that of the land enclosed on each side of the line of Railway traversing the Darling Downs. On that land, in consequence of its being protected from stock of all kinds, the original grasses and herbs of the district have reappeared, and are growing to luxuriance side by side with the stunted and comparatively innutritious grasses which have taken their place in the heavily stocked sheep paddocks.

In conclusion, I would remark that it has long been my conviction, that if a system of spelling paddocks by regular rotation were universally adopted, many of the diseases that infest our flocks would rapidly disappear.

P. R. GORDON.

No. 13.

FLUKE IN SHEEP.

PAPER prepared by Mr. Edward M. Curr, Chief Inspector of Stock, Victoria.

(Laid before the Conference of Chief Inspectors of Sheep, held in Sydney, in November, 1874.)

To the naturalist and helminthologist the study of the fluke parasite and the phenomena connected with its being, are matters of interest which have but slight charms for the sheepowner, however important to his welfare they may eventually prove. Perhaps they refer to matters too near home to be to his taste, and as a rule he has no patience but with what we will call the practical side of the subject, to which I propose to confine the few remarks I have to offer on a topic which of late has been worn somewhat threadbare.

The first circumstance which claims the attention of Victorian sheepowners with respect to this disease is its great spread during the last few years. Originally, as is well known, it confined its ravages to certain cold, dank, sour-grassed mountainous localities, whilst of late it has gradually been encroaching on neighbourhoods in which heretofore it had never been heard of, and in which it was believed on all hands that its existence was impossible. It is natural to inquire how this is to be accounted for; and how it has happened that the fluke has of late taken possession of large tracts of country, in which, during the thirty previous years of its occupation it was entirely unknown.

As regards this change, it seems probable that it may be accounted for in this way: that before fluke spread in Victoria, sheep were shepherded; they had as a rule plenty of excellent grass and to spare, and consequently that they lived on wholesome food, the result being, as old residents in the Colony will remember, that the sheep of those days were well-grown and healthy. Neither was it usual at the time to buy store sheep to fatten, so that there was but little travelling of stock, and diseases were, as a rule, confined to the localities to which by some means they had been brought.

This state of things came to an end, however, when paddocks took the place of shepherds; it was then too that overstocking became a general practice, and our sheep first became acquainted with starvation and unwholesome diet. A further consequence of overstocking was that the prime grasses never being allowed to seed, disappeared; the kangaroo grasses were eaten out, the myrnong and yams were almost exterminated, and their places were supplied by the least nutritious of our indigenous grasses, and not a few unwholesome exotic weeds. From that period, too, our sheep, reduced in many cases to a state bordering on chronic semi-starvation, dwindled in size and lost stamina, offering an easy prey to the first disease which might present itself. The purchase of store sheep, which the buyer reckoned on quickly fattening and selling off, also became a very prevalent custom, and as such sheep were obtained from localities in which fluke prevailed the disease gradually obtained the proportions which we now see. In other words, animals suffering from fluke were imported on the hitherto clean runs, on the least healthy portions of which they deposited the seeds of disease, which in due time were taken up by animals driven by hunger to feed in localities which otherwise they would have avoided.

The questions then crop up, where will fluke end? Can it possibly extend to country which has heretofore escaped its ravages? Is it to become general throughout the Colonies? Premising the fluke has already been acclimatized on runs on which a few years ago the owners, who freely purchased fluky sheep, ridiculed the idea of its propagation, it seems to me that we are not yet in a position to determine the possible geographical limits of this disease. On this subject, whilst admitting the probability of a large extent of country, notably our salt-bush plains, being wanting in the conditions necessary to the propagation of fluke, and setting aside the fact that I find it impossible to believe that steps will not soon be taken by owners which will in a great measure put an end to this scourge, I will ask the reader to remember, in considering the possible expansion of which this disease is capable here, that the acclimatization of animals is, as a rule, gradual, but the extent to which it may be carried very large—that a man, horse, dog, or sheep, for instance, transferred direct from the tropics, and subjected to the conditions of nature as they exist in Iceland, would undoubtedly perish, whilst there would nevertheless be no difficulty in the gradual extension of the tropical man, horse, dog, or sheep to that island. In the same manner, it is well known that vegetables will in many instances become gradually accustomed to conditions which at first were found to be very unfavourable to them. As one instance out of many, I may adduce the fact that, of a quantity of English wheat sown in some parts of Western Africa, but a moderate portion will seed, whilst in each ear which matures there will only be three or four grains of corn, but that after a few sowings the produce will gradually become acclimatized, strong, and plentiful. In like manner, I may remark, that many of our vegetables are now readily grown in Victoria in perfection in localities in which, to my knowledge, they could only be reared with considerable trouble thirty years ago. Hence, as modern authors have demonstrated, that in the laws which affect animals and vegetables there are many marked and undeniable coincidences, far from saying that the general plan of nature stops short with parasites, everything would lead to the inference that they are governed by conditions analogous to those of their hosts; so that it seems to me that we are not yet in a position to determine to what portions of this continent fluke might not, if unchecked, eventually extend, the probability being in favour of the increased area of its habitat.

Touching the reduction and prevention of fluke which, in the majority of cases, I am persuaded is a matter easily attainable, the first steps should undoubtedly be the lessening of the number of the sheep on lands on which this disease prevails, the substitution of healthy flocks for those now diseased, the destruction, as far as possible, of the ova of the fluke, and the securing to the flocks conditions of existence directly favourable to general health, and specially adverse to the economy of this parasite. As regards the destruction of ova, I believe it can be effected practically in most cases by burning off all rank vegetation and the drainage of wet grounds; whilst a considerable reduction of stock on fluky runs, by
allowing

allowing the better grasses to grow, and securing the animal a plentiful supply of wholesome food, at the same time taking away from it the necessity for browsing in sour and unhealthy spots, will very much reduce the frequency of this disease. In addition, in many places, as is well known, a liberal allowance of salt to the sheep is not only beneficial but an absolute condition to health. On lands where such measures fail, I think it may be said that the conditions of nature, unassisted by further efforts of art, which are not perhaps at present practicable, are unsuited to sheep; and that the sooner the owner accepts the fact and acts on it, the sooner he will consult his own interest.

In conclusion, I cannot help expressing the opinion that fluke is a disease which proper management will confine to very narrow limits. Along the country verging on the Australian Alps from Victoria to Southern Queensland, and in a few other districts, it will undoubtedly always prevail to some extent; whilst in such localities it may be very much kept under by a liberal use of salt and sulphate of iron, and Mr. Charles Thomas's remedy, which cannot be too much recommended. As a rule, fluke in Victoria is the natural result of improper sheep-farming—in other words, of overstocking; and the sheep-farmer, instead of lessening the quantity of his stock, or increasing the carrying capabilities of his land, has, in too many instances, contented himself with living in hopes that some medicine would be discovered which would enable him to go on defying the laws of nature, as he has been doing; forgetting that even if a cure for fluke were discovered, that, as things are, some other disease would inevitably take its place—that in fact health and unwholesome food cannot long co-exist.

At present, what the sheep-farmer in many cases has to consider is—whether it suits him best to feed five healthy sheep or six unhealthy ones. The great parent of disease in Australia is over-stocking—unwholesome food.

Sydney, 6 November, 1874.

EDWARD M. CURR.

No. 14.

FOOT-ROT IN SHEEP.

PAPER prepared by Mr. C. J. Valentine, Chief Inspector of Stock, South Australia.

(Laid before the Conference of Chief Inspectors of Stock, held in Sydney, in November, 1874.)

In making remarks on foot-rot, it appears to be only repeating common matter which is known to nearly all persons connected with the working management of sheep in the Colonies, and I fear that I shall not be able to throw any new light on the subject. As a disease which causes great depreciation in the value of sheep and entailing heavy expenses on sheepowners, it has been known through most parts of the Colonies, and is dreaded by many more than an outbreak of scab.

Investigations held by professional men in Great Britain have caused them to conclude that there are several distinct affections of the foot which are commonly included under the term foot-rot. True foot-rot prevails on heavy soils during wet weather. The affection generally commences in the skin above the hoof between the digits or clefts of the hoof, thence extending downwards to the membrane of the sensitive foot; inflammation is set up, which increasing, causes an exudation of purulent matter, in which stage the disease is very bad.

One form of foot-rot occurs on dry sandy soils, and is sometimes prevalent in hot, dry summers. Minute particles of grit enter the horn tubes, and ultimately get into the interior of the foot, causing inflammation and exudation, finally extensive separation of the horny covering from the secreting structures.

A third form depends upon the overgrowth of the hoof, and occurs commonly in soft soils in which there is abundant moisture.

Injuries inflicted during journeys, punctures from thorns, nails, wounds from sharp stones, constitute another form of the disease. Such are looked upon in Great Britain as the different causes of foot-rot.

Randall, in his work on Sheep, considers that foot-rot in America is much more virulent than in Europe, where, as described by Youatt, it presents essentially different early symptoms, but is evidently the same disease.

No doubt there are many trifling causes from which foot-rot arises in the Colonies, but I consider the disease arises principally from sheep pasturing on rich soils with plenty of moisture, long wet grass keeping the foot constantly damp (previous to fencing, assisted by camping in dirty yards), the clefts of the foot are filled or choked with dirt, thereby causing much irritation, and consequent on that inflammation of the interior structures of the foot; suppuration then takes place and spreads under the hoof, and in many instances in the advanced stages to the coronet, causing it to separate. Scald by some is considered to be the first stage of the disease, but I am inclined to think such is not the fact in all cases. After scald sheep pasturing on sandy soils with excessive heat in the day after heavy dews, particles are introduced into the foot causing inflammation, and disease is the necessary consequence. Sheep have been pastured over wet plains of rich black soil, but so thoroughly washed have the feet become by the constant moving through water that scarcely any cases of foot-rot occurred. This was in limestone country. Wherever sheep have their feet washed naturally, although on rich soil, foot-rot appears only in isolated cases.

It appears in many instances where it cannot be reasonably accounted for. Some seasons more than others appear to favour the development of the disease, but no record has been kept that I am aware of the different seasons, which might be used as a guide to show when foot-rot might be expected to be more virulent

virulent than usual. I find country on which it was considered impossible to place sheep, in consequence of the disease appearing in so virulent a form, being free from it for some years, notwithstanding that the state of the land was not apparently altered; since which the disease has again appeared. A case occurred in which foot-rot broke out in swampy country, attributed by the owner to the sheep not camping on dry ground. It ran through about 3,000 sheep, in not a very virulent form, but still bad; no other sheep suffered, and no other sheep have suffered on the same country since.

In regard to foot-rot in South Australia, the sheep on country to the north of Adelaide are remarkably free from it, the disease appearing only in isolated cases. On some large properties it is entirely unknown, and but few long hoofs even require paring. Such was not the case on country to the east and south-east of Adelaide, where it was found on some stations in its worst and most destructive form. Much of this country was moist land, with long grass and too often dirty yards; here the staff of foot-rotters was formidable, and a terrible expense to the owner. This staff of men were kept up to pare and dress with all sorts of remedies some thousands of sheep on large stations, and the number of unfortunate animals limping about, poor, haggard, and decidedly unprofitable, was a very heavy percentage on the total number of sheep. All this has been altered since fencing has been introduced and an improved system of management adopted. Fencing has allowed the sheep more freedom and a choice of camps; they are no longer driven in a hurry over sticky, muddy ground, and enclosed in a camp strongly heated with the manure deposited for years. In a report from the worst district, preventative measures have reduced the disease to a minimum, and it is spoken of as trifling, varying slightly with the seasons. Although foot-rot has decreased amongst large holders, I am afraid that it is rather on the increase among small ones. As their number increases in favourable localities for foot-rot, there it appears to come to the front again; they are not so ready to adopt an improved system of management, and are often ignorant of the disease and its cause. Owing only a few sheep, they do not consider it of sufficient importance to inquire or make any outlay to prevent a disease from which they are only beginning to feel the ill effects.

Is it contagious? I am inclined against the opinion, in the general sense of the term. No doubt matter exuded from a diseased foot would inoculate another if placed in it. Foot-rot will run through a flock in a few weeks—yet sheep pastured on the same country shortly after will not become diseased. It appears to me foot-rot arises from the state of the country, the health of the sheep, and the peculiarity of the season, as sheep placed on the same country at different seasons of the year are differently affected.

After all, the most important thing is, can foot-rot be prevented or cured? I am afraid not entirely eradicated. Much may be done to prevent the disease, and sheep may be cured by good management; but this will not prevent the disease from breaking out again and again in the same sheep. The instances of the disease breaking out in different places after the sheep or country have been free from it for a long time show that there are causes producing foot-rot which at present we are not able to explain. In some places the merino suffers more than the long-wooled sheep, and again we find it reversed. As a rule, I think the merino suffers the worst. In others foot-rot disappears for some years and then breaks out without any apparent reason. The disease causes so much loss, and entails such heavy expense on sheepowners, that it would be well worthy for an inquiry to be made by competent persons to trace out the different circumstances which cause the disease.

A number of different remedies have been used, each more or less successful according to the carefulness with which they are applied. Butyr of antimony, bluestone, and quick-lime, were and are still with many favourite remedies. To a great extent arsenic has superseded these; it is a cheap and efficacious remedy, and easily applied to large numbers of sheep. Sheep scalded, if run through a trough with hot arsenic water, are prevented from the disease extending farther, and on those stations where the disease exists, sheep are passed through a solution of arsenic, varying from 2 oz. to 4 oz. to the gallon, about every six weeks, during the worst season of the year. Sheep when in the second stage, and with long hoofs, should be pared, and the diseased foot thoroughly cleansed and washed with arsenic water prior to passing through the trough. Sheep should stand after passing through the trough in a clean yard, to allow the arsenic to take effect. Arsenic is recommended as being efficacious, and, where thousands of sheep require to be treated, cheap and easily applied; but I would impress on all that, no matter what the remedy may be, unless care and attention is paid to the paring of the feet, to the mixing of the solution, and the general application, arsenic will not be of more use than other remedies badly applied. I find that carelessness in the treatment of all diseases is generally the cause of failure.

C. J. VALENTINE.

No. 15.

FOOT-ROT IN SHEEP.

PAPER by Mr. P. R. Gordon, Chief Inspector of Sheep, Queensland.

MEMO.—Having given some attention to the subject of foot-rot, my experience has led me to class malignant foot-rot as a decidedly contagious disease. Several well authenticated instances on the black soil of Darling Downs have shown that it can be communicated by contagion, and permanently stamped out with the sheep immediately affected.

Seven years ago, Mr. E. M. Curr, of Victoria, supplied me with information as to the use of carbolic acid, and, acting on my advice, that agent has been used most successfully in the cure of foot-rot. It combines with water by boiling from ten to twenty minutes, and is used in the trough at a temperature of 110° Fahr., and in the proportion of a pint of the acid to four gallons of water; or it may be applied in the form of an emulsion, prepared by means of soft soap.

Too much importance cannot be placed on the fact that very much of the success of a cure depends on the surgical operation. Every diseased part of the foot *must* be laid open, even if this should necessitate the removal of the *whole of the hoof*.

P. R. GORDON.

No. 16.

LETTER from Chief Secretary, Victoria, to Colonial Secretary of New South Wales,
in regard to Border Quarantine.

Victoria.
Chief Secretary's Office,
Melbourne, 7 October, 1874.

SIR,

With reference to the conversation which some of the Members of this Government had with you during your recent visit to Melbourne, on the subject of a quarantine-ground for sheep being established at Moama, or one of the other crossing-places of the Murray, to facilitate the export of sheep from Victoria into New South Wales,—I have the honor to request that you will, according to your promise, bring this matter under the consideration of your colleagues, with a view, if possible, to meet the wishes of the Government of Victoria.

The grounds upon which it seems reasonable to urge the question at the present time are, that scab has been nearly eradicated from Victoria, after great outlay, and it can be stated with confidence that the disease does not exist at all, and has not for a very lengthened period, among those flocks from which sheep of a high class would most probably be selected for export; such sheep, for instance, as have been sent habitually into the Colony of New South Wales, to a limited extent, *via* Sydney, under the Quarantine Regulations, without any evil effects resulting to the latter Colony from the trade.

And I may also remind you that, when some years ago sheep from Victoria were permitted to enter New South Wales, at Echuca, the precautionary means that were adopted to prevent them conveying infection were so efficacious that in no case, I am informed, did sheep introduce disease into your territory, although the risk then was much greater than it could be now, as scab prevailed extensively in Victoria, while it is confined at the present time to a few districts.

The experience obtained in this Colony confirms the view that, under proper Quarantine Regulations, rigidly enforced, sheep may be moved, without danger, into clean districts.

By the provisions of the Scab Act of Victoria no sheep can be taken into a clean district from one that is uncertain, without being dipped twice under the personal superintendence of a qualified officer; and I have it on the authority of the Chief Inspector of Stock that these means have had the effect of allowing sheep to be transferred without injurious effects resulting in any single instance, though the system has been in operation for some years, and has therefore been thoroughly tested.

I have only, in conclusion, to say that, although it would be a great boon to the breeders of first-class sheep in Victoria to have New South Wales open to them as a market for their stock, it is worthy of your notice that the persons who are the most urgent on this Government to have the existing restrictions removed or abated are the owners of stations in New South Wales, who expect to derive great advantages from introducing improved strains of blood into their flocks.

I have, &c.,
GEO. B. KERFORD.

No. 17.

CORRESPONDENCE respecting Fluke in Travelling Sheep in South-eastern District in
South Australia.

(Laid before the Conference by C. J. VALENTINE, Esq.)

MR. ARCHIBALD COOKE TO THE COMMISSIONER OF CROWN LANDS.

Wellington, 29 June, 1874.

SIR,

I have sent you a copy of an extract from a letter from a Lacepede firm, signed Donald Matheson, a confidential clerk.

I enclose the package of the fluke sent to me. I have no practical knowledge of the disease. It will be a serious matter to allow this plague to get into the country.

I have, &c.,
ARCHIBALD COOKE.

D. Matheson to Archibald Cooke, Esq.

Kingston, 25 June, 1874.

Dear Sir,

I wish particularly to draw your attention to some 7,000 or 8,000 sheep now on the road from McImis's station, taken by Jenkin Coles, and will likely pass through your run and others if permitted. When passing here the butchers bought 200, and the sheep are found to be full of the "fluke," which I believe was unknown in this district before. I enclose you two or three of the fluke, taken out of one of the sheep killed by the butchers here. It was through Mr. Vaughan that the matter was discovered here. It seems some one or two of the sheep were dropped on Morris's run; and, as they had a suspicion about the sheep, they killed those dropped, and examined and found the "fluke," which he brought over here in a vial, and which led to the examination of those killed here. Mr. Vaughan says he will report to the Inspector, but we thought to send you this notice, in case it might be dangerous for these sheep to pass over your country. The sheep will be about the Salt Creek now.

Yours, &c.,
D. MATHESON.

MR.

MR. H. T. MORRIS TO THE COMMISSIONER OF CROWN LANDS.

Anlaby, 7 July, 1874.

SIR,

This morning, I took the liberty of telegraphing to you, intimating that I had heard, on good authority, that a flock of sheep, travelling up from the South-east, were affected with fluke.

It is more than probable that you were acquainted with the fact before my telegram reached you; but, notwithstanding, as soon as the circumstance came to my knowledge, I deemed it my duty to inform the Government of it.

It is certainly a contagious and dangerous disease; and the sheep in this Colony generally being in a most healthy condition, especially north of the River Murray, it would be a great misfortune should any disease be introduced amongst them. I do not know if there is any Act to show how this disease can be dealt with, but I fancy not. Should such be the case, some special and immediate action is necessary, as the ground on which they must depasture may cause the disease to spread to other flocks travelling on the same country.

If a number of persons engaged in pastoral pursuits could be readily got together, probably the best way to meet the difficulty would be for them to subscribe *pro rata*, according to the number of sheep they would buy, and destroy them; but as this cannot be quickly done, and should the sheep alluded to be in such a state as to endanger other flocks, it is to be hoped the Government will be able to step in and destroy them, and compensate the owners.

I have reason to know that the gentlemen who have purchased these sheep had not the least idea of them being diseased; it is therefore a great hardship for them.

I have, &c.,
H. T. MORRIS.

MR. S. DEERING TO THE CHIEF INSPECTOR OF SHEEP, ADELAIDE.

(578/74.)

Crown Lands Office,
Adelaide, 9 July, 1874.

SIR,

I have the honor, by direction of the Honorable the Commissioner, to inform you that the Government have appointed you, in conjunction with the gentlemen named in the margin [H. T. Morris and A. McFarlane], to be a Board of Inquiry in the matter of a flock of about 6,800 sheep stopped on Policeman's Point, on the Coorong.

The Government desire that you will proceed to Policeman's Point and examine the sheep which are reported as being diseased with fluke. It will be desirable that several sheep should be killed to prove practically that fluke exists in them.

You will report—

- 1st. As to whether you consider the flock to be badly diseased?
- 2nd. Whether, in your opinion, there would be danger of contagion to other sheep depasturing over the same land?
- 3rd. Whether it is desirable that the flock should be destroyed; or, if not, whether they might be placed in a locality away from the travelling stock road in quarantine for not less than four months?
- 4th. As to the value of the sheep, and whether you consider that the Government, in the event of the flock having to be destroyed, should pay any portion of the value, and if so what that portion should be?
- 5th. Whether you think that the owners may be supposed to have known of the state of the flock before buying; and, if so, whether they have a claim on the Government in the event of the sheep having to be destroyed?
- 6th. Whether, in your opinion, it is desirable that a part of the South-eastern district in which fluke is known to exist should be declared a quarantine district, with a view to prevent, if possible, the disease being extended to other parts of the Colony which are now free from the evil?

I have, &c.,
SAML. DEERING,
Secretary.

THE BOARD OF INQUIRY TO THE COMMISSIONER OF CROWN LANDS.

Magrath's Flat, 11 July, 1874.

SIR,

We have the honor to inform you that in accordance with your instructions of the 9th instant, we carefully examined the sheep detained at Policeman's Point, on the Coorong, on the 10th instant, and beg to report as follows:—

1st. We selected and killed ten sheep, some fat and, to external appearance, healthy—all were picked to show the general state of the flock; we found them in every instance very badly diseased with fluke, and we are of opinion that there is not a sound sheep in the whole flock.

2nd. We are of opinion there would be danger of contagion, and consider the country on which these sheep have been detained should be immediately proclaimed a quarantine ground.

3rd. It is with reluctance that we have arrived at the conclusion that the sheep should be killed. We are satisfied from the state of the flock that they should not on any account be moved from where they now are. From the nature of this country it would be impossible to keep so large a flock in quarantine; even if this could be done there is no probability of their recovering in country of this description.

4th. We value the sheep at seven shillings per head. We consider the Government should pay to the owners a portion of the value, and that the amount should be four shillings per head. The owners should be required to kill and burn the sheep at their own cost, and be allowed to take the skins and fat.

5th. We believe that the owners were not aware of the sheep being diseased with fluke; but, from the advanced stage of the disease, we are surprised that the seller was not aware of the sheep being in so bad a state. We consider that if the owners had known the sheep were diseased when purchasing, they would have no claim on the Government.

6th.

6th. From the state of these sheep we consider it is absolutely necessary that steps should be taken at once to examine the flocks from which they were brought, and others if deemed necessary, and where fluke is found to exist the sheep should be placed in quarantine, with a view to prevent the disease being extended to other parts of the Colony. We are also of opinion that power should be immediately obtained, authorizing the inspectors to examine the flocks of the Colony for fluke and any other infectious or contagious disease. We think it necessary to state these sheep came from the "Woakwine Run," near the coast, about North of Rivioli Bay, and are now depasturing on the Coorong, near the Salt Creek, about 130 miles from Adelaide. In conclusion we would recommend the immediate necessity of preventing all sheep from crossing the River Murray from the south-east until the state of the flocks can be ascertained.

We have, &c.,
 C. J. VALENTINE,
 H. T. MORRIS,
 ALLAN McFARLANE, } The Board of Inquiry.

Memo. of Sheep Destroyed.

No. 1. Sheep selected as likely to be diseased, from external appearance, on being opened it presented a shocking sight; there was more than a quart of dirty brown liquid in the abdomen—evidently, on examination, from the liver which was much enlarged, and the ducts expanded to a most unnatural size, and filled with "fluke"; the heart and lungs were in an abnormal state; the heart was enlarged, thin, and flabby; the lungs were almost white; the flesh was of a greenish yellow colour; the sides of the sheep were discoloured, and apparently as if granulated; the lips were pallid and bloodless; and the eyes bloodless and dull.

No. 2. Sheep selected as being fat, and one of the most healthy-looking; however, on being opened, the ducts of the liver were distended with "fluke," and the sheep, though fat, presented a most unhealthy appearance, the flesh being of a greenish yellow, showing it to be unwholesome, and unfit for human food.

The whole ten killed were almost equally diseased; in three, the intestines were adherent to the enlarged liver, and in one instance adhered to the side of the sheep. It is apparent that if sheep in this state are allowed to travel, especially at this season of the year, it is more than probable that the germs of the disease would be disseminated throughout the Colony.

Considering it prudent to fix a line across which the diseased sheep should not come, we instructed Mr. Pavey, of Woods' Wells, to draw a plough furrow across the Government Reserve, at the northern end; this will also act as a caution to travelling sheep.

C. J. VALENTINE,
 H. T. MORRIS,
 ALLAN McFARLANE.

MR. S. DEERING TO THE CHIEF INSPECTOR OF SHEEP, ADELAIDE.

(599/74.)

Crown Lands Office,
 Adelaide, 15 July, 1874.

SIR,

With reference to the report of the Board of Inquiry (845/74) appointed to examine a flock of sheep travelling along the Coorong, and said to be badly diseased with fluke, in which it is recommended that the sheep should be killed, and the owners partially compensated, I have the honor, by direction of the Hon. the Commissioner, to request that you will state whether, in your opinion, there is any other course open to the Government to adopt—for instance, could a piece of dry country be found near where the sheep are at present, upon which they could be placed for a time? Or, failing that, would it be advisable to allow the sheep to travel back again over the route they have already come, and on to the run from which they were purchased?

If neither of these courses can be adopted, I am to request you to make any suggestions that may occur to you which would meet the difficulty.

I am, &c.,
 SAML. DEERING,
 Secretary.

THE CHIEF INSPECTOR OF SHEEP, ADELAIDE, TO THE SECRETARY CROWN LANDS.

Inspector of Sheep Office,
 Adelaide, 15 July, 1874.

SIR,

In reply to your inquiry of the 15th instant, as to whether there is any other course open than that recommended by the Board of Inquiry for the Government to adopt in reference to the diseased sheep at Policeman's Point, I have the honor to state the travelling reserve on which the sheep now are, although extending back three or four miles, would be insufficient to keep the sheep on for a few months, and there is no country adjacent on which the Government are able to place the sheep. I understand the owners endeavoured to get country on which to place the sheep, but did not succeed.

If the sheep are allowed to travel back, the owners of clean stations would and do strongly object to their return, and it would be manifestly unjust to owners to allow the sheep to travel again over clean country. Even should the sheep be able to return to Woakwine I think I may state the late owner would not take them.

Should the Government not adopt the recommendation of the Board, they could take a negative position—that is, obtain power to stop all sheep from crossing the River Murray for the present, and decline to interfere with the sheep. This would be right if the whole of the South-east District were diseased; but not being so, I question whether it would be an entirely equitable course.

It

It has been asked by owner of scrub country to the east of Policeman's Point if he could purchase the diseased sheep cheap, to place on scrub country. Although agreeing with the recommendation of the Board, such a course is open for the Government, provided the sheep are placed in quarantine, to prevent their removal until late in December. Although the scrub country is dry, and sheep placed there would be off the general travelling route of sheep, I am of opinion that these sheep remaining on that country so long would leave the germs of fluke on the ground.

I have, &c.,
C. J. VALENTINE,
Chief Inspector of Sheep.

MR. J. M. BORROW to MESSRS. AUSTIN AND COLLS.

(619/74.)

Crown Lands Office,
Adelaide, 18 July, 1874.

GENTLEMEN,

With reference to the correspondence that has taken place on the subject of the flock of six thousand eight hundred (6,800) sheep, diseased with fluke, now at Policeman's Point, on the Coorong, I have the honor, by direction of the Honorable the Commissioner, to inform you that, upon condition that the sheep are killed, and the carcasses burned, the Government will place a sum upon the Estimates to partly reimburse you for the loss you will sustain, such sum to be at the rate of three shillings and fourpence (3s. 4d.) per head for each sheep so destroyed—the number killed to be certified by Mr. Inspector Wells.

The cost of killing and destroying must be borne by yourselves, and the skins, &c., &c., remain your property. No claim to be made upon the Government for anything beyond the sum of 3s. 4d. per head.

I am, &c.,
J. M. BORROW,
Chief Clerk, *pro* Secretary.

THE SECRETARY, CENTRAL BOARD OF HEALTH, to THE CHIEF SECRETARY.

Central Board of Health, Adelaide,
18 July, 1874.

SIR,

I have the honor, by direction of the President of the Board of Health, to acknowledge the receipt of your communication of the 17th instant, containing the report of the Commission appointed "to examine the condition of a flock of sheep at Policeman's Point, said to be diseased with fluke, and asking that the Central Board of Health should report, as soon as possible, whether the sheep referred to are such as should be allowed to be brought to market and killed for human consumption, or whether the Board of Health would not feel justified in ordering such meat to be destroyed."

As the matter appears to be urgent, and the time required to convene a special meeting of the Board would be considerable, the President would venture to make the following suggestion:—That the sheep should be confined to a certain locality, and when the wet season is over the pasturage should be burnt so as to destroy the ova which become attached to the moist pasturage, getting into the stomach of the sheep whilst feeding, and from the stomach passing into the liver.

The whole matter will be brought before the Board at its first meeting on Tuesday next.

I have, &c.,
R. G. THOMAS,
Secretary, C.B.H.

THE SECRETARY, CENTRAL BOARD OF HEALTH, to THE CHIEF SECRETARY.

Central Board of Health, Adelaide,
22 July, 1874.

SIR,

I have the honor to refer to my former communication of the 18th inst., in answer to a letter of the 17th inst., addressed to this Board, and enclosing the report of the Commission appointed "to examine the condition of a flock of sheep at Policeman's Point, said to be infected with fluke, and requesting the opinion of the Board as to whether the sheep referred to are such as should be allowed to be brought to market and killed for human consumption, or whether the Board of Health would not feel justified in ordering such meat to be destroyed."

I am directed, in answer, to forward for the information of the Honorable the Chief Secretary the following resolution of the Board of Health, passed at their meeting of the 21st inst.:—"The Board of Health have to report to the Honorable the Chief Secretary, that from the statements contained in the report of the Commissioners they cannot doubt that the sheep alluded to were not in a state to have been slaughtered for human consumption."

I have, &c.,
R. G. THOMAS,
Secretary, C.B.H.

MR.

MR. H. WELLS TO THE CHIEF INSPECTOR OF SHEEP, ADELAIDE.

Wood's Wells,
8 August, 1874.

SIR,

I have the honor to report that the killing and burning of the fluky sheep, which were travelling from the Woakwine country, and stopped on the country at Policeman's Point by authority of the Government, has been carried out to my entire satisfaction. The work commenced on the 23rd of July, and was finished to-day. The system and care which has characterized Mr. Robertson's proceedings in carrying out this unpleasant task, is worthy of every commendation. During the time I have been here I have endeavoured to find the fluke ova, and also small fluke. I searched the gall, bladder, bile, ducts, stomach, and intestines, without success, which is probably owing to the glass I used not being powerful enough. I observed one case of rot, the liver was adhering to the side of the sheep, and when taken out had the appearance of a large hard oval-shaped lump of disease, which when opened showed a mass of decomposed matter, with a small quantity of fluke. I cannot imagine how an animal could possibly exist in such a state, and yet the sheep seemed in good condition. In every instance in searching for ova and small fluke, I found the latter all of one size, or nearly so,—fully developed.

I would call your attention to the fact, that I found the fluke in large quantities in the intestines, leading immediately from the last part of the stomach; they were very numerous in the entrails, from the junction with it of the pipe or duct, down which the bile flows from the liver. I opened the entrails from this point for six or eight feet downward from the stomach, and found it full of bile and fluke. To show you how easily this parasite can leave the liver, I send by this mail a bottle containing the gall-bladder, with its pipe leading into the ducts of the liver, and from there direct into the intestines; that portion which empties itself into the entrails, though small, is so elastic, that when taken hot from the sheep would almost admit of the fingers being inserted in it. In conclusion, I would beg to say, that although salt herbage may be a cure for fluky sheep, it does not alter the fact, that all clean runs, apart from salt country, are liable to become diseased if fluky sheep are allowed to travel over them.

I have certified to the number, &c., &c.

I have, &c.,
HY. E. WELLS,
Inspector of Sheep.

1875.

NEW SOUTH WALES.

LIVE STOCK.

REPORT

FROM

CHIEF INSPECTOR OF STOCK, FOR THE YEAR 1873.

Presented to both Houses of Parliament, by Command.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1875.

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LIVE STOCK.

REPORT FROM CHIEF INSPECTOR, FOR THE YEAR 1873.

THE CHIEF INSPECTOR OF STOCK TO THE HONORABLE THE MINISTER FOR LANDS.

Department of Lands,
Sydney, 12 August, 1874.

I HAVE the honor to submit for your consideration a Report on the Horses, Cattle, and Sheep in the Colony, for the year ending 31st December, 1873.

I.—HORSES.

1. THEIR HEALTH.

OUR horse stock are reported as entirely free from any infectious or contagious disease.

2. THEIR NUMBER AND DESCRIPTION.

There appears by the returns to be a considerable increase in the number of horses in 1873 as compared with 1872, but the returns for 1872 were even less reliable than those of last year; and when it is considered how very unprofitable horse-breeding is, and that breeders are almost all inclined to get out of this class of stock, it may be taken for granted that the increase is more apparent than real, and that as to numbers our horses are nearly stationary at about 320,000. This is also borne out by the Statistical Register, in which the numbers, which stood in 1872 at 328,408, stand in 1873 at 328,014. Relatively to each other, the numbers of the different breeds may be stated at (say) one-sixth draught, one-sixth light-harness, and four-sixths saddle.

3. IMPROVEMENT.

With only four exceptions, the Inspectors report that the horse stock in their districts is improving. This is being brought about—1st, by keeping the horses in paddocks; 2nd, by the destruction and sale of weedy mares; 3rd, by the introduction of well-bred entires; and, 4th, by the destruction of wild horses; and I will deal with this branch of my Report under these heads:—

(1.) *Depasturing in Paddocks.*

This is a step in the right direction. No real improvement can be made in our horse stock until they are kept within enclosures. Until they are so they will never be so quiet or manageable as they ought to be, nor can they be kept from coming into contact with wild horses and stray ill-bred entires, which always infest open runs.

(2.) *The culling and sale or destruction of weedy Mares.*

This also is absolutely necessary, but the practice is not followed to anything like the extent it ought to be. Thousands of mares are still allowed to breed, whose progeny, with the sires now available, can do little more than pay the expense of driving them to market. It is to be hoped, however, that as the country is enclosed, and the cost of rearing these useless weeds becomes more apparent, their owners will see the folly of breeding from such mares, and either sell or shoot them. Even if colts from these weedy mares should average £4 or £5 a head—and that for the class of colt is a much higher average than they now make—the return to the breeder is very little more than half what cattle give; for it is generally allowed that *one* horse eats and destroys as much as *two* head of horned cattle, or at least that *two* horses require as much pasture as *three* cattle; while at present rates cattle are fit for market a year earlier than horses, and bring average prices of £2 a head more than the average named, while they require far less looking after.

(3.) *The introduction of well-bred Sires.*(a) *Thoroughbred Blood and Arab.*

Of late years there have been frequent importations of both English thoroughbreds and Arabs, and a good many of the former introduced last year are of very fashionable blood. But besides these, we possess in the Sir Hercules (a Colonial-bred sire), New Warrior, and other families, some of the stoutest and best strains in the World. Unless therefore our blood stock are allowed to deteriorate—of which there does not appear to be the least risk under the able management of our present stud-owners—our thoroughbreds must continue to be, as they have always proved themselves—the best of that breed out of England.

(b)

(b) Draught Horses.

So far as the draught stock are concerned, the horses which have lately been introduced have generally been of the right description—being principally of the Clydesdale breed, the best draught horses in the World for general purposes; and a decided change for the better is noticeable during the last few years; but any improvement must be comparatively slow, for the mares to which these entires can be put are mostly light in the frame, leggy, and wanting in bone below the knee.

The best of our draught stock went to Victoria some twenty years ago, on the outbreak of the diggings there; and although several of our breeders—such as Mr. Towns of Richmond, Mr. Bell of the Upper Hunter, Mr. Rouse of Mudgee, Mr. Wade of Goulburn, Mr. Brown of Bowenfels, Mr. Stephenson of Maneroo, Mr. McLeod of Moruya, Mr. Massie of Gundaroo, and other breeders who might be named—have again formed studs and are breeding first-class heavy horses, our draught horses generally had become so deteriorated that it will take a great deal of time, money, and care to make them as a class anything like what they ought to be. However, with the extension which has taken place of late years in farming, and the macadamizing of the roads (which has had the effect of driving the bullock teams off them), there is now a good demand for serviceable carriers' and farmers' horses, and every prospect that this demand will not only continue but increase, while heavy dray horses are bringing long prices for town work.

(c) Light-harness and Saddle Horses.

There is a very great scarcity of good sires of this breed. In fact, if the returns received from the different districts be correct, there are only two or three pure-bred coaching sires in the whole Colony. At any rate, with the exception of a very good horse re-introduced by Mr. Woodhouse, of Mount Gilead, Campbelltown, from Tasmania, and another of the same stamp imported by Mr. Rouse, of Guntawang, no entire of this stamp has been imported for several years; and pure-bred coaching mares are even scarcer than the entires.

To supply the demand for coaching and light harness horses therefore, a cross-bred animal is being produced. The thorough or well-bred blood horse is put to draught mares, and the draught horses to light well-bred mares. The progeny is the ordinary light-harness horses of the present day, which, taken as a class, are very far from being the right sort even for work, and so far as good looks go they have little to recommend them. Of the two the cross with the blood horse and the heavy mare is the better; and where the sire is thoroughbred or nearly so, and of fair strength and substance, a good many useful animals with passable action and fair shapes are bred. Very few of them, however, are fit for the side of a carriage. In the other cross again the chances are still farther against the breeder; and it is no uncommon thing to see some of the stock bred in this way with what might be termed the sire's head, the dam's legs, the sire's straight cloudy shoulder, and the light middle piece of the dam, with a general coarseness all over, and neither style nor endurance.

The fact is this cross is by far too sudden, *i.e.*, the animals making it are a great deal too much unlike each other to amalgamate properly in their progeny. And it is to the fact of our breeders being reduced to either of these alternatives, or to that of breeding from mares the produce of this cross and a blood horse—when the progeny almost always runs small and weedy, with anything but showy shapes or good carriage—that the great scarcity of well-bred serviceable carriage and buggy horses is attributable.

To remedy this state of matters the pure bred coaching horse or Cleveland bay ought to be introduced from England. That horse is described by a writer on the breeding of carriage horses, who is evidently master of his subject, in a recent issue of the *Town and Country Journal*, as follows:—"The coach horse, sometimes called the "Cleveland," is an upstanding clean-limbed animal, with lofty crest, high action, and the general appearance of an enlarged blood horse. His head is light and well formed, well set on a long high arched neck. His shoulders are oblique to a degree rarely seen but in the best hacks or hunters. His legs are clean and flat, though tolerably substantial. His barrel is good, with a well-sprung rib. The quarters are in proportion to the fore-hand, with well-bent hocks; the croup is high, and the tail well set on. He has considerable courage, and a spirited air and manner. With his magnificent shoulders of course he has good action and plenty of it. His dam, foaled in the green fields of Beverley, was such another, and his sire had taken many a prize as the best coaching sire and so on all over Britain."

In purchasing in England, however, great care should be taken that the horses selected are of the pure coaching blood, and sprung from progenitors which have for many generations been bred from that blood without any admixture whatever. If this is not done, a more stylish, and perhaps somewhat handsomer horse in some respects may be palmed off for the Cleveland. I allude to a horse got from a light clean-legged mare by a thorough-bred sire. Horses bred in this way are comparatively useless for stud purposes, for they are themselves but cross-bred, and there is no certainty that their progeny will be like themselves—the certainty is rather that they will be unlike. Their use, therefore, only leads to disappointment and loss; and it is to overlooking this fact that so many of our breeders of horse stock have been unsuccessful.

If the Cleveland were put to good-sized mares as nearly as possible of the same type as himself, the progeny as a rule would be a fair coaching size, with good action and good looks. If again he were put to mares of the upstanding saddle or well-bred light-harness type, the progeny would in most cases be a well-bred light-harness horse fit either for the side of a carriage or for a dog-cart or buggy. And if put to the smaller well-bred, or even the comparatively light or weedy mares (of which we unfortunately have tens of thousands) the progeny would be either a fair buggy horse or a good-sized hack.

There would even with these sires be still of course a good many comparatively low-priced and worthless animals bred from such mares as are now in the Colony, but the proportion of low-priced ones would every year be less and less.

Besides the true coacher or Cleveland bay there is a breed of horses in the eastern portions of Hanover and the middle districts of Saxony (in the neighbourhood of Brunswick and Magdebourg and in the country lying between these towns) which if introduced would be of great service in improving our lighter breeds. This horse shows more breeding than the Cleveland, and looks very like what a cross between the English thoroughbred blood horse and the Cleveland would be; but he is of a confirmed type, and as such is of course far more valuable for breeding purposes than the cross-bred animal I have mentioned

mentioned would be. He is what might be termed a well-bred, stylish, carriage horse, about 15 hands 2 inches to 16 hands high. He has a good head, a long well-shaped well-set neck, sloping withers, fair barrel, and handsomely turned hind quarters, with good clean legs, and plenty of bone below the knee; and his action is both good and stylish.

Another horse whose introduction would be of immense advantage to the Colony is the Norfolk cob. He stands from 15 hands to 15 hands 3 inches high, and is what may be termed a thoroughbred cob. His head and neck are all that could be desired, while his expression indicates courage and durability; his withers are high and well set back; he is thick at the heart, broad on the loins, and well ribbed home; his quarters are full and round, and his arms and thighs full of muscle; his knees and hocks are strong, and his cannon bone is remarkably short and stout, while his pasterns are strong and elastic; his style and action as a trotter is superior to that of any other breed, and his speed would be considered under the average if he could not trot 14 miles within the hour.

The Norfolk cob is a distinct type of horse, and would be certain to convey his shapes and qualities to his progeny, as he can be obtained pure bred for generations without any cross whatever. He is therefore just the horse we require to put to our light well-bred mares to breed horses suitable for the Indian market, and to give more compactness, greater strength, and more bone under the knee to our saddle horses generally. If, again, the Norfolk cob were put to our larger saddle and light-harness mares, the progeny would be a strong, well-knit, stylish, carriage or buggy horse, with great spirit and durability.

Not only would these direct benefits accrue to our studs by the importation of the Cleveland, the Brunswick carriage horse, or the Norfolk trotter, but very great indirect advantages would also follow their introduction. Thus the next generation of our well-bred brood mares would be considerably stouter, more roomy and larger every way than they now are—more like what they were twenty years ago; and if a good thoroughbred could be put to them,—instead of the progeny being as it now is, with such a sire, light and weedy, it would in nine cases out of ten be a good, serviceable, well-bred, upstanding hack, or light-harness horse, with plenty of style and spirit.

4. EXPORT TO INDIA.

India has always been a good market for the right class of horses, such as a well-bred, compact saddle horse, about 14 hands 2 inches to 15 hands 1 inch, suitable for the Indian Cavalry—handsome, upstanding, well-bred, well-broken, saddle horse, fit for a gentleman's town-hack—thoroughbreds for racing purposes, and well-matched, well-bred carriage pairs; and lower-priced horses of the same sorts have usually sold well in Ceylon.

If the report be correct that the Government in India have ceased to breed, or more correctly speaking, to rear their own horses for the cavalry, the market there must improve. Until very recently it was customary for the Indian Government to purchase English or Australian thoroughbred, and I believe also Arab entires, and give the farmers in those parts of India most favourable for horse-breeding the use of them for their native mares, on the understanding that they sold the foal to the Government when twelve months old at from £10 to £12. The foal was then taken to some of the Government stud farms till it was old enough to be broken in, when it was handled, and at the right age sent to the cavalry as a troop horse. It is now stated that, after a long and thorough trial, it has been found that what with the carelessness of the natives, who are employed on the stud farms as grooms, the great expense these farms entail, and the frequent losses through deaths and accidents, these native bred and reared horses cost more than horses can be imported for from Australia, while they are inferior to them in size, shape, and endurance—the native mare being as a rule a very poor dam.

If this report be correct with regard to the Indian breeding establishment, and the prices for horses suitable for their market keep up, we may expect that the spirit of improvement which has begun to pervade our breeders will continue to strengthen and develop, and that before long our horses will regain the very high reputation they at one time possessed in all parts of India.

5. WILD HORSES.

Notwithstanding that a great many wild horses are annually destroyed, the number of these pests, owing to the natural increase, shows comparatively little diminution. Last year the number stood by the returns at 109,242 for the whole Colony. This year it is given at 106,815.

It is very much to be regretted that the existing law does not empower—as the new Impounding Bill, which has been more than once before Parliament, proposes to do—the occupants of runs to destroy wild or unmanageable *branded* horses after notice has been given to remove them. The existing Act allows occupants to destroy *unbranded* horses over two years old; but this is not enough, as the occupants of runs are now frequently prevented from destroying unbranded wild horses through the fear of killing the few branded wild ones which are almost always running with them.

At a very moderate calculation something like 150,000 head of cattle might be kept on the country which the wild horses now occupy, and the annual return from that number of cattle, or an equivalent number of sheep, would amount to from £150,000 to £200,000, all which is now lost to the Colony through the prevalence of these worthless scrubbers.

Then if to this be added the loss they occasion through decoying away quiet horses, the injury they occasion the owners of well-bred studs through the wild entires coming among the brood mares, and the expense, trouble, and accidents, not unfrequently fatal, which occur in running in wild horses, it will be seen that it is high time thoroughly effective measures were adopted—such as has been mentioned—for their extirpation.

Even these do not complete the catalogue of the evils and losses wild horses occasion to the Colony. Wherever there are wild horses, duffing and stock-stealing are almost certain to be common. Not only do those who follow these practices make the running of the scrubbers an excuse or blind for their nefarious practices, but the mere existence of the wild mobs of horses tends to make our youths duffers and cattle-stealers. Thus, those lads who are good riders run in the wild horses and begin by branding the foals and clean skins they can yard. Among the unbranded horses there may however be some branded mares with foals at foot belonging to owners residing at a distance from the place where the horses are running, and as there is very little fear of detection their foals are branded as well as those belonging to the wild unbranded mares; and these youths are led on in this way from bad to worse till they become downright duffers and stock-stealers.

6. HORSE TAX.

Two propositions have been made to improve the breed of our horses by taxation. Mr. Rossi of Goulburn, and a few other breeders, propose that a tax should be imposed on all brood mares, while other breeders, and I believe the majority, consider that it would answer the purpose to tax entires.

There is little doubt but that the first proposal would be the most effective, but the tax would fall rather too heavily on men of small means if *all* brood mares were to be taxed, and if owners possessed of only a few, say three head, were to be exempted from payment, the law would be certain to be evaded as it is in the case of the registration of dogs, where owners with more than one dog not unfrequently register them in the names of the different members of their families.

It would seem, therefore, that the latter proposal, the taxing of the entires, is the more practicable one, and, as its effect would be indirect as well as direct, it would be very much more efficacious than it appears at first sight likely to be. Thus, if a good heavy tax, say £20 each, were imposed on entires, none but well-bred suitable horses would be kept, and for such sires both the price and cost of service would be comparatively high—too high in fact for the owners of weedy and inferior mares to pay. They would, therefore, sell such mares or only use them for work, and the breeding of the ugly useless weeds and scrubbers which now sell at from 10s. to 40s. would cease, greatly to the advantage of these owners themselves and to the Colony generally.

The money thus contributed by the owners of entires ought not to be paid into the General Revenue, but should be expended for the benefit of the breeders of horses, and to do this it might be distributed among the different local Agricultural Societies, with the understanding that it was to be disbursed in prizes for exhibits in the horse section, and not to meet in the general expenses of these Societies.

II.—CATTLE.

1. THEIR NUMBER.

The number of cattle in the Colony for the year 1873 and the eleven years preceding, as given in the Statistical Register, is as follows:—

Year.	No.
1862	2,620,388
1863	2,032,522
1864	1,924,119
1865	1,969,105
1866	1,771,809
1867	1,728,427
1868	1,761,411
1869	1,795,904
1870	2,195,096
1871	2,014,888
1872	2,287,660
1873	2,710,374

As explained in my Report of 1870, the great falling off in the number of cattle is attributable partly to the losses sustained in 1861 and the four following years through pleuro-pneumonia, but principally through owners changing their cattle runs into sheep stations. This they did for two reasons,—from a dread of the disease, but principally because sheep paid much better than cattle. To see how very powerful these reasons must have been with stockowners, it is only necessary to state that while the number of cattle was very little more in 1873 than it was in 1862, the sheep had increased from 6,550,896 in 1862 to 18,990,595 in 1873; in other words, that while in 1873 there were very few more cattle in the Colony than in 1862, eleven years previously, there were very nearly three times as many sheep at the latter date than at the former.

Cattle are now reported by the Inspectors in almost all the districts as increasing; but what between the number still lost every year by pleuro-pneumonia, the heavy drafts of store cattle which are being constantly sent into Victoria, the increased demand for beef for the Preserving Companies, and the increasing requirements of the Colony generally for butcher meat,—the reported increase from breeding may be taken as nearly wiped out; and if the numbers were correctly taken, it is believed that the increase in 1873 over that of 1872 would be very trifling indeed.

2. THE DIFFERENT BREEDS.

These may now be put at (say) eight-tenths Short-horn, one-tenth Hereford with a few Devons, and and one-tenth Crosses.

It will be seen that a new breed or rather class of cattle has now to be noticed,—the “crosses.” A good many of our breeders of late years have been putting Hereford and Devon bulls into their Short-horn herds and breeding again from the cross progeny,—instead of adhering to the Home practice, and keeping a set of cows of one breed and a bull of another, and never going beyond the first cross. The breeding from crosses is contrary to rule, and is only allowable in a case where an owner has made up his mind to change from one breed to another, and keeps putting (say) pure Hereford or Devon bulls into his herd for perhaps seven or eight years until his cattle have all the characteristics of either of these breeds. To use Hereford or Devon bulls for a few generations and then resort again to the Short-horn, as, I believe, a good many breeders intend to do, will be certain to result in disappointment and loss. It is only in the first cross that the breeder has any decided certainty that he will have a combination of the good qualities of both breeds. In every generation after that the probability is that the bad qualities of both breeds rather than the good will be the outcome of the mixture, and the more the breeds are commingled the more certain becomes the uncertainty. Unless therefore an owner is in a position to take the one (the first) cross and fatten off, or dispose of, and not breed from it, or has made up his mind to change the breed of his cattle, he should not put either Hereford or Devon bulls to his Short-horn cows, nor Short-horn or Devon to Hereford, nor Hereford or Short-horn to Devon.

At the same time, there is no doubt but the very best beast both for the breeder and the butcher—that is, the most profitable to both—is the first cross. This seems to have escaped the notice of our breeders,

breeders, in their recent discussions on the paper read by Dr. Jenkins on "The Considerations which should guide Breeders and Graziers of Cattle," in the zeal with which they advocated the superiority of their favourite breeds.

The fact is, no one breed possesses all the good qualities which can be obtained in the cross. Thus, the Short-horn stands the highest of all the breeds in size, shapes, early maturity and aptitude to fatten on good or even fair pasture. He is inferior, however, in quality of meat to the Devon, the Black-poley, and even somewhat to the Hereford. He is also less active, and does not perhaps stand hardship so well as the other breeds, while he no doubt requires better pasture than either of them. If, however, the Short-horn bull be put to cows of either of these breeds, an animal combining the good qualities of both is to a very large extent obtained. That the Short-horn ought to be in the cross there cannot be the slightest doubt. The London Market and the British Farmers' Dr. and Cr. Account have settled that point years ago. The next question then is, which of the other breeds should be used with the Short-horn; and that, if we go into the same Court, has also been determined for a good many years in favour of the Black-poled breed. To see that this is the case, it is only necessary to turn to the weekly account of the Smithfield Market in the *Mark Lane Express* and other London papers, where it will be found that the "prime Scotch" and "Crosses," principally from Aberdeen and the neighbouring counties, and almost in every case the produce of Short-horn bulls and Black-poled cows, regularly "top the market," and sell per lb. as high if not higher than the little Devons, while taking the weight for age they are equal to the Short-horn, heavier than the Herefords, and about a *fourth* weightier than the Devons.

Thus, in the aged Fat Cattle Class at last Smithfield Show the average weights of the different breeds were as follows:—

	...	...	...	...	...	...	...	cwt.	qrs.	lbs.
Crosses	...	...	...	...	...	...	...	21	3	3
Short-horn	...	...	...	...	...	...	...	20	0	16
Herefords	...	...	...	...	...	...	...	18	4	23
Devons	...	...	...	...	...	...	...	15	3	4

In the Steer Class, under two years and six months, the average weights were—

	...	...	...	...	...	...	...	cwt.	qrs.	lbs.
Crosses	...	...	...	...	...	...	...	16	1	21
Short-horn	...	...	...	...	...	...	...	15	2	1
Herefords	...	...	...	...	...	...	...	14	3	12
Devons	...	...	...	...	...	...	...	11	2	18

When again we recollect that this cross inherits, as it does, the large frame, good form, aptitude to fatten, and early maturity of the Short-horn sire, with the robustness and soundness of constitution, thickness and evenness of flesh, and well-marbled small-grained meat of the Black-poled dam, it is easy to see why it is such a favourite both with the butcher and the breeder.

The Devon makes a better cross with the Short-horn than the Hereford. It is liked quite as well by the butcher as the Poley cross, but they are not so profitable to the breeder, as they do not come to nearly such good weights.

The Short-horn and Hereford cross is also for fattening purposes an improvement on the pure Hereford. He is, however, inferior as a cross to both the Poley and Devon, as he stands higher on the leg, is lighter in the thighs, twist, and flank, and indeed in all the boiling pieces, and does not generally "die" so well.

Crossing the other way—putting Black-poled Hereford or Devon bulls to Short-horn cows, makes a very good beast both for the grazier and butcher, although inferior to the cross got by the Short-horn bull out of cows of these breeds.

There is a very common error into which breeders introducing Hereford and Devon bulls into their Short-horn herds have fallen. On the produce of these bulls—especially where they were pure or nearly pure bred, turning out (as first crosses always do) very well—these breeders, instead of recollecting this, and giving the Short-horn cow her fair share of the credit of the successful cross, have as a rule, unthinkingly attributed the whole of the success to the new blood, and gone on introducing it into their herds, while in reality the larger proportion of the success may most probably have been due to the Short-horn blood of the cow. If the breeders who have taken this course are not in a country where Short-horns do not thrive, they will be certain to find that they have made a mistake.

There is another feature in these recent discussions on the breeding of stock which also appears to call for notice. It is the frequent allusion by the advocates of the Hereford and Devon breeds to their superior hardihood in bad seasons, and their activity on the road. Now these are good points, but they are only of secondary importance compared with the very valuable qualities of good shapes, early maturity, and aptitude to fatten; and any one will see that cattle high in the points alluded to cannot possibly be very high in these more important qualities, for it is impossible there can be very great activity with the very wide forequarters, the fullness and roundness of shapes, and the great depth of flesh and fat which they must have if they possess in a very high degree the qualities there indicated; nor can there be much softness and aptitude to fatten with very great hardiness and robustness of constitution. This is exemplified in our common comparatively unimproved bush herds. They have a great deal too much hardiness and activity, and we have no need to introduce stock into our herds wholly or even mainly for the sake of giving them either the one quality or the other; in fact, we require to breed these qualities *out* of them. Although, therefore, the Herefords, Poles, or Devons, do in themselves possess to a large extent the qualities of good shapes, early maturity and aptitude to fatten, together with those of hardiness and activity, our herds generally stand in so very much greater need of having their points of quality and form improved than their hardiness and activity increased, that it is to the breed which would most effectually and expeditiously bring about this much to be desired improvement that our stockowners as a rule should look. It will be a long time before our herds generally become so very full of quality and so very well developed in shapes as not to be able to withstand the vicissitudes of our climate or to travel to market. When they are, it will be time to think of increasing their hardiness and activity. Indeed, when we consider their comparatively round, bare, plain shapes, and the fine grain and good quality of their meat, it must be evident that the generality of our bush cattle, although with more of the Short-horn blood in their veins than that of any other breed, can scarcely be looked upon as anything else than a distinct breed from the pure Short-horn, and the progeny for several generations at least as crosses. If this view be correct, then

then the putting of well-bred Short-horns into our common herds now running on even poor or inferior country, would for a time at least show nearly as good results as putting these bulls to Hereford, Poley, or Devon cows, and of course proportionately better where the pasture is good.

Still, owners must be guided by the position and class of country which they occupy, in determining what breed of cattle they should put upon it. On this point, supposing the herd is a breeding and fattening one, it may be said that the *Short-horn* will answer best on country ranging from good to superior, not too far from market. The *Hereford* again will thrive and fatten on a poorer class of country, will stand a cold climate better, and travel better long distances to market. The *Black-poley* is as active as the Hereford, and is hardier and more robust, and would do remarkably well in the colder and higher lying portions of the Colony. How this breed would answer on the plains is yet to be tried, but there is no reason why it should not do as well there as the others. If it did, the fat cattle would carry their condition well to market. The *Devon* seems admirably adapted for our great outlying salt-bush plains, and if Devon herds were formed there, and Short-horn bulls put to the cows, the produce would be stock that would stand very high with both grazier and butcher.

3. THEIR IMPROVEMENT.

The very marked desire for the improvement of their herds, which some years back set in so strongly among owners, still continues, and our cattle are every year becoming better and better, through close and judicious culling, the purchase of pedigree bulls, and the fencing in of the runs.

(1.) Introduction of pure Stock.

Last year, as many as 1,000 pure and well-bred bulls, and over 200 cows and heifers, were introduced into the different districts.

In nine districts the introductions are reported as all Short-horns; in nine as Short-horn and Hereford; and in six as Short-horn, Hereford, and Devon.

Among the pedigree stock thus introduced were the following animals imported from England:—

(2.) Imported Cattle.

Number.	Shorthorn.		Herefords.		Devon.		Importers.
	Males.	Females.	Males.	Females.	Males.	Females.	
1	...	1	...	...	...	...	Captain Swanson.
5	2	3	...	...	...	...	Barnes & Smith.
1	1	...	...	...	...	...	Dr. Jenkins.
5	...	...	...	...	...	5	H. C. White.
1	1	...	...	...	...	...	Fanning, Griffiths & Co.
1	...	1	...	...	...	...	A. A. Dangar.
1	...	1	...	...	...	...	E. H. Woodhouse.
1	1	...	...	...	...	...	Gilchrist, Watt, & Co.
1	...	...	...	...	...	1	T. Yeo.
1	1	...	...	...	1	...	J. C. Irving.
3	...	...	...	...	...	2	Walter Lamb.
1	...	1	...	...	...	...	Barnes & Smith.
7	5	2	...	...	...	...	J. D. Macanah.
6	2	4	...	...	...	...	Gilchrist, Watt, & Co.
6	6	...	...	...	...	...	H. Bell.
2	2	...	...	...	...	...	Australian Agricultural Company.
3	3	...	...	...	...	...	T. Yeo.
2	...	...	...	...	1	1	Barnes & Smith.
2	1	1	...	...	...	...	A. Loder.
6	2	4	...	...	...	...	C. Bagott.
9	...	...	1	3	1	4	T. Yeo.
2	...	...	...	...	1	1	Gilchrist, Watt, & Co.
4	4	...	...	...	...	...	H. C. White.
7	...	...	...	...	1	6	W. J. Dangar.
2	...	2	...	...	...	...	A. A. Dangar.
2	...	2	...	...	...	...	W. Russell.
1	1	...	...	...	...	...	Codrington & Wyndham.
6	...	...	...	...	2	4	J. J. R. Gibson.
3	...	...	1	2	...	...	Fraser & Anderson.
1	1	...	...	...	...	...	S. Dight.
1	...	...	1	...	...	...	Barnes & Smith.
4	...	...	1	...	...	...	Fanning, Griffiths, & Co.
4	4	...	...	...	...	...	E. H. Woodhouse.
3	...	3	...	...	...	...	M. Joseph.
4	2	2	...	...	...	...	Gilchrist, Watt, & Co.
6	3	3	...	...	...	...	Charles Baldwin.
1	1	...	...	...	...	...
	43	30	4	5	7	24	

There were thus:—73 Short-horns, 9 Herefords, and 31 Devons.

Besides the importations from England, 10 Short-horns, 40 Herefords, and 102 Devons came from Tasmania; 12 Short-horns from Victoria; and 2 buffaloes from India.

(3.) Fencing in the Runs.

It would appear that the enclosing of the cattle-runs is steadily progressing. The returns under this head are as follows:—In seventeen districts the cattle are kept on both open and enclosed runs, in seven districts they are all in paddocks, in three districts they are principally in paddocks, in two they are chiefly on open runs, and in two more they are all on open runs. The advantages of fencing in the case of cattle are very numerous. The following may be noticed:—(1) The country, especially if cut up in moderately sized paddocks, will carry more cattle; (2) fencing of course prevents the losses which occur on open runs through the cattle—especially store stock—straying; (3) it saves in their case breaking in to the run, and thus reduces the time the cattle take to fatten by at least one-half; (4) it tends to make the cattle quieter and larger

(5) it saves expense in management; (6) it prevents cattle-stealing; (7) it prevents the spread of infectious diseases; (8) it enables the owner to keep his fattening and breeding stock separate, and thus enables him to turn off his fat stock at a much earlier age; (9) it enables him to classify his stock and keep the heifers from breeding at too early an age; and (10) it renders the general management of the station so regular and easy as to allow the owner to devote the principal part of his time to the improvement of the breed of his stock.

4. AILMENTS AND DISEASES IN CATTLE.

Cancer.—This ailment has been reported as only occurring in four districts. It is quite a common one in many parts of the Continent of Europe. The treatment which has been found most successful there is excision and burning the wound with a hot iron brought up to white heat.

Ophthalmia.—This disease is not reported last year as existing in any of the districts.

Fluke and Worms.—Only in one or two of our most unsound districts does fluke or worms affect cattle, and there, although they have a prejudicial effect on the animals' health, they very seldom prove fatal.

Cumberland Disease.—This affection, which at one time was so fatal in some of the districts, is now of comparatively rare occurrence, and the losses from it but slight. During last year only in three districts were there any outbreaks, and the losses were very trifling.

Blackleg.—As might have been expected from the favourable season, this disease was last year unusually prevalent, and the losses in several instances comparatively heavy. Here as in every other ailment the proper treatment is prevention. This may be effected in several ways, but chiefly by taking care that cattle, especially young stock, are not allowed to lay on condition with too great rapidity, particularly in the spring or beginning of summer; for the disease is caused by what may be termed a rapid plethora of condition. Clater says on this subject—"Where the vegetable creation springs up in all its perfection, the young animals are not able to stand against such luxurious living, particularly those which have been much reduced with bad keeping and scanty food during a long and severe winter." These remarks apply with very great force to the stock kept on some of the best pasture lands of the Colony, where the soil is deep and rich, and the feed in summer very luxuriant and fattening, while the land is at the same time comparatively high, lying exposed, or cold in winter. In situations such as these the cattle are often greatly reduced in the winter-time; and when the great flush of luxuriant grass comes up with the warm weather of early summer, the animals change so rapidly from a state of leanness and poverty to one of high condition and fatness that their constitutions fail to stand the strain, and blackleg is the result.

Treatment.—Looking at the causes of this ailment, it is plain that a good deal can be done to prevent its occurrence by seeing that the young stock running on strong rich soil are subjected as little as possible to the risk which attends their grazing on the luxuriant feed which grows on these lands; and if they must be kept on such pasture, care should be taken to send them occasionally to poorer land, or even to yard them at night, as it would seem that such a change as this is beneficial, both through checking the rapidity with which they would otherwise lay on condition, and through the beneficial effects arising from the change from the one locality to the other.

This in fact is almost all that can be done with a large proportion of our stock, as there would be very great difficulty in bleeding, setoning, and physicing our comparatively wild bush cattle. "Putting a seton in the dewlap of sufficient length from above downwards, and giving to each animal, when required, the following medicines,—

<p>"Crude antimony, in powder, $\frac{1}{2}$ oz. "Brown sugar and nitre in powder, each, 1 oz. "Myrrh in powder, $\frac{1}{2}$ oz. "Flower of sulphur, 2 ozs.</p>	} or {	<p>Nitre and madder, each in powder, 1 oz. Alum in powder, & flower of sulphur, each, 2 ozs. Treacle, 4 tablepoonsful.</p>
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"with a change of pasture," is the treatment recommended by Armatage in his recent edition of "Clater." Both medicines are for one drink each, and to be given fasting in the morning in a quart of warm gruel. Bleeding to the extent of from 2 to 3 quarts from each beast, according to its size, condition, and strength, physicing and change of run, was the old treatment; but it is now considered unnecessarily severe.

Where, however, either of these modes of treatment can be applied to the young stock, it ought to be so regularly every year in those localities where the disease is liable to occur; for it gives very little warning of its approach, and it is generally the best as well as the fattest that are first carried off.

It ought to be borne in mind that cattle which have died of blackleg are, like those affected with Cumberland Disease, dangerous to handle, and ought not to be skinned.

Pleuro-pneumonia.—This disease was very general last year. It is reported as prevailing in twenty-four out of thirty-four districts, but usually of a mild type; and the losses comparatively few, when the cattle were allowed to remain quiet on their runs, and not mustered or travelled. This, of course, they could not always be; and the losses were then frequently severe.

Bleeding is reported to have been tried in a good many instances as a cure; but although favourably reported of, its efficacy is more than doubtful; for it was tried again and again in England and on the Continent, and given up by the profession as worse than useless. It was found to do no good, and to weaken the animal.

Inoculation as a preventive is now all but universally believed in, and generally practised with the best results. Mr. Ogilvie, of Yugalbar, Clarence River, reports that he has been inoculating very successfully with a different sort of virus from that generally used; and, as the virus he recommends,—the water in the chest,—is not only to be obtained in very much larger quantities than the virus from the lung, but is also much more easily found, *i.e.* the animal from which it can be procured is far more readily selected,—owners inoculating should try this virus on a few head of their cattle and carefully note the result.

Mr. Ogilvie thus describes the sort of virus he uses, and the mode of obtaining it:—

"It is not, I think, generally understood that the liquid which (as all who have any acquaintance with pleuro-pneumonia will know) is so frequently found secreted in large quantity within the cavity of the chest of affected animals, is the best and safest description of virus to use for the purpose of inoculation. By the use of this liquid, instead of that obtained from the diseased lung, the risk of loss from swelled tail is almost entirely avoided. In fact, the dangers attendant upon inoculation are to a very large extent

extent escaped, while the beneficial influence of the operation is in no degree impaired. Of this so little doubt is entertained in the Clarence District that the use of virus taken from the lung was very early, and I believe I am justified in saying very generally, abandoned. In obtaining the liquid spoken of, care has always been taken to procure it in a bright and pellucid condition; but I am not prepared to say that such precaution is really necessary. In the virus obtained from the lung, pellucidity and a pale colour were so generally acknowledged to be indispensable conditions, that it was taken for granted that similar conditions must also be requisite in the new kind of virus or lymph when it was adopted; and as far as I am aware, no one has hitherto, in using this lymph, thought it expedient to venture to dispense with these conditions. This description of lymph is moreover readily obtained in the required condition—much more so than the lung virus. I have usually been able to obtain it from the first or second animal killed for the purpose, and have never found it necessary to go beyond a third. In short, I think this is to be so much preferred to the lung virus that I cannot too strongly recommend its use."

III.—SHEEP.

I. NUMBER AND DISTRIBUTION.

The number of Sheep in the Colony during each of the last *thirteen* years stands as follows:—

1861	6,119,169	1868	16,000,000
1862	6,550,896	1869	16,848,217
1863	7,169,126	1870	16,218,825
1864	9,089,463	1871	16,766,012
1865	9,650,106	1872	17,873,696
1866	11,644,593	1873	18,990,595
1867	15,066,377		

The following Tabulated Statement shows the number of Sheep returned to the Clerks of Petty Sessions throughout the Colony in 1872 and 1873, with the increase and decrease for the latter year.

District.	No. of Sheep, 1872.	No. of Sheep, 1873.	Increase, 1873.	Decrease, 1873.	District.	No. of Sheep, 1872.	No. of Sheep, 1873.	Increase, 1873.	Decrease, 1873.
Albury	293,957	210,815	.....	83,142	Moama	60,936	74,234	13,298	1,559
Armidale	461,393	410,069	.....	51,324	Molong	206,310	204,751	.....	.....
Balranald	428,543	587,789	159,246	.....	Murrurundi	388,645	335,117	.....	53,528
Barraba	52,237	74,176	21,939	.....	Mudgee	184,694	117,296	.....	67,398
Bathurst	172,786	168,838	.....	3,948	Muswellbrook	33,398	37,059	3,661	.....
Bega	3,354	804	.....	2,250	Murrumburrah	.....	4,200	4,200	.....
Berrima	12,279	14,483	2,204	.....	Mulwala	.....	554	554	.....
Binalong	.....	46,372	46,372	.....	Narrabri	341,703	364,718	23,015	.....
Bourke	561,687	672,374	110,687	.....	Oberon	6,662	4,200	.....	2,462
Brewarrina	.....	68,532	68,532	.....	Obley	40,900	37,766	.....	3,134
Braidwood	27,934	24,503	.....	3,426	Orange	70,139	675,587	605,448	.....
Bombala	200,238	205,271	5,033	.....	Paterson	3,500	1,500	.....	2,000
Burrowa	246,635	242,546	.....	4,089	Queanbeyan	230,656	260,494	29,838	.....
Camden	4,372	5,376	1,004	.....	Rockley	47,383	44,143	.....	3,240
Campbelltown	2,500	1,037	.....	1,463	Rylstone	85,831	74,674	.....	11,137
Carcoar	271,250	284,906	13,656	.....	Scone	123,477	132,440	8,963	.....
Casalis	270,074	236,613	.....	33,461	Singleton	88,256	84,225	.....	4,031
Cannonba	87,146	135,366	48,220	.....	Sofala	7,778	6,790	.....	988
Cooma	462,429	495,440	33,011	.....	Stroud	.....	1,600	1,600	.....
Cowra	145,088	49,636	.....	95,452	Tamworth	419,628	425,447	5,819	.....
Coonamble	236,826	262,414	25,588	.....	Tenterfield	111,561	85,248	.....	26,313
Cootamundry	19,350	8,010	.....	11,340	Ten-mile Creek	67,566	177,123	109,557	.....
Coonabarabran	898,641	623,943	.....	269,698	Tambaroora	17,539	.....	.....	17,539
Corowa	475,134	409,975	.....	65,209	Toocumwall	.....	67,910	67,910	.....
Dandaloo	10,500	53,850	43,350	.....	Trunkay Creek	10,516	14,495	3,979	.....
Demilequin	855,003	1,123,098	273,090	.....	Turnat	39,794	64,815	25,021	.....
Dubbo	371,442	566,150	194,708	.....	Tumbarumba	41,000	.....	.....	41,000
Eden	2,892	2,239	.....	655	Urana	.....	170,675	170,675	.....
Euston	56,393	67,101	10,708	.....	Wagga Wagga	761,692	886,759	125,067	.....
Forbes	221,713	373,869	152,156	.....	Walgett	158,748	185,710	26,962	.....
Glen Innes	236,826	275,222	38,396	.....	Walcha	190,076	214,314	24,238	.....
Gungahlin	11,000	1,335	.....	9,665	Warialda	1,044,901	580,407	.....	464,494
Goulburn	197,142	165,268	.....	31,874	Warren	.....	23,000	23,000	.....
Grenfell	12,872	22,312	9,440	.....	Wellington	154,908	181,536	26,628	.....
Gunning	89,120	117,855	28,765	.....	Wentworth	231,847	426,016	144,169	.....
Gundagai	122,654	176,570	53,916	.....	Wendover	8,286	10,574	2,288	.....
Gulgong	.....	21,700	21,700	.....	Wollombi	830	560	.....	270
Gunnedah	325,875	341,039	15,164	.....	Yass	153,355	163,278	9,923	.....
Hargraves	15,536	13,505	.....	2,031	Young	700,319	408,247	.....	292,072
Hartley	.....	4,380	4,380	.....				
Hay	2,375,118	2,479,402	104,284	.....				
Hill End	.....	22,190	22,190	.....				
Inverell	355,714	316,597	.....	39,117	Add lots under	17,666,620	18,717,648	2,811,492	2,032,456
Jerilderie	421,872	127,015	.....	294,857	500	207,076	272,947	.....	.....
Kiandra	1,200	.....	.....	1,200	Totals	17,873,696	18,990,595	.....	.....
Maitland	750	1,800	1,050	.....				
Merriwa	106,606	101,250	.....	5,356	Net increase on	.....	1,116,899	.....	.....
Menindie	578,850	547,116	.....	31,734	the year 1872	.....	.....	.....	.....

These returns show that, notwithstanding the large numbers of sheep killed for home consumption and for preserving at the various establishments now at work in the different Colonies, there was an *increase* in the number of sheep in the Colony in 1873 compared with 1872 of 1,116,899. This increase arises partly from the stocking of new country, but principally from the improvement of the carrying capabilities of the runs by fencing and water-making—especially by fencing; and as these improvements are every year becoming more general we may expect that the increase which has again fairly commenced will be a steadily progressive one.

It would be interesting to know,—and next year the Inspectors' returns might be made to show,—how many sheep are now depastured on land held in fee simple, and on selections, and how many on runs and grazing rights. The Inspectors' reports give the number of sheep held by owners of less than 500, but they do not give anything like a correct idea of the number of sheep in the two classes mentioned, or even of those owned by the comparatively small holders; for although these owners have at first generally less than 500 sheep they very soon own more than that number, and are then of course included in the large class of contributing owners.

In the foregoing general total of the whole number of sheep, something over a quarter of a million (264,000) of them are coarse-woolled or large-framed sheep. These coarse-woolled sheep consist of Leicesters, Lincolns, crosses with these breeds and the Merino, and a sprinkling of South Downs, Cotswolds, Cheviots, and Romney Marsh. The number of large-framed sheep is increasing, although the rate of increase is not so rapid as it was at one time expected to be. The owners, with comparatively poor country, who have recently tried this breed have been disappointed. They imagined that all they required was a large supply of feed, and that if the quantity was ample and not far to travel for, the quality was not a matter of much moment. That, in fact, these sheep would do well on the rank coarse grass growing on poor country, where the Merino would not thrive. They have discovered their mistake, for these large-framed sheep not only require a plentiful supply of feed, but it must be of a nutritious description, and they must not have to travel far for it. When, however, these conditions are obtainable, Leicesters and Lincolns do remarkably well when kept pure, and are much less liable to foot-rot on what may be termed unsound country than the Merino. It has also been found very profitable to put pure rams of these breeds to Merino ewes. The progeny (the first cross) possess a fair share of the good qualities of the wool and carcass of both breeds, and on good thickly-grassed country pay the breeder a good deal better than the Merino. The single cross, however, is all that ought to be taken, and the progeny (of the two breeds) ought to be sent to the butcher—not bred from, as deterioration and uncertainty would be pretty certain to follow such a course.

2. FENCING AND SHEPHERDING.

The Inspectors' returns show that in eighteen districts the sheep are both shepherded and paddocked. In five districts (in the south-western portion of the Colony) they are all paddocked; in five more they are principally paddocked; in two they are all shepherded, and in two more they are principally shepherded.

The advantages of fencing are even greater in the case of sheep than of cattle; and they are now so well known and generally appreciated that it is only a question of a comparatively few years when all the runs—except perhaps those which are peculiarly liable to be selected—will be enclosed. It may not, however, be out of place here to enumerate some of the advantages of fencing sheep stations. They are, among others, the following:—

1. The country will carry one-third more sheep.
2. The wool will be longer and sounder, and the flecce as a whole one-third better.
3. The feed will be cleaner and less liable to grass-seed.
4. The lambing on the average of years will be better.
5. The sheep will increase in size.
6. They will live longer, and continue longer profitable.
7. They will be freer from foot-rot and other diseases.
8. The expense of working the station will be less than one-quarter of what it would be if the sheep were shepherded.
9. The owner will be able to devote the principal part of his time to improving his sheep, instead of spending it in attempting to manage a lot of careless shepherds and hut-keepers.

3. THEIR IMPROVEMENT.

In all the districts except one the flocks are reported by the Inspectors as improving, through the careful close culling of the breeding ewes and the introduction of well-bred rams. Their returns show that no less than 35,000 stud sheep were introduced last year into the different districts (exclusive of purchases from local breeders not included in those returns). They were principally from the Mudgee and Merriwa flocks; a good many came from Victoria; some from Mr. Gibson and other breeders in Tasmania, and some from Mr. Fisher, South Australia; while there were a good few importations of large-framed sheep from England.

The following is a detailed statement of the various importations:—

IMPORTED SHEEP.

Number.	Merino.		Leicester.		Lincoln.		Other Breeds.		Where from.	Importer.
	Rams.	Ewes.	Rams.	Ewes.	Rams.	Ewes.	Rams.	Ewes.		
51	...	...	51	...	...	...	...	...	Tasmania	Harrison, Jones, & Devlin.
4	...	...	...	...	2	2	...	...	England	J. J. R. Gibson.
18	...	...	14	4	...	...	...	...	" .....	Messrs. Brodie Bros.
52	...	...	50	2	...	...	...	...	Tasmania	Walter Lamb.
8	...	...	8	...	...	...	...	...	Victoria	T. Dawson.
52	50	2	...	...	...	...	...	...	Tasmania	Harrison, Jones, & Devlin.
42	...	...	40	2	...	...	...	...	" .....	do. do.
46	...	...	1	45	...	...	...	...	New Zealand	F. Hill.
13	...	...	...	...	...	...	1	12	England	H. Rotton.
							Southdowns.			
9	9	...	...	...	...	...	...	...	Tasmania	Harrison, Jones, & Devlin.
3	...	...	3	...	...	...	...	...	" .....	do. do.
8	...	...	8	...	...	...	...	...	England	J. de V. Lamb.
184	184	...	...	...	...	...	...	...	Victoria	T. Dawson.
20	...	...	...	20	...	...	...	...	" .....	Harrison, Jones, & Devlin.

IMPORTED SHEEP—continued.

Number.	Merino.		Leicester.		Lincoln.		Other Breeds.		Where from.	Importer.
	Rams.	Ewes.	Rams.	Ewes.	Rams.	Ewes.	Rams.	Ewes.		
3	...	...	1	2	...	...	...	...	England	J. G. Frankland.
4	...	...	...	...	...	...	4	...	"	Dangar Bros.
							Shropshire Downs			
50	...	...	...	...	30	20	...	...	Victoria	W. O. Windeyer.
22	...	...	...	...	5	17	...	...	Tasmania	Harrison, Jones, and Devlin.
530	530	...	...	...	...	...	...	...	Victoria	A. Fetherstonchaugh.
303	...	303	...	...	...	...	...	...	" .....	R. Chirnside & Co.
45	...	...	23	22	...	...	...	...	Tasmania	R. Simmonds.
21	21	...	...	...	...	...	...	...	Victoria	R. Chirnside & Co.
31	...	...	31	...	...	...	...	...	" .....	M. Fletcher.
25	25	...	...	...	...	...	...	...	Tasmania	Harrison, Jones, & Devlin.
4	4	...	...	...	...	...	...	...	" .....	R. Simmonds.
6	...	...	...	...	4	2	...	...	England	G. Onkes.
376	376	...	...	...	...	...	...	...	Victoria	— Cummings.
27	...	...	7	20	...	...	...	...	" .....	T. Dawson.
9	...	...	9	...	...	...	...	...	Tasmania	Harrison, Jones, & Devlin.
226	24	202	...	...	...	...	...	...	Victoria	I. L. Learmonth.
227	227	...	...	...	...	...	...	...	" .....	Harrison, Jones, & Devlin.
66	...	...	...	...	34	32	...	...	England	M'Donald, Smith, & Co.
21	...	...	21	...	...	...	...	...	Tasmania	C. Doyle.
32	32	...	...	...	...	...	...	...	" .....	Harrison, Jones, & Devlin.
75	...	...	3	72	...	...	...	...	England	— Murphy.
6	...	...	...	...	...	...	6	...	"	W. J. Dangar.
							Shropshire Downs			
6	...	...	...	...	6	...	...	...	" .....	do.
6	...	...	...	...	...	...	6	...	"	A. Codrington.
							Shropshire Downs			
2	...	...	2	...	...	...	...	...	" .....	do.
45	45	...	...	...	...	...	...	...	Tasmania	Harrison, Jones, & Devlin.
98	98	...	...	...	...	...	...	...	Victoria	— Broadribb.
23	...	...	...	23	...	...	...	...	" .....	T. Robertson.
3	...	...	...	3	...	...	...	...	" .....	do.
3	3	...	...	...	...	...	...	...	" .....	— Cochran.
29	...	...	29	...	...	...	...	...	" .....	J. Ingles.
11	11	...	...	...	...	...	...	...	" .....	do.
52	...	20	32	...	...	...	...	...	Tasmania	R. Simmonds.
20	20	...	...	...	...	...	...	...	" .....	do.
49	49	...	...	...	...	...	...	...	Victoria	W. Macleay.
13	4	9	...	...	...	...	...	...	Tasmania	J. Allen.
20	...	...	2	18	...	...	...	...	" .....	R. Gibson.
1	...	...	1	...	...	...	...	...	" .....	J. McDermott.
77	...	...	...	...	77	...	...	...	Victoria	M. Fletcher.
92	92	...	...	...	...	...	...	...	Tasmania	J. Berbury.
108	...	...	...	...	108	...	...	...	South Australia ..	— Dickson.
11	...	...	...	...	11	...	...	...	Victoria	J. A. Turner.
20	...	...	...	...	...	20	...	...	" .....	Harrison, Jones, & Devlin.
3295	1800	516	324	262	280	84	17	12		

It will be seen from the above statement that the total number of sheep which passed through Quarantine in Sydney, last year, was 3,295. Of these, 2,316 were Merinos, 586 Leicesters, 364 Lincolns, 16 Shropshire, and 13 Southdowns.

4. LAMBING.

The average lambing last year for the whole Colony was a very good one—78½ per cent. It was made up as follows:—Albury 74½; Armidale, 70; Balranald, 84; Bathurst, 81; Bourke, 89; Braidwood, 65½; Carcoar, 82; Cooma, 70½; Coonabarabran, 88½; Corowa, 77½; Deniliquin, 83½; Dubbo, 82; Eden, 77½; Forbes, 87; Glen Innes, 63½; Goulburn, 76; Grafton, —; Gundagai, 77; Hay, 77; Maitland, 90; Menindie, 84; Merriwa, 70; Mudgee, 81½; Narrabri, 86½; Port Macquarie, 30; Singleton, 89; Tamworth, 89; Wagga Wagga, 75; Warialda, 80½; Wentworth, 92; Windsor, 80; Yass, 75; and Young, 81½.

Looking again at the averages of the shepherded compared with the paddocked sheep, the following results appear:—In the districts where the sheep are all shepherded the average lambing was 77 per cent.; while in those where they are all paddocked the average was 82. In those districts where the sheep are principally shepherded the average is given as 82 per cent., and in those where they are principally paddocked the average is 80 per cent. This makes the average lambing in paddocked upon the whole better than in shepherded sheep, but not so much as it really is, for fully three-fourths of our flocks are now running in paddocks, and the expense of lambing in that case is only a fourth of what it is where the sheep are shepherded.

The six highest average lambings are Wentworth (paddocked), 92; Maitland (paddocked), 90; Bourke (shepherded and paddocked), 89; Singleton (both), 89; Tamworth (both), 89; and Coonabarabran (both), 88½.

5. THE CLIP.

The clip of last year was lighter than that of 1872. Last year the average clip for the whole Colony, compared with that of 1872, stands as follows:—Greasy, 4 lbs. 12 ozs. in 1872, against 4 lbs. 9½ ozs. in 1873; pool-washed, 2 lbs. 14 ozs. in 1872, against 2 lbs. 11 ozs. in 1873.

As usual, the highest averages are in the Western and South-western portions of the Colony. Wentworth heads the list for greasy wool, with the extremely high average of 7 lbs.; Bourke and Deniliquin are next, with 6 lbs. each; Balranald next, with 5 lbs. 13 ozs.; Cooma next, with 5½ lbs.; and Menindie next, with 5½ lbs.; while the lowest are—Braidwood, 3½ lbs.; Forbes, 3 lbs. 12 ozs.; Mudgee, 3 lbs. 13½ ozs.; and Yass, Windsor, and Gundagai, 4 lbs. each.

The

The highest averages in hot-water washed wool are—Hay, 3 lbs. 3 ozs. ; Dubbo, 3 lbs. 1 oz. ; Albury, Demiliquin, and Singleton, 3 lbs. each ; and Merriwa, 2 lbs. 13 ozs. ; while the lowest are—Glen Innes, 2 lbs. 7 ozs. ; Warialda, Narrabri, Forbes, and Cooma, 2 lbs. 8 ozs. each ; and Menindie, 2 lbs. 8½ ozs.

This year the returns fix the difference in weight between combing and clothing fleeces in favour of the former by 8 ozs. each.

Here again the depasturing of the sheep in paddocks tells, the higher averages being nearly all in those districts where the sheep are running at large ; and, as has been stated, it not only gives additional weight, but it is even more beneficial as regards the quality of the wool, the staple being longer and sounder, and the fleece very much cleaner.

6. DISEASES AND AILMENTS.

Scab.—I have much pleasure in reporting that our flocks are still entirely free from this disease. The reports received from Victoria are also of a more favourable character, although a considerable number of sheep are yet in quarantine in that Colony, and it is still considered necessary to maintain a full staff of boundary riders on the Murray. There is no scab in South Australia or Queensland, and no risk of disease being introduced from either of these Colonies, except perhaps in the case of South Australia, through which the infection might possibly pass from Victoria. But this has been foreseen and provided against.

Catarrh.—No outbreak of this disease has occurred in this Colony for upwards of three years ; and it is hoped that it has been finally eradicated.

Cumberland Disease.—This disease only showed itself in four districts, and in each instance the losses were very slight.

Fellows and Redwater.—No case of either of these ailments occurred during last year.

Foot-rot.—This ailment is reported as very virulent in one district, as prevalent in seven districts, slightly so in fourteen districts, and the rest are reported as entirely free from it.

The variety of dressings tried for this ailment is very great—no less than twenty-seven different chemicals and combinations having been used. Of these, arsenic, butter of antimony, carbolic acid, bluestone, and lime, were most generally used, while the other dressings were only tried in a few cases. In the combinations, again, the most in favour were arsenic and bluestone, bluestone and tar, carbolic and tar, and carbolic and oil.

In all cases prevention is better than cure, but here it is especially so, and owners should be careful, when the season threatens to be such as to induce foot-rot, to harden and protect the sheep's feet from scalds, by running them through shallow baths with arsenic water or a decoction of wattle-bark or some other astringent as frequently as may be necessary while the damp weather lasts. With properly constructed shallow baths and races, the expense and labour of these dressings would be comparatively small, and would, if applied in time, be repaid tenfold, through saving the expense, loss and trouble which an outbreak of confirmed footrot always entails.

Fluke.—In regard to this affection—in fourteen districts there were no cases ; in five it was very slightly prevalent, in nine it was slightly, in four it was generally prevalent, and in one it was very prevalent.

Five different medicines are stated to have been used as preventives namely:—Liverpool salt and sulphate of iron ; Liverpool salt, sulphate of iron, and turpentine ; sulphur and Liverpool salt ; sulphur, and turps ; and rock-salt. Of these again—salt and sulphur have been used in seven districts ; salt and sulphate of iron in six ; and salt and sulphate of iron, salt, sulphur, and turps, and rock-salt, in one district.

Worms.—These pests are reported as being very prevalent in one district, generally so in five, slightly in three, very slightly in four, and non-existent in twenty districts.

The medicines and preventives used for worms were as follows:—salt, sulphate of iron, and turps, in three districts, salt and sulphate of iron in two, Liverpool salt in two, and tobacco-water, gunpowder and Liverpool salt, Hargan's specific, sulphate of iron and salt, and salt, sulphate of iron and sulphur, in one district each.

Both from the experience of this Colony and of that of Queensland, as given in Mr. Chief Inspector Gordon's valuable Report lately published, this disease, as well as that of fluke, can only be successfully dealt with by prevention ; and this, as Mr. Gordon has shown, can only be effected by a thoroughly liberal and regular supply of salt in all parts of the Colony except the true salt-bush country. On very inferior or saltless pasture he considers sheep should receive at least 2 tons per annum per 1,000 ; and great care must be exercised that every sheep regularly receives its proper quota.

Of course, where the sheep have been allowed to become affected, the other medicines mentioned, such as turpentine, sulphate of iron, sulphur, &c., will require to be used along with the salt, and in such cases a mixture of nitre and sulphur in the proportions of one to ten, and a strong decoction of horehound, might also be tried, as they are said to be very effective.

In administering turpentine to sheep, it would be safer to give it in a mucilage of starch or flour and water ; and sheep to whom this medicine or nitre and sulphur have been given should not be allowed to drink for at least six hours after they have been dosed.

There is one circumstance connected with this ailment which is very disquieting. It has been the custom of late years for owners in the upland parts of the Colony, where worms frequently infest the sheep, when they find them affected, to travel them into the salt-bush districts by way of cure ; and worms have in several instances appeared among the sheep in different portions of the salt-bush country through which these worm-infested sheep have passed. Indeed, so frequently has this occurred that the owners in these districts have begun to protest against sheep affected in this way being allowed to travel over the same ground as their sound flocks, and have mooted the question of legislating to prevent them from doing so. There are, no doubt, good grounds for immediate inquiry into the matter. Indeed attention was several years ago called to the danger of the spread of the worm disease in this way, by Dr. Morris of Sydney, in his very able paper on that subject, published in the journal of the Agricultural Society of New South Wales ; and I am collecting all the information I can through the Inspectors, with the view to settle the question as to whether or not the ailment is infectious.

IV.—GENERAL.

1. LOAFING SHEEP.

Last season was too favourable, and the feed and water too plentiful, to induce loafing.

2. RESERVES FOR TRAVELLING STOCK.

These Reserves are very far from being in a satisfactory state.

A great deal too few have been proclaimed, and the most suitable land for them is being fast taken up by selectors along the main droving roads; while those that have been proclaimed are rendered comparatively valueless to the drovers by the occupants of the adjoining land consuming the grass.

The first portion of the evil here noticed would of course be remedied by the proclamation of additional reserves, and the Survey Department are doing all that an overworked staff can do to survey and proclaim the necessary sites.

The second portion might be remedied by giving the Inspectors into whose charge these reserves have lately been placed exact descriptions of their boundaries, and empowering them to impound all except travelling stock found upon these reserves.

There is no doubt but that the proposal made by Mr. Forster, in his Impounding Bill, of enclosing the principal reserves on the main droving roads, and charging a small fee per head per night for the sustenance of the stock, is a sound and practical one, and ought to be carried out; but perhaps public opinion is not yet ripe for this alteration, and the best thing that can in the meantime be done is to place the Inspectors in a position to keep all but travelling stock off these reserves so far as they can.

3. CHANGE OF STOCK ON RUNS.

In a few of the higher-lying wet portions of the Colony cattle have taken the place of sheep, and it would be well perhaps, in country of the same sort, where the sheep require such great care to keep them sound and in a profitable condition, that more owners, and especially the careless and incompetent, would follow the example of those who have already done so, and get rid of their sheep for cattle.

4. TAME DOGS.

The loss through tame dogs is steadily on the increase; and if a measure be not shortly passed extending the provisions of the Dog Act to the whole Colony, and making owners responsible for the depredations their dogs commit, sheep-farming in the more thickly settled districts will have to be abandoned. Indeed, it has already been so on this account in a good many cases. The owners in almost every district throughout the Colony are strongly in favour of some such measure, and it was very unfortunate that the House took the view they did of the Bill introduced last Session by Mr. Nelson, and did not amend instead of throwing it out.

It is to be hoped, however, that the matter will be taken up at an early period of the coming Session, and that before the end of the present year the law will be remedied.

The Inspectors' returns show that in five districts the losses through tame dogs were excessively heavy, in ten they were severe, in four they were slight, in eight they are not given, and in five they are returned as nil.

5. DINGO.

Although native dogs are nearly exterminated in the districts where the sheep have been turned out, they are returned as still very troublesome in six districts, troublesome in twelve, slightly so in seven, very slightly in two, and in the others not at all.

In some of the outlying and newly settled districts, as well in the mountainous country near the coast range, the losses by native dogs have been severe; and it would even yet be advantageous to adopt and carry out some general and simultaneous plan for their extermination, such as I have already suggested, under the management of the Boards of Sheep Directors in the different districts, on the model of the Municipalities Act.

There is not of course very great necessity, in those districts where the sheep are turned out and the native dogs already nearly exterminated, for such a measure as that now pointed out; but even in these districts it would be much cheaper, and a great deal more effectual, if the destruction of the dingo was carried out in this general and simultaneous way than it now is by individual and fitful efforts; while the contribution to be paid by the owners would be the merest bagatelle, and the trouble to the Board of Sheep Directors very trifling.

6. COAST SCAB DISTRICT.

The alteration of the boundary of this district from the Hawkesbury River to a line in the neighbourhood of the sale yards at Homebush has been more than once mooted, with the view of enabling sheep which are too low in condition to be sold as fat, to be sent back without being dressed as required by the Act. If this alteration was carried out according to the views of those who have been moving in the matter, the object of the Coast Scab District provision of the Act would be completely defeated, as town sheep, and sheep which may have for a long time been kept in the neighbourhood of the sale yards, would be certain to mix with those which would thus be taken back without dressing, and disease would again be carried into the interior, as it has been in the case of every outbreak by sheep taken back from the Sydney and Maitland sale yards.

Then again, the convenience of the inhabitants in the towns situated in the present Coast Scab District, such as Parramatta, Liverpool, Campbelltown, Penrith, and Richmond, must be considered in settling the boundaries of the Coast District. If the Coast Scab line were brought as proposed up to the neighbourhood of Homebush, no sheep whatever could be taken back from the sale yards there to any of these towns for slaughter unless they were dressed and kept twenty days in quarantine, which is of course entirely out of the question.

Before, however, entertaining a request such as this and altering the boundary from the Hawkesbury River, which forms both a thoroughly safe and well-defined line, as well as one that entails the least inconvenience on the people in the County of Cumberland and the Coast District generally, it would be well to ascertain if there be really any necessity for such an alteration; and I think it will be very easy to show that the operation of the law as it now stands tends rather to the advantage than otherwise of the sheep-owner; for it leads him or his agent to ascertain sooner than might otherwise be done the actual condition

condition of the sheep; and—if they be too poor to sell as fat—to send them back to the station they started from, or dispose of them as stores, instead of turning them back from Homebush after they have been knocked about, and a great deal of unnecessary expense incurred in taking them to a market in which they were quite unfit to be offered.

Even though there were no Coast Scab Regulations, there never would be a market for store sheep near Sydney, and every mile they come, after they are too poor to sell to the butcher, is needlessly increasing expense, and taking them away from their run or their market.

It is not, therefore, for a moment to be imagined that the salesmen who have the interests of their constituents at heart (although they may now and then when caught with a few sheep which are too poor to dispose of to the butcher complain against the present Regulations) will seriously think of altering the existing boundaries. In fact, most of the salesmen have agents at different stages along the main droving roads, from whom they receive regular intimation of the description and condition of the sheep which are sent them for sale; and if the drovers are not sufficiently trustworthy to be depended upon for information, they are kept advised by these agents as to the real state of the sheep, and as to whether or not they should be allowed to proceed beyond the place where they are inspected. If, therefore, they are found to be too poor for the butcher, they are either sent back to their run or stopped until their owner is communicated with.

In this way sheep which are only fit for stores, which were intended to come down by rail, need never be allowed to come on beyond Wallerawang, and those intended to be travelled, if they pass that place, can at any rate be stopped before crossing the Hawkesbury.

When, therefore, the interests of the owners of the sheep are studied as they ought to be, it must be evident that there are no good grounds for the complaints which are now at times made with regard to the boundaries of the Coast Scab District; and that while the salesmen can duly attend to their constituents' interests by stopping the sheep before they come near the boundary of the Coast District, the provisions of the Sheep Act can be so administered as to render it impossible for the scab to spread again, as it has often done, from the town or market sheep. At the same time it must be allowed that, however careful a salesman may be, there will be times when little lots of sheep which have been waiting the market in the Coast District will fall away and become too poor to dispose of to the butcher; and it would be well if the provisions relating to the dressings of Coast District sheep, which are unnecessarily protracted and severe, were relaxed. It is to be hoped that an opportunity will be obtained during the coming Session of Parliament to amend the Sheep Act in this and in several other of its provisions which require alteration, now that there is no scab in the Colony.

7. DUTY ON SALT.

From what has been said with regard to the prevention of fluke and worms in sheep, it will be seen how very essential it is that the sheep in a large proportion of the Colony,—in all of it in fact except the true salt-bush country,—should receive a very liberal supply of salt to keep them in good health.

I would therefore suggest that the duty on rock and Calcutta salt be repealed. Taking both sorts together they bring only a small amount—some £3,000 or £4,000 per annum—into the Treasury; and all classes would participate in the advantage of its repeal,—the stockowners by the improvement in the health of their stock and better returns from them, and the public by avoiding the risk they now run of consuming mutton affected with worms and fluke, and in participating in the advantage which would accrue to the Colony generally by the increase in the quality of our beef and mutton, and the improvement of the clip in those districts where the stock are more or less affected with worms and fluke, or at least not in such vigorous health as they would be if they had a full supply of salt.

8. DRAINING.

Both for fluke and worms, as well as for foot-rot, the real remedy is draining, and especially under-draining the land. Under-draining, however, at the present cost of labour cannot be thought of, especially on Crown lands; but surface draining on purchased land and on some portions of Crown lands, by drawing plough furrows and helping them a little here and there with the spade, would be comparatively inexpensive, while it would do a vast deal of good by preventing surface water from lodging and forming, as it now does, nurseries and breeding pools for the fluke and worm. If open furrows were run and helped as proposed, the rain would soon form them into natural channels, and where there was much fall and the water threatened to cut too deeply into the ground, a few branches placed in the ruts would at once stop the soil from being washed away, and prevent the drain from going beyond the proper depth.

9. MEAT-PRESERVING.

As this is a subject in which our stockowners are both directly and indirectly deeply interested, I made it my business while in Europe to obtain all the information I could as to the state and prospects of the trade in Australian preserved meats.

On doing so I was disappointed to find that the prices our meats realized were only about half what the best Home-made meats brought; and I was led to believe from what I heard that this extraordinary difference in price, although partly owing to the superiority of the quality and flavour of the Home meat at certain seasons of the year, was mainly attributable to the mode in which the Colonial Meat-preserving Companies have conducted their business.

The stock in the Colonies have, as a rule, to travel long distances to the preserving establishments, and they not unfrequently suffer on the road from want of feed and water, as well as from overdriving. Our beef and mutton, therefore, can scarcely rank as to quality and flavour with the best Home-fed meat; and no pains ought to have been spared by the preserving Companies, especially when it is considered that the trade in preserved meats as now carried on at Home is a comparatively new one,—to put up as little inferior meat as possible, and to dispose of any of that class which they did preserve, as *second* or *third* quality,—in order that consumers might have no grounds for complaining, as it is now currently reported at Home they often have, that they have been deceived in the article they were purchasing. Such a precaution as this has unfortunately not been taken. The Companies have never made any classification of their meat; and as they have all, in order to keep their works going and their hands employed, not unfrequently put up inferior meat, and allowed it, so far at least as the consumer is concerned, to go into the market as if it were *first* quality, the consequence is, that the character of our Australian preserved meat has been unnecessarily damaged, and its market value so much depreciated as that, while the best Aberdeen preserved meat sells readily at 1s. per lb., the best Australian never exceeds 7d.

This unfortunate state of matters has been accelerated and aggravated by some of our colonial preserving establishments purchasing and putting up a great deal of inferior meat, and flooding the Home market with a most inferior and worthless article, but for which, on an average, now that there is no classification as to quality, they obtain nearly as good prices as the meat preserved by the Companies who as a rule put up nothing but the best; for the people at Home—at any rate, the consumers—have little or no knowledge of the relative merits of the different brands, and purchase the one nearly as readily as the other.

In this way the general average price of our preserved meat is pulled down to the level of the inferior, and the value of the difference in quality between the best meat and the inferior is lost to the careful preserver. If, however, the Companies that are doing the largest business, and who of course desire to do it in the best manner possible, would combine to classify their meat, and bind themselves never to allow any to be labelled as *first* or even *second* quality that was not fairly entitled to be marked as belonging to those grades, consumers would seldom or never be disappointed, as they now not unfrequently are, through the want of this classification in the quality of the meat of an established brand, and would not only always ask for such a quality and brand, but would largely increase their purchases; and the general result would eventually be that, while the Companies who adopted such a classification and strictly adhered to it obtained the prices they now get for their *third* quality, their *second* would fetch $\frac{1}{2}$ d. to 1d. per lb., and their *first* 1 $\frac{1}{2}$ d. to 2d. per lb. more than they now bring; while the dishonest preservers, who are shipping little else than inferior meats, would find them unsaleable, and quit a business in which their continuance only tends to lower its character and ruin its prospects.

ALEX. BRUCE,
Chief Inspector of Stock.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

LIVE STOCK AND AGRICULTURE.

(RETURNS FOR YEAR ENDED 31 MARCH, 1875.)

Ordered by the Legislative Assembly to be printed, 1 June, 1875.

LIVE STOCK.

ABSTRACT of Live Stock in the several Police Districts of the Colony on the 31st of March, 1875.

Police District.	Description of Stock.				Totals.	Police Districts.	Description of Stock.				Totals.
	Horses.	Horned Cattle.	Sheep.	Pigs.			Horses.	Horned Cattle.	Sheep.	Pigs.	
	No.	No.	No.	No.		No.	No.	No.	No.		
Albury	11,037	52,622	1,059,333	4,866	1,127,858	Mitchell ..	1,798	43,497	1,019,042	334	1,064,671
Armidale	11,934	111,347	646,228	4,167	773,675	Mtweena	1,025	2,660	162,724	301	166,710
Balranald	1,108	23,277	398,152	137	422,674	Molong	4,238	10,392	366,958	1,654	383,272
Bathurst	10,234	24,926	153,457	7,215	195,832	Mudgee	5,700	13,799	134,599	2,831	156,911
Bega	3,343	37,234	2,079	8,922	51,578	Murrumbidgee ..	3,845	23,667	418,147	1,247	446,906
Berrima	3,701	18,836	32,709	2,748	57,994	Musclebrook and					
Bombala	2,735	28,266	213,607	1,549	246,157	Merton	4,669	39,912	35,960	1,557	82,098
Bonrowa	4,544	13,035	245,684	1,950	265,213	Narrabri	3,082	70,543	236,961	584	311,070
Bourke	3,672	107,414	713,875	821	825,782	Newcastle	1,311	4,030	282	1,431	7,074
Braidwood	5,933	44,479	17,682	2,689	70,783	Orange	5,652	8,101	76,201	6,371	96,325
Brisbane Water...	592	3,140	15	986	4,733	Oxley	6,790	62,931	3,276,829	1,511	3,348,061
Broulee	1,830	12,965	148	4,726	19,669	Parramatta	1,759	4,479	744	1,631	8,604
Camden (Narellan						Paterson	3,620	21,525	2,529	4,214	31,888
and Picton)	5,363	43,323	9,617	6,545	64,848	Patrick's Plains ..	6,542	46,399	34,716	5,786	93,434
Campbelltown ..	1,260	6,663	1,964	759	10,652	Penitth	2,832	12,381	3,188	2,047	20,448
Caroon	6,725	15,381	403,302	2,807	428,215	Port Macquarie ..	1,600	7,800	420	6,460	16,280
Cassilis	4,123	16,160	401,589	589	422,461	Port Stephens ..	3,304	30,453	1,663	3,785	39,205
Cooma	7,427	68,886	458,715	1,912	536,940	Queanbeyan	7,136	45,837	238,116	2,485	293,574
Coonamble	6,323	56,395	762,525	1,332	826,575	Raymond Terrace	2,230	9,424	876	2,881	15,411
Cowra	2,661	5,485	141,183	708	150,637	Richmond River...	5,700	156,832	843	1,925	165,300
Dunhillquin	4,512	33,953	1,730,955	1,592	1,770,112	Rylstone	3,653	10,878	105,926	1,996	122,453
Dowling	512	8,845	820	2,723	12,900	Seone	5,699	38,770	152,914	977	198,360
Dubbo	9,932	162,621	1,146,597	3,098	1,322,248	Shoalhaven	3,421	20,424	514	6,927	31,286
Dungog	2,053	18,541	538	4,813	25,945	Tamworth	14,433	89,735	1,475,482	5,210	1,584,860
Eden	1,050	6,500	1,503	2,400	11,453	Tenterfield	2,250	34,476	80,859	1,016	118,601
Forbes	5,360	82,911	841,095	1,356	939,922	Tumut	4,706	33,134	97,620	2,533	138,013
Glen Innes	2,826	59,944	198,202	505	261,477	Tweed River	200	700	.....	400	1,300
Goulburn	11,159	74,608	138,662	7,502	231,941	Wagga Wagga ..	8,184	67,746	1,529,700	3,453	1,509,083
Grafton	7,216	57,244	733	5,088	70,281	Walgett	3,890	170,660	442,980	450	617,980
Grenfell	1,781	27,505	209,613	1,109	240,008	Warialda	9,351	219,362	889,954	853	1,119,520
Gundagai	6,031	40,906	198,296	3,088	248,321	Wellington	7,037	23,494	336,314	2,426	369,271
Hartley	7,159	20,257	20,051	6,111	53,578	Wentworth	1,461	10,613	513,993	417	526,484
Inverell	2,833	26,426	177,422	986	207,667	Windsor	5,287	11,480	2,958	7,137	26,862
Kiama	2,467	31,667	2,171	6,923	43,228	Wollombi	2,149	10,425	1,173	1,971	15,718
Liverpool	1,572	7,288	1,642	739	11,221	Wollongong	1,933	18,262	563	4,436	25,194
Macleay River ..	3,252	22,258	173	4,496	30,179	Yass	10,669	32,116	277,332	3,510	323,627
Maitland	5,367	24,880	8,734	4,329	43,210	Young	6,200	25,979	611,040	3,297	646,516
Manning River ..	4,675	19,800	188	7,115	31,778						
Metropolitan	8,812	7,807	4,532	4,563	25,714						
						Totals	346,691	2,856,699	22,872,882	219,058	26,296,230

Registrar General's Office,
Sydney, 27 May, 1875.

H. NEWCOMBE,
Compiler.

E. G. WARD,
Registrar General.

AGRICULTURE.

ABSTRACT of Agriculture, showing the Number of Holders of Land (exclusive of the Area occupied for Pastoral purposes) the Year ended 31 March, 1875,

POLICE DISTRICTS.	Number of Holders of Land exceeding one Acre.			Total Extent of Holdings exceeding one Acre.		Extent of Land in Cultivation		Extent of Land enclosed but not in Cultivation.		Extent of Holdings Unenclosed.		Crops.															
	Freeholders.	Free and Leaseholders.	Leaseholders.	Freehold.	Leasehold.	Freehold.	Leasehold.	Freehold.	Leasehold.	Freehold.	Leasehold.	Wheat.		Maize.		Barley.		Oats.		Rye.		Millet.		Potatoes.	Tobacco.		
												For Grain.	For Hay.	For Grain.	For Green Food for Cattle.	For Grain.	For Hay.	For Green Food for Cattle.	For Grain.	For Hay.	For Green Food for Cattle.	For Grain.	For Hay.			For Green Food for Cattle.	For Grain.	For Green Food for Cattle.
Albury ...	944	61	161	6347871	333136	30322	2354	4533333	280844	149131	49937	22998	348	290	44	281	35	8	2546	1443	7	10	15	...	183	17	
Armidale ...	460	70	95	148680	89253	10071	1161	66615	32170	68993	55922	5589	279	867	135	16	42	35	685	1903	221	7	17	...	1	542	
Balranald ...	2	...	...	18	...	18	...	...	...	...	...	...	7	...	...	3	...	...	...	8	...	...	...	...	...	...
Bathurst ...	635	310	528	200424	146511	13887	14435	123983	32600	62553	99475	14839	1219	3277	500	588	458	219	1857	3982	158	21	...	...	743	...	
Bega ...	420	10	34	166852	12088	2919	464	133522	9770	30410	1913	15	...	1960	30	126	5	51	47	134	50	52	140	...	...	207	...
Berrima ...	448	53	107	130775	64981	3039	607	103448	58795	24287	5579	326	14	159	29	32	6	...	148	533	...	210	129	...	...	997	...
Bombala ...	282	6	4	108631	16425	1171	...	28523	9685	78937	6740	604	25	...	...	20	6	...	144	284	...	...	...	...	...	71	...
Boorowa ...	318	13	15	116893	11946	4899	92	49795	1105	62289	10749	3334	4	467	2	47	4	...	217	481	...	9	...	...	...	102	...
Bourke ...	40	...	3	5591	30	10	18	966	12	4615	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Braidwood ...	405	23	83	161652	41248	3505	731	123810	25264	34336	15252	1760	177	171	...	27	10	5	219	805	1	4	5	...	...	464	...
Brisbane Water ...	224	12	51	26321	4328	1031	136	9541	2652	15749	1540	...	...	824	7	4	4	2	24	18	2	2	2	...	...	39	...
Broulee ...	270	33	60	70959	11424	6409	1586	39878	2946	24672	6892	328	7	3255	43	26	...	17	450	116	305	2	3	...	...	676	10
Camden (Narellan and Picton) ...	296	61	330	102052	78953	3511	6551	95892	69855	2648	2546	718	199	1609	37	137	5	131	841	5228	12	271	11	...	...	72	...
Campbelltown ...	137	19	85	24197	13363	1528	1652	19213	11461	3456	250	41	95	415	...	48	...	26	129	2103	...	60	...	...	...	21	...
Carcoar ...	330	55	60	173382	186112	6725	662	51509	6239	115148	179211	4970	190	406	4	28	2	2	603	548	...	...	...	...	...	256	...
Cessils ...	111	...	31	247765	82700	2104	223	112847	10717	132813	71760	1247	105	326	...	12	...	...	100	148	50	...	...	...	...	53	...
Cooma ...	42	300	17	205535	23653	3253	179	42074	933	162205	13621	1725	109	9	...	30	2	28	290	630	...	...	...	...	...	144	...
Coonamble ...	110	...	...	69054	...	661	...	48806	...	19586	...	283	...	195	...	1	4	5	1	59	...	...	...	...	...	19	...
Cowra ...	117	1	2	70179	1479	1867	82	20602	1350	47710	47	817	47	498	40	23	...	24	151	189	50	...	...	...	...	12	35
Deniliquin ...	641	9	23	634436	57347	1296	279	225925	54395	497214	2763	283	512	3	1	25	39	...	31	512	...	...	...	...	...	18	...
Dowling ...	161	16	56	26540	6229	13200	5228	5940	801	7400	200	12	...	815	13	20	...	4	399	200	123	...	...	...	...	120	...
Dubbo ...	361	30	27	85497	4399	3147	422	42629	2452	39630	1525	1210	12	828	2	16	6	...	110	382	...	...	12	...	...	86	...
Dungog ...	132	20	155	40993	15212	2020	2996	29998	5027	8975	7289	1090	...	2879	9	141	...	54	84	132	30	1	2	7	5	158	100
Eden ...	80	4	9	14611	1855	950	226	6200	929	7461	700	6	...	881	...	6	...	10	20	80	...	...	...	...	...	80	...
Forbes ...	206	...	...	42804	...	1322	...	15730	...	25751	...	305	212	165	8	...	3	...	10	438	9	...	...	...	...	23	1
Glen Innes ...	121	4	14	73826	27789	1657	369	40081	14655	32088	12765	394	95	229	2	10	55	2	101	685	1	1	...	...	...	172	...
Goulburn ...	663	335	230	338044	188854	10278	3554	277459	87816	30307	97484	7689	162	561	2	113	1	39	1209	2170	...	15	...	...	...	772	...
Grafton ...	500	165	341	34952	25673	15202	8329	50272	11255	19478	6088	6	20	16318	27	16	9	14	24	177	16	...	...	...	...	316	...
Grenfell ...	60	6	6	17282	80	389	42	7977	38	8916	...	107	15	79	3	6	23	...	4	141	10	...	...	...	...	8	...
Gundagai ...	439	...	18	155941	3488	5993	109	89716	3339	60231	40	3791	67	430	12	60	...	7	438	863	...	2	...	...	...	132	...
Hartley ...	298	22	79	84180	18096	2270	897	25167	8991	56743	8208	968	11	169	...	64	...	...	590	631	...	47	...	...	...	517	...
Inverell ...	156	18	18	75125	16691	3148	96	26158	4396	45518	12199	1558	93	683	41	18	10	8	21	367	3	...	...	...	...	103	1
Kiama ...	210	74	323	30770	33577	1550	1693	26224	31645	2995	239	46	23	870	139	75	...	8	211	227	380	217	31	...	...	351	...
Liverpool ...	120	13	142	31969	53451	9391	1621	28619	47063	2410	4734	21	17	71	14	6	...	11	8	2031	18	2	...	...	...	1	26
Macleay River ...	351	38	192	57701	11560	7300	5290	27494	3868	22907	2402	12	...	1166	...	4	1	3	2	6	24	...	2	...	...	151	1
Maitland ...	382	67	511	71156	58957	5957	6549	63211	40568	2888	11840	1212	49	3733	5	316	11	89	179	349	15	11	...	...	30	1103	7
Manning River ...	386	23	254	49554	15453	9633	5562	24655	6398	15266	3492	828	...	12316	...	348	1	18	579	1	129	...	...	...	...	218	54
Metropolitan ...	1900	64	450	56841	13076	4087	864	24272	7755	28482	4457	...	...	65	55	...	...	21	...	374	15	...	10	...	25	349	...
Mitchell ...	33	...	5	6042	11580	2	...	3113	620	2927	11496	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Moama ...	101	7	9	22581	2610	961	90	53512	1874	171107	645	343	275	...	...	...	...	...	111	162	...	...	...	...	...	3	...
Molong ...	455	458	13	118136	3084	6191	40	49662	2894	62293	150	3352	96	1721	...	4	5	3	70	269	2	5	...	...	...	223	...
Mudgee ...	540	20	105	108524	30038	10435	2682	53663	5178	44426	22178	6802	53	3721	...	74	...	5	205	1175	4	1	...	12	...	254	...
Murrurundi ...	202	...	7	5352	308	1770	69	2877	220	705	19	1000	...	259	...	6	...	7	3	287	...	...	...	...	...	54	...
Muswellbrook & Merton	70	366	24	231958	89622	3111	217	179564	39833	49282	49572	1887	10	347	7	30	2	16	12	118	5	4	4	...	...	30	4
Narrabri ...	33	...	...	15508	...	221	...	3340	...	11946	...	9	6	106	...	...	...	...	10	...	...	...	...	...	...	8	...
Newcastle ...	113	4	80	26458	21476	502	584	10153	11855	15803	9036	...	...	240	6	1	7	5	...	80	16	...	...	...	...	62	...

AGRICULTURE—continued.

POLICE DISTRICTS.	Number of Holders of Land exceeding one Acre.			Total Extent of Holdings exceeding one Acre.		Extent of Land in Cultivation.		Extent of Land enclosed but not in Cultivation.		Extent of Holdings Unenclosed.		Crops.															
	Freeholders.	Free and Lease holders.	Leaseholders.	Freehold.	Leasehold.	Freehold.	Leasehold.	Freehold.	Leasehold.	Freehold.	Leasehold.	Wheat.		Maize.		Barley.			Oats.		Rye.		Millet.		Potatoes.	Tobacco.	
												For Grain.	For Hay.	For Grain.	For Green Food for Cattle.	For Grain.	For Hay.	For Green Food for Cattle.	For Grain.	For Hay.	For Green Food for Cattle.	For Grain.	For Hay.	For Green Food for Cattle.			For Grain.	For Hay.	For Green Food for Cattle.
Orange	590	60	296	92377	19501	33602	4004	35130	7370	23645	8217	32282	930	890	...	68	...	49	452	1550	...	14	...	...	...	540	...
Oxley	108	4	12	25880	31	8054	476	50	145016	1796	111370	6208	...	95	...	3	50	...	...	359	...	3	2	...	...	...	...
Parramatta	741	43	305	33875	22581	6494	1876	24164	17740	3217	2965	5	41	44	180	6	...	19	9	2280	67	1	4	...	...	21	...
Paterson	111	22	115	90837	41662	1678	1697	51743	11914	37415	28051	876	3	1375	...	129	...	90	...	8	...	2	...	...	...	83	203
Patriek's Plains	331	40	203	202737	84903	4406	1834	91138	20479	107192	62590	27431	21	1587	...	48	13	68	20	93	...	15	...	3	...	156	54
Penrith	212	22	242	60547	62383	2277	3973	57701	57948	368	462	105	48	2985	7	25	8	24	511	1709	...	4	3	...	...	55	...
Port Macquarie	214	7	47	44663	35178	4023	1010	17140	8468	23500	25700	180	...	2864	240	34	...	14	41	32	20	...	...	...	...	210	6
Port Stephens	153	13	97	11040	7379	1360	1211	7451	4462	2220	1706	358	...	1843	...	64	1	14	58	15	1	...	...	...	...	76	24
Queanbeyan	362	19	71	31754	45898	6324	1974	18699	17106	124224	26818	5282	134	252	28	81	183	25	219	815	5	...	...	...	...	219	...
Raymond Terrace	134	17	195	23727	16264	1164	3360	17588	6780	6975	6124	97	22	2026	10	155	18	22	67	272	4	...	3	137	2	160	8
Richmond River	690	5	33	151637	5823	4404	383	103102	4640	44131	800	...	...	2917	...	...	14	6	...	51	25	...	...	...	2	19	5
Rylstone	247	...	37	11046	7535	2143	455	74640	3637	33679	3443	818	6	553	...	17	...	9	72	399	...	...	...	...	...	182	...
Seone	248	2	13	28146	10224	2114	215	27843	3440	251568	6569	1936	87	107	5	7	...	8	...	12	...	2	...	...	...	18	...
Shoalhaven	301	44	382	91112	34545	2183	6726	24795	16502	64224	11317	15	3	7011	...	8	3	49	339	68	63	6	...	...	...	453	...
Tamworth	859	72	37	367074	70645	8895	1198	133122	9890	225037	59557	7028	81	1355	260	22	8	19	21	316	3	...	...	2	...	224	2
Tenterfield	247	15	5	12024	2685	1488	235	5196	815	5340	1635	931	75	246	...	2	...	...	12	216	...	...	...	...	...	215	...
Tumut	265	16	24	78418	6792	3552	670	66271	5324	8595	798	1900	18	924	13	21	20	1	229	199	...	3	...	...	7	124	...
Tweed River	214	...	7	22352	800	315	20	113	...	21924	780	2	...	120	...	...	...	...	...	...	...	...	...	...	...	10	...
Wagga Wagga	350	64	101	283170	266690	5164	392	169836	141088	108170	125210	2170	303	376	9	57	36	38	482	1523	23	1	...	...	...	55	...
Walgett	43	...	...	6394	...	...	...	922	...	5472	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Warialda	137	105	21	123697	31898	740	166	58875	19874	64082	11858	140	26	226	25	...	...	51	...	119	...	...	6	...	4	25	...
Wellington	401	244	26	272489	335330	5088	85	62818	16806	204583	318439	2333	325	1025	38	27	6	...	116	590	...	3	...	...	...	131	...
Wentworth	32	1	...	5878	3	60	...	4264	...	1554	3	...	60	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Windsor	499	378	164	73191	35911	10174	8123	56090	26466	6927	1322	640	448	10693	48	141	...	102	692	2918	5	111	5	...	1	160	...
Wollombi	134	91	99	32716	17395	2529	1571	19344	11743	10843	3991	870	...	2076	...	32	...	8	714	32	...	...	200	...	...	63	35
Wollongong	194	59	291	25210	31998	800	900	22071	29689	2139	1409	18	...	730	69	22	...	27	59	103	297	6	5	...	...	136	...
Yass	663	89	87	255485	55033	9464	1574	154939	25566	91082	27893	7531	92	828	...	67	8	...	345	1222	...	12	...	...	...	199	1
Young	615	2	5	247450	5026	12027	87	124947	4918	111376	21	6117	16	1474	29	109	8	30	636	1093	12	1	...	...	...	184	...
General Total	23310	4187	7680	6949819	8104276	342021	121436	4065433	1123135	3941906	1638307	166011	7902	118406	2119	5924	1131	1594	17913	16421	2189	1143	1813	102	61	13604	589

Registrar General's Office,
Sydney, 27 May, 1875.

AGRICULTURE—continued.

Crops.															Produce.															Vineyards.				
Sorghum and Imphee		Sugar-cane.		Sown Grasses		Vineyards.	Gardens and Orchards	All other.	Total number of Acres under Crop.	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.	Potatoes.	Tobacco.	Sorghum and Imphee (Grain).	Sugar-cane.	Sugar produce.	Arrowroot.	Hay.				Wine-making		Table-use.						
For Grain.	For Green Food for Cattle.	Productive.	Unproductive.	Arrowroot.	For Hay.																	For Green Food for Cattle.	Wheat.	Barley.	Oats.	Sown Grasses.	No. of Acres.	Wine produced.	Brandy manufactured.	No. of Acres.	Quantity obtained.	Vines unproductive.		
acs	acs	acs	acs	acs	acres	acres	acres	acres	bushels	bushels	bushels	bushels	bushels	bushels	tons	lbs.	tons	cwt.	cwt.	lbs.	tons	tons	tons	tons	gallons	gals	tons	acs						
...	...	...	...	...	60	300	...	90	381	3766	355102	8900	1168	9600	182	...	590	...	...	...	...	1860	...	3080	100	...	...	...	...	...
...	...	...	...	...	8	...	2	6	...	526	...	...	10	...	20	...	...	...	...	...	...	107	75	229	6	...	...	...	...	...
...	29	...	...	...	18	63	220	5324	39	8370	96	860	91	80	18	...	30	...	...	...	...	29	...	1109	8	75	4000	82	99	33	45
...	2	...	...	...	74	95	188	128	116	3376	8405	34597	2704	...	70	30	192	262944	...	...	...	200	3	7	414	144	17715	...	...	...	43
3	2	874	18	240	276	...	6241	38384	34937	705	490	315	50	261	56665	7	25	15	93	243	213	45550	...	11	13	16		
...	8	...	...	...	207	1	163	385	...	6250	930	7299	552	865	51	...	144	...	...	...	...	69	12	1555	409	113	19480	234	9	5	41
...	7	304	220	6	8	600	113	64	70	5033	870	85920	680	846	360	5400	...	100200	3310	4000	60	14	87	17400	...	6	14	20		
...	2	11	51	49	2571	5223	53025	1343	1271	261	1428	3200	...	2	19	...	9	800	21	1	2	1		
...	...	...	...	...	105	819	3	89	37	8298	66884	6140	1608	4007	...	...	664	...	...	...	...	127	161	855	52	...	...	...	2	74	1
...	2	18	4	3	1104	20	161	114	95	4524	1017	41271	2668	1015	...	2691	295	1650	...	2880	240	2400	23	35	393	4675	139	30856	72	14	19	8		
...	3	161	59	6	9	725	4	250	...	4787	...	94365	54	5000	...	190800	5960	7800	...	33	113	20	2	450	...	1	5	...		
...	184	312	...	44	1	2598	11898	6642	250	1169	456	6	...	406	223		
...	...	...	...	...	88	15	244	18	1	1329	35192	1643	100	...	35	...	22	...	...	...	...	100	...	11	144	13	516	...	1	1	10
...	131	672	...	54	34	8909	167	239924	170	5702	100	...	1775	3	2	67	130		
...	...	...	...	...	402	121	21	118	87	10094	139710	14043	484	428	...	30	416	...	...	...	...	104	14	423	1326	14	3700	17	6	20	1
...	...	...	...	...	7	8	4	7	...	1723	18620	3375	27	183	...	...	470	...	...	...	...	80	...	590	28	...	...	...	4	2	...
...	...	...	...	...	10	561	28	164	...	4222	29404	17165	476	4810	60	...	256	...	...	...	...	18	...	284	30	20	2000	20	4	4	4
...	...	3	150	20	30	...	335	60	4000	20	1200	60	2000		
6	32	8	122	122	1	3	23	5555	25779	2855	931	6661	15	...	44	...	2	940	2	...	262	33	1493	150	77	12194	58	26	12	...		
...	
...	61	...	...	...	50	84	28	23	38	906	2670	3275	...	...	...	...	27	...	...	...	...	30	...	103	46	7	1520	...	17	11	4
...	...	...	...	...	194	202	42	132	6	5173	39278	29328	643	1597	49	...	221	...	...	...	...	397	8	815	394	20	2800	80	16	40	6
...	60	4		
...	26	2	8	...	138	24	34	803	53	18297	5772	233478	2110	10553	1033	...	320	...	...	40	...	611	...	2315	3080	21	1230	77	8	3	5	
...	...	...	...	...	7	2	5	53	...	4100	7676	47175	487	11414	...	...	84	29620	...	...	...	...	...	21	10	5	400	...	...	...	...
...	89	...	...	...	13	12	6	107	...	1700	600	20014	345	1385	110	...	450	...	...	...	...	...	...	210	32	5	1000	12	1	2	...
...	...	...	...	...	337	202	48	146	...	11038	73161	12555	833	4853	106	...	400	1200	...	...	...	74	5	1120	143	7	3040	...	41	44	...
...	...	...	...	...	623	1291	40	337	114	12114	89083	17676	2147	14924	16	...	184	...	...	...	...	18	...	1500	438	24	2420	50	10	5	6
15	750	4007	44531	47	12639	33216	4307	11571	9012	461837	3148394	3616196	09063	283135	17386	9601	285432	619849	18	14437970	182104	20760	9758	1364	30414	31910	3077	684256	1859	649	0791	581		

HY. NEWCOMBE, Compiler.

E. G. WARD, Registrar General.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DISEASES AFFECTING LIVE STOCK.

(SKETCHES OF BILL FOR PREVENTION OF, &c.)

Ordered by the Legislative Assembly to be printed, 29 July, 1875.

RETURN (*in part*) to an *Order* made by the Honorable the Legislative Assembly, dated 16 July, 1875, That there be laid upon the Table of this House,—

- “ (1.) Copies of the Sketches of a Stock Disease Prevention Bill which
 “ have been framed and circulated amongst the Members of the Conference
 “ of the Chief Inspectors of Stock held in Sydney in November last, with
 “ the view to their coming to an agreement on the details of the resolutions
 “ they had passed on this subject.
- “ (2.) A copy of the Correspondence which has taken place between the
 “ Chief Inspector of Stock for this Colony and the other Members of the
 “ Conference with respect to these Sketches.
- “ (3.) A Return from Stockowners, showing the effect of Inoculation for
 “ Pleuro-pneumonia in Cattle.
- “ (4.) Returns from Sheepowners as to the nature, symptoms, prevention,
 “ and cure of worms, fluke, and foot-rot in Sheep.
- “ (5.) Copies of any Memoranda which have been submitted by the Chief
 “ Inspector of Stock to the Honorable the Minister for Lands in regard to
 “ retaining the services of the Inspectors of Stock in the Inland Districts.”

SCHEDULE.

NO.	PAGE.
1. Chief Inspector, Sydney, forwarding Synopsis of Bill for prevention of Diseases in Stock to other Members of Conference, for their consideration. 8 January, 1875	2
2. Chief Inspector, Melbourne, returning above Synopsis with notes. 29 January, 1875	20
3. Chief Inspector, Adelaide, same with same. 11 March, 1875	20
4. Chief Inspector, Hobart Town, same with same. 3 April, 1875	21
5. Chief Inspector, Brisbane, same with same. 14 April, 1875	21
6. Chief Inspector, Sydney, forwarding above notes to the several Chief Inspectors, for reconsideration. 20 May, 1875	21
7. Chief Inspector, Melbourne, returning notes with remarks. 2 June, 1875	21
8. Chief Inspector, Adelaide, same with same. 15 June, 1875	22
9. Chief Inspector, Hobart Town, same with same. 21 July, 1875	22
10. Chief Inspector, Brisbane, same with same. 23 July, 1875	23

DISEASES AFFECTING LIVE STOCK.

Return No. 2.

No. 1.

THE CHIEF INSPECTOR, SYDNEY, TO THE OTHER MEMBERS OF THE CONFERENCE.

*(Non-official.)*Stock Branch,
Department of Lands,
Sydney, 8 January, 1875.

DEAR SIR,

I beg to send herewith for your consideration the accompanying Synopsis of a Bill for the prevention of Diseases in Stock.

Until the members of the late Conference come to an agreement with respect to the details of the subjects which were discussed at that meeting their resolutions will bear very little fruit, and joint action cannot be taken; while again this agreement will never take place until an attempt is made to frame a measure which will in the main at least be adopted by all the Colonies. I have therefore drawn up the accompanying Synopsis, and I will feel obliged by your taking the subject up at your early convenience and giving me your opinion in regard to its provisions and the form in which they have been arranged, with the view to the preparation of such a measure as all the Colonies will approve.

The Bill goes very much into detail, but not more so than I think is necessary to enable stockowners and the public to understand plainly the duties they have to carry out under it, and to place the officers who are appointed to see its provisions enforced in a position to do so.

If a measure such as this so full of details is to work well and efficiently, it must either be a very long one or be worked principally by regulations; and surely it is much better that Parliament should settle these details than that they should be left to the Government of the day, or more properly speaking to the Minister charged with the administration of the Act, for the other Members of the Cabinet seldom interfere.

Even although these details might be as well and satisfactorily settled by regulations,—the convenience of having them in the Act instead of scattered, as they would likely be if the measure were worked principally by regulations over a series of proclamations and in so many different Gazettes, would be worth all the additional trouble of embodying them in the Act; for regulations are sure to be lost sight of, and the public would in many instances be ignorant of what the law really was.

Besides, legislating in this way gives the law quite an unsettled character, and the Government would be continually urged to make fresh regulations which would frequently alter the law in some of its most important respects; and it is feared that regulations would thus, through political influence, be promulgated, which would not be for the interest of stockowners.

While advocating the embodying of these particulars in the measure itself, the disadvantage of going much into detail, and thereby making the measure stiff and inelastic, has not been overlooked. This has been provided against by taking power in the Act to alter almost any provision in it by regulations. But although this power is taken, it would not of course be acted on unless it was very necessary to do so; and the Government could very well plead, where an application was made for an alteration of the Act which they did not think called for, that as the Parliament had settled the details which were asked to be altered, they would not take it upon them to make such an alteration unless it was clearly the wish of a majority of stockowners that such a regulation should be made.

In this way the measure would have all the advantages of going fully into details, while these details could be very soon altered by regulation should it be found that there was any real necessity for doing so; for instance, that they defeated the objects for which the Act was passed, that they did not give sufficient power to enforce its provisions, that they imposed unnecessary restrictions on the stock traffic, or pressed too heavily on the owners of stock.

With respect to this question of long or short Acts, it is surely very much better that a measure should be full and explicit than short and vague. If it is brief, it is almost certain to be ambiguous, or at least to leave hundreds of matters not settled which ought to be so by positive enactment; while if it goes into details, the chances are that it will be free from doubt and give the lawyers little or nothing to do.

Nor is there any good reason why a measure should be short. The extra printing costs little, and the extra paper still less; and if it be so arranged in parts and under headings that reference can be quickly and easily made to any of its provisions, there can be no possible objection to an Act being comparatively long. One thing is quite certain that, both here and in the Mother Country, Acts are now being framed at greater length every year; and that, through the division and arrangement alluded to, reference can be far more easily made to every provision in the short plain sections of the Acts now framed than could be done to those passed some twenty years ago, with single clauses occupying whole pages, and no division into parts, nor any arrangement under headings.

You will observe that I have adopted a good many of the provisions contained in the Imperial Contagious Diseases (Animals) Act, 32 and 33 Victoria, chapter 70, to which I would beg to refer you as bearing out what I have said with respect to short and long Acts.

I am, &c.,
ALEX. BRUCE.

Return No. 1.

Return No. 1.

STOCK DISEASE PREVENTION BILL, 1875.

PART I.—PRELIMINARY.

PART II.—STOCK DISTRICTS.

PART III.—STOCK DIRECTORS.

1. *Election or appointment of Directors.*
2. *Meetings of Board.*
3. *General powers and duties of Directors.*
4. *Appeals and applications to Directors.*

PART IV.—INSPECTORS OF STOCK.

1. *Appointment.*
2. *Powers and duties.*

PART V.—QUARANTINE OF INFECTED STOCK AND RUNS.

1. *Infected stock on runs.*
2. *Infected travelling stock.*

PART VI.—QUARANTINE STATIONS.

PART VII.—STOCK ON RUNS.

1. *Uninfected stock.*
 - (1.) Duties in regard to *all* such stock.
 - (2.) Additional duties when stock are *sheep*.
2. *Infected stock.*
 - (1.) Duties in regard to *all* such stock.
 - (2.) Additional duties when stock are *sheep*.
 - (3.) *Inspection of stock and declaration of infection.*
 - (4.) Which stock are to be *destroyed and when*.
 - (5.) How cattle infected with *pleuro-pneumonia* are to be dealt with.

PART VIII.—TRAVELLING STOCK.

1. *Uninfected travelling stock.*
 - (1.) Duties in regard to *all* such stock.
 - (2.) Additional duties when stock are *sheep*.
2. *Infected travelling stock.*
 - (1.) Duties in regard to *all* such stock.
 - (2.) Additional duties when stock are *sheep*.
 - (3.) *Inspection of stock and declaration of infection.*
 - (4.) Which stock are to be *destroyed and when*.
 - (5.) How cattle infected with *pleuro-pneumonia* are to be dealt with.

PART IX.—COAST, OR INFECTED DISTRICT, AND COASTWISE STOCK.

1. *Coast or infected district.*
 - (1.) *Sheep.*
 - (2.) Stock in *general*.
2. *Coastwise stock.*
Stock in *general*.

PART X.—COLONIAL STOCK INTRODUCED ACROSS THE BORDER.

1. *Rules as to admission of such stock when uninfected.*
 - (1.) In regard to *all* stock.
 - (2.) Additional rules in regard to *sheep*.
2. *Rules as to admission of such stock when infected.*
 - (1.) In regard to stock in *general*.
 - (2.) Special rules when stock are infected with *pleuro-pneumonia*.

PART XI.—COLONIAL STOCK INTRODUCED BY SEA.

1. *Rules as to admission of such stock when uninfected.*
 - (1.) In regard to *all* stock.
2. *Rules as to admission of such stock when infected.*
 - (1.) In regard to stock in *general*.
 - (2.) Special rules when stock are infected with *pleuro-pneumonia*.
 - (3.) Special rules when stock are infected with *scab*.

PART XII.—FOREIGN STOCK.

1. *Rules of admission of such stock into the Colony.*
 - (1.) In regard to *all* stock when *uninfected*.
 - (2.) " " " *infected*.

PART XIII.—TRANSHIPPED STOCK, AND STOCK LANDED FOR TRANSHIPMENT.

1. *Transhipped stock.*
2. *Stock landed for transhipment.*

PART XIV.—EXPORTED STOCK.

Rules of exportation.

PART XV.—STRAY INFECTED STOCK.

Rules of seizure and disposal.

PART XVI.—LAND, PREMISES, CONVEYANCES, EFFECTS, ETC., INFECTED OR LIKELY TO BE.

PART XVII.—PENAL AND PRECAUTIONARY PROVISIONS.

1. *Money penalties.*
2. *Imprisonment.*
3. *Confiscation of stock, &c.*
4. *Apprehension of offender.*

PART XVIII.—COMPENSATION FOR STOCK, EFFECTS, ETC., DESTROYED.

PART XIX.—PROCLAMATIONS AND REGULATIONS.

PART XX.—CONTRIBUTIONS AND EXPENSES.

1. *Contributions.*
2. *Expenses.*

PART XXI.—LEGAL PROCEEDINGS.

1. *General.*
2. *Appeals against Justices' decision.*
3. *Protection of persons carrying out the Act.*

SYNOPSIS OF STOCK DISEASE PREVENTION BILL, 1875.

Preamble.

PART I.—PRELIMINARY.

1. Commencement and title.
2. Repeal of unrepealed sections of 17 Victoria, No. 27 (the Catarrh Act), and of the Acts 27 Victoria, No. 9 (the Cattle Export Act), 30 Victoria, No. 16 (the Sheep Act), and 35 Victoria, No. 6 (the Imported Stock Act); but this repeal not to affect anything done or purporting to be done in virtue of repealed Acts, and all appointments to stand.
3. Interpretation clause.

PART II.—STOCK DISTRICTS.

4. The Governor in Council may proclaim or alter Stock Districts, and alterations not to affect Directors in Districts altered.

PART III.—STOCK DIRECTORS.

1. *Election or appointment.*

5. Seven Directors—four sheep-owners and three cattle-owners—to be elected annually from contributing owners or their superintendents.

Mr. Curr: I do not place much dependence on Boards, though they have answered pretty well in connection with our Scab Act, in the position therein assigned them. *In no other way* do I think them at all desirable, especially as regards their having anything to do with the appointment or nomination of the Inspectors.

Mr. Bruce: As will be gathered from my remarks in the notes on the other sections relating to Directors, I am inclined to agree to a considerable extent with *Mr. Curr* as to curtailing the powers and duties of these Boards, and am willing to omit some of the sections to which he has the greatest objections.

Mr. Valentine: If this system is adopted, and it is quite possible it may be, although many will not see the use of introducing an entirely new system into a clean Colony, cleansed under the present one; this will be a strong argument against it, coupled with the objection to be taxed separately. I have no alteration to suggest excepting under 4, Appeals, &c. It is against all the workings of our Acts to allow of appeals against stock being diseased; cut down your appeals; any improvement in the working of a directorate you would now be able to see after working the New South Wales Act.

Mr. Bruce: As stockowners will, under the proposed measure, have to contribute to a special tax, it is only reasonable that they should have some say in its administration through Directors elected by themselves.

6. If no election take place, or if a fewer number than seven be elected, the Minister to appoint on the nomination of the Chief Inspector.

7. Owners with *one hundred* cattle or *five hundred* sheep, or superintendents of owners of *two thousand* cattle or *eight thousand* sheep, to be qualified as electors.

8. Owners and superintendents, *bonâ fide* residents in the district, with similar qualifications, to be eligible as directors.

9. No owner or superintendent of infected stock to have a vote or be a candidate, and no owner and his superintendent to be appointed to the same Board.

Mr. Whyte: Right.

Mr. Gordon: I agree generally with the principle that no owners of infected stock should have a voice at the Boards; but in the case of pleuro-pneumonia when at times it is spread all over a Colony, it would appear hard to debar owners who have been powerless to prevent it spreading in their herds. Might not the disqualification be removed in the case of pleuro-pneumonia, in the case of those owners who have inoculated, although the herds have not been yet considered as free from disease?

10. Mode and place of election.

11. Vacancies in the Board to be filled up in the same manner as original appointment; but vacancies not to affect powers of Board while there is a quorum.

12. The Chief Inspector to be a Director at all Boards *ex officio*.

Mr. Whyte: Quite right.

2. *Meetings of Board.*

13. Mode of calling and conducting meetings, the place of meeting, quorum of Directors, mode of deciding questions, election of Chairman, and record of proceedings.

14. When disease is in a District, Directors to meet at least once a month—when it is not, annually.

Mr. Gordon: What penalty? They never meet once in any of my districts, although the Act expressly provides for it.

Mr. Bruce: I do not think that any penalty could in this case be enforced, except that of removal from the Board; and in the scarcity of fit men for Directors, it would often be inexpedient to take that course.

Mr. Gordon: In Queensland, Boards cannot be got to meet even once a year, except in cases of disease. Dismissal from the Board is no penalty. At same time, when occasion requires, such as an outbreak of catarrh, they have at all times met on the shortest notice, and been of the very utmost service to me and to the District Inspectors.

3. General powers and duties of Directors.

15. Directors may nominate qualified person as Inspector; but Minister may refuse to appoint if person not qualified, or may appoint one Inspector for two or more Districts.

Mr. Carr : As already stated, I think this highly objectionable, and would only recommend Board of advice. See our Scab Act.

Mr. Bruce : It is not a very material point as to whether or not Directors should nominate the Inspector, but, speaking from the experience of this Colony, where both systems have been tried, nominations by the Directors answer best. In either case, however, I would now propose that every candidate for the office of Inspector should pass a test examination before a Board composed of (say) a medical man, a veterinary surgeon, and the Chief Inspector.

16. Directors to advise and assist Inspector in his duty, and if Inspector refuse to carry out advice offered by Directors, Inspector may be reported to the Chief Inspector.

17. Every Director to be *ex officio* an Inspector, but without remuneration, except as after-mentioned.

Mr. Bruce : This section ought to be retained, as a Director could often take action at once as Inspector, instead of waiting for the regular Inspector.

18. Director receiving notice of an outbreak of disease to visit locality, and, in absence of the Inspector, do duty as such.

19. Directors acting as such, or as Inspectors, to be allowed travelling expenses, but no payment for time, at a rate to be fixed by Regulation.

Mr. Whyte : Reasonable.

Mr. Gordon : I strongly recommend Directors being paid when acting as Inspectors, and also that the rates be fixed by Schedule to the Act, and not by Regulation. This has acted well, and given satisfaction to all parties for seven years in this Colony.

20. Director not to act as such, nor as Inspector, when personally interested, nor as a Director where he has acted as an Inspector.

Mr. Whyte : Right.

4. Appeals and applications to Directors.

21. An owner may appeal to the Board of Directors against any decision, refusal, or valuation, of an Inspector, or of an Inspector and Director, on lodging expense of appeal.

Mr. Valentine : Does not this include too much? I don't like appeals against a decision that stock are infected—I should prefer it left out. If wrongly declared infected, let Director or Inspector suffer. I do not agree with allowing too many appeals.

Mr. Bruce : The advantages of appeals, as here proposed, are—1st, that when they are allowed the Inspector may with safety be invested with greater powers than when they are not, which enables him to discharge his duties much more effectively than when they are less; and 2nd, that practical questions relating to stock and their management are under this system of appeals heard and decided by men thoroughly acquainted with these matters, and of course much more interested in seeing the Act faithfully carried out than Justices of Peace usually are. I am, however, inclined to yield to the objections urged by Mr. Carr and Mr. Valentine; and omitting sections 21 to 23 inclusive, to allow such matters to be settled as they would then be by the Petty Sessions.

22. In appeals against a decision that stock are infected, the appeal must be lodged with one of the Directors within forty-eight hours of the notice of the decision, and the Director and Inspector interested must receive notice at the same time of its being so. And any other appeal shall be lodged in like manner, and notice given to the Inspector within ninety-six hours of the receipt of the notice occasioning such appeal.

Mr. Gordon : I think seventy-two hours is short enough. We should make provision for a little indecision on the part of those acting to orders, and who may have to use the wires or post in receiving instructions how to act.

Mr. Whyte : Promptitude is doubtless desirable in all cases in carrying out this Act, but to me the proposed time seems rather short.

Mr. Gordon : I think at least three days short enough notice, as in many cases it will be found stations are in charge of superintendents, who before appealing will be anxious to communicate with their principals.

23. An owner making application to the Directors shall give the Inspector notice as aforesaid; and applications for compensation must be made within two months of the date of the destruction of the stock or effects.

Mr. Valentine : If appeals are allowed and there is truth in the practical knowledge of Boards, their powers should be curtailed to very moderate limits, but I think it immaterial as to the form of the Boards being the same in all the Colonies, provided the working provisions of the Bill are similar.

24. Every Board of Directors is hereby empowered to receive appeals, to fix the place and date of hearing applications, and to summon witnesses.

25. Appeals against the decision that stock are infected shall be heard not earlier than the *third* nor later than the *fifth* day after the appeal is lodged; and all other appeals and all applications not earlier than the *seventh* nor later than the *fourteenth*, at some convenient hour and place. And due notice in writing shall be given to the appellant or applicant, to the other Directors, to the Inspector, and to such witnesses as may be required.

Mr. Valentine : Don't like it. Refer to in former remarks; better left out. In our far north districts it would be a difficult matter to get two to meet to form a quorum.

Mr. Whyte : The same observations made at 22 seem to me applicable here, where Directors, and it may be all the parties, are widely separated. But on this point I have no decided opinion, in the absence of practical knowledge of the working of Boards of advice.

Mr. Bruce : As two form a quorum this difficulty would seldom occur.

26. Every Board of Directors shall have full power to hear and determine all such appeals and applications, and shall do so in the same manner as appeals at Quarter Sessions, and shall award damages or compensation and assess and tax the costs and expenses; and may inflict a penalty not exceeding £20 for non-attendance of witnesses.

27. A record shall be taken of the proceedings; and decisions to be given in the form of Schedule or

Mr. Carr : I think it probable that the views of Boards would frequently have reference, not to Victoria and the Colonies at large, but to their own immediate neighbourhood and interest, than which nothing could possibly be worse in a matter of this sort.

Mr. Bruce : It would only be as regards purely local matters that the Government would be guided by the opinion of any single Board. Of course, where the Boards generally expressed the same opinion, it would be a different matter.

Mr.

Mr. Carr: As regards these sections, I must repeat that I consider them bad in principle and in practice. You have stated respecting them that the Government would only be guided in *local matters* by a local Board. Besides that such has not been my experience, I will add that nothing almost connected with disease can be confined to local results. Disease on the smallest farm in Victoria has or may have a bearing on the whole of the stock in New Holland.

28. In appeals or applications relating to any stock, run, conveyance, matter, or thing, the Directors shall personally examine into circumstances and hear the same as near as may be to where the circumstances occurred.

Mr. Gordon: (clauses 21 to 28) It has been proposed to omit these clauses. I think this a mistake. A Director and Inspector will always be found to act with more promptitude and decision when they are in a position to say to owners—"You can appeal against our decisions." In fact, their decisions, when appeals are permitted, are virtually the decisions of the whole Board. I would, however, add a proviso to the effect that, in case of decisions being given by an Inspector and *more than one Director*, no appeals be allowed.

PART IV.—APPOINTMENT AND GENERAL POWERS OF INSPECTORS.

1. *Appointment of Inspectors.*

29. The Chief Inspector to be appointed by the Governor in Council.

Mr. Whyte: Correct.

30. Inspectors nominated by Directors to be appointed by the Governor in Council, to be liable to be suspended by the Chief Inspector or the Directors, and to be dismissed by the Governor in Council, who may appoint Inspectors where necessary if the Directors neglect or refuse.

Mr. Carr: I never knew such conflicting arrangements to succeed. The whole staff should, in my opinion, be on the Civil Service, and be appointed by the Governor in Council.

Mr. Whyte: Will there not be a clashing of powers here?

Mr. Bruce: See remarks on notes to section 15. No hitch such as that here anticipated has occurred under the New South Wales Act, where for ten years the Boards have nominated and the Government appointed. This arises through the appointment being really in the hands of the Minister, when he chooses to exercise the power conferred on the Government.

Mr. Carr: I cannot but think that the reason that the system of Directors worked well in New South Wales was that there was but little to be done in that Colony; disease never brought any strain on the system. Divided powers—the delays occasioned by Boards—the impossibility of carrying through any system under such a variety of management and circumstances—the isolated standpoint from which each separate Board takes its view—their *want of responsibility*—are all matters hostile to vigorous, well-ordered, and sustained action. Boards of advice, pure and simple, I should consider desirable, and none others. As regards officers, they should, I think, be independent of local influence; and I would prefer them being strangers in their districts at starting. If real work had to be done, I should place little confidence in an Inspector who had been appointed or recommended by the very people he might have to coerce.

2. *Powers and duties of Inspectors.*

31. Inspector to have power to enter and inspect stock, premises, vessel, conveyance, or anything else in any part of the Colony—to carry out the law at the owner's expense when he neglects—and to possess all the other powers conferred by the Act.

Mr. Valentine: This involves taking possession of stock to cure them. I entirely disapprove of such a course. I am satisfied it is much better the Inspectors should not step in and clean. Inflict penalties if not clean within a certain time; make it too hot for a man to keep diseased animals; destroy the stock. Severe as you like, but do not ask the Inspector to cleanse the stock.

Mr. Bruce: I do not think that this section can quite bear the construction here put upon it by Mr. Valentine; at any rate, it need not do so when drawn in the Bill. All that is required is to give the Inspector power to order the dressing, disinfecting, or destruction of stock called for by the Act, and where necessary to place some one on the run to see that his order is duly carried out; for all which the owner of the stock would of course have to pay.

Mr. Valentine: With such a construction I agree with the clause.

32. Inspector and his assistants in certain cases to have the same powers as Officers of Customs and Health Officers.

Mr. Valentine: On what grounds? Is it not mixing up different Acts? I do not see the value of this.

Mr. Bruce: The powers here proposed to be taken are absolutely necessary in regard to imported and border stock; and taking them in this way saves repeating all the details so minutely laid down in the Customs and Health Acts.

33. Inspector may in certain cases kill stock for evidence, and may seal up and mark, and make owner mark, any portion of stock killed, for the purpose of its being produced in Court.

Mr. Valentine: Don't believe in this clause at all—consider it quite a mistake. I have known men drive through cases worked under this clause. I think it weakens the position of the Inspector. We have always done without it.

Mr. Carr: I think an Inspector should be allowed to kill stock to ascertain the presence of disease; but as for producing parts for evidence in Court, I think the less said about it the better. To the Scab Act, for instance, such a course would have been fatal.

Mr. Bruce: It often occurs that it is impossible for Inspectors to obtain witnesses who would speak to the necessary facts in regard to the infection of stock, in cases brought before the Court; and the production of the lung, skin, or other part of the stock showing symptoms of the disease would settle the question.

34. Inspector may employ assistants, who will have the same powers of entry and seizure as himself; and the expense of their employment to be paid by the owner in fault.

35. No Inspector to be owner or dealer in stock, except in so far as sanctioned by the Minister; and Inspector shall not receive any fees other than those authorized by this Act.

Mr. Valentine: Don't see any objection to his being an owner. Think that should be left out, if not all of it, as no Chief or Minister would allow an officer to be dealing, and thereby neglecting his work—quite sufficient grounds for dismissal, and, taken literally, he can hardly buy and sell a horse. Why put it in at all?

Mr. Bruce: I think this might as well stand, but I do not insist upon it.

PART V.—QUARANTINE OF INFECTED STOCK, RUNS, &c.

1. *Infected stock, &c., on runs.*

36. Inspector may place infected or doubtful stock, fodder, &c., on a run, and the run on which the same are, as well as any other infected run, in quarantine, by giving due notice to the owner and the public; and such quarantine may extend as far beyond the infected run as the Inspector thinks necessary, and may when necessary include portions of other districts.

Mr. Carr: Infected stock should be defined.

Mr. Bruce: Yes; it will be defined in the interpretation clause, as settled at the Conference.

Mr. Whyte: Extreme power; but I do not say it may not be necessary; only, in such case, what would be considered a run? A paddock of 100 acres, or a run of 10,000 acres?

Mr. Bruce: Any farm or station; the term "run" being a convenient one for "land" or "place."

37. With respect to quarantines the Inspector has the following powers:—(1), to remove infected stock back from a road on to land not infected; (2), to extend or alter the quarantine where necessary for the sake of food or water for the stock; (3), to bring other infected stock on to the same ground, with proprietor's sanction; and, (4), to allow the removal of hay, straw, fodder, fittings, or effects.

Mr. Valentine: This clause must be modified considerably before I could accept it. In the outside pastoral country no doubt you can use it, but as the country becomes cut up in smaller areas, and sheep are kept largely by "stock farmers," it becomes of very little value, because unworkable.

Mr. Bruce: These powers are discretionary, and the Inspector would only attempt to put them in force where it was practicable, *i.e.*, on the larger runs and properties—not on the smaller farms.

38. The Inspector may place doubtful stock or run in temporary quarantine till their actual state be ascertained.

2. Suspected or infected travelling stock.

39. The Inspector may, with the approval of the Directors, place infected or doubtful travelling stock in temporary quarantine as aforesaid on any safe and suitable land, until they are destroyed or otherwise dealt with, as required by the Act; and the proprietor on whose land they are quarantined will receive compensation from the owner of such stock for any loss he may thereby sustain; and failing recovery of such loss from the owner, the amount shall be paid as compensation from the Pastoral Contribution Fund, as hereinafter provided.

Mr. Curr: What is to become of the stock pending meeting of Directors? Who is to decide when land is safe and suitable? I think an Inspector should have power to quarantine infected travelling stock at once, on the nearest land which he may deem convenient.

Mr. Bruce: There is force in this objection. The Inspector should, in the first instance, as Mr. Curr suggests (at 40), have power to place the stock where he considers best, and then, if it be necessary for them to be detained for any length of time, the place where they are to remain should, as here proposed, be approved by the Directors, as it is on questions like this that their advice would be of the greatest value.

Mr. Whyte: Absolutely necessary.

Mr. Gordon: "Approval of Directors" would be very difficult to get in such cases, especially in Queensland, where they usually reside hundreds of miles apart.

Mr. Valentine: I think Mr. Curr is right here, otherwise disease would spread, unless, as with us, stock are liable to be destroyed if travelled after found diseased.

40. The provisions of this Act relating to Quarantine not to apply to stock carried by railway, except they be stopped in any infected place. Infected stock found at railway station to be taken to fit place and quarantined.

Mr. Curr: *Idem.*

Mr. Valentine: Do you mean the quarantine provisions?

Mr. Bruce: Yes.

41. Such quarantines shall be binding on all persons whomsoever, and shall continue and be in force for the periods respectively set forth in Schedule hereto; and any want, defect, or irregularity in publication shall not invalidate any quarantine.

42. Before a run or stock can be released from quarantine the owner must first obtain a certificate from the Inspector that they are free from infection, and then apply to the Directors, who will consider and decide, but the Governor in Council may grant release although refused by Directors.

Mr. Curr: I think they should only be released by the Governor in Council.

Mr. Bruce: This would make the action too tedious, and I do not think any harm could arise were the section allowed to stand, as under it the Government could interfere when necessary.

Mr. Valentine: I think the Directors might recommend to the Chief Inspector.

Mr. Gordon: Chief Inspector should have power to release; it will be found difficult to get a Board together to release; at least I found it impossible, although they turned up well when the disease was in the sheep, and when there was fears of its spreading.

Mr. Bruce: See remark on Mr. Curr's note. The giving this power to the Government amounts to about the same thing as if it were conferred on the Chief Inspector, as he would not act contrary to the wishes of the Government, but generally with their express sanction.

Mr. Gordon: As stated in notes to clause 14, the Directors always muster and work well in cases of disease, but in the matter of releasing runs from quarantine I have found it impracticable to do so by means of Board meetings. In all cases I had to resort to getting the written consent of each member of the Board. I would advise that they be released by the Chief Inspector, with the written consent of a majority of the members of the Board; failing the Board meeting for the purpose. In case no written consent received, Chief Inspector to release within (say) fifteen days.

PART VI.—QUARANTINE STATIONS.

43. The Governor in Council may proclaim uninfected and infected Quarantine Stations where required.

Mr. Curr: For what purposes are these stations intended?

Mr. Bruce: For "imported" (foreign) and "introduced" (intercolonial) stock.

44. The necessary yards, sheds, and appurtenances, to be erected at quarantines, and to be under the charge of the Inspector.

45. The owner of stock placed in quarantine to find the necessary food and attendance for them, or to pay for the same in whole or in part as the Government may decide.

Mr. Valentine: I think Government should provide and owners should pay.

Mr. Bruce: It would generally be best for the Government to provide as here suggested, but in some cases that would be impracticable; such as those of large lots of sheep, say 400 or 500 placed in special outside quarantines.

Mr. Valentine: Perhaps there would be difficulty in providing for large lots, and it might be arranged as most suitable.

46. All quarantine stations to be marked as such, and no person to enter on them without authority from an Inspector.

PART VII.—STOCK ON RUNS.

1. *Uninfected stock on runs.*

(1.) Owner's duties in regard to all such stock.

47. All owners of stock to make such returns to the Chief Inspector as to their number, breed, condition, treatment, and state of health, as the Minister shall, from time to time, direct by notice in the Gazette.

Mr. Valentine: I look on this as utterly useless so far as this country is concerned; it would never be done, and it is asking too much. In asking too much we defeat the object.

Mr. Gordon: For what object? Will not this make the Act distasteful to many, and then what value will a declaration as to health of stock be from their owner?

Mr. Bruce: The provisions of this section are framed to carry out Resolution 11 of the Conference. A vast deal of highly valuable information would be obtained in this way as to the nature and treatment of diseases in stock, and with respect to pastoral matters generally. For instance, if owners would, as a rule, make these returns, and favour the Inspector with their experience in regard to the nature and treatment of foot-rot, and the Inspector were to keep a correct and systematic record of the particulars supplied to him, a great many questions which are now mere matters of surmise with respect to the nature of that ailment, and the best modes of dealing with it under all the different circumstances and phases in which it occurs, would soon be settled. So with respect to all other diseases, and also in regard to pastoral matters generally; the collecting and exchanging the experience of all the Colonies would be of incalculable value, although of course that relating to the health of the stock is of the most vital importance, and its collection is absolutely necessary if any progress is to be made in eradicating these scourges which are now causing our stockowners so great loss.

Mr. Valentine: I withdraw my objection, but at the same time still think it almost an impossibility to carry out this section.

Mr. Gordon: These returns would be most useful; but unless it is specified in the Bill that the Inspectors or Chief Inspector be bound only to publish them *in globo*, with a penalty for making individual cases public, I fear it will not pass the Legislature, and, if it does, the returns will not be reliable.

Mr. Bruce: From the imperfect manner in which the returns which I annually ask from owners are made, I am persuaded that unless they are obliged by law to give such information as here alluded to, owners will never voluntarily supply it, although so far as they are individually concerned it has been kept strictly private.

48. Every owner not liable to contribute, and every butcher, dealer, and salesman of stock, to register his run and premises, with the number of his stock, at 1st of January in each year, with the Inspector of the district.

Mr. Valentine: May be useful, as it only refers to a class of men who are not reached by assessment.

49. Every owner placing stock of a new description on his run to give the Inspector notice.

Mr. Valentine: Won't do; don't like it, and would never be carried.

Mr. Bruce: This is very little trouble, and it enables the Inspector to know what stock are in his district. If he does not know this, it would not be fair to hold him responsible (as he ought to be) that he does not allow disease to exist in it for any length of time without detecting it.

Mr. Curr: I agree with Mr. Valentine.

(2.) Owner's additional duties when such stock are sheep.

50. All sheep above the age of six months, and all lambs which have been weaned, whatever their age, to be branded and kept branded. All brands and ear and other marks to be registered with the Inspector for the district.

Mr. Valentine: Clauses 50, 51, and 53, are better in Brands Act. No business here. I do not consider it advisable to have these clauses here.

Mr. Bruce: The provisions are inserted here to insure their becoming law, as they are greatly wanted in the management of stock, and would assist very much in proving ownership in prosecutions under this measure. As remarked by Mr. Valentine, however, their proper place is the Brands Act, and if passed in it they might be repealed in this.

51. When similar brands or marks are applied for, the Inspector may give modifications.

52. No owner shall use any of the letters A, C, Q, S, T, nor V, as a sheep brand, nor brand with paint for a red colour.

53. No owner shall cut ear straight across, nor cut off more than $\frac{1}{4}$ of the ear in ear-marking.

2. *Infected stock on runs.*

(1.) Duties in regard to all such stock.

54. If stock on a run are infected, or suspected of being infected, the owner to immediately carry out the following duties, namely:—

- (1.) Separate as far as possible infected from uninfected.
- (2.) Strictly confine his infected stock to their own ground, and keep them as far as necessary from his neighbour's and from public roads.
- (3.) Destroy all infected carcasses.
- (4.) Post notices of outbreak on roads through or along his run.
- (5.) Send notices of the outbreak to the following persons:—
To the owners of all the adjoining runs.
To the nearest Inspector.
To the nearest Director.
- (6.) Advertise the outbreak in the local newspapers.
- (7.) And take such other steps for staying the infection as the Minister may from time to time direct.

Mr. Curr: How can these things be done by small owners?

Mr. Bruce: These duties could be carried out where practicable, and that will be sufficient for the purposes of the Act.

Mr. Valentine: This (7) is very open, and involves regulations which I understand you consider very objectionable, and the fewer the better in such a Bill as this.

Mr. Bruce: Although measures which are worked principally by regulations are objectionable, and it has been the endeavour in drawing up this sketch as far as possible to do without them, still cases arise where regulations are necessary, *i.e.*, in matters of detail, which I think those here referred to are.

Mr. Gordon: Would it not be well to confine 1 and 2 to sheep, and give a penalty for breach? You cannot inflict a penalty in case of cattle on unfenced runs, and No. 2 ought to have a penalty, with the use of the words "strictly." I think the words "as far as possible" should not occur in an Act of Parliament, but in regulations or instructions.

Mr.

Mr. Bruce: Yes, I think the alterations here suggested should be made.

Mr. Gordon: I think 1 and 2 should only apply to sheep, and be stringently enforced, and have the words "so far as possible" only to apply to cattle.

(2.) Additional duties in regard to infected sheep on runs.

55. If sheep are infected or suspected of being infected, the owner shall carry out the following additional duties, viz.:—

- (1.) Cause his sheep to be shepherded where practicable; and where not, to be kept in securely fenced enclosures.

Mr. Curr: 1 and 2 hardly practicable at all in Victoria, as they would die for want of feed if shepherded, &c.

Mr. Bruce: Shepherding is only called for where practicable.

Mr. Valentine: As shepherding is not always practicable, power should be given to enforce the fences being kept in good order.

- (2.) Where sheep are infected with catarrh or scab, he shall brand all above the age of one month with the letters C or S, and in such a manner as to distinguish between different flocks.

Mr. Valentine: As we decided that all sheep of this description should be killed in any outbreak, particularly catarrh, is this not an anomaly?

Mr. Bruce: This is the case, but an owner can very much more quickly brand than destroy these sheep; and although he at once makes arrangements to kill them, the first thing he ought to do is to brand them with the letter C, lest any of the infected sheep should join his other flocks, or stray on to other runs.

Mr. Whyte: According to Conference Resolution, all sheep with catarrh are to be destroyed.

Mr. Bruce: Yes.

(3.) Inspection of stock on runs and declaration of infection.

56. The Inspector and a Director to examine stock and decide if they are infected, and if so, give their owner notice to destroy or otherwise treat them.

Mr. Curr: Government Veterinarian (in place of Director).

Mr. Bruce: As regards ordinary diseases Directors would be quite competent, and their services could be very much more readily obtained in country districts. In difficult cases the Veterinary Surgeon could be called in.

Mr. Gordon: Substitute for "a Director" the words "at least one Director." There appears a necessity for compelling a Director to attend with an Inspector in such cases.

Mr. Curr: The land on which they have been running should be kept without sheep for a period to be determined by circumstances.

Mr. Bruce: Yes. This might be done by defining "infected run," when such land as that here alluded to would as a matter of course be placed and kept in quarantine until it was safe.

57. What is to be considered service of notice to owner by Inspector and Director.

58. Owner may appeal against decision that stock are infected, but on that score only.

Mr. Valentine: Don't believe in this; it interferes with the working of the Act.

Mr. Bruce: This would now be omitted, with the other provisions relating to appeals.

Mr. Gordon: Add "except when two or more Directors acting with Inspector."

(4.) Which of such stock are to be destroyed, and when.

59. The following infected stock to be destroyed within the time specified in Schedule hereto:—

- (1.) All stock infected with glanders, farcy, rinderpest, foot and mouth disease, sheep-pox, or any other new disease proclaimed as such by the Governor.

Mr. Valentine: This would of course be under certain conditions.

Mr. Bruce: Stock with any of these diseases would be at once destroyed.

Mr. Whyte: Catarrh should be included.

- (2.) All sheep infected with catarrh, and also all sheep infected with scab (except sheep infected with scab introduced by sea); but sheep infected with catarrh or scab may, with the sanction of the Minister, be boiled down.

Mr. Valentine: Clause 55 and this are contradictory. You don't want them branded if you are going to kill or even boil down.

Mr. Bruce: See remarks on Mr. Valentine's notes on section 55 (2).

Mr. Whyte: Previous note unnecessary.

(5.) How cattle infected with pleuro-pneumonia are to be dealt with.

60. In addition to the duties hereinbefore prescribed with respect to infected stock, owners of cattle infected with pleuro-pneumonia shall carry out the following, namely:—

- (1.) No cattle infected with pleuro-pneumonia shall be allowed to leave their runs until six months after the last case of disease, unless they are inoculated as hereinafter mentioned.

Mr. Valentine: How do you carry this out?

Mr. Bruce: The outbreak would be reported so soon as it was discovered, as the owner would be liable to a penalty if it is not, and the Inspector would then visit and examine the cattle, and as often afterwards as necessary.

- (2.) All cattle on runs infected with pleuro-pneumonia shall be inoculated when virus is procurable.

Mr. Curr: If the cattle are infected cannot the virus be obtained from them?

Mr. Bruce: Not always; at any rate, not until the cattle are actually diseased as well as infected.

- (3.) The Inspector shall receive due notice before inoculation is commenced.

Mr. Valentine: It appears to me that if a person intends to inoculate, he should not be obliged to send notice to an Inspector before commencing—in many instances it would cause unnecessary delay. I think notice being sent of the intention to commence on a certain day, or of having commenced during the week, is quite sufficient for all purposes required.

Mr. Bruce: Yes. With the notice alluded to in the previous remark, the alteration here suggested might, I think, be made; but unless there is some supervision the operation may be negligently or ineffectively performed.

- (4.) The cattle shall be marked as directed from time to time by the Minister.

Mr. Valentine: Cannot carry this out unless you have an ear-mark for inoculated cattle, and forbid owners to use it, and then it would be doubtful.

Mr. Bruce: Some permanent mark must be adopted; I would suggest either the firebrand "I" on the near cheek, and if that be already branded on, then on the near arm, or a slit in the near ear, as Mr. Valentine proposes.

Mr. Gordon: This would imperil the measure. I think we must trust to the Inspector's certificate, or to the common square tail.

Mr. Bruce : See remarks on Mr. Valentine's notes to 60 (4) as above.

Mr. Gordon : I withdraw my previous objection to this sub-clause. Since it was advanced we have set apart the "crop" ear-mark for an inoculation ear-mark for the whole Colony, and that too at the request of stockowners. This has been done under the Brands Act. The "crop" ear-mark was selected because being the "duffers" ear-mark it was considered advisable to withdraw it from use as a station ear-mark. Some permanent mark is necessary to assist owners in watching the effects of inoculation, whilst it will be found beneficial to cattle-owners, as inoculated cattle (stores) are worth more in the southern markets than those not inoculated. This is the experience of Queensland owners, and in consequence I would recommend that the same ear-mark "crop" should be used by all the Colonies as the distinctive mark for inoculated cattle.

(5.) No person unless he be duly authorized by the Minister, or be the owner's superintendent, overseer, or stockman, shall inoculate for another.

Mr. Curr : It will not be difficult to evade this. I would suggest that authorized inoculators be gazetted.

Mr. Bruce : Yes.

Mr. Valentine : An owner may make any man his overseer or stockman for the time being.

Mr. Bruce : This evasion could be prevented by enacting that overseers or stockmen must have been three months in their employer's service before they would be considered as such under the Act.

(6.) Cattle duly inoculated may leave their run and travel on the expiry of six weeks after last case of disease.

PART VIII.—TRAVELLING STOCK.

1. Uninfected travelling stock.

(1.) Owners' Duties in regard to all such stock.

61. Owner starting stock from a district in which infection exists, or adjoining a district in which it exists, or a Colony proclaimed infected, to obtain a permit.

Mr. Curr : If "infection" refers to herds in which pleuro exists, I think this clause would be a useless nuisance.

Mr. Bruce : The term "infection" here refers to districts, and not to herds.

Mr. Valentine (clauses 61 and 62) : I do not see the use of these clauses ; in fact I think it is interfering with the movements of clean stock to too great an extent. My idea is that the movements of stock should not be hampered more than can possibly be avoided, when both country and stock are clean. Into or out of an infected district is a very different matter. I cannot agree to these. They cannot be carried out with us ; any stock leaving an infected district might obtain a permit ; and an Inspector should always receive notice of stock travelling into a diseased district. No stock should be allowed to leave an infected district.

Mr. Bruce : No infected or doubtful stock would, under this measure, be allowed to leave quarantine, although that always includes some adjoining runs or portions of runs and stock not actually infected. But in an infected district, again (the proclamation of which is an additional precaution), there would of course, outside the quarantine be no stock known to be actually infected ; and when such stock are really sound, and there is no risk attached to their removal, it ought to be allowed. While this is the case, there is still some doubt with respect to them, and they should only be allowed to travel after they have been duly inspected, and their state and character well ascertained. It is to provide for such cases as these that the section is proposed ; and it would work as follows :—A disease breaking out on a run, it and those portions of the adjoining runs at all likely to be infected would, as a matter of course, be placed in quarantine. Then the district in which this run or runs are situated would be held to be "infected" ; and if the infected run were near the border of the district the next district would also be declared "infected." No stock would be allowed to leave quarantine till they were formally released ; and none could be removed from these "infected" districts till they are examined, as mentioned above, by an Inspector and received his permit to travel.

62. Owner starting stock from any other district to give the Inspector such notice as will enable him to inspect the stock.

Mr. Curr (62, 63, 64, 65, 66) : I do not think these clauses desirable ; it seems to me that over-legislation is proposed. The enforcement of any act of this sort should, in my opinion, be entrusted to the officials appointed under it only.

Mr. Bruce : The notice called for by this section enables the Inspector from whose district the stock start to examine them if he thinks necessary ; and whether he does so or not he is required, in this Colony, as regards sheep, to send notice of their approach to the Inspector for the district through which they are next to pass. He again examines them, and sends on notice to the next Inspector ; and so on till the stock reach their destination. In this way every Inspector has intimation of the approach of travelling stock, without the drover being put to any trouble in giving notice.

63. The owner shall forthwith, at his own expense, destroy the carcasses of all such stock as may die.

Mr. Valentine : Query.

Mr. Bruce : This section is very necessary.

64. Owner driving stock through or along a run of 2,000 acres not separated from the road by a fence, to give not less than twelve hours' nor more than seven days' written notice ; and notice to state the time when stock would approach run, and stock not to do so more than six hours before nor six hours after such time.

Mr. Bruce : So is this ; and it is now in force both in New South Wales and in Victoria.

65. The owner to give a like notice to the Inspector when passing within _____ miles of his station.

Mr. Gordon : I would advise this being struck out—it would be vexatious. You could not expect overlanders to post themselves up to the residences of Inspectors.

Mr. Bruce : Yes.

Mr. Gordon : Recommended to be struck out.

66. Every owner of travelling stock shall, when required by an owner or proprietor, allow and assist his stock to be examined ; and if owner or proprietor consider them infected he may, on giving a written notice to that effect to owner of stock, detain them, and their owner shall send immediate notice to the Inspector.

Mr. Valentine : Through whose country they are travelling.

Mr. Bruce : These powers are proposed to be conferred on the proprietor of the run through or along which the stock are passing, and on the owner of other stock travelling by the same road as the first-mentioned stock.

Mr. Gordon : It would be well to restrict the use of the word "proprietor" to the owner of runs and stock, and the term "owner" to stock only. This clause seems confusing. Proprietor should, I think, send notice to the Inspector.

Mr. Bruce : I think with Mr. Gordon that it would be better to make the person detaining the stock send notice to the Inspector.

Mr. Gordon : Recommend that "owner" be applied to person in charge of or owning stock only, and that "proprietor" apply to runholders.

67. If travelling stock are detained as infected, the owner and the person detaining them shall take due precautions to prevent the spread of infection lest the stock should be infected.

Mr. Curr : What precautions is it possible to take?

Mr. Bruce : The person detaining the stock might do so negligently, and allow the infection to spread, if the measure did not contain such a provision as this.

68. All expenses incurred by proprietor or owner detaining such stock to be recovered by him from their owner if they are infected; if not, and no reason for stopping them, person doing so to be at the expense and pay compensation.

Mr. Valentine : Add,—And liable to a fine of £200, not less.

Mr. Bruce : Yes. But I think the amount might be fixed at £100.

(2.) Additional duties in regard to uninfected travelling stock.

69. Besides having a station brand, all sheep above the age of six months, and all weaned lambs travelling more than forty miles, shall be branded with the letter T.

Mr. Curr : Unnecessary interference.

Mr. Valentine : Don't think much of this.

Mr. Bruce : This is not a very material provision, but our sheepowners who have complied with it for upwards of ten years consider that the trouble and expense of branding with the letter T are much more than repaid by the readiness with which stray travelling sheep are detected in a flock.

2. *Infected travelling stock.*

(1.) Owner's duties in regard to all such stock.

70. If any travelling stock are infected or suspected of being infected, the owner shall immediately carry out the following duties, namely:—

- (1.) He shall stop the stock at or near where outbreak occurs.
- (2.) As far as possible keep the infected from his own uninfected stock and from those belonging to others.

Mr. Gordon : This, as far as cattle are concerned, and even sheep, would be impossible.

Mr. Bruce : This is only asked where practicable; and, where it is so, it ought I think to be insisted upon.

- (3.) Destroy all carcasses.
- (4.) Send notice of the outbreak to nearest Inspector, and in his absence to the nearest Director.
- (5.) Give notice to owners of run on or near which his stock are when stopped, and to owners of adjoining runs.
- (6.) Carry out all regulations promulgated for staying infection.

Mr. Curr : I do not know to what section this refers.

Mr. Bruce : To section 59.

Mr. Valentine : I don't think that "suspected" should be included here—it leaves an opening for abuse. An owner may stop his stock merely for the purpose of resting them.

Mr. Bruce : I do not think that owners would run the risk of damaging the character of their stock for the sake of being allowed to "loaf" on a run; but lest they should, a penalty might be added rendering owners liable if they gave notice of a suspected outbreak without sufficient grounds for doing so.

(2.) Additional duties in regard to infected travelling sheep.

71. If any travelling sheep are infected or suspected of being infected, he shall execute and perform all the additional duties hereinbefore prescribed with respect to infected sheep on runs and travelling uninfected sheep.

(3.) Inspection of travelling stock and declaration of infection.

72. The provisions hereinbefore prescribed relating to the declaration of infection, valuation of stock, action to be taken, and the service of the notice with respect to infected stock on runs, to apply also to infected travelling stock, except that it shall not be necessary for a Director to join with an Inspector when the value of the stock to be destroyed does not exceed £20.

(4.) Which infected travelling stock are to be destroyed and when.

73. The following travelling stock declared infected shall be destroyed within the time specified in Schedule hereto:—

- (1.) All travelling stock of the same description and infected with the same diseases as the infected stock on runs hereinbefore directed to be destroyed.
- (2.) All travelling stock actually affected with or suffering from pleuro-pneumonia.
- (5.) How travelling cattle infected with but not suffering from pleuro-pneumonia are to be dealt with.

74. In addition to the duties hereinbefore prescribed, the following action shall be taken in regard to all travelling cattle declared infected but not actually affected with nor suffering from pleuro-pneumonia, namely:—

- (1.) Such cattle, if not more than miles from the run from which they started, to be sent back to it by the Inspector.
- (2.) All such cattle if fat to be travelled by day to their destination, by roads approved by Inspector; and questions as to whether or not stock are fat to be settled by nearest Director.

Mr. Valentine : Is it not sufficient for the Inspector to decide whether they are fat or not?

Mr. Bruce : It is better that the settlement of this question should be left to some third party, and one of the Directors seems to be a fit person to decide it.

- (3.) All such cattle, other than fat cattle, to be stopped and inoculated as hereinbefore provided with respect to cattle inoculated on runs as soon as practicable, but before they have gone more than fifty miles, and to be taken to their destination as aforesaid. And such cattle not to require to travel more than six miles a day for first thirty days after being inoculated.

Mr. Curr : "Practicable" is quite indefinite.

Mr. Bruce : See remarks on Mr. Gordon's notes to section 70. I do not think that a fit place for inoculating could always be found sooner than required by this section, and some limit must be fixed.

Mr. Valentine : I cannot see that this clause can be worked, and I know many will object to it. My Commissioner would not consent to it. Utterly impracticable in this Colony.

Mr. Bruce : If not inoculated what could be done with them? The course proposed is the only practicable one; in no other way can the infection be eradicated.

- (4.) Cattle duly inoculated may, thirty days thereafter, travel over infected ground without being held to be infected.

Mr. Valentine: Is not (6) of 60 contradictory, six weeks in (6) of 60, and 30 days here?

Mr. Bruce: Sub-section (6) of section 60 is right, and 30 days are wrong, as here noticed. The correct time is six weeks.

PART IX.—COAST OR INFECTED DISTRICT AND COASTWISE STOCK.

1. *Coast or infected district stock.*

(1.) As regards sheep.

75. The Governor in Council may from time to time proclaim and alter coast or infected districts, but alterations not to affect appointments of Directors in neighbouring districts.

76. Sheep in coast or infected districts to be inspected and dressed before being allowed to leave it.

77. Sheep treated as imported not to be held to be coast or infected district if removed in twenty-eight days.

Mr. Gordon: (75, 76, 77) This may be necessary in New South Wales and Victoria, but should not be insisted on in Queensland. To pass this here would be to imperil the measure. I have thought much on this subject, but cannot see the use of it where the term "infected" has such a wide definition and such ample powers are given to Inspectors.

Mr. Gordon: I think 75, 6, and 7 should be cut out. When the Colonies are clean they are of no use, and the stringent provisions proposed by this measure will render the distinction unnecessary.

78. No wool, skin, or other portion of the carcass of a sheep, shall be removed from the coast or infected district without the sanction of the Chief Inspector.

Mr. Valentine: From an infected district only.

Mr. Gordon: All required by the three preceding clauses is embodied in this clause if the words "coast district" are expunged and "ports" substituted.

(2.) As regards all coast district stock.

79. On the outbreak of disease in the Colony, all or any of the provisions of the four next preceding sections may by proclamation be made applicable to other stock than sheep.

Mr. Curr: (75, 76, 77, 78, and 79.) No such provisions desirable in Victoria.

Mr. Valentine: I do not think a coast district workable here. What I think we want more in all the Colonies is a middle or temporary district—something between clean and infected, where stock could be detained, dressed, &c., as might be thought necessary, although not showing disease or as being infected.

Mr. Bruce: (Mr. Curr 75 to 79 inclusive, Mr. Valentine 75, and Mr. Gordon 75, 76, 77). Such provisions as those are very necessary with respect to seaports; and it is better to make a coast-line at once to prevent stock from being smuggled into the Colony at places other than seaports. Every outbreak of scab in this Colony has been occasioned by diseased sheep being taken up the country from seaport towns; and, if the Colonies were all clean—as it is hoped they will now very soon be—a more essential provision than this could scarcely be passed. The coast-line in this Colony at a distance of some thirty miles from the seaboard, with all our exceedingly strict regulations as to detention and dressings *does* cause considerable inconvenience; but by contracting the district where practicable, and relaxing the requirements as to detention and dressing, this inconvenience would be almost wholly removed; while, as I have said, the existence of a coast line would add very much to the safety of our flocks and herds; for, with such a safeguard disease, although it did break out on the coast, could almost always be prevented from spreading into the interior. When it is considered how very few stock there are which require to be taken up into the interior from seaport towns, it will be seen how comparatively little inconvenience this line would occasion; while on the other hand, we know that only a few head of diseased stock taken inland will spread infectious diseases far and near. When, again, disease has been eradicated in all the Colonies, dressing and detention might be dispensed with, and the stock allowed to proceed inland on inspection and certificate.

Mr. Gordon: Expunge.

2. *Coastwise stock.*

All stock.

80. On an outbreak of disease occurring among any stock in the Colony, regulations may be made for the inspection of the stock at the ports of shipment and landing, and for otherwise regulating the traffic.

Mr. Gordon: Should not a new clause be inserted giving free trade in all coastwise sheep within the respective Colonies? At present they must undergo quarantine even if shipped from Newcastle to Grafton. Or is this provided for by the absence of all mention of them?

PART X.—INTERCOLONIAL STOCK TO BE BROUGHT ACROSS THE BORDER.

1. *Rules as to admission of such stock when uninfected.*

81. Persons intending to introduce stock across the Border shall do so under the following rules:—

(1.) In regard to all such stock.

- (1.) That the stock be brought to proclaimed crossing-places only, or to those specially sanctioned by Directors.
- (2.) That twenty-four hours' notice of their intention to cross, be given to an Inspector in this Colony by their owner.
- (3.) That no stock cross without a certificate from such Inspector that he examined them previous to crossing.
- (4.) That all stock be accompanied by a certificate by the Inspector for the district in the Colony they left, as to—(1), whether the stock are infected; (2), the date and place they left; (3), the nearest infected stock to such place; (4), the nature of such infection; (5), their route to the border; (6), nearest infected stock to route; and, (7), the term of the certificate.
- (5.) That such certificate be confirmed by the Inspector in the other Colony for the district in which the crossing-place is.
- (6.) That the certificate be delivered up to the Inspector in this Colony.
- (7.) That where they arrive by train, they shall have been conveyed in thoroughly clean and properly disinfected trucks.

(2.)

(2.) Additional rules in regard to sheep.

- (8.) That the sheep be branded with a letter, to denote the Colony from which they come.

Mr. Valentine : And the letter T.

- (9.) That on crossing they undergo a quarantine of thirty days, and be
- three*
- times dressed as Chief Inspector shall direct.

Mr. Valentine : Fourteen days and two dippings.*Mr. Whyte* : I think fourteen days and two dressings under supervision of Inspector sufficient, where the presumption is the sheep are clean.*Mr. Bruce* : When all the Colonies are clean, I have no doubt but New South Wales will agree to fourteen days and three dressings.*Mr. Valentine* : I am inclined to think that the Regulations relating to Intercolonial Stock Traffic should be in force only when disease exists in any adjoining Colony, and be put in force by proclamation. This reverses your rule of making it law and then suspending. But under these rules we are continuing, and even extending the restrictions, and preventing anything like free trade in stock.*Mr. Bruce* : Although I prefer the course proposed in the sketch, I have no objection to adopt Mr. Valentine's suggestion. See my remarks on notes to 80.

- (10.) That they do not leave the quarantine till certified by the Inspector to be clean.

Mr. Carr : 80 and 81. (2.) Unnecessary. (5.) Unnecessary. (8), (9), (10). If I understand Mr. Bruce, those are suggestions for a Disease in Stock Act to be general in the Colonies. If so, it will not suit us to dress clean wethers from Riverina, which would become necessary under these clauses.*Mr. Bruce* : The operation of these sections would, when Victoria is clean, be suspended by New South Wales with respect to sheep from Victoria, as they now are under our Sheep Act in regard to sheep from Queensland ; and Victoria would, of course, be expected to suspend them with regard to sheep coming from New South Wales, as that Colony is clean. So that the dressing here alluded to would not be necessary.

It is considered safer to frame the measure so as that these restrictions and requirements would always apply, unless suspended, as they can be by section 87. If, however, it be considered best to make them only apply when occasion required, as proposed by Mr. Valentine at 81 (9), that course could be adopted.

2. Rules in regard to admission of infected colonial stock.

82. The following rules shall apply to colonial stock intended to be introduced into this Colony across the Border, and found to be infected :—

(1.) In regard to such stock in general.

That no stock which the Inspector considers infected (except cattle infected with pleuro-pneumonia) be allowed to cross ; and if any are found on inspection to be infected, notice be at once given to the Chief Inspector for the Colony they are in.

Mr. Valentine : Excepting in regard to pleuro-pneumonia, I do not see the use of these rules. I should certainly object to infected colonial stock being introduced ; and, if introduced, should prefer to provide for their being immediately destroyed and the introducer heavily fined.*Mr. Bruce* : I think the sections as sketched carry out Mr. Valentine's idea. No stock with any infectious disease but Pleuro are proposed to be admitted, and then only after they have been inoculated. This might perhaps have been stated more briefly than in the sketch, but it was considered better to put the provisions in this shape, in order to preserve uniformity of arrangement and make reference easy.

(2.) Special rules in regard to cattle infected with pleuro-pneumonia.

That cattle infected with but not actually suffering from pleuro-pneumonia, after being duly inoculated, may be introduced.

Mr. Valentine : Can this be carried out with all cattle ?*Mr. Bruce* : Yes.

83. Notwithstanding anything herein contained, any of the provisions of the two next preceding sections of this Act relating to the introduction of uninfected stock across the Border from the neighbouring Colonies may be suspended by proclamation, in regard to any Colony in which disease is not known to exist ; and any of the provisions of this Act relating to cattle infected with pleuro-pneumonia may in like manner be suspended.

84. The Governor may in like manner absolutely prohibit the introduction across the Border of stock from any Colony.

Mr. Valentine : I think a clause should be introduced providing for how apparently sound stray stock from adjoining Colonies should be dealt with.*Mr. Bruce* : Yes.

PART XI.—INTERCOLONIAL STOCK INTRODUCED BY SEA.

1. Rules of admission of such stock when uninfected.

85. Stock from other Colonies arriving in any port shall be introduced under the following conditions, namely :—

(1.) In regard to all such stock—

- (1.) That they be landed at proclaimed ports only.

- (2.) That they be accompanied by the same certificate as stock brought over the Border.

Mr. Valentine : I think this certificate should be modified ; it is hardly suitable for stock by sea.*Mr. Bruce* : Yes.

- (3.) That the captain give notice to the Inspector within twelve hours of arrival of stock.

Mr. Valentine : Not necessary.*Mr. Bruce* : Where many vessels are arriving, or where the Inspector resides at any distance from the port, such notice as this is very necessary, and very little trouble to the ship's agent.*Mr. Whyte* : I think notice should be given some time before arrival as well.

- (4.) That they are not landed till permitted by Inspector.

- (5.) That they be so under such regulations as the Minister may publish.

(6.)

- (6.) That, if apparently free from infection, the stock be sent to quarantine, and kept and treated there as prescribed by Schedule hereto.
- (7.) That if the stock exceed five head of cattle or twenty sheep, they may be sent to an outside quarantine and kept there at their owner's expense and risk.

Mr. Valentine : What is an outside quarantine ?

Mr. Bruce : An "outside quarantine" is some isolated place or paddock where large numbers of sheep (say 400 or 500 in a lot) are placed in special quarantine—the regular quarantine yards being too small to contain them.

Mr. Valentine : Call it a "special quarantine."

2. *Rules as to admission of such stock when infected.*

86. The following rules shall apply to infected colonial stock arriving by sea in any port in the Colony, viz. :—

(1.) In regard to such stock in general.

- (1.) If the stock are found to be infected with any new disease, or with catarrh, they shall be destroyed, whether it was intended to land such stock or not.

Mr. Valentine : Query—if not landed.

Mr. Bruce : Yes ; because there would be great risk of the infection spreading through the intercourse which is kept up between the vessel and the wharf, if the stock with the disease be allowed to remain undestroyed.

Mr. Whyte : Right.

(2.) Special rules in regard to such stock when infected with pleuro-pneumonia.

- (2.) All cattle actually suffering from that disease shall be destroyed.
- (3.) If the cattle are infected with but not suffering from that disease, they shall be sent to quarantine for 6 weeks and inoculated.

(3.) Special rules in regard to such stock when infected with scab.

- (4.) If any such sheep are infected with scab, they shall be sent to the proper quarantine for three months and dressed as directed.

Mr. Valentine : I cannot agree with this ; won't have them at all ; let them go away or die.

Mr. Bruce : There would be no difficulty whatever in cleansing a few stud sheep infected with scab ; and there need be no risk of the disease spreading, if a proper site—such as an island—be selected for their quarantine. It would, I think, be wrong under such circumstances to destroy valuable stud sheep.

87. All or any of the provisions of the next preceding sections may be suspended by proclamation in regard to a clean Colony.

Mr. Gordon : I think this clause should precede all the clauses to which it relates, and I also think clause 83 should precede the two preceding sections, otherwise there will be misunderstanding in passing the Act through Parliament, as those in charge do not post themselves up.

Mr. Bruce : Yes ; or *Mr. Valentine's* suggestion as at 81 (9) could be adopted, leaving the admission usually open, and only putting on restrictions against stock from Colonies in which disease appeared.

Mr. Gordon : In order to prevent misunderstanding and debate during the passage of the Bill through Parliament, all suspension clauses should, I think, precede the clauses to which they refer. This remark will apply to clause 83.

88. The Governor may issue absolute prohibition against any Colony when necessary.

PART XII.—FOREIGN STOCK.

1. *Rules of admission into the Colony.*

89. Foreign stock intended to be introduced shall be so in terms of the following rules, namely :—

Mr. Whyte : A definition of the word "foreign" seems necessary.

Mr. Bruce : Yes. It might be defined "stock from any port or place other than a port or place in the Australian Colonies."

(1.) In regard to all such stock when uninfected.

- (1.) That they be accompanied by a certificate from the Inspector for the port where they were shipped that neither they nor any other stock on board were infected.

Mr. Whyte : What is to be done if they come from a port where there is no Inspector of Stock ?

Mr. Bruce : I do not think that this is likely to occur after the Regulations passed in the Colonies have been published in London, as they would be certain to be soon after they are so in the Colonies.

Mr. Valentine : You have not carried out the recommendation of the Conference in this matter as to veterinary certificate. I think their recommendation meets the case best.

Mr. Bruce : The provision as to the certificate of a veterinary was overlooked ; it ought to have been provided for.

- (2.) That the captains of all vessels arriving from ports outside the Colonies make declaration as to the stock they had on board.

Mr. Valentine : I do not think the captain's declaration worth the paper it is signed on.

Mr. Bruce : Much reliance cannot be placed on the captain's declaration in every case, but it always gives the Inspector an opportunity of obtaining information which he would not otherwise get.

- (3.) That the officer of Customs receiving the declaration forward it to the nearest Inspector, or intimate captain's refusal to sign ; and if captain refuse, the officer to detain stock and attendants.

Mr. Valentine : If possible, omit reference to Customs officers.

Mr. Bruce : This is necessary, and gives the Customs officers very little trouble.

- (4.) The captain of any vessel with stock on board to send immediate notice of his arrival to the Inspector.

- (5.) That no such stock be landed without being examined by the Inspector and a veterinary surgeon and receive a permit to land.

Mr. Valentine : Veterinary should only be employed when necessary.

Mr. Bruce : Yes.

- (6.) That all such stock found infected be sent at the owner's expense to quarantine for fifty days, and dressed or disinfected as directed by Chief Inspector.

- (7.) At expiry of quarantine the stock be examined in the same manner before being allowed to leave.

(2.) In regard to such stock when infected.

- (8.) That all such stock found to be infected shall be dealt with according to the description of such stock and the disease with which they are infected as heretofore provided, with respect to colonial stock brought by sea found to be infected. But all foreign cattle placed in quarantine shall remain in quarantine fifty days at least.

Mr. Valentine: As to stock when infected, I have never admitted them, and do not like the principle. I think it much more advisable to provide for the destruction of all diseased stock which arrive in our ports. If we intend to keep out disease, we must not be too nice about killing a few because they are valuable. The admission of any diseased animals is a mistake I am sure.

Mr. Bruce: Under this sub-section, the only infected stock admissible would be cattle infected with pleuro and sheep infected with scab; and it was resolved at the Conference that both these sorts of stock might be introduced under certain conditions.

Mr. Curr: I am of opinion that stock should not be allowed to be introduced from countries in which infectious disease (scab excepted) exist.

Mr. Bruce: See preceding remark.

(3.) In regard to prohibition.

- (9.) The Governor may at any time for a period of twelve months absolutely prohibit or restrict to any extent he may think necessary the introduction of all or any particular kind or description of stock from any country outside the Australian Colonies.

Mr. Valentine: Why not from the Australian Colonies as well, if necessary?

Mr. Bruce: This is provided for by section 88.

PART XIII.—TRANSHIPPED STOCK, AND STOCK LANDED FOR TRANSHIPMENT.

1. *Transhipped stock.*

90. Stock arriving from any of the neighbouring Colonies where they have, within the next preceding thirty days, been released from quarantine as colonial or foreign stock, shall on landing only undergo such additional quarantine and disinfecting as the Minister shall direct.

Mr. Valentine: Query—Chief Inspector.

Mr. Bruce: Yes.

2. *Stock for transhipment.*

91. If stock arrive from any of the neighbouring Colonies for transhipment to any of the other Colonies, and be found free from infection, they may be landed and kept at the owner's expense for twenty days, at a place to be approved by the Inspector.

92. If foreign stock arrive for transhipment and are sound, they may be landed for twenty days at the quarantine set apart for that class of stock, and kept at owner's expense.

93. If stock arriving for transhipment prove infected, or if they are not removed within the twenty days, they shall be dealt with as if they were intended for this Colony.

Mr. Valentine: Infected stock should not be landed.

Mr. Bruce: Infected stock of this sort would be dealt with as required by the Act.

PART XIV.—EXPORTED STOCK.

Rules of exportation.

94. Persons intending to send stock out of the Colony by sea shall give the Inspector hours' notice, and pay the authorized fees for inspection.

95. The Inspector on examining stock to grant a certificate which owner shall transmit with stock.

PART XV.—INFECTED STRAY STOCK.

96. Any person may seize and detain any stray infected or suspected stock, and shall on doing so send immediate notice to the Inspector, who shall hold such stock to be travelling stock, and deal with them accordingly.

97. While detaining such stock, the person doing so shall take every precaution against the spread of disease, and shall hand the stock over to the Inspector.

Mr. Curr: What will the Inspector do with it?

Mr. Bruce: A large proportion of such stock would be seized by persons other than Inspectors, and it would not be right to allow these persons to destroy such stock, as it were, privately. On being delivered to the Inspector the stock would be dealt (publicly) with by him, as required by the Act.

Mr. Valentine: I think a clause should be introduced referring to uninfected stray stock from adjoining Colonies, so that they might be seized and dealt with.

Mr. Bruce: Yes. See note to 84.

PART XVI.—LAND, PREMISES, CONVEYANCES, EFFECTS, ETC., INFECTED OR LIKELY TO BE INFECTED.

98. Any land, run, premises, erection, conveyance, vessel, food, fittings, effects, or other matter or thing which has been in direct or indirect contact with infection, or in such a position as to have been liable to be in such contact, or which has been placed in quarantine, shall for the purposes of this Act be held to be infected.

99. All such land, matters or things as aforesaid shall, according to the disease with which the same is infected, be dealt with, so far as practicable, in the same manner as it is by this Act provided that stock infected with the same disease shall be dealt with.

100. When a vessel arrives which has, or has had, stock infected with any new disease on board, the Governor in Council may place such vessel in quarantine, until the vessel, stock, attendants, passengers, and crew are disinfected.

Mr. Valentine: Query.

Mr. Curr: It seems to me no community would put up with such a law, especially when the efficacy of disinfectants is held to be doubtful at least.

Mr. Bruce: This is an extreme power, and would be very seldom exercised. It is, however, in safe keeping,—that of the Governor and the Executive Council,—and cases *might* arise where they would deem it right to call it into operation.

Mr. Curr: Insert—"and their clothes and everything by which infection may be carried," after the word "crew."

Mr. Bruce: Yes.

101. The Governor in Council may from time to time make regulations for prohibiting or regulating the introduction of wool, skins, hair, horns, bones, hoofs, fodder, hay, straw, or other article by the introduction of which he considers there is any risk of introducing disease.

102. The Inspector may, where he thinks necessary, direct the disinfecting or cleansing of any premises, conveyance, vessel, food, fitting, or effects, which the owner shall carry out, unless the Inspector's decision is altered on appeal.

Mr. Valentine: Why have it for appeal? Surely an appeal is not necessary.

Mr. Bruce: This provision, relating to appeals, would with the others on that subject now be omitted.

103. The provisions of this Act shall not apply to thoroughly dry hides or skins, bones, horns, hoofs, melted tallow in casks or skins, nor to horse, cow, or goat's hair, packed in bags or bales, or to any other thing not known to be infected.

104. The Governor in Council may, by proclamation, restrict or absolutely prohibit, for any specified time not exceeding twelve months, the introduction into this Colony of any fodder, hay, food, straw, fittings, effects, matter, or thing used for, with, or about stock, which he considers in any way likely to introduce the infection.

PART XVII.—PENAL AND PRECAUTIONARY PROVISIONS.

1. Money penalties.

105. If any person does any of the following things, he shall be deemed guilty of an offence against this Act, and on conviction shall forfeit and pay any sum not exceeding that mentioned in the sub-section describing such offence.

Mr. Valentine: *In re* penalties. I think it would be much more satisfactory to name the minimum fine—not less than £50, or as it may be. I find Magistrates are very apt to let men off when Government is prosecuting.

Mr. Bruce: Yes. I think a minimum penalty should in most cases be adopted, but there are some sections where the expediency of doing so is doubtful.

- (1.) If he acts in contravention of any of the provisions of this Act relating to the election, powers, duties of Directors, or disturbs any meeting of Directors—a penalty not exceeding £20.
- (2.) If he refuses to admit, obstructs, impedes, or interferes with an Inspector or his assistants, or refuses to carry out any lawful direction or request of an Inspector under this Act—a penalty not exceeding £100.
- (3.) If he, contrary to this Act, takes or assists to take any stock, carcass, matter, or thing, in or out of quarantine, or in any manner breaks quarantine, or negligently allows stock to stray in or out of quarantine, or trespasses on any quarantine station—a penalty not exceeding £100.
- (4.) If he acts in contravention of any of the provisions of this Act in regard to stock on runs, travelling stock, colonial stock, foreign stock, transhipped stock, or exported stock, or in regard to any run, matter, or thing by which the infection is spread or likely to be spread, when such stock, run, matter, or thing are uninfected, a penalty not exceeding £50; and when infected, a penalty not exceeding £200.
- (5.) If he abandon any stock, or if he casts any stock in any stream or water, or leaves the carcass of any such stock on a road, or within half a mile of it, undestroyed—a penalty not exceeding £5, if the stock are uninfected; and not exceeding £100, if they are infected.
- (6.) If he has in his possession, without the sanction of the Chief Inspector, any infected stock for sale or slaughter, or exposes the same in any shop, stall, or market—a penalty not exceeding £20.
- (7.) If he introduces, otherwise than by sea, any wool, skin, or other portion of stock from a Colony declared to be infected—a penalty not exceeding £50.
- (8.) If he pack or remove any wool, skins, bones, or other portion of infected stock, without giving the Inspector notice, and putting the same securely up in boxes, casks, bags, or bales, marked "infected"—a penalty not exceeding £100.
- (9.) If, through culpable negligence, he allows his infected stock to stray—a penalty not exceeding £100.
- (10.) If he destroy or obliterate any brand, or ear or other mark required by this Act to be put on any stock, or deface, pull down, or destroy any placard required by this Act—a penalty not exceeding £50.
- (11.) If he dig up, or remove, or interfere with any stock or carcass destroyed, buried, or otherwise disposed of as infected—a penalty not exceeding £50.

106. If infected stock of an owner come into direct or into indirect contact, or mix with clean stock, whereby their owner incurs any loss, damage, or expense, the owner of first-mentioned stock shall pay to owner of clean stock all loss, damage, or expense—the amount to be determined by the Directors.

Mr. Whyte: The Inspector should have power to enforce these provisions. In Tasmania owners will not generally do so.

Mr. Bruce: The Inspector would have this power—he could insist upon the stock being dressed or disinfected.

107. Any Inspector of slaughter-houses to give to nearest Inspector immediate notice of any stock being infected, and to aid Inspector in tracing outbreak, under a penalty not exceeding £20.

108. If any person acts in contravention of, or is guilty of any offence against this Act, or any proclamation or regulation, he shall, where a penalty is not specially provided for such offence, be liable in a penalty not exceeding £20.

109. If any offence against this Act or any proclamation or regulation be committed in respect to more than four head of stock, a penalty not exceeding *one-fourth* of the lump penalty mentioned in the Act, proclamation, or regulation, may, at the discretion of the Court, be imposed for each head of stock instead of the said lump penalty.

2. *Imprisonment.*

110. If any person commits any of the following offences he shall be deemed guilty of a misdemeanor, and shall, on conviction thereof, be liable at the discretion of the Court to imprisonment for any period not exceeding five years :—

- (1.) If he wilfully communicate, or attempt to communicate, or aid, or be concerned in communicating any infectious or contagious disease to or among stock.

Mr. Carr : How then can inoculation be performed ?

Mr. Bruce : This objection is valid. Inoculation should have been specially exempted.

Mr. Whyte : It is three years in the Tasmanian Scab Act.

- (2.) If he knowingly permits or connives at the travelling of any infected stock (except cattle infected with pleuro-pneumonia).
- (3.) If he knowingly ship or put on board any vessel for exportation any infected stock.
- (4.) If he make any false return or report under this Act, or sign any false certificate respecting any stock, knowing such return, report, or certificate to be false, or shall forge, or alter, or utter, or put off any return, report, notice, certificate, permit, brand, or mark, knowing the same to be forged or altered.
- (5.) If he by force or violence obstruct an Inspector or his assistants.

111. If a person knowingly offer for sale any infected stock without informing the purchaser that they are infected, or if any person offer for sale any uninoculated cattle without informing the purchaser, such person shall be deemed guilty of fraud.

112. When, by this Act, or by any proclamation or regulation thereunder, a penalty is fixed at any sum not exceeding £50, the Court may, at its discretion, instead of such money penalty, inflict imprisonment for any term not exceeding two months ; and where the money penalty is fixed at any sum not exceeding £100 for any term not exceeding four months, and where the money penalty is fixed at any sum not exceeding £200 for any term not exceeding six months.

Mr. Whyte : I suspect you will find it difficult to carry this. In default of payment of a fine under our Act in Tasmania, the person may be sentenced to imprisonment for any period not exceeding six months.

Mr. Bruce : This section is not absolutely necessary, but it would add to the efficiency of the measure.

3. *Confiscation of stock.*

113. All stock of any of the following descriptions, driven, travelled, landed, or moved in contravention of this Act, or of any proclamation or regulation thereunder, and all fittings, fodder, effects, and things used for, with, or about such stock, may be seized by any person whomsoever, and handed over to the nearest Inspector, and shall be destroyed or otherwise disposed of as the Minister may direct, without any compensation to the owner of such stock :—

- (1.) All stock placed in quarantine, all coast district and coastwise stock, and all colonial, foreign, transhipped, and exported stock ; and all fodder, fittings, effects, and things used for, with, or about such stock, moved, travelled, or introduced in contravention as aforesaid, whether such stock, fodder, fittings, effects, or things be infected or not.
- (2.) All infected stock knowingly or wilfully moved or travelled, or allowed to stray, or otherwise dealt with in contravention as aforesaid, and all fodder, fittings, effects, and things used for, with, or about such stock, or which has been in direct or in indirect contact therewith.

4. *Apprehension of offender.*

114. An offender may be apprehended under any of the following circumstances :—

- (1.) If he obstructs or impedes an Inspector or his assistants.
- (2.) If he commits or attempts or aids in committing any breach of this Act relating to quarantine.
- (3.) If, after being warned, he persists in travelling infected stock.

Mr. Carr : By whom warned ?

Mr. Bruce : By an Inspector or owner.

PART XVIII.—COMPENSATION FOR STOCK, &c., DESTROYED.

115. Owners whose stock, &c., have been destroyed, if they have complied with the Act, will receive compensation to the extent of the value of such stock, &c., when destroyed ; and proprietors who have sustained loss through infected travelling stock being quarantined on their land will also receive compensation.

116. Mode of application to Directors for compensation.

117. Mode by which Directors investigate claim for compensation and fix the amount to be awarded.

118. How claim is to be paid from Pastoral Contribution Fund at the Treasury.

PART XIX.—PROCLAMATIONS AND REGULATIONS.

119. The Governor in Council may by proclamation declare the provisions of this Act, and of any proclamation or regulation thereunder, to apply to any disease in domesticated animals other than those mentioned in the definition of the word "disease" in the interpretation clause of this Act ; and also to any domesticated animals other than those mentioned in the definition of the term "stock" in the said interpretation clause.

120. The Governor in Council may from time to time make, alter, or repeal such proclamations or regulations as he may think expedient, in respect of any of the following matters or things, namely :—

- (a) The place of meeting and mode of voting for the election of Directors.
- (b) The powers, duties, and travelling expenses of Directors and Inspectors.
- (c) The placing of land, stock, and other matters and things in quarantine, and releasing the same ; and the establishment and regulating quarantine stations for the reception of coastwise, colonial, foreign, and any other stock.
- (d) The duties of owners with respect to stock on runs, travelling stock, intercolonial stock, transhipped stock, and exported stock, and the action to be taken with respect to such stock when uninfected or infected.

- (e) The opening and closing of temporary roads for uninfected or infected travelling stock.
- (f) The conditions to be imposed on the landing of or subjecting to inspection or to quarantine of any colonial or foreign stock, fodder, fittings, or effects, or any specified kind thereof, brought from any specified colony or country.
- (g) The insuring for stock brought by sea a proper supply of food during the passage and on landing; and protecting them from unnecessary suffering.
- (h) The protecting stock from unnecessary suffering during inland transit, while being kept at slaughter-houses, and wherever else they may be.

Mr. Valentine : (g and h). I think these matters do not affect the Inspectors—it is the owner's business. If you could provide for the punishment of cruelty and starvation, it might be of value for Government to take notice, but only in quite exceptional cases.

Mr. Bruce : These regulations are not essential, but if passed would benefit the owner and tend to the comfort of the stock. They are copied from the English Act.

- (i) The prohibiting, or regulating the movement and quarantining of stock, and the removal and destruction, when necessary, of dead stock or parts thereof, and of hay, straw, fodder, dung, litter, and other things likely to spread disease among stock.
- (j) The cleansing and disinfecting of stock, premises, yards, sheds, stalls, stables, stable utensils, fields, and other premises.
- (k) The disposal, mode of destruction, and burial of stock dying while affected with disease.
- (l) The prohibiting or regulating the holding of markets, exhibitions, or sales of stock.
- (m) The detaining and keeping of infected or suspected stock which are being travelled or moved.
- (n) The valuation of stock and effects, and payment of compensation for them when destroyed.
- (o) The payment and collection of contributions.

And generally, any proclamations and regulations deemed expedient for the better execution of this Act, or for the purpose of in any manner preventing the introduction or spreading of disease among stock in the Colony (whether any such proclamations or regulations are of the same kind as the kinds enumerated in this section or not): And may in any such proclamation or regulation direct or authorize the slaughtering of stock that are affected with any new infectious or contagious disease, or that have been in direct or in indirect contact with stock so affected: And may in any such proclamation or regulation direct and authorize payment of compensation for any stock so slaughtered: And may in any such proclamation or regulation impose penalties for offences against the same—not exceeding the sum of £50 for any such offence.

121. Every such proclamation or regulation shall be published in the Gazette, and on being so shall have the like force and effect as if it had been enacted by this Act. And any want of or defect or irregularity in the publication of any such proclamation or regulation shall not invalidate the same.

PART XX.—CONTRIBUTIONS AND EXPENSES.

1. Contributions.

122. To defray the expenses of this Act, there shall be levied an annual contribution at the rate of 1d. per head on all owners of *horses* with twenty-four head or more, at the rate of $\frac{1}{4}$ d. per head on all owners of *cattle* with forty-eight head or more, and at the rate of 2s. per 100 on all owners of *sheep* with 500 head or more. And every such contribution shall be a preferential charge on all stock whoseever's possession they may be in; but contribution may be reduced or wholly remitted, as the Governor in Council may decide.

Mr. Gordon : In our case we have a fund of £7,000 at Cr. Sheep Act, equal to £21,000 in your Colony. If you are similarly situated, how do you intend to compromise—will you do so by remitting contributions on sheep for a few years?

Mr. Bruce : There is only a small balance at the credit of our Sheep Act.

Mr. Whyte : The limit as to numbers, of course, is only for convenience and saving of trouble. It may suit the great Colonies, but would not answer in Tasmania; here a much smaller limit would be required.

Mr. Bruce : Yes.

123. The contributions to be payable together on the 31st day of May to the Colonial Treasurer, or any one he may appoint, and to be paid into an account at the Treasury to be called the "Pastoral Contribution Fund Account."

Mr. Valentine : What is the object of making 31st May pay day?

Mr. Bruce : None, beyond giving time for the returns being received and dealt with by the C.P.S., as here proposed.

124. Owners to make returns before the 1st of January in each year, of the numbers of their stock to the nearest C.P.S.

125. If the owner fails to make a return, the Inspector may make an estimated one, which shall be binding on the owner.

Mr. Gordon : Owner may appeal against this, but if he does so the cost of appeal must be borne by the owner himself.

Mr. Bruce : All appeals are now proposed to be omitted.

Mr. Whyte : Quite right.

126. C.P.S. to make up a list of the owners making returns,—calculate the amount of contribution due by the several owners,—and make up and forward General Return to the Colonial Treasurer and Auditor General.

Mr. Gordon : Why not make the C.P.S. receive the money and forward to you, to be by you paid into Treasury monthly, as we do with Brands Act. It affords us a good check, and works really well. I have a Bank account for the purpose.

Mr. Bruce : The alteration here suggested would be a decided improvement if contributions were all paid in the country districts; but by far the greater portion of them is so in town, in this Colony at least, at the Treasury; and the course proposed in the sketch is, under these circumstances, I think, the more convenient.

127. The Clerk of Petty Sessions shall, on or before the 31st of March, send each owner notice of the amount of contribution which he owes.

Mr. Gordon : This should be paid at time of making returns. The calculation is simple, and may be made by any one.

Mr. Bruce : See remarks on notes on 126.

128. Owners may appeal to the Directors against the notice sent to them by the C.P.S.

(122—128.) *Mr. Gordon*: I would suggest that owners pay assessment at time of making return to the C.P.S., who shall send monthly remittances to Chief Inspector, who in like manner pays monthly into Treasury from a public Bank account. This answers admirably with the brands assessment account in this Colony, and affords the only possible correct check on defaulters.

129. Mode of recovering contributions if owner fail to pay.

2. Expenses.

130. The balances standing at the credit or debit of the "Cattle Disease Fund" and the "Cattle Export Act" in the books of the Treasury, shall be carried over to the said "Pastoral Contribution Fund Account," and all claims due under the Acts hereby repealed shall be paid out of the said last-mentioned account.

Mr. Valentine: Don't understand this clause.

Mr. Bruce: It relates to Acts now in force in this Colony and Queensland.

131. The Colonial Treasurer shall, under warrant of the Governor, pay out of the said "Pastoral Contribution Fund Account" (or in the event of such fund being inadequate, out of such moneys as shall be appropriated for the purposes of this Act) all claims for compensation and all expenses hereunder. And all such appropriations shall be recouped to the "Consolidated Revenue Fund," when there is a sufficient balance to the credit of the said "Pastoral Contribution Fund."

PART XXI.—LEGAL PROCEDURE.

1. General.

132. For the purposes of this Act, or any proclamation or regulation thereunder, every offence against the same shall be deemed to have been committed, and every cause of complaint under this Act, or under any proclamation or regulation as aforesaid, shall be deemed to have arisen, either in the place in which the same actually was committed or arose, or in any place in which the person charged or complained against happens to be.

133. What is to be held to be service of notice, intimation or summons.

134. Mode of recovering penalties, awards, and sums of money incurred, due, or payable under this Act, or any proclamation or regulation.

135. When it is uncertain who is the owner of any stock in respect of which a penalty or sum of money is sued for under this Act, or if an order be obtained with respect to any such stock and the same is not immediately satisfied, such stock, or as many thereof as may be necessary, may be levied upon in satisfaction of such order.

136. Half of penalty to be paid to the person who sues or proceeds for the same, and half to the "Pastoral Contribution Fund Account."

Mr. Whyte: Very good, but could not be carried in Tasmania.

137. For the purposes of the Act a station or registered brand on stock shall be *prima facie* evidence of the ownership thereof; and such brand, in conjunction with its colour, position, or shape, shall be *prima facie* evidence that the stock are of the description denoted by such colour, position, or shape.

Mr. Whyte: In Tasmanian Scab Act, "brand" is *prima facie* evidence of ownership. The *onus probandi* should rest with the accused.

Mr. Bruce: Making a notice or decision by an Inspector *prima facie* evidence, as proposed in this section, throws the *onus probandi* to a large extent on the defendant.

138. The Schedules to this Act shall be construed and have effect as part of this Act.

139. In all questions as to whether stock are quarantine, travelling, coastwise, coast, colonial, foreign, or transhipped, and whether they are or are not infected, *prima facie* evidence adduced by an Inspector to show that any of such stock are of either of the classes here mentioned shall be conclusive evidence, unless the owner of such stock shall satisfactorily prove the contrary. And any stock with which stock of any of the descriptions hereinbefore mentioned shall have come into direct or into indirect contact shall be deemed to be of the class with which they shall have so come into contact, and shall be dealt with accordingly.

140. The written certificate or notice of an Inspector shall for the purposes of this Act be held to be *prima facie* evidence of the fact therein stated.

141. Any decision, order, license, certificate, permit, notice, or other instrument made under this Act, or under any proclamation or regulation thereunder, may be in writing or in print, or partly in writing and partly in print.

142. Any public notice, proclamation, or regulation under this Act may be proved as follows:—

(1.) By the production of a newspaper containing a copy of such public notice, proclamation, or regulation.

(2.) By the production of a printed copy of such public notice, proclamation, or regulation, purporting to be certified to be a true copy by Inspector or by the nearest C.P.S., or to have been printed by the Government Printer.

And every such public notice, proclamation, or regulation shall, until the contrary be proved, be deemed to have been duly made and issued at the time at which it bears date.

143. No proceedings under this Act taken before any Justices shall be quashed for want of form: and no conviction, decision, order, appeal, or application made under this Act shall be removed by writ of *certiorari* or otherwise into the Supreme Court.

2. Appeal against Justices' decision.

144. Any person feeling aggrieved by the order or decision of any Petty Sessions—if the amount of such order or decision exceeds £20—may appeal therefrom to the County Court, and from that to the Supreme Court, subject to the following conditions:—

(1.) The appeal must be brought not sooner than fifteen days nor later than four months after the decision or order.

(2.) The appellant shall give notice to the C.P.S., within three days of such order or decision, that he intends to appeal.

(3.)

- (3.) He shall immediately after enter into a recognizance before a Justice, with two sufficient sureties, to try such appeal, abide by the judgment, and pay costs.
- (4.) The Court may adjourn the appeal and make such order as they see fit.

Mr. Whyte: I do not like an appeal to the Supreme Court in such cases.

Mr. Valentine: Avoid all appeals to the Supreme Court; if possible, let it stop before it gets there.

Mr. Bruce: I also am doubtful as to the policy of allowing this appeal, but the section is copied from the English Act.

3. Protection of persons in executing the Act.

145. In actions against persons executing this Act, or any proclamation or regulation thereunder, a month's notice must be given, the action must be begun within four months, and must be tried in district where the cause arose.

146. Defendant may plead that it was done or omitted under the authority of _____ or in carrying out Act—and may give special matter in evidence.

147. On trial, plaintiff shall not give evidence of any cause of action not stated in notice.

148. The plaintiff not to succeed if tender of amends is made before action; and after it is commenced defendant may pay any sum into Court, and the Court shall make such order as if the money were paid into Court in an ordinary action.

149. If the plaintiff does not succeed in obtaining judgment, the defendant shall receive full costs, charges, and expenses; and though a verdict is given for plaintiff, he shall not have costs unless the Judges approve of action and verdict.

150. Where any such action is defended under the direction of the Minister, the costs, charges, and expenses, and any damages or other moneys recovered against or payable by him, shall be deemed to be expenses under this Act.

SCHEDULES.

No. 2.

THE CHIEF INSPECTOR, MELBOURNE, to THE CHIEF INSPECTOR, SYDNEY.

Melbourne, 29 January, 1875.

SIR,

At your request I have cursorily gone through your Synopsis of a proposed Disease Prevention Bill. With much of the policy and many of its details I cannot at all agree, as you will perceive by my marginal notes on copy returned herewith. On looking through such notes, I am aware that they may appear, and in fact are less considerate than they should have been, having been hurriedly penned as if only for myself; but I trust you will not attribute this to any other cause than haste, and to my idea it is well in such cases to hear unvarnished opinions.

As a whole, I do not like the Bill; I think it by far too diffuse, whilst, were I a stockowner, I should consider a great number of the provisions uselessly vexatious.

I do not think that such an Act would ever be passed in Victoria, and I am quite sure it never could be enforced if it were.

The Minister has directed me to state that the Government of this Colony will not hold themselves to be in any way committed to the remarks made by me on this subject.

I have, &c.,
EDWARD M. CURR.

No. 3.

THE CHIEF INSPECTOR, ADELAIDE, to THE CHIEF INSPECTOR, SYDNEY.

Adelaide, 11 March, 1875.

DEAR SIR,

By this mail I return your Synopsis of Stock Disease Bill. You have gone thoroughly into the matter, and in doing so have evidently carried on your present system as far as possible. I am very doubtful if our Parliament will introduce a new system, but if not done I must try and assimilate our new Bill as near yours as can be done. This can be worked out after your final draft is in print. At present we are not doing much. So far as length is concerned, I do not see how it is possible to deal with all the subjects and the different animals without making a long Bill, and I quite agree with you that it is better to set out distinctly and in one Bill in different parts what is requisite. I do not think I need recapitulate in this non-official letter the remarks I have made in additional memo. I may say, I think we ought to deal with fluke and worms so far as I have drawn out. All I want to do is to force people to take some steps to improve the health of their sheep, and that can only be done by law unfortunately; it ought not to require more than losses, but I find the general scheme of these sort of men is to palm off their unhealthy stock on other parties and grumble at the Inspectors for exposing them. I have no objection to their selling these sheep if it does not injure the public, but when the many are to suffer for the few, then, I think, we may step in and have our say.

I am, &c.,
C. J. VALENTINE.

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No. 4.

THE CHIEF INSPECTOR, HOBART TOWN, to THE CHIEF INSPECTOR, SYDNEY.

Tasmania.

Inspector of Sheep Office,
3 April, 1875.

MY DEAR SIR,

I return your Synopsis, with a few general remarks on it. I have gone over it several times with much care, and certainly it appears to me to have been very carefully considered, and the subject thoroughly reviewed in every point of view. If you can get this Synopsis carried out in a well-drawn Bill I think it will fully carry out the opinions expressed in the suggestions of the Conference.

I am informed by Mr. Curr that the Victorian Government are disposed to carry out the suggestions of the Conference.

I have, &c.,
JAMES WHYTE.

No. 5.

THE CHIEF INSPECTOR, BRISBANE, to THE CHIEF INSPECTOR, SYDNEY.

Brisbane, 14 April, 1875.

DEAR BRUCE,

I have forwarded your draft Stock Bill by this post. I have gone carefully over it many times, and take no exception whatever to its form and provisions, with a few minor exceptions noted in the margin, and which do not affect the principle.

The measure to be recommended by me to my Government will embody the same principles throughout, although as yet I do not see my way clearly to embodying the Sheep and Cattle Acts in one measure. This, however, is only my own opinion and that of a limited number of owners to whom I have had an opportunity of speaking.

Yours truly,
P. R. GORDON.

No. 6.

CIRCULAR TO THE CHIEF INSPECTORS.

Sydney, 20 May, 1875.

Sketch of Stock Disease Prevention Bill.

DEAR SIR,

As I proposed in my circular letter of January last, I now beg to send you herewith a copy of the notes by the members of the late Conference on the several clauses of the above sketch, and of my remarks on these notes for your further consideration, with the view to our coming to an agreement on the more important details of a measure which we can join in recommending to our respective Governments; and I will be glad if you will favour me at your early convenience with any additional marks you may have to offer on the questions raised in the paper now sent you.

Looking at these notes, the divergence of opinion among us on the principal provisions of the sketch does not appear to be very great; and perhaps the better way will now be for each member, in replying to this communication, to state the section or sub-section to which he is opposed, and his reasons for being so; and with respect to the other provisions of the sketch to which no reference is made, it will be taken for granted that he agrees to them.

Little or nothing has been said in the notes as to the form which the measure should assume. I am quite willing to agree to its being drawn up in any shape which may be deemed best.

Although I may have again to trouble you in this way, I trust that when the explanations which have been offered are considered, the agreement on the whole will be so general as that my next paper will be a very short one.

I am, &c.,
ALEX. BRUCE.

No. 7.

THE CHIEF INSPECTOR, MELBOURNE, to THE CHIEF INSPECTOR, SYDNEY.

(Non-official.)

Melbourne, 2 June, 1875.

MY DEAR SIR,

In reply to your letter of the 20th May, I beg to state that I have gone through a considerable portion of the enclosure with some attention, and find no reason to alter what I have previously stated on this subject. As, however, there is no certainty that ever this matter will come before the Government of Victoria, I have not paid that attention to it which I should have done had I seen that my labours were likely to produce any fruit. With many of the remarks made by Mr. Gordon and Mr. Valentine I also agree; though, however, I have not, for the reason stated, entered fully into the subject, I think it well to make some remarks, which may be of use to you if preparing a Bill on the subject.

I will begin then by stating in a general way, that it seems to me that the measure which you propose is excessive, and that comparatively few clauses would effect all that can be done under the circumstances; and, secondly, I much prefer in these cases regulations to provisions in an Act. It is a fact that the work done in Victoria has been under regulations, and that the Acts themselves (the Scab Acts) were always failures.

As

As regards sections 5 to 28, I must repeat that I consider them bad in principle and in practice. You have stated respecting them that the Government would only be guided in *local* matters by a local Board. Besides that such has not been my experience, I will add, that nothing almost connected with disease can be confined to local results. Disease on the smallest farm in Victoria has, or may have, a bearing on the whole of the stock of New Holland.

Section 30.—I cannot but think that the reason that the system of Directors worked well in New South Wales was that there was but little to be done in that Colony: disease never brought any strain on the system. Divided powers—the delays occasioned by Boards—the impossibility of carrying through any system under such a variety of management and circumstances—the isolated standpoint from which each separate Board takes its view—their *want of responsibility*—are all matters hostile to vigorous, well-ordered, and sustained action. *Boards of advice*, pure and simple, I should consider desirable, and none others. As regards officers, they should, I think, be independent of local influence, and I would prefer them being strangers in their districts at starting. If real work had to be done, I should place little confidence in an Inspector who had been appointed or recommended by the very people he might have to coerce.

Section 33.—I think an Inspector should be allowed to kill stock, to ascertain the presence of disease; but as for producing parts for evidence in Court, I think the less said about it the better. To the Scab Act such a course, for instance, would have been fatal.

40.—*Idem*.

49.—I agree with Mr. Valentine in his remarks on this clause.

I will not, however, trouble you further with details, as I could not agree with the principal features of what you propose.

I want to see an Act which is so elastic that it can be made to suit all cases—an Act which works, therefore, by regulations. I want to see the power provided, one which can be wielded easily and effectually, and Boards existing whose advice can be asked when wanted,—with officers who can be expected to administer the Act without fear or favour.

Your proposal does not seem to provide for such a state of things. From it would result a lengthy, weak law, one which could only be amended by Parliament, no matter how great the emergency, which locally-appointed Inspectors and the intermeddlement of Directors would thoroughly emasculate.

Trusting, my dear Sir, that you will find the freedom of my remarks, which are given straightforwardly and honorably, proper to the question before us, and as the result of my wish for a real good law,—

I beg to remain, &c.,

EDWARD M. CURR.

No. 8.

THE CHIEF INSPECTOR, ADELAIDE, TO THE CHIEF INSPECTOR, SYDNEY.

Inspector of Sheep Office,

Adelaide, 15 June, 1875.

DEAR SIR,

Herewith I return notes and Bill forwarded. I have read them over, and do not think I can say much more or suggest other alterations than I have done. There appears to be very little difference between us. After all, Mr. Curr's objections are not such as to prevent a Bill being drawn in Victoria of a character very similar.

The general provisions of the Bill meet with my approval, excepting the "Coast District" section, which is unsuitable to this Colony. At one time I thought it would work well, but now I am of opinion we are better without it. There are certainly clauses to which I may take exception, but not of sufficient importance to hurt the Bill. Those clauses which are arbitrary are likely to be struck out, yet I do not see how we can have a good serviceable Bill without having clauses which are very objectionable to many.

Regarding the system of Boards, either as in New South Wales or as in Victoria, I do not see that it matters which is adopted, so long as they are *ex officio* Inspectors. I have had no experience in working them; but looking at your outside Boards in places, I have not formed a favourable opinion of the working, but with an assessment I do not think the Bill would pass without allowing stockholders some word in dealing with the money.

As to form of the Bill, I would merely suggest that cattle of all kinds should be kept as distinct as possible from Sheep.

My Commissioner will not look at the Bill until it is in print. Without wishing to hurry you, I would suggest that if you can put the Bill in form on the present notes and print it, it would be of great advantage. Let each have an extra copy and return—one to you with the Bill altered in such way as he intends to recommend to his Government; this will advance the matter. Unless I get a printed copy before my Commissioner, who is the head of the Government, shortly, I shall not get it on the Table of the House this Session.

I am sorry you do not see your way to have clauses dealing with fluke and worms. I still think we ought, and, if possible, shall endeavour to carry my point; by means of regular examinations we may be much better able to deal with them. Gordon will of course wait for the Report of the Commission.

I am, &c.,

C. J. VALENTINE.

No. 9.

THE CHIEF INSPECTOR, HOBART TOWN, TO THE CHIEF INSPECTOR, SYDNEY.

Tasmania.

Inspector of Sheep Office,

21 July, 1875.

SIR,

I am directed by the Chief Inspector (who I am sorry to say is unable to leave his room through illness) to return the "Notes by the several Chief Inspectors of Stock, on the 'Stock Disease Prevention Bill, 1875,'" and also to state that he has no further suggestions to offer at present, though perhaps may do so on further consideration.

I have, &c.,

J. COMPTON PENNY.

No. 10.

No. 10.

THE CHIEF INSPECTOR, BRISBANE, to THE CHIEF INSPECTOR, SYDNEY.

Office of Chief Inspector of Stock,
Brisbane, 23 July, 1875.

SIR,

I have the honor to forward herewith my notes on the sketch Stock Disease Prevention Bill submitted by you. With the principle and arrangement of the measure I now entirely agree, and the few objections I have offered to the details are made more with the hope that they may be seen to improve the Bill than with any intention of pressing their adoption upon you.

I may state that I have not consulted the Minister on the matter, and that my notes are given as the result of my own experience.

It is my intention to commence at once to draft a Bill for this Colony, under the headings and in the order laid down in your sketch, in order that I may be able to compare it with your rdaft Bill when elaborated.

I have, &c.,

P. R. GORDON,
Chief Inspector of Stock.

P.S.—It is to be understood that these notes are substituted for those formerly offered on the sketch. It will also be understood that I fully agree with all the clauses on which I offer no remarks.—
P.R.G.

Returns Nos. 3 and 4.

No. 3.—A Return from Stockowners, showing the effect of inoculation for pleuro-pneumonia in cattle.

No. 4.—Returns from Sheepowners, as to the nature, symptoms, prevention, and cure of worms, fluke, and foot-rot in sheep.

The information ordered by Parts 3 and 4 will require to be obtained from stockowners, and will be furnished as soon as it is procured.

Return No. 5.

INLAND INSPECTORS.

THE REASONS for retaining these officers are the following :—

Sheep Act.

1. There is a certain amount of risk that, although there are Border and Coast Inspectors, sheep infected with scab might be allowed to pass them unobserved, and thus spread the disease throughout the Colony, without its being detected,—if the Inland Inspectors were all removed.

2. There is also still some risk of outbreaks of catarrh occurring.

3. There are many provisions in the Sheep Act relating to the branding and travelling of sheep which require to be carried out, even when there is little or no risk of disease, and which would fail to be so if there were no Inland Inspectors. Owners will never be at the trouble of looking after each other with regard to these matters; and, as a rule, they would much rather pay Inspectors to prosecute than do so themselves. The Directors, again, would neither have the time nor the inclination to see these provisions of the Sheep Act enforced.

Worms and fluke.

Discussion has lately arisen as to whether sheep affected with these ailments should not be prevented from travelling into districts in which they do not naturally exist, as there is no doubt that sheep infected with these parasites carry the infection to sheep which would not otherwise be affected; and it is very probable that some action will ere long require to be taken to prevent this.

Cattle disease prevention.

It is universally admitted that something ought to be done with pleuro-pneumonia. That at any rate cattle actually affected with that disease should not be allowed to travel, and thus sow the infection broadcast as they go. Indeed, some go so far as to propose the compulsory inoculation of all herds infected with pleuro; and there are certainly very strong grounds for advocating that course, as the returns lately received at this Branch show that, taking the owners in all the different districts in the Colony who have inoculated, there are *eighteen* "for," and only *one* "against," inoculation.

If any measure were passed for dealing with this disease, cattle-owners would require to contribute to the payment of the Inspectors' salaries; and if they did, 5s. per thousand, or one-fourth of a farthing per sheep, would then be sufficient as contribution under the Sheep Act.

Brands and Cattle-stealing Prevention Acts.

1. Under the Brands Act the Inspectors assist owners in registering their brands.

2. They see the provisions of the Act in regard to branding, droving, &c., carried out. If they did not, the Brands Act would very soon become a dead letter, and the trouble and expense of registering in a great measure lost.

3. They aid the police in the detection of sheep- and cattle-stealers. This is especially the case in regard to sheep-stealing, which, with the turning out of sheep, is becoming rife in many parts of the Colony, as they examine the stock in the course of their duty as Inspectors, and can take notice of any suspicious brands and marks with which they may meet.

Impounding

Impounding Act.

It has been proposed that Inspectors of Stock should be Inspectors of Pounds, and a Bill giving them supervision of Pounds and Poundkeepers has been in type for the last four or five years.

A Pound now, instead of being a convenience to a district, is often only a nuisance; and this arises almost entirely from the want of supervision—Poundkeepers in many instances doing to a great extent as they like.

Droving roads and reserves.

Inspectors have recently been called upon to report upon these roads and reserves; and these officers are in the best possible position to do this duty, and to protect the interests of the public, so far as travelling stock are concerned.

When the question was put to the different Boards of Directors, in 1872, as to whether the service of the Inland Inspectors could be dispensed with,—twelve answered in the negative, four answered in the affirmative, two sent no reply.

Although there was a considerable majority in favour of retaining the Inspectors, it is probable that it would have been still larger if the Boards had been aware of the proposal to give the Inspectors other work to do, and reduce the sheep contribution.

A.B., 22 April, /75.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

DISEASES AFFECTING LIVE STOCK.

(STATISTICS.)

Ordered by the Legislative Assembly to be printed, 10 August, 1875.

ADDITIONAL part of Return to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 16 July, 1875, in reference to Diseases affecting Live Stock.

SCHEDULE.

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DISEASES AFFECTING LIVE STOCK.

No. 1.

THE CHIEF INSPECTOR, SYDNEY, to THE CHIEF INSPECTOR, MELBOURNE.

Sydney, 10 June, 1875.

(Non-official.)

DEAR SIR,

You say that the Bill as sketched is too long, and that you prefer a short measure worked by regulations. As this is the case, I think it would tend very materially to further the object in view if you would make a sketch of such a measure as you think would meet the case, and send or allow me to send copies to each of the other members for their consideration and remarks.

2. As I said, I am not at all wedded to any particular form of a Bill; and if you will frame and forward a short measure such as you describe, containing the necessary provisions for binding the several Colonies to such a course of action as will result in a combined and simultaneous effort to eradicate the infectious diseases now prevailing among our live stock and prevent the introduction of fresh ailments, it will have my most cordial support.

I am, &c.,
ALEX. BRUCE.

No. 2.

THE CHIEF INSPECTOR, MELBOURNE, to THE CHIEF INSPECTOR, SYDNEY.

Melbourne, 2 July, 1875.

Sketch No. 2.

SIR,

I have the honor to reply to your non-official letter of the 10th ultimo, on the subject of a Diseases in Stock Act. Whilst so doing, you will be good enough to remember that I only offer my own private opinion on the subject in question, by which, of course, the Government of this Colony are in no ways bound.

Proceeding then to give you my views on what I think would be a suitable law, I have started with our Diseases in Stock Act of 17th December, 1872, of which I send you a copy, in which you will find certain written alterations and erasures. To this Act I have the honor to make the following additions in short. I have not thought it necessary to go so completely and methodically into the matter as you have done in your sketch, but I hope that I have done enough to put you practically in possession of my views on the subject. I proceed then with my proposed additions to our present Act:—

- 1st. That the Governor in Council may divide the Colony into districts for the purposes of this Act, and may alter and annul such districts.
- 2nd. That the Governor in Council may appoint Boards of advice in each district of not less than five members, whose duty it shall be to advise with the Inspector of the district and report to the Chief Secretary on the subject of disease in the district when necessary. Members of such Boards to be resident in the district, and owners of not less than 100 cattle or 1,000 sheep in a satisfactory state as regards their freedom from disease.
- 3rd. Inspectors to have power to kill animals in performance of their duty of examining for disease. Compensation in this case for the animals killed to be made to the owner.
- 4th. Inspectors of Stock to be empowered to seize and destroy unwholesome meat offered for sale.
- 5th. Here insert substance of section 34 of Mr. Bruce's sketch of Diseases in Stock Bill.
- 6th. In lieu of clause 10 of our Diseases in Stock Act herewith, insert "That the Governor in Council may to prevent the spread or introduction of any disease cause to be destroyed or placed in quarantine in any place which he may deem fit any stock whatsoever."
- 7th. That when any person suffers any loss in respect of any stock not his property so quarantined or destroyed on his land, that such loss should be made good by the Government.
- 8th. That any expense or loss incurred by the Government under the foregoing section shall be made good by the owner of the stock so dealt with.
- 9th. Here insert clause 35 of Mr. Bruce's sketch.
- 10th. In addition to the powers taken under clause 4 of our Diseases in Stock Act, add the following:—
K.—For the purpose of preventing the introduction of disease through the medium of ships arriving in harbour.
L.—For dealing with markets, shows, exhibitions, &c.
- 11th. Stock placed in quarantine to be entirely at the risk and cost of their owner.
- 12th. Here insert sections 47, 48, and 49, of Mr. Bruce's sketch; also sections 67, 68, and 69 of same.
- 13th. That captains of vessels on arriving in harbour furnish Chief Inspector of Stock with the statutory declaration as to health of stock on board and deaths which may have occurred during the voyage.
- 14th. Penalty of not less than £100 on captains of vessels if any stock be landed contrary to regulations in force, such penalty to be no bar to prosecution of the owner of such stock.
- 15th. In all cases minimum and maximum penalties to be stated in the Act or regulations.
- 16th. Mode of procedure by which penalties may be recovered.
- 17th. Insert sections 109, 110, 113, and 114 of Mr. Bruce's sketch; also section 139 of same.

Whilst begging you to accept of my want of leisure as my excuse for not going into this matter in a more systematic manner I hope that what I have written will put you substantially in possession of my views
on

No. 1.

See No. 3.

By regulation.

on the subject. There is one point, however, to which I think it necessary to draw your attention once more, as I frequently did that of the Conference, namely, my strong objection to the policy of allowing stock from Europe to be introduced into these Colonies on any terms whatever. If such a course be persisted in, it is my conviction that in spite of any quarantine which may be devised, we shall end by acclimatizing here all the diseases to which European stock is subject.

I have, &c.,
EDWARD M. CURR,
Chief Inspector of Stock.

No. 3.

VICTORIAN SCAB ACT, ALTERED BY CHIEF INSPECTOR, MELBOURNE.

No. CCCCLI.

An Act for the Prevention of Diseases in Stock. [17th December, 1872.]

BE it enacted by the Queen's Most Excellent Majesty by and with the advice and consent of the Legislative Council and Legislative Assembly of Victoria in this present Parliament assembled and by the authority of the same as follows (that is to say) :—

1. This Act shall be called and may be cited as "*The Diseases in Stock Act 1872.*" Title of Act.
2. Part III of the "*Prevention of Diseases of Animals Statute 1864*" and the "*Prevention of Diseases of Animals Statute 1872,*" No. 418, are hereby repealed. Repeal.
3. In the construction of this Act the following words shall if not inconsistent with the context or subject matter have the meanings hereby respectively assigned to them (that is to say) :— Interpretation.
 - "Inspector of Stock" shall include the Chief Inspector of Stock or person employed under the Act.
 - "Stock" shall include any bull cow ox calf stallion mare gelding foal ass mule ram ewe wether lamb pig goat dog or other animal whatsoever alive or dead.
 - "Drive" shall mean drive conduct or convey whether by land or by water.
 - "Disease" shall mean any contagious or infectious disease to which any animal is subject, which the Governor in Council may from time to time by order declare to be a contagious or infectious disease for the purposes of this Act.
 - "Diseased stock" shall mean all stock proclaimed by the Governor in Council to be diseased as well as all stock suffering from any disease the Governor in Council has proclaimed to be infectious or contagious.
 - Insert the word "owner," as per our Scab Act of 1870 ; altering the word "sheep" into "stock."
 - "Fittings" shall mean any sheep pens, cattle or horse-boxes and any materials used for penning, yarding, or confining stock ; as also any halters, brushes, clothes, buckets or other articles whatever which shall have been brought in contact with any diseased stock.
 - "Fodder" shall mean any food or bedding used or which shall have been brought in contact with any stock.
4. The Governor in Council may from time to time make such regulations under this Act as may be deemed expedient for all or any of the following purposes and may rescind the same :— Governor in Council may make regulations.
 - A. For extending all or any of the sections of this Act to any particular stock or kind of stock.
 - B. For prohibiting the introduction into the Colony, either by sea or land, of any stock.
 - C. For regulating and fixing the conditions upon which certain kinds of stock may be introduced into the Colony.
 - D. For the inspection of newly introduced stock.
 - E. For taking such steps as may be deemed expedient to prevent the spread of any disease which may have obtained a footing in the Colony and to eradicate it.
 - F. For placing any stock in quarantine for such periods, at such places or buildings, and within such limits as may be deemed expedient, and for declaring any such place or building a quarantine district.
 - G. For the purpose of subjecting any stock to such restrictions or veterinary treatment, remedial measures as may be deemed necessary to prevent the introduction and spread of disease.
 - H. For the seizure and destruction of any stock diseased or supposed to be diseased.
 - I. For the purpose of proclaiming any portion of the Colony a quarantine or a clean district.
 - J. For prohibiting or regulating the introduction into the Colony of any fodder or fittings, and for the seizure sale or destruction of any such fodder or fittings landed without the written authority of an Inspector of Stock.
 - K. For the purpose of preventing the introduction of disease through the medium of ships arriving in harbour.
 - L. For dealing with markets, shows, exhibitions, &c.
5. The Governor in Council may from time to time appoint and remove a Chief Inspector of Stock, Inspectors of Stock, and such other officers as may be necessary to carry out the provisions of this Act. Governor in Council to appoint Inspectors and other persons.
6. Inspectors of Stock shall have power to enter at any time into any ship or on any land or into any building for the purpose of inspecting any stock, or enforcing the provisions of this Act or the regulations made in pursuance hereof. Any person who shall obstruct or hinder any Inspector in the performance of his duty shall, on conviction before two Justices of the Peace, forfeit and pay a penalty not exceeding fifty pounds for every such offence. Powers of Inspector, and penalty for hindering and obstructing him.
7. Stock newly introduced either by sea or land shall not travel until it has been inspected by an Inspector appointed for that purpose, and until he has authorized it to travel. The cost of such inspection and of carrying out the several provisions of this Act shall be defrayed by a charge to be imposed of one shilling per head for every head of cattle and horses, sixpence per head for every head of calves and foals, and one penny per head for every head of sheep and pigs so inspected ; and such charge may be recovered in a summary way before any two Justices. Charge on inspection of newly introduced stock.

Driving stock into clean district without written authority of Inspector.

8. Any person who shall allow to stray or shall drive or cause to be driven any stock into a quarantine or clean district without the written authority of an Inspector of Stock shall, on conviction before two Justices of the Peace, forfeit and pay a penalty not exceeding one hundred pounds for every such offence.

Introduction of fodder and fittings into the Colony.

9. Any person who shall introduce into the Colony any fodder or fittings without the written authority of an Inspector of Stock shall, on conviction before two Justices of the Peace, forfeit such fodder and fittings and pay a penalty not exceeding fifty pounds for every such offence.

Expenses connected with diseased stock to be borne by the owner.

10. Whenever the Governor in Council shall have ordered that any stock shall be placed in quarantine or under restrictions for the purposes of this Act, or that remedial measures shall be taken to prevent the introduction or spread of disease, the cost and expense thereby incurred shall in every case be borne by the owner of the stock dealt with, if it shall be proved to the satisfaction of the Governor in Council that such stock are or have been diseased, and such cost and expense may be recovered in a summary manner before any two Justices of the Peace on complaint by an Inspector of Stock.

Driving stock into quarantine districts, and removal from same of fodder, &c.

11. Any person who shall drive or cause to be driven into through or out of any quarantine district, or shall remove from any quarantine district any fodder or fittings, or any soil, sand, or other material upon which any diseased stock, have been kept, or any dairy produce of diseased stock, without the written authority of an Inspector of Stock, shall upon conviction before two Justices of the Peace forfeit and pay a penalty not exceeding fifty pounds for every such offence.

Breach of regulations.

12. Any person who shall be guilty of a breach of any of the regulations made under this Act by the Governor in Council, shall on conviction of the same before two Justices of the Peace forfeit and pay a penalty not exceeding five hundred pounds for every such offence.

Effect of regulations.

13. Any regulation made or to be made under this Act shall have the full force of law until the same shall have been disallowed by resolution of both Houses of Parliament, and thereupon such regulation or any part thereof so disallowed shall cease to have any force or effect in law: Provided also and be it enacted that this Act shall continue in force until repealed.

Duration of Act.

No. 4.

THE CHIEF INSPECTOR, SYDNEY, TO THE CHIEF INSPECTOR, MELBOURNE.

(Non-official.)

Sydney, 15 July, 1875.

DEAR SIR,

See Nos. 2 and 3.

I have considered the sketch of the measure forwarded by you with your letter of the 2nd inst., for carrying into effect the resolutions passed at the Conference of Chief Inspectors of Stock, held at Sydney in November last; and I now beg to offer the following remarks on your paper:—

1. The measure sketched by you would be worked entirely by regulations, and would give the Governor in Council power to make *any regulations*; to do absolutely *anything*, and deal with *any sort of stock*, and any diseases he may consider necessary.

2. Now I do not think that our Legislature could ever be induced, unless perhaps in the case of a very great emergency, and *temporarily* to give the Governor in Council such powers as these, and it is not every Government that would like to have the responsibility imposed upon them of administering such an Act.

3. But supposing for a moment that such a measure as here proposed by you were passed in this and the other Colonies, I think you will on consideration see that, so far as the objects of the Conference are concerned, it would be utterly valueless, for it would in no way bind any of the Colonies to a uniform course of action.

4. To show that this would actually occur, we have only to recollect that under such a measure one Colony might make a regulation compelling the owners of sheep infected with scab to destroy them, while the next only enforced their cleansing, and the third made no regulation whatever, but allowed owners to do what they liked with their infected flocks.

5. Again, under such a law one Colony might compel owners to destroy cattle affected with pleuro-pneumonia, while another might only enforce compulsory inoculation, and a third might take no cognizance whatever of the disease.

6. Or again, one Colony might admit all sorts of stock from places outside Australia and Tasmania, another might admit only certain sorts of stock, and a third might admit stock from only certain Colonies and countries.

7. If then this is the case—and I do not think it can be disputed—the several Colonies would be in no way bound to adopt the same law, with respect to the infectious and contagious diseases existing among our stock; and the very heavy losses these diseases now annually occasion would be certain to continue, while fresh ailments, even of a more malignant character, might perhaps be introduced.

8. With regard to the length of the measure, as first sketched, and the minuteness of its details, I think it will be seen, on reference to the Imperial Contagious Diseases (Animals) Act of 1869, that I have followed, to a large extent at least, a very good precedent in both these respects; and so long as reference can easily and readily be made to any of the provisions of a measure—which it can be in this case through their being arranged in Parts, and under distinct headings—its length is no objection whatever.

9. Besides we have, I think, all had sufficient experience to enable us to judge how far these details are necessary and practicable; and so far as they are so, it is certainly very much better that they should be embodied in Acts of the several Legislatures, than left to be promulgated from time to time, in the shape of regulations, which may be made without due consideration.

10. It is a fact too that regulations are lost sight of by the public, while every one becomes acquainted with the provisions of the Acts of Parliament which in any way affect their calling or property.

I am, &c.,
ALEX. BRUCE.

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No. 5.

THE CHIEF INSPECTOR, MELBOURNE, TO THE CHIEF INSPECTOR, SYDNEY.

Melbourne, 19 July, 1875.

SIR,

I have the honor to acknowledge your letter of 15th instant.

In replying to it I hope you will agree with me that there can be little use in my going into your objections categorically, when there is no probability of such a step altering my opinion on the subject. After a full consideration of the matter, it is my *unalterable* opinion that no law will ever satisfactorily settle every important particular of an Act such as the one in question, and yet be suitable to half-a-dozen Colonies whose circumstances are so diverse as those of the Australian group.

For many reasons it is clear to me that disease must be dealt with by regulation.

Fleming, the best authority on such subjects, has taken just the same position in this matter which I have and always shall advocate; he objects to the English law on this very score.

When this subject was discussed at the Conference it was admitted a hundred times that some course which was admirably suited to one Colony would not answer in another, from which it resulted that from Queensland, for instance, some benefit was to be withheld, as the step proposed was unsuited (say) to Tasmania; so that the recommendations of the Conference were to *some degree* emasculated, in order that they might be uniform.

My opinion is that it would be wiser were each Colony to take all possible means *at its command* to stay and reduce disease irrespective of others, recognizing at the same time the necessity for each Colony helping the other, and working together as far as practicable.

As regards the advantages of regulations, I will remark that it was tried for ten years to extirpate scab by law from Victoria, and proved a failure. We were then allowed to go to work with regulations, which (as far as is known) succeeded in four years.

I have, &c.,

EDWARD M. CURR.

No. 6.

THE CHIEF INSPECTOR, SYDNEY, TO THE CHIEF INSPECTORS, QUEENSLAND, SOUTH AUSTRALIA, AND TASMANIA.

(Non-official.)

Sydney, 27 July, 1875.

DEAR SIR,

Mr. Curr having stated, in the course of his correspondence with regard to the Bill sketched to carry out the resolutions of the Conference, that he thought a very much shorter measure might be framed, I asked him to favour me with the outlines of the measure he would propose.

2. He has kindly complied with my request; and I now send you herewith a copy of his letter of the 2nd instant, in which he gives the outlines of such a Bill as he thinks would answer the purpose. I also send you a copy of my reply to his letter, and I will be glad to have your opinion upon his proposals and my letter at your earliest convenience, as the present Session of our Parliament will very soon terminate, and I should like that the whole of the correspondence relating to the Conference were laid upon the table of the House and ordered to be printed, before it rises, in order that the Members of the Select Committee which has been appointed to inquire into and report upon the prevention of Diseases in Stock may have an opportunity of considering the resolutions of the Conference and the relative correspondence during the recess.

3. I was in hopes that I would be able to send you with this a copy of the Victorian Stock Disease Prevention Act of 1872, to which Mr. Curr refers in his letter of the 2nd; but the copies of that Act, for which I wrote some time back, have not yet reached me, and I can only send you, as I do with this, a list of the alterations he proposes to make in that measure, and refer you to the copy of it, which I have no doubt you will find in your Parliamentary Library, if you have not one in your own office.

I am, &c.,

ALEX. BRUCE.

No. 7.

TELEGRAM FROM THE CHIEF INSPECTOR, BRISBANE, TO THE CHIEF INSPECTOR, SYDNEY.

30/7/75.

HAVE carefully considered Mr. Curr's proposed measure, I consider it totally unsuited to any of the Colonies. I strongly object to working the Act by means of regulations.

No. 8.

THE CHIEF INSPECTOR, BRISBANE, TO THE CHIEF INSPECTOR, SYDNEY.

(Non-official.)

Office of Chief Inspector of Stock,
Brisbane, 2 August, 1875.

DEAR SIR,

I am in receipt of your letter of 27th July, enclosing Mr. Curr's sketch of Stock Diseases Prevention Bill, and of your memo. of 28th, forwarding copy of Victorian Prevention of Diseases Act, No. CCCCLI, with Mr. Curr's proposed amendments thereon.

Prior to receipt of the latter I had carefully gone over the Act in the Parliamentary Library here, and on the 30th I forwarded you a telegram to the effect that I considered his proposed Bill totally unsuited to the circumstances of any of the Colonies.

I consider that his proposal to work the Act by regulations is altogether a mistake, and I cannot adduce stronger evidence in favour of my opinion than by stating the fact that many persons who have travelled Queensland stock into Victoria have, on their return, complained loudly to me of the impossibility of finding out the law as regards the travelling of stock in that Colony, and that the information on the subject received from constables and Police Magistrates is never to be relied on. More than once overlanders have consulted me as to whether our Government should not suggest to the Victorian Government the propriety of having their Act assimilated to that of New South Wales and Queensland so far as it relates to travelling stock.

I cannot see what serious objection Mr. Curr can have to the mere length of the Bill. All experience goes to prove that unless well elaborated, no Act is workable. Our Insolvency Act of last Session drawn up by the present Attorney General contains nearly 200 clauses.

I return herewith the copy of the Victorian Act.

Yours truly,
P. R. GORDON,
Chief Inspector of Stock.

No. 9.

TELEGRAM FROM THE CHIEF INSPECTOR, SYDNEY, TO THE CHIEF INSPECTORS, ADELAIDE AND HOBART TOWN.

5 August, 1875.

FOR reasons in my message of 19th ultimo, I would be obliged by your telegraphing shortly, on receipt, your opinion on Mr. Curr's sketch.

No. 10.

TELEGRAM FROM THE CHIEF INSPECTOR, ADELAIDE, TO THE CHIEF INSPECTOR, SYDNEY.

5 August, 1875.

IN reply *in re* Mr. Curr's sketch. Leaves too much to regulation. Feel obliged to reject it. The two sketches might be modified by Mr. Curr, and the main principles adopted leaving less to regulations; so that all important matters could be fixed in all Colonies by Bill. By this means his sketch would be brought nearer Conference resolutions as a basis.

No. 11.

TELEGRAM FROM THE CHIEF INSPECTOR, HOBART TOWN, TO THE CHIEF INSPECTOR, SYDNEY.

9 August, 1875.

HAVE been ill. Would not object to Curr's sketch Bill, but could not get passed here; puts all power in Executive; on that account prefer yours. Will write fully post.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

LIVE STOCK.

(REPORT FROM CHIEF INSPECTOR RESPECTING INOCULATION FOR PLEURO-PNEUMONIA.)

Ordered by the Legislative Assembly to be printed, 13 May, 1875.

THE CHIEF INSPECTOR OF STOCK TO THE UNDER SECRETARY FOR LANDS.

MEMO.

I have the honor to submit for your consideration the accompanying tabulated statement, showing the opinions of the owners of cattle in the different districts of the Colony who have replied to the questions addressed to them by circular in the end of last year, as to the efficacy of Inoculation for Pleuro-pneumonia.

From this statement it will be seen that, in the opinion of our stockowners, the previous experience of the beneficial effects of inoculation is fully confirmed, as this statement shows that, of those who have practised inoculation, *there are 18 in favour of that treatment to 1 against it*, and that even of those who have never tried inoculation *there are nearly 4 for, to 1 against it*. By these returns it also appears that, of those owners who have inoculated, 216 have done so *once*, 36 *twice*, 13 *three times*, 4 *four times*, 13 *several times*, and 16 *often*, while 51 owners state that they inoculate their young stock annually when virus can be obtained. It will be noticed that the Inspector for Coonabarabran—one of the two districts in which the largest number of inoculating owners declare against the practice—gives as a reason for so large a percentage of owners being opposed to it, that "they killed their cattle through not understanding the process." The same thing has occurred in many other instances; and this fact, and that of many of the cattle being diseased when they were inoculated, although they showed no symptoms of being so, easily account for the want of success on the part of the few owners who have tried and are still opposed to inoculation.

A.B.

Stock Branch,

1 May, 1875.

INOCULATION FOR PLEURO-PNEUMONIA.

TABULATED Statement of the opinion of the owners of cattle in the different districts of the Colony as to the efficacy of Inoculation for Pleuro-pneumonia.

	No reply.	Uninoculated.			Inoculated.			Remarks.
		In favour of.	Against.	Neither	In favour of.	Against.	Neither	
1. Albury	11	20	5	4	26	1	...	Inoculation would be more generally practised in this district if owners had more confidence in themselves in selecting virus. No pleuro now in district.
2. Armidale	1	1	2	2	14	...	...
3. Balranald	31	...	...	...	2	2	1
4. Bathurst	4	25	9	16	45	4	1	
5. Bourke	3	15	2	6	2	1	...	
6. Braidwood .....	...	4	...	6	3	...	...
7. Carcoar	21	34	3	21	23	...	2	
8. Cooma	17	14	2	10	22	...	1	
9. Coonabarabran	5	12	7	24	5	4	1	
10. Corowa	Owners in this district did not understand the process of inoculation when they tried it, and consequently a great many cattle were killed.
11. Demiquin .....	...	...	...	...	...	...	...
12. Dubbo	6	6	...	2	8	...	1	
13. Eden	22	9	3	2	10	...	1	
14. Forbes	9	9	6	6	53	...	...
15. Glen Innes .....	...	1	...	4	13	1	5
16. Goulburn	10	10	...	6	22	...	1	
17. Grafton .....	...	...	...	...	...	...	...
18. Gundagai .....	...	...	...	...	...	...	...
19. Hay	32	3	3	15	3	2	...	
20. Maitland .....	...	9	1	...	6	...	...
21. Menindie	1	6	1	6	...	...	1
22. Merriwa .....	...	3	1	...	3	...	1
23. Mudgee	1	11	1	7	4	...	...
24. Narrabri .....	...	...	...	...	...	...	...
25. Port Macquarie	4	6	5	3	6	...	...
26. Singleton	1	6	Some of the owners in this district are averse to inoculation, and would allow the disease to be on their run rather than inoculate.
27. Sydney .....	...	...	...	...	...	...	...
28. Tamworth	21	18	6	3	13	...	...
29. Wagga Wagga	59	5	...	...	1	...	...
30. Warialda	47	8	6	1	3	The cattle in this district are subject to pleuro through travelling cattle.
31. Wentworth	5	1	...	5	3	...	...
32. Windsor	4	...	...	1	2	...	...
33. Yass	22	4	...	1	5	...	2	
34. Young	5	5	1	7	7	2	7	
	341	230	64	158	310	17	25	

A.B.
Stock Branch,
1 May, 1875.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

GOULBURN CATTLE SALE-YARDS BILL.

(PETITION AGAINST—STOCKOWNERS AND AGENTS.)

Ordered by the Legislative Assembly to be printed, 11 May, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned Stockowners, Stock Agents, and others interested in the sale and purchase of live stock,—

SHOWETH:—

That your Petitioners have observed that there is now before your Honorable House a Bill intituled "The Goulburn Municipal Sale-yards Bill."

That your Petitioners are opposed to the said Bill, on the following grounds, viz. :—

1. Because accommodation is provided at the existing sale-yards (erected at considerable cost by private enterprise), not only ample for present wants, but commensurate for probable requirements for years to come.
2. Because the erection of public yards would not only be a direct interference with private enterprise, but be also the means of deteriorating the value of those now in use, and thereby entitle the owners to look for compensation.
3. Because as the City of Goulburn is becoming a central cattle depôt, stock being sent there from the western and surrounding districts in large numbers, any tax, no matter how small, would induce owners to seek other places for the disposal thereof where they would not be subjected to municipal imposts.
4. Because, as your Petitioners believe, the opening of the Railway to Yass and Wagga Wagga will enable buyers from those places and the districts beyond to attend the Goulburn cattle sales; but if the tax which it is proposed by "The Goulburn Municipal Sale-yards Bill" to place on stock be sanctioned by law, and owners take their stock to places where there is no such Act in force, the traffic of the Great Southern Railway and the general revenue of the Colony will be materially interfered with.
5. Because the tax will not only be difficult to collect, but in some cases vexatious, as, for instance, any one living or being within a radius of ten miles and selling a single beast to a neighbour would be compelled to pay the tax, whilst at the same time he would not have occasion to avail himself of the accommodation of the public sale-yards.
6. Because the municipal authorities will not realize from this tax a revenue much in excess of the cost of collection, as the number of cattle sent for sale will be greatly diminished; and it is therefore, as your Petitioners consider, highly impolitic to impose restrictive regulations unless with a fair hope of corresponding advantages.
7. Because your Petitioners are opposed to one class of producers being taxed for the benefit of others, as this Bill imposes a tax upon cattle and sheep owners bringing their stock to market, whilst farmers and others will be allowed to dispose of their produce without taxation and without interference.

Your Petitioners therefore humbly pray that your Honorable House will withhold its sanction from the Bill intituled "The Goulburn Municipal Sale-yards Bill."

And your Petitioners, as in duty bound, will ever pray.

[Here follow 99 signatures.]

1875

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

OF THE

GOULBURN CATTLE SALE-YARDS BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

AND

MINUTES OF EVIDENCE.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
6 May, 1875.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1875.

1875.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES NO. 28. TUESDAY, 27 APRIL, 1875.

13. GOULBURN CATTLE SALE-YARDS BILL (*Formal Motion*):—*Mr. Farnell*, on behalf of *Mr. Teece*, moved, pursuant to notice,—
- (1.) That the Goulburn Cattle Sale-Yards Bill be referred to a Select Committee for consideration and report.
- (2.) That such Committee consist of *Mr. Garrett*, *Mr. Farnell*, *Mr. Booth*, *Mr. Cameron*, *Mr. Cunneen*, *Mr. Davies*, *Mr. Macintosh*, *Mr. Terry*, and the Mover.
- Question put and passed.
-

VOTES NO. 34. THURSDAY, 6 MAY, 1875.

7. GOULBURN CATTLE SALE-YARDS BILL:—*Mr. Farnell*, on behalf of the Chairman, *Mr. Teece*, brought up the Report from, and laid upon the Table the Minutes of Proceedings of, and of Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on the 27th April, 1875.
- Ordered to be printed.
- * * * * *
-

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1875.

GOULBURN CATTLE SALE-YARDS BILL.

REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred, on 27th April, 1875,—“*the Goulburn Cattle Sale-Yards Bill,*”—beg to report to your Honorable House,—

That they have examined the Witnesses named in the margin* (whose evidence will be found appended hereto); and that the Preamble having been satisfactorily proved to your Committee, they proceeded to consider the several Clauses and Schedule of the Bill, in which it was deemed necessary to make an Amendment.

Your Committee now beg to lay before your Honorable House the Bill, with an Amendment.

WILLIAM TEECE,
Chairman.

No. 3 Committee Room,
Sydney, 27th April, 1875.

PROCEEDINGS OF THE COMMITTEE.

THURSDAY, 27 APRIL, 1875.

MEMBERS PRESENT:—

Mr. Teece,
Mr. Farnell,

Mr. Macintosh,
Mr. Booth.

Mr. Teece called to the Chair.

Entry from Votes and Proceedings, appointing the Committee, read by the Clerk.

Printed copies of the Bill referred, and original Petition to introduce the same, before the Committee.

Frederick Horn, Esq., called in and examined.

Witness withdrew.

F. W. Rutter, Esq., called in and examined.

Room cleared.

Preamble considered.

Question,—“That this preamble stand part of the Bill,”—put and passed.

Clauses 1 and 2 read and agreed to.

Clause 3 read, amended,* and agreed to.

Remaining clauses and Schedule read and agreed to.

Chairman to report Bill with an Amendment to the House.

*See Schedule of
Amendment.

SCHEDULE OF AMENDMENT.

Page 2, clause 3, lines 5 and 6. Omit “or within ten miles thereof.”

LIST OF WITNESSES.

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Rutter F. W., Esq.	7

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

GOULBURN CATTLE SALE-YARDS BILL.

THURSDAY, 29 APRIL, 1875.

Present:—

MR. BOOTH,	|	MR. MACINTOSH,
MR. FARNELL,	|	MR. TEECE.

WILLIAM TEECE, Esq., IN THE CHAIR.

Frederick Horn, Esq., called in and examined:—

1. *Chairman.*] You are one of the Aldermen for the city of Goulburn? I am.
2. Were you an Alderman at the time the Goulburn Cattle Sale-Yards Bill was first introduced to Parliament? I was Mayor of Goulburn at that time.
3. How long have you resided in Goulburn? For about seventeen years.
4. Do you know anything about the principles of the Bill upon which this Committee is now sitting? I do.
5. Do you think the Bill is a necessary one? I do.
6. Will you assign your reasons for thinking so? The principal reason is this:—A petition signed by a large number of stockowners and auctioneers of the district was sent in to the Council, asking the Council to take steps for the establishment of cattle sale-yards. It was considered that it would be to the interest of the vendors of stock, as well as to the buyers of stock and consumers of meat, to establish cattle sale-yards.
7. Do you know whether there are any persons opposed to the Bill? I do not know of my own knowledge that there are any persons opposed to the Bill. I have heard it rumoured that there is one person opposed to it. It is only a rumour.
8. Have you heard any grounds assigned for opposition to the Bill? No just grounds.
9. Is the land on which it is proposed to erect the yards suitable for such a purpose? Yes, very suitable. The ground was granted for the purpose by the Government, upon an application made by myself, when I was Mayor some years ago.
10. Have you no authority under the Municipalities Act to erect cattle sale-yards? No; we cannot erect them without a special Act of Parliament.
11. *Mr. Macintosh.*] By the third clause of the Bill, I see the Council wish to have this power: "So soon as sale-yards shall be established and by-laws shall be made as hereinafter provided it shall be lawful for the said Council to take and demand from the owner of every head of cattle brought to any sale-yards established under this Act or yarded or brought to any sale-yard or premises within the Borough of Goulburn or within ten miles thereof whether the same be intended for sale by public auction or private contract and whether the same be intended for slaughter or otherwise the fees or charges mentioned in the said by-laws";—do you not think it arbitrary that by-laws should extend so many miles beyond Goulburn? I think that some limit should be fixed outside the boundaries of the city of Goulburn, for this reason: the boundaries of the city are very small, and if the yards were erected within those boundaries the money would be thrown away. The whole of the auctioneers at present rent the premises they use—they do not use their own freeholds; and the chances are that if the Municipal Council erect cattle sale-yards within the city boundaries, the auctioneers may go just outside the boundaries and erect sale-yards of their own.
12. What expense do you propose to incur in the erection of the yards? We think the yards will cost nearly a thousand pounds.

F. Horn, Esq.
29 April, 1875.

- F. Horn, Esq. 13. And you believe that it would be to the benefit of the district generally for the Municipal Council to erect cattle sale-yards? We have every reason to believe that it would be a very great benefit.
- 29 April, 1875. 14. Would the Council have any objection to the Bill if that portion of the clause to which I have referred was struck out—that is, if they simply had power to collect dues within the municipal area? If that portion of the Bill was struck out, I do not think it would be of any service to us, for the reasons I have already assigned.
15. Would not a radius of five miles be sufficient? It might, perhaps. The reason that ten miles was named is that there are very few people within a radius of ten miles who would be likely to hold private sales. The land is principally in the hands of large landowners.
16. Your Council would not attempt to erect yards unless they had power to collect dues outside the municipal area? No.
17. Does it not appear to you arbitrary to go so far outside to collect dues? I think ten miles was named merely for the purpose of describing some distance outside the municipal area. I think the Council would be satisfied with a 5-mile radius. I will give you an instance, to show what might take place: A nuisance was caused at a slaughtering establishment just inside the boundaries of the municipality; the gentlemen whose property adjoined the slaughtering establishment lodged a complaint against the butcher, and the butcher was ordered to remove. The butcher only removed about fifty yards; he opened another establishment just outside the boundary, and immediately opposite the entrance gate of the grounds belonging to the gentleman who had complained.
18. Has your Council had this question of distance under their consideration—have they determined not to work the Bill unless they get power to collect dues outside the municipal area? I do not think the Bill would be of any use to us, unless we had power to collect fees some distance beyond the municipal area.
19. Do you speak now for your Council? Yes, I do. I speak the opinion that has been expressed generally by the whole of the Council.
20. *Mr. Parnell.*] Have the necessary notices been given in the Government Gazette and local newspapers? Yes. There is one very strong reason why we should have some such power as this Bill would confer upon us. At the end of the year our endowment from the Government will cease. We laboured under great disadvantage in consequence of some informality that took place when the Municipal Council was first formed; through that informality we were deprived of Government endowment for two or three years. We were not able to collect the rates. We are now nearly £3,000 in debt; at the end of the year the Government endowment will cease, and we shall not have sufficient means to maintain the municipality unless we have some other sources of revenue.
21. *Mr. Macintosh.*] Have you a schedule of the rates you propose to charge when the sale-yards are established? I think it was threepence a head for cattle and a farthing a head for sheep. I should suppose that was a matter of detail which would have to be determined afterwards.
22. *Mr. Parnell.*] With what funds do you propose to erect these sale-yards? We have a sum of money set apart for it; it has been set apart for the last year, and we have made provision on the estimates this year.
23. I understood from your reply to a question put by Mr. Macintosh, that you wish this Bill to extend ten miles beyond the municipal boundaries in order to prevent competition—is that so? It is so.
24. Do you not think if you were to put up sale-yards on the allotment of land described in the schedule to this Bill, with sufficient accommodation, that that would not be sufficient in itself to prevent other people putting up sale-yards? I do not think it would.
25. Are you aware that they have large cattle sale-yards in the city of Melbourne? Yes.
26. And that their power does not extend further than the city of Melbourne? Yes, but the population of Melbourne is very different to that of Goulburn.
27. The population does not affect the sale of cattle coming from the interior? Most of the cattle sold in Melbourne are, I presume, sold for killing purposes; but Goulburn is a kind of depôt, where country people derive all the advantages of citizenship without paying anything towards the municipality.
28. If you were to afford sufficient accommodation, is it not likely that people would prefer to send cattle to your yards than to any other yards? I do not think so. There are three auctioneers in Goulburn, all of whom have their own places of business. There would be a little jealousy created in all probability by their having to give up their own places of business and coming to the sale-yards.
29. Where do they sell now? In their own yards.
30. Do not their yards afford sufficient accommodation? Two of the auctioneers have petitioned the Council to erect central sale-yards. The yards at present used are all rented. None of the auctioneers are selling on their own freehold property; in fact one of the yards is upon the estate of the late Mr. Bradley, which is now being subdivided and sold. It may be sold for villa sites.
31. You say that money has been set apart for the erection of these yards—do you mean that it has been voted by the Council? Yes.
32. And that you have it in hand? Yes.
33. Has it been borrowed? No, not that money; we did borrow £5,000 to make improvements.
34. Are you aware that an Act has been passed, called “An Act to authorize the erection and maintenance of Cattle Sale-yards at Bathurst”? Yes.
35. And are you aware that that Act only gives the Municipal Council jurisdiction within the borough of Bathurst? Yes.
36. Are you aware whether that Act is working well or not? I have not heard. The petition that was sent in to the Goulburn Municipal Council was signed by stockowners within a radius of 10 miles of Goulburn. At a meeting of stockowners held at the Court House, one of the largest stockowners, in my presence, said he should like to see the power of the Council extended to 20 miles beyond the city boundaries. It is principally on account of those gentlemen who lived within a radius of 10 miles, and the auctioneers, that the Council has taken action—and with the view also of supplementing the revenue of the Council.
37. *Mr. Macintosh.*] Do you know the area of the borough of Goulburn? I do not recollect it; we have 65 miles of streets.
38. Are there any cattle sale-yards or places where cattle are sold by auction at stated periods outside the municipal boundaries? Yes.
39. What part? About 14 miles away.

40. *Mr. Booth.*] The present sale-yards are within the boundary of the municipality? Yes.
41. Whereabouts is the land on which you propose to erect sale-yards situated—at the extreme end of Goulburn? Yes, on the Yass Road.
42. If you erect cattle sale-yards, would cattle going to them have to pay tolls? No, we have no tolls.
43. There is a toll-bar near the city, is there not? That is a Government toll. We have no tolls.
44. Then I gather that you do not propose to interfere with the toll-bar, but merely wish to erect sale-yards for the convenience of stockowners and buyers, and as a means of obtaining revenue to keep your streets in order? Yes, that is it.
45. Would cattle also have to pay the toll? Not to the Council. They would have to pay coming along the Government road.
46. Are you aware in what part of the city of Melbourne the cattle sale-yards are situated? I do not know.
47. *Mr. Macintosh.*] Suppose the sale-yards in Melbourne are 4 miles outside the municipal area of the city—that would be equal in extent to the area within which you wish to collect rates? Yes, we should be satisfied with that.
48. *Mr. Booth.*] If you do not erect sale-yards, what will become of the 9 acres 1 rood which the Government has given you? I presume the Government will resume it if we do not use it for the purposes for which it was dedicated.
49. The reason you have not used the 9 acres 1 rood of land granted you by the Government is that you consider that, unless you get an Act, as soon as you put up sale-yards, some one else will erect yards a short distance from the city boundary, and charge no fees, and thus deprive the municipality of a revenue? Yes.
50. That is one of the reasons for your not having established sale-yards? Yes. I may state that one of the principal auctioneers who petitioned the Municipal Council to erect sale-yards is renting yards on the estate of the late Mr. Bradley, which I believe is to be cut up and sold. The chances are that he or some others, if they thought they could drive a better business, would use this as an argument to the vendors.—“If you send your cattle to me I shall only charge you so much for selling, but if you send them inside the town you will have to pay the commission and also fees to the Municipality.” The Council could not exact a toll unless their powers extended beyond the municipality.
51. Do you know of your own knowledge, or by hearsay, that the Melbourne cattle sale-yards have benefited the stockowners by gathering them all at a central place at one particular time? I have heard it from a great number of people, that they believe it is greatly to the interest of the stockowners to have their stock sold at one yard and on particular days. I may state, from my own knowledge, that the auctioneers in Goulburn frequently have sales on the same day, and perhaps within an hour of each other. The buyers are therefore divided, and the owners of stock do not get so much for their stock as they would do if the buyers could all be brought together at one time.
52. *Mr. Macintosh.*] But any number of auctioneers may use the yards you propose to erect? Any auctioneer may use them without charge. The charge would not be made to the auctioneer, but only to the vendors. Vendors would have to pay a sum of money for the privilege of having their cattle sold in the yard, and also for the accommodation.
53. And several auctioneers might use the yards on the same day? Yes; the yards will be sufficiently large to allow the whole of the auctioneers to do their business there.
54. And you believe that the regulations and by-laws that would be framed by the Council would control the auctioneers, and enable trade to be conducted in a more systematic manner, and for the greater benefit of the stockowners and public? I do.
55. With regard to the thousand pounds which the Council has set apart for these yards, is it a part of the £5,000 which the Council has borrowed? Yes.
56. So that you have still to pay interest on it? Yes.
57. And, if you were to erect yards, you would have no means of ensuring your getting compensation for the outlay unless this Bill is passed? No, we should not.
58. Is the site upon which you propose to erect the yards a convenient one? Yes, very.
59. Both for the vendors and consumers? Yes.
60. *Mr. Booth.*] I presume you would fence in the whole of the 9 acres? Oh yes.
61. Is there water on the land? There is a creek running close by. We have land on the opposite side, granted by the Government in lieu of some that was promised but which was sold; I know the creek runs through that.
62. You mentioned a petition that was sent in to the Municipal Council by the stockowners, asking them to erect the yards—is that put in as evidence? No.
63. Has your Council any objection to send it here? None whatever.
64. *Mr. Macintosh.*] No petition has been sent in to the Council against the erection of the yards? No.

Frederick William Rutter, Esq., called in and examined:—

65. *Chairman.*] You are a draftsman in the Surveyor General's Office, I believe? Yes.
66. Do you know whether any land has been dedicated to the Municipal Council of Goulburn as a site for cattle sale-yards? Yes, land has been granted for that purpose.
67. What quantity of land? 9 acres 1 rood and 2 perches.
68. Has the dedication of the land been gazetted? Yes.
69. When was it gazetted? On the 15th of August, 1871.
70. Do you know whether any persons have been appointed trustees of the land? The Borough Council of Goulburn have been appointed trustees; notice of their appointment was published in the Government Gazette on the 24th November, 1871.
71. Will you read the Schedule attached to the Bill, and say whether the description of the land there given is correct? Yes, the description is correct. The land shown upon the plan extends to Bourke-street, and it might be necessary to reserve that. I think that has been lost sight of.
72. Have you got Mr. Twynam's letter with you? Yes.
73. What alteration of the description would you suggest? The addition of the words “with the resumption of so much of Bourke-street as is included within this description.” Mr. Broughton, the owner of the adjoining ground, might object, as it disturbs access to his property.
74. *Mr. Farnell.*] Then this street that subdivides the land is a right-of-way? Yes.

F. Horn, Esq.
29 April, 1875.

F. W. Rutter,
Esq.
29 April, 1875.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

REGISTRATION OF BRANDS ACT.

(RECEIPTS AND DISBURSEMENTS UNDER.)

Ordered by the Legislative Assembly to be printed, 8 July, 1875.

RETURN to an *Order* made by the Honorable the Legislative Assembly, dated 8th April, 1875, That there be laid upon the Table of this House,—

- “ (1.) A Return showing the amount annually received since the passing
“ of the ‘ Registration of Brands Act of 1866 ’ up to present date.
- “ (2.) A detailed annual statement of the disbursements that have taken
“ place under the said Act.
- “ (3.) The present amount to credit of Registration Brands Account.
- “ (4.) The like information under ‘ Diseases in Sheep Act of 1866,’ showing
“ the present amount to the credit of Sheep Account.”

(Mr. T. G. Dangar.)

REGISTRATION OF BRANDS ACT.

No. 1.

RETURN showing the amount annually received since the passing of the "Registration of Brands Act of 1866," up to the 31st December, 1874:—

	£	s.	d.
1867—Receipts	14,520	19	1
1868— Do.	1,378	12	9
1869— Do.	1,083	8	6
1870— Do.	674	2	3
1871— Do.	781	12	0
1872— Do.	890	16	6
1873— Do.	1,119	12	8
1874— Do.	1,358	16	9
Total	£21,808	0	6

Treasury, New South Wales,
1st June, 1875.

F. KIRKPATRICK,
Accountant.

No. 2.

RETURN showing the Annual Expenditure under the "Registration of Brands Act of 1866," from the passing of that Act up to the 31st December, 1874.

Service.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries of Assistant Registrar	250 0 0	250 0 0	215 0 7	224 19 5	238 0 0	238 0 0	250 0 0	250 0 0	1,076 0 0
" Registrars	918 11 0	1,138 7 5	770 10 1	827 1 8	871 17 9	903 10 2	792 5 6	999 18 10	7,241 16 5
" Clerks	712 0 0	544 1 2	200 0 0	200 0 0	188 17 2	190 0 0	200 0 0	200 0 0	2,434 18 4
Extra clerical assistance	320 10 6	275 19 2	97 18 4	47 18 4	.....	.....	.....	.....	841 1 4
Gratuity to Thos. Richards .....	.....	75 0 0	.....	.....	.....	.....	.....	98 15 0	75 0 0
" C. Potter .....	.....	50 0 0	.....	.....	.....	.....	.....	.....	50 0 0
Printing machine	652 7 6	.....	.....	.....	.....	.....	.....	.....	652 7 6
Printing	364 14 11	1,981 0 11	788 8 7	519 7 2	301 13 1	515 19 7	861 16 3	105 0 0	5,438 0 6
Type	1,125 9 0	1,513 17 7	124 1 0	62 17 6	50 15 7	66 11 0	169 11 5	120 15 2	3,233 18 9
Stationery	61 10 5	22 18 4	.....	.....	.....	.....	.....	.....	91 17 6
Law costs .....	.....	.....	8 4 6	7 13 0	.....	0 16 0	.....	.....	3 19 6
Advertising .....	.....	.....	.....	.....	.....	.....	.....	16 17 2	32 14 8
Safe and cash-box .....	.....	.....	.....	.....	.....	.....	.....	25 5 0	25 5 0
Die for Office .....	.....	5 10 0	.....	.....	.....	.....	.....	.....	5 10 0
Incidental expenses	3 10 0	0 5 11	.....	.....	.....	.....	.....	.....	5 9 11
Fees credited in error and refunded	17 15 0	12 0 0	.....	.....	.....	.....	.....	1 14 0	29 15 0
Total	4,426 8 4	5,889 0 6	2,204 3 1	1,949 17 1	1,650 17 7	1,914 17 3	2,273 13 2	1,828 17 5	22,137 14 5

Treasury, New South Wales,
1st June, 1875.

F. KIRKPATRICK,
Accountant.

No. 3.

RETURN showing the amount at the debit of the "Registration of Brands Act of 1866" on the 31st December, 1874.

	£	s.	d.
Receipts as per Return No. 1	21,808	0	6
Expenditure as per Return No. 2	22,137	14	5
Debit balance, 31st December, 1874	£329	13	11.

Treasury, New South Wales,
1st June, 1875.

F. KIRKPATRICK,
Accountant.

3

No. 1.

RETURN showing the amount annually received since the passing of the "Diseases in Sheep Act of 1866," up to the 31st December, 1874.

	£	s.	d.
1867—Receipts	12,751	1	10
1868— Do.	8,324	2	9
1869— Do.	5,439	9	0
1870— Do.	9,348	18	5
1871— Do.	9,328	11	2
1872— Do.	9,011	13	6
1873— Do.	10,685	15	6
1874— Do.	11,298	11	9
Total	£ 76,188	3	11

Treasury, New South Wales,
28th May, 1875.

F. KIRKPATRICK,
Accountant.

No. 2.

RETURN showing the Annual Expenditure under the "Diseases in Sheep Act of 1866."

Service.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	Total.
Salaries of Inspectors	£ s. d. 8,007 11 6	£ s. d. 9,314 9 4	£ s. d. 7,649 2 6	£ s. d. 7,153 4 1	£ s. d. 6,759 4 2	£ s. d. 7,330 16 4	£ s. d. 7,449 12 6	£ s. d. 7,672 13 10	£ s. d. 61,376 14 3
" Clerk	23 13 1	23 13 1	23 13 1	100 0 0	107 0 0	150 0 0	150 0 0	150 0 0	680 13 1
" Messenger .....	.....	.....	.....	.....	.....	30 0 0	100 0 0	100 0 0	230 0 0
" Office-keeper .....	.....	.....	.....	.....	.....	.....	.....	36 0 0	36 0 0
" Boundary-riders	1,031 14 6	525 19 5	1,086 10 10	1,187 17 4	1,359 19 1	1,402 5 8	1,437 0 2	1,488 0 0	9,519 7 0
Postage and stationery allowances	151 19 2	174 1 7	167 1 4	158 2 10	151 6 8	127 16 10	174 9 0	181 12 4	1,286 9 9
Forage	100 0 0	182 8 4	185 10 8	193 0 0	344 2 6	296 3 6	502 13 6	500 6 9	2,304 5 3
Keeping charge of quarantine yards .....	.....	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	50 0 0	45 16 8	345 16 8
Rent of	32 17 0	81 12 0	68 18 6	70 3 6	68 16 6	59 3 4	37 10 0	5 0 0	425 0 10
Travelling expenses	136 17 4	137 15 6	87 2 0	101 5 0	100 5 0	27 17 0	113 14 6	31 7 0	735 3 4
Wages of labourers	1 0 0	64 7 4	5 7 1	.....	39 5 0	66 16 5	107 14 2	90 15 8	375 5 8
Destroying sheep	5 10 0	.....	4 8 0	7 12 6	9 13 0	1 3 6	.....	.....	28 7 0
Compensation for sheep destroyed	687 18 8	.....	.....	31 6 8	.....	.....	.....	.....	719 5 4
Law costs	49 0 6	.....	7 3 6	9 10 0	12 0 0	.....	2 8 6	1 17 2	81 19 8
Tanks for dipping and troughs	46 19 3	.....	.....	.....	3 4 8	6 2 0	46 8 6	.....	102 14 5
Sheds, gates, and fencing	386 0 0	253 3 6	51 10 0	.....	6 6 0	30 0 0	517 18 3	60 19 0	1,305 16 9
Printing	83 2 1	50 17 9	34 14 3	21 6 11	43 13 10	8 1 9	5 18 6	.....	247 13 1
Advertising, telegrams	1 4 0	1 4 8	.....	.....	.....	1 11 6	2 5 9	.....	6 5 11
Firewood .....	.....	1 8 0	1 12 0	6 8 0	5 13 6	6 8 0	4 5 0	.....	25 14 6
Medicaments for dressing, &c. .....	.....	8 10 0	.....	.....	4 9 8	15 7 0	42 4 7	27 11 8	98 2 11
Weighing-machine and chaff-cutter .....	.....	5 15 0	4 15 0	.....	.....	.....	.....	.....	10 10 0
Surgeons' fees	1 1 0	2 7 6	.....	.....	.....	3 5 6	.....	.....	6 14 0
Cartage	1 5 0	.....	1 16 0	.....	.....	.....	4 16 6	6 17 6	14 15 0
Office rent .....	.....	.....	.....	.....	13 0 0	.....	.....	.....	13 0 0
Ploughing and sowing paddock and planting trees .....	.....	.....	.....	.....	.....	.....	68 15 9	19 15 0	88 10 0
Laying on water .....	.....	.....	.....	.....	.....	.....	44 6 8	.....	44 6 8
Acting Secretary to Board of Inquiry .....	.....	.....	.....	.....	.....	.....	50 0 0	.....	50 0 0
City rates .....	.....	.....	.....	.....	4 5 0	4 5 0	2 2 6	.....	10 12 6
Maps .....	.....	.....	.....	.....	.....	10 3 0	2 12 6	1 5 0	14 0 6
Blinds .....	.....	.....	.....	.....	.....	9 18 11	14 15 0	.....	24 13 11
Incidental expenses .....	.....	.....	.....	.....	4 7 0	0 10 6	9 16 8	6 8 2	21 2 4
Refund of amounts improperly credited .....	.....	18 0 0	147 17 6	929 15 0	119 9 3	.....	.....	.....	1,215 1 9
TOTAL	10,724 0 0	10,895 13 0	9,553 9 2	10,019 11 10	9,207 0 10	9,637 15 9	10,891 8 6	10,476 5 9	81,405 4 10

Treasury, New South Wales,
28th May, 1875.

F. KIRKPATRICK,
Accountant.

No. 3.

RETURN showing the amount at the credit of the "Diseases in Sheep Act of 1866," on the 31st December, 1874.

Balance from old account, 27 Victoria, No. 6... ..	£ s. d. 7,866 18 7
Add receipts as per Return No. 1	76,188 3 11
	£84,055 2 6
Deduct expenditure as per Return No. 2	81,405 4 10
Balance on 31st December, 1874	£ 2,649 17 8

Treasury, New South Wales,
28th May, 1875.

F. KIRKPATRICK,
Accountant.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

UNHEALTHINESS OF SYDNEY HARBOUR.

(REPORTS FROM COMMODORE GOODENOUGH AND CAPTAIN NARES.)

Ordered by the Legislative Assembly to be printed, 9 August, 1875.

No. 1.

COMMODORE GOODENOUGH to GOVERNOR SIR HERCULES ROBINSON.

Her Majesty's ship "Pearl,"
Sydney, 13 April, 1875.

SIR,

I have the honor to ask your Excellency's attention to the large number of cases of enteric fever which have recently appeared in two ships of this squadron during, or immediately after, their remaining at anchor in Farm Cove, Sydney.

2. I have been for some time in doubt as to whether the probabilities were in favour of the disease having been contracted on shore when men were on leave, or on board and at the anchorage, the early cases seeming to show that the men might well have contracted it on shore, as they were traced to have slept in low and poisonous parts of the town, while the officers, who almost invariably slept on board their ships, were not attacked.

3. But as this fever has now attacked a man of the "Pearl," who has not yet put his foot on shore at Sydney since the arrival of that ship from Adelaide on the 22nd February, it seems that there can be no doubt that in some cases the fever has been contracted on board the ship, and I have no doubt that in such cases it is due to the very foul state of the harbour in Sydney Cove and Farm Cove.

4. There can be no question that this condition of those anchorages is due to the fact, that the drainage of a great part of Sydney is delivered into the harbour all around the head of Sydney Cove, where the water is always in a black and stinking state; and also off the end of Fort Macquarie, where a strong smell is nearly always apparent by day and constantly by night.

5. It seems highly probable that the unhealthy parts of the town where seamen sleep, have also contributed to produce these fevers, which, beyond the shadow of a doubt, have had their origin in Sydney.

6. The cases of fever which have appeared in the ships whose crews have been attacked are as follows:—

H.M.S. "Pearl," arrived at Sydney, 25 October, 1874. Left Sydney for South Australia, 15 January, 1875. Returned to Sydney, 22nd February, 1875:—

Cases of Fever.

Date of appearance.	Result.
26 January 1 case... ..	Invalided.
27 " 1 "	Died 14 February.
3 February 1 "	Died 11 February.
4 April 1 "	Sent to hospital.

H.M.S. "Barracouta," arrived at Sydney from Brisbane, 9 February, 1875. Left Sydney for Hobart Town, 13 March, 1875. Returned to Sydney, 10 April, 1875 :—

<i>Cases of Fever.</i>					
Date of appearance.					Result.
25 February	1 case...	...	} Sent to Sydney Infirmary, where one patient died.
8 March	...	...	1 " ...	...
31 "	...	...	1 " ...	...
29 March	2 cases	...	} Cases all on board "Barracouta" in Quarantine, at Sydney.
30 "	...	...	1 case...	...
2 April	...	...	1 " ...	...
1 "	...	...	1 " ...	...
4 "	...	...	1 " ...	...
5 "	...	...	1 " ...	...
6 "	...	...	3 cases	...
7 "	...	...	1 case...	...
8 "	...	...	6 cases	...
9 "	...	...	3 "	...
9 "	...	...	1 case...	...
10 "	...	...	1 " ...	...

Two additional cases, which appeared during "Barracouta's" passage to Hobart Town, were left in hospital at the latter place.

I have, &c.,
J. G. GOODENOUGH,
Captain and Commodore, 2nd class, Commanding Australian Station.

No. 2.

R. HALL, Esq., to THE UNDER SECRETARY OF STATE FOR THE COLONIES.

Admiralty, 18 January, 1875.

SIR,

I am commanded by my Lords Commissioners of the Admiralty to transmit, for the information of the Secretary of State for the Colonies, extracts from a report dated 19th November last from Captain Nares, of H.M.S. "Challenger," in regard to the sanitary condition of Sydney Harbour, New South Wales, with reference to the contemplated Commissariat Store and Military Hospital at that place.

I am, &c.,
ROBERT HALL.

[Enclosure in No. 2.]

EXTRACT from letter of hydrographic proceedings of H.M.S. "Challenger," dated from Hongkong, 19 November, 1874—Captain G. E. Nares.

I FOUND the anchorage in Farm Cove to be far less healthy than it was during my last visit in 1867, and I attribute the number of cases of sickness which occurred amongst the ship's company on our first arrival there in the "Challenger" to the effluvia arising from the drain which is constantly discharging its contents in the Harbour at Fort Macquarie. I believe it is contemplated to build a new Commissariat Store on Garden Island and to establish a hospital there; if so, I should wish to warn the authorities against choosing that site. It is astonishing how quickly the floor of the anchorage in the neighbourhood of Farm Cove is being covered with the refuse and filth of the town, carried off by the drain and spread over the anchorage by the ebb tide.

The moorings in Farm Cove have already had to be moved in consequence of the unhealthiness of the previous position, and even at the moorings off Lady Macquarie's Point the smell is frequently offensive. Considering the ever advancing bank of filth and the compound rate of increase in the amount of the discharge of the drain in consequence of the increase of the population, it is certain before another twenty years have elapsed, unless the drain is diverted, the whole anchorage, extending from Fort Macquarie to Garden Island, will be in an unhealthy state, and that the island itself, however conveniently situated, will not be a healthy building site. On the other hand, considering that the whole drainage of the city is well known to be in the most shameful state, requiring only an epidemic to awake the authorities up to a better scheme, and that the Governor's family living at Government House already feel the effects of the present arrangement nearly as much as the navy do, it is most probable that before the time I have mentioned has elapsed, the drainage will be diverted from its present outfall, in which case no better or more convenient site could be chosen than Garden Island.

1875.

NEW SOUTH WALES.

HARBOUR OF REFUGE AT TRIAL BAY.

(REPORT RESPECTING EMPLOYMENT OF PRISON LABOUR IN FORMING.)

Presented to Parliament by Command.

THE COMPTROLLER GENERAL OF PRISONS AND THE ENGINEER-IN-CHIEF FOR HARBOURS AND RIVERS to
THE COLONIAL SECRETARY.

Department of Prisons, New South Wales,
Comptroller General's Office,
Sydney, 14 April, 1875.

SIR,

In pursuance of instructions, we do ourselves the honor to report upon the project of forming a Harbour of Refuge at Trial Bay by means of prison labour. The work having already been determined upon by Parliament and by the Government, it appears to be only necessary for us to submit the views as to carrying it out at which we have arrived after a careful consideration of the subject, and chiefly from a prisons administrative point of view.

The project affords the first condition needed for the establishment of a Public Works Prison, as shown by Mr. Maclean's Report of the 4th of August, 1870, upon the Prisons of the United Kingdom. The formation of the harbour will afford continuous work for a period beyond fifteen years, and so warrant the erection of a prison according to the model of the English Public Works Prisons, providing the means of properly carrying out prison discipline.

The advantages of establishing such a Public Works Prison are numerous. There will be provided, without difficulty, abundant remunerative employment for the longer sentenced criminals of the Colony, together with the means of working them in the open air, and thus the treatment of that class of offenders would be brought into accordance with the modernly accepted ideas and the practice of other Countries.

The character of the employment will be, not the mere casting of stone into the sea, as the work will be effected by mechanical means, and the least skilled form of instruction to be imparted will be quarrying,—an occupation that commands at all times in this Colony a high rate of wages; consequently the very important desideratum will be gained of the prisoners being ultimately discharged with a knowledge in handicrafts enabling them to obtain an honest livelihood.

Furthermore, there will be afforded the means of amelioration of the punishment of long sentences, in a mode midway between tickets-of-leave (to which there are serious objections in the conditions of semi-liberation in the Colony) and final release, by granting licenses for employment upon the works at gradually increasing rates of remuneration, the men having licenses to be hutted outside the prison.

Such a plan would enable men to be discharged, not only with training to earn a living acquired under a system inculcating self-control, but with means to start advantageously in their future life. This plan in some degree assimilates to the purposes of the well known intermediate prison of Lusk, in Ireland, and is a large extension of the ideas upon which that prison was founded. It was verbally suggested by Mr. Maclean to Sir Walter Crofton, who warmly commended its adoption.

While advocating the project, we are not insensible to some disadvantages to which it is right that the attention of the Government should be directed. Experience has condemned the formation of important penal establishments at distances remote from the seat of government and central authority. This objection is in part met by telegraphic and steam communication. The question of expense of management comes also into account. In a locality so isolated from extraneous assistance as Trial Bay, the staff must be upon a scale competent within its own resources to maintain a complete control over the prisoners. All the officers must be lodged and provisioned, and where in the neighbourhood of Sydney the duties of Surgeon, Chaplain, and other officials could be performed by visiting officers, resident and fully salaried officers must be provided. Nevertheless, as there does not appear to be any other public work having the condition of permanency warranting the erection of a proper prison upon which prisoners could be employed, we think that the disadvantages must be accepted as being out-balanced by the advantages.

An important consideration presents itself, as to the extent of prison labour that would be available. By data recently obtained, the number of prisoners under sentences to hard labour upon the roads or other public works was..... 235

Exempt from first class labour by reason of illness or other causes 52

Not available by reason of being in first stage of probationary separate treatment in Berrima Gaol—an essential part of prison administration 30

82

Leaving the number available 153

At the commencement of the undertaking, there is estimated to be of these 153 some thirty-six who have not two years of their sentences to complete, and whose removal to Trial Bay would not therefore be attended with any advantage. This would leave the number practically available at 117.

In that view, the plan for the prison which has been separately reported upon provides in the first instance for 128 prisoners.

In the contemplated criminal legislation it is anticipated that all sentences beyond two years will be to "penal servitude," as in England. This would furnish an additional 120 prisoners, according to existing circumstances, for the works. Provision for the 128 having been made by free labour, we have acted upon the idea that these prisoners could themselves erect the necessary extension for the others to follow, and this could be done simultaneously with the harbour works, and by degrees.

The founding of a Public Works Prison, capable of containing the number of prisoners indicated above, would bring about a most important result affecting the general prison administration of the Colony. With the present means of accommodation in Darlinghurst, and extensions in progress at Parramatta Gaol, these establishments, assisted by the Gaols at Maitland, Bathurst, and Goulburn, would be capable of accommodating in separate cells, all the prisoners under sentences up to two years whose periods of service would warrant their removal from the lesser country gaols. Thus would be introduced the system of separation, now in operation in England, superseding the difficulties of classification, and breaking up the associations of prison life, so conducive to the propagation of crime, and bearing with it effects of good, not readily to be understood by those who have not given the subject a careful study.

It may be in place here to mention that the first cost of the prison for 128 men is estimated at £28,000. Of this, only £14,600 is the amount estimated for the actual accommodation of the prisoners. The difference in cost of such a prison as compared with one providing only for large dormitories within a stockade, and which at all times has been productive of such mischief, is £6,500, an amount that, having in view the advantages to be gained, must be regarded as comparatively immaterial. The plan has been prepared with a most careful attention to economy, all the buildings, other than for the security of custody, being proposed to be constructed of timber, which indeed, with iron sheeting, we were prepared to adopt for the cells, had there appeared to have been any material economy in so doing.

We have, &c.,

HAROLD MACLEAN.
E. O. MORIARTY.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

ENCROACHMENT OF THE MURRUMBIDGEE AT WAGGA WAGGA.
(PETITION—MAYOR, ALDERMEN, AND OTHERS.)

Ordered by the Legislative Assembly to be printed, 10 May, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the Mayor and Aldermen of the Borough of Wagga Wagga, and the Inhabitants of the Town and District,—

RESPECTFULLY SHOWETH:—

That a piece of land, the property of the Government, and known as the Wharf Reserve, is situate in the most central portion of the South Ward of the Borough of Wagga Wagga, immediately upon the bank of the Murrumbidgee, and bounded thereby northerly.

That owing to the natural curvature of the channel, the stream at all times, but especially when its volume is increased by rains, strikes with considerable force against the perpendicular face of the Reserve in question.

That the recoil of the water at this point produces a powerful eddy, which by its continuous action upon the peculiarly friable deposits of which the Reserve is composed, is rapidly and certainly eating its way into the centre of the town.

That this destructive process has been going on steadily for years, and the inhabitants, fully and keenly alive to the danger threatening them, have made repeated and earnest applications to the Government for assistance to check the ruinous advance of the river, but without any practical result.

That, by the engulfment of the bank, the encroachment of the stream has at length assumed such proportions as reasonably to alarm the owners of valuable properties in the immediate neighbourhood, and excite an intense anxiety in the minds of the inhabitants generally, in view of the evident result. It is clear to your Petitioners that if the advance of the river be not stayed, the total destruction of the western portion of the town is merely a question of time, but one which must be determined finally in a very few years.

That your Petitioners are utterly unable to raise the means required for securing the bank, and thereby checking the danger which imminently threatens them.

That your Petitioners believe their case to be a peculiar and exceptional one, which should command the immediate attention and aid of the Government, one which in effect should long since have met with the consideration it merited at the hands of the authorities.

In support of this view your Petitioners desire to point out that every inch of land in the vicinity of the Reserve in question has long since been purchased and is very highly improved.

That the Reserve being Crown Land, your Petitioners conceive it to be most unjust that the Executive should allow the interests of the inhabitants to be threatened with destruction by the inroad of the river through Government land, without an effort to arrest the advancing mischief.

In view of the indifference with which all applications have hitherto been treated by previous Governments, your Petitioners humbly and earnestly pray the intervention of your Honorable House in this very pressing and emergent case, and that you will suggest and recommend such measures for the immediate and practical relief of your Petitioners as to your Honorable House shall appear necessary and equitable.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 8 signatures.]

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

STEAM-TUG, RICHMOND RIVER.

(PETITION—RESIDENTS OF RICHMOND RIVER.)

Ordered by the Legislative Assembly to be printed, 8 April, 1875.

To the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned Delegates of the Richmond and Tweed Rivers League, appointed by authority conferred at Public Meeting,—

HUMBLY SHOWETH:—

That your Petitioners beg to draw your attention to the acknowledgment by your Honorable House of a steam-tug being urgently required to be stationed at Ballina, Richmond River, by the fact of the sum of £5,000 having been voted for the building of such a vessel as it was supposed would be suitable for the purpose.

That, as your Petitioners believe, independent of other reasons, it was owing to the smallness of the sum voted no one was willing to tender for the work, and that, therefore, the late Ministry promised a further sum of £4,000 should be placed on the Estimates for the purpose of supplementing the former grant, which promise, however, unfortunately, could not be kept in consequence of the sudden dissolution of Parliament.

That in appeals made from time to time to your Honorable House, praying that some improvement might be effected at the bar at the entrance of the Richmond, long lists of losses of vessels and of casualties to others were fully set forth, and that even since the promise of a tug-boat was made by the late Ministry two valuable vessels have been lost on the bar, and two damaged; which, as well as many of the former losses, could not have occurred had a tug been granted years ago, when prayed for.

That a powerful tug, "The Challenge," built of timber in Victoria, and now stationed at Moreton Bay, was employed by a Company for a time at Ballina, and, from experience of her serviceable qualities during her stay there, your Petitioners are of opinion that a similar vessel would better meet the requirements of the port, be more suitable for a bar, and be less expensive to maintain than an iron vessel, for the construction of which plans and specifications were drawn up and tenders invited.

That, therefore, your Petitioners humbly pray your Honorable House to take these promises into your favourable consideration, and direct such steps to be taken as to your Honorable House may seem expedient, in order that the port of Ballina shall be supplied, with as little delay as possible, with a powerful steam-tug suitable in every way for a shifting bar harbour.

And your Petitioners, as in duty bound, will ever pray, &c.

[Here follow 7 signatures.]

1875.

NEW SOUTH WALES.

NANUKU PASSAGE, FIJI GROUP.

(PLAN OF, AND REPORT ON ISLANDS IN.)

Presented to Parliament by Command.

COMMODORE GOODENOUGH to HIS EXCELLENCY THE GOVERNOR.

Her Majesty's Ship "Pearl,"
Sydney, 31 December, 1874.

SIR,

I have the honor to forward, for your Excellency's information, copy of a plan* of the Nanuku passage, the N.E. entrance to the Fiji Group, together with some remarks on it and the adjacent islands, which have been made by Lieutenant Rendell, commanding Her Majesty's schooner "Beagle," who has been engaged in surveying that portion of the group.

I have, &c.,

JAMES G. GOODENOUGH,
Captain and Commodore (2nd class),
Commanding Australian Station.

REMARKS ON THE ISLANDS IN NANUKU PASSAGE.

Taviuni.—There is anchorage off Vuna Point in 10 fathoms, sandy bottom, with Hamilton's store, a prominent zinc building on the beach, in line with a small house on the hill behind, about E.S.E., and close into the beach a long reef extends $1\frac{1}{2}$ mile in a westerly direction from the S.W. Point, which always breaks. The South Point of Taviuni is laid down nearly 2 miles too far south on the present chart. It is steep-to, and may be approached within 2 cables. The east coast is precipitous and steep-to (except a small reef off the S.E. part, where Salia Levu is situated) for 13 miles, the coast trending N.E. $\frac{1}{2}$ N., where it forms a point with a reef running off it about $\frac{1}{2}$ of a mile, and then runs back into a deep bay with a fringing reef. Abreast of Qamea there is a small promontory, with good anchorage to the northward of it in Vuri-Vuri Bay, 15 fathoms, level sandy bottom. This bay is well protected from nearly all winds, and there is a good fresh-water stream discharging itself into the S.W. part of the bay. There are one or two outlying reefs in the Straits off this promontory, but they are easily distinguished on a clear day. There is a long reef running off from the Point to the northward of Vuri-Vuri Bay, which reduces the width of Tasman's Straits to less than a mile. The tidal streams are very strong here—the ebb to the northward and the flood to the southward—and it is dangerous for sailing-vessels to attempt to pass the Straits, unless with a commanding breeze.

Vuna Point is in lat. $16^{\circ} 42' 10''$ S., and long. $179^{\circ} 51' 30''$ E.

Qamea is a well-wooded island indented with deep bays, and divided from Laucala by a narrow strait, impassable except by boats. The two islands are nearly surrounded by a reef, from a mile to a mile and a half from the shore. There is good anchorage in nearly all parts inside this reef to the southward of the islands. It can only be entered from the westward where it is open, and where there are two detached patches which form entrances. The N. and N.E. parts of these islands were not examined.

Thane Reef is about $\frac{1}{2}$ a mile in diameter, and is situated $6\frac{1}{2}$ miles from Laucala, with south point of that island bearing S.W. by W. It breaks heavily.

Nanuku consists of the small coral islets about $\frac{1}{2}$ of a mile apart, lying N. by E. $\frac{1}{2}$ E. and S. by W. $\frac{1}{2}$ W. from each other. They are situated about $\frac{3}{4}$ of a mile from the end of a long reef which runs away from the N.N.E. 3 miles, then trending N.E. for 6 miles, it turns off abruptly W.N.W. Numerous detached patches were seen to the westward of the reef, reaching as far as could be seen from the mast-head, but they were not examined. No anchorage could be obtained in the neighbourhood of these islands, the reef being steep-to on both sides. The south islet is in lat. $16^{\circ} 42' 30''$ S., long. $179^{\circ} 29'$ E.

Nuku-Basaga—consists of two small islets lying N.E. by E. and S.W. by W. $\frac{1}{4}$ a mile apart; they are situated at the edges of a coral reef extending $1\frac{1}{2}$ mile N.E. by N. and S.W. by S., and 1 mile N.W. by N. and S.E. by E. There is an entrance on the west side for small vessels, but it is full of coral patches and not recommended. H.M.S. "Beagle" anchored on the north side of the reef in 10 fathoms coral bottom, but it is a very unsafe anchorage on account of the heavy swell caused by the strong tides which run round these islands. There are detached patches stretching towards Nuku-manu, which island appeared to be laid down about 3 miles too far to the northward. The large island is in lat. $16^{\circ} 34' 45''$ S., and long. $179^{\circ} 16' 45''$ W. By true bearings taken from Taviuni and Nuku-Basaga, Budd Island would appear to be placed 5 miles to the northward of its position.

Nuku Levu or Qele Levu, called also Miku Balavu, is the largest island in this part of the group. It is in lat. $16^{\circ} 9'$ S., long. $179^{\circ} 10' 30''$ W. It is of coral formation, principally coral rock, rising in some places to the height of 30 feet. It is about 3 miles in circumference, and there are several small islets and rocks off its western end. It is steep to on the east side, and is situated at the N.E. point of a long coral lagoon running east and west, which is 12 miles long by 5 miles wide in its broadest part. There are several entrances at its western end, the best one being about 8 miles W.S.W. of the larger island. The lagoon is perfectly clear of dangers, and good anchorage may be obtained in any part of it in from 12 to 13 fathoms. The island is covered with cocoa-nut trees, but no fresh water was found in it.

Korotuna is in lat. $16^{\circ} 4'$ S. and long. $179^{\circ} 26'$ W.; it is about $\frac{3}{4}$ of a mile long, N.E. and S.W., and is surrounded by a fringing reef, extending not more than $\frac{1}{2}$ of a mile from it.

Wailagilala consists of two small coral islets in lat. $16^{\circ} 45'$ S., long. $179^{\circ} 8'$ W. The islands are joined by a sand-spit, and are situated at the N.E. part of a coral lagoon extending 3' N. by W. and S. by E., by $1\frac{1}{4}'$ W. by S. and E. by N. and having an entrance on the western side. There is good anchorage in the lagoon in 15 to 18 fathoms (sand and coral), and it appears to be free from dangers. The entrance is $\frac{1}{2}$ a cable wide, with 7 fathoms in the centre, and the island bearing N. 38° E.

The whole of these islands bear the same character. They are low coral islands covered with tropical vegetation, but no fresh water could be discovered on any of them. They are uninhabited, but are visited periodically by the natives to collect the cocoa-nuts.

The Rock marked dangerous in the Nanuku passage was searched for without success by H.M.S. "Beagle."

Naitaba is a high basaltic island, nearly triangular, with its apex to the S.E., on which point there is a remarkable peak. It is entirely surrounded by a reef, having deep water inside, but no entrance except for boats. Owing to the heavy swell, it was impassable when the "Beagle" was off the island.

Yacata, or Cap Island is inaccessible except in very smooth weather, for the same reason. There are several islands inside the reef.

Nuga-tobc Reef consists of three small islets on a small coral reef, the western of which is in lat. $17^{\circ} 15' 40''$ S., long. $179^{\circ} 40'$ W.; it is 5 miles W.S.W. from the west point of Yacata.

The Tidal Streams are very strong between the northern islands of the group, and are a good deal affected by the islands and reefs, but their general direction is the flood to southward and the ebb to the northward; they are also much affected by the prevailing winds—a strong surface current to the westward having been met with to the north of Wailagilala after a continuance of strong trade winds.

FREDK. J. RENDELL,
Lieut. Command. H.M.S. "Beagle."

[One plan.]

FIJI GROUP

NANUKU PASSAGE.

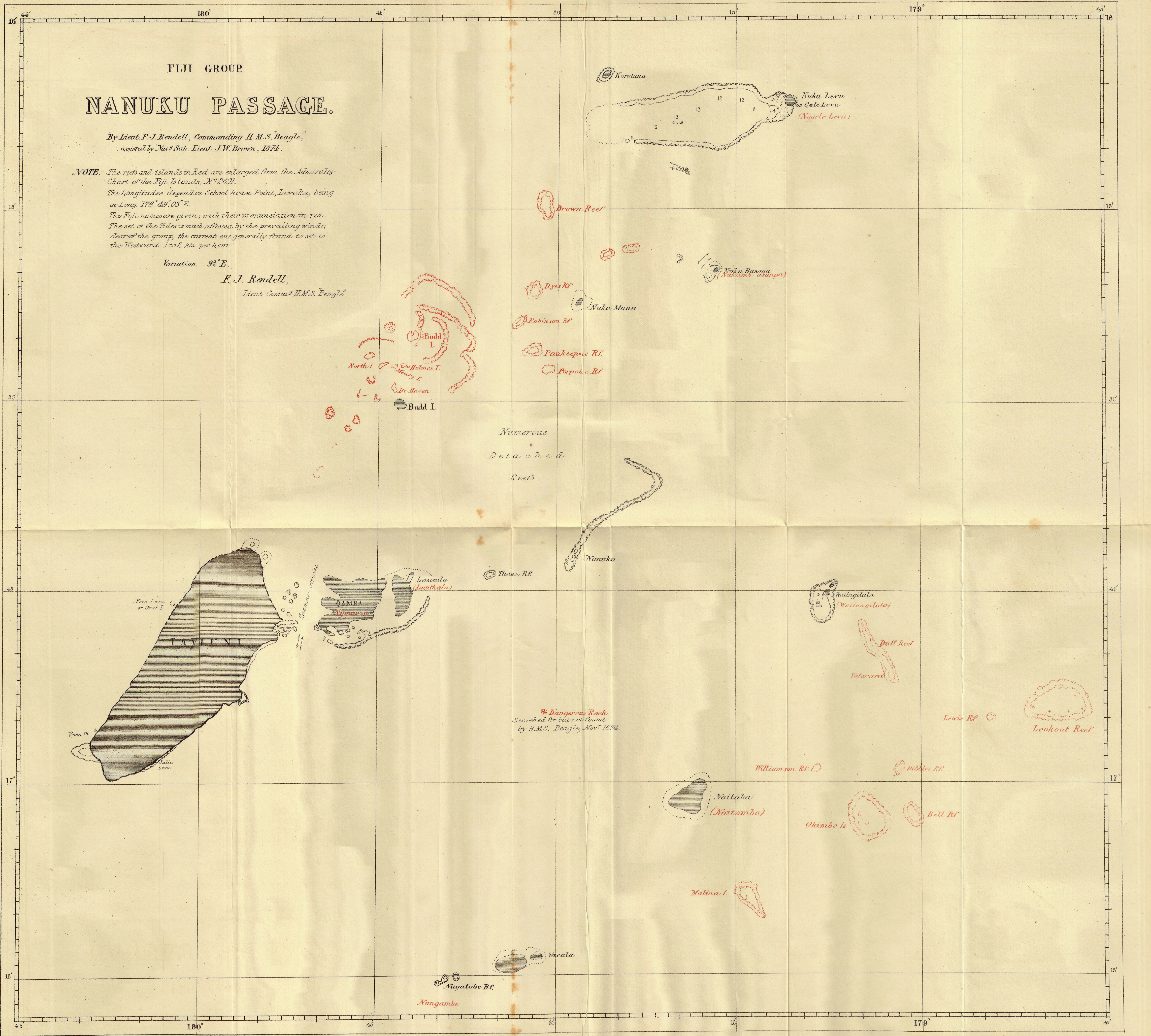
By Lieut. F. J. Rendell, Commanding H.M.S. "Beagle,"
assisted by Nav^y Sub. Lieut. J. W. Brown, 1874.

NOTE. The reefs and islands in Red are enlarged from the Admiralty
Chart of the Fiji Islands, N^o 2691.
The Longitudes depend on School-house Point, Levaka, being
in Long. 178° 49' 03" E.
The Fiji names are given, with their pronunciation in red.
The set of the Tides is much affected by the prevailing winds;
clear of the group, the current was generally found to set to
the Westward 1 to 2 kts. per hour.

Variation 9½° E.

F. J. Rendell,

Lieut. Comm^d H.M.S. "Beagle."



1875.

NEW SOUTH WALES.

VOYAGE BETWEEN NEW SOUTH WALES AND CHINA.

(REPORT FROM CAPTAIN NARES RESPECTING BEST ROUTE.)

Presented to Parliament by Command.

CAPTAIN NARES to GOVERNOR SIR HERCULES ROBINSON.

H.M.S. "Challenger,"
Wellington (N.Z.), 2 July, 1874.

SIR,

During the stay of the "Challenger" at Sydney, knowing how important it would be to the trade of the Colony that all the information obtainable relative to the best course for vessels to pursue in making the voyage between New South Wales and China should be compiled with a view of publishing it for general information, Navigating Lieutenant Tizard, belonging to this ship, who has had great experience in the navigation of the China Seas, undertook the task; and I have the honor to forward the result of his investigations to your Excellency, for the benefit of the many interested.

I may add, that I fully endorse the recommendations contained in the paper, which has been drawn up with much thoughtful care.

I have, &c.,
G. S. NARES, Captain.

ROUTE BETWEEN AUSTRALIA AND CHINA.

The passage between Australia and China is yearly becoming of more importance, owing to the increase of traffic between the two Countries; and, as the best route to follow is yet doubtful, any light that can be thrown on the time taken, and the wind and weather experienced on the voyage, must be useful information to vessels pursuing this track. Captain Allen, the Harbour Master at Newcastle, has collected for the past four years an epitome of the log of each vessel leaving that port; and he has kindly placed at my disposal the abstract logs between Newcastle and the ports in China and Japan, from which I have plotted the track of each ship. The following remarks and tables have been compiled after a careful study of the logs and the routes adopted.

During these four years, four different routes have been taken to China; three of them are to the eastward of New Guinea, and one (the Torres Strait route) to the westward.

The easternmost route east of New Guinea, which I shall call the "outer route to China," follows a line on the chart from Newcastle to Norfolk Island; from thence to Matthew Island, then north along the 171st meridian to 11° S., then N.N.W. to Pleasant Island, crossing the equator in 166° east, then through the Eastern islands of the Caroline Group to their destinations. The length of this route is—

From Newcastle to Hongkong	6,150 miles.
" Shanghai	6,000 "
" Yokohama	5,500 "

Ten vessels have adopted this route, and their average passage is sixty-four days. The shortest passage (forty-nine days) was made in the "Zenobia," which ship left Newcastle 2nd April. The longest passage was made by the "Windhover," which ship left Newcastle December 21st; she took seventy-four days on her voyage to Hongkong.

Another route east of New Guinea, which I shall call the "middle route to China," follows a line on the chart from Newcastle, midway between Lord Howe's Island and the Elizabeth Reef, from thence to the D'Entrecasteaux Reef on the N.W. extreme of New Caledonia, then between the Solomon and Santa Cruz Islands, and from thence N.W. by N. to the equator, which is crossed in 159° E. From the equator a northerly route is taken through the middle of the Caroline Group, and then a course is shaped for the port bound to.

The length of this route is—

From Newcastle to Hongkong	5,500 miles.
" Shanghai	5,400 "
" Yokohama	4,900 "

Twenty-nine vessels have adopted this track, and their average passage is forty-eight days, or sixteen days less than that of the "outer route." The quickest passage made was by the "Thermopylae," which ship left Newcastle on February 10th, and arrived in Shanghai 10th March, or in twenty-eight days. The longest passage recorded is sixty-five days, or the average passage by the "outer route." This passage was made by the "E. J. Spence," which ship left Newcastle in April.

The third route (east of New Guinea), which I shall call the "inner route to China," follows a line from Newcastle N.E. to the 157th meridian, then due north on that meridian to the latitude of the Pocklington Reef in 11° S., then either to the N.W., between New Ireland and the Solomon Group, or to the N., through the Bougainville Straits, between Bougainville and Choiseul Islands, then north to the equator, which may be crossed in about 153° E., from which position a straight course may be shaped for either Shanghai or Yokohama; but for Hongkong a course to the northward of the straight line to the Balintang Channel.

The length of the route is—

Newcastle to Hongkong	5,000 miles.
" Shanghai	4,900 "
" Yokohama	4,600 "

Five sailing-vessels and one steamer have adopted this track. The steamer made the passage in twenty-three days to Shanghai. The average length of passage of the sailing-vessels is forty-eight days, the same as the "middle route"; the shortest (thirty-four days) having been made in April, by the "Erie," and the longest (seventy-five days) in July, by the "Helen Malcolm." In the same month, however, another vessel, the "Woodlark," made the passage in thirty-nine days.

The fourth, or Torres Strait route, follows a line from Newcastle N.E. to the 157th meridian; then north on that meridian to the latitude of the Mellish Reef; then N.W. for Bligh's entrance to Torres Strait. When through the strait, the route is between the Tenimber and Arrow Islands for the passage between Ceram and Bouru into the Molucca Channel; then round the N.E. end of Celebes Sea, through the Basilan Channel into the Sulu Sea; and then through Mindoro Strait into the China Sea. The distance from Newcastle to Hongkong by this route is 5,300 miles, and it has been taken by only one ship, the "England," which made the passage in forty-one days in the month of July.

The annexed Tables give the statistics of each ship whose track has been plotted.

TABLE I.

STATISTICS of the "Outer Route to China."

Ship's Name.	Port in Australia sailed from.	Destination.	Date of Leaving.	Date of Arrival.	Number of Days on Passage.	Latitude of getting S.E. Trade	Latitude of losing S.E. Trade and getting West Monsoon.	Longitude of crossing Equator.	Latitude of getting N.E. Trade.	Latitude of losing N.E. Trade.	Remarks.
Greyhound ...	Newcastle	Hongkong	12 Jan.	10 March ...	57	25° S.	15° S.	167° E.	Equator	.....	Carried the N.E. monsoon to Hongkong. Three days in a hurricane, lat. 15° S., between New Hebrides and Fiji Islands.
Catherine Jane	Newcastle	Hongkong	22 Jan.	27 March ...	64	None	14° S.	159° E.	3° 0' S.	.....	Experienced variable winds from Newcastle to 14° S. lat. No S.E. trade.
Leicester	Newcastle	Shanghai	6 March ...	11 May	66	20° S.	11° S.	167° 30' E	Equator	23° N.	S.E. trade light and variable. West monsoon squally with rain.
Rattler	Newcastle	Hongkong	18 March ...	18 May	61	20° S.	13° S.	166° E.	Equator	20° N.	No west monsoon, but light N.E. and east winds from 13° S. to the equator.
Zenobia	Newcastle	Hongkong	2 April ...	21 May	49	20° S.	15° S.	163° E.	5° 0' S.	17° N.	Had south and S.E. winds on first starting, which carried her into the trade. From 15° S. to 5° S. light variable winds and calms.
Jno. Nicholson	Newcastle	Yokohama	20 Sept.	20 Nov.	61	26° S.	13° S.	166° 30' E.	6° 0' S.	20° N.	Light variable winds from 13° S. to 5° S., then N.E. winds to 6° N. From 20° north to Yokohama experienced variable winds.
Loch Lec	Newcastle	Hongkong	26 Sept.	26 Nov.	61	25° S.	12° S.	166° E.	8° 0' S.	.....	From 12° S. to 8° S. experienced light variable winds; but at 8° S. got the N.E. monsoon, which carried her to Hongkong.
Burnsides	Newcastle	Yokohama	4 Oct.	9 Dec.	66	23° S.	12° S.	166° 30' E	10° 0' S.	30° N.	From 12° S. to 10° N. lat. experienced light winds; baffling when to the southward of the line, and from the eastward when to the northward of the line.
Araby Maid ...	Newcastle	Shanghai	15 Oct.	16 Dec.	60	21° S.	9° S.	168° E.	4° 40' S.	24° N.	From 9° S. to 4° 40' N. latitude experienced variable winds. From lat. 24° N. to Shanghai northerly and north-westerly winds.
Windhover ...	Newcastle	Hongkong	21 Dec.	4 March ...	74	19° S.	13° S.	164° 30' E.	Equator	.....	From 13° S. to the equator experienced variable winds from the westward, with heavy rains. From the equator carried the N.E. monsoon to Hongkong.

TABLE II.
STATISTICS of the "Middle Route to China."

Ship's name.	Port in Australia sailed from.	Destination.	Date of Leaving.	Date of Arrival.	Number of days on passage.	Latitude of getting S.E. Trade.	Latitude of losing S.E. Trade and getting West Monsoon.	Longitude of crossing Equator.	Latitude of getting N.E. Trade.	Latitude of losing N.E. Trade.	Remarks.
E. M. Young.	Newcastle	Hongkong	16 Jan.	26 Feb.	41	26° S.	15° S.	157° E.	4° 0' S.	.....	Carried the N.E. monsoon to Hongkong. Experienced a hurricane in lat. 14° S.
Thermopylae	Newcastle	Shanghai	10 Feb.	10 March	28	25° S.	14° S.	167° E.	0° 19' S.	20° N.	A strong westerly monsoon from 14° S. to 3° S.
Norham Castle	Newcastle	Shanghai	4 March	17 April	44	25° S.	15° S.	164° E.	4° 0' S.	20° N.	From lat. 15° S. to 4° S. experienced northerly winds with heavy squalls. Between the Lin Kin group and Shanghai experienced a typhoon.
Thermopylae	Sydney	Shanghai	7 March	16 April	40	None	12° S.	165° E.	7° 0' N.	.....	Had no regular S.E. trade, but variable winds to 12° S. lat., from whence to the equator had the west monsoon with heavy squalls and rain. Carried the N.E. monsoon to Shanghai.
Thermopylae	Melbourne	Foo-choo-foo	8 March	17 April	40	25° S.	17° S.	164° E.	2° 0' S.	23° N.	.....
Iuverdrue	Newcastle	Hongkong	11 March	20 April	40	25° S.	15° S.	160° E.	3° 0' S.	.....	Carried the N.E. monsoon to Hongkong. From lat. 10° S. to 3° S. experienced light northerly and north-easterly winds.
Titania	Newcastle	Shanghai	20 March	3 May	44	23° S.	15° S.	154° E.	8° 0' N.	20° N.	No westerly monsoon, but light N.E. and E. winds from 15° S. to the equator.
Thermopylae	Sydney	Shanghai	20 March	4 May	45	20° S.	.....	161° E.	4° 0' N.	18° N.	From 20° S. to the equator had variable winds from N. to E.S.E., with occasional heavy squalls and rain. Delayed by fog three days off Shanghai.
Thermopylae	Newcastle	Shanghai	30 March	8 May	39	26° S.	16° S.	159° E.	Equator	.....	Carried the N.E. monsoon to Shanghai. Had no regular westerly monsoon, but light variable airs from N.E. from 16° S. to equator.
Apelles	Newcastle	Hongkong	13 April	12 June	60	20° S.	9° S.	158° E.	1° 0' N.	20° N.	From 9° S. to 1° N. experienced light variable winds and calms.
E. J. Spence	Newcastle	Hongkong	16 April	20 June	65	20° S.	4° S.	158° E.	2° 30' N.	16° N.	From 4° S. to 2° 30' N. experienced light variable winds and calms.
Fire Queen	Newcastle	Hongkong	22 May	10 July	49	24° S.	0	159° E.	2° 0' N.	15° N.	From 15° N. to Balintang Channel experienced S.W. winds.
Ardentiny	Newcastle	Hongkong	5 June	28 July	53	25° S.	7° S.	159° E.	7° 0' S.	12° N.	Variable winds from 12° N. to Hongkong.
Corinne	Newcastle	Yokohama	9 June	5 August	57	None	.....	164° E.	6° 0' N.	.....	Had no regular S.E. trade. From 9° S. to 3° N. had north-easterly winds. From 6° N. carried fair winds to Yokohama.
Thyatira	Newcastle	Shanghai	10 June	1 August	52	25° S.	16° S.	152° E.	7° 0' S.	Pelew Is.	From 16° S. to the Pelew Islands experienced E. and N.E. winds. From the Pelew Islands to 17° N. the S.W. monsoon. From 17° N. to Shanghai, E. and N.E. winds.
Formosa	Newcastle	Cheefoo	20 June	20 August	61	20° S.	7° S.	158° E.	.....	.....	From 7° S. to 5° N. experienced light variable easterly winds. From 5° N. to 21° N. variable winds, from thence to Cheefoo the S.W. monsoon, strong with squalls.

TABLE II—continued.

Ship's name.	Port in Australia sailed from.	Destination.	Date of Leaving.	Date of Arrival.	Number of days on passage.	Latitude of getting S.E. Trade.	Latitude of losing S.E. Trade and getting West Monsoon.	Longitude of crossing Equator.	Latitude of getting N.E. Trade.	Latitude of losing N.E. Trade.	Remarks.
Flying Eagle...	Newcastle	Hongkong	1 July	26 August ...	57	20° S.	10° N.	158° E.	.....	.....	The S.E. trade unsteady, both in force and direction. From 10° N. to Hongkong variable light winds, principally from the eastward.
Thomas Bell...	Newcastle	Hongkong	7 July	8 Sept.	63	20° S.	7° N.	140° E.	.....	.....	The S.E. trades unsteady, both in force and direction. From 7° N. to Hongkong N.E. winds.
Oberon	Newcastle	Shanghai	10 August ...	20 Sept.	41	25° S.	5° S.	161° E.	.....	.....	From 5° S. to 26° N. experienced the S.W. monsoon, with heavy rain squalls, then east wind to Shanghai.
Ocean Beauty..	Newcastle	Hongkong	18 August ...	21 Oct.	64	24° S.	17° S.	156° E.	.....	.....	From 17° S. to 5° S. experienced light winds from N. to E., then light variable winds to 12° N., then E. winds to Hongkong.
Whittington...	Newcastle	Shanghai	27 August ...	20 Oct.	54	23° S.	13° S.	162° E.	.....	.....	From 13° S. to the equator she experienced light E. winds and calms. From the equator to 10° N. variable light winds. From 10° to 17° N. the S.W. monsoon strong, then light fair winds to Shanghai.
Lauderdale ...	Newcastle	Hongkong	16 Sept.	7 Nov.	52	20° S.	5° S.	161° 30' E.	5° S.	15° N.	Experienced light winds from 5° S. to 15° N., then S., E., and N.E. winds to the Bashee Channel.
B. Constitution	Newcastle	Hongkong	24 Sept.	20 Nov.	57	19° S.	5° S.	159° E.	Equator	.....	Carried the N.E. monsoon to Hongkong.
Lennox Castle..	Newcastle	Hongkong	27 Sept.	7 Nov.	41	20° S.	4° N.	159° E.	14° N.	17° N.	The S.E. trade well to the eastward, with gloomy rainy weather. From 4° to 14° N. experienced southerly winds, varying to the westward and eastward of S. From 17° N. to Bashee Channel the S.W. monsoon.
Zaretza	Newcastle	Hongkong	24 Oct.	2 Dec.	39	23° S.	10° S.	164° E.	3° N.	.....	From 10° S. to 3° N. experienced variable winds. Carried the N.E. monsoon to Hongkong.
Selim	Newcastle	Hongkong	22 Nov.	9 Jan.	48	None	.....	163° E.	2° N.	.....	Experienced no regular S.E. trade, but variable winds from the northward and eastward from 23° S. to 12° S., then light variable winds to 2° N., after which she kept the N.E. monsoon to Hongkong.
Lennox Castle..	Newcastle	Hongkong	7 Dec.	18 Jan.	42	None	8° S.	166° 30' E.	1° N.	.....	Had no S.E. trade, but variable winds from the northward and eastward from 22° S. to 8° S., then got the W. monsoon light and variable with squalls to 1° N., then the N.E. monsoon to Hongkong.
Maris	Newcastle	Hongkong	22 Dec.	9 Feb.	49	29° S.	16° S.	166° E.	3° S.	.....	From 16° S. to 3° S. had the westerly monsoon, then variable winds to 3° S.
Talbot	Newcastle	Hongkong	30 Dec.	12 Feb.	44	29° S.	14° S.	163° E.	3° S.	.....	From 14° S. to 3° S. variable winds.

TABLE III.
STATISTICS of the "Inner Route to China."

Ship's Name.	Port in Australia sailed from.	Destination.	Date of Leaving.	Date of Arrival.	Number of Days on Passage.	Latitude of getting S.E. Trade.	Latitude of losing S.E. Trade and getting W. Monsoon.	Longitude of crossing Equator.	Latitude of getting N.E. Trade.	Latitude of losing N.E. Trade.	Remarks.
Eric	Newcastle	Shanghai	8 April ...	12 May	34	.....	20° S.	150° E.	3° S.	20° N.	No regular S.E. trade. From 20° S. to 15° S. she had west winds, then east winds to 6° S., then variable winds to 3° S.
Decapolis	Newcastle	Yokohama.....	12 June.....	20 July	38	23° S.	6° S.	.....	Equator	23° N.	From 6° S. to the equator experienced light southerly winds.
Helen Malcolm	Newcastle	Hongkong.....	6 July	19 Sept.....	75	14° S.	Equator	150° E.	None	.....	From the equator to 5° N. experienced light N.W. winds. From 5° N. to 15° N. westerly winds, interrupted by calms and N.E. winds. From 15° N. to Hongkong east winds. She experienced a typhoon on 12th Sept.
Woodlark	Newcastle	Shanghai	14 July	22 Aug.....	39	23° S.	13° S.	142° E.	4° N.†	20° N.	From 13° S. to the equator experienced moderate S., S.E., and S.W. winds. From 20° N. to Shanghai variable winds.
Reigate	Newcastle	Hongkong.....	10 Aug.	1 Oct.	52	19° S.	2° N.	150° 30' E	5° N.	Bashee Chl.	From 2° N. to 5° N. experienced variable winds. After passing the Bashee Channel she got a typhoon which delayed her three days.
S.S. Bernard...	Newcastle	Shanghai	31 Aug.....	23 Sept.....	23	20° S	9° S.	149° E.	1° N.	.....	From 9° S. to 1° N. variable winds were experienced. From 1° N. to Shanghai N.E. winds.

TABLE IV.
STATISTICS of the "Torres Straits Route to China."

England	Newcastle	Hongkong.....	12 July	21 Aug.....	41	23° S.	Equator	Molucca Passage.	From the equator to the Molucca Channel experienced variable winds to the Mindoro Channel, and then the S.W. monsoon.
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A careful study of these Tables, and the Wind Charts published by the Admiralty in 1872, have led me to the following conclusions:—

During the months of January, February, and March, the average passage by the "outer route" is sixty-two days, the longest recorded passage being sixty-six days, and the shortest fifty-seven days.

The average passage by the "middle route" is forty days, the longest recorded being forty-five days, and the shortest twenty-eight days. No passage by the "inner" or the Torres Strait route has been attempted during this season, and a glance at the Wind Charts will show that neither of these tracks are suitable during the first three months of the year.

The question of the route to be adopted during these months therefore rests between the "middle" and the "outer" routes, and, as the passage by the "middle route" is performed in *twenty-two days less* than that by the "outer route," there can be no question that the "middle" is the proper route to China for vessels leaving Australia in January, February, and March.

During the months of April, May, and June, only one passage has been made by the "outer route," viz., in April, the time occupied being forty-nine days.

The average passage by the "middle route" is fifty-seven days; the longest recorded being sixty-five days, and the shortest forty-nine days; whilst during the same three months two passages were made by the "inner route," one in thirty-four days, the other in thirty-eight days, or an average of thirty-six days. No passage is recorded by the Torres Strait route.

A careful study of the Wind Chart for these months, in conjunction with this information, will, I think, show satisfactorily that neither the "middle" or the "outer" routes are suitable for ships at this season, but that the "inner route" offers the greatest facilities for making a rapid passage to China, for ships leaving Australia in April, May, and June.

During the months of July, August, and September, two vessels took the "outer route," and each ship made the passage in sixty-one days. The average passage by the "middle route" is fifty-four days; the longest recorded being sixty-four days, and the shortest forty-one days.

The average passage by the "inner route" is fifty-six days; the longest recorded being seventy-five days, and the shortest thirty-nine days, whilst one passage was made by the "Torres Strait route" in forty-one days.

It will be evident, therefore, that in these three months a better passage will be made by following the "middle" rather than the "outer route" to China; the question as to which is the most advantageous track rests, therefore, between the "Torres Strait," the "middle," and the "inner route."

If a ship leaving Australia can enter Torres Strait *before* the end of August, this will be found the best track to take; if, however, she cannot get through those straits by that time, she should adopt either the "inner" or the "middle" route; probably the inner will be found the quickest, if every means are taken to get north after crossing the equator until the 10th parallel is reached; as the vessel that took seventy-five days on the voyage wasted a fortnight by trying to work to the westward against light N.W. winds when between the equator and 5° N. latitude. There appears, however, very little to choose between the "middle" and "inner" routes, and either of them may be followed if too late in the season to enter Torres Strait.

During the months of October, November, and December, the average passage by the "outer route" is sixty-seven days; the longest recorded being seventy-four days, and the shortest sixty days. The average passage by the "middle route" is forty-four days; the longest recorded being forty-nine days, and the shortest thirty-nine days. No passage has been made at this season of the year either by the "Torres Strait" or "inner" routes. The "Torres Strait route" is certainly unfit to take, but until we possess more information regarding the "inner route," I am not certain as to its fitness or otherwise.

The "outer route," occupying an average of *twenty-three days* more than the "middle route," should on no account be taken by ships leaving Australia in October, November, and December.

Briefly, then:—Ships leaving Australia in the months of January, February, or March, for China or Japan, should adopt the "middle route," and may expect to make the passage in about forty days; leaving in April, May, or June, they should adopt the "inner route," and may expect to make the passage in about thirty-six days; leaving in July, August, or September, they should, if they can reach Torres Strait before the end of August, take that route; and if not, either the "middle" or the "inner route," and may expect to make the passage *via* Torres Strait in forty days, and by the other routes in fifty-five days; and finally, ships leaving in October, November, and December, should adopt the "middle route," and may expect to make the passage in forty-four days about.

Two other passages to China have been mentioned in the Sydney papers; one to the west of Australia, and through Sunda Strait, the other a modification of the "inner route," through some of the channels lately discovered by Captain Moresby, of H.M.S. "Basilisk."

The western route is only practicable for sailing-vessels during the months of January, December, and February, as they may then get easterly winds to the southward of Australia. I should not, however recommend this route even to Singapore, as during the months of November, December, January, February, and March, northerly winds and a southerly current prevail in Sunda, Banka, and Gaspar Straits, and the Carinata Channels, and it is a tedious and heart-breaking process endeavouring to get to the northward under such adverse circumstances. I have known a ship thirty days from Sunda Strait to Singapore—a distance of 500 miles.

With

With regard to the modification of the "inner route" rendered advisable by the discoveries of Captain Moresby, I am unable, at present, to give an opinion, as the charts are as yet unpublished.

It is as well, perhaps, for me to point out, in conclusion, that in recommending what I consider should be the route adopted at each particular season of the year, I have been entirely guided by the logs of the vessels I have perused, in conjunction with the Wind Charts published by the Admiralty, and have not taken into consideration their relative value of facility in navigation; nor am I able, of course, to judge of the passages made by ships whose logs I have not seen, and who *may* have made quicker passages by other or the same routes.

Viewing then the different tracks in regard to their freedom from danger, there is no doubt that the "outer route" is the clearest, and *that* probably is the reason it has been adopted by so many ships.

The "middle route," however, is nearly as free from difficulty as the "outer," and will be, in my opinion, quite as safe when the survey of the D'Entrecasteaux Reef is completed,—a work I understand the present hydrographic staff in New Caledonia are engaged on.

The "inner route" is at present the least known, and unquestionably that portion of it between the Solomon Islands and New Guinea requires to be surveyed; still, however, the passage between the Solomon Islands on the eastern, and the Louisade Archipelago and New Ireland on the western side, is a wide channel apparently free from danger (with the exception of the Pocklington Reef); and in the months of April, May, and June, during which ships gain the greatest advantage by using it, the weather is fine, so that I see nothing to deter vessels taking this track provided a good look-out is kept; and it must likewise not be forgotten that should it be found the quickest, as it is the shortest highway to China, a vessel would probably soon be employed in properly surveying it.

The "Torres Strait route" although not free from danger, may be navigated with facility by captains who have had any experience amongst coral reefs, and who are accustomed to con their vessel from the masthead; a precaution which is absolutely necessary. Once through the strait there are but few dangers on the track to China, as although the islands are many of them doubtful in position, they are of sufficient height to insure their being seen readily.

H.M.S. "Challenger,"
25th June, 1874.

T. H. TIZARD,
Navg. Lieut.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

SEAMEN'S LAWS CONSOLIDATION ACT.

(PETITION FOR AMENDMENT OF—OFFICERS AND SEAMEN OF PORT JACKSON.)

Ordered by the Legislative Assembly to be printed, 16 April, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned officers and seamen of the Port of Sydney,—

SHOWETH:—

1. That your Petitioners are engaged in the Colonial and Intercolonial trade of New South Wales, and in justice to themselves, their families, and others depending upon them for a livelihood, they deem it their duty to bring under the notice of your Honorable House the shocking condition of that portion of many ships termed the "forecastle," which is set apart for their use as sleeping and eating apartments, which is frequently leaky, has little or no ventilation, and insufficient room, so that in tempestuous weather it becomes highly detrimental to your Petitioners' health.

2. That an injustice is done to seamen in permitting ships' articles to be signed on board vessels where there is no one to look after their interests, which the Shipping Master could do if all the shipping were under his supervision. It would, moreover, be a great boon to the seamen if all engagements were made at the Shipping Office only, which is the seamen's legitimate depôt of labour, whereas as the law at present stands the seamen most in want of employment are frequently the very last to hear of it, and thus much distress is occasioned.

3. That under section 20 of the Seamen's Laws Consolidation Act, masters or owners of vessels may engage seamen for any two or more ships, which is detrimental to the interests of the unemployed, and often causes serious injury to those so engaged, through their being shifted into ships with officers who had no part in shipping them, and who generally have special favourites, for whom they wish to provide. Consequently the men so shifted are driven out of the ships, or are aggravated to that extent that they give insolence to the officers and are discharged without a character, which renders it almost impossible for them to obtain employment. "Driving men out of a ship" is a term well known to every officer and seaman, and has caused more mutinies at sea than all other causes put together. It is therefore desirable that the portion of the Act above referred to, making it legal for the masters and owners of ships to engage a single crew for more than one vessel, should be repealed.

4. That a large number of masters and owners of ships make it a regular and systematic practice to have their ships thoroughly cleaned outside and inside on the Sabbath day, to the moral degradation of both officers and seamen, who are equally with other men entitled to the enjoyment of the privileges of the Lord's Day, and are under equal obligations to observe it; and this unnecessary working on the Sabbath, by which the sanctity of that day is violated, and the men caused to view God's commandments with indifference, is an occurrence which takes place on board some vessels every Sunday in the year. The seamen belonging to a vessel recently lying in the Macleay River had to choose whether they would on a Sunday take in cargo or wash the vessel, and they decided as the lesser evil to take in cargo (25 tons), which they had to carry on their backs from the shore to the vessel.

5. That a portion of part 6, section 72, of the Seamen's Laws Consolidation Act, gives power to the master of a ship to prevent his crew from going ashore to visit their wives and families, or for any other purpose, for twenty-four hours before the vessel's departure, notwithstanding that the ship may be safely moored alongside of a wharf; and your Petitioners consider this power both unjust and tyrannical.

Your Petitioners therefore respectfully pray your Honorable House to take their grievances into your consideration, and to grant them such relief in the premises as your wisdom may direct.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 744 signatures.]

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ELECTRIC CABLE BETWEEN NEW ZEALAND AND
NEW SOUTH WALES.

(MESSAGE No. 21.)

Ordered by the Legislative Assembly to be printed, 10 June, 1875.

HERCULES ROBINSON,
Governor.

Message No. 21.

In accordance with the 54th clause of the Constitution Act, the Governor recommends to the Legislative Assembly that provision be made for a sum adequate to meet the cost of constructing an Electric Cable between New South Wales and New Zealand.

*Government House,
Sydney, 10th June, 1875.*

1875.

NEW SOUTH WALES.

SOUNDINGS FOR TELEGRAPHIC CABLE BETWEEN
NEW SOUTH WALES AND NEW ZEALAND.

(REPORT FROM CAPTAIN NARES.)

Presented to Parliament by Command.

CAPTAIN NARES TO GOVERNOR SIR HERCULES ROBINSON.

H.M.S. "Challenger,"
Wellington (N.Z.), 2 July, 1874.

SIR,

As many in New South Wales are interested in the best telegraphic route between that Colony and New Zealand, I have the honor to enclose tracings of charts showing the soundings I lately obtained on a line between Sydney and Cook's Straits, with remarks on the conditions of the bottom with regard to its suitability for a telegraphic cable.

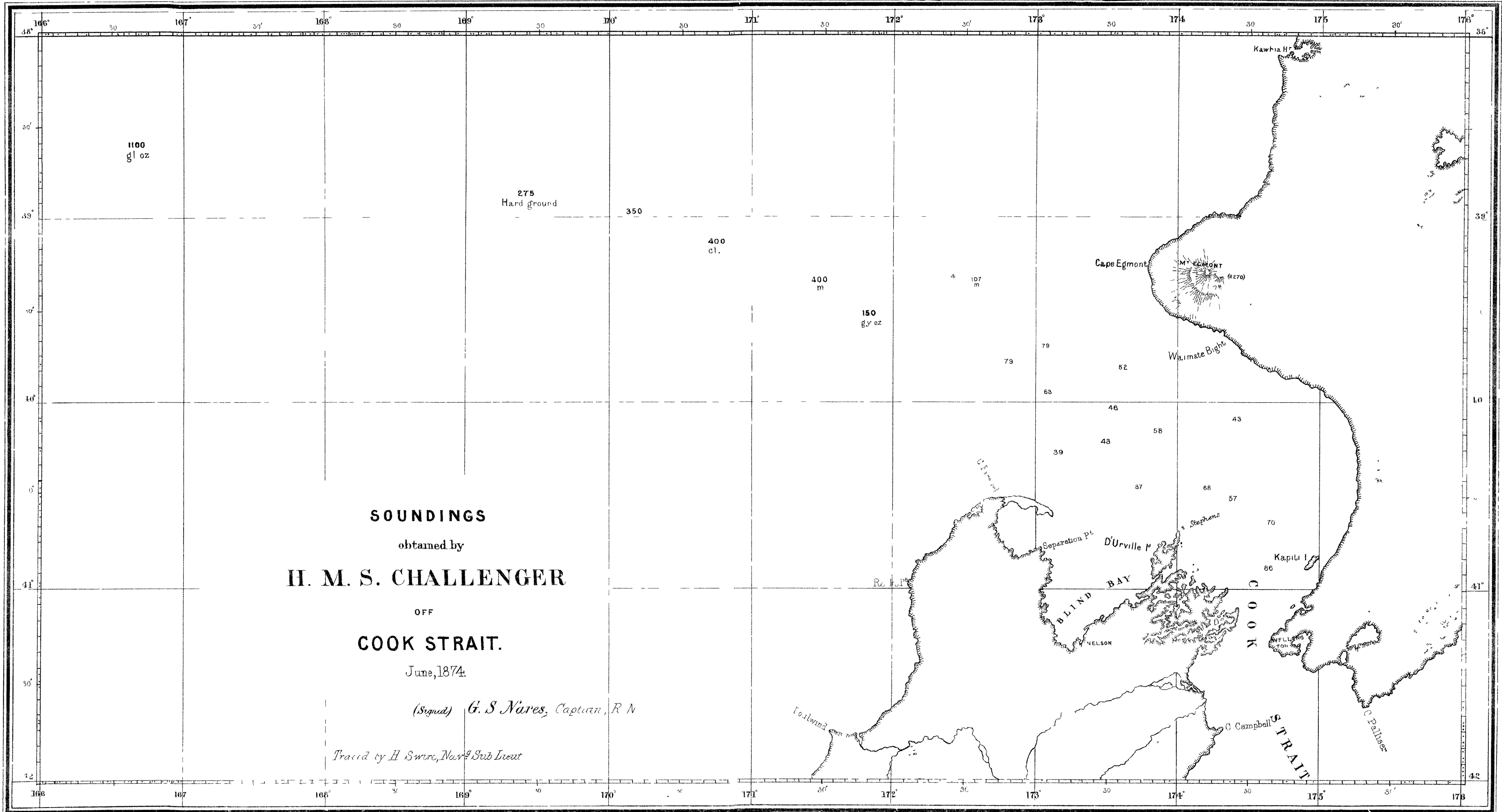
2. On the Australian coast the incline from the 100 fathoms line, which was 17 miles from the land, into a depth of 2,100 fathoms at 57 miles distance, was about 1 in 20, which is less abrupt than we had previously found to be the case further to the southward of Twofold Bay, where it was about 1 in 6. The bottom, which consists of soft ooze, then slopes down to a depth of 2,600 fathoms, at a distance of 240 miles from the coast, the temperature being 33°, which conditions continue for 140 miles.

3. From this extreme depth the bottom slopes upwards, with a gentle incline, with soft ooze, for 400 miles, until, at a position 780 miles from Sydney, and 335 miles from the entrance to Cook's Straits, we obtained soundings in 1,100 fathoms. Between this and New Zealand only shallow soundings below 400 fathoms, with hard bottom, were obtained. The most westerly of these, 275 fathoms, was 200 miles from the land, and 125 miles to the eastward of the 1,100 fathoms sounding. The shoal water evidently extends for some distance farther to the westward, probably as much as 100 miles, which would give a total breadth of shallow water of 300 miles. The bottom on the shoal was extremely hard—so much so that we obtained little or no samples in the sounding rods; but as both the dredge and trawl dragged freely along, without catching in any irregularities, it must have been of a smooth nature.

4. On reference to former soundings on the general chart, it is evident that a somewhat similar bank extends for a considerable distance to the westward of the north cape of New Zealand; such being the case, the shoal is probably continuous, and shallow water may be expected all along the western side of the North Island; but I see no reason to suppose that deep water does not extend to within a very short distance of the south-west cape of the Middle Island, which is also the nearest land to Australia.

I have, &c.,
G. S. NARES, Captain.

[Two charts.]

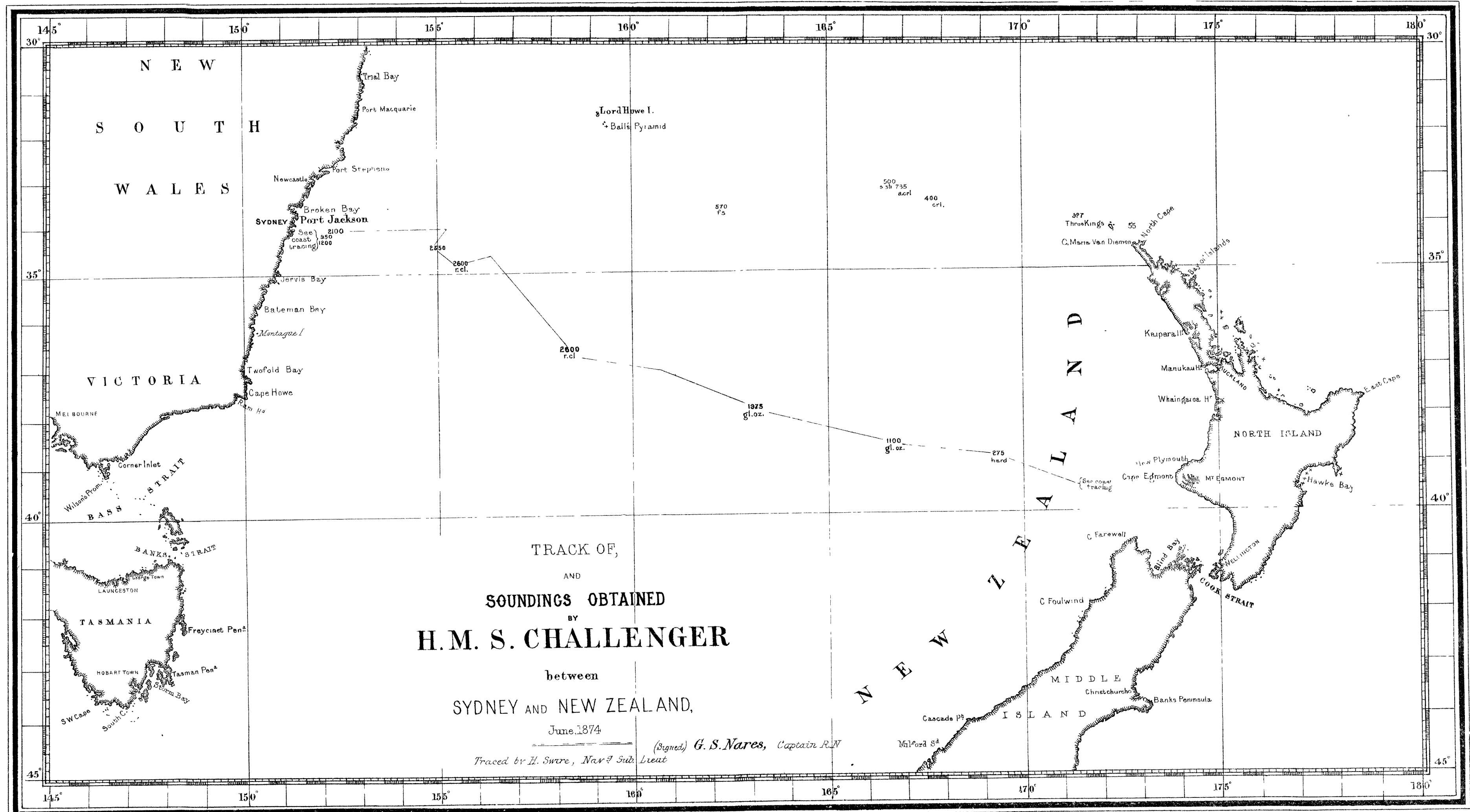


SOUNDINGS
 obtained by
H. M. S. CHALLENGER
 OFF
COOK STRAIT.

June, 1874.

(Signed) *G. S. Nares, Captain, R.N.*

Traced by H. Swire, Nav. Sub-Lieut.



TRACK OF,
AND
SOUNDINGS OBTAINED
BY
H.M.S. CHALLENGER

between
SYDNEY AND NEW ZEALAND,

June 1874

Traced by H. Swire, Nav^y Sub Lieut
(Signed) G. S. Nares, Captain R.N.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

TELEGRAPH DEPARTMENT.

(ADDITIONAL OFFICERS FOR.)

Ordered by the Legislative Assembly to be printed, 23 May, 1875.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 12 May, 1875, A.M., That there be laid upon the Table of this House,—

“(1.) A Return showing the services in which it was intended to employ the additional thirty-eight Officers on the Estimates of the Telegraph Department, which were presented to the House by the late Government on the 19th November, 1874, and the salary proposed to be paid in each case.

“(2.) A similar Return with regard to the eighty-eight additional Officers, asked for on the Estimates presented by the present Government on the 31st March, 1875.”

(*Mr. G. A. Lloyd.*)

TELEGRAPH DEPARTMENT.

No. 1.

RETURN showing the services in which it was intended to employ the additional 38 Officers on the Estimates of the Telegraph Department, which were presented to the House by the late Government on the 19th November, 1874, and the salary proposed to be paid in each case.

1 Inspector of Lines and Stations for Railways	£250
1 Messenger, Albury	52
1 Operator for Duplex System, Albury	150
1 Operator, Gabo Island	52
1 Operator, Blue Mountains	26
1 Operator, Raglan	52
1 Operator, Wagga Wagga	104
1 Messenger, do.	52
1 Messenger, Wentworth	52
1 Messenger, Dubbo	26
1 Messenger (extra), Maitland	26
1 Messenger, Muswellbrook	52
1 Operator, Wallabadah	104
1 Messenger, Tamworth	52
1 Line Repairer, do.	120
1 Operator, Tenterfield	104
1 Operator, Sydney (for Windsor and Richmond Line)	104
1 Operator, Newcastle	104
1 Operator, Seal Rocks (new Station)	52
1 Operator, Nelson's Bay	52
1 Operator, St. Leonards	52
1 Operator, Lambton	52
1 Operator, Waratah	52
1 Operator, Wallsend	52
1 Messenger, Deniliquin	52
1 Junior Operator, Forbes	104
1 Operator, Adaminaby	104
1 Messenger, Queanbeyan	26
6 Lady Operators, at £75 each	450
1 Lady Instructor	150
1 Operator, Manly Beach	104
1 Operator, " spare"	150
1 Operator, " spare"	104

Total ... 38

£ 3,038

This Estimate was prepared on the 17th August, 1874, and seven months elapsed before an amended Estimate was submitted for the consideration of the present Government.

Electric Telegraph Office,
Sydney, 27th May, 1875.

P. B. WALKER,
For the Superintendent of Telegraphs.

No. 2.

RETURN showing the Services in which it is intended to employ the 88 additional Officers, asked for on the Estimates presented by the present Government on the 31st March, 1875.

	No.	£
	1 Check Clerk and Operator, for night duty	150
	1 Station-master, Gunning (new Station)	104
	1 Operator (additional), Albury	150
"Day and night duty."	6 Operators, Automatic Instruments, Albury, at £104...	624
	1 Line Repairer, Kiama	120
	1 Do., Cooma	120
"New office."	1 Operator, Kelso	52
	1 Do., Bathurst	104
	1 Line Repairer, Port Macquarie... ..	120
"New office."	1 Operator, Gladstone	150
	1 Line Repairer, Glen Innes	120
	1 Do., Tenterfield	120
"Day and night duty."	6 Operators, Automatic Instruments (Tenterfield), at £104	624
	1 Line Repairer, Dungog	120
	1 Do., Taree	120
	1 Do., Pilliga	120
"New office."	1 Station-master, Bingera	150
"New office."	1 Do., Baradine	150
"For keeping open till 10 p.m."	6 Additional Operators, Chief Office, at £150	900
	6 Do., to provide for the opening of new Stations, at £150	900
"Sydney Office."	2 Operators for Duplex, at £200	400
	2 Do., for Legislative Assembly Line, at £104	208
	6 Female Operators, at £52	312
	—	—
	50	£5,988
November Estimates ...	38	—
	—	—
TOTAL . . .	88	—

P. B. WALKER,
For the Superintendent of Telegraphs.

Electric Telegraph Office,
Sydney, 27th May, 1875.

1875.

NEW SOUTH WALES.

MILITARY AND NAVAL FORCES REGULATION ACT.

(REGULATION UNDER.)

Presented to Parliament, pursuant to Act 34 Vict. No. 19, sec. 7.

Colonial Secretary's Office,
Sydney, 3 August, 1875.

His Excellency the Governor, with the advice of the Executive Council, has been pleased, under the 7th section of the Military and Naval Forces Regulation Act (34 Vict. No. 19), to direct that, in cases where men or boys of the Permanent Military Force shall be admitted into Hospital, suffering from the effects of injuries received in the actual performance of their duty, they shall not be subject to the Hospital stoppage usually enforced.

JOHN ROBERTSON.

1875.

NEW SOUTH WALES.

VOLUNTEER FORCE REGULATION ACT OF 1867.

(MONEYS EXPENDED UNDER, IN 1874.)

Presented to Parliament, pursuant to Act 31 Vic. No. 5, sec. 51.

VOLUNTEER FORCE—NEW SOUTH WALES.

STATEMENT of all Moneys paid on account of the above Force during the year ending 31st December, 1874, furnished in accordance with paragraph 51 of the Volunteer Act of 1867.

Particulars.		Amount.
		£ s. d.
Salaries and allowances	Amount paid	4,769 14 1
Forage	Allowances paid in lieu thereof to three Majors and one paid Adjutant, at 3s. 6d. per diem each	255 10 0
Travelling expenses.....	For General Staff and Volunteer Officers	541 5 8
Compensation in lieu of uniforms...	For Staff Sergeants—Instructors	76 10 0
Capitation allowance—		
Uniforms	Amount paid to Contractors	4,542 13 5
Balance	Amount paid over to Officers commanding Batteries and Companies... ..	1,009 5 2
Marksman's Badges	Amount paid to Contractors and incidental expenses	124 0 9
Hire of horses.....	For mounted Officers of Artillery and Infantry on Field Parades	84 0 6
Do.	For Artillery Field Guns	168 15 6
Contribution to	Volunteer Brigade Band	250 0 0
Do.	Rifle Association	500 0 0
Armoury—Repairs and materials...	Freight and cartage of ammunition and incidental expenses	521 14 9
Collecting and cleaning arms.....	Annual allowance to each Country Corps of £5.....	85 0 0
Rifle ranges	For constructing new Butts and keeping in repair the several Rifle Ranges	136 14 10
Sheds	Constructing on Paddington Rifle Range.....	300 0 0
Office rent	Office for General Staff	100 0 0
Do.	Office—Central for all Corps	200 0 0
Brigade Office	Allowance to Watchman and Office-keeper	16 0 0
Offices in use by Head Quarters Corps.	Allowance to Office-keeper.....	16 0 0
Encampment	Cost of	1,569 9 2
Offices for three Majors in command of Country Battalions.	Hire of, at £15 per annum each	45 0 0
Rifles and ammunition	For the purchase of twelve Match Rifles and Ammunition	1,034 13 5
Butts on Paddington Rifle Range...	Altering to safer principle	180 0 0
Tents and great-coats.....	For the purchase of, for Volunteer Encampment	974 0 0
		£ 17,500 7 3

THOS. BAYNES, Major,
Brigade Pay and Quarter-master.JOHN S. RICHARDSON, Lieut.-Col.,
Commandant.

1875.

NEW SOUTH WALES.

VOLUNTEER FORCE REGULATION ACT OF 1867.
(AMENDED REGULATION.)

Presented to Parliament, pursuant to Act 31 Vict. No. 5, sec. 50.

Colonial Secretary's Office,
Sydney, 3rd March, 1875.

His Excellency the Governor, having been pleased, with the advice of the Executive Council, to make the following Regulation for the Volunteer Force, in substitution of No. 124 of the Regulations published in the Supplementary Government Gazette of the 29th April, 1871, directs its publication in accordance with the 50th section of the Volunteer Force Regulation Act of 1867, viz.:—

124. No claim to these allowances shall be admitted at the commencement of any year, unless specially authorized, if the number of "efficient" in any Corps be below the minimum establishment shown in the tabular forms of these Regulations; and the services of such Corps shall be liable to be dispensed with.

JOHN ROBERTSON.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

VOLUNTEERS.
(NON-GRANTING OF SECOND LAND ORDERS TO.)

Ordered by the Legislative Assembly to be printed, 11 May, 1875.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 27 April, 1875, that there be laid upon the Table of this House,—
“Copies of all Correspondence and all opinions that have been given by
“the Crown Law Officers with respect to the non-granting of second Land
“Orders to Volunteers.”

(*Mr. Davies.*)

No. 1.

LIEUT.-COL. J. S. RICHARDSON to THE COLONIAL SECRETARY.

Brigade Office,
Sydney, 11 January, 1875.

SIR,

Several applications for a second Land Order having been recently made to me by members of the Volunteer Force, who having completed a second period of five years efficient service, and claim to be entitled under the Volunteer Act to the grant of a second Land Order, I have the honor to request I may be informed whether the issue of a second Land Order is contemplated by the Government?

I have, &c.,
JOHN S. RICHARDSON,
Lieut.-Col., Commandant.

No. 2.

MINUTE OF THE PRINCIPAL UNDER SECRETARY.

SUCH, it is believed, is not the intention of the Act. The opinion of the Attorney General is desirable.—
2/2/75.

The Under Secretary, Crown Law Department, B.C., 2nd February, 1875.—H.H.

No. 3.

OPINION of Attorney General respecting the issuing to Volunteers of a second Land Order.

THERE is only *one* free grant of 50 acres of Crown land provided for under section 44 of 31 Vic., No. 5. There is only one service spoken of as the title to this grant, and there is only one period fixed within which this title accrues. The service must be continuous for five years, dating from the 1st January, 1868. The consideration of the efficient service during this term is “a free grant of 50 acres”; nothing is said of any other term, of any other service, of any other grant. No Volunteer is entitled to another grant.

W. B. DALLEY,
Attorney General,
18 March, 1875.

The Principal Under Secretary, B.C., 18th March, 1875.—W.E.P.

No. 4.

THE PRINCIPAL UNDER SECRETARY TO LIEUT.-COL. J. S. RICHARDSON.

Colonial Secretary's Office,
Sydney, 24 March, 1875.

SIR,

In reply to your letter of the 11th of January last, reporting that several applications have been made to you by members of the Volunteer Force who, having completed a second period of five years efficient service, claim to be entitled under the Volunteer Act to the grant of a second Land Order, and inquiring whether the issue of a second Land Order is contemplated by the Government, I am directed by the Colonial Secretary to inform you that this question has been referred for the opinion of the Attorney General, who has advised upon it in the following terms:—

“There is only *one* free grant of 50 acres of Crown Land provided for under section 44 of 31 Vic., No. 5. There is only one service spoken of as the title to this grant; and there is only one period fixed within which this title accrues. The service must be continuous for five years, dating from the 1st January, 1868. The consideration of the efficient service during this term is a free grant of 50 acres. Nothing is said of any other term, of any other service, of any other grant. No Volunteer is entitled to another grant.”

I have, &c.,

HENRY HALLORAN.

No. 5.

THE PRINCIPAL UNDER SECRETARY TO THE UNDER SECRETARY FOR LANDS.

Colonial Secretary's Office,
Sydney, 24 March, 1875.

SIR,

I am directed by the Colonial Secretary to communicate to you, for the information of the Secretary for Lands, a copy of an opinion which has been obtained from the Attorney General on a question propounded by the Commandant with respect to certain applications made to him by members of the Volunteer Force who, having completed a second period of five years efficient service, claimed to be entitled under the Volunteer Act to the grant of a second Land Order.

2. Upon the question proposed by the Commandant the Attorney General advised in the following terms:—

“There is only *one* free grant of 50 acres of Crown Land provided for under section 44 of 31 Vic., No. 5. There is only one service spoken of as the title to this grant; and there is only one period fixed within which this title accrues. The service must be continuous for five years, dating from the 1st January, 1868. The consideration of the efficient service during this term is a free grant of 50 acres. Nothing is said of any other term, of any other service, of any other grant. No Volunteer is entitled to another grant.”

I have, &c.,

HENRY HALLORAN.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

LETTERS OF REGISTRATION OF INVENTIONS

UNDER

16 VICTORIA, No. 24;

FOR

1873.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
9 *July*, 1875.



SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1875.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

LETTERS OF REGISTRATION OF INVENTIONS.

(DESCRIPTIONS, SPECIFICATIONS, &c., ACCOMPANYING APPLICATIONS FOR.)

Ordered by the Legislative Assembly to be printed, 9 July, 1875.

RETURN (in part) to an *Address* of the Honorable the Legislative Assembly of New South Wales, dated 10 May, 1861, A.M., praying that His Excellency the Administrator of the Government would be pleased to cause to be laid upon the Table of this House (in addition to the Return already upon the Table),—

“(1.) A copy of the Descriptions and Specifications accompanying any applications for Letters of Registration of Inventions under the Act of Council 16 Victoria, No. 24, together with the date of application for such Letters of Registration, and when granted; also, copies of the Plans or Sections annexed, and of the Report, in each case.

“(2.) That His Excellency will cause similar Returns to be laid before Parliament annually.”

(Mr. Hart.)

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359	Thomas Wearne	11 February, 1873...	Invention for converting cyperus vaginatus, cat's-tail grass, imphee trash, sugar-cane megass, grass-tree, knotty water-reed or sedge-grass, and other vegetable fibres, into a fibrous substance principally for use in paper-making, and technically known as "half-stuff."	18 June.....	41
360	Eugene Dominique Nicolle and Thomas Sutcliffe Mort.	16 May, 1873	Invention for utilizing the waste cold from frigorific mixtures, and for applying the same and in combination with a plan for the continuous recovery of the salts employed for producing the cold, by an apparatus styled "Nicolle and Mort's Frigorific Machine."	23 June.....	45
361	Alexander Nicolaievitch Lodighin.	14 May, 1873	Improved means and appliances for lighting by electricity.	23 June	51
362	Charles Sargeant	8 April, 1873.....	A new method of and apparatus for closing the points of worn sheep-shears.	4 July	55
363	Thomas Whitwell	16 June, 1873	Improvements in apparatus for heating air and gases.	7 July	57
365	Frederick Edward Blacket Beaumont and Charles James Appleby.	7 May, 1873	Improvements in rock or stone-drilling, tunnelling and boring apparatus.	9 July	61
366	Thomas Brown.....	5 June, 1873	Improvements in machinery for drilling or perforating rocks and other hard substances.	9 July	67

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No.	NAME OF APPLICANT.	DATE OF APPLICATION.	NATURE OF INVENTION.	WHEN GRANTED.	PAGE.
367	Thomas Denny.....	23 May, 1873	Improvement for pulverizing and concentrating for the sure saving of gold and pyrites.	1873. 7 July	73
368	Allen Hollinshed and James Smith Norrie.	27 May, 1873	Invention for the better method of collecting and retaining gold and silver, by the process of amalgamation from quartz and other mineral substances containing those metals.	7 July	77
369	Edward Reading	4 June, 1873	Invention for reducing mineral ores and quartz stone to a powder, by means of which all the gold that may be therein may be readily extracted therefrom with a great saving of labour.	7 July	79
370	John Christian Lyons and Frederic John Christian Lyons.	8 May, 1873	Lyons's chloro-alkaline deodorizer and disinfectant.	15 July	81
371	John Melton Black	15 April, 1873	Improvements in tools for boring, and in apparatus for working the same.	21 July	85
372	James Bishop Perrins...	20 June, 1873	Perrins's patent hydraulic cement	21 July	89
373	Jacob Heberlein	16 June, 1873	Improvements in apparatus for working brakes for railway and other carriages.	25 July	91
375	John Phillips	17 July, 1873	Improvements in amalgamation, trituration, and washing of gold and silver ores, or the pulverization and washing of any mineral, animal, or vegetable matter, and the separation of the lighter from the heavier and the soluble from the insoluble matters.	11 August	97
376	George Rawle and William Nathaniel Evans.	9 July, 1873	Improvements in the manufacture of leather.	11 August	99
377	William Malpas	24 April, 1873	Certain chemical compounds for preservation of wood without impregnation by pressure.	21 August	101
378	Theodore Frederic Sandback Tinne.	26 August, 1873	Improvements in motive-power engines.	18 September ..	103
379	William Frederick Bassett.	18 August, 1873 ..	Invention for the more perfect separation of gold or silver from the sludge of puddled earth or tailings of crushing machines; also the self-retorting of gold obtained and complete saving of the mercury employed.	29 September ..	107
380	James Lawson and Thomas Jaffrey.	12 September, 1873	Invention for the immediate extraction of gold and silver from any mineral substance containing one or both of these metals, either oxidized or unoxidized, such as pyrites, quartz, granite, slate, cement, sand, gravel, or other substances containing gold and silver.	7 October ...	111
381	John Phillips	1 September, 1873	Invention for the separation of mineral substances, cleaning of tin and other ores, the amalgamation and separation of gold and mercury from lighter substances, and the exposition of precious stones.	14 October ...	113
383	Henry Richard Hancock.	9 April, 1873	Improvements in the method of jigging ores.	21 November ..	115
384	Samuel Barclay Martin and John M'Gough Beath.	9 October, 1873 ..	Improvements in machinery for making ice, cooling liquids, refrigerating rooms, and for other like purposes.	21 November ..	117
385	James Harrison	16 September, 1873	Improvements in cooling by the evaporation of volatile liquids and by the solution of salts in the apparatus and processes for the manufacture of ice, and in the application of ice and cold solutions to the regulation of temperature.	21 November ..	121
386	Hiram Codd.....	9 October, 1873 ..	Improvements in the manufacture of glass bottles and in apparatus employed therein.	21 November ..	127
387	Hiram Codd.....	9 October, 1873 ..	Improvements in bottles for containing aerated liquids, and in apparatus for making and filling such bottles.	21 November ..	131

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389	George Gledhill	28 July, 1873	Gledhill's patent aerated water-bottle and stopper.	24 November...	139
390	Benjamin Rogers Brown	23 October, 1873 ..	Machinery for washing auriferous or stanniferous drifts, for concentrating sand or slime ores, and for separating pyrites and gold from crushed quartz.	9 December...	143
391	Robert Henry Prendergast.	13 November, 1873	Invention for impregnating or aerating malt liquors by carbonic acid gas.	23 December...	145

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A.D. 1873, 6th January. No. 343.

**IMPROVEMENTS IN THE ORDINARY SYSTEM OF PRESERVING MEATS
KNOWN AS "THE CHLORIDE OF CALCIUM PROCESS."**

LETTERS OF REGISTRATION to Robert Andrew Loughnan, for Improvements in the ordinary system of preserving Meats known as "the Chloride of Calcium Process."

[Registered on the 8th day of January, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS ROBERT ANDREW LOUGHNAN, of Green Island, near Dunedin, in the province of Otago and Colony of New Zealand, Manager of the Otago Meat-preserving Company there, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention of Improvements in the ordinary system of preserving Meats known as "the Chloride of Calcium Process," which is more particularly described in the specification which is hereunto annexed, and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of twenty pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four ; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years : And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Robert Andrew Loughnan, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof ; to have, hold, and exercise unto the said Robert Andrew Loughnan, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended : Provided always, that if the said Robert Andrew Loughnan shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this sixth day of January, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in the ordinary system of preserving Meats.

SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, ROBERT ANDREW LOUGHNAN, of Green Island, near Dunedin, in the province of Otago and Colony of New Zealand, Manager of the Otago Meat-preserving Company, limited there, send greeting:

WHEREAS I am desirous of obtaining Royal Letters Patent for securing unto me Her Majesty's special license that I, my executors, administrators, and assigns, and such others as I or they should at any time agree with, and no others, should and lawfully might, from time to time, and at all times during the term of fourteen years to be computed from the day on which this instrument shall be left at the office of the Patent Officer, make, use, exercise, and vend within the Colony of New South Wales, an invention for improving on the ordinary system of preserving Meats known as "the Chloride of Calcium Process," and in order to obtain the said letters patent, I must by an instrument in writing under my hand and seal particularly describe and ascertain the nature of the said invention, and in what manner the same is to be performed, and must also enter into the covenant hereinafter contained: Now know ye, that the nature of the said invention, and the manner in which the same is to be performed, is particularly described and ascertained in and by the following statement (that is to say),—the meat-preserving pans used in the Chloride of Calcium process are converted into vacuum pans, where the ordinary heating and steaming processes of that system are effected at lower temperatures in a vacuum more or less perfect, with or without modifications of the duration of those processes, and the air prevented from re-entering the canisters by accompanying the gradual diminution of the vacuum with a gradual increase of temperature, thereby keeping the steam jets stronger than the atmospheric pressure during and after the destruction of the vacuum, after which sealing is performed in the ordinary way: And I do hereby, for myself, my heirs, executors, and administrators, covenant with Her Majesty, Her Heirs and Successors, that I believe the said invention to be a new invention as to the public use and exercise thereof, and that I do not know or believe that any other person than myself is the true and first inventor of the said invention, and that I will not deposit these presents at the office of the Patent Officer with any such knowledge or belief as last aforesaid.

In witness whereof, I have hereunto set my hand and seal, this twenty-second day of July, one thousand eight hundred and seventy-two.

R. A. LOUGHNAN.

Signed, sealed, and delivered by the said Robert Andrew Loughnan, in the presence of,—

J. R. SINCLAIR,
Clerk to Messrs. Smith & Anderson,
Solicitors,
Dunedin, Otago, N.Z.

This is the specification referred to in the annexed Letters of Registration granted to Robert Andrew Loughnan, this sixth day of January, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 9 December, 1872.

Sir,

We do ourselves the honor to recommend the issue of Letters of Registration securing to Robert Andrew Loughnan the exclusive enjoyment, for a term of fourteen years, of a certain invention for improving on the ordinary system of preserving Meats known as "the Chloride of Calcium Process," in accordance with his Petition and specification, herewith returned.

We have, &c.,
CHAS. WATT.
GOTHEK K. MANN.

THE PRINCIPAL UNDER SECRETARY.



A.D. 1873, 7th February. No. 344.

**IMPROVEMENTS IN MACHINERY OR APPARATUS FOR STAMPING ORES
AND OTHER HARD SUBSTANCES.**

LETTERS OF REGISTRATION to William Willoughby, Joseph Willoughby, and Samuel Willoughby, for Improvements in Machinery or Apparatus for stamping Ores and other hard substances.

[Registered on the 10th February, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS WILLIAM WILLOUGHBY, JOSEPH WILLOUGHBY, and SAMUEL WILLOUGHBY, all of Plymouth, in the County of Devon, England, engineers, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in Machinery or Apparatus for stamping Ores and other hard substances," which is more particularly described in the specification and sheet of drawings which are hereunto annexed; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said William Willoughby, Joseph Willoughby, and Samuel Willoughby, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said William Willoughby, Joseph Willoughby, and Samuel Willoughby, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said William Willoughby, Joseph Willoughby, and Samuel Willoughby, shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this seventh day of February, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in Machinery or Apparatus for stamping Ores and other hard substances.

SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, WILLIAM WILLOUGHBY, JOSEPH WILLOUGHBY, and SAMUEL WILLOUGHBY, all of Plymouth, in the County of Devon, England, engineers, send greeting :

WHEREAS we are desirous of obtaining Letters of Registration for the Colony of New South Wales, securing unto us Her Majesty's special license that we, our executors, administrators, and assigns, and such others as we or they should at any time agree with, and no others, should and lawfully might, from time to time, and at all times during the term of fourteen years next and immediately after the date of the said Letters of Registration, make, use, exercise, and vend within the said Colony of New South Wales an invention for "Improvements in Machinery or Apparatus for stamping Ores and other hard substances"; and whereas, in order to obtain such Letters of Registration, we must, by an instrument or specification in writing under our hands and seals, particularly describe and ascertain the nature of the said invention, and in what manner the same is to be performed: Now know ye, that the nature of the said invention, and the manner in which the same is to be performed, is particularly described and ascertained in and by the following statement in writing, and on reference to the accompanying sheet of drawings (that is to say) :—

This invention relates to Improvements in Machinery or Apparatus for stamping Ores and other hard substances, whereby such substances are more advantageously and efficiently stamped or crushed than by the means hitherto used.

In order that our invention may be distinctly understood, we have annexed hereunto one sheet of drawings illustrative thereof, and have marked the same with figures and letters of reference corresponding with those in the following explanation thereof (that is to say),—

On the accompanying drawings—

Figures 1 and 2 respectively represent the front and a side elevation of the improved machine.

a represents a strong frame, of either wood or iron, above which is placed, in suitable bearings, *b*, a crank shaft, *c*, having two or more throws or cranks, *d* (according to the number of stampers required), which are so arranged that the connecting rods *e* and their attachments carrying the stamp heads *f* balance each other and lessen the power necessary to impart the requisite motion.

The rods *e* are made so as to admit of their being lengthened or shortened at the joint *g* according to the wearing away or renewal of the stamp heads, and are attached by bushes, *h*, to the cranks *d*, and by saddle-pieces, *i*, to the top of metal springs, *j*. The saddle-pieces are provided with a joint, *k*, to allow of the necessary motion for the swing of the rods *e*, and also with bushings, *l*, which work freely over the stamp rods *m* and allow full liberty for the stroke of the springs, but prevent the latter being moved from their vertical position.

The stamp rods *m* are each suspended or attached to its spring *j* by means of connecting rods, *n*, a boss, *o*, and pin, *p*, to which are attached guide blocks, *r*, working in slides, *s*, and which serve to keep the rods *m* in their proper position, the latter working also in additional extensions, *t*, of the framing *s**, and in loose bushings, *u*, placed in the cross-piece *a**, which protect the rods and guides from any sudden jar or shock which may sometimes occur in stamping, and which, being placed above the coffer *v*, are free from the action of the water and grit therein.

The coffer consists of a strong frame, *v*, surrounding the stamp heads *f*, and provided with the necessary gratings or sieves, *w*, through which the ore stuff passes when sufficiently pulverized.

The machine is actuated by a strap and pulley, *x*, keyed on the shaft *c*, and when the full or necessary speed is obtained, the stroke of the stamp rods *m* is about four times the throw of the cranks *d*.

The ore stuff is shot in at the back, *y*, of the coffer, together with a sufficient quantity of water, and the pulverized stuff passes through the gratings into a trough, to be conveyed to the buddles or other washing apparatus.

A stream of water is or may be conveyed by a pipe down by the sides of the rods *m* and through the bushings *u*, and so serve for the double purpose of lubricating and washing.

When crushing dry, however, the water supply is dispensed with, and in place of the gratings or sieves *w*, covers or flaps of suitable material are or may be applied to the openings in the coffer in the usual way.

The stamp heads or dies may be of any form, and the arrangement for actuating the same varied according to special circumstances or requirements.

Various methods may be employed for feeding the machine, amongst which may be mentioned that of setting a shoot behind the coffer at such an angle as to allow the ore stuff to fall gradually toward the heads of the stamps, and which, after being sufficiently pulverized thereby, is washed through the gratings by the water, or again by means of a trough or cylinder containing an Archimedean screw driven from the shaft *c*, and of such pitch and diameter as will allow of the ore stuff being freely passed down, or the ore stuff may be passed into a shaking shoot capable of being raised or lowered to regulate the supply under the stamp heads.

Having

Improvements in Machinery or Apparatus for stamping Ores and other hard substances.

Having now particularly described and ascertained the nature of our said invention, and the manner in which the same is to be performed or carried into practical effect, we have to state, in conclusion, that we claim as our invention the general combination and arrangement of the machinery or apparatus for stamping ores and other hard substances, substantially as hereinbefore described, and as illustrated on the accompanying drawings, and especially the particular combination and arrangement of the component parts thereof as above described and shown on the accompanying drawings, or any mere modification thereof.

In witness whereof, we, the said William Willoughby, Joseph Willoughby, and Samuel Willoughby, have hereunto set our hands and seals, this twenty-eighth day of October, in the year of our Lord one thousand eight hundred and seventy-two.

WILLIAM WILLOUGHBY. (L.S.)
JOSEPH WILLOUGHBY. (L.S.)
SAMUEL WILLOUGHBY. (L.S.)

Signed and sealed in the presence of—

JOHN GARD EDMUNDS, jr., No. 5, Courtenay-street, Plymouth, Notary Public.

This is the specification referred to in the annexed letters of Registration granted to William Willoughby, Joseph Willoughby, and Samuel Willoughby, this seventh day of February, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 6 January, 1873.

SIR,

The Petition of Messrs. W., J., & S. Willoughby for Letters of Registration for Improvements in Machinery or Apparatus for stamping Ores and other hard substances having been referred to us, we have examined the drawings and specifications accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,
J. SMITH.
E. C. CRACKNELL.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

(Copy)

Fig. 1.

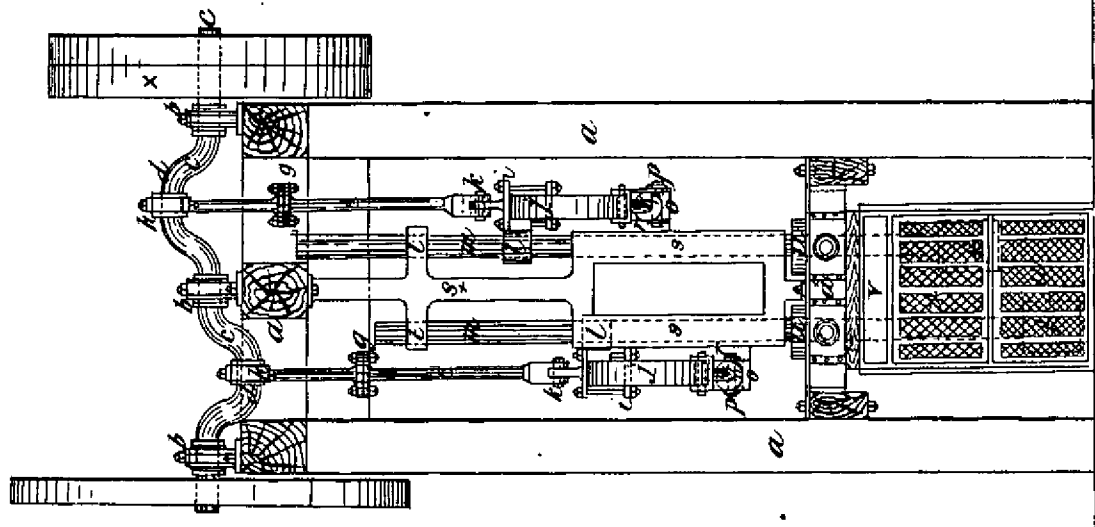
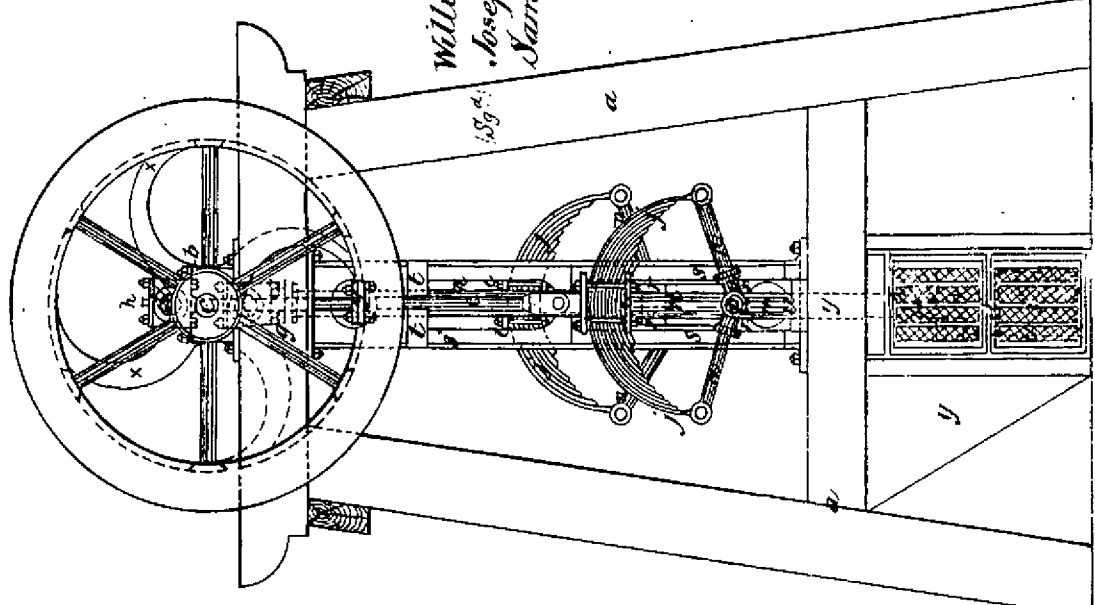


Fig. 2.



William Willoughby.
 Joseph Willoughby.
 Samuel Willoughby.

This is the Sheet of Drawings referred to in the
 annexed Letters of Registration granted to William
 Willoughby, Joseph Willoughby, and Samuel
 Willoughby, this seventh day of February, 1863.
 Hercules Robinson.

H. W. Hammond, Patent Agent,
 London and Glasgow.

(Sign)

[7]



A.D. 1873, 18th February. No. 345.

IMPROVEMENTS IN BOTTLES.

LETTERS OF REGISTRATION to Henry Perry, for Improvements in Bottles.

[Registered on the 18th day of February, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief of the Colony of New South Wales, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS HENRY PERRY, of London, in Great Britain, late of Lonsdale-street, Melbourne, Victoria, machinist, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in Bottles," which is more particularly described in the specification and drawing which are hereunto annexed ; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four ; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years : And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Henry Perry, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof ; to have, hold, and exercise unto the said Henry Perry, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended : Provided always, that if the said Henry Perry shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this eighteenth day of February, in the year of our Lord one thousand eight hundred and seventy-three.

(i.s.)

HERCULES ROBINSON.

Improvements in Bottles.

SPECIFICATION of HENRY PERRY, of London, in Great Britain, late of Lonsdale-street, Melbourne, Victoria, machinist, for an invention intituled "Improvements in Bottles."

It is well known that bottles having a popular trade-mark upon them are frequently put to a fraudulent use by being refilled with an inferior article after they have been emptied of their original contents. Now this invention has been designed for the purpose of preventing this, by constructing the bottles in such a way as to preclude the possibility of the contents being abstracted without their being broken or materially damaged. This is accomplished by constructing them with a solid top, provision being made for the reception of the fluid with which they are to be filled, by making a perforation at the top or the bottom of the bottle. This perforation is made by preference in the top, and in a conical form. When the bottle is filled this perforation is to be fitted with a conical plug or stopper, by preference of the same material as the bottle, and cemented in so as to prevent its extraction, thus preventing the removal of the contents except by the breakage of the bottle. To do this without loss they are each made with a projecting flange at the top, so as to permit of their being knocked off with the greatest facility and the contents poured out through the neck, but yet utterly destroying the bottle for fraudulent purposes. The plug should not project above the top of the bottle. If preferred, a cork may be compressed so as to enable it to be pushed through the conical hole and take its place in the neck of the bottle. The drawing hereto attached shows a bottle with both plug and cork, A being the plug, and B the cork; C being the flange by which the top is knocked off so as to get at the contents.

Having thus described the nature of this invention, and the manner of performing same, I would have it understood that I do not confine myself to the precise details herein set forth, such as the size or shape, or materials of which my invention may be made or manufactured, but I claim—

The construction and use of bottles having a solid top, with a projecting flange, and a perforation at the top or bottom fitted with a plug, substantially as herein described and explained.

In witness whereof, I, the said Henry Perry, have hereto set my hand and seal, this twenty-first day of November, one thousand eight hundred and seventy-two.

HENRY PERRY,
By his Attorney duly authorized,
NICHOLAS LA FEUILLADE.

This is the specification referred to in the annexed Letters of Registration granted to Henry Perry, this eighteenth day of February, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 20 January, 1873.

SIR,

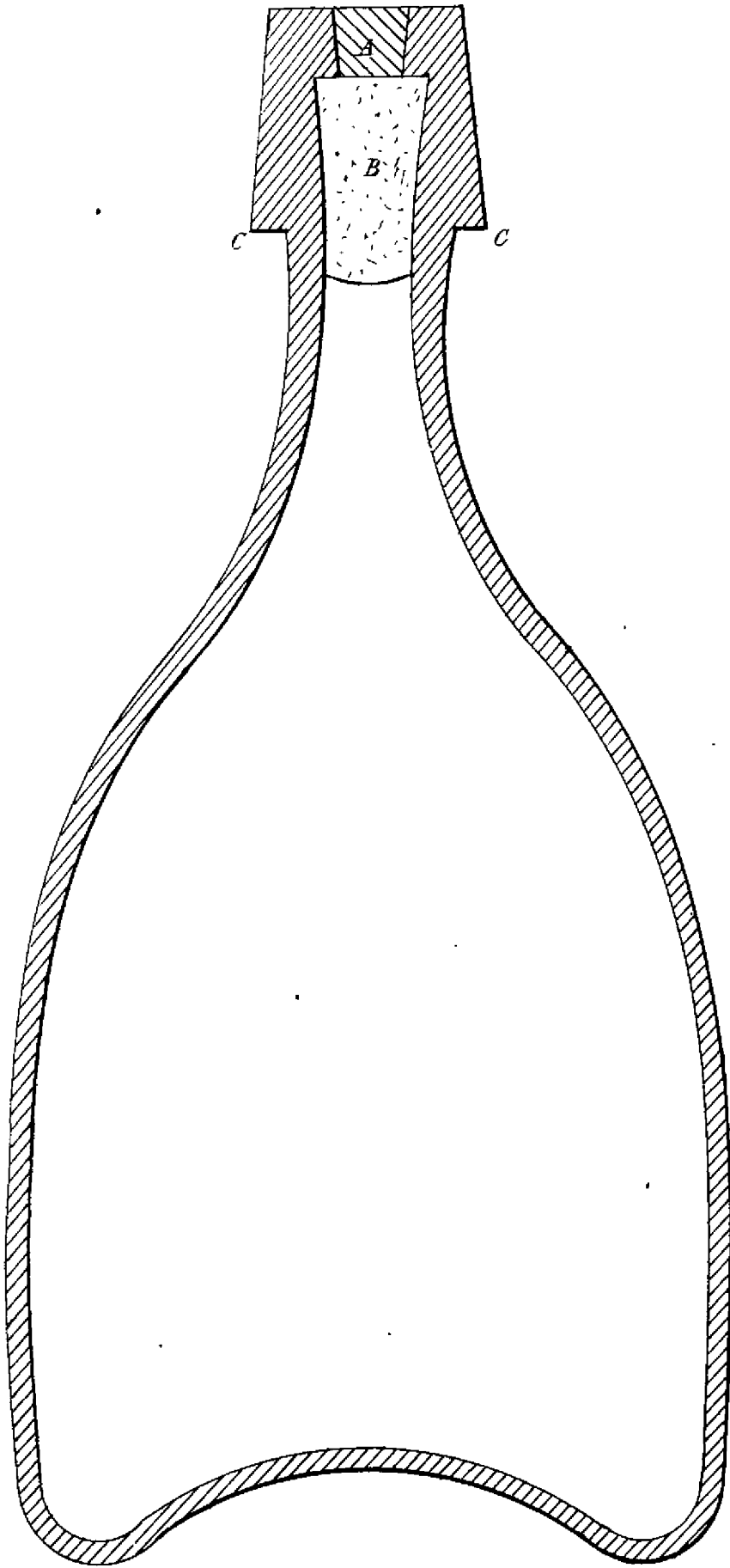
We do ourselves the honor to recommend that Letters of Registration be granted, securing to Mr. Henry Perry, of London, in Great Britain, late of Lonsdale-street, Melbourne, Victoria, the exclusive enjoyment of his invention, intituled "Improvements in Bottles," in accordance with the specification, drawing, and claim transmitted for our report, under your B.C. communication of the 3rd January, 1873, herewith returned.

We have, &c.,
E. C. CRACKNELL.
GOTHEK K. MANN.

THE PRINCIPAL UNDER SECRETARY.

[Drawing—one sheet]

Perry's Patent.



*This is the Drawing referred to in the annexed Letters
of Registration granted to Henry Perry, this eighteenth
day of February, 1873.*

Hercules Robinson.

[9]



A.D. 1873, 18th February. No. 346.

AN IMPROVED METHOD OF PURIFYING AND DECOLOURIZING STEARIC ACID.

LETTERS OF REGISTRATION to Theophilus Kitchen, for an Improved Method of purifying and decolourizing Stearic Acid.

[Registered on the 18th day of February, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS THEOPHILUS KITCHEN, of Melbourne, in the county of Bourke and Colony of Victoria, soap and candle manufacturer, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "An improved method of purifying and decolourizing Stearic Acid," which is more particularly described in the specification which is hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Theophilus Kitchen, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Theophilus Kitchen, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Theophilus Kitchen shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this eighteenth day of February, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

An Improved Method of purifying and decolourizing Stearic Acid.

SPECIFICATION of THEOPHILUS KITCHEN, of Melbourne, in the county of Bourke and Colony of Victoria, soap and candle manufacturer, for an invention intituled "An improved method of purifying and decolourizing Stearic Acid."

THIS invention consists of the use of mineral oil, such as kerosene, petroleum, or paraffine, as a hardening and decolourizing agent in the treatment of stearic acid. If the oil is not of a tolerably light colour itself, it will only harden—not decolourize; but if it is of a light colour it will do both.

It is well known that various processes are in use by candle manufacturers for the manufacture of the stearic acid, and although mineral oil is equally efficacious, no matter by what process it is produced, yet I prefer to work by what is known as the sulphuric acid saponification process. According to this method, the fatty bodies in use are made into fatty acids by admixture with sulphuric acid, at a heat which varies according to the judgment or fancy of the operator; the sulphuric acid being used either strong or diluted with water. After this the acids so produced are washed, and are then more or less of a black colour. To remove such colour and impurities it is usual to submit the same to distillation. This is attended by considerable waste, and is a costly process, while at the same time it is admitted that the percentage of such candle material on the fatty body used is decreased and its quality lowered; whereas by the use of mineral oil instead of distillation, the candle material is not injured and suffers no decrease in quantity.

My mode of procedure is as follows:—When the black acids have been made as above, I at once subject them to pressure in the usual way, for the purpose of removing the oleic acid. The stearic acid is then melted and mixed with a quantity of a light-coloured mineral oil, such as that known as kerosene, petroleum, or paraffine (but I prefer kerosene), and again submitted to pressure, when it is found that all the dark colour and impurities are carried away in the oil, leaving the stearic acid white and ready for use. The percentage of oil I use depends upon the quality of the stearic acid and the temperature of the atmosphere, decreasing as the quality of the acid improves, and increasing as the heat of the atmosphere lessens. In the ordinary way I should use ten hundredweight of oil to double the quantity of stearic acid.

The omission of the distillation in the sulphuric acid saponification process permits of the manufacture of stearic acid as good as, if not superior to, that produced by what is known as the open lime process, while the yield of candle-stuff is greater, and the cost of the chemicals about 80 per cent less.

Care should be taken to keep the temperature of the mixed materials as low as possible, to avoid loss by evaporation of the light oil.

I purify the used oil by distillation, and use it afresh, although any other of the well-known processes of purifying might possibly answer as well.

Having thus described the nature of my invention and the manner of performing same, I would have it understood that I do not confine myself to precise details, so long as the nature of my invention be retained; but I claim the use of mineral oil, such as kerosene, petroleum, or paraffine, as a hardening and (in the event of its being of a light colour) a decolourizing agent, in the treatment of stearic acid, substantially as herein described and explained.

In witness whereof, I, the said Theophilus Kitchen, have hereto set my hand and seal, this twenty-fifth day of November, one thousand eight hundred and seventy-two.

THEOPHILUS KITCHEN.

This is the specification referred to in the annexed Letters of Registration granted to Theophilus Kitchen, this eighteenth day of February, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 17 January, 1873.

SIR,

The application of Mr. Theophilus Kitchen for Letters of Registration for an improved method of purifying and decolourizing Stearic Acid having been referred to us, we have examined the specification accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,
J. SMITH.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

No. 347.

[Assignment of No. 242A. See page 73 of Return of 21 June, 1872.]

[11]



A.D. 1873, 27th February. No. 348.

MACHINE FOR GOLD AND SILVER QUARTZ CRUSHING AND AMALGAMATING, AND FOR GEM-WASHING.

LETTERS OF REGISTRATION to Eugene Roehn, for a Machine for Gold and Silver Quartz crushing and amalgamating, and for Gem-washing.

[Registered on the 27th day of February, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS EUGENE ROEHN, of Sydney, in the Colony of New South Wales, naturalist, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention of a Machine for "Gold and Silver Quartz crushing and amalgamating, and for Gem-washing," which is more particularly described in the specification and the sheet of drawings which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Eugene Roehn, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Eugene Roehn, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Eugene Roehn shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-seventh day of February, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Machine for Gold and Silver Quartz crushing and amalgamating, and Gem-washing.

APPLICATION for Letters Patent by EUGENE ROEHN, of Sydney, in the Colony of New South Wales, gentleman, several Medals of Honor, Member of the National Academy of Paris, Member of the Polytechnic Institute, Paris, ex-Vice-President of the National Academy, Bolivia, Corresponding Member of the Agricultural Society of Albany, U.S., &c., &c., &c., for a Machine for crushing Gold and Silver Quartz, for amalgamating the same, and for washing Gold and Silver sands or dust, or alluvial earth containing Gold or Silver, and for crushing or washing Tin Ore or alluvial Tin, or other metals and minerals; and also for washing Gems and Precious Stones.

The process or processes herein described may be carried on either simultaneously or separately, as may be desired. The machine may be worked by hand or horse, or any other animal power, or by steam or water power, or by any known mechanical power.

SPECIFICATION and description of the Machine, and explanation of the accompanying Drawings referring to it.

- O trough. The letter O refers to that portion of the drawing which represents a trough, the bottom of which is the fourth part of a circle of 12 feet in circumference, and is 1 foot deep and 10 inches long. This trough may be constructed of timber and iron, or of iron altogether, and is intended to work on an angular iron axis or pivot, between two steel rollers, A; thereby enabling the circumference of the circular part of the trough, when in motion, to touch at all and every point in succession the iron floor of the lower trough B, by which means any angle can be obtained. The trough O may be partly or entirely filled with wet sand or other heavy material, to increase its weight while at work.
- A steel rollers.
- B lower trough.
- C C arms.
D D stampers.
- E guide for stampers.
- F anvil.
- G box.
H slide.
- I pivot or axis.
- K amalgamating machine.
- M iron receiver.
- N separator and distributor.
- P drawer.
- Q gauze wire.
R receiver.
S handles.
T hopper.
U distributor.
W drawer.
- C C represent the arms of the machine, to each of which is attached one or more stampers, D D, working either singly or collectively, as may be required.
- E is a guide or slot, in which the axle of the stampers works. These stampers may be composed of timber, in the form of a hollow box, as shown, bound with iron, and shod with cast or wrought iron shoes, and may be filled with wet sand or other heavy material, or they may be composed entirely of iron, and of any weight the machines of different sizes may require. The reason for filling the stampers with wet sand or other heavy material is to give additional force and weight to their descending blow when at work. The sand or other material may at any time be emptied from the trough and stampers, and when it is desired to move the machine from place to place, its portability is thereby greatly increased, as the machine is thus rendered much lighter.
- F is the anvil on which the stampers strike, placed on a solid foundation of wood or stone, which forms part of the machine. It is faced with steel or case-hardened iron, and is enclosed in a box, G. The foundation referred to may be strengthened and increased, if necessary, to suit the character of the ground on which the machine is to work. The box G receives the quartz or stone, which is therein subjected to the first crushing process, being treated by the stampers. It then passes through the slide H into the trough B, and is there treated by the crushing trough O and reduced to powder; after which it passes through the opening in the pivot or axis I into the amalgamating box. It is by causing the trough O to oscillate on its axis that the stampers D D are brought into contact with and crush the quartz, which, after being crushed, is reduced to powder by the trough O.
- K is a dry amalgamating machine, composed of a timber box or receiver, of dimensions to suit the different sized machines, and fitted with a wrought-iron screwed pipe, securely fixed to an iron plate, and screwed to a cast-iron receiver, M, which is partly filled with mercury, and which can be unscrewed whenever it may be necessary. N a separator and distributor. This being occasionally worked by means of the handle attached to it, keeps the material contained within it in an amalgamating state, and prevents any settling or adhering to the amalgamator. In the body of the trough O, and secured as seen in drawing, is a drawer, P, the bottom of which inclines from the centre to each side. A zig-zag, or strips of wood, placed at an angle, as shown, acts as a distributor of the alluvial gold or silver, or tin, or of the gems or precious stones, or other material subjected to the process of washing. A plate of gauze wire, or of perforated metal, Q, is placed at each end, through which the fine particles of the metal pass into the receiver R, which can be taken out and emptied through the diagonal bracing on the side of the trough.
- S, handles to take out washing tray.
T, hopper to supply the washing tray with material.
U, distributor.
W, drawer for emptying washing tray.

NOTE.—Under the anvil there is placed a square piece of lead, to prevent the jump of the stamper on striking the anvil.

The principle adopted in the construction of the machine herein described may be adopted in the construction of similar machines of any size. The length of the arms may be increased for the purpose of carrying the stampers to whatever extent is desirable, thereby securing additional power; and the stampers themselves may be disconnected and worked by the leverage caused by the oscillation of the trough.

CLAIMS for the novelty and utility of the invention.

The adaptation of the principle of using stampers or hammers for breaking stone or quartz or other minerals in this manner is entirely new, no such stampers or hammers having been worked heretofore by an oscillating motion. The principle of reducing to fine particles the material broken by the hammers or stampers, by means of a partly cylindrical trough, the motion being obtained by an angular axis working on anti-friction rollers, is also new, and it enables the entire lower surface of the lower part of the machine to come into contact successively with every point of the bottom of the trough. The principles made use of in the working of this machine are quite new in their application, and have never been

Machine for Gold and Silver Quartz crushing and amalgamating, and Gem-washing.

been applied to any machine for the purpose to which I now propose to employ them. The machine is unique of its kind, and has not been invented by any other person in any part of the world. The portability of the machine when not weighted for the purpose of crushing, and the power of immensely increasing its effective force by filling the trough and stampers with wet sand or other heavy material, are great recommendations to its use. The number of stampers can be augmented as required. It can be repaired on the spot where it is at work by any miner, in the event of any part of it being broken.

Its small size and portability enable it to be easily carried over parts of the country where the conveyance of crushing machines, such as now are in ordinary use, would be almost impracticable. It can also be worked under ground, saving the trouble and expense of raising quartz to the surface, and thus causing great economy in money, time, and labour.

It may be made of wood or iron, or solely of iron.

Any quantity of quartz, from one ton to thousands of tons per day, can be treated without changing anything in the principle of the machine or its form. It requires but a minimum force to crush, wash, and amalgamate simultaneously or separately, at pleasure, and it sends into a receiver charged with mercury the most minute particles of gold or silver (which often escape from the best machines hitherto constructed), as the ore revolving over the mercury deposits itself at the bottom of each receiver.

The trough, or quarter of a circle, has never been used for the purpose herein described, and the peculiar axle, on each side of which is a roller to facilitate the oscillatory motion and to obtain greater degrees of angle, have not been adapted to such an amalgamating machine with its receiver under it. The zig-zag, or diagonal strips of wood, contained in the drawer P, to force the ore attracted by the mercury, and thus deposited in the small receivers, has not been used for the purpose expressed ever before. Respecting the stampers, the blow given as described in the sketch would be from 14 to 16 inches, but the blow can be augmented to 24 or 26 inches, according to the velocity given to the trough and the stamper, and the stamper left independent after being lifted by the trough, the full weight of the stamper falling on the stone or quartz.

The cheapness of this machine places its purchase within the reach of working miners, and enables them to gain daily earnings on their claims—a great boon to those whose limited means do not allow them to purchase the large and expensive machines used for quartz-crushing at the present time.

This machine will benefit the entire mining population, and assist in developing one of the greatest branches of industry in the Colony.

EUG^E. ROEHN.

This is the specification referred to in the annexed Letters of Registration granted to Eugene Roehn, this twenty-seventh day of February, 1873.

HERCULES ROBINSON.

REPORTS.

No. 3, Spring-street,
Sydney, 13 August, 1872.

SIR,

We have the honor to return herewith the Petition of Mr. Eugene Roehn, forwarded to us by your blank cover, under date 31st ultimo, with specification and drawings descriptive of a Machine for "Gold and Silver Quartz crushing and amalgamating, and for Gem-washing," of which he claims to be the inventor, and for which he is desirous of obtaining Letters of Registration.

We have now to state that, after perusal of the specification and examination of the accompanying drawings, we are of opinion that the claimant should be called upon to set out more particularly in his claim the several parts of the said machine which he holds to be novel and of his own invention, or the particular combination (if such be his claim) of known appliances composing the machine, in the use of which he claims the protection of the Letters applied for.

Pursuant to your instructions, we have considered, in connection with the foregoing, the Petition also forwarded to us from Mr. Henry Esplen, claiming to be the author or designer of the machine in question, and requesting that the Letters of Registration thereof may not be granted to Eugene Roehn, but to himself.

Conceiving the latter to be a counter-claim to the property in the invention, the question would not be one within our province to deal with, even were it shown that precisely the same appliances were contemplated by the respective parties; but of this there is no evidence before us, the sketch forwarded by the latter claimant, though apparently disclosing some features of resemblance, being unaccompanied by any specification or details of illustration such as would enable us to arrive at an opinion as to the identity of the proposed appliances.

We have, &c.,
CHAS. WATT.
A. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY.

No. 3, Gresham-street,
Sydney, 21 November, 1872.

SIR,

We have had the honor to receive the letter of Messrs. Watt & Johnson, transmitted to us by your blank cover of the 18th instant, and purporting to supply the further particulars with reference to the application of Mr. Eugene Roehn for certain Letters of Registration, which we had reported to be necessary to admit of his application being dealt with.

We

Machine for Gold and Silver Quartz crushing and amalgamating, and Gem-washing.

We regret to have still to report that the specification and drawings, even with the additions or explanatory remarks now made, are so general, and devoid of detail and precision, as to render it impossible for us, with any proper regard to the responsibility thrown upon us in the interests of the public, or even of the applicant, to deal with the claim.

It is quite possible that some portion of the processes or machinery (of which the claimant has only given a general description, illustrated by a pen-and-ink sketch of a character such as it is difficult to understand and impossible to recognize as a proper drawing of machinery) may be novel, and a proper subject for Letters of Registration, but at present we cannot do more than state that the applicant has not complied with the requirements of our former Report.

We have, &c.,
CHAS. WATT.
A. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY.

No. 3, Gresham-street,
Sydney, 14 January, 1873.

SIR,

We have now the honor to return the letters of Messrs. Watt & Johnson, forwarded to us by your blank cover, No. 73-76, of the 7th instant, with amended specification and drawings of a certain invention of Machinery for Gold and Silver Quartz crushing and for Gem-washing, for which Letters of Registration are claimed by Mr. Eugene Roehn.

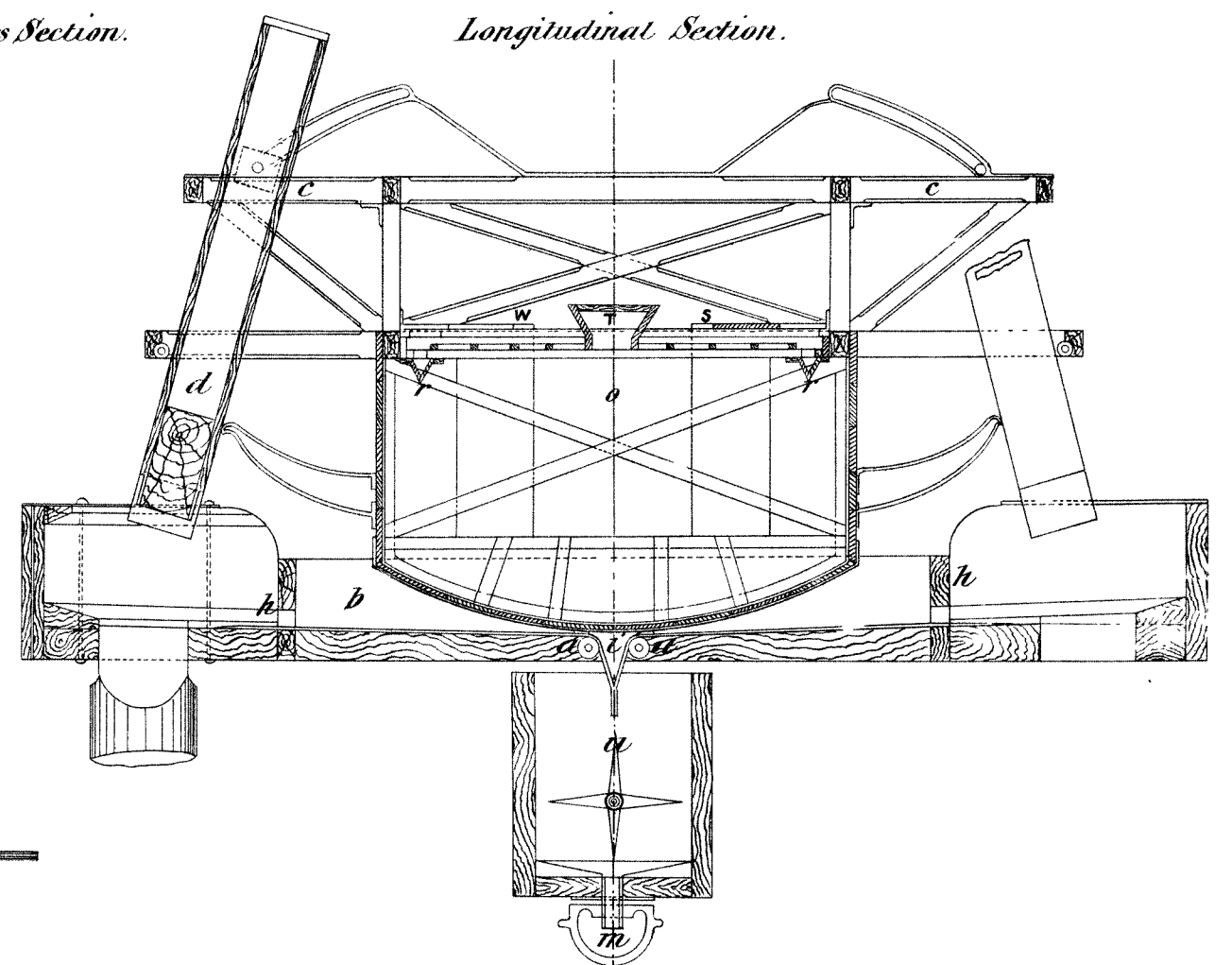
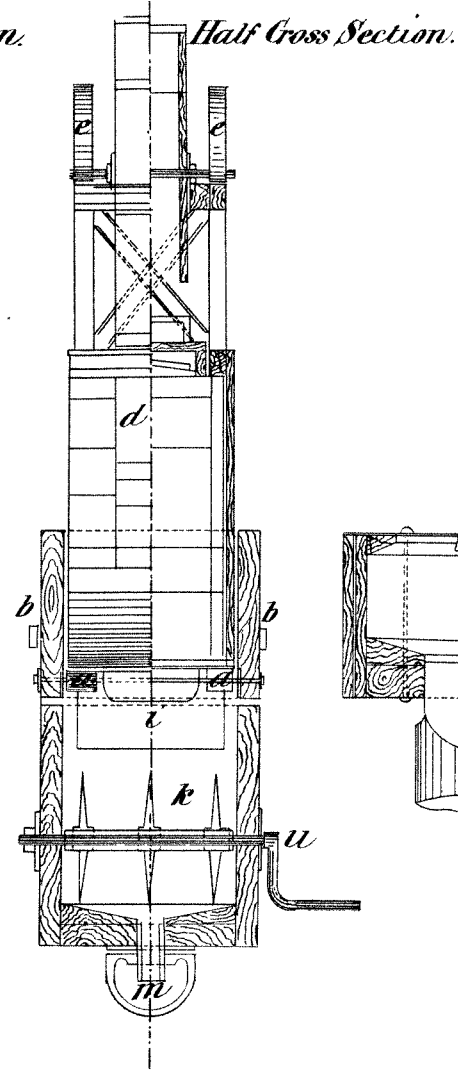
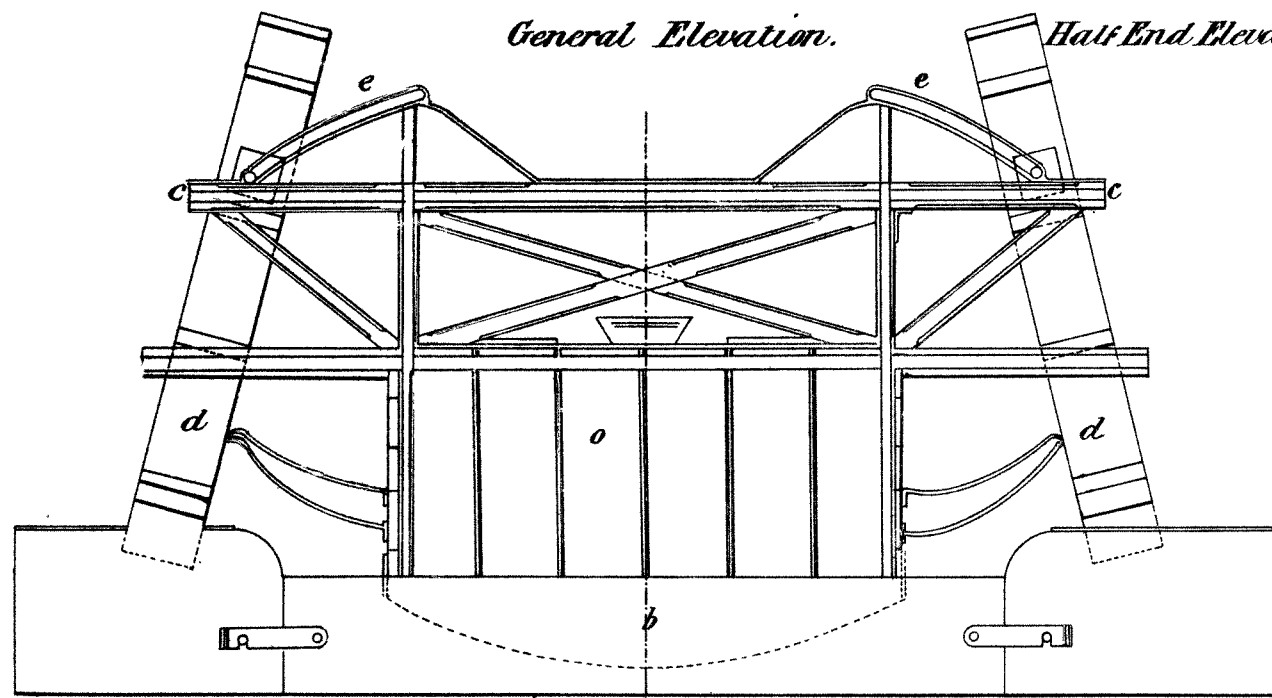
We regret to have to state that even now the specification is far from satisfactory as regards the precise claims which the Letters of Registration are designed to secure; but as the nature of the machinery is described with sufficient precision, and illustrated sufficiently in detail for general information in the revised drawings, we do not feel warranted in further opposing the issue of Letters of Registration for an invention which appears to be novel, solely on account of objections which are now mainly matters concerning the inventor and those who are interested with him in the application.

We have, therefore, the honor to recommend that Letters of Registration be granted as applied for, for the machinery and appliances as a whole, set forth in the amended specification and drawings herewith returned.

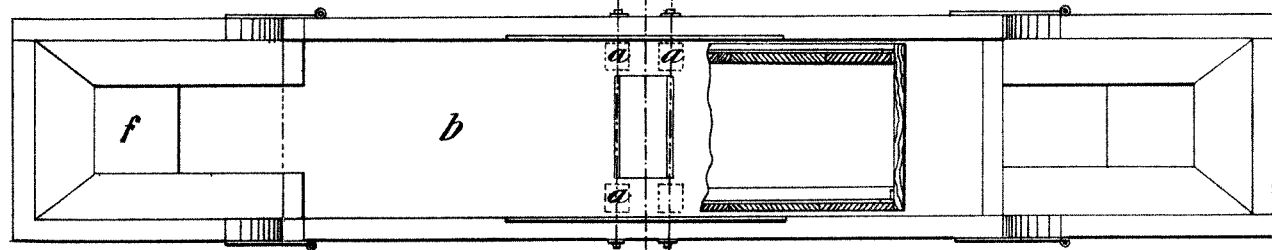
We have, &c.,
CHAS. WATT.
A. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

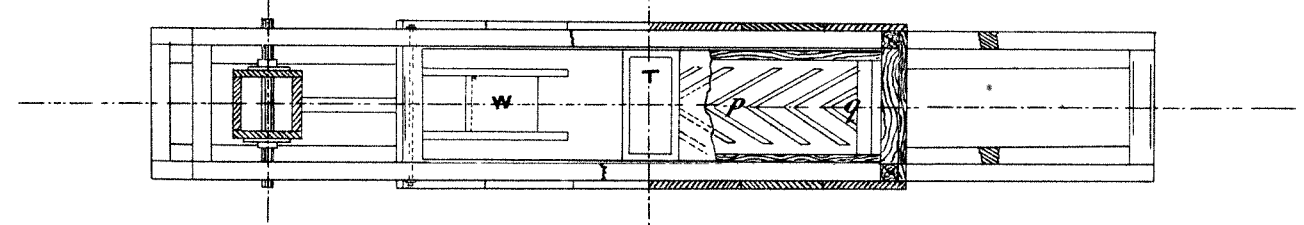


Plan of Trough.



Plan of Top of Machine

Section Showing Tray &c



Scale 2 inches = 1 foot.



This is the Sheet of Drawings referred to in the annexed Letters of Registration granted to Eugene Rochu this twenty-seventh day of February, 1875.
Hercules Robinson.

(Sig 1)

[15]



A.D. 1873, 18th March. No. 349.

IMPROVEMENTS IN TREATING FIBROUS SUBSTANCES FOR TEXTILE PURPOSES AND FOR THE MANUFACTURE OF PAPER STOCK.

LETTERS OF REGISTRATION to Thomas Routledge, for Improvements in treating Fibrous Substances for Textile purposes and for the manufacture of Paper Stock.

[Registered on the 18th day of March, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS THOMAS ROUTLEDGE, of Ford Works, near Sunderland, in the county of Durham and Kingdom of England, paper manufacturer, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in treating Fibrous Substances for Textile purposes and for the manufacture of Paper Stock," which is more particularly described in the specification which is hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Thomas Routledge, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Thomas Routledge, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Thomas Routledge shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this eighteenth day of March, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in treating Fibrous Substances for

SPECIFICATION of THOMAS ROUTLEDGE, of Ford Works, near Sunderland, in the county of Durham and Kingdom of England, paper manufacturer, for "Improvements in treating Fibrous Substances for Textile purposes and for the manufacture of Paper Stock."

THE objects of this invention are the preliminary preparation and the subsequent treatment of raw vegetable fibrous substances, in order to reduce them into a fibrous condition suitable for "textile" purposes and for "paper stock," as also for the utilization of the by or secondary products resulting therefrom.

The said preliminary preparation consists in a process or series of processes whereby the gluten, starch, and other amylaceous, gummo-resinous, and extractive compounds which more or less constitute a large proportion of the bulk and considerable percentage of the weight of all raw vegetable fibrous substances, are decomposed or partially decomposed so far that the ultimate fibres may be separated or eliminated wholly or partially therefrom, thus constituting "paper stock"; or the said ultimate fibres so preliminarily prepared may be further disintegrated by heckling, willowing, carding, or other analogous process, so as to be adapted for spinning and various other "textile" purposes, the residuary amylaceous and proteine compounds being, if desired, collected and utilized.

It is well known that most fibres employed in "textile" manufactures, with the exception perhaps of silk and cotton, are separated or prepared for separation from the attaching stalk or parenchyma with which during their growth they are naturally combined, by a process of steeping or retting in water, which induces a species of fermentation whereby the parenchymous, amylaceous, or gummo-resinous compounds or matters are so decomposed, or partially decomposed, that by the further mechanical processes of rolling, breaking or beating, scutching and heckling, the ultimate fibres are separated therefrom. Such steeping or retting processes, however, as now practised, occupy a very considerable time, and require to be very carefully conducted and watched.

I have discovered that when a certain class of raw vegetable fibrous substances are subject to a preliminary alkaline steep, and from that transferred to a fermentative steep produced artificially as herein-after described, the time necessitated for such steeping is very much reduced; and further, by adjusting the temperature of such steeping operations, the desired decomposition and subsequent separation and elimination of such parenchymous and other extraneous substances or compounds combined with the ultimate fibres is materially expedited and promoted, and at the same time readily controlled.

The class of fibrous substances to which I have found the above preliminary system of treatment more especially applicable are those combined with or containing a large proportion of gluten, starch, and similar amylaceous and gummo-resinous compounds, such as begasse or sugar-cane refuse, maize straw and leaves, rice straw, musa or plantain, pine-apple, yucca, phormium tenax, &c. It is also applicable to the treatment of flax, hemp, jute, rhea fibre, and similar fibrous substances used more especially for "textile" purposes.

According to my said invention, the preliminary or first steep is composed of lime water, that is, water in which caustic or hydrate of lime has been dissolved. I use lime for economy, but any other alkaline steep may be employed. I immerse the fibrous substances to be treated in a tank or one of a series of tanks or vessels hereinafter described, filled with the alkaline steep liquor, taking care that they shall be submerged or covered, and allow them to remain therein from about twenty-four to thirty-six hours; if at the ordinary temperature of the water where such fibrous substances are produced, say from about 50 to 70 degrees Fahrenheit, by the action of such alkaline steep the parenchymous covering and amylaceous and proteine compounds combined with the fibres will be so far attacked or affected as to admit of and facilitate the action of the following or fermentation steep, which (the lime or other alkaline steep liquor being drained or pumped off) may be conducted in the same, but, by preference, in one or more of another adjacent series of tanks or vessels, the fibrous substances being placed therein and ferment liquor added thereto, so as to cover the fibrous substances. The time required for this second or ferment steep will be from thirty-six to seventy hours, according to the atmospheric temperature. Such ferment steep is composed of water to which has been added a portion of the ferment resulting from a previous ferment steep, or fermentation may be induced by adding yeast or other fermenting substance thereto, the natural previously created ferment being preferable; and such ferment in the first instance may be created by allowing a certain portion of the fibrous substances previously treated by an alkaline steep to remain under steep until fermentation has been naturally induced, when by using the ferment thus created the process of steeping may thereafter be conducted continuously from one steep vessel to another, through the series of vessels, with fresh charges indefinitely.

It will be remarked that both the alkaline and fermentative steeps may be effected by using water at the natural temperature; but in order to expedite both the said steeping processes and economize the plant or apparatus required, I prefer the application of heat, as, according to the elevation of temperature of the steep liquors, the time required for steeping is materially reduced or abridged, and more readily controlled. For example, the best results are obtained by alkaline steeping from about 110 to 120 degrees for about ten to twelve hours, and ferment steeping at about 100 degrees for about ten to twelve hours; sufficient decomposition of the extraneous compounds, without injurious action on the ultimate fibres, being thereby attained, with most convenient and regular working of the steeping plant or apparatus and succeeding processes.

The plant or series of tanks or vessels in which the aforesaid steeping processes (as also those for the subsequent boiling, washing, and bleaching processes hereinafter to be described) are performed may be constructed of any convenient form of wood, masonry, concrete, or metal sunk into or placed on the surface of the ground; but as crude or raw vegetable substances in their normal condition are generally extremely bulky, for economical considerations, especially when mere steeping alone is desired, it will be found most convenient to construct them in the ground, and of capacity sufficient to contain a ton or thereabouts of the fibrous substances to be treated. The vessels should be water-tight, furnished with perforated false bottoms, and connected together by pipes or channels fitted with the necessary cocks or valves in order to connect or disconnect each vessel as desired, in such manner that the warm steep or other liquor being run into the top of the first vessel of the series (charged with the material to be treated),

which

Textile purposes and for the manufacture of Paper Stock.

which is connected by a pipe or otherwise from under the false bottom to the upper portion of the second vessel of the series by hydrostatic pressure is forced or gravitated downwards, and then upwards successively and continuously through eight, ten, or more vessels constituting the series, the eighth or last vessel of the series being connected by a return pipe or other channel with the first of the series, so that the steeping, boiling, or other processes may thus be proceeded with continuously; and, as each vessel is also provided with a connection fitted to and under the false bottom, it may be emptied as desired. By this system the steep or other liquors may be used again and again until they have become inoperative or surcharged with extractive matter, meanwhile, however, utilizing the heat, if heat be employed, and thus economizing fuel and water; or the whole or a certain portion of the liquors in either case may be run off to waste, or otherwise utilized, and fresh added to supplement the portion thus run off and revivify the steep or other liquors; or the steep or other liquors may be pumped or syphoned from one vessel to another as may be desired; but I have found the continuous system as described most convenient in practice. The temperature of the steep liquors is maintained by blind pipes, laid under the false bottoms of the vessels, heated by steam or water, or naked steam may be employed for such purpose.

It will be known when the effect desired has been attained by taking a portion of the fibrous substances which have been treated in the hand, when, if they are found to have lost their natural harshness, and to have become soft, viscous, or greasy, and the fibres readily separated or detached from the parenchyma and from each other by rubbing, they may be removed from the steep and subjected to pressure in any convenient manner, or without pressure, trodden on a paved floor, passed through stampers or rollers, or otherwise treated to complete the disintegration resulting from the steeping processes previously described, washed in water, when the glutinous and other compounds or substances will separate freely therefrom. The comparatively clean fibre or fibrous material may be pressed into cakes in any convenient manner, and dried artificially or otherwise, or by preference, especially if the cost of carriage is an object, the fibres may be reduced materially in bulk and still further deprived of extraneous matter after being pressed to extract the excess of moisture, by passing them when dried, or partially dried, through a willow or carding machine, by which they will be converted into a fibrous or tow-like condition, when they may be baled, forming in this condition crude "paper stock." The glutinous proteins or other compounds left diffused in the washing waters will deposit in the vessels, and may be collected and utilized.

If the fibres are desired only for "textile" purposes, neither the alkaline nor the ferment steeping processes should be carried so far as when the fibres are desired for "paper stock"; partial decomposition of the parenchyma and protein compounds having been sufficiently effected, further disintegration of the fibres should be produced by greater mechanical manipulation of the rolling and washing processes, and by subsequent scutching, heckling, &c., &c.

The crude "paper stock" prepared as described is suitable for conversion into brown wrapping and other common papers; but when it is desired to manufacture therefrom printing, writing, or other bleached papers, such "paper stock" must be subjected to a process of boiling in alkaline leys, as ordinarily practised, or by the peculiar system of boiling which I now proceed to describe. The system of boiling which I prefer, not only for such crude "paper stock" prepared as described, but for other fibres or fibrous materials to which the foregoing preliminary steeping processes are not applicable, consists as follows:—I employ for the said boiling and subsequent washing processes a similar series of eight or more vessels to those hereinbefore mentioned, so connected together that I can employ the alkaline ley for boiling again and again until the free alkali therein is completely neutralized, by which I effect a great saving, not only in the original relative percentage quantity of alkali employed, but I save fuel, and enormously reduce the quantity of water required by the ordinary process as now followed, besides producing the desired effect upon the fibrous material under treatment, with the minimum of waste or loss to such material.

The vessels may be heated in any convenient manner, by injection of either low or high pressure or superheated steam, or by blind pipes with steam or water circulating therein. I prefer employing the Bowking or vomiting system, as it is desirable that circulation of the alkaline leys be from time to time kept up during the boiling process, the same being also necessary to maintain the requisite temperature of the leys. This is most conveniently effected by injecting steam into the kier or vessel immediately under the ordinary vomiting pipe, which is fixed in the centre of the kier and attached to the false bottom thereof; this system being applicable with either low or high pressure steam, and to either an open or a closed vessel or boiling-pan. It is desirable the bonnet superimposed over the vomiting pipe should be adjustable, to control the flow and circulation of the vomited leys; and where fuel is costly, I prefer the special arrangement of blind pipes for producing boiling and circulation hereinafter described.

In commencing the boiling process, one of the vessels of the series being filled with the fibrous materials to be treated, I run thereon the boiling ley, filling the vessel above the level of the pipe or channel connecting it with and to the next vessel of the series; which second vessel being charged, I again run a charge of ley into the first vessel, which the valve of communication being then opened from under the false bottom of the first vessel, an equivalent quantity of ley is forced by gravitation from it into No. 2 vessel, by which time No. 3 vessel is charged, and so on progressively and continuously; so that assuming ten hours would, by the ordinary system, be employed for boiling with one charge during such period of my system five successive charges would be run on over and through the fibres in No. 1 vessel, which would then be found to be sufficiently boiled. I then disconnect No. 1 by closing the connection between it and No. 2 vessel, thus constituting No. 2 for the time being No. 1 vessel, and run water into No. 1 for washing. No. 2 having received its full charge of ley, is then disconnected from No. 3, which in its turn becomes as it were No. 1, and No. 2 is connected again with No. 1, and a fresh charge of washing water being run into No. 1 forces over a corresponding quantity into No. 2. By this system it will be seen that both the leys and the succeeding rinsing or washing waters will be used again and again. By the time the first ley introduced has reached No. 5 or No. 6 vessel it will be found to have become neutralized by the gummo-resinous colouring and extractive matters, and may then be run off to waste or evaporated, to recover the alkali therefrom, and when the succeeding washing waters have been run progressively in the

Improvements in treating Fibrous Substances for

same manner from vessel to vessel it will be found that by the time they have reached (say) the sixth or eighth vessel, they will have attained the same strength as the original ley. The fibrous material in No. 1 being perfectly cleansed, and if desired, cooled by a final rinsing water, may then be removed from the pan or vessel, and is ready for bleaching without further mechanical or other washing.

By this means I am enabled to employ concentrated leys, thus saving at least two-thirds the quantity of water usually employed, thereby insuring economy of the fuel required for maintaining the necessary temperature during the boiling process, reducing also the quantity of water to be subsequently evaporated, and thus effecting a further saving if it is desired to recover the alkali employed. Moreover, as each fresh charge of alkali removes and (so to speak) pushes forward the proteine and colouring matters, every successive charge acts on fresh surfaces, and the ultimate cleansing and purification of the fibres is insured, with a saving of 30 per cent. and upwards of the alkaline now employed, and, as previously remarked, with less injurious action upon the fibrous materials under treatment.

For instance, with esparto, the present practice is to use not less than 8 per cent., and frequently 10 per cent. and upwards of soda to the ton of fibre under treatment. By the foregoing system, I find from about 5 to 7 per cent. sufficient, or even less, and I also am enabled to recover a larger proportion of the effete alkali after it has been used in the boiling process, and from the washing and rinsing waters which are also by being thus used again and again concentrated to nearly an equal strength of contained soda to the original leys employed.

In the ordinary process of boiling now practised in single or detached kiers or other vessels, the charge of alkaline ley requisite to treat a ton of fibrous material such as esparto is from about 900 to 1,000 gallons, such alkaline ley being constituted by from about 8 per cent. to 10 per cent. of soda to the fibre treated. By my continuous system, as hereinbefore described, I am enabled to use the ley in a far more concentrated form, the quantity of liquor being reduced to about 300 to 400 gallons, and its relative percentage strength of soda to the fibre treated to about 6 per cent. to 7 per cent., thus saving about three cents of alkali and more than half the water to be boiled and ultimately evaporated, if the soda is intended to be recovered.

Having thus so far described the preliminary preparation by alkaline and fermentative steeping, and the subsequent system of boiling and washing, I have now to add that when fuel is not an object of economy a material reduction in the time required for the said preliminary steeping processes, and a consequent saving of the plant or apparatus employed therein, may be effected by still further elevating the temperature of the lime or other alkaline steep to from about 160 degrees to 180 degrees, and continuing the same from about eight to ten hours, the warmth mellowing, softening, and swelling the fibrous substances, so that the covering silicious coating and their pores are more readily permeated and acted upon, the parenchyma and proteine compounds being thereby sufficiently decomposed to allow of their being readily removed by the processes hereinbefore described.

It is desirable when subjecting bogasse or similar harsh ligneous fibres to the above treatment to increase the quantity of lime present in the steep liquors, not, however, exceeding from about 15 to 25 per cent. of the fibre treated; but in treating maize and similar fibres of a more delicate texture, the lime or other alkaline steep liquor should be clear or nearly clear.

Bogasse thus treated, or by the alkaline and fermentative steeps as first described, can then be efficiently boiled by my peculiar continuous or other system, and manufactured into fibrous "paper stock" fit for bleaching and conversion into pulp and paper with one-half or less than half the quantity of soda were such preliminary processes omitted.

With maize and similar fibres the saving of soda will be in the same proportions, and with such fibres when thus preliminarily treated the soda may be used in its mild or carbonated form.

When it is desired to utilize the glutinous and amylaceous compounds produced, they should be washed in fresh water to purify them from the alkaline and fermentative steep liquors; such water, however, need not be wasted, as if allowed to repose these compounds will be deposited, and can then be removed and reduced to a compact condition and dried for transit.

When it is desired to bleach the "paper stock" or fibrous substances, I prefer to employ a continuous system by hydrostatic percolation, in a similar series of vessels connected together as previously described with respect to the boiling and steeping processes; such "paper stock" purified by washing may then be dried and prepared for transport in any convenient manner. The special arrangement of blind pipes hereinbefore referred to for boiling is as follows:—I take wrought-iron tubing, say of 1 to 2 inches diameter, and bend the same into a helix or coil proportioned in height to the size of the vessel in which the materials are boiled, the internal diameter of the said helix being kept from about 5 to 8 inches, and its exterior surrounded with thin sheet iron, when it forms as it were the vomit pipe. I connect the bottom of the said helix with a coil of pipe formed into a flattened worm or volute, corresponding with the diameter, and placed under the false bottom of the pan or boiling vessel, the extremity of said worm or volute being protruded through the bottom of the pan, and furnished with a tap, so that steam being admitted into the upper portion of the helix passes through the whole coil of pipe, the tap being so regulated as merely to allow the condensed steam as water to escape.

The washing arrangement hereinbefore referred to consists of a drum or cylinder with open ends mounted on bearings driven in any convenient manner, covered with wire cloth or similar reticulated material, the said drum revolving in a case or trough, and its interior being filled with shelves placed diagonally or transversely thereto, four, six, or more in number, forming as it were a hollow screw, so that the material being fed thereto will be rotated therein, and gradually passed through the drum, and a pipe or stream of water being supplied to the interior of the drum, such material during its passage is cleansed from the glutinous and other compounds which pass through the exterior reticulated surface of the covering of the drum into the exterior case, from which they can be removed, while the cleansed fibre is discharged from the further end of the drum. A convenient size for such drum will be (say) from 9 to 12 feet long, and 4 to 5 feet in diameter.

Textile purposes and for the manufacture of Paper Stock.

CLAIMS.

First.—The preliminary preparation of raw vegetable fibrous substances, in order to reduce them into a fibrous condition suitable for "textile" purposes and for "paper stock," by steeping the same in an alkaline bath, and subsequently subjecting them to a fermentative steeping, substantially as and for the purpose hereinbefore described.

Second.—The continuous system of boiling in a series of vessels connected together, substantially as and for the purpose hereinbefore described.

Third.—The continuous system of bleaching vegetable fibrous substances, substantially as hereinbefore described.

Fourth.—The peculiar construction and arrangement of apparatus for steeping, boiling, bleaching, and washing vegetable fibrous substances, as hereinbefore described.

Fifth.—The utilization of the by or secondary products resulting from vegetable fibrous substances when treated in the manner hereinbefore described.

This is the specification referred to in the annexed Letters of Registration granted to Thomas Routledge, this eighteenth day of March, 1873.

HERCULES ROBINSON.

REPORT.

No. 3, Gresham-street,
Sydney, 10 February, 1873.

SIR,

We have the honor to return the Petition of Thomas Routledge for a grant of Letters of Registration for "Improvements in treating Fibrous Substances for Textile purposes, and for the manufacture of Paper Stock," transmitted to us for our report by your blank cover of the 30th ultimo.

We now desire to state that, having considered the claims set forth in the Petition and accompanying specification, we are not aware of any objection to the granting of Letters of Registration as applied for.

We have, &c.,

CHAS. WATT.
A. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY.



[21]



A.D. 1873, 4th April. No. 350.

MEALER OR PULVERIZER.

LETTERS OF REGISTRATION to George Bishop, for a Mealer or Pulverizer.

[Registered on the 5th day of April, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS GEORGE BISHOP, of Sydney, in the Colony of New South Wales, Esquire, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention of a process for the reduction of all metallic ores and quartz to an impalpable powder, which invention is more particularly described in the specification and drawing which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said George Bishop, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said George Bishop, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said George Bishop shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this fourth day of April, in the year of our Lord one thousand eight hundred and seventy-three.

(I.S.)

HERCULES ROBINSON.

Mealer or Pulverizer.

SPECIFICATION of GEORGE BISHOP's invention for a Mealer or Pulverizer for pulverizing mineral ores and reducing them to an impalpable powder.

THIS invention consists of an improved machine for the pulverization of all mineral ores to an impalpable powder, which machine consists of a pot or mortar with a shaft or pestle with a nearly fitting semi-circular base, the rapid revolving of which gives it an oscillating and smearing motion which completely perfects the powdering of the mineral ores, and which discharges the powder through a hole in the bottom of the pot.

The drawing of such a machine as that described is annexed to this specification.

What is claimed is the machine as already described for use, in the exclusive operation of pulverizing mineral ores.

GEO. BISHOP.

This is the specification referred to in the annexed Letters of Registration granted to George Bishop, this fourth day of April, 1873.

HERCULES ROBINSON.

REPORTS.

Sydney, 4 March, 1873.

SIR, We do ourselves the honor to return to you the documents transmitted under your B.C. communication of the 26th ultimo, No. 1,470, and to report that we are of opinion, on examination thereof, that the claims set forth in Mr. George Bishop's specification are untenable, with the exception of so much thereof as relates to the use of the "Pulverizer," detailed in the drawing annexed, for the exclusive operation of pulverizing mineral ores, and we therefore recommend that Mr. Bishop be requested to revise his claims accordingly.

We have, &c.,

GOTHEK K. MANN.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

Sydney, 13 March, 1873.

SIR, We do ourselves the honor to recommend the issue of Letters of Registration securing to Mr. George Bishop the right to his invention of the "Mealer or Pulverizer for the exclusive operation of pulverizing mineral ores," as detailed in the specification, drawing, and claim, transmitted for our report under your B.C. communication of the 12th instant, No. 1,984, herewith returned.

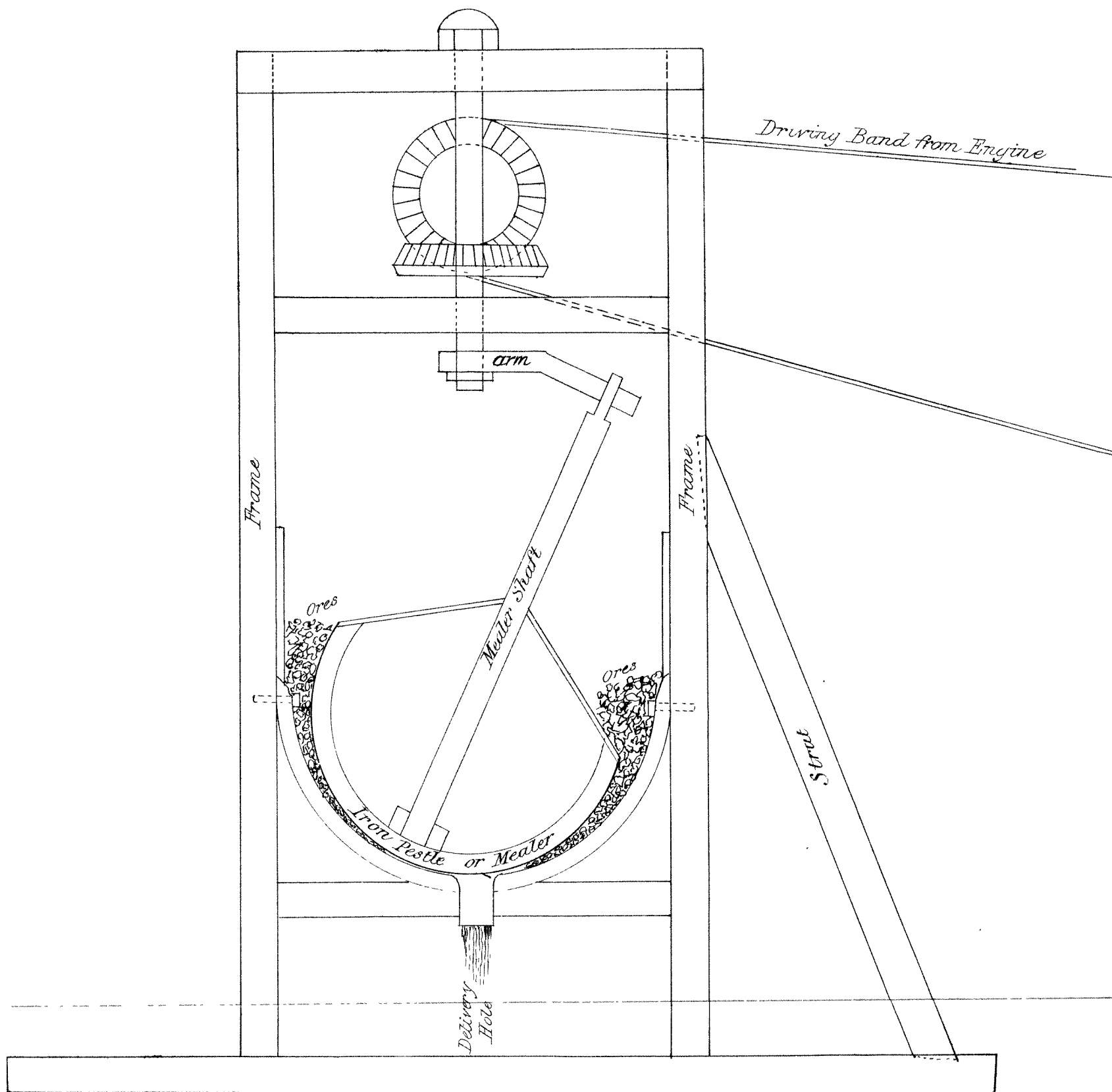
We have, &c.,

GOTHEK K. MANN.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

[Drawing—onc sheet.]

THE PULVERIZER



*This is the Drawing referred to in the annexed Letters of
Registration granted to George Bishop, this fourth day
of April, 1873.*

Hercules Robinson.

(Sig.1)

Geo Bishop
19/2/73

[23]



A.D. 1873, 7th April. No. 351.

INVENTION FOR THE SAFETY OF TRAINS RUNNING ON NARROW GAUGE RAILWAYS.

LETTERS OF REGISTRATION to Nicholas Trengrouse, for an Invention for safety of Trains running on Narrow Gauge Railways.

[Registered on the 8th day of April, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS NICHOLAS TRENGROUSE, of Stanmore Road, Marrickville, near Sydney, in the Colony of New South Wales, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention or improvement to the safety of Trains running on Narrow Gauge Railways, which invention is more particularly described in the specification and sheet of drawings which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Nicholas Trengrouse, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Nicholas Trengrouse, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Nicholas Trengrouse shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this seventh day of April, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Invention for the Safety of Trains running on Narrow Gauge Railways.

SPECIFICATION of an Improved Safety Invention for Narrow Gauge Railways.

THE object of this invention is to prevent the possibility of a railway train overturning upon any contracted gauge of railway (however contracted the same may be), by having attached to the framework of the permanent way safety wings, of either wood or iron, or of wood and iron combined (see drawing lettered CCC, and transverse section tinted pink, lettered DD) and by safety wheels mounted and attached to rolling stock, lettered EE on drawing; the safety wheels to act vertically upon the underside of the safety wings (should there be any inclination to overturn), and thus comparatively clamp the rolling stock down to the permanent way. The safety wheels acting on the outside of the permanent way, and on the opposite side to the train-carrying wheels (as shown by dotted red lines on transverse sections), lengthens the leverage from the centre of gravity, and consequently adds to safety.

The advantages of my claim are as follows, viz. :—The narrow gauge as now before the public has this disadvantage,—the safety wheels act horizontally, and are only kept to the guide plates by side pressure, without anything to prevent the wheels rising above the line. This omission, together with the fact of these wheels being so close to the rail-level, acts as a lever to force the rolling stock off the line, whilst with my invention it is impossible for the safety wheels to rise up to within 4 inches of the rail, being stopped by the underside of the safety wings.

Having described the nature of my invention, and its effect, I declare that what I claim is—

Firstly.—The principle, the application, and arrangement of the safety wings, of either wood or iron, or of wood and iron combined, and of the projection required (the projection of which will be regulated by the gauge of railway) lettered CCC and DD, tinted pink on drawing, to all railway lines of such gauge as may require this apparatus.

Secondly.—I claim the principle, the application, and arrangement of the safety wheels revolving vertically, with the necessary iron-work connected therewith, lettered EE on drawing, for all rolling stock.

NICHOLAS TRENGROUSE,
Stanmore Road, Marrickville.

This is the specification referred to in the annexed Letters of Registration granted to Nicholas Trengrouse, this seventh day of April, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 6 March, 1873.

SIR,

We do ourselves the honor to recommend the issue of Letters of Registration securing to Mr. Nicholas Trengrouse the exclusive right to his invention "for the safety of Trains running on Narrow Gauge Railways," in accordance with his Petition, specification, drawings, and claim, transmitted for our report, under your B.C. communication of the 4th instant, No. 1,674, herewith returned.

We have, &c.,

GOTHER K. MANN.
JOHN WHITTON.

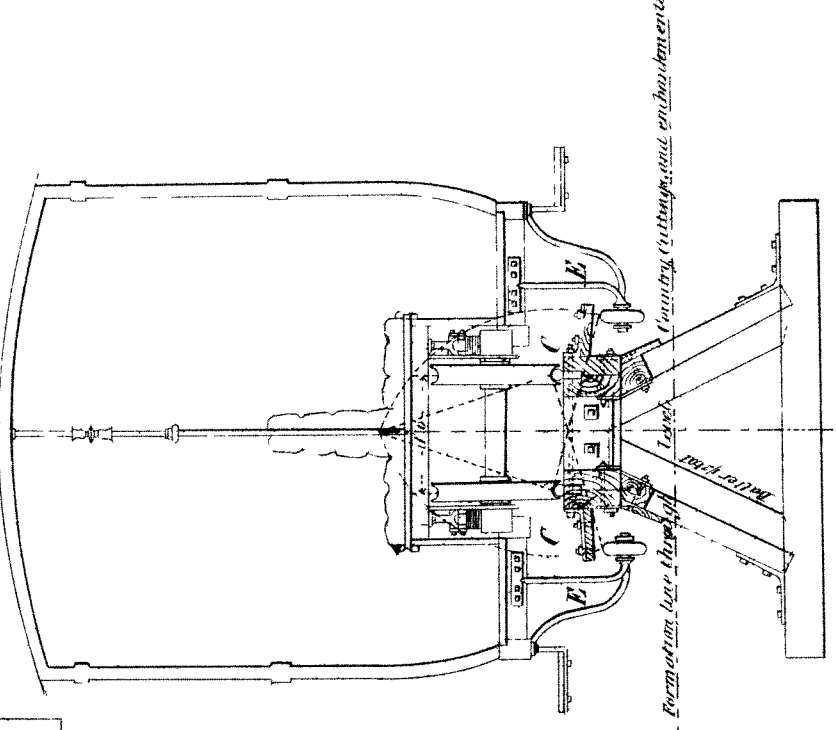
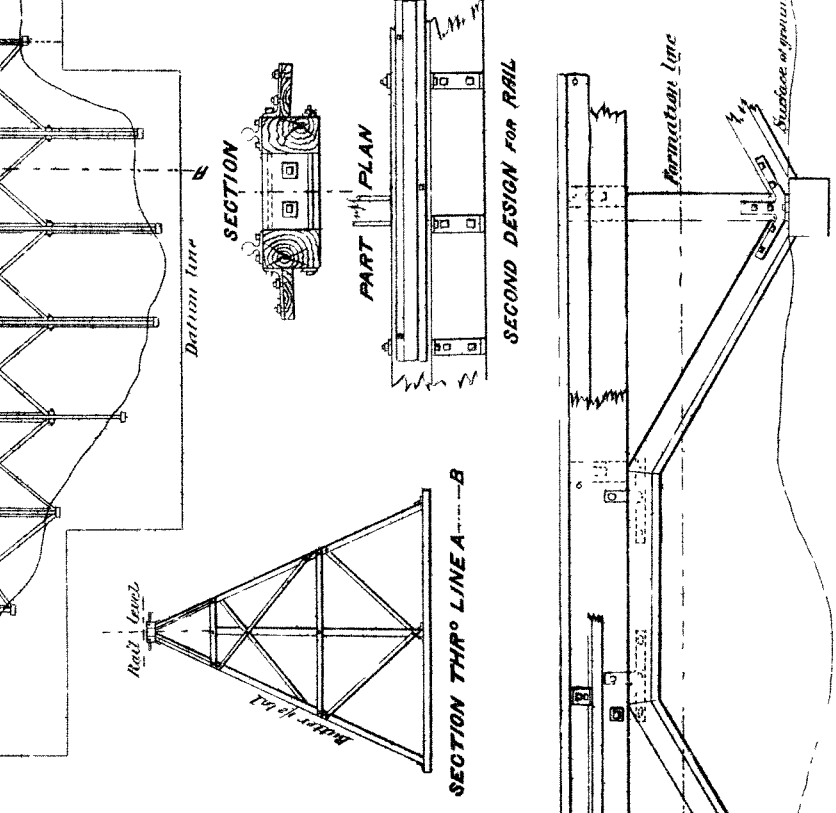
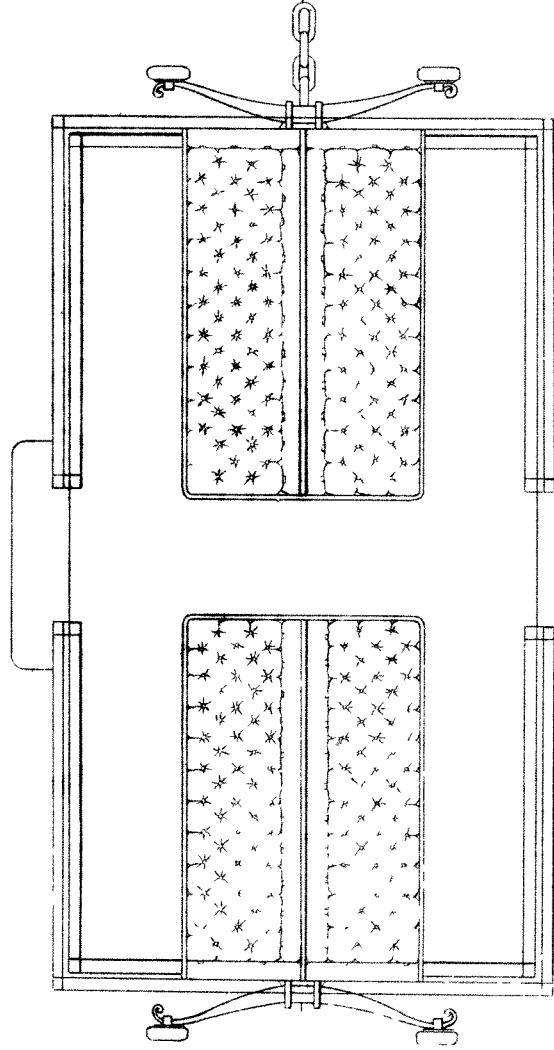
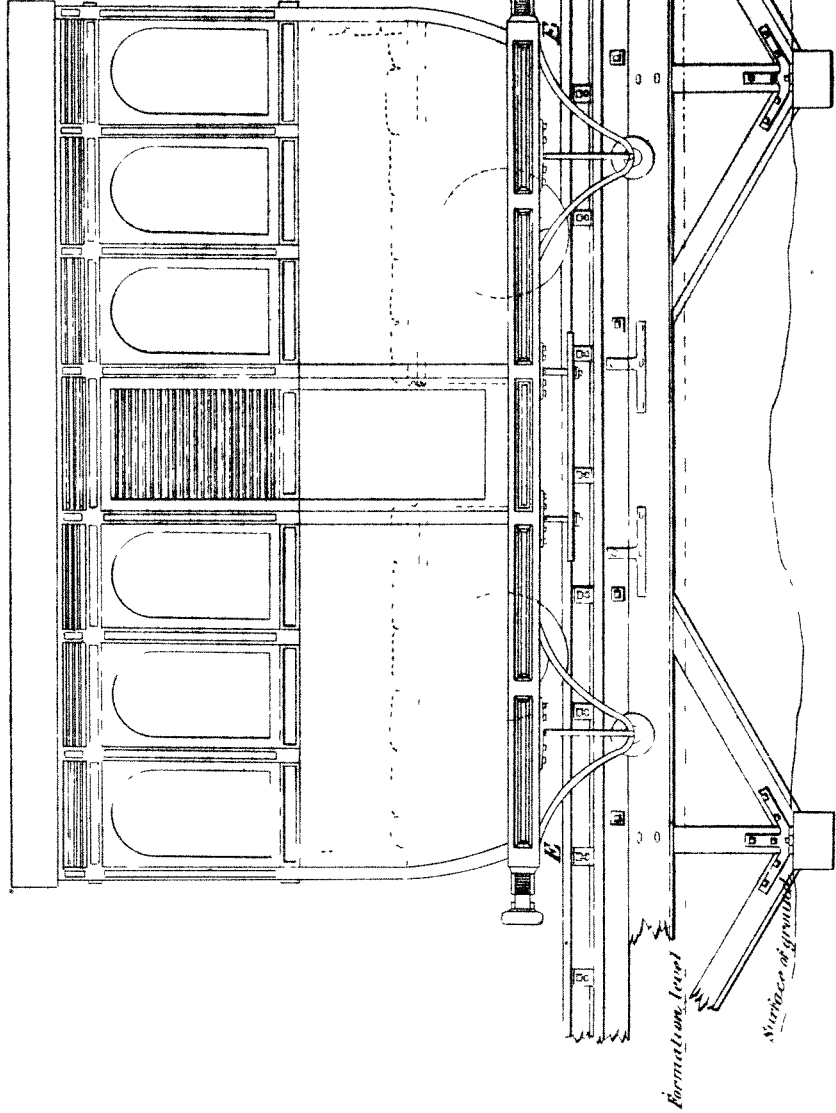
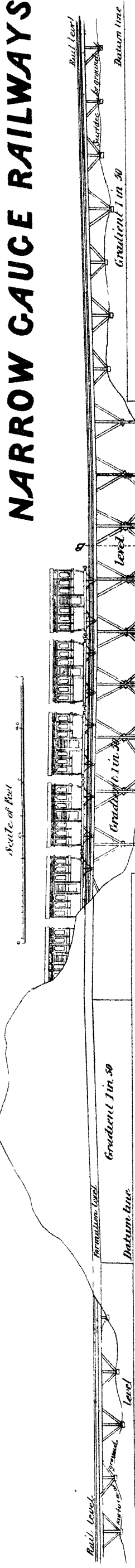
THE PRINCIPAL UNDER SECRETARY.

[No 357]

TRENGROUSE'S IMPROVED SAFETY INVENTION, FOR NARROW GAUGE RAILWAYS

GENERAL ELEVATION OF RAILWAY

Scale of Feet



Nicholas Trengrouse
Stannore Road
Marrickville

PLAN OF LINE SHEWING THREE STAGES OF PROGRESS

Scale of Feet

This is the Sheet of Drawings referred to in the annexed Letters of Registration granted to Nicholas Trengrouse, this seventh day of April 1873
Herbert L. Robinson

(Signed)

[25]



A.D. 1873, 7th April. No. 352.

HARWOOD AND MITCHELL'S SLUICING MACHINE FOR TIN AND GOLD.

LETTERS OF REGISTRATION to Thomas Soutter Harwood, Robert Harwood, and John Mitchell, for a Sluicing Machine for Tin and Gold.

[Registered on the 9th day of April, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS THOMAS SOUTTER HARWOOD, ROBERT HARWOOD, and JOHN MITCHELL, all of Sydney, in the Colony of New South Wales, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention termed "Harwood and Mitchell's Sluicing Machine for Tin and Gold," which invention is more particularly described in the specification and sheet of drawings which are herewith annexed; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration, grant unto the said Thomas Soutter Harwood, Robert Harwood, and John Mitchell, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Thomas Soutter Harwood, Robert Harwood, and John Mitchell, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Thomas Soutter Harwood, Robert Harwood, and John Mitchell shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this seventh day of April, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Harwood and Mitchell's Sluicing Machine for Tin and Gold.

SPECIFICATION of "Harwood and Mitchell's Tin and Gold Sluicing Machine."

PATENT applied for by THOMAS S. HARWOOD, of Ultimo, Sydney, ROBERT HARWOOD, of Sydney and Inverell, and JOHN MITCHELL, of Newtown, Sydney.

THE Patent is required to protect the invention as a whole, as set forth in accompanying drawing; and also the several separate inventions included in the design, viz. :—

1. The horizontal-action machine, "forking" or separating apparatus, the principle of which is applicable to any ordinary sluice-box.

2. A pierced or wired metal termination "ripple" at outlet of box, preventing the escape of the ore, but allowing the free escape (with the water) of the sand and other particles of wash-dirt up to a certain size, as the ore becomes separated therefrom.

3. A corrugated bottom (of wood or iron) to sluice-box, laid beneath where the separating machine works. The use of this principle (a partially corrugated bottom) is also applicable for ordinary sluice-boxes; and the inventors propose to use the same laid either longitudinally, diagonally, or transversely, according to the description of ore to be cleaned.

4. A self-acting screen or sieve for separating the larger stones from the wash-dirt before it enters the sluice-box proper.

5. The method of delivering the wash-dirt *with* the water upon the screen and thence into the sluice-box, instead of the ordinary method of depositing the wash-dirt in the box proper and then acting upon it with the water.

DESCRIPTION OF THE WORKING OF THE MACHINE.

A steady flow of water being admitted from the receiver *b* (see plan), it at once acts on the wash-dirt as it is thrown into the main shoot *a*, and is carried with force upon the curved screen or sieve *P*, the openings in which will allow the wash-dirt containing the ore to pass through but reject the stones, the latter falling by their own gravity to the ground. To prevent during rapid working any wash-dirt from escaping the action of the screen, there is fixed at the foot of the screen a hinge-stop, *cc*, extending right across the screen, and regulated by the lever arm *G*. In ordinary working, the wash-dirt if not driven through the upper part of the screen at once, will by reason of its adhesiveness follow the curve of the screen and be blocked by the stop—when the flow of the water from the supplementary shoot *C* will at once act and wash the dirt and ore through the interstices of the lower part of the screen. Should the stones collect in the stop, it will tilt from the over-weight and clear itself, being brought back to its ordinary position by the action of the lever-arm.

After passing through the screen, the wash-dirt falls upon a false bottom having a considerable downward incline, and is then carried on by the water to the main bottom of the machine, where it is at once subjected to the action of the forking machinery, which works continuously in a horizontal line over a space of about 4 feet 6 inches. The forks or separators are constructed of seven bars of iron of the length of the whole width of the box, and in each of these are screwed or riveted at a right angle alternate rows of seven and eight (or more) prongs or spikes. The forks thus completed are fixed across the box to three endless chains supported and carried by *V* pulleys. The apparatus may be used either on a flat or corrugated bottom; but when corrugations are used that run longitudinally (as in drawing) the forks are made of suitable lengths to work alternately row by row upon the top and bottom of the corrugations. Suitable speed and regularity is insured in the working of the forking machine by the use of a small cog-wheel (to which a winch-handle is fixed) working in a larger cog-wheel keyed to one of the shafts carrying the *V* pulleys. A strong lad at the winch-handle is sufficient to drive the machine.

The forks are of such a form and so arranged that the resistance offered to the flow of the water near the surface is only moderate; but beneath the surface various cross and counter currents are caused by the joint action of the forks and the corrugations; the effect of which is to deposit the ore on the bottom, while the wash from which the ore has been separated, being held by the commotion in a state of partial suspension, is acted upon by the main current of the water and carried onwards through or over the perforated ripple-plate at outlet of box.

The forking apparatus is fixed to an independent framing, and may be removed from the sluice-box bodily at pleasure. When in work it rests upon the sides of the box, supported by the cross-pieces *M*, and is fixed in position by two hinge-rods, *mm*, which admits of its being raised at either end for the purpose of removing the clean ore.

In working the sluicing-machine, two men feeding with wash-dirt will keep it at full speed, and the only other labour required is a strong lad at the winch-handle, or any other power at hand could be substituted.

The machine will pass through in the same time as much stuff as three or four ordinary sluice-boxes attended by two men each, and will save all the ore and clean it thoroughly.

An ordinary size machine, as shown in drawing, will be 3 feet in width; but larger machines can be constructed for mines having an adequate force of water.

THOMAS S. HARWOOD.
ROBT. HARWOOD.
JOHN MITCHELL.

Sydney, 13 February, 1873.

This is the specification referred to in the annexed Letters of Registration, granted to Thomas Soutter Harwood, Robert Harwood, and John Mitchell, this seventh day of April, 1873.

HERCULES ROBINSON.

Harwood and Mitchell's Sluicing Machine for Tin and Gold.

REPORT.

Sydney, 5 March, 1873.

SIR,

The application of Messrs. Thomas Harwood, Robert Harwood, and John Mitchell, for Letters of Registration for a Sluicing Machine for Tin and Gold, having been referred to us, we have examined the specification and drawings accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

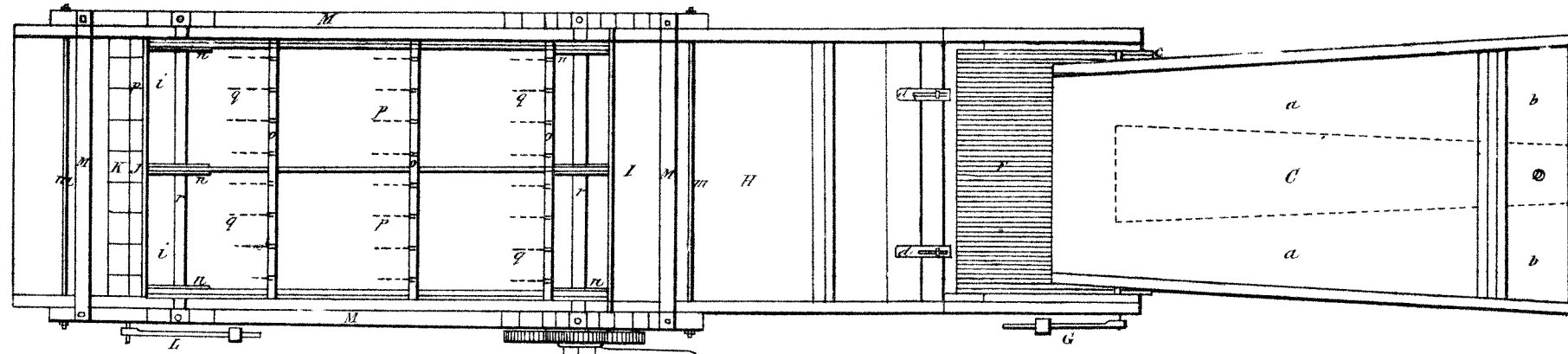
We have, &c.,
J. SMITH.
GOTHEK K. MANN.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

HARWOOD AND MITCHELL'S TIN AND GOLD SLUICING MACHINE.

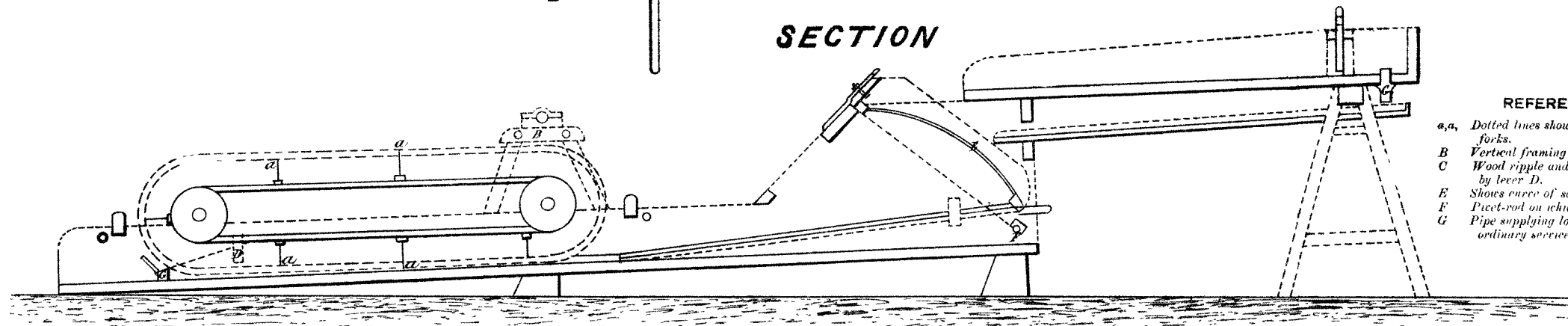
PLAN



REFERENCES TO PLAN.

- a, a, Shoot to receive wash-dirt and deliver on screen or grating.
- b, b, Receiver for water from pipes or fluming
- C Dotted lines show plan of lower shoot to keep screen clear.
- D Aperture for water supplying lower shoot.
- E Slides admitting water to throw wash-dirt on screen.
- F Curved screen to remove wash-stones.
- c, c, Hinged stop (working with lever G) to prevent escape of wash-dirt in rapid working.
- d, d, Slotted stops for regulating pitch of screen.
- H False bottom to lay, to receive wash dirt and deliver on corrugated bottom I.
- i, i, Corrugated false bottom of iron or wood.
- J Wooden ripple level with top of corrugations.
- K Lugs perforated or wired iron ripple, hinged to wooden ripple, set at an angle and regulated by a lever, L.
- M Movable frame to which forking machinery is fixed.
- m, m, Large rods to fasten frame and allow of raising at either end.
- n, n, 1 pulleys in which run endless chains.
- o, o, Transverse iron bars to which fork spikes are fixed.
- p, p, Forks working along bottom of corrugations.
- q, q, Forks working along top of corrugations.
- N Power for driving shafts r, r, to which V pulleys are fixed.

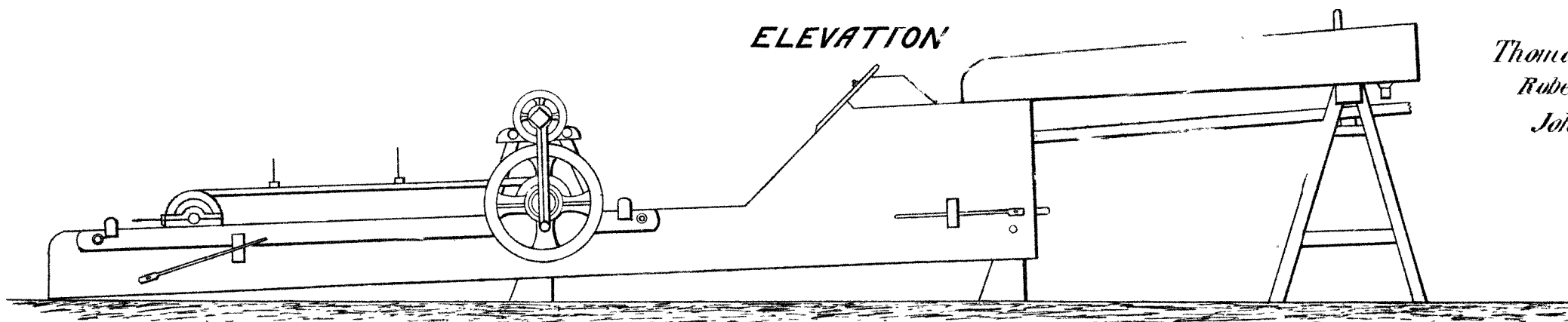
SECTION



REFERENCES TO SECTION.

- a, a, Dotted lines show lines of working for long and short forks.
- B Vertical framing to carry shaft of pinion cog-wheel.
- C Wooden ripple and perforated iron continuation regulated by lever D.
- E Shows curve of screen.
- F Pivot-rod on which frame of screen works in adjusting.
- G Pipe supplying lower shoot with water, to be regulated by ordinary screw-cock or a plug.

ELEVATION



Thomas S. Harwood.
Robert Harwood.
John Mitchell.



This is the Sheet of Drawings referred to in the annexed Letters of Registration granted to Thomas Soutter Harwood Robert Harwood and John Mitchell this seventh day of April 1873.

Hercules Robinson

(Sig. L.)

[29]



A.D. 1873, 8th April. No. 353.

ALLUVIAL TIN AND GOLD WASHING MACHINE.

LETTERS OF REGISTRATION to Joseph Justin Brenan and Cornelius Stanley M'Glew, for Machinery for the purpose of washing Tin and Gold from Alluvial.

[Registered on the 10th day of April, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS JOSEPH JUSTIN BREMAN and CORNELIUS STANLEY M'GLEW, both of Sydney, in the Colony of New South Wales, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention of "Machinery for the purpose of washing Tin and Gold from Alluvial," which invention is more particularly described in the specification and sheet of drawings which are hereunto annexed; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council sixteenth Victoria, number twenty-four; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Joseph Justin Brenan and Cornelius Stanley M'Glew, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Joseph Justin Brenan and Cornelius Stanley M'Glew, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Joseph Justin Brenan and Cornelius Stanley M'Glew shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this eighth day of April, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Alluvial Tin and Gold Washing Machine.

SPECIFICATION of Joseph Justin Brenan and M'Glew's Patent Tin and Gold Washing Machine.

This machine can be used for tin or gold, or for both.

The hopper is three (3) feet wide, two (2) feet high, and six (6) feet long, and runs on four (4) wheels on a tramway into a frame of iron or wood, which frame oscillates.

When the stones are washed and free from all the wash-dirt, and you wish to get rid of the stones in the hopper, there is a socket near each end that two bars fit into, with a loop on the end of each to hook on a rope, which passes through a block made fast above you. Haul the rope, and the hopper runs on the tramway until the two wheels are caught by the curves on the end of the tramway, on which are slides and pins which clasp the two wheels, thus forming a hinge. By pulling the rope you tilt out the stones.

The water wash-dirt—tin or gold—passes through the holes in the bottom of the hopper (which is made of iron) into a trough or receiver six (6) feet long, three (3) feet high, and three (3) feet wide, through which, from end to end, passes a shaft, attached to which are rakes or disturbers which keep all the matter in motion. This agitator or disturber is kept revolving by a belt on a pulley from a pulley on the main shaft of an engine, or otherwise as may be deemed fit.

The bottom of the above trough or receiver is curved, with a door in the centre of the bottom, to take out the tin or gold.

There is an opening from end to end in the trough next the table, for the dirt and water to escape, to which there is a slide to regulate the discharge as required.

The table can be attached to the trough or receiver; it is six (6) feet wide and eighteen (18) feet long, with sides about eight (8) inches high. About five to six feet from the trough or receiver there is another disturber or agitator, constructed upon the same principle as the above described one, but only a foot in diameter, and is also kept in motion by a belt or pulley on the main shaft of the engine, or otherwise as may be deemed advisable. Further down the table there are pocket ripples to receive anything that may escape from the upper receivers.

We claim for the whole machine, all of which is original.

We claim for the drawer-hopper, for the wheels, the tramway, the bars by which the hopper is run back, the slides and pins at the end of the tramway to form the hinges to discharge the hopper.

We claim for the oscillating frame which the hopper runs into.

We claim for the trough or receiver, for its capacity, its shape of the bottom, for the open to let out the water and matter, the slide to regulate the said opening, the shaft, with the rakes, disturbers, or agitators attached to the shaft, the door in the bottom of the trough or receiver to take out the gold and tin.

We claim for the length, width, and construction of the table.

We claim for the second receiver, for its form, its peculiar construction, and for the shaft and the rakes, disturbers, or agitators which work therein.

We claim for the pocket ripples or receivers on the table, for their formation; also, for a trough receiver at the bottom or end of the table.

JOSEPH JUSTIN BRENAN.

CORNELIUS STANLEY M'GLEW.

This is the specification referred to in the annexed Letters of Registration granted to Joseph Justin Brenan and Cornelius Stanley M'Glew, this eighth day of April, 1873.

HERCULES ROBINSON.

REPORTS.

Sydney, 10 February, 1873.

SIR,

We do ourselves the honor to recommend that the specification and drawings of Messrs. J. J. Brenan and C. S. M'Glew of "certain Machinery for the purpose of washing Tin and Gold from Alluvial," transmitted for our report, under your B.C. communication of the 4th instant, be returned to those gentlemen for revision and more distinct description.

We would draw attention to the fact that the specification and drawings are without signature, and without letters of reference indicating the various parts of the machinery referred to.

We also recommend that applicants be required to affix to their specification a definite claim or claims.

We have, &c.,

CHAS. WATT.

GOTHER K. MANN.

THE PRINCIPAL UNDER SECRETARY.

Sydney, 13 March, 1873.

SIR,

We do ourselves the honor to return to you the documents transmitted to us for our report, under your B.C. communication of the 11th instant, and to recommend that Letters of Registration be granted, securing to Messrs. Joseph Justin Brenan and Cornelius Stanley M'Glew the exclusive right to an invention "of certain Machinery for the purpose of washing Tin and Gold from Alluvial," in accordance with their specification, drawing, and claim.

We have, &c.,

CHAS. WATT.

GOTHER K. MANN.

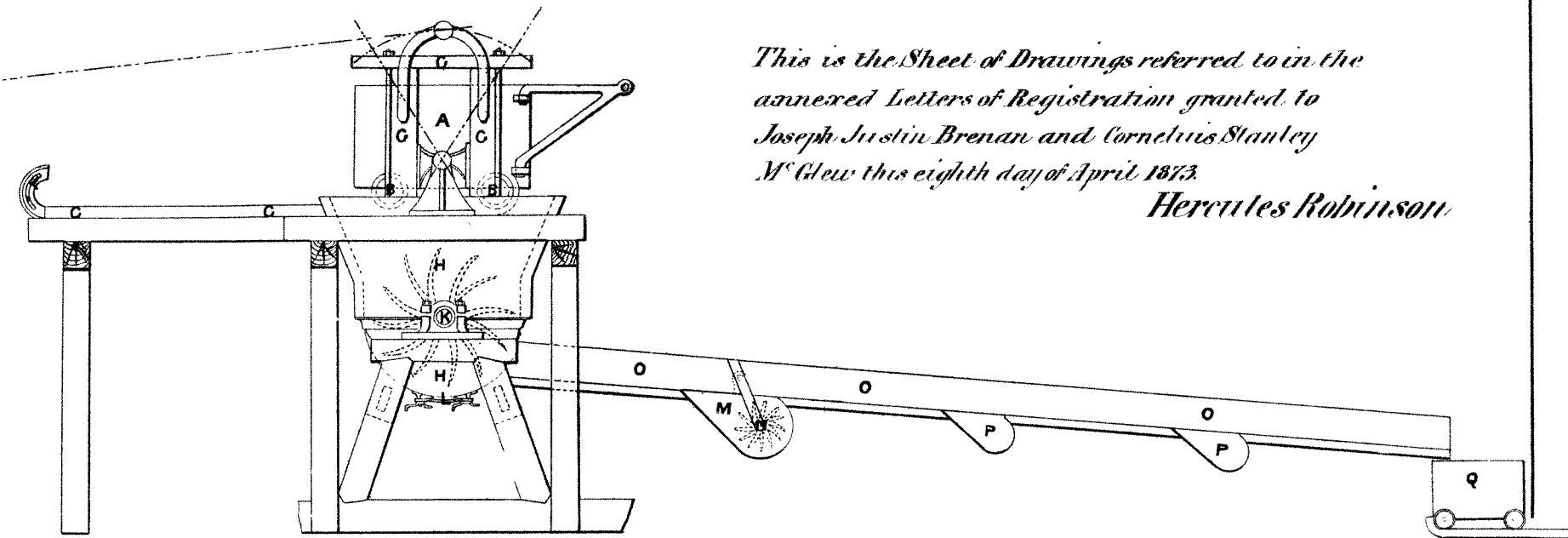
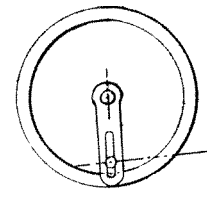
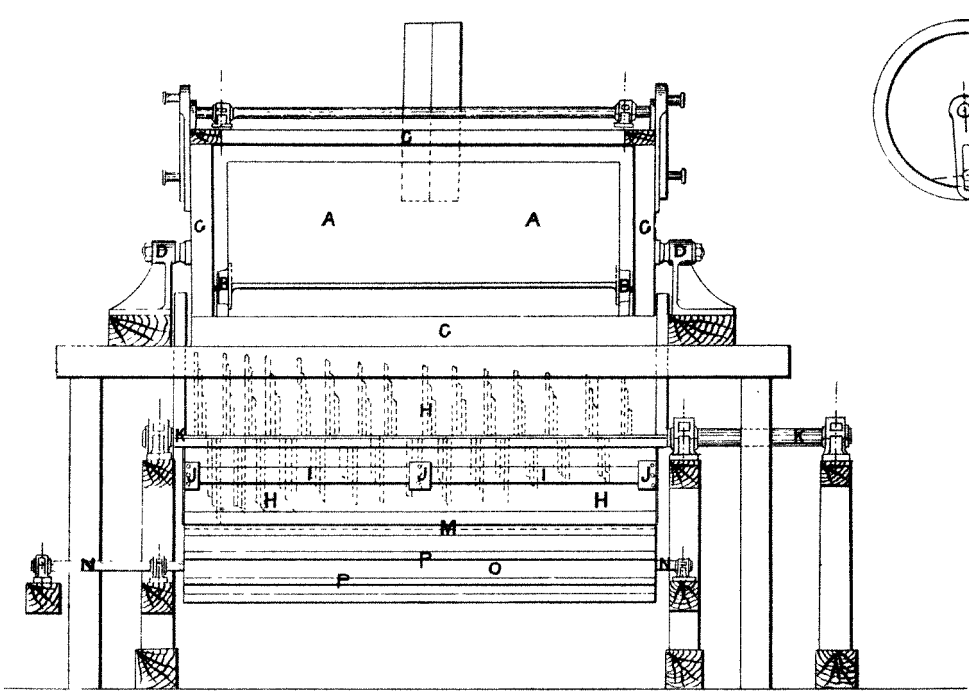
THE PRINCIPAL UNDER SECRETARY.

Copy.

N° 353

JOSEPH JUSTIN BREMAN & M^{rs} GLEW'S PATENT TIN & GOLD WASHING MACHINE.

*This is the Sheet of Drawings referred to in the
annexed Letters of Registration granted to
Joseph Justin Breman and Cornelius Stanley
M^{rs} Glew this eighth day of April 1873.
Herbert Robinson*



EXPLANATION

Part 1st

- A ----- The Drawer hopper
- B ----- Wheels
- C ----- Tram way
- D ----- Socket
- E ----- Bars
- F ----- Slides to form the hinges

Part 2nd

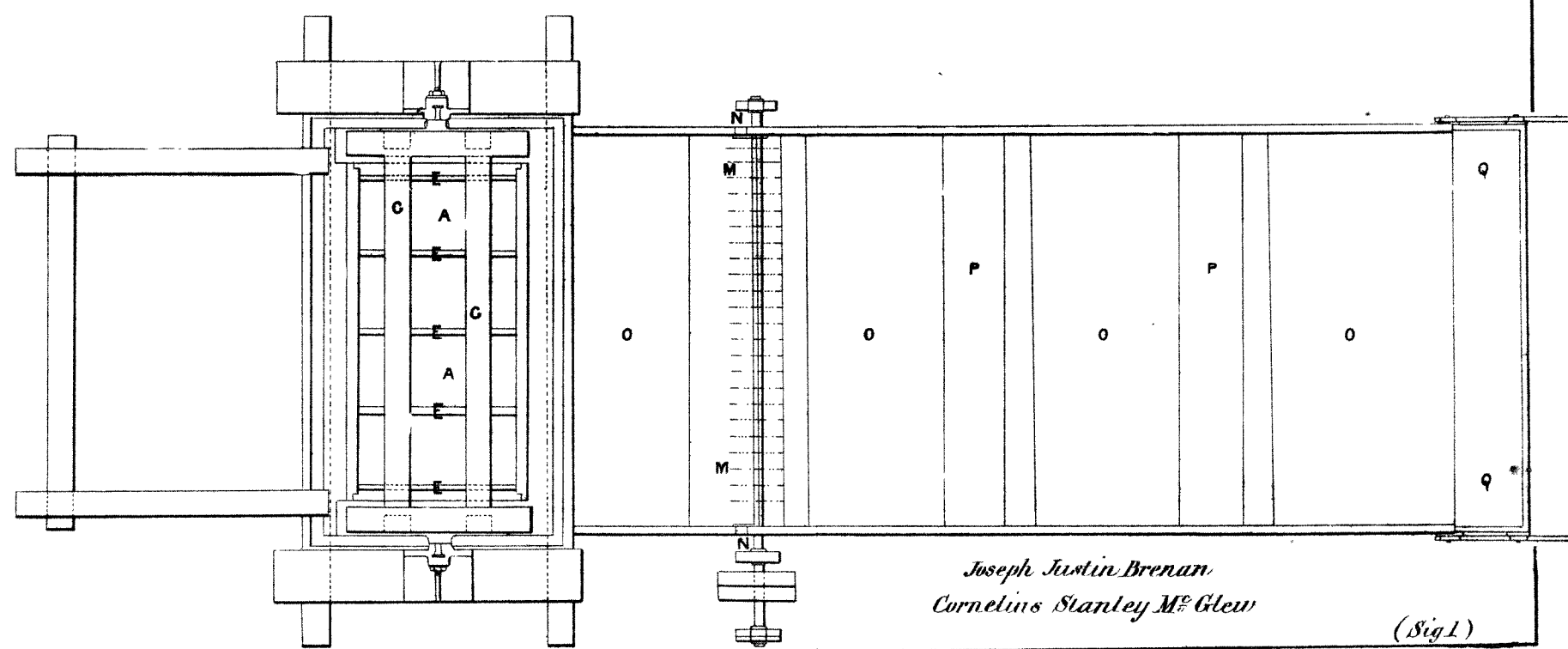
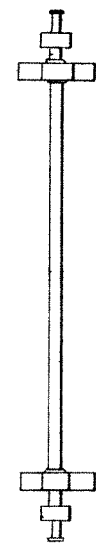
- G ----- The Oscillating frame that the hopper runs into

Part 3rd

- H ----- The Trough or Receiver
- I ----- Opening to let out the water and matter
- J ----- Slide to regulate the discharge
- K ----- Shaft with the rakes, agitators or disturbers
- L ----- Door in the bottom of the trough or receiver to take out the Gold and Tin

Part 4th

- M ----- The second Receiver
- N ----- Shaft with the rakes, disturbers or agitators
- O ----- Table
- P ----- Pocket ripples or receivers
- Q ----- Trough to receive the tailings



Scale of Feet



Joseph Justin Breman
Cornelius Stanley M^{rs} Glew

(Sig. L)

[31]



A.D. 1873, 8th May. No. 354.

**AN IMPROVED METHOD OF CONSTRUCTING CAMS AND DISCS FOR
STAMPING MACHINERY.**

LETTERS OF REGISTRATION to Thomas Sutcliffe Mort, for an improved method of constructing Cams and Discs for Stamping Machinery.

[Registered on the 9th day of May, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS THOMAS SUTCLIFFE MORT, of Sydney, in the Colony of New South Wales, Esquire, hath by his Petition humbly represented to me that he is the assignee of James Watts, of Sandhurst, in the Colony of Victoria, engineer, who is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "An improved method of constructing Cams and Discs for Stamping Machinery," which is more particularly described in the specification, marked A, and the two sheets of drawings, marked B and C respectively, which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Thomas Sutcliffe Mort, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Thomas Sutcliffe Mort, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Thomas Sutcliffe Mort shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this eighth day of May, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

An improved method of constructing Cams and Discs for Stamping Machinery.

A.

SPECIFICATION of THOMAS SUTCLIFFE MORT, assignee of the within-named James Watts, for an Invention intituled "An improved method of constructing Cams and Discs for Stamping Machinery."

The first part of my invention consists of an improved method of constructing Cams for Stamping Machinery. Hitherto it has been the custom to make these articles in one piece, whilst I propose to make them in more than one piece, so that the wearing parts may be renewed and replaced as may be required, without disturbing the cam itself or the shaft on which it works.

These renewed parts may be fastened in position in any approved way, say with bolts or keys; but of course I do not confine myself to any particular method of fastening, as this of itself forms no part of my invention.

The second part of my invention consists of an improved method of constructing Discs for the shanks of Stamping Machinery.

Instead of constructing the disc in one piece as heretofore, I construct it in two pieces, which I prefer to be of equal size. These two pieces I bolt together, and on the face of the disc I also bolt a steel face.

This method of construction is clearly illustrated in the accompanying drawings, where figure 1 shows elevation, and figure 2 shows plan of my disc as applied to a screwed shank.

Of course, if my invention be applied to a plain shank, it would have to be fastened by bolts, wedges, hoops, or some other approved method; and, if desired, more than two pieces might be used in its construction.

Having thus described the nature of my invention and the manner of performing same, I would have it understood that I do not confine myself to the precise size or shape, or the materials of which my invention may be made or manufactured, but I claim--

- 1st. The construction of Cams for Stamping Machinery in more than one piece, in order to permit of the renewal of the wearing parts, substantially as herein described and explained.
- 2nd. The construction of Discs for the shanks of Stamping Machinery in two or more pieces or halves, substantially in the manner herein described and explained.

THOS. S. MORT.

This is the specification, marked A, referred to in the annexed Letters of Registration, granted to Thomas Sutcliffe Mort, this eighth day of May, 1873.

HERCULES 'ROBINSON.

REPORT.

Sydney, 24 March, 1873.

SIR,

We do ourselves the honor to recommend the issue of Letters of Registration, securing to Thomas Sutcliffe Mort, of Sydney, the exclusive right to an invention for an improved method of constructing Cams and Discs for Stamping Machinery, in accordance with the specification, drawing, and claim, transmitted for our report, under your B.C. communication of the 20th instant, No. 2,204, herewith returned.

We have, &c.,

GOTHER K. MANN.
E. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY.

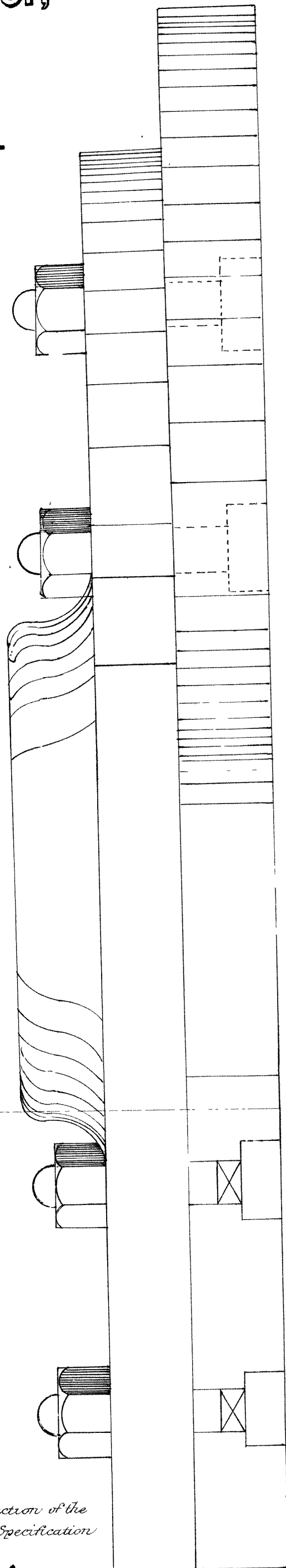
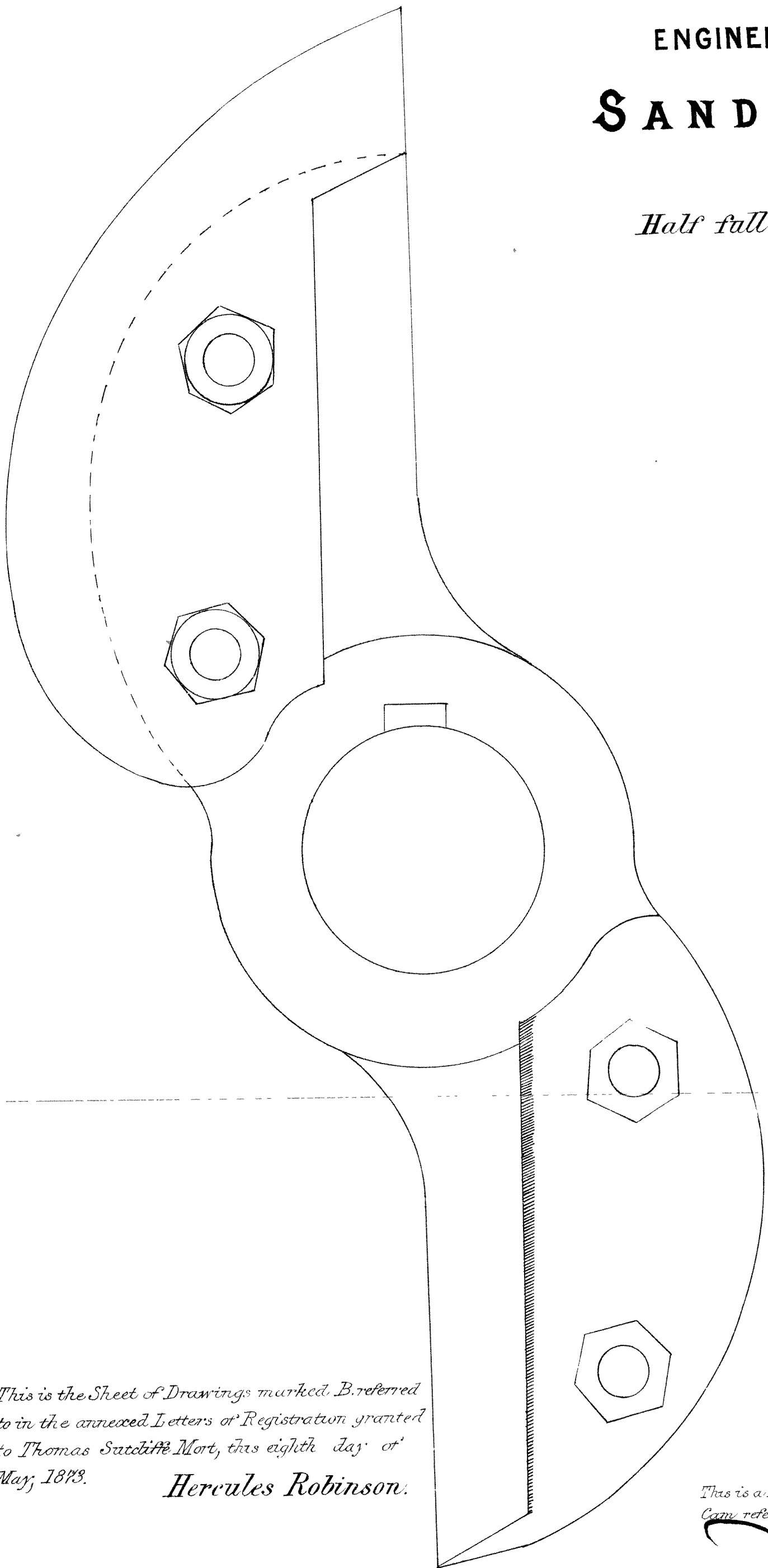
[Drawings—two sheets.]

J. WATTS & CO.,

ENGINEERS &c.,

SANDHURST.

Half full Size



This is the Sheet of Drawings marked B. referred to in the annexed Letters of Registration granted to Thomas Satchell Mort, this eighth day of May, 1873.

Hercules Robinson.

(Sig. 1)

This is a Plan showing the construction of the Cam referred to in the annexed Specification

Thomas Satchell Mort

[33]



A.D. 1873, 8th May. No. 355.

**IMPROVEMENTS IN APPARATUS FOR WASHING ALLUVIOUS AND
AURIFEROUS EARTHS.**

LETTERS OF REGISTRATION to Alphonse Allain and Alfred Riviere Dejean,
for Improvements in Apparatus for washing Alluvious and Auriferous Earths.

[Registered on the 9th day of May, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS ALPHONSE ALLAIN, of Paris, in the Department of the Seine, and ALFRED RIVIERE DEJEAN, of Alais, in the Department of the Gard, both in the Republic of France, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention for "certain Improvements in Apparatus for washing Alluvious and Auriferous Earths," which is more particularly described in the specification and sheet of drawings which are herunto annexed; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Alphonse Allain and Alfred Riviere Dejean, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Alphonse Allain and Alfred Riviere Dejean, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Alphonse Allain and Alfred Riviere Dejean shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this eighth day of May, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in Apparatus for washing Alluvious and Auriferous Earths.

SPECIFICATION of the Invention of ALPHONSE ALLAIN, of Paris, in the Department of the Seine, and ALFRED RIVIERE DEJEAN, of Alais, in the Department of the Gard, both in the Republic of France, for "certain Improvements in Apparatus for washing Alluvious and Auriferous Earths."

NOW KNOW YE to whom these presents shall come, that we, the said Alphonse Allain and Alfred Riviere Dejean, do hereby declare the nature of our said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

Our invention relates to a system of washing Alluvious and Auriferous Earths, which may be termed the system of fixed angles, having for principle a cavity represented by a parallelogram united at its base with a triangle, preferably an isosceles, and the lines of which have always an angle of from 40 to 50 degrees, that is to say, a mean of 45 degrees.

Figure 1 of the accompanying sheet of drawings is a vertical section, at A B, fig. 2, of an apparatus embodying our invention.

Figure 2 is a horizontal section of same.

Figure 3 is a diagram illustrating the principle of formation of a cavity or groove according to our invention, and—

Figure 4, a groove or cavity embodying our invention.

Figures 1 and 2 are drawn to a scale of $\frac{1}{12}$ of the ordinary size, and figures 3 and 4 full size.

The apparatus consists of a long box or trough combining a puddling compartment, A, and a washing-table, B, having hollow transversal grooves or cavities, C, of a geometrical and fixed shape (hence the designation of apparatus with fixed angles), each of these grooves resulting, as above stated, from a parallelogram and a triangle of any kind, the common base of which is the lower main line of the parallelogram, the said cavity being summed up by the figure represented by the lines *a b, c d, d a, d e, e c*, figure 3 of the drawing.

The fore-part of the box forms a water-tank, D, separated by a movable sluice-gate, E, from a second compartment constituting a puddling trough without mechanism of any kind, and the extended part which follows receives the washing-table, composed of several segments, which it is only necessary to place by hand on the bottom of the box to form the table. Each segment has a hollow groove. The apparatus thus combined may rest upon two wheels, and be moved from place to place like a hand-barrow, or be drawn by a horse.

The entire apparatus may be made of wood, using boards of equal thickness held together by wooden or other screws. The thick parts, such as the segments, may be formed by the union of several boards, and the grooves (see drawing, figures 3 and 4) be obtained by the juxtaposition of boards cut at one of their ends to an oblique face giving a fixed angle. This carefully studied arrangement renders the construction and repair of the apparatus very simple; it further affords the advantage of resisting the tendency to warp, common to all apparatuses alternately wet and exposed dry to the heat of a burning sun.

The mode of construction above described is that which is preferred, but it will be evident that other material might be used, and the combination of the parts be otherwise effected, while retaining the main features of this invention.

WORKING OF THE APPARATUS.

The apparatus being brought to the soil to be washed and to the stream of water, the requisite inclination is given to it, say from 10 to 14 degrees, according to the quantity of water at command, the nature of the soil, and of the metallic particles, whether in dust, nuggets, or other form. This is done by resting upon the ground the end of the box opposite to that at which the water is admitted, and if necessary the ground is slightly hollowed with a shovel, either under the wheels to lessen the inclination, or under the end of the table to increase it.

After having introduced a suitable quantity of water, which is regulated by the sluice-gate E, the earth to be washed is shovelled into the puddler A. The soil to be washed is taken into the apparatus as it comes, stones, earth, sand, without sorting or rejection. The coarse sieve found at the head of all apparatuses for gold-washing is not here considered necessary, but deemed a complication of which the safety of the grooves permits the suppression.

The water passing beneath the sluice-gate attacks the mass to be puddled, its action being assisted and directed by the labour of a workman armed with an iron scraper. During the puddling the matters are drawn beyond the projection or partition separating the puddler from the table B, and undergo the action of the table B and of its grooves C. When the puddling leaves no fear of carrying forward entire lumps or balls of earth, the workman, by means of his scraper, causes the entire mass to pass on to the table, precipitating this forward movement with a roughness of manœuvre and an absence of precaution which render the work very simple and very rapid. While the operation is progressing, the action of the scraper is brought at one time on to the puddling, at another on to the cleansing of the table. The extreme facility of this work results from an absolute dependence upon the retention of the metallic particles. It will be understood that the greater the number of grooves, the faster the working may be conducted without increasing the losses of metal.

The operation usually continuous may be arrested by simply stopping the flow of water and ceasing to scrape, the operation being recommenced at the point at which it was arrested. When it is desired to end the operation, a stronger flow of water is given, by lifting the sluice-gate sufficiently to sweep away all that is on the table outside the grooves, a corner of the scraper is even passed into the grooves to cause the major part of the gravel and stones to pass out, leaving the sand retained at its maximum of richness.

The operation is finally stopped when the sand in the grooves is deemed sufficiently enriched to render further outflows dangerous. Practice alone can fix the limit to be chosen for each kind of auriferous earth.

Each segment carrying a groove is then removed by hand and plunged into a trough full of water in such a manner as to cause the fall of the enriched sand. The product of the grooves and that of the last washing or scouring of the table are considered rich, and are preserved to be further treated in a finishing apparatus such as the washing pan or bowl.

Improvements in Apparatus for washing Alluvious and Auriferous Earths.

At the end of each day the segments are removed and the box washed, care being taken to introduce the water in such a manner as to collect the particles of metal which may have entered the joints; this will yield a few more quarts of sand to be treated.

Technical Details.

We deem it desirable to further dilate upon the play of the grooves, in order to show how this apparatus, notwithstanding its apparent and real simplicity, borrows from the complicated apparatuses hitherto used in the mechanical preparation of ores their most fruitful principles.

After the puddling, the matters carried or pushed on to the table undergo the action of a series of elements of fixed table and a series of grooves. The water which descends on to the table divides into two sheets, the work of each being very different: the first, superficial and continuous, carries with it all the light bodies, and all those which offer sufficient surface to the shock; the second sheet undergoes a succession of refluxes and eddyings as it meets the grooves. The first therefore tends to classify by density the naturally heavy matters, and the second strives to classify by equal fall delivering to the continuous stream of the superficial sheet all the matters which may issue from the grooves or simply rise to the zone of forward impulsion. The various cases which may arise cannot here be discussed, but persons familiarized with the apparatuses of mechanical treatment will with slight consideration realize that the soils to be washed are submitted in this apparatus to the double and repeated action of a fixed table and a series of small rudimentary sieves; the grooves really act like small continuous sieves, and further, they cover the metallic substances like "pointed boxes," or boxes with grooves coming to a single point.

It is only necessary to mention these latter to render apparent the favourable influence of the lower angles of the grooves. The result obtained under such simple conditions is due to the great difference in density between gold and stony matters. It is sufficient that the movement be started in a favourable direction to effect the separation with certainty, notwithstanding the presence of pieces of very different dimensions.

We do not limit ourselves to the use of any particular material in the construction of our washing apparatus, but we claim as our invention—

Firstly—The construction of the grooves or cavities C, substantially as and for the purpose hereinbefore set forth.

Secondly—The combination of the table B and grooves C with puddling compartment A and reservoir D, substantially as and for the purpose hereinbefore set forth.

In witness whereof, we, the said Alphonse Allain and Alfred Riviere Dejean, have hereunto set our hands and seals, this twenty-first day of November, in the year of our Lord one thousand eight hundred and seventy-two.

ALPH. ALLAIN. (L.S.)

ALFRED RIVIERE DEJEAN. (L.S.)

This is the specification referred to in the annexed Letters of Registration granted to Alphonse Allain and Alfred Riviere Dejean, this eighth day of May, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 27. March, 1873.

SIR,

We do ourselves the honor to recommend the issue of Letters of Registration securing to Alphonse Allain, of Paris, and Alfred Riviere Dejean, of Alais, the exclusive right to an invention for "certain Improvements in Apparatus for washing Alluvious and Auriferous Earths," in accordance with the drawings, specification, and claims, transmitted for our report, under your B.C. communication of the 24th instant, No. 2,308, herewith returned.

We have, &c.,
CHAS. WATT.
GOTHER K. MANN.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

Fig. 1.

Vertical Section at AB.

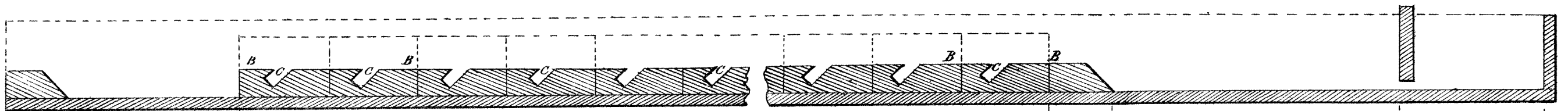
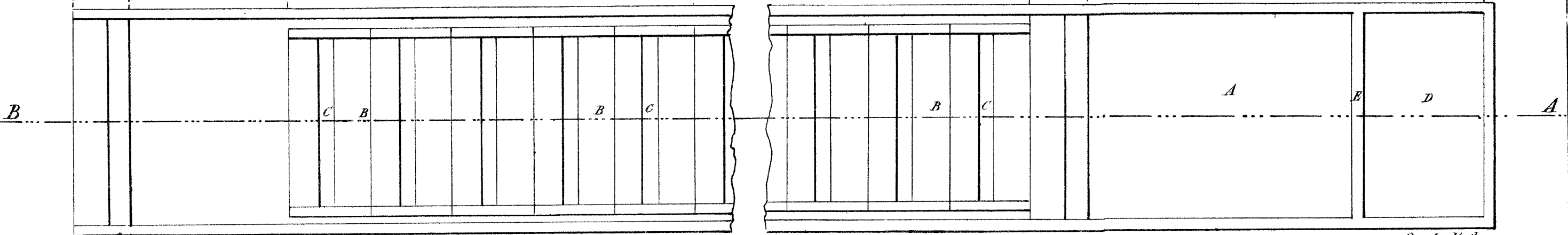


Fig. 2.

Horizontal Section.



Scale, $\frac{1}{16}$ "

Fig. 3.

Cavity (principle of the system) full size.

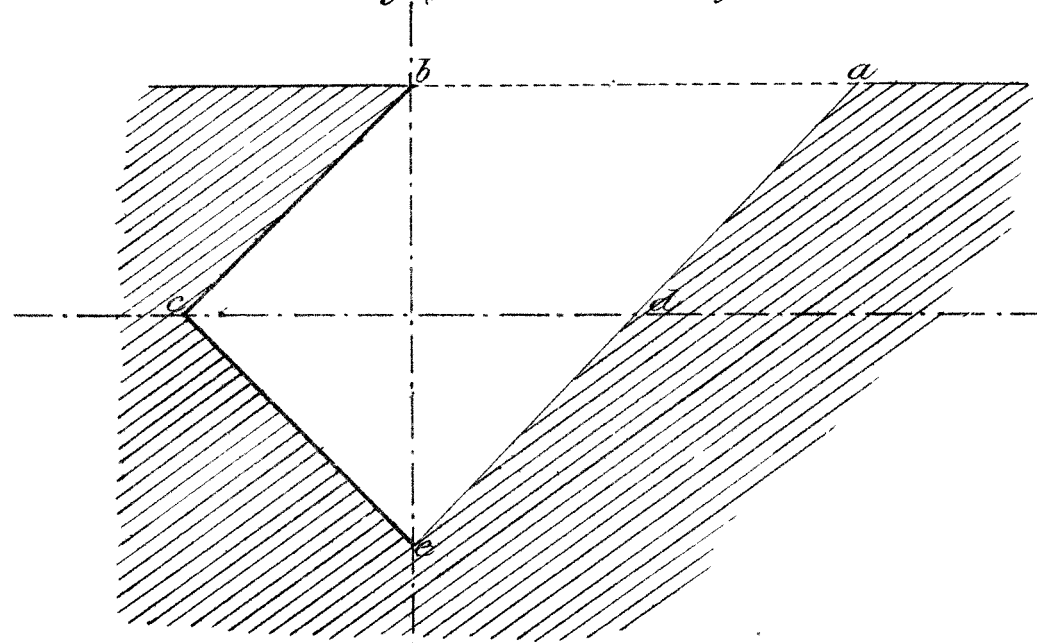
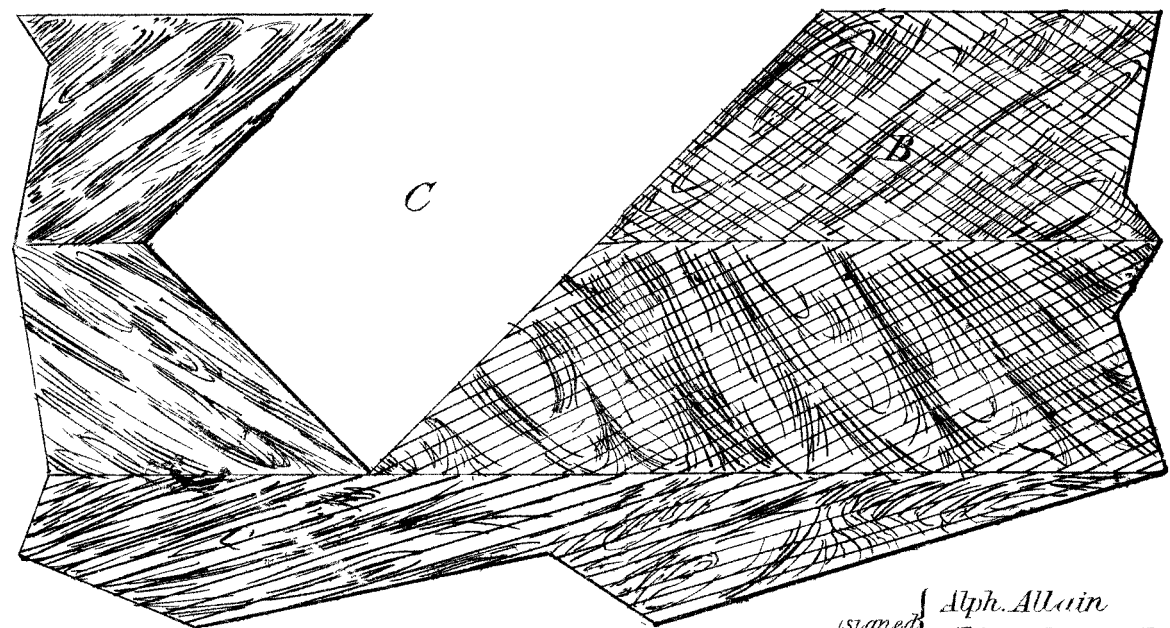


Fig. 4.

Cavity (Execution)



This is the Sheet of Drawings referred to in the annexed Letters of
 Registration granted to Alphonse Allain and Alfred Rivière
 Dejean, this eighth day of May, 1873. Hercules Robinson.

signed { Alph. Allain
 Alfred Rivière Dejean

[37]



A.D. 1873, 16th May. No. 356.

AN IMPROVED PROCESS OF AND FURNACE FOR CHLORIDIZING AND TREATING SILVER AND COPPER AND OTHER ORES.

LETTERS OF REGISTRATION to Samuel House and Carl A. Stetefeldt, for an improved Process of and Furnace for chloridizing and treating Silver and Copper and other Ores.

[Registered on the 17th day of May, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS SAMUEL HOUSE, of Melbourne, in the Colony of Victoria, merchant, hath by his Petition humbly represented to me that Carl A. Stetefeldt, of San Francisco, in California, is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention intituled "An improved Process of and Furnace for chloridizing and treating Silver and Copper and other Ores," which is more particularly described in the specification, marked A, and the three sheets of drawings, marked B, C, and D, respectively, which are hereunto annexed; and that the said Carl A. Stetefeldt, by agreement dated the eighth day of October, one thousand eight hundred and seventy-two, authorized the London and St. Arnaud Gold and Silver Mining Company (Limited) to apply for and receive Letters Patent for the said invention in and for all the Australasian Colonies, in the joint names of the said Carl A. Stetefeldt and the said Company, or such party as might be appointed to represent the said Company; and that he, the said Petitioner, is one of the Directors of the said Company, and has been appointed its representative for the purpose of obtaining such Letters Patent; and that he, the said Petitioner, has deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him the said Petitioner and the said Carl A. Stetefeldt for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Samuel House and Carl A. Stetefeldt, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Samuel House and Carl A. Stetefeldt, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Samuel House and Carl A. Stetefeldt shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this sixteenth day of May, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S)

HERCULES ROBINSON.

An improved Process of and Furnace for chloridizing

A.

SPECIFICATION of an Invention intituled "An improved Process of and Furnace for chloridizing and treating Silver and Copper and other Ores," invented by Carl A. Stetefeldt, of San Francisco, in California, and one-half interest therein sold to the London and Saint Arnaud Gold and Silver Mining Company (Limited), of whom Samuel House, of Melbourne, in the Colony of Victoria, is the authorized representative.

This invention consists of an improved mode or process for chloridizing silver and copper ores preparatory to amalgamation for silver ores or leaching for silver and copper ores, and also of an improved furnace for carrying out this and other kindred processes.

The process consists in dropping a mixture of finely pulverized ore and salt through a heated chamber, shaft, or flue, either against or with the flame and products of combustion.

The best mode to accomplish this object is to use a furnace and apparatus as hereinafter described. This will give the best results at the least expense.

The operation of the process is as follows, to wit:—The ore and salt (from three to eight per cent.) are best mixed together and pulverized in a dry crushing battery, through a No. 40 wire screen (forty meshes per linear inch). From the battery the pulp is taken by conveyors and elevators to the hopper of the feeding machine on top of the roasting shaft. The heat of the furnace is so regulated that the roasted ore is red hot but does not bake or sinter. A considerable amount of ore is allowed to accumulate at the bottom of the shaft before discharging, so that the chloridizing gases emanating from the charge are utilized.

In chloridizing copper ores the roasting should be done at a low heat, or the chloride of copper is again decomposed at a high temperature. The chemical process which takes place in this mode of roasting may be described as follows:—

Considering the old, or rather the usual theory deduced from the roasting process in common reverberatory furnaces, that sulphates must be formed before the salt can be decomposed, and not till then will the chlorination begin, it would seem that for these chemical reactions more time is required than a few seconds; but this is not the case. As soon as ore and salt enter the furnace each sulphuret particle ignites in the glowing atmosphere, evolving at the same time sulphur, which in presence of the oxygen of the atmospheric air coming undecomposed through the grates, is turned into sulphurous acid, and the metal into an oxide, or in part directly into a chloride. The sulphurous acid in contact with the ore particles and oxygen becomes sulphuric acid. The temperature is nearly from the start too high to permit the formation of sulphates, so that the sulphuric acid turns its force on the red hot salt particles, setting the chlorine free. All these reactions are performed instantaneously. The whole space in the furnace is filled with glowing gases of chlorine, hydrochloric acid, sulphurous and sulphuric acid, oxygen, steam, volatile, base metal, chlorides, &c., all of them acting, decomposing, and composing on the sulphurets with great vigour. The chlorine decomposes the sulphurets directly, forming chloride of metals and chloride of sulphur; it attacks decomposingly also oxides and sulphates, if present. The hydrochloric acid performs the same office. Also metallic silver, if it should occur in the ore, would combine with the chlorine. The sulphuric acid, besides decomposing the salt, oxidizes partly the sulphurets directly, &c.

Considering now an ore particle in a red hot condition attacked simultaneously by all these gases while falling, the final chloridizing result is inevitable. The finer the ore particles are, the more perfect the chlorination; but even if some coarser parts (to a certain degree) should reach the bottom not thoroughly chloridized, this would be finished in the pile as the chlorination and evolution of chlorine gas continues in the red hot accumulation on the bottom of the furnace.

The improved furnace is for desulphurizing, chloridizing, or reducing ores. It consists of a shaft with one or more fireplaces near the bottom. Into this shaft the finely pulverized ore is fed by proper machinery, and falls against the rising flame and gases. Near the top of the shaft, which is closed by the feeding machine, the gases descend into a flue. This flue is connected with a small fireplace near the bottom, which is intended to heat and roast the fine ore dust escaping from the main shaft through the flue. The flue leads into a system of dust chambers which are connected with a high chimney.

To more fully illustrate and describe this furnace, reference is had to the accompanying drawings and letters marked thereon, of which figure 1 is a ground plan of the feeding machine, and figure 2 a vertical section thereof; figure 3 is a ground plan of the furnace, and figure 4 a vertical section thereof. The feeding machine A (in figures 1 and 2) represents a hollow cast-iron frame, which rests on the top of the furnace, and through which water circulates, in order to keep the machinery above cool. Into this frame is inserted a cast-iron grate, B, which supports a punched screen of sheet-iron, with holes of about the three thirty-second part of an inch in diameter. Above the punched screen is a coarse wire screen with meshes of one-third of an inch. This screen is fastened to the frame C, which rests upon friction rollers D, fastened to the hopper E, and is set in motion by the crank F. The plates G, which nearly touch the wire screen, are for the purpose of keeping the ore in place when the frame C is set in motion. H is a damper which is inserted in case the screens have to be renewed.

In figures 3 and 4 the furnace itself is shown. A represents the shaft, which, when working, is covered at the top with the feeding machine. B is a fireplace near the bottom of the shaft. In order to effect a complete burning of the flame, and to introduce a surplus of oxygen for desulphurizing and chloridizing, roasting air is introduced through the channels C, which are in connection with the slit D. E is the flue near the top of the shaft, heated by the auxiliary fireplace F. The flue G (where most of the dust accumulates) leads to the dust chambers.

The operation of the furnace is as follows, to wit:—Fire is made in the fireplaces B and F, and as soon as the inner walls of the shaft are hot the feeding machine is put in motion. The coarse wire screen cutting through the pulp between the plates and the punched screen, rubs the ore through the holes of the latter into the shaft. By the time the ore has dropped to the bottom it is roasted. After a charge has accumulated the roasted ore is drawn out through the door H. The dust is discharged through the doors JJJ.

The only attention which the furnace requires is the keeping of a proper uniform heat. The furnace is at a "proper" heat when there is a bright red flame passing up the shaft, and when its outer walls are so hot as to enable you to barely hold your hand on it.

A

and treating Silver and Copper and other Ores.

A furnace of the size represented in the drawing will roast from twenty to thirty tons of ore in twenty-four hours, at considerably less expense in fuel and labour than the reverberatory furnaces.

The furnace can be used for various purposes, to wit:—

- 1st.—For oxidizing or desulphurizing roasting of sulphuretted ores. For instance, roasting of zincblende for manufacture of zinc; pyrites of copper previous to smelting or leaching; gold-bearing pyrites of iron preparatory to amalgamation, or Plattner's chlorination process.
- 2nd.—For chloridizing roasting of silver and copper ores preparatory to amalgamation for silver ores or leaching for silver and copper ores. In this case a proper percentage of salt is mixed and pulverized with the ore before it enters the furnace.
- 3rd.—For reducing iron ores. In this case the furnace has to be constructed with gas generally, and a surplus of oxide of carbon has to be introduced into the shaft for reducing the iron ore.

What is claimed is:—

- 1st.—The improved process for chloridizing silver and copper ores by dropping a mixture of the finely pulverized ore and salt through a heated chamber, shaft, or flue, either against or with the flame and products of combustion, substantially as herein described and explained.
- 2nd.—The combination of a shaft having fireplaces near its bottom, with a flue provided with an auxiliary fireplace for the purposes described.

—

This is the specification, marked A, referred to in the annexed Letters of Registration granted to Samuel House and Carl A. Stetefeldt, this sixteenth day of May, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 3 March, 1873.

SIR,

We do ourselves the honor to recommend the issue of Letters of Registration, securing to Samuel House and to Carl A. Stetefeldt the exclusive enjoyment, for a term of fourteen years, of an invention intituled "An improved Process of and Furnace for chloridizing and treating Silver and Copper and other Ores," in accordance with the Petition, specification, drawings, and claim transmitted for our report, under your B.C. communication of the 26th February, 1873, No. 1,511, herewith returned.

We have, &c.,
GOTHER K. MANN.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

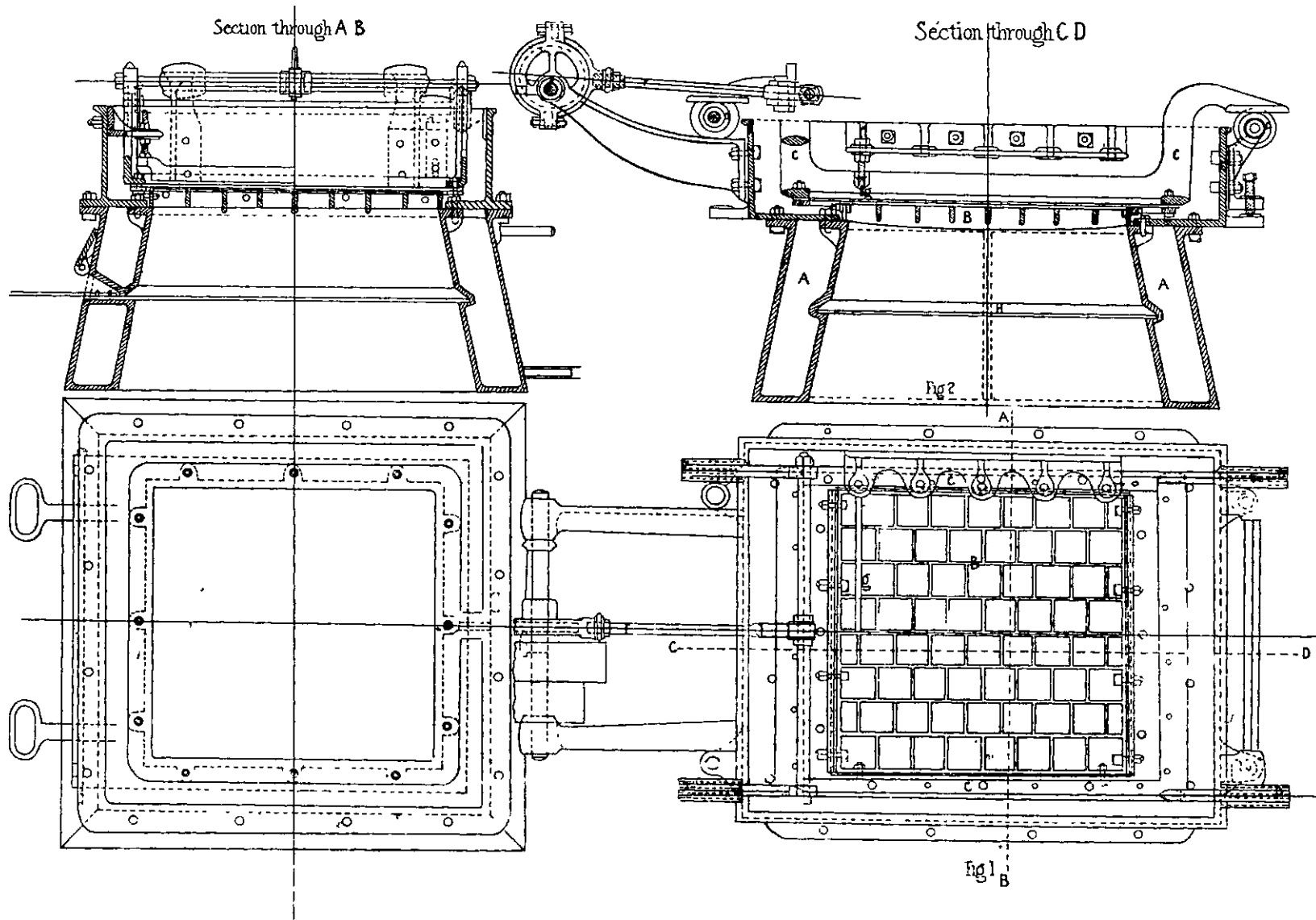
[Drawings—three sheets.]

No. 357.

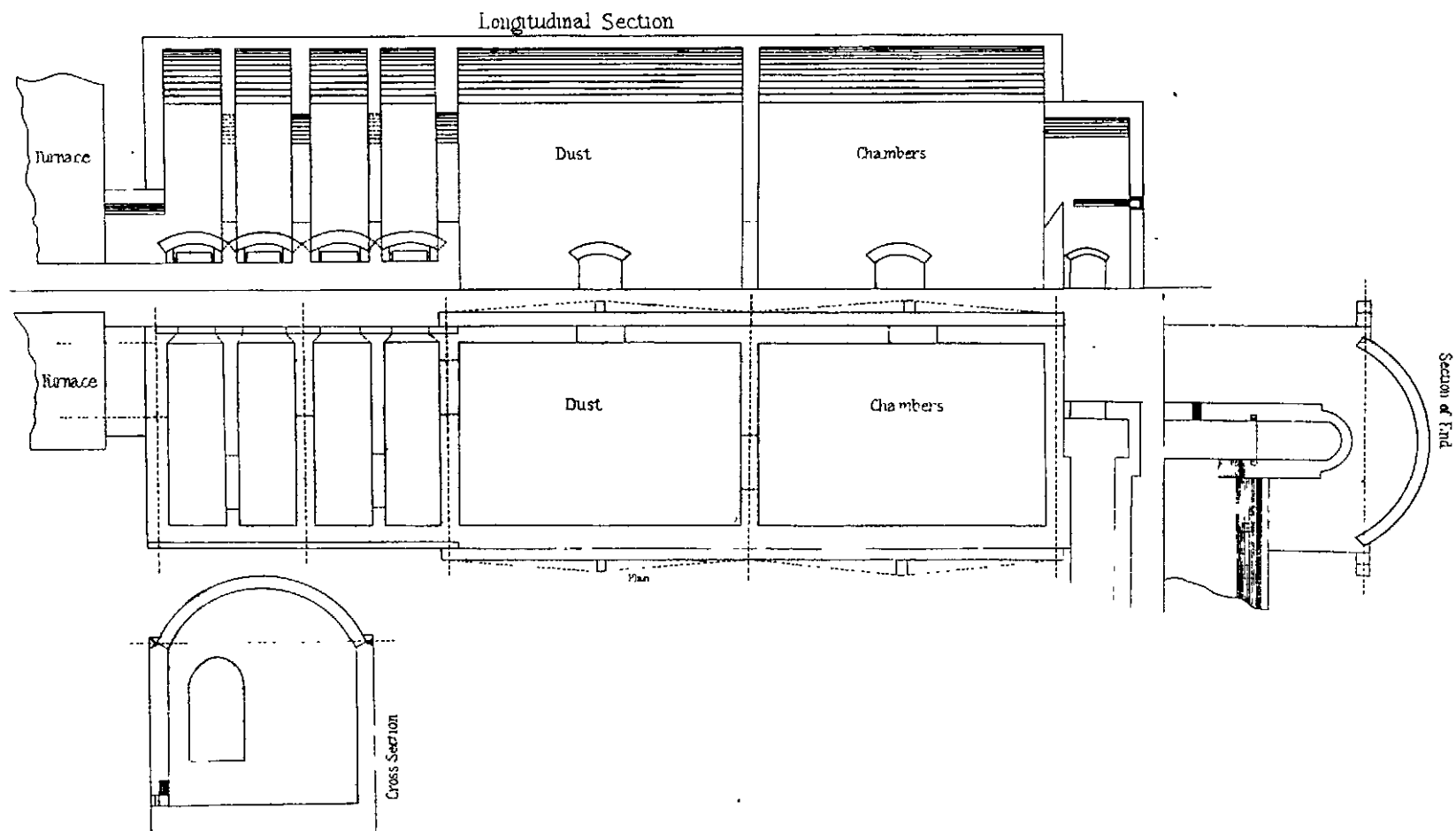
[Assignment of No. 153. See page 73 of Return of 8 December, 1870.]

No. 358.

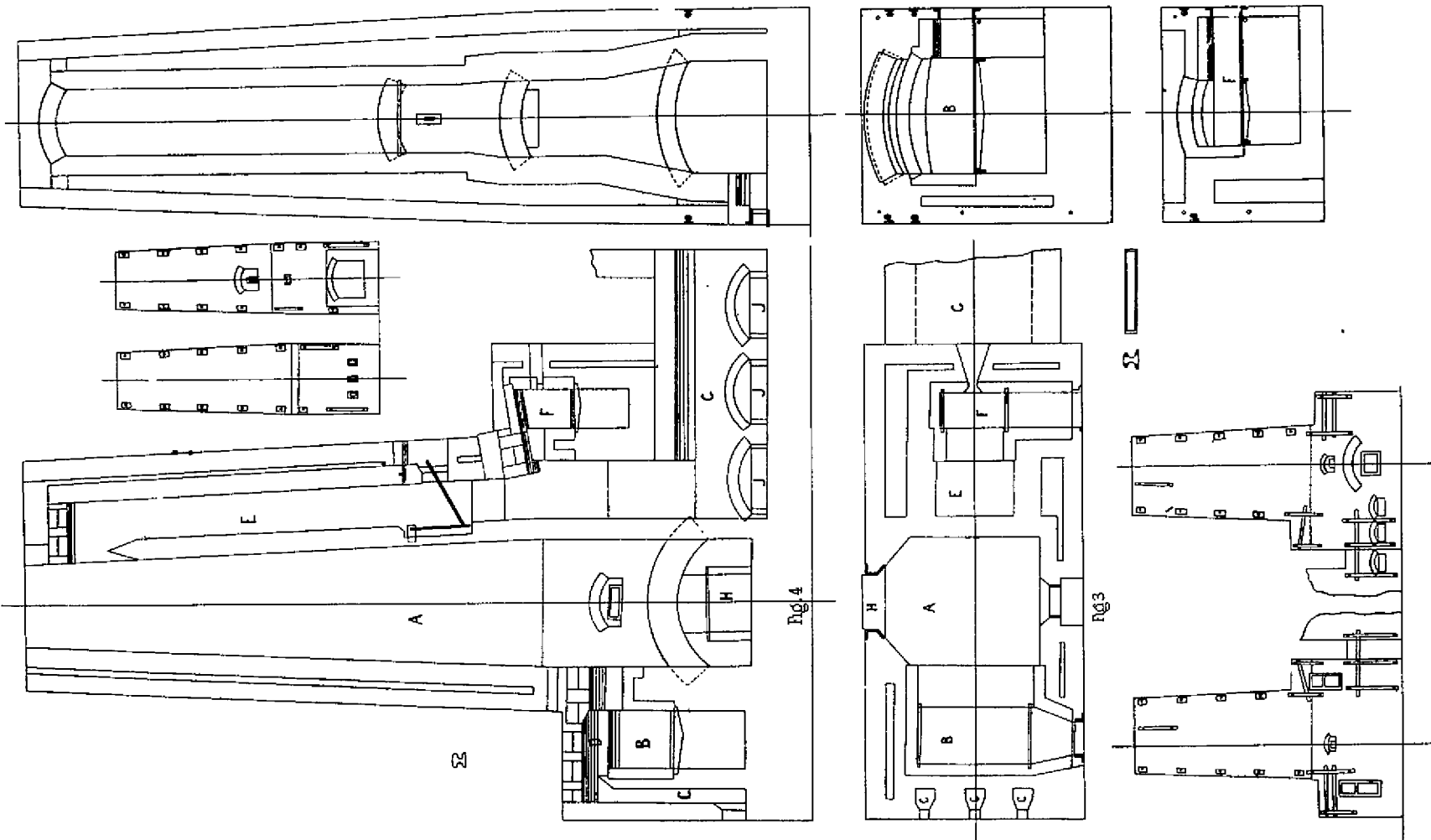
[Assignment of No. 242A. See page 73 of Return of 21 June, 1872.]



This is the Sheet of Drawings marked B referred to in the annexed Letters of Registration granted to Samuel House and Carl A Stetefeldt this 22nd day of May 1873 Hercules Robinson



*This is the Sheet of Drawings marked C referred to in the annexed Letters of Registration granted to Samuel Hulse and Carl A. Steinfeldt this sixteenth day of May 1873
 Perciles Robinson*



Scale - 1/2 Inch to the Foot

This is the Sheet of Drawings marked, D referred to in the annexed Letters of Registration granted to Samuel House and Carl A Stiefeldt this sixteenth day of May 1873
Hercules Robinson



A.D. 1873, 18th June. No. 359.

AN INVENTION FOR CONVERTING CYPERUS VAGINATUS, &c., INTO A FIBROUS SUBSTANCE PRINCIPALLY FOR USE IN PAPER-MAKING.

LETTERS OF REGISTRATION to Thomas Wearne, for an Invention for converting *Cyperus vaginatus*, Cat's-tail Grass, Imphee trash, Sugar-cane megass, Grass-tree, Knotty Water-reed or Sedge-grass, and other vegetable fibres, into a fibrous substance, principally for use in Paper-making, and technically known as "half-stuff."

[Registered on the 20th day of June, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS THOMAS WEARNE, of Sydney, in the Colony of New South Wales, ironmonger, hath by his Petition humbly represented to me that he is the assignee of William Frederick Thomas, of Liverpool, in the said Colony, paper-maker, who is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for converting *Cyperus vaginatus*, Cat's-tail Grass, Imphee trash, Sugar-cane megass, Grass-tree, Knotty Water-reed or Sedge-grass, and other vegetable fibres, into a fibrous substance, principally for use in Paper-making, and technically known as "half-stuff," which said invention is more particularly described in the specification and sheet of drawings which are herewith annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Thomas Wearne, as such assignee as aforesaid, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Thomas Wearne, as such assignee as aforesaid, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Thomas Wearne shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have herewith set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this eighteenth day of June, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

An Invention for converting Cyperus vaginatus, &c., into a

SPECIFICATION of Mr. William Frederick Thomas's Invention for converting *Cyperus vaginatus*, Cat's-tail Grass, Imphee trash, Sugar-cane megass, Grass-free, Knotty Water-reed or Sedge-grass, and other vegetable fibres, into a fibrous substance, principally for use in Paper-making, and technically known as "half-stuff."

THE nature of my invention and the manner in which I perform the same are particularly described and ascertained in and by the following statement, that is to say:—

To convert *Cyperus vaginatus*, cat's-tail grass, imphee trash, sugar-cane megass, grass-tree, knotty water-reed, or sedge-grass, or other such like raw vegetable fibres, into "half-stuff," for use in paper-making, I first pass the material to be operated upon through rolls, similar to sugar rolls, but having, in addition to the usual revolving motion a lateral side motion, so as to more effectually crush or open the fibres by the grinding pinch thus obtained, and by which means the after process of boiling is much facilitated and more economically effected. I next cut the material into lengths, varying from 1 inch to 3 inches; an ordinary chaff-cutting machine being sufficient for the purpose. The crushed and cut material is then conveyed to the reducing boilers, which may be either open or enclosed, and may be boiled with either low or high pressure steam, or even direct fire heat may be employed. The boilers I now purpose using are constructed from $\frac{3}{4}$ wrought-iron plates, 12 feet long by 6 feet diameter, hung or suspended by the centre on two cast-iron trunnions, fitted with stuffing glands for the admission of high-pressure steam; in fact, a "tumbling boiler." The material is then placed in this, the reducing boiler, and an alkaline lye, consisting of 5 per cent. soda and 15 per cent. stone lime to every 100 lbs. of fibre, is added. The boiler is then closed, and the boiling proceeded with; the material being subjected to a pressure of steam from 15 to 30 lbs., varying according to the nature of the fibre used—its freshness, soundness, strength, and other contingent circumstances, which can only be determined by the operator at the time. The time of boiling varies from four to eight hours, and at times even longer, but the material cannot be said to be sufficiently boiled or reduced until the fibre will separate from the vegetable-gummy mucilagenous matter by a gentle rubbing between the hands. The boiling being completed, the "stuff" is at once withdrawn, and drained on a floor suitable for the purpose. It is then put into an ordinary washing or breaking engine, for the purpose of heating the water previous to the boiled fibre being put into the engine, and also for the purpose of allowing the washing for the first half-hour being done with warm water, which much assists the washing and getting rid of the disengaged gummy and colouring matter. The washing being completed, it is then, in the same engine, reduced to "half-stuff," which operation being concluded, the half-stuff is run off by means of a valve in the bottom of the engine into drainers adjacent for the purpose. I then place the drained "half-stuff" in layers in a perforated lever press, for the purpose of freeing it from water and getting it into a consistent form for further manipulation. The layers or sheets of "half-stuff" are now removed and subjected to a still greater pressure, in either an hydraulic or screw-press, from whence it is taken and placed on edge in the drying-room, where, when quite dry, it is packed in bales or cases for either home or foreign consumption.

I wish it understood that I do not limit myself to the precise form or method of operation herein described, but may make such variations therein as will facilitate the accomplishment, under any circumstances, of the object of my invention; and I claim—

- 1stly—The discovery that the best and most abundant of the before-mentioned fibres—*Cyperus vaginatus*—is adapted for paper-making, as also the method or process herein stated by which it is to be converted into "half-stuff" for the paper-maker's use.
- 2ndly—The use of rolls with the combined lateral side motion for opening or crushing the fibres preparatory to boiling, and the economy of chemicals thereby effected.
- 3rdly—The extraction of silica, colouring matter, &c., contained in these raw vegetable fibres, by subjecting them to the action of steam in a closed rotary vessel, as specified, for the purpose set forth.
- 4thly—For the simple and efficient manner my "half-stuff" is converted into millboards, in the wet press, as compared with the ordinary process of millboard-making with hand moulds, &c.

This is the specification referred to in the annexed Letters of Registration granted to Thomas Wearne, this eighteenth day of June, 1873.

HERCULES ROBINSON.

REPORTS.

No. 3, Gresham-street,
Sydney, 27 February, 1873.

SIR,

We have had the honor to receive the Memorial of Mr. William Frederick Thomas which you transmitted for our report, by blank cover, under date 21st February instant, with accompanying specifications of an invention for converting *Cyperus vaginatus* and other vegetable fibres into a fibrous substance, principally for use in Paper-making, and technically known as "half-stuff," for which Letters of Registration are applied for by Mr. Thomas Wearne as assignee of the invention.

We

A.D. 1873. No. 359.

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fibrous substance principally for use in Paper-making.

We desire respectfully to state that having considered the several claims set forth in these documents, we are of opinion that the claimant should be required to illustrate his specification by drawings or diagrams showing the apparatus or machinery which he purposes to employ, and for the protection of which the Letters are required; this more particularly with reference to the claims Nos. 2 and 3 appended to the Memorial. It would also, in our opinion, be desirable that the claimant should indicate more precisely than he has done, at what stage of the processes described the manufacture of millboards is completed, forming the subject of his 4th claim.

THE PRINCIPAL UNDER SECRETARY.

We have, &c.,
GOTHER K. MANN.
A. O. MORIARTY.

No. 3, Gresham-street,
Sydney, 13 March, 1873.

SIR,

We have the honor to return herewith the application of Mr. Thomas Wearne, as assignee of a certain invention for converting *Cyperus vaginatus* and other vegetable fibres into a fibrous substance, principally for use in Paper-making, and technically known as "half-stuff," with the accompanying drawings and specification; and we desire to state that, having considered the said application, we are not aware of any objection to Letters of Registration of the said invention being granted as applied for, and in accordance with the specification, as amended, and illustrative drawings.

THE PRINCIPAL UNDER SECRETARY.

We have, &c.,
GOTHER K. MANN.
A. O. MORIARTY.

[Drawings—one sheet.]

1917

2

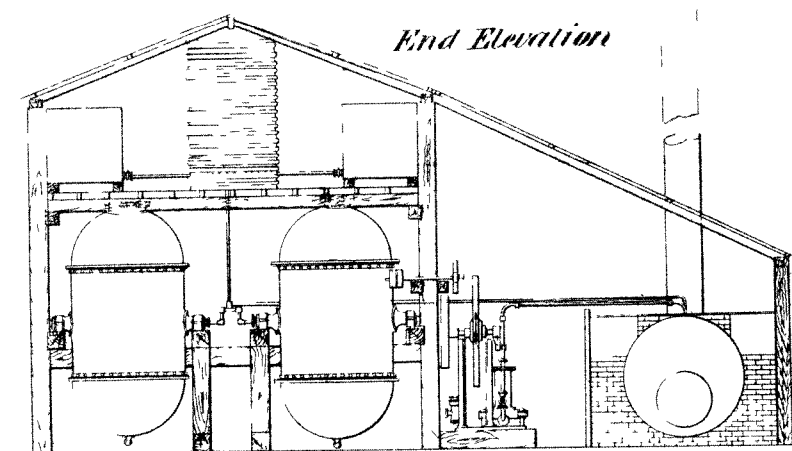
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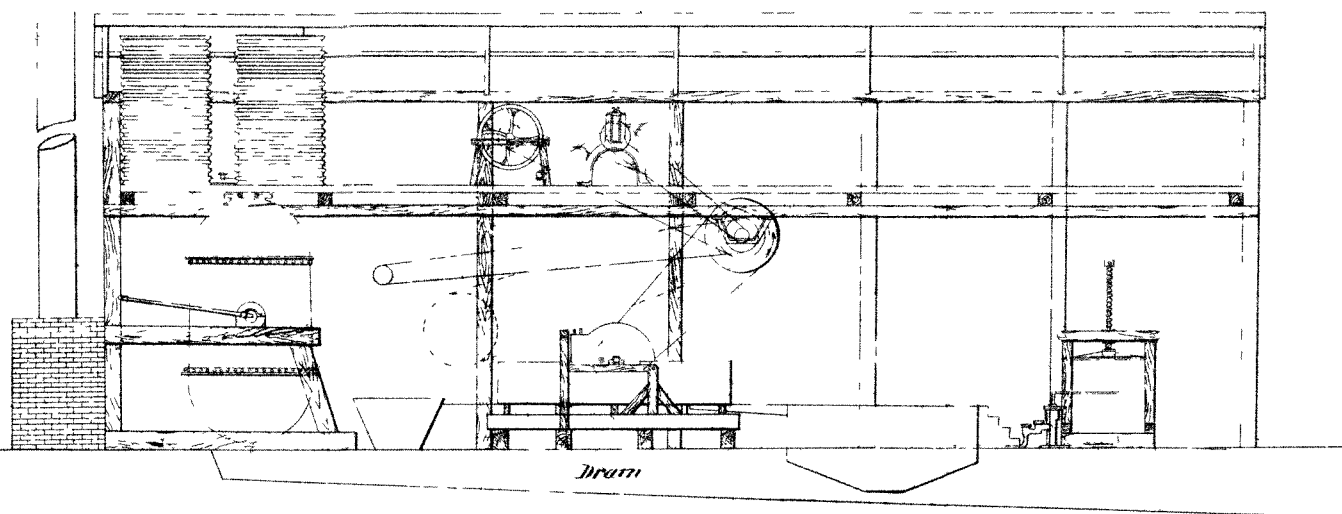
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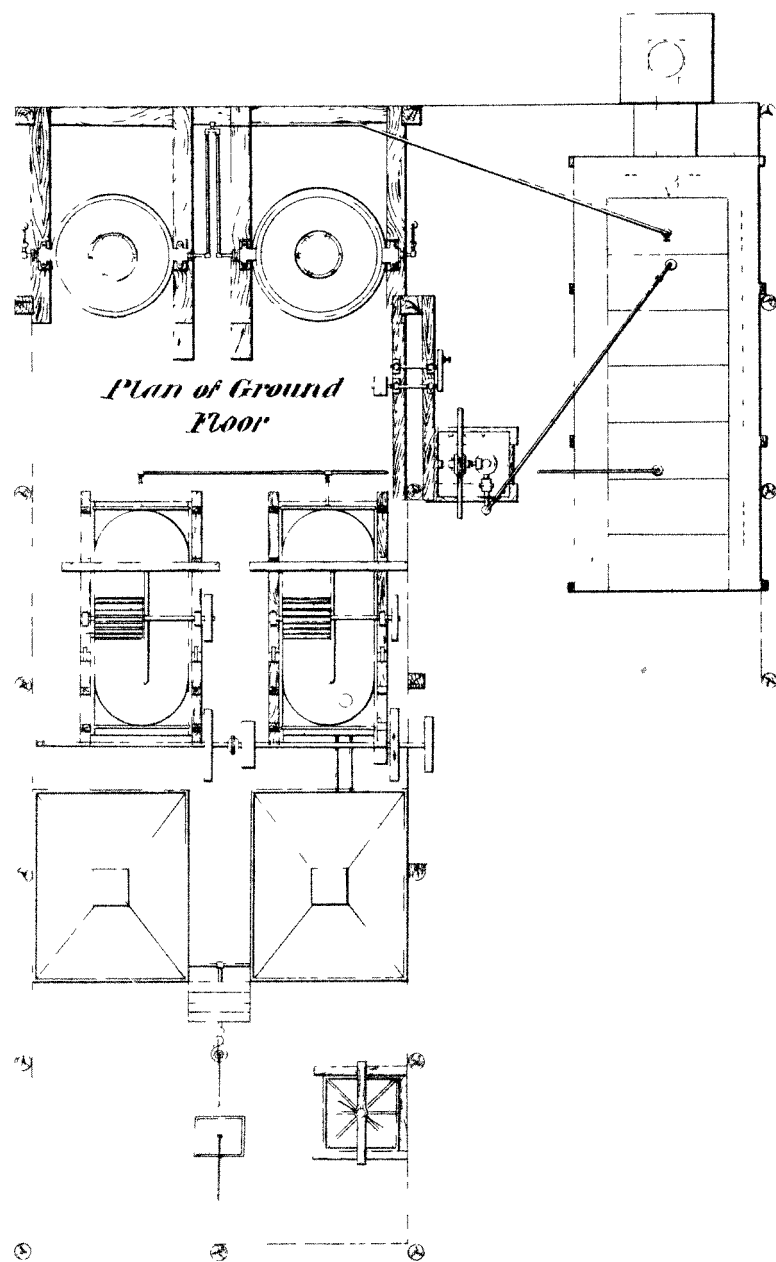


End Elevation

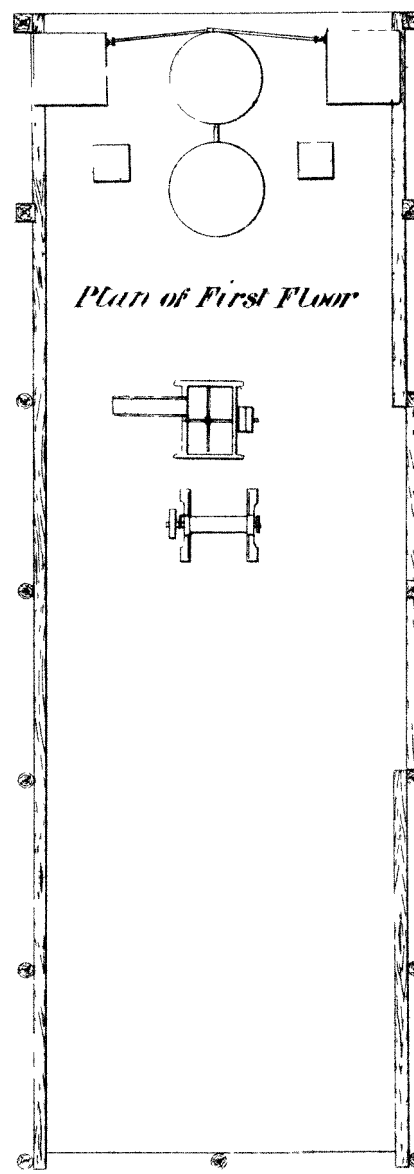


[N^o 359]

Side Elevation



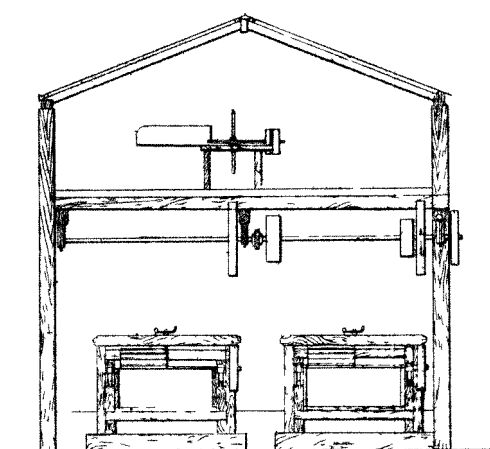
Plan of Ground Floor



Plan of First Floor

**DRAWING
OF
MACHINERY
FOR MANUFACTURING
HALF STUFF**

SCALE OF FEET



Sectional Elevation

*This is the Sheet of Drawings referred to in
the annexed Letters of Registration
granted to Thomas Wearne this eighteenth
day of June 1873. Hercules Robinson*

(Sig 1)

[45]



A.D. 1873, 23rd June. No. 360.

NICOLLE AND MORT'S FRIGORIFIC MACHINE.

LETTERS OF REGISTRATION to Eugene Dominique Nicolle and Thomas Sutcliffe Mort, for an Invention for utilizing the Waste Cold from Frigorific Mixtures, &c.

[Registered on the 24th day of June, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS EUGENE DOMINIQUE NICOLLE and THOMAS SUTCLIFFE MORT, both of Sydney, in the Colony of New South Wales, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention for "utilizing the Waste Cold from Frigorific Mixtures, and for applying the same, and in combination with a plan for the continuous recovery of the salts employed for producing the cold, by an apparatus styled Nicolle and Mort's Frigorific Machine," which said invention is more particularly described in the specification, marked A, and the two sheets of drawings or plans, marked B and C respectively, which are hereunto annexed; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Eugene Dominique Nicolle and Thomas Sutcliffe Mort, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Eugene Dominique Nicolle and Thomas Sutcliffe Mort, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Eugene Dominique Nicolle and Thomas Sutcliffe Mort shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-third day of June, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Nicolle and Mort's Frigorific Machine.

A.

Our invention consists of a mechanical combination, at once simple, novel, and useful, which enables us to utilize the waste cold resulting from frigorific mixtures, whereby we can follow up the lowering of temperature to the extreme point at which the salts used will dissolve.

Our method of availing of this power enables us to freeze water and refrigerate generally, with certainty, safety, and economy; the apparatus being instantaneous in its results, requiring only a trifling power to work it, whilst its continuous action may be perpetuated without any manual interference beyond the attention required in keeping the motive power going, the water and the salts for each successive manipulation being (where the evaporating apparatus is used in combination with the freezing power) mechanically and continuously supplied as the evaporation of the spent liquor goes on.

It is well known that the lower the temperature of the liquid used in cooling mixtures for the dissolving of the salts, the more intense the cold produced; and we avail of this fact and utilize it in a temperature exchanger, by which we are enabled to impart to the water and salts next to be used, the surplus cold of the liquid last used. In this way we can effect refrigeration with the most simple and familiar ingredients, such as common salt, sugar, washing soda, or any other crystallized salts which produce cold during liquefaction, the range of cold attainable, as before stated, being only limited by the temperature at which the salts employed will liquefy.

For example, common salt producing only three degrees of reduction of temperature at 75° Fahrenheit, by the use of our apparatus reduces it from 75° to 28°, or four degrees below freezing point. Then again, chloride of calcium giving only 31° reduction starting from the same point, with our apparatus gives and maintains a point considerably below zero.

The cold-producing machine shown upon the annexed plan and herein described is designed for household purposes, and to be worked by hand, but it may of course be made of any size, according to the work required of it, and be driven by any form of motive power which may be at command, and may be worked in combination with the evaporating apparatus or not.

The shape of the vessels and the position they occupy may also be varied to suit circumstances and conditions, so long as the general principle be observed.

In working the apparatus, we use, by preference, simple fixed salts which are soluble in water and only requiring to be evaporated to be again fit for use, such as nitrate of ammonia, chloride of calcium, &c., &c.

Care must be taken to use only such pipes and vessels as are not affected by the salts employed. This is easily ascertained by placing a bit of the metal proposed to be used in a solution of the salt intended to be employed: if the solution be discoloured by the metal, then that metal must be avoided.

We now proceed to describe our apparatus styled "Nicolle and Mort's Frigorific Machine," reference being had to the plans hereunto attached, and to the description of the evaporating apparatus hereinafter given, as used in connection and combination with the Frigorific Machine.

SPECIFICATION.

Fig. 1 shows a sectional elevation through the centre of the apparatus.

2 is a ground plan of the apparatus.

A is a salt receiver, fitted with a cone or inverted funnel, in order to lead the salt to the distributing slide E.

B is a vertical shaft, fitted at the base with an eccentric, to give backward and forward motion to the slide E.

C is a pulley fixed on the shaft B, to which it gives motion.

D is a spade, to which a circular movement is given by an arm attached to the upper part of the shaft B. This spade fills the aperture in the slide E with the salts every successive stroke.

E is a distributing slide, which moves freely between two dovetails, receiving its motion from the eccentric above referred to. This slide is made with an opening (by preference oval), which is filled with salt each time it enters the vessel A, emptying itself on its return into the inclined shoot J.

F is a water tender, fitted at the base with a small pipe, which serves to convey the water through the exchanger and into the inclined shoot J.

G is a temperature exchanger, composed of a metallic cylinder, with an external spiral channel and a coil containing one pipe within another, the cylinder and the coil being connected and both enclosed in some good non-conductor. The cylinder is made of a good conducting metal, having a broad but shallow spiral recessed on its outer side, such recess being covered with an outer casing so as to form it into a channel into the upper part of which the spent liquor is made to enter on its return from its work, and after having performed the circuit of the spiral to continue its course through the outer pipe of the coil on its way to the tank S. The water next required for the dissolution of the salts enters the inner pipe of the coil at the point where the spent liquor discharges, and passing in an opposite direction exchanges temperature with that liquor, entering the cylinder at its base at or about the temperature at which the spent liquor left that vessel. Upon entering the cylinder the water comes in contact by conduction with the more intense cold of the spent liquor, which it absorbs, and if the cold be sufficiently intense it will cause the congelation of the water against the inner surface of the cylinder. The ice thus formed is continuously detached by a revolving knife or scraper (which also acts as an agitator) and as detached is, owing to its lighter gravity, continuously passed into the tube K, where it joins the salt on its way into the refrigerating well. If the refrigerated liquor be made to return to the spiral of the cylinder without robbing it of too much of its cold on the way, the whole of the water may speedily be passed into the tube in a frozen state, whereby a very low range of temperature may be obtained; indeed, if crystallized chloride of calcium be the salt employed, 49° below zero, or thereabouts, will be the result. In simple ice-making, the spiral cylinder may be dispensed

Nicolle and Mort's Frigorific Machine.

dispensed with, as the temperature of the spent liquor after having done its work will never be at freezing point. We may here state that we do not confine ourselves to the form of this vessel, as a similar result may be obtained by the spent liquor being made to surround a metal vessel, by coil of round or flat pipe, the water entering the inner vessel, or one vessel may hold the water and be placed in another vessel receiving the spent liquor, but by preference we use the form first described. The coil is composed of two pipes of different diameters, the smaller pipe being placed inside the larger one, and of such proportions as to allow the water from the tender F to circulate freely, whilst sufficient space is left between the inner and outer pipe to allow the overflow from the refrigerating well H as it passes from the spiral of the cylinder also to circulate freely. The principle of the exchanger is the circulation of a warmer and a colder liquid in opposite directions within separate metallic pipes or spaces; and if the pipes or spaces be in harmony as to size and the lengths be properly adjusted, say from 25 feet to 100 feet, according to the quantity of liquor to be passed, a perfect exchange of temperature will be effected between the two, one liquid leaving at one end at the temperature the other entered, and *vice versa*. It may be observed that the pipes being in excess of the length required will not be injurious to the working. By preference we use one pipe within another, but we do not confine ourselves to this sort of exchanger, as any other form of temperature exchanger may be used, such for instance as a coil or spiral placed in a vessel, one liquid flowing through the coil, and the other entering and leaving the vessel in opposite directions; or one metal vessel may be placed within another vessel, the spent liquor being made to enter one of the vessels and the liquid next to be employed in dissolving the salts to enter the other.

- H is the refrigerating well, made of wood or other material, and by preference lined with lead or other metal not affected by the salts used, into which the salts and water pass by the tube K.
- H¹ is a freezing box, made by preference of wood, lined with tin or lead or other metal which the salts used will not affect, in which the ice moulds (filled with water) or other articles requiring to be refrigerated are placed. It is made with divisions so as to ensure the gradual application of the cold and the discharge of the spent liquor at a temperature at which the water on its way to the water tender will not freeze.
- I is a small metallic pipe, which conveys the water from the tender F through the outer coil of the exchanger into the inclined shoot J. This pipe is fitted with regulating cock, in order to regulate the flow of water into the shoot J.
- J is an inclined shoot which leads the water and the salts into the central tube K.
- K is a central tube which leads the salts and the water on to the centre of the agitator L. This tube is essential to the proper working of the apparatus, as without it the water would escape without proper contact with the salt, and if the water were introduced at the bottom it would congeal.
- We specially claim this central tube.
- L is an agitator, working in the refrigerating well H, made with several blades in the form of a screw propeller, and of such shape or angle as will counteract the centrifugal force and give a retrograde motion to the projected particles towards the centre, thus causing a rapid dissolution of the salts employed.
- M is a vertical shaft, on which the agitator L is fixed, revolving in a step fixed on the bottom of the refrigerating well H.
- N is a small driving pulley, revolving freely on the shaft M, fitted with a strap or band encircling the pulley C, and giving motion to the shaft B.
- N¹ is also a driving pulley communicating its rotary motion to a corresponding pulley on the shaft of the scraper or knife in the spiral cylinder of the exchanger G.
- O is a clutch fitted with a square hole on to the shaft M which enables the salt spade and distributor to be thrown out of gear, without interfering with the motion of the shaft M. A thumbscrew serves to keep the clutch in or out of gear as required.
- P is a bracket in which the shaft M revolves freely.
- Q is a handle for working the machine, which can be replaced by pulley where the machine is of a size requiring more than hand power.
- R is a V pipe rising to the level of the overflow to ensure the exchanger pipe into which the spent liquor overflows being kept full so that the inner pipe containing the water may be in full contact with the cool liquor.
- S is the spent liquor tank, into which the spent liquor flows, after exchanging its temperature with the water coming from the tender F.
- T is a delivery cock.
- U is a fresh water tank, placed in the spent liquor tank S, for the purpose of cooling the water next to be used for ice-making, utilizing any remaining cold which may be in the spent liquor.
- V is a supply pipe, for the purpose of admitting water into the tank U.
- X is a cock for withdrawing the water from the tank U.
- Y is a cock for drawing off the spent liquor from the well H.
- Z is a cock for drawing off the liquor from the freezing box.

MODE OF WORKING THE MACHINE.

The salt tank A must be filled with the salt intended to be used, and the water tender F with water, and be replenished as required.

This may be effected by mechanical means such as elevators, and be made actually continuous in its operation by being worked in combination with the evaporator.

The ice moulds must be filled with water, and placed in the freezing box H¹ with any other articles requiring to be refrigerated.

These

Nicolle and Mort's Frigorific Machine.

These things attended to, the cock in the pipe I at the bottom of the water tender must be opened, and at the same time the machine must be put in motion by turning the handle Q. This action must be continued until the refrigerating well H and the freezing box H' are full, when the temperature of the liquid, if nitrate of ammonia be the salt used, will be about 46° below the temperature of the water at starting; but should this not be the case, before proceeding with the work the flow of water must be lessened, by adjusting the regulating cock so as to increase the quantity of salt, and should it be found as the work proceeds that the salt admitted is in excess of what the water will take up, then the clutch must be thrown out of gear and screwed to the shaft by the thumbscrew provided for that purpose, and so kept until the salt in the refrigerating box is dissolved.

In this way the quantities may be adjusted so that the flow of the water may be equal to the proper dissolution of the salts as they are admitted.

The vessels H and H' being full, the overflow will begin to empty itself into the outside pipe of the exchanger G, through the centre of which the fresh water from the water tender is flowing in an opposite direction through the pipe I on its way to the shoot J, and an exchange of temperatures between the two will commence, the spent solution discharging into the tank S at the temperature the water left the water tender, and the water entering the shoot J at the temperature the spent liquor left the freezing box H.

Fresh water may be introduced through the pipe V into the fresh water tank U, from whence the ice moulds may be supplied by the pipe X.

It will be found that this water has taken up any cold which was left in the spent liquor.

The operation will go on so long as the salt and water is supplied and the apparatus kept in motion, the spent liquor being as continuously withdrawn for evaporation through the pipe T; but in order to prevent the spent liquor from freezing the water on its way to the shoot J, it will be necessary, where the spiral cylinder is not used, to remove the ice mould next the refrigerating well (which it will be found will be first frozen) and to move on the others, replacing the space at the end with the same mould filled afresh with water.

We would here particularly observe that when artificial refrigeration is required for purposes other than those referred to, the room or space requiring to be kept cold is more or less surrounded with piping, which is connected at the cock Z, and through which the refrigerated liquor is made to flow—if needs be by a pump, and on its return to enter the exchanger G.

In working with the piping, we arrange for the passage of the liquor through two properly protected chambers so as to give the extreme cold to the centre or frozen one, and then passing it through the outer chamber in which the articles next to be frozen or other articles requiring to be kept cool may be placed, we utilize the remaining cold in reducing their temperature in the outer chamber. In this way we work most effectively and ensure the return of our cooling agent to its entrance at the exchanger at a temperature which will not freeze the water from the water tender on its way to the shoot J; this latter, however, will be of no importance where the spiral cylinder forms part of the temperature exchanger, except where very low temperatures are sought.

If preferred, the ice moulds may be removed and replaced by a coil, through which brine or any other vehicle for cold may be passed by action of a pump or other mechanical contrivance, the cooling agent entering the coil where the freezing liquor leaves the freezing box, and leaving that vessel on its way to do its work, where the freezing liquor enters; but where the salt employed for producing the cold will not injure the metal through or over which it may have to pass, it may of course be made to perform the work direct, and so do away with the necessity for the coil just described.

To avoid the expense of piping, air may be made the cooling agent.

In this case we pass air through the refrigerating well H or the refrigerating box H', and then through, over, or around the vessels required to be cooled, the air being made to pass by means of a common air-pump.

The description given up to this point has reference only to the working of the apparatus for the production of cold; we now propose to describe the plan for continuously evaporating the spent liquor whilst working, and recovering the salts, reference being made to the plan hereunto annexed. We employ the following vessels, viz. :—

- A is an exchanger (made by preference of wood lined with lead or tin) containing a metal coil, E, through which the spent liquor coming out at the cock Z is forced on its way to another exchanger, B. The spent liquor is forced through the coil E, meeting the evaporated liquid on its way from the still C to the crystallizing drum D, with which liquid it partly exchanges temperature.
- B is another exchanger, made by preference of like material to A, through which the coil E passes; the liquor in that coil taking up additional heat from the vapour passing into the vessel through the pipe F from the still C. The condensed water from this vessel is conveyed by a coiled pipe through the condenser G.
- C is a still, the upper chamber of which is somewhat after the fashion of Coffey's still, and made by preference of wood, lined with lead or tin, and fitted with ten or more perforated evaporating metal plates on to which the spent liquor falls, having in its course through the exchangers A and B acquired a large amount of heat. The liquor passes from plate to plate, receiving additional heat from the vapour arising from three or more steam-plates occupying the lower portion of the still, and into which steam is admitted at suitable temperature, by the pipe H. These lower plates are best made of copper, tinned outside, and of sufficient strength to bear the pressure of steam employed. In passing over the steam-plates the necessary amount of water is driven off and the liquid leaves the still, and entering the exchanger A, imparts its heat to the liquor next to be acted upon.
- D is a revolving drum, made by preference of tinned copper, through which cold water is made to pass, by the cooling power of which the salt is crystallized, and which coming in contact with a scraper, is made to fall into a receiver, from whence, by endless belt or other mechanical contrivance, it is carried into the salt receiver of the Frigorific Machine, thus keeping up the supply in that vessel.

Nicolle and Mort's Frigorific Machine.

E is the metal coil through which the spent liquor is forced, through the exchangers A and B, on its way to the still C.

F is a metal pipe, through which the steam and vapour from the still C is conveyed into the exchanger B, in which vessel it is partly condensed.

G is a condenser or cooler (made by preference of wood), into which cold water is allowed to flow for the purpose of condensing the vapour and cooling the condensed water coming from the exchanger B through the coil K, which latter is a continuation of the pipe F. The condensed water falls into a closed vessel, L, from which it is pumped to the water tender of the Frigorific Machine, which latter may thus be kept continuously supplied with water, whilst a vacuum is maintained in the chamber L.

H is a metal pipe (by preference copper), by which steam is admitted from any steam boiler to heat the steam-plates in the still C. The steam after passing through these plates is carried back to the water space of the boiler through the pipe I.

The mode of working the evaporating apparatus is as follows, viz. :--

First,—pass steam by the pipe H, at a temperature of about 275°, so as to thoroughly warm the still C, and then begin to pump the spent liquor (which leaves the Frigorific Machine at the pipe X) through the pipe which conveys it through the exchanger coils to the still C.

As soon as the liquor gets into circulation, open the cock at the bottom of the vessel L and let out the air; this repeat until all the air is expelled. Now admit the cooling water into the condenser G and into the crystallizing drum D, which drum set in motion at such a speed as will best ensure crystallization, at the same time pumping the water from L.

By this latter and the condensing of the vapour in the vessel G, vacuum will be produced, thereby ensuring a more rapid evaporation of the liquor in the still C.

A regulating cock will allow of the evaporated liquor to fall on to the drum D at such rate as will ensure crystallization.

The speed of the spent liquor force pump must be regulated according to the evaporating power of the still and cooling power of the drum.

We do not confine ourselves to the proportions shown on the plan, or to the size or shape of any of the vessels, which will of course have to be varied according to the amount of work to be performed.

The temperature at which the steam is admitted may have to be varied according to the salts employed, but 275° or thereabouts is what we should use for evaporating chloride of calcium and nitrate of ammonia liquors.

It will be found that a still of the size of the plan, and made as herein described, will be capable of evaporating a much larger amount of salt than a Frigorific Machine of the size described could dissolve.

The still described is designed for the recovering of salts which, during desiccation, will absorb the quantity of water necessary for their crystallization, such as nitrate of ammonia, chloride of sodium, &c.

In recovering other salts which are capable of absorbing a larger amount of water of crystallization, and which amount is necessary for their full frigorific power, such as chloride of calcium, we substitute for the revolving drum D a crystallizing vat, into which the liquor, after having been sufficiently evaporated (say, if under atmospheric pressure, 255° or thereabouts), is allowed to run.

If the salt be required for immediate use, a coil or other cooling contrivance, with a current of cold water, must pass through the vat, to carry off the heat necessary to be removed to effect crystallization.

The bottom of this vessel is fitted with a cock for the purpose of drawing off the drained mother liquor, which liquor must be returned to the still for further evaporation.

The salt as recovered must be passed into the elevator as before described, and the process in that way may be made continuous.

CLAIMS.

First.—We claim in its general combination the apparatus herein described and set forth, styled "Nicolle and Mort's Frigorific Machine," and which we claim to work with or without the evaporating apparatus.

Second.—We specially and separately claim the application of our temperature exchanger for the utilization of the waste cold resulting from frigorific mixtures.

Third.—We specially and separately claim our central tube as described herein and marked K on the plan, whereby we prevent the overflow of the mixing water until saturated with the salt, and also by its union with the salt, as the two find their way into the refrigerating well, also prevent its being frozen.

Fourth.—We specially and separately claim our mode of utilizing the cold left in the spent liquor or other agent after having done its work in or over or around the frozen chamber, and on its return therefrom, by passing it through or over or around a second or outer chamber, by which we effect among other results, the following, viz. :—

1st. We present a valuable barrier against the infiltration of heat into the frozen chamber.

2nd. We utilize the surplus cold possessed by our agent in cooling the articles next requiring to be frozen, or in the temporary preservation of articles of food, or in the cooling of rooms or spaces.

THOS. S. MORT.
E. D. NICOLLE.

This is the specification, marked A. referred to in the annexed Letters of Registration granted to Eugene Dominique Nicolle and Thomas Sutcliffe Mort, this twenty-third day of June, 1873.

HERCULES ROBINSON.

Nicolle and Mort's Frigorific Machine.

REPORT.

Sydney, 26 May, 1873.

SIR,

The application of Messrs. Nicolle and Mort for Letters of Registration for an invention styled "Nicolle and Mort's Frigorific Machine" having been referred to us, we have examined the specification and drawings accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,

J. SMITH.

CHAS. WATT.

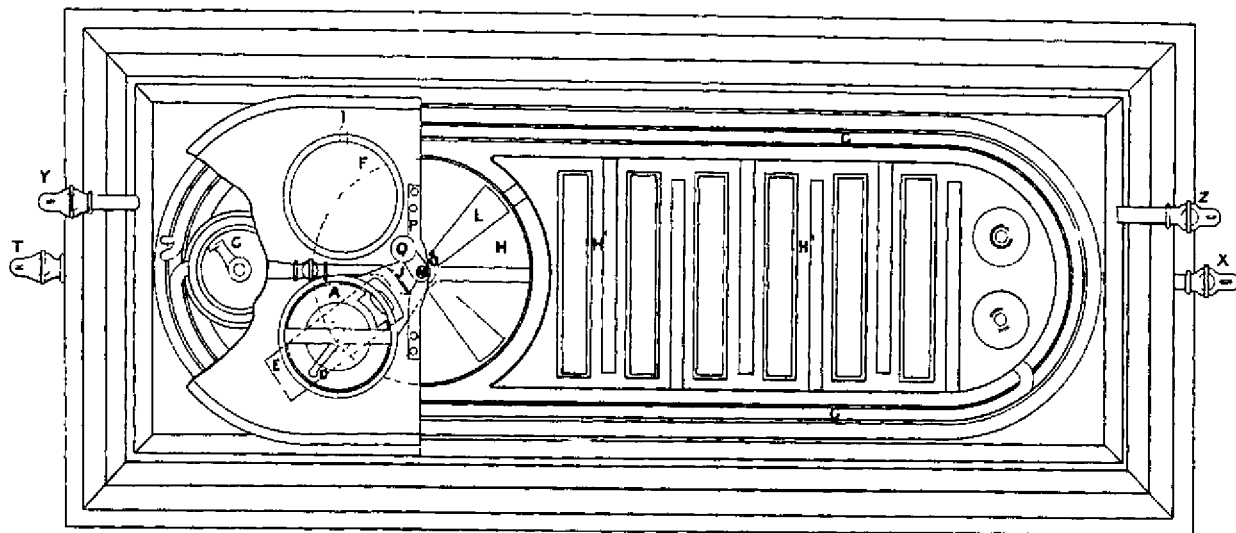
THE PRINCIPAL UNDER SECRETARY.

[Drawings—two sheets.]

[N° 360-2]

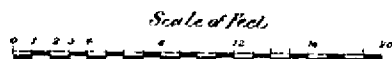
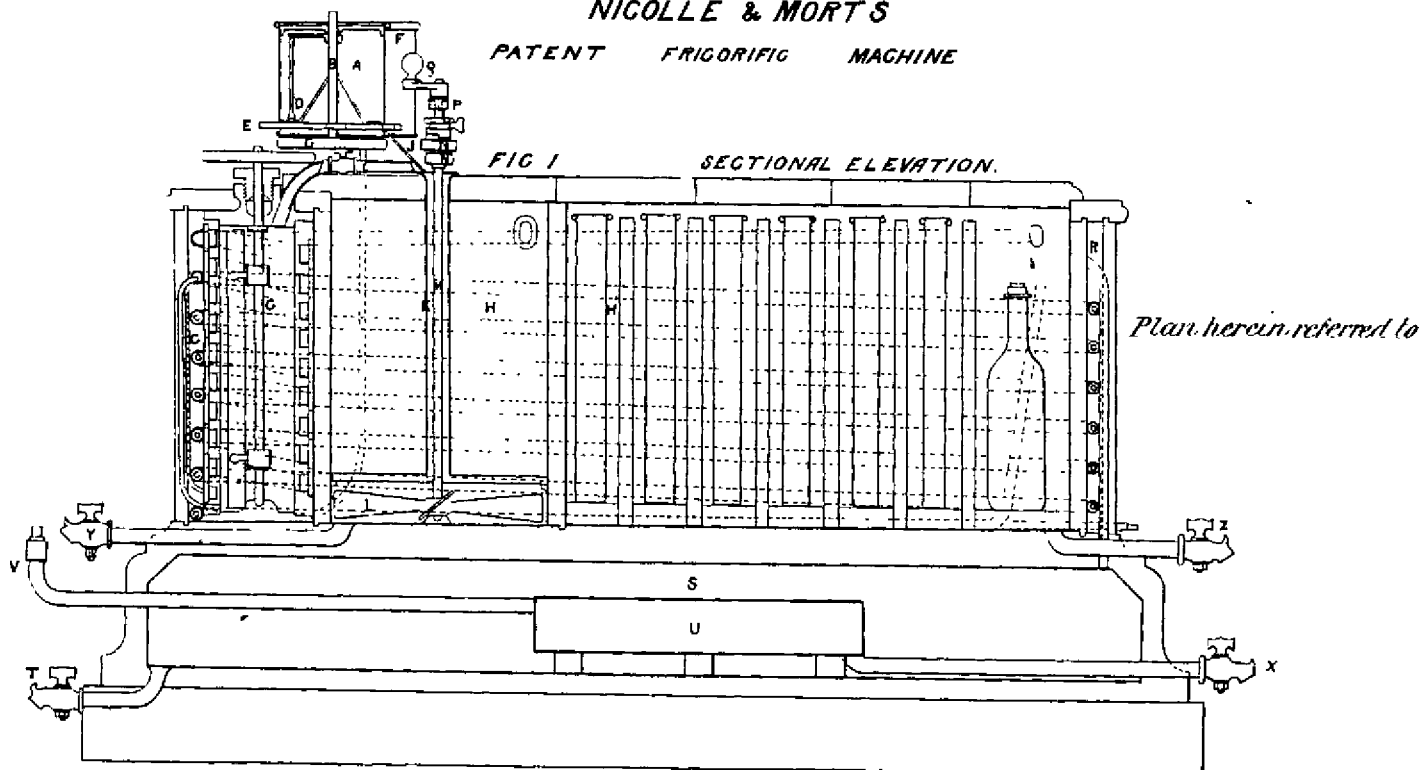
Copy B

FIG 2 PLAN



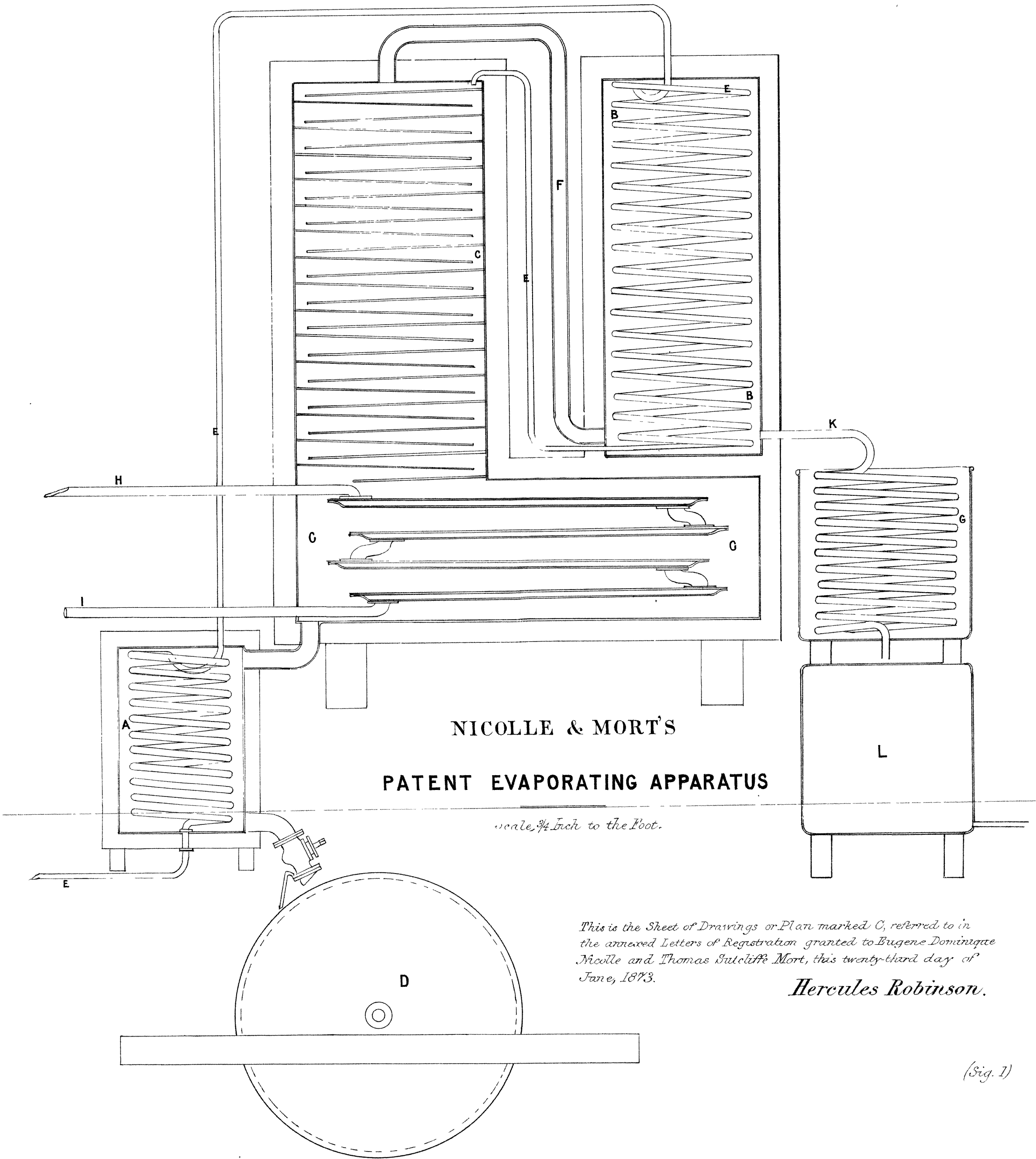
NICOLLE & MORT'S
PATENT FRIGORIFIC MACHINE

FIG 1 SECTIONAL ELEVATION.



This is the Sheet of Drawings or plan marked B referred to in the annexed Letters of Registration granted to Eugene Dominique Nicolle and Thomas Statistique Mort this twenty third day of June 1873

Hercules Robinson.



NICOLLE & MORT'S
 PATENT EVAPORATING APPARATUS

scale, $\frac{1}{4}$ Inch to the Foot.

This is the Sheet of Drawings or Plan marked C, referred to in the annexed Letters of Registration granted to Eugene Dominique Nicolle and Thomas Sutcliffe Mort, this twenty-third day of June, 1873.

Hercules Robinson.

(Sig. 1)



A.D. 1873, 23rd June. No. 361.

IMPROVED MEANS AND APPLIANCES FOR LIGHTING BY ELECTRICITY.

LETTERS OF REGISTRATION to Alexander Nicolaievitch Lodighin, for Improved means and appliances for lighting by Electricity.

[Registered on the 24th day of June, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS ALEXANDER NICOLAIEVITCH LODIGHIN, of Saint Petersburg, in the Empire of Russia, gentleman, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention of "Improved means and appliances for lighting by Electricity," which said invention is more particularly described in the specification and sheet of drawings which are hereunto annexed ; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four ; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years : And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Alexander Nicolaievitch Lodighin, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof ; to have, hold, and exercise unto the said Alexander Nicolaievitch Lodighin, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended : Provided always, that if the said Alexander Nicolaievitch Lodighin shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-third day of June, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improved means and appliances for lighting by Electricity.

SPECIFICATION of ALEXANDER NICOLAIEVITCH LODIGHIN, of Saint Petersburg, in the Empire of Russia, gentleman, of an invention for the "Improved means and appliances for lighting by Electricity."

NOW KNOW YE, that I, the said ALEXANDER NICOLAIEVITCH LODIGHIN, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement or specification thereof (that is to say) :—

This invention relates to the production of regular and steady burning of carbon bodies within a case hermetically closed and charged with a non-supporter of combustion by electric currents, for the purpose of lighting public and private roads and places, signalling on railways and on board ship, illuminating light-houses and buildings generally. The invention consists in the employment of a single carbon stem in lieu of two carbon points as hitherto, one of which burnt away very rapidly and necessitated clock-work to keep them in contact to establish a light at their tips. This plan, also, by reason of the broader points forming increased contact surfaces, increased the brilliancy of the light, which gradually died faint and dim, and produced a flickering flame, not only injurious to the eyes of persons but of an unsuitable character for any practical purpose.

Now, by my invention, a light of almost any required degree of brilliancy can be obtained and maintained for any length of time without flickering, without destruction of carbon points, and without the aid of clock-work. The invention will be well understood by reference to the accompanying drawings and by the following detailed description thereof. Figures 1 and 2 are views of a lantern, with respectively one and two of my carbon stems arranged in the interior. Figure 3 is an outside view of the lantern with two stems. Figure 4 is a plan view of the same. Figure 5 is a plan view taken through the line A.B of figure 2. Figure 6 is a plan view taken through the line C.D of figure 1; while figure 7 is a separate view of the carbon stem which I prefer to use for these sort of lanterns. The stem is composed of a composition of the usual description, compressed or formed with a reduced diameter at or near its central part as at *b*, the ends *cc* being of larger diameter and clipped or held in socket frames, *dd*, which pass through the lantern ends *ee*, and are connected to the circuit wires from the magnets or from the battery. Any number of the carbon stems can be employed in the same lantern, and the current of electricity may be made to pass from one stem to another until the whole or any two or more of them are charged for lighting as desired.

The lanterns are composed of two ends, *ee*, the lips of which receive the glass *f* of the required shape, and in such a manner that the whole can be hermetically closed for preventing electrical contact with the atmosphere, which is essential for the purposes of practically carrying my invention into effect; and in order to fulfil this object more completely, I fill the lanterns with nitrogen or other gas which does not support combustion.

I prefer to use the magneto-electric apparatus known as Ladd's or that of Wild, but I do not limit myself to employing these, as others having the same properties can be employed.

In some cases I connect the two wires or frames of neighbouring stems by a claw attachment, *g* (figures 2 and 3), which is free to be turned on its pin or stud *h* for its claw to engage over or upon the pin or stud *i* of the other, and I establish the continuity of the electric current from one frame to the next by that means. In other cases, if desirable, I fit a metallic strip or wire, *k*, to the two ends of the lanterns as in figure 1, to put the two ends in connection. To ensure the passage of the electric current in the proper direction, I insulate the lantern ends by means of glass or other non-conductable body arranged upon the socket-frames, so as to close the openings through which the stems are inserted, as will be understood.

Figure 8 is a section, and figure 9 a plan view with the top cap removed, of another form of lamp or lantern.

In this lamp the carbon stem is V-shaped, the electric current passing down one side and up the other of the V, the light being formed at the angle at the bottom. This stem is suitably supported and enclosed in a glass lamp or case filled with nitrogen or gas incapable of supporting combustion as before, and the current of electricity is applied as in the first instance or in any convenient manner.

Having thus set forth the nature and object of my invention, I desire to claim,—

Firstly.—The production of light by electricity from carbon stems enclosed in a case charged with a non-supporter of combustion, and hermetically closed, substantially in the manner hereinbefore described.

Secondly.—The apparatus shown in figures 1 to 7 of the accompanying drawings, in which light is produced by electricity from carbon stems hermetically closed in vessels charged with a non-supporter of combustion as described, and—

Thirdly.—I also claim the modified arrangement of carbon stem described and shown with reference to figures 8 and 9 of the accompanying drawings.

In witness whereof, I, the said Alexander Nicolaievitch Lodighin, have hereunto set my hand and seal, this fourth day of January, one thousand eight hundred and seventy-three.

A. N. LODIGHIN.

H. GARDNER, }
E. L. DANIEL, } 166, Fleet-street, London, England.

This is the specification referred to in the annexed Letters of Registration granted to Alexander Nicolaievitch Lodighin, this twenty-third day of June, 1873.

HERCULES ROBINSON.

Improved means and appliances for lighting by Electricity.

REPORT.

Sydney, 27 May, 1873.

SIR,

The application of Mr. Alexander N. Lodighin for Letters of Registration for "Improved means and appliances for lighting by Electricity," having been referred to us, we have examined the specification and drawings accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,

J. SMITH.
GOTHER K. MANN.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

6

8

Fig. 1.

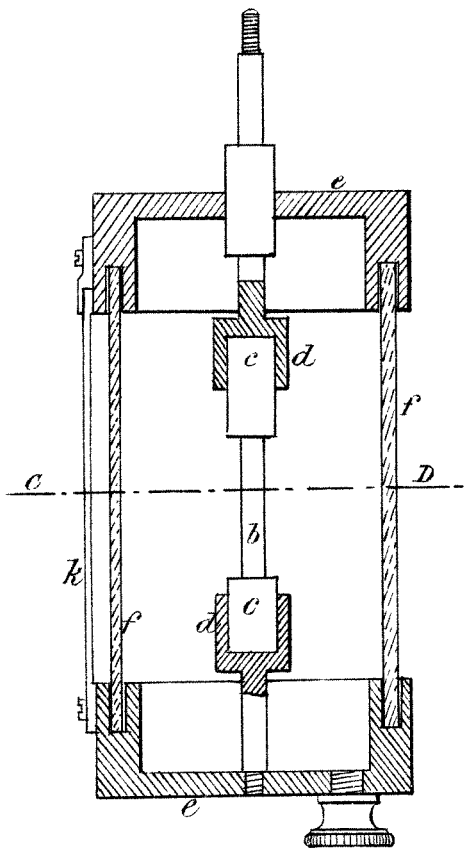


Fig. 2.

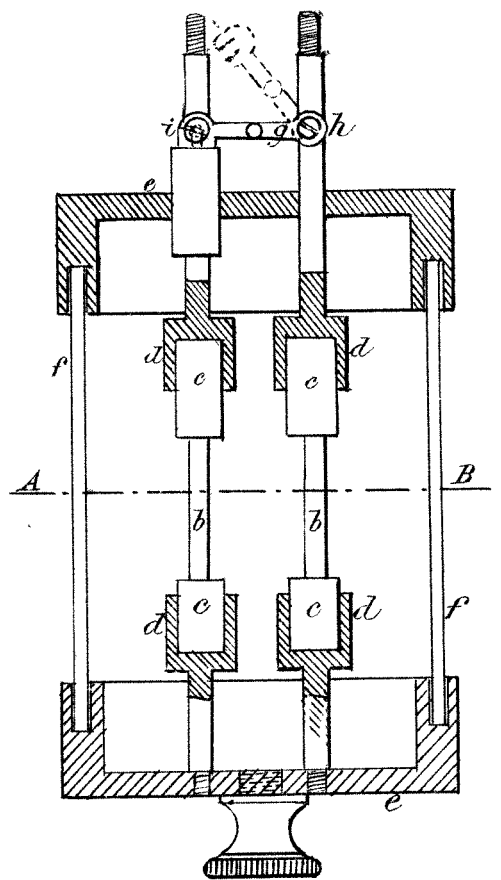


Fig. 7.

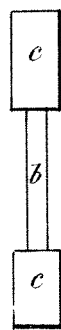


Fig. 6.

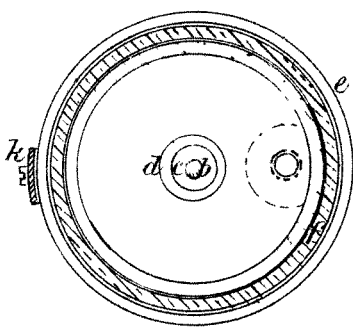


Fig. 8.

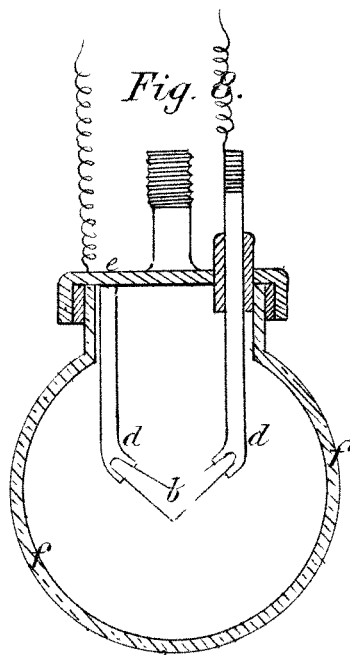


Fig. 5.

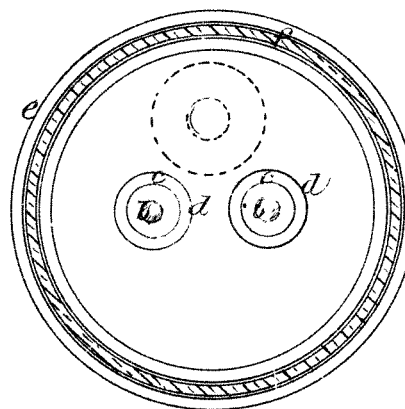


Fig. 3.

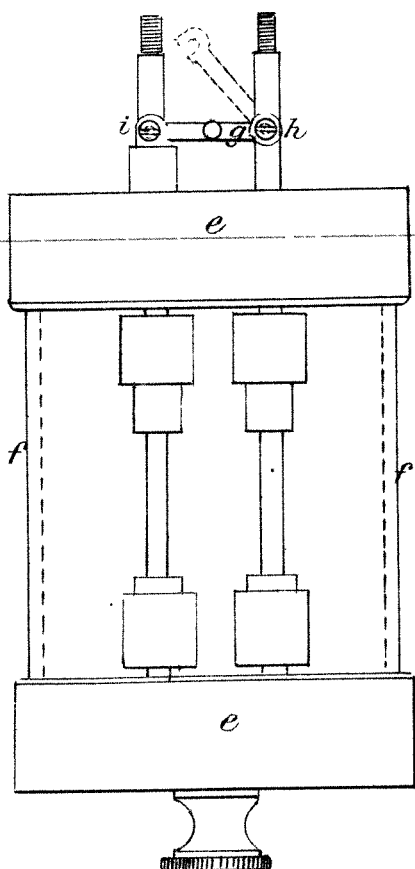
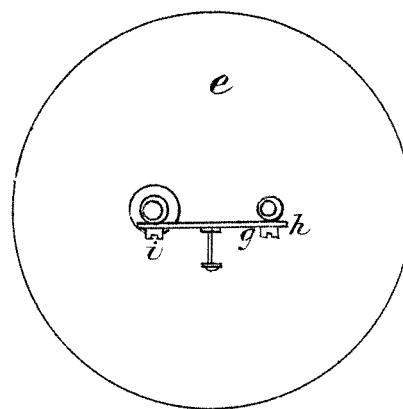
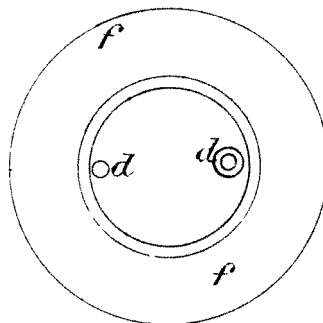


Fig. 4.

Fig. 9.



This is the Sheet of Drawings referred to in the annexed Letters of Registration granted to Alexander Nicolaiévitch Lodighin, this twenty-third of June, 1873.

Hercules Robinson.



A.D. 1873, 4th July. No. 362.

A NEW METHOD OF AND APPARATUS FOR CLOSING THE POINTS OF WORN SHEEP SHEARS.

LETTERS OF REGISTRATION to Charles Sargeant, for a new method of and apparatus for closing the Points of worn Sheep Shears.

[Registered on the 5th day of July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS CHARLES SARGEANT, of Geelong, in the county of Bourke and Colony of Victoria, builder, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "a new method of and apparatus for closing the points of worn Sheep Shears," which is more particularly described in the specification and the two sheets of drawings hereunto annexed, and marked A and B respectively ; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four ; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years : And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Charles Sargeant, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof ; to have, hold, and exercise unto the said Charles Sargeant, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended : Provided always, that if the said Charles Sargeant shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this fourth day of July, in the year of our Lord one thousand eight hundred and seventy-three.

(I.S.)

HERCULES ROBINSON.

A new method of and apparatus for closing the Points of worn Sheep Shears.

SPECIFICATION of CHARLES SARGEANT, of Geelong, in the county of Grant and Colony of Victoria, builder, for an invention of "a new method of and apparatus for closing the Points of Worn Sheep Shears."

The present method of closing the points of worn sheep shears is to reduce the "hammers" by filing, and the width of the blades at the heels by grinding. My method is to bend the neck of each shear; by the neck I mean that portion of the handle which adjoins the blade. This brings the points of the shears together without the loss of time and waste of metal incurred by the old process of filing and grinding.

The apparatus which I use for this purpose is of the simplest description. A semi-cylindrical inclined rest is provided for the support of the straight portion of the handle which adjoins the blade. The blade is held in position by a slot at the end of a vertical rod, and a lever is made to descend upon the semi-cylindrical portion of the handle with a gradual pressure sufficient to give the necessary bend at the neck. In order, however, that this portion of my invention may be distinctly understood, I will proceed to describe the drawings hereto attached, where the same letters indicate the same parts wherever they occur. Figure 1 is a front elevation, and figure 2 a side elevation of my apparatus. A is a flat iron plate for affixing to the side or wall of the wool-shed; B is a vertical rod moving freely in cylindrical bracket C, held in position by pin D, and having a vertical slot in its lower end; E is the semi-cylindrical inclined rest; F is the lever supported on pin G; H is the blade of the shear; I, the semi-cylindrical portion of the handle; and J is the neck; K is the hammer.

When about to be used, the rod B must be turned partly round so as to receive the blade of the shear, and back again, so as to admit of the handle resting on the rest E; the lever F must then be brought down, and a sufficient pressure gradually exerted on the semi-cylindrical portion of the handle to give the required bend at the neck as before explained.

Having thus described the nature of my invention and the manner of performing same, I would have it understood that, although I have shown the best apparatus I know of for the purpose, I do not confine myself to it, nor to any of the details of my invention, so long as the nature thereof be retained, but I claim,—

- 1st. Bending worn sheep shears at the neck for the purpose of closing the points.
- 2nd. The apparatus for accomplishing this purpose, substantially as herein described and explained.

This is the specification referred to in the annexed Letters of Registration granted to Charles Sargeant, this fourth day of July, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 20 May, 1873.

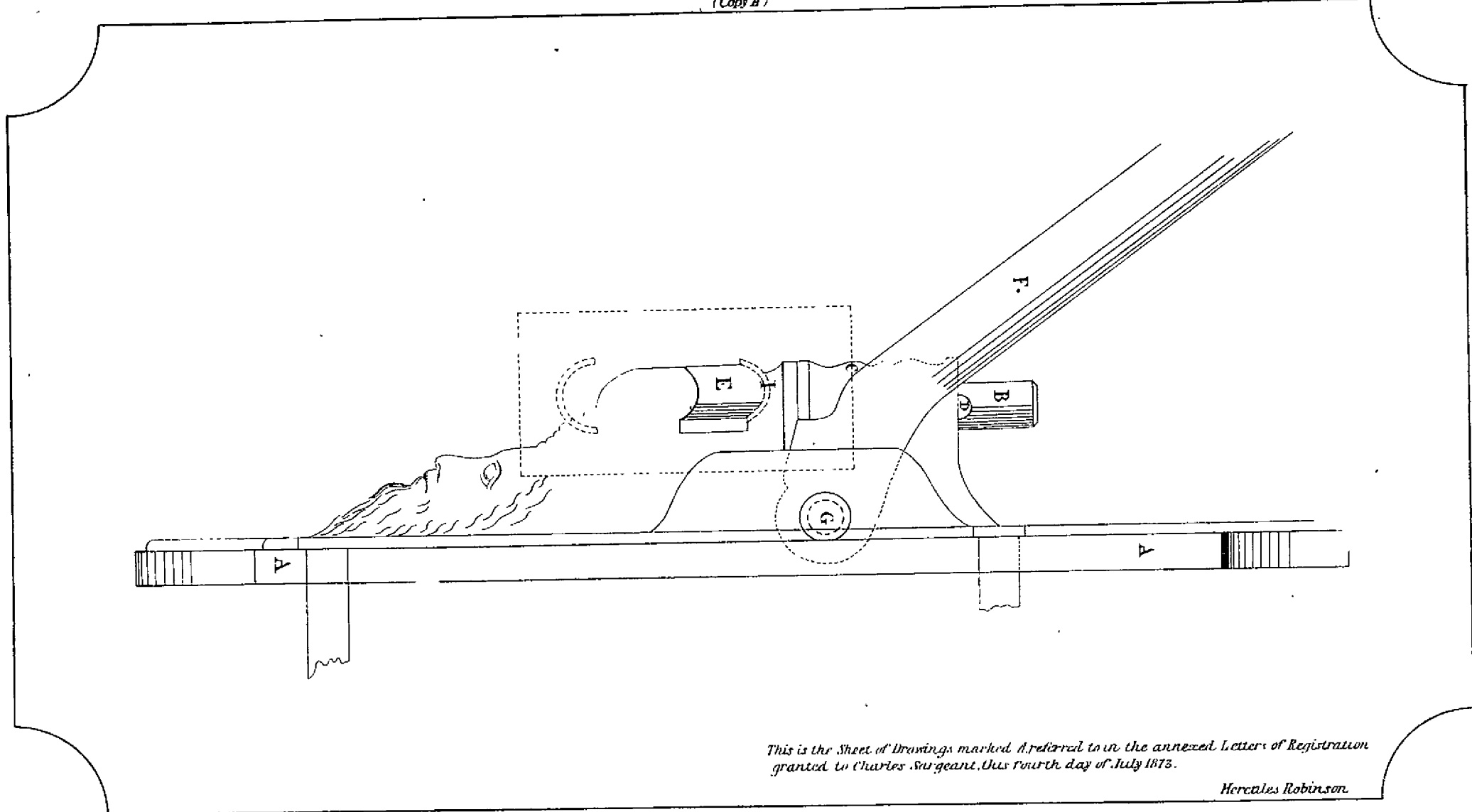
SIR,

We do ourselves the honor to return to you the documents transmitted to us under your B.C. communication of the 5th May, No. 73-2,898, and we recommend the issue of Letters of Registration, securing to Mr. Charles Sargeant the exclusive right to his claim for bending worn Sheep Shears for the purpose of closing the points by the apparatus for accomplishing this purpose, as described and explained in the specification and plan accompanying the application of this claim only, namely, the apparatus for accomplishing this purpose substantially as therein described and explained.

We have, &c.,
GOTHER K. MANN.
E. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY.

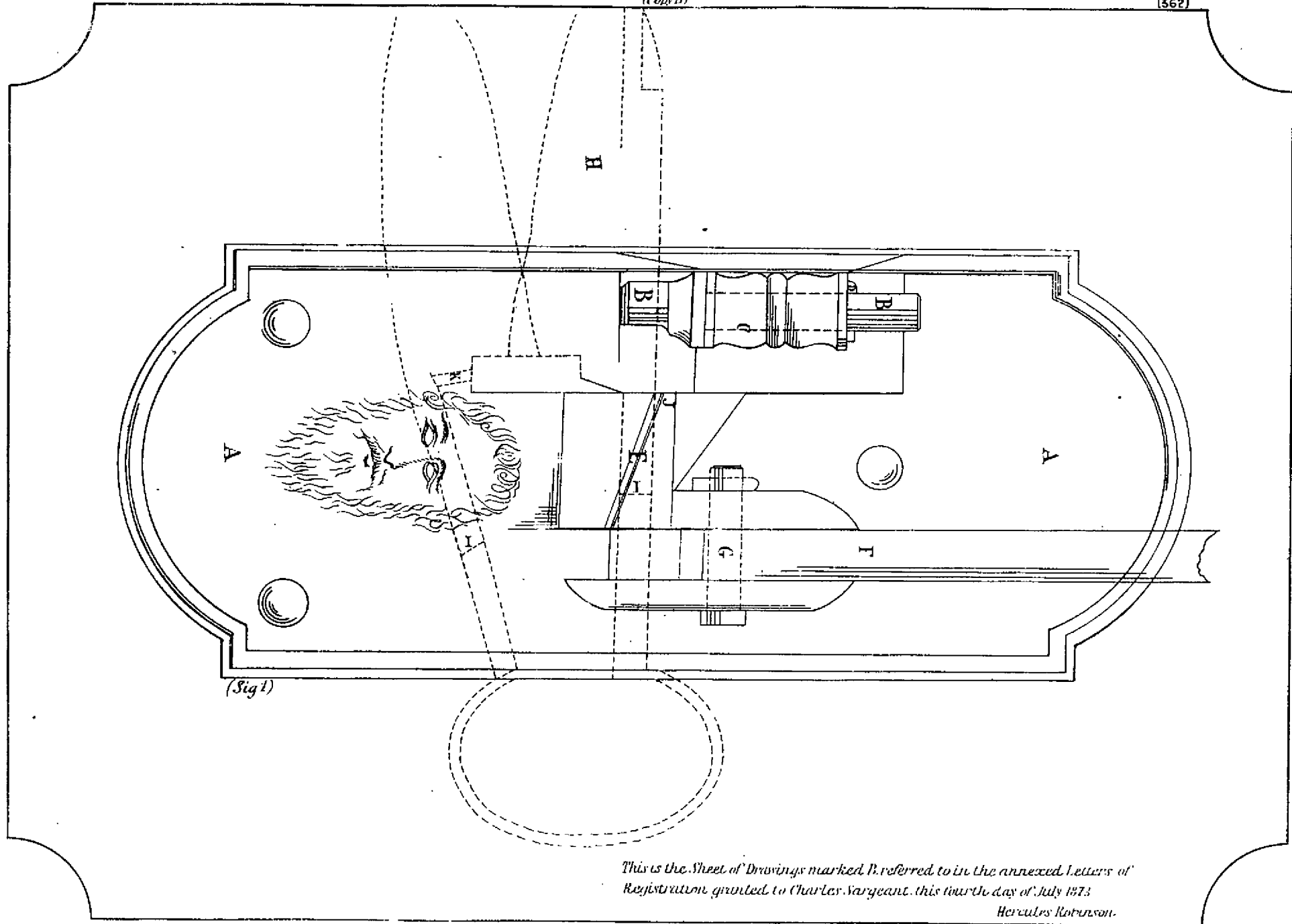
[Drawings—two sheets.]



This is the Sheet of Drawings marked A referred to in the annexed Letters of Registration granted to Charles Sargeant, this fourth day of July 1873.

Hercules Robinson

(Sig 1)



(Sig 1)

This is the Sheet of Drawings marked B, referred to in the annexed Letters of Registration granted to Charles Sargeant, this fourth day of July 1873.

Hercules Robinson.

(Sig 1)

[57]



A.D. 1873, 7th July. No. 363.

IMPROVEMENTS IN APPARATUS FOR HEATING AIR AND GASES.

LETTERS OF REGISTRATION to Thomas Whitwell, for Improvements in Apparatus for heating Air and Gases.

[Registered on the 7th day of July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS THOMAS WHITWELL, of Thornaby Iron Works, Stockton-on-Tees, in the County of Durham, England, engineer, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in Apparatus for heating Air and Gases," which is more particularly described in the specification, marked A, and the three sheets of drawings, marked B, C, and D, respectively, which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Thomas Whitwell, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Thomas Whitwell, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Thomas Whitwell shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this seventh day of July, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in Apparatus for heating Air and Gases.

A.

SPECIFICATION.

TO ALL TO WHOM IT MAY CONCERN, Be it known that I, THOMAS WHITWELL, of Thornaby Iron Works, Stockton-on-Tees, in the County of Durham, England, engineer, am in possession of an Invention for Improvements in Apparatus for heating Air and Gases, and I, the said Thomas Whitwell, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:—

This invention has for its object improvements in apparatus for heating air and gases.

The apparatus consists of two furnaces, ovens, or chambers, each enclosed by walls contained in an iron case, and divided by other walls into several narrow compartments. The furnace, oven, or chamber, and the iron case which contains it, is of a cylindrical form, with transverse partition walls, and longitudinal walls to stay and support the partition walls. The partition walls are constructed with openings alternately at the top and bottom, so that the air and gas passing the furnace, oven, or chamber, is led alternately under and over the walls. The furnace, oven, or chamber, is first heated by admitting gas and air, and burning them as they traverse the compartments, and then afterwards the air to be heated for the blast is forced through the furnace, oven, or chamber, in the contrary direction. I form zig-zag passages in the partition walls, and pass through the passages the air for burning the gas, so that it becomes highly heated before it meets the gas in the furnace, oven, or chamber. In this way a more intense combustion is obtained. The furnace, oven, or chamber, may be of elliptical form in place of cylindrical, but the cylindrical form is preferred. I place the cleaning doors at the bottom of the furnace, oven, or chamber, by which the dust which the gas deposits is readily removed.

Having thus stated the nature of my said invention, I will proceed more fully to describe the manner of performing the same.

DESCRIPTION OF THE DRAWINGS.

Figure 1, sheet 1, is a side elevation of apparatus, constructed and combined, according to my invention, showing the burning gas inlet, and the outlet for the heated airs or gases. Figure 2, sheet 1, is a side elevation of apparatus, showing the burning gas outlet, and inlet for the airs or gases to be heated. Figure 3, sheet 1, shows a plan of one of the furnaces or heating chambers.

Figure 1, sheet 2, is a vertical section of a furnace or heating chamber, and figure 2, sheet 2, is a sectional plan of the same. In each of these figures the same letters of reference are used to indicate the same parts.

The apparatus consists of two or more similar furnaces, ovens, or heating chambers, whereof one only is shown.

The furnace, oven, or heating chamber, consists of an air-tight shell of iron, enclosing a circular wall constructed of fire-brick, or other material suited to the temperature it will have to bear. The furnace, oven, or heating chamber, is divided by several transverse walls, at varying distances from each other, which are crossed at right angles by longitudinal walls, for the more perfect support of the same, the whole being properly bonded together. The alternate transverse walls are open at the top and bottom, so that the airs or gases to be heated entering the chimney end of the furnace, oven, or heating chamber, are by the construction of the walls caused to ascend, then to descend, then to ascend, and so on till the heated airs or gases leave the furnace, oven, or heating chamber, at the opposite end of the furnace to that at which they entered. At the top of each furnace, oven, or heating chamber, are iron doors, KK, which are protected by fire-plugs or lumps, LL, which fit the openings on the top of the furnace, oven, or heating chamber.

These openings on the top of the furnace, oven, or heating chamber, are by preference formed over the walls which do not come to the top of the furnace, oven, or heating chamber, by which means the surfaces of the walls situated below the opening can be cleaned with facility.

These openings, when the airs or gases to be heated are passing through the furnace, oven, or heating chamber, are kept closed. In the section shown there are nine of these transverse walls, but the number and also height of the same may be varied according to the extent of surface over which is desired that the airs or gases to be heated shall pass; at the lower part of the walls which ascend to the tops of the furnace, oven, or heating chamber, there are openings for the passage of the airs or gases to be heated. Two or more furnaces, ovens, or heating chambers, are used in combination, in order to maintain a regular stream of heated airs or gases. Gas from any suitable source is supplied to one furnace, oven, or heating chamber, whilst the airs or gases to be heated are passing through another furnace, oven, or heating chamber, and the arrangement of the passages and valves in connection with the furnaces, ovens, or heating chambers is such that the airs or gases to be heated pass through the furnace, oven, or heating chamber, in the opposite direction, and over the identical surfaces of the brick walls previously traversed by the burning gases, on heating the furnace, oven, or heating chamber; by these means the airs or gases to be heated absorb heat from the walls in ascending or descending, and thus become of the same or nearly the same heat as the walls of the furnace, oven, or heating chamber, prior to leaving the same. The dust carried by the burning gas employed in heating the furnace, oven, or heating chamber, accumulates on the walls, and requires to be scraped or removed from time to time. The scraping or removal from the walls is performed by proper tools, introduced through the top openings KK, as above described, and the dust is removed from the bottom of each chamber or oven through the openings closed by the doors DD, by means of convenient tools.

I will now describe the process of the heating of the furnace, oven, or heating chamber:—The gas from any suitable source is made to enter by the gas inlet, valve B, whence it is conducted to the furnace, oven, or heating chamber, by the pipe C. The hot outlet E is closed, and also the cold inlet F, whilst

Improvements in Apparatus for heating Air and Gases.

whilst the chimney valve G is opened, as also the air inlet valves H and I, for assisting in the combustion of the burning gas; by this means the walls of the furnace, oven, or heating chamber, are made red hot to a proper proportion of the whole furnace, oven, or heating chamber, during which time the airs or gases to be heated have been traversing other furnaces, ovens, or heating chambers, heated previously in a similar manner.

The air admitted at H and I for assisting in the combustion of the burning gas is conducted to and fro by long air-passages MN, formed in the thickness of the vertical walls in such way that the air becomes red hot before it meets the burning gas, and hence the combustion is made more intense.

I will now describe the heating of the airs or gases. The furnace, oven, or heating chamber, having been made red hot, as above described, the burning gas inlet B is closed, as also the air inlets H and I; the chimney valve G is also closed. The hot outlet E, which is lined with refractory material, is now opened, also the cold inlet F, by which means the airs or gases to be heated are made to enter the furnace, oven, or heating chamber, at the coldest end, and by the construction of the furnace, oven, or heating chamber, the airs or gases to be heated ascend and descend the walls in rotation till they attain to the required temperature, and issue from the furnace, oven, or heating chamber, by means of the hot outlet E. After a proper interval of time, that is to say, before the airs or gases to be heated cease to be sufficiently heated, they are shut off from the furnace, oven, or heating chamber, and made to pass through another similar furnace, oven, or heating chamber, previously heated, by which means a constant current of heated airs or gases is maintained.

Figure 1, sheet 3, is a vertical section, and figure 2, sheet 3, is a sectional plan of a furnace, oven, or heating chamber, differing from that shown on sheet 2, in that in place of the cleaning openings and doors D, at the lower part of the side openings and doors D', at the bottom of the furnace, oven, or heating chamber, are employed, in which case passages are provided beneath the structure.

Having thus described the nature of my invention, I would have it understood that I claim the construction of furnaces, ovens, or heating chambers, for heating airs or gases, of a circular or elliptical form, and with upright walls or partitions, stayed by cross walls, and with openings capable of being closed by means of plugs and doors or valves, for the purpose of cleaning the interior of such furnaces, ovens, or heating chambers, from dust, substantially as described.

I also claim the admission of heated air, substantially as described, for the combustion of gas in the furnace, oven, or heating chamber.

I also claim the construction of furnaces, ovens, or heating chambers, for heating airs or gases, with cleaning openings in the bottom, in the manner substantially as shown on sheet 3 of the drawings.

In witness whereof, I, the said Thomas Whitwell, have hereunto set my hand and seal, this twenty-eighth day of February, in the year of our Lord one thousand eight hundred and seventy-three.

THOMAS WHITWELL.

This is the specification referred to in the annexed Letters of Registration granted to Thomas Whitwell, this seventh day of July, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 21 June, 1873.

Sir,

The application of Mr. Thomas Whitwell for Letters of Registration for "Improvements in Apparatus for heating Air and Gases," having been referred to us, we have examined the specification and drawings accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,

J. SMITH.
E. O. MORIARTY.

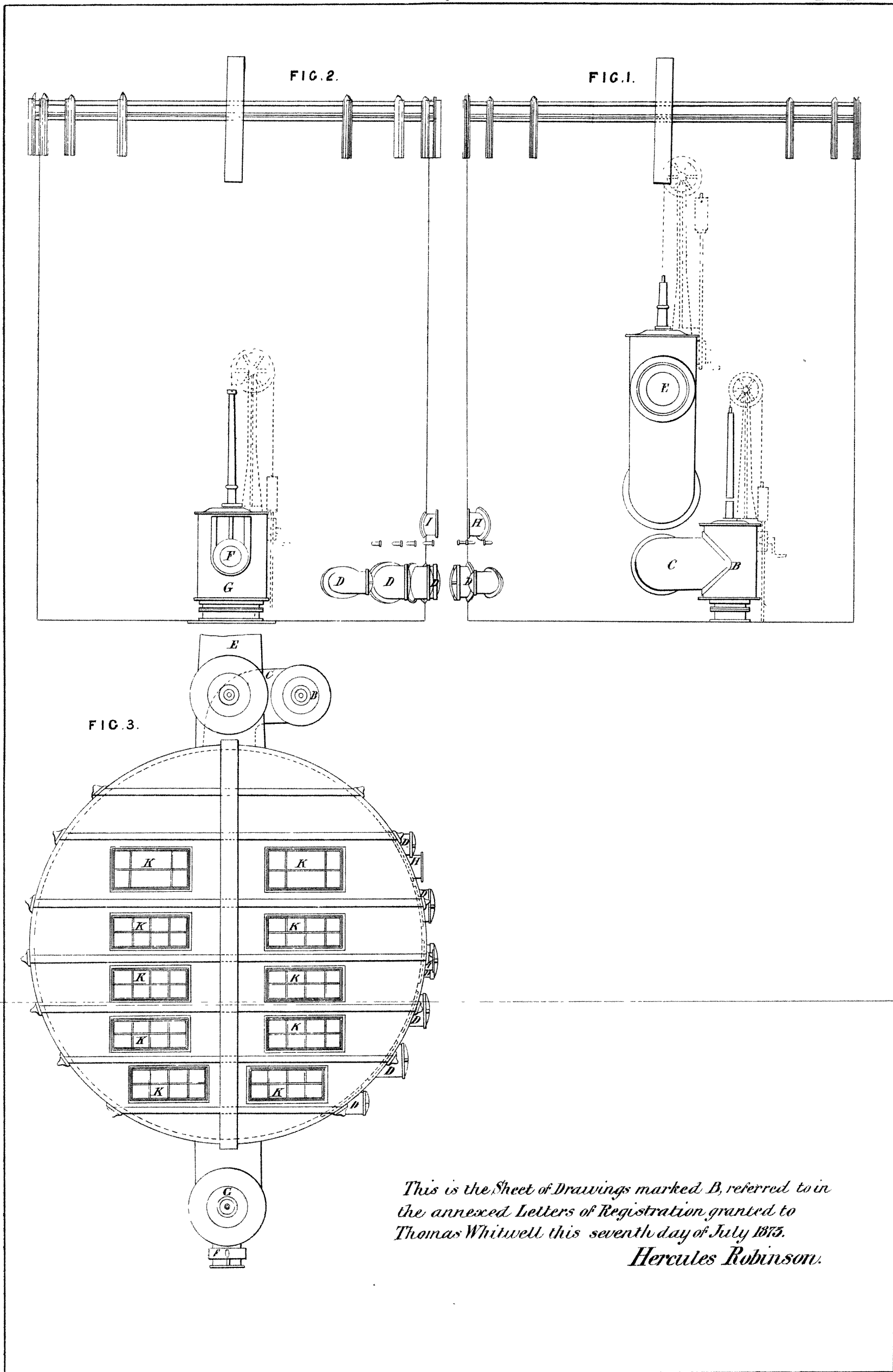
THE PRINCIPAL UNDER SECRETARY.

[Drawings—three sheets.]

No. 364.

[Assignment of No. 242A. See page 73 of Return of 21 June, 1872.]





*This is the Sheet of Drawings marked B, referred to in the annexed Letters of Registration granted to Thomas Whitwell this seventh day of July 1873.
Hercules Robinson.*

FIG. 1.

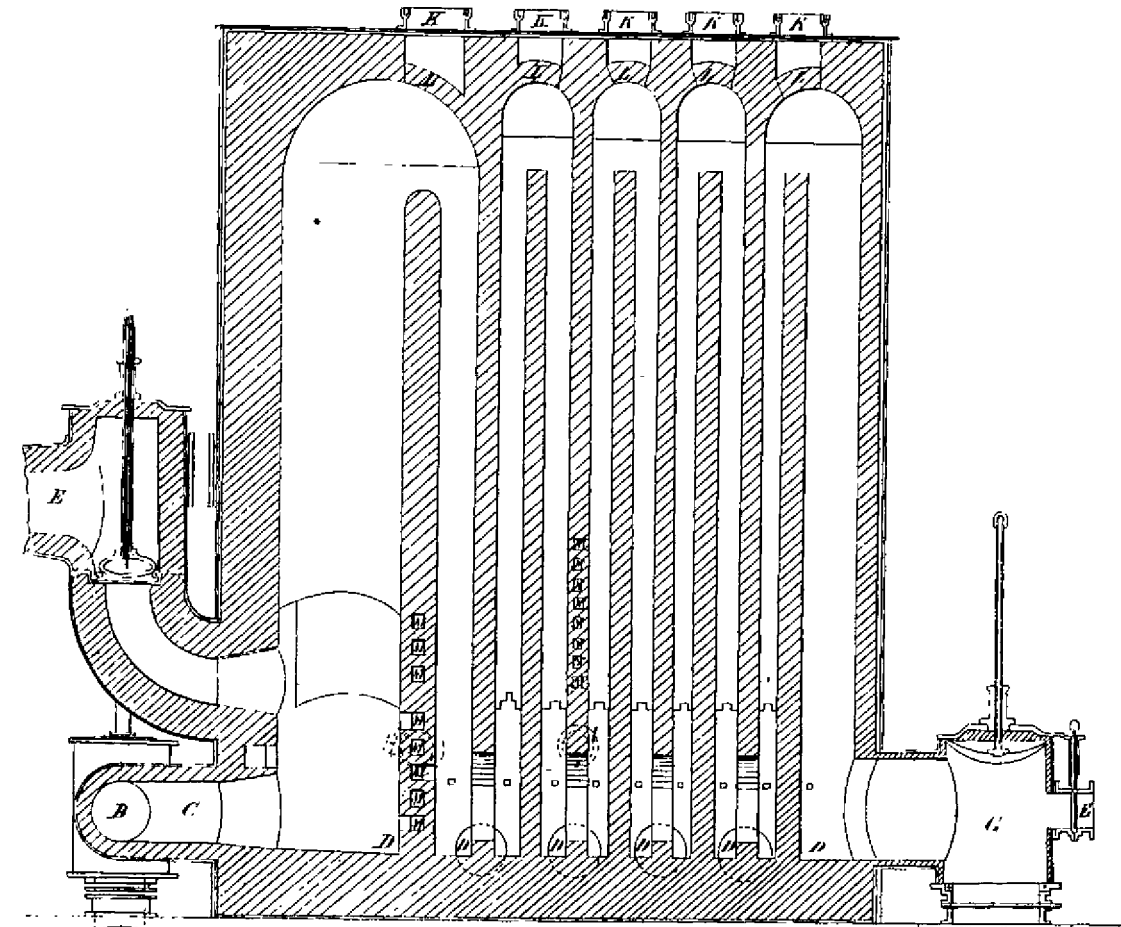
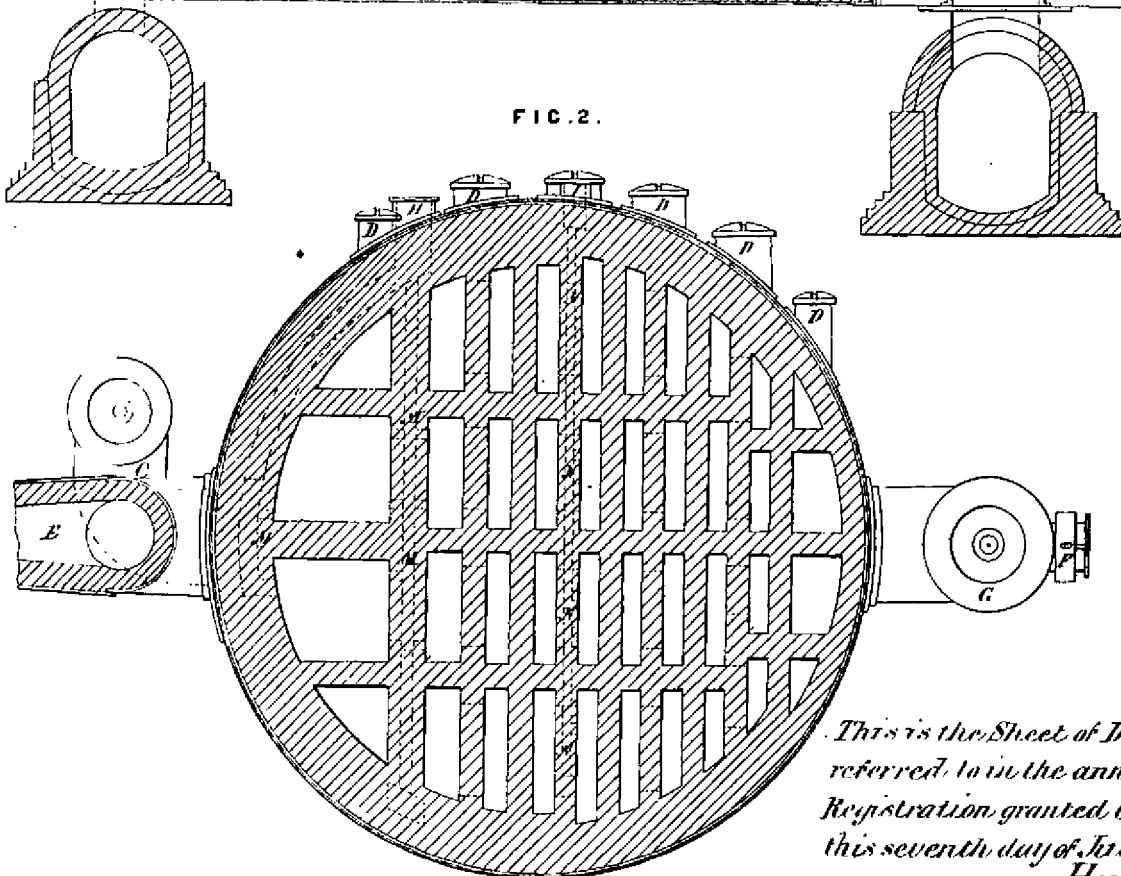


FIG. 2.



*This is the Sheet of Drawings marked C.
referred to in the annexed Letters of
Registration granted to Thomas Whitwell
this seventh day of July 1873.*

Hercules Robinson.

FIG. 1.

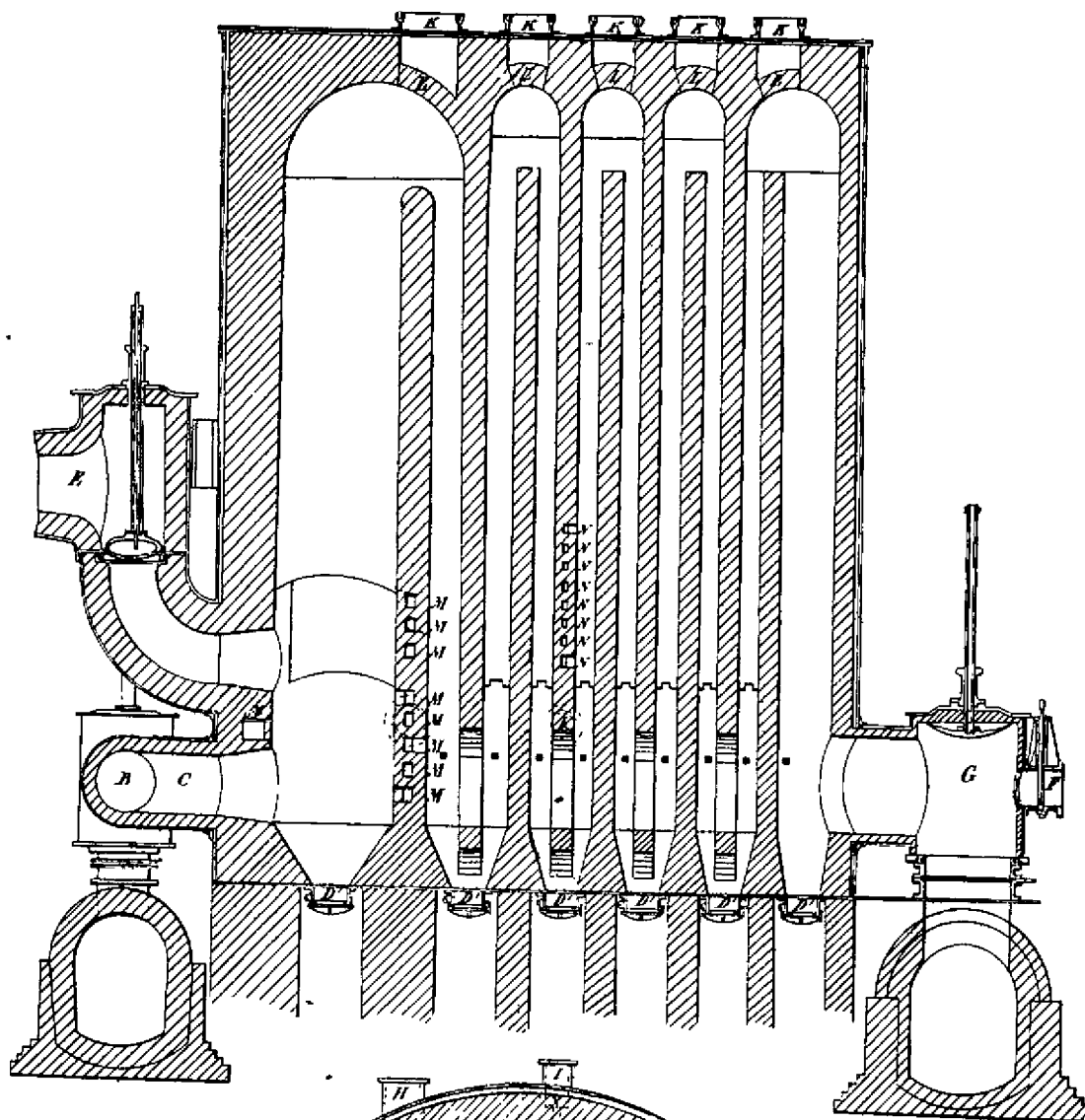
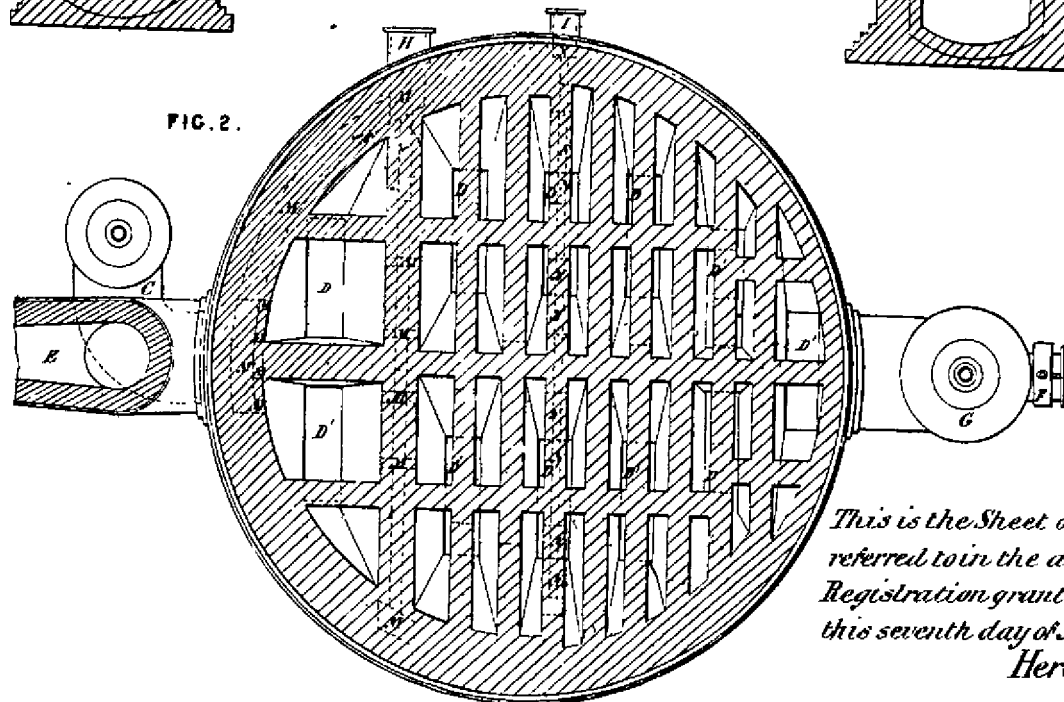


FIG. 2.



*This is the Sheet of Drawings marked D.
referred to in the annexed Letters of
Registration granted to Thomas Whitwell
this seventh day of July 1873.*

Hercules Robinson.

[61]



A.D. 1873, 9th July. No. 365.

IMPROVEMENTS IN ROCK OR STONE DRILLING, TUNNELLING AND BORING APPARATUS.

LETTERS OF REGISTRATION to Frederick Edward Blacket Beaumont and Charles James Appleby, for Improvements in Rock or Stone Drilling, Tunnelling and Boring Apparatus.

[Registered on the 10th day of July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS FREDERICK EDWARD BLACKET BEAUMONT, of No. 2, Westminster Chambers, Victoria-street, in the city of Westminster, Captain in the Royal Engineers, and CHARLES JAMES APPLEBY, of Emerson-street, Southwark, Surrey, engineer, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in Rock or Stone Drilling, Tunnelling and Boring Apparatus," which is more particularly described in the specification, marked A, and the seven sheets of drawings, marked B, C, D, E, F, G, and H, respectively, which are hereunto annexed; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Frederick Edward Blacket Beaumont and Charles James Appleby, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Frederick Edward Blacket Beaumont and Charles James Appleby, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Frederick Edward Blacket Beaumont and Charles James Appleby shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this ninth day of July in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

*Improvements in Rock or Stone Drilling, Tunnelling and Boring Apparatus.*A.
SPECIFICATION.

TO ALL TO WHOM IT MAY CONCERN, be it known that we, FREDERICK EDWARD BLACKET BEAUMONT, of No. 2, Westminster Chambers, Victoria-street, in the city of Westminster, Captain in the Royal Engineers, and CHARLES JAMES APPELBY, of Emerson-street, Southwark, Surrey, engineer, have invented or discovered new and useful "Improvements in Rock or Stone Drilling Tunnelling and Boring Apparatus"; and we, the said Frederick Edward Blacket Beaumont and Charles James Appleby, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:—

This invention has for its object improvements in rock or stone drilling, tunnelling and boring apparatus.

For the purpose of drilling-rock or stone, we employ diamonds or gems set around a tubular holder pressed against the rock or stone, and rotated; the gems are thus caused to cut an annular groove, leaving a cylindrical core which is broken away from time to time.

The cutter is mounted on a drilling-bar having a screw-thread cut upon it, and passing through a nut which is so held by the frame of the apparatus that, whilst it is free to rotate, it cannot move in the direction of the axis of the drilling-bar. The drilling-bar and nut are both driven from an axis parallel to the bar, and carrying two pinions to drive the bar and the nut respectively.

The speeds given to the bar and nut are somewhat different, and from this difference the longitudinal motion of the drilling-bar results. The speed of rotation of the drilling-bar in relation to that of the driving axis is invariable, but the gearing or connection of the nut with the driving axis is through parts which are simply in frictional contact; and when the resistance to the rotation of the nut on the drilling-bar is sufficient to overcome the friction of these parts, they yield the one on the other and the longitudinal motion of the drilling-bar ceases.

The driving pinions are connected with their axis through clutches, and either of them can be disconnected from the axis and held fast by a break, and then the longitudinal motion of the drilling-bar is rapid either to or from the work, according as the one or other of the pinions is held fast whilst the other rotates.

Such then is the combination and arrangement of parts constituting our improved rock or stone drill. It is represented in the annexed drawings.

Figures 1 and 2 are longitudinal sections of the apparatus taken on the lines *a b*, figure 2, and *c d*, figure 1, respectively; figure 3 is a front elevation; figures 4 and 5 are transverse sections, taken respectively on the lines *e, f, g, h*, and *i, j, k, l*, in figure 2; figure 6 is a partial section, taken on the line *m n* in figure 2.

A is a bevelled wheel on an axis carried by a face plate, *x*, to which the cast frame, *o*, of the machine is clamped. The wheel A may be driven in any convenient manner, and it gears with a wheel, A¹, which is fast on the axis B. C is a clutch sliding on a feather on the shaft B, and serving when the apparatus is at work to lock the loose wheel D (which has thirty-four teeth) on its axis. E and E¹ are friction discs, alternately of wrought iron and copper; the discs E are caused, by means of a feather, to rotate with the axis; and the discs E¹ are similarly connected with the wheel F, which also is loose on the axis, and thirty-five teeth. By means of the worm, worm-wheel, screw and nut marked G, the discs E E¹ can be pressed together, and the wheel F then revolves with the axis B, unless the resistance to its rotation is capable of overcoming the friction between the discs. HH are steel rings to lessen the friction between the parts G which remain stationary and the parts in connection with the axis B which rotate.

In addition to these frictional holding parts we sometimes provide means for clutching or locking the pinion F upon its axis B at the will of the operator. I is the hollow drill-bar; it has a screw-thread upon it, and a groove from end to end. J is a wheel and tube carried in a bearing on the frame *o*; it has forty teeth, and is driven by the wheel D, and by an internal feather it communicates its motion to the drill-bar I. K is an outer tube with a toothed wheel upon it mounted on the tube J; this wheel has thirty-nine teeth, and it gears with the wheel F. L is a driver carried round by the wheel K and taking with it the brake-strap M, which encircles a disc forming the head of the nut N on the drill-bar I; this nut rotates in a bearing on the frame, and between the bearing and the head of the nut a ring of conical rollers is interposed, to take the thrust of the drill and reduce friction; these parts are marked O, and the ring is shown separately at figure 7.

By these arrangements it will be seen that the drill-bar and its nut are both rotated in the same direction, but at a slightly different speed, and the bar consequently moves slowly forward through the nut so long as it can overcome the resistance to its advance; but when this resistance is sufficient it checks the rotation of the nut N, and the brake-strap M slips on the head of the nut N; the nip of this strap is regulated by a screw and nut and springs, and is so adjusted that it will slip before there is any risk of injury to the gem-cutters or breakage of the parts. In starting a hole the discs E E¹ are allowed to slip the one on the other. P is a screw brake for checking the wheel D when the clutch C is out; it stops the rotation of the drill-bar, whilst that of the nut continues, and so the bar advances at a rapid speed. R is a similar brake on the wheel F; it holds this wheel stationary whilst the wheel D is driven through the clutch C; the drill-bar then rapidly recedes.

The diamonds and gems are set at the end of the hollow holder, both on its external and internal edges, and project so that as they revolve they clear a path for the drill-bar, leaving, however, a core, which is easily removed.

The driving axis may be kept in motion by any power or description of motive-power engine, either attached to the frame of and forming part of the borer proper or detached from it.

For tunnelling we construct a frame or carriage to support and transmit motion to a number of such drills; the carriage is mounted on wheels running on rails laid in the tunnel; it carries an engine worked by compressed air or other fluid, and driving a transverse horizontal axis, which by bevelled gear, drives an inclined axis projecting to the front of the carriage. A bevelled wheel on the axis drives similar wheels on horizontal axes mounted on a transom or base beam which, when the machine is at work, stands

Improvements in Rock or Stone Drilling, Tunnelling and Boring Apparatus.

stands across the floor of the tunnel in front of the working face; the transom carries two standards, which can be traversed along it by screws, and in each standard is a vertical axis driven from the horizontal axis in the transom; there are face plates on the standards to receive the drills, and they can be traversed up or down on the standard to suit the position of the hole to be drilled, and the standards can be turned round to attain any inclination which may be required. The vertical axis on the standard drives the drills by means of bevelled gear. When at work, the standards are fixed by screws at their upper ends, which bear against the roof of the tunnel, and adjustable ties connect the upper part of the standards with the carriage.

In moving from place to place, the transom and uprights are carried by an axle and pair of wheels, connected by links to the front of the carriage; other links connect the axle with the transom. The ties from the upper ends of the standards pass to screws running lengthwise of the carriage on either side, and these screws can be driven by the engine; and to put the transom upon its wheels they are rotated, and then the ties draw back the standards, and cause them to incline towards carriage, the transom inclining to the same degree.

The links connecting the transom with its wheels are so jointed to it that after a certain inclination has been attained (sufficient to give headway to fit the standards) the joints become stiff, and then as the ties still pull back the upper ends of the standards, the whole—the transom and standards, and the parts connected with them—are lifted off the bottom of the tunnel, and their weight is thrown upon the wheels.

The machine can then run freely along the rails which support it, to any place which it may be desired to take it. Thus, when a set of holes have been drilled, the machine is without loss of time removed to a place of security, where it remains whilst the face of the rock is blasted. When the machine returns to its work, the screws on the carriage are driven by the engine in the reverse direction, and the ties then hoist the standards and place the transom on the floor of the tunnel. The standards are then secured by causing the pressure screws at their upper ends to bear against the roof of the tunnel, and the machine is ready to be again set to work. The inclined driving axis is jointed, to admit of the operation just described.

The facility and rapidity with which the machine can be set up at the working face and retired when the holes have been drilled is an important advantage attained by the novel combination and arrangements of parts in which this part of our invention consists.

In the annexed drawings, figure 8 is a side view of the machine, figure 9 is a plan, and figure 10 a front elevation; *aa* is the carriage frame, mounted on wheels, *b*, running on rails; *cd* are brakes on the wheels; *ee* are cramps to cramp the carriage to the rails, to give it greater steadiness when drilling; *f* is the cylinder of the engine, and *g* its crank shaft. It has fly-wheels upon it, and also the bevelled wheel *g*¹ driving the corresponding wheel *h*¹ on the inclined axis; *h*, *h*², *h*³ are universal joints on the axis *h*, and *h*³ is a telescope joint; these joints are all to admit of the tipping of the standards and transom, as already described. A bevelled pinion, *h*⁴, drives pinions *i*¹ *i*² on horizontal axes *ii* in the base beam or transom *l*. Bevelled pinions, *i*², are able to slide with groove and feather along the axis *i*, and they drive pinions on the vertical axis *l* within the standards *m*; these standards are clamped down in the positions required on to the saddles *n*, and the saddle can be traversed by the screws *o*. *pp* are face plates (corresponding with the plates *x* in figure 1); they are able to slide in guides on the standard. *qq* are fixed screws, and there are nuts upon them—one carried by each face plate; and to bring the face plate to the height required, the nut is turned by means of a small handle and bevelled gear. In connection with each face plate there are also two bevelled pinions, one of which is able to slide with a feather on the axis *l*, and the other in gear with it is mounted on an axis, to which it can be rendered fast by a clutch; this axis corresponds with the axis of the pinion *A* in figure 1. The handle which works the clutch is marked *r*. It will be seen that there is great freedom for the adjustment of the drills. The position in a horizontal direction is attained by traversing the saddle *n*, and in a vertical direction by traversing the face plate on the standard. The inclination of the drill bar in a horizontal plane is adjusted by varying the position on which the standard is clamped down to the saddle on which it stands, and the inclination of the drill-bar in a vertical plane depends on the position in which the drill is clamped to the face plate. In whatever position the drills are set, they are with equal facility driven by the toothed gearing from the air or other engine. *ss* are the axle and wheels for carrying the transom and standards. *s*¹ are the connecting links passing from the axle to the transom. The joint at *s*¹ allows a certain amount of motion, which is limited by the side of the transom coming against a stop on the link. *t* are the ties passing from the top of the standards to the carriage, where they are connected with nuts, *t*¹, on the screws *t*². The length of the ties is adjustable by means of right and left handed screws, as is shown.

When the nuts are caused to traverse along the screws towards the rear of the carriage, they first incline the standards and transom, the movement being on the joints *s*¹, and when this joint becomes fast the links *s*¹ move around the axle *s*, and the transom is lifted so that its weight is taken by the wheels. *uu* are the screws on the standards, which jam them fast in their working positions by penetrating the roof of the tunnel.

On the inclined axis *h* is a toothed wheel, *h*⁵, gearing with a wheel, *v*¹, on an axis, *v*, running from end to end of the carriage. From the axis *v* the governor of the engine is driven in the manner shown; and there is also a bevelled pinion, *v*², on this axis driving other pinions, *w*¹ *w*². On an axis, *w* *x*, is a clutch with a lever handle, by which either of the wheels *w*¹ *w*² can be made fast with the axis, which thus can be driven in either direction. *w*³ *w*⁴ are bevelled pinions on the axis in gear with pinions *t* on the screws *t*². *f*¹ *f*² are pump barrels cast with the cylinder; they force water which is conveyed by flexible pipes into the hollow drill-bars. *y* is the starting lever.

The usual method of working is to form several rows of holes, the holes of the two centre rows inclining more or less towards each other; and first by means of these holes an opening is blasted out, then the remaining rows of holes are blasted successively to complete the heading.

If the tunnel is not wide enough to admit of this method of working, the bottom of the working face is first blown outwards by firing charges in a line of inclined bore-holes, and then by means of other holes the rock above is thrown down. When this method of working is resorted to, the transom is so constructed that the standards can be traversed right across it from end to end, so that the lower row of holes may be drilled sufficiently close together. The inclined axis *h* in this case drives an intermediate

axis

Improvements in Rock or Stone Drilling, Tunnelling and Boring Apparatus.

axis passing along at the side of the transom, and this by spur gear drives the axis *i* within the transom. This axis extends from end to end of the transom.

In well-sinking the drills are similarly mounted on "standards," which, however, in this case are horizontal, and the axes *ii* are driven by a travelling rope passing to the surface.

Another part of this invention consists in a novel combination and arrangement of parts for the purpose of applying the drills hereinbefore described to the production of deep bore holes to serve as wells, or to give indications of the strata through which the hole is sunk.

The drill-bar is lengthened from time to time as the work progresses, by the addition of boring rods, consisting of drawn steel tubes or welded wrought-iron tubes with screw sockets, and the upper length of the boring rods passes through an outer tube which has a keyway cut along it. The boring rod is firmly held in a clamp at lower end of the outer tube, and the outer tube is carried in a bearing which slides on the upright frame of the machine, and has weights connected with it by chains to regulate the pressure on the drill so that it may be either more or less than the weight of the boring rods. The outer tube also passes through a hollow axis having a key or feather within it entering the keyway in the tube, so that the tube is compelled to revolve with the axis. The axis is carried in a bearing fixed on the frame, and is driven by bevelled gear from an inclined shaft, and this shaft is itself driven from a horizontal shaft, receiving motion by a driving strap from a steam-engine or other convenient source of power. The lifting chains pass over chain wheels, which can be driven by a hand rope and wheel or by power to lift the boring rod or its holder.

Figure 11 is a front view, and figure 12 is a side view, both partly in section, of this apparatus. *aa* is the frame, consisting of the uprights *a*¹, the struts *a*² and *a*³, and the base beams, *a*⁴. On the struts *a*² the horizontal axis *b* is mounted; it is driven by a belt, *b*¹, passing around the belt pulley *b*²; *b*³ is a spur wheel on the same axis driving a pinion, *c*¹, on an axis *c*. The wheel *b*³ and pinion *c*¹ can be changed for others of different sizes to vary the speed of rotation of the boring rod; *c*² is a bevelled wheel on the axis *c*, driving another bevelled wheel, *d*¹, on the inclined axis *d* carried in bearings which are supported by the struts *a*². The wheel *d*¹ at the upper end of this axis drives a pinion, *e*¹, on a hollow axis, *e*. The bearing of the hollow axis *e* is fixed to the uprights *a*¹, and through this axis the slotted tube *f* passes. The tube can slide freely through the axis, but is compelled to turn with it by a key or feather within the axis entering a slot in the tube. The lower part, *f*¹, of the tube *f* is a separate piece connected with the upper part by flanges and bolts; it is carried in a sliding bearing, *g*, which is able to traverse up and down on the uprights *a*¹. *f*² is a clutch on the bottom of the part *f*¹; it is for the purpose of holding firmly the boring rod *h* which passes through the tube *f*, *f*¹. This clutch is made like a lathe chuck, with a series of jaws receiving radial motion from screws. The screws have bevelled pinions upon them, all gearing with a similar pinion mounted on *f*¹ so that the screws turn simultaneously, and the jaws hold the boring rod concentrically within the tube *f*, *f*¹. The boring rod may conveniently be, as already mentioned, of drawn steel or wrought-iron welded tube with the ordinary external screw sockets. At its lower end the gem-drilling tool is fixed, and at its upper end a cone or plug, *k*¹, like that of an ordinary water tap. This cone or plug enters a corresponding shell, to which water is supplied from a pump, *k*, by a pipe, part of which is flexible. The upper end of the water pipe is carried by a block which is able to slide along guides, *ll*. These guides also serve to steady the top of the boring rod. The weight of the boring rod *h* and the outer tube *f*, with its sliding bearing *g*, tends to press the drill down to its work, and, to diminish or augment this pressure, chains are passed upwards and downwards from the sliding bearing *g* around pulleys, *m*, to suspended weight-receivers, *n*, each made to receive a number of separate weights. The adjustment of the pressure on the drill is effected by loading one or other of these receivers. The chains which pass upwards from the sliding bearing *g* pass over chain wheels, *o*¹, on an axis, *o*, on which is a spur wheel, *o*², gearing with a pinion, *p*¹, on an axis, *p*. *p*² is a pulley on the same axis; it receives an endless rope which may be used to turn the pulley by hand, or it may be driven by placing around the pulley *p*² on the axis *b*. *q* is a treadle acting on a break strap to retain the axis *o*; this gear is used in raising the tube *f*, *f*¹ either with or without the boring rod. It is convenient that the tube which forms the boring rod should be in long lengths, so that the joints may be as few as possible. When such tubes are used a light scaffold is erected over the machine, to steady the upper end of the tube, and to facilitate the screwing on and off of the successive lengths; this scaffold may carry tackle for lifting the tubes.

After the drill has been worked for some time, the boring rod is lifted, carrying up with it the cores, which are caught by wedges or clips; and also by an enlargement in the boring tube immediately and for some distance above the cutting tool. The debris formed during the boring is entirely removed by the circulation of the water forced down the tube *h* by the pump *k*.

For deep borings the pressure may be put on in the same way as in drilling and tunnelling, and as is fully described in respect to figure 1 to 10. In such case the weights represented in figures 11 and 12 would be dispensed with.

In place of controlling the pressure on the boring tool by movable weights, as in the machine above described, the pressure on the drill may be controlled by hydrostatic apparatus.

Figure 13 shows a vertical section, figure 14 a side view, figure 15 a plan partly in section, and figure 16 a horizontal section (on the line GH, figure 14) of the hydrostatic machine. In these figures *aa* represents the framing of the machine carrying a cylinder, *b*, in which works a piston, *c*, fixed on a hollow piston rod, *c*¹; this piston rod passes out through a stuffing-box, *b*¹, at the lower end of the cylinder. The hollow piston rod fits over a tube, *d*, which hangs down from the top cylinder cover, as shown; and it is through this tube that a stream of water is supplied to the boring rod. The lower end of the piston rod has connected to it the cross head *e*, which can rise and fall on the guides *f* formed on the framing of the machine. The cross head carries a short vertical tube, *g*, concentric with the piston rod, and capable of being revolved in the bearings in which it is mounted; to this tube the upper end of the boring rod carrying the drill is attached. On the exterior of the tube is a toothed wheel, *h*, which is driven by a wheel, *h*¹, carried by the cross head, and is capable of sliding up and down on the vertical shaft *h*², whilst at the same time it is caused to revolve with the shaft by a key or feather upon it. The shaft *h*² receives motion from the shaft *h*³, and this is driven by a bevel-toothed wheel, *h*⁴, on the main driving shaft *k*. The toothed wheel *h*⁴ is loose on the shaft, but can be made fast therewith by the sliding friction clutch *h*⁵, and thus a continuous

Improvements in Rock or Stone Drilling, Tunnelling and Boring Apparatus.

continuous rotary motion can be imparted whenever desired to the boring rod. The lower end of the boring rod may either be a diamond crown cutter, such as hereinbefore described, or other construction of cutter may be used. When the boring rod is at work, and it is desired to put pressure upon it to force it downwards, water under pressure is admitted to the top of the cylinder *b*, through the pipe *l* which leads from the bottom of the cylinder *m*; this cylinder forms an accumulator; its upper part containing compressed air, whilst water is pumped into its lower part by the pump *n*¹, the plunger of which receives motion from an eccentric on the main shaft, as shown. The suction pipe of this pump draws water from the tank *r* which forms the lower part of the bed or framing of the machine. *n*¹ is an outlet safety-valve to allow of the escape of water supplied by the pump when the pressure in the accumulator has arrived at the limit desired. The amount of pressure put upon the boring tool can thus be regulated by varying the pressure in the accumulator, or the pressure on the boring tool can be controlled by causing the water in the lower part of the cylinder to escape through a loaded escape valve on the pipe *q* which leads from the bottom of the cylinder *b* to the tank *r*.

On the opposite side of the framing of the machine to that which carries the accumulator *m* is another air vessel or accumulator, *o*, similarly supplied with water under pressure from a pump, *p*, the suction pipe of which is supplied with water from any convenient water supply. From the accumulator *o* a stream of water is supplied whenever desired to the hollow boring rod, by the pipe *p*¹. A branch pipe, *p*², fitted with a cock, is also led out from this pipe to the bottom of the cylinder; by opening this cock, water under pressure can be admitted to the lower part of the cylinder, for the purpose of raising the hollow piston rod together with the boring rod carried by it.

When the piston is being raised by the admission of water to the lower end of the cylinder, the communication between the accumulator *m* and the top of the cylinder is cut off by closing a cock on the pipe *l*, and at the same time a cock on a branch pipe, *s*, leading out from it is opened, and thereby the water in the upper part of the cylinder is allowed to escape and pass away through this branch pipe. It will thus be seen that the boring rod can not only be raised whenever desired, but can also be lowered steadily, and have any desired amount of pressure placed upon it when the boring tool is cutting.

The machine above described may also, with slight modifications, be employed for working an ordinary jumping boring tool.

When such a tool is to be employed, we make provision for admitting steam alternately to the two ends of the cylinder *b*, so as to give a reciprocating rising and falling motion to the boring rod; and in place of imparting to the rod a quick revolving motion as in the machine shown at figures 13, 14, 15, and 16, we modify the gearing, by which a revolving motion is given to the boring rod so as only to give to it a slow continuous revolving motion.

Another part of our invention relates to the construction of the cutter. Heretofore, the gems have been set in a cylinder of soft steel so as to project beyond it, both on the inner and outer circumference, and also at the end of the cylinder; when set in this way the gems are liable to break from being insufficiently supported. To obviate this difficulty, we increase the thickness of the cylinder at the part where the gems are set, both on the inner and outer side, and the end of the cylinder is rounded.

In setting the gems they are sunk into the metal, so that they do not project, or project but slightly above the surface, and then afterwards on the cutting side of each gem the metal is removed to expose the part of the gem which is to operate on the rock, leaving the gem completely supported at the back.

Figure 17 is a side view, figure 18 is a plan, and figure 19 is a longitudinal section of a cutter thus constructed. The gems are marked *a a*.

Having thus described the nature of our said invention and the manner of performing the same, we would have it understood that we do not make any general claim for the use of gem-cutters in drilling, tunnelling and boring rock, but we claim—

First.—The construction of the rock drill, substantially as described.

Second.—The construction of the tunnelling machine, substantially as described.

Third.—The construction of the boring or prospecting machine, substantially as described, and illustrated at figures 11 and 12.

Fourth.—The construction of the boring or prospecting machine, substantially as described, and illustrated at figures 13, 14, 15, and 16; and also the modification herein described of this machine to adapt it for working with an ordinary pumping tool.

Fifth.—The construction of the cutters, in manner substantially as described in respect to figures 17, 18, and 19.

In witness whereof, we, the said Frederick Edward Blacket Beaumont and Charles James Appleby, have hereunto set our hands and seals, this twenty-third day of December, in the year of our Lord one thousand eight hundred and seventy-two.

F. E. B. BEAUMONT. (L.S.)
C. J. APPLEBY. (L.S.)

This is the specification referred to in the annexed Letters of Registration granted to Frederick Edward Blacket Beaumont and Charles James Appleby, this ninth day of July, 1873.

HERCULES ROBINSON.

Improvements in Rock or Stone Drilling, Tunnelling and Boring Apparatus.

REPORT.

Sydney, 20 May, 1873.

SIR,

We do ourselves the honor to return to you the documents transmitted to us under your B.C. communication of the 9th May, No. 73/3521, and we recommend the issue of Letters of Registration, securing to Frederick Elward Blacket Beaumont and Charles James Appleby the exclusive right to their invention of "Improvements in Rock or Stone Drilling, Tunnelling and Boring Apparatus," as set forth in their Petition, drawings, specification, and claims.

We have, &c.,

E. O. MORIARTY.
GOTHER K. MANN.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—seven sheets.]

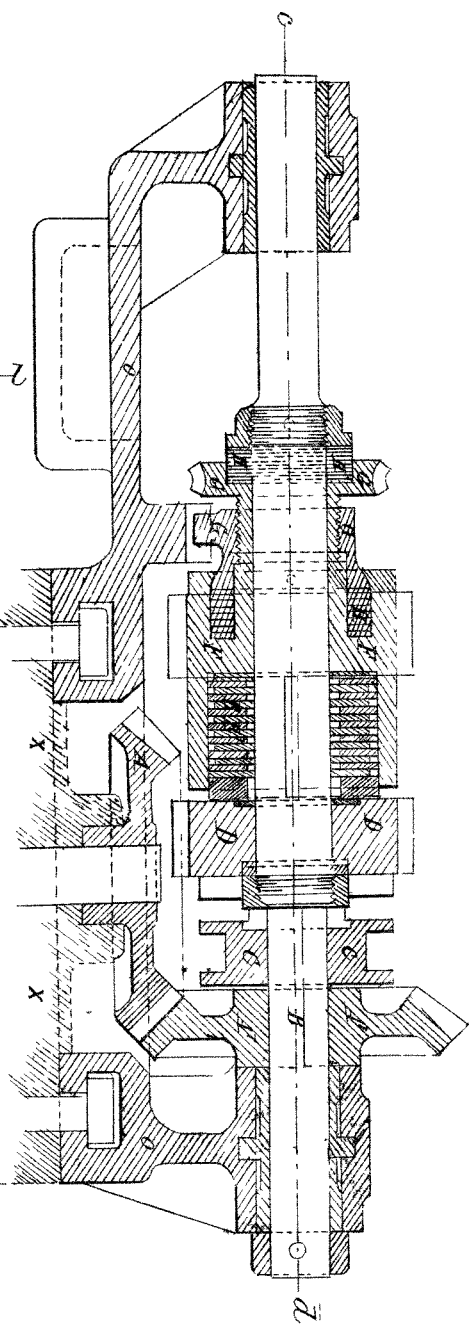


Fig. 1.

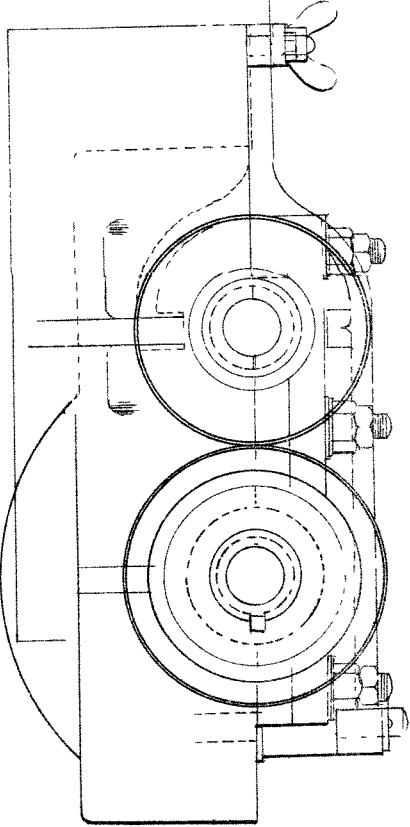


Fig. 3.

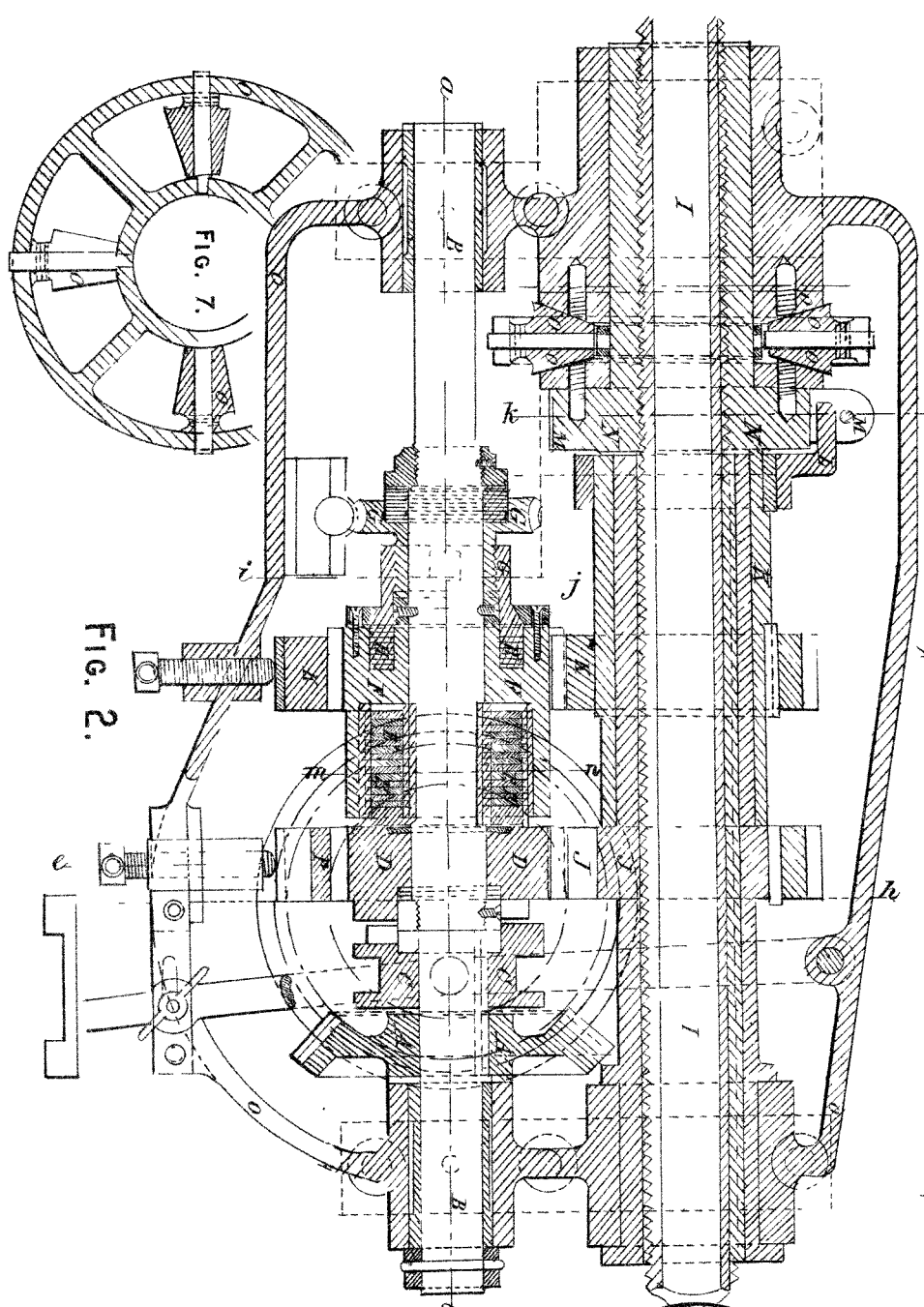


Fig. 2.

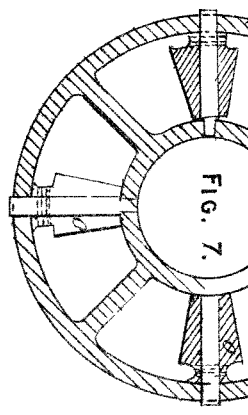


Fig. 7.

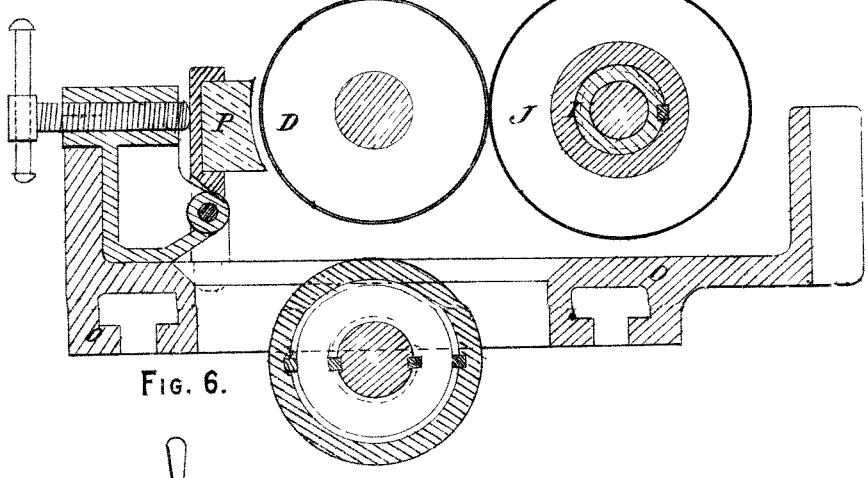


Fig. 6.

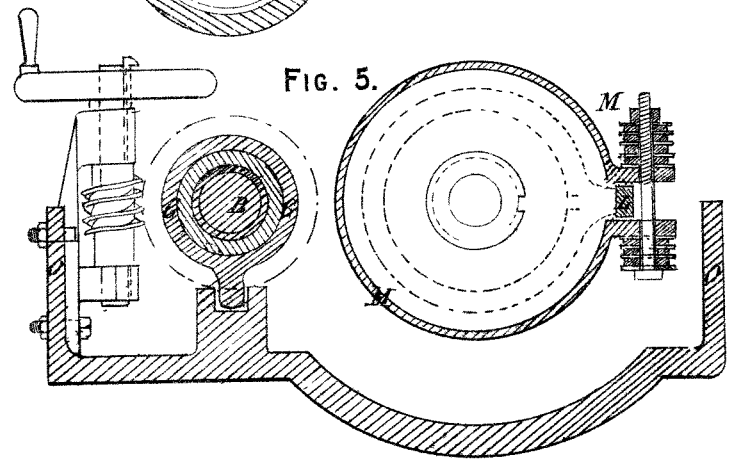


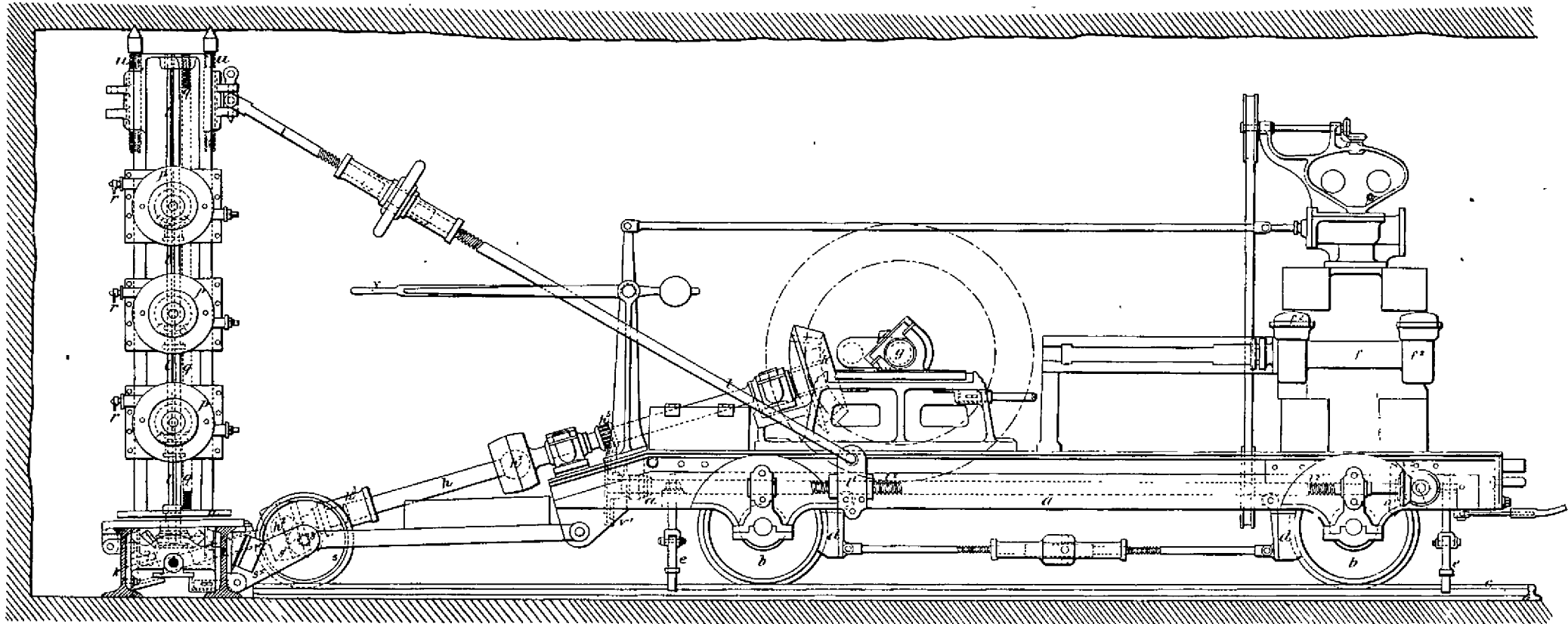
Fig. 5.

*This is the Sheet of Drawings marked B referred to in the annexed
 Letters of Registration granted to Frederick Edward Bluckett Beaumont
 and Charles James Appleby, this ninth day of July, 1873.*

Hercules Robinson.

(Copy) C.

FIG. 8



*This is the Sheet of Drawings marked C, referred to in
the award Letters of Registration granted to Frederick
Edward Blacket, Beaumont and Charles James Appleby,
this ninth day of July, 1873.*

Hercules Robinson.

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BYOKEY N. S. WALES.

(Sig. 7.)

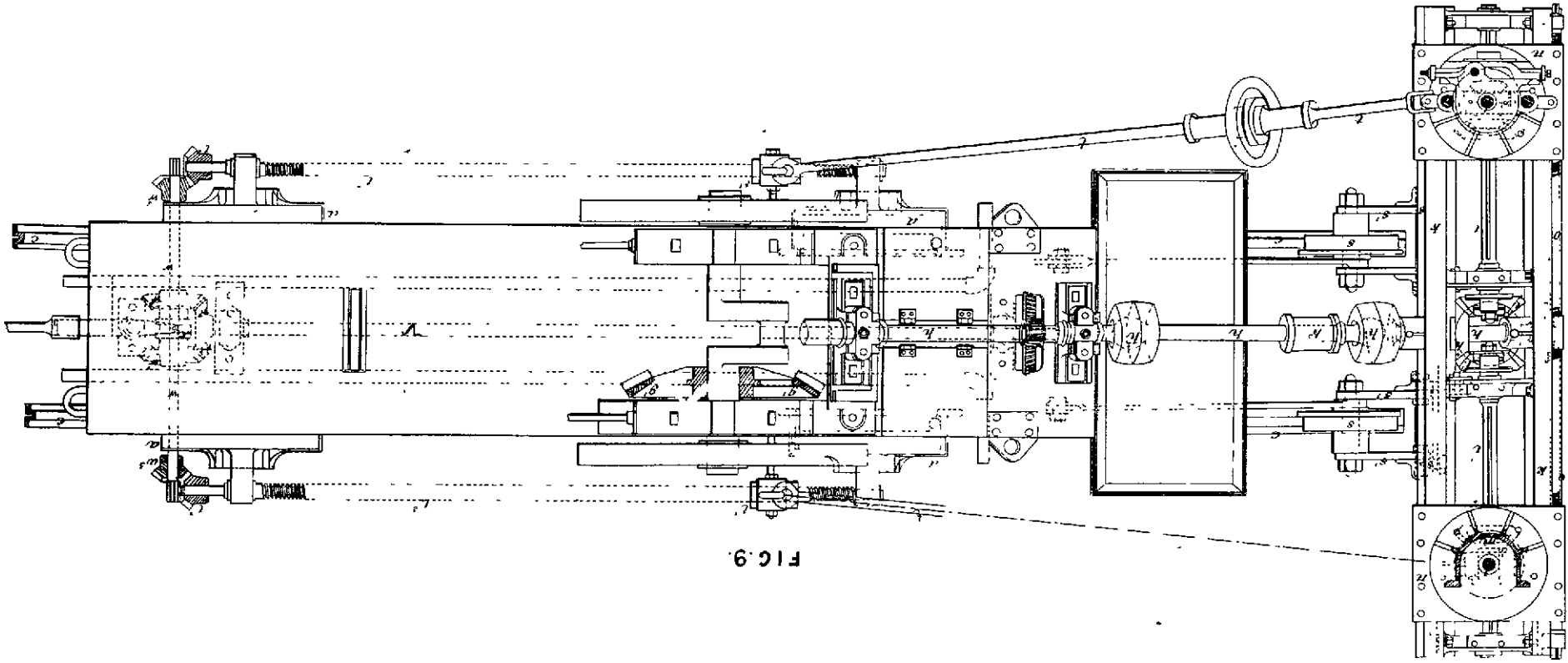


FIG. 9

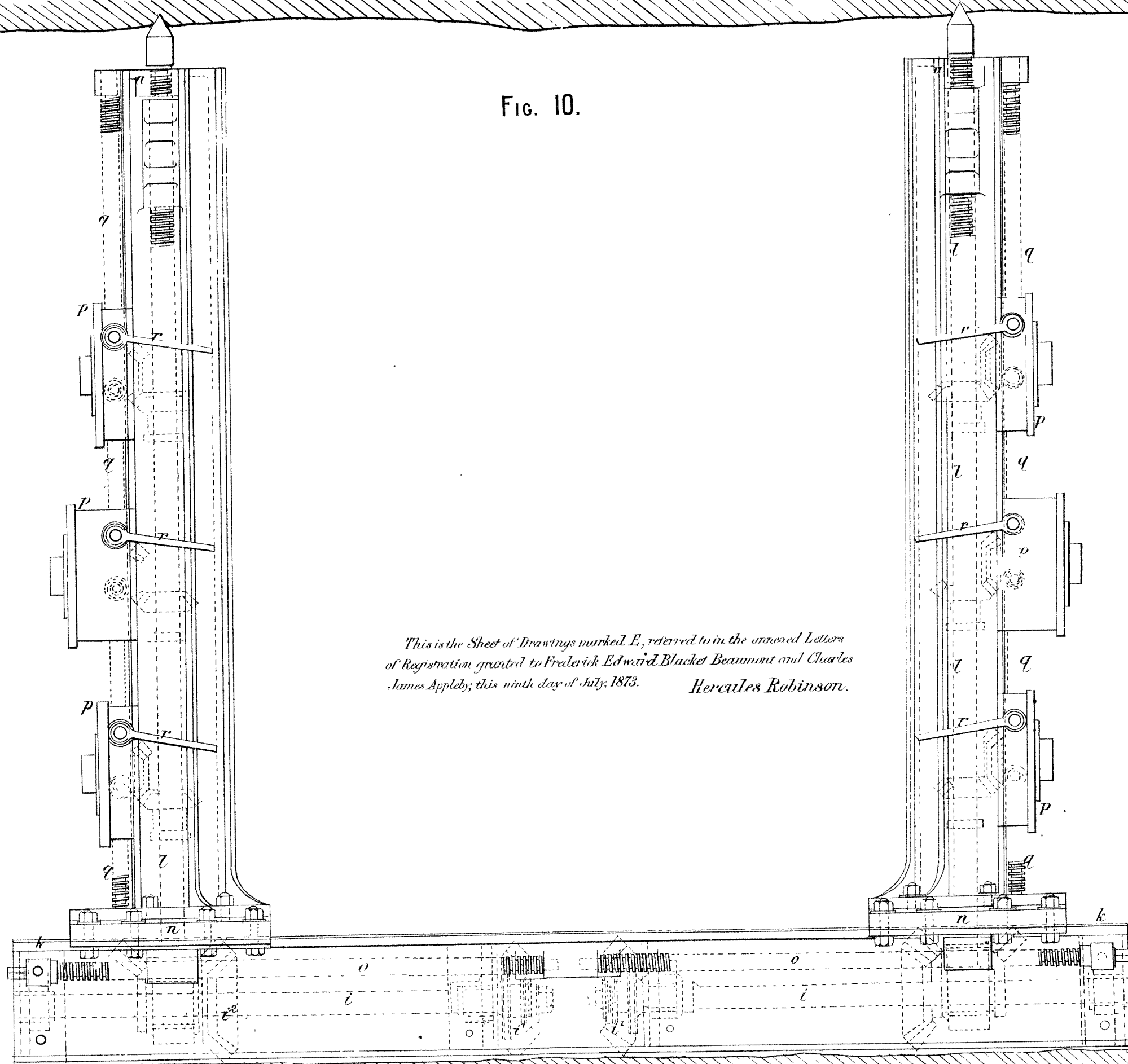
This is the Sheet of Drawings marked B referred
to in the annexed Letters of Registration granted
to Frederick Howard Black, Beaumont and
Charles James Appleby on the ninth day of July 1873.

Hercules Roburson.

(Sig. 1.)

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BY DWYER & S. WALKER

FIG. 10.



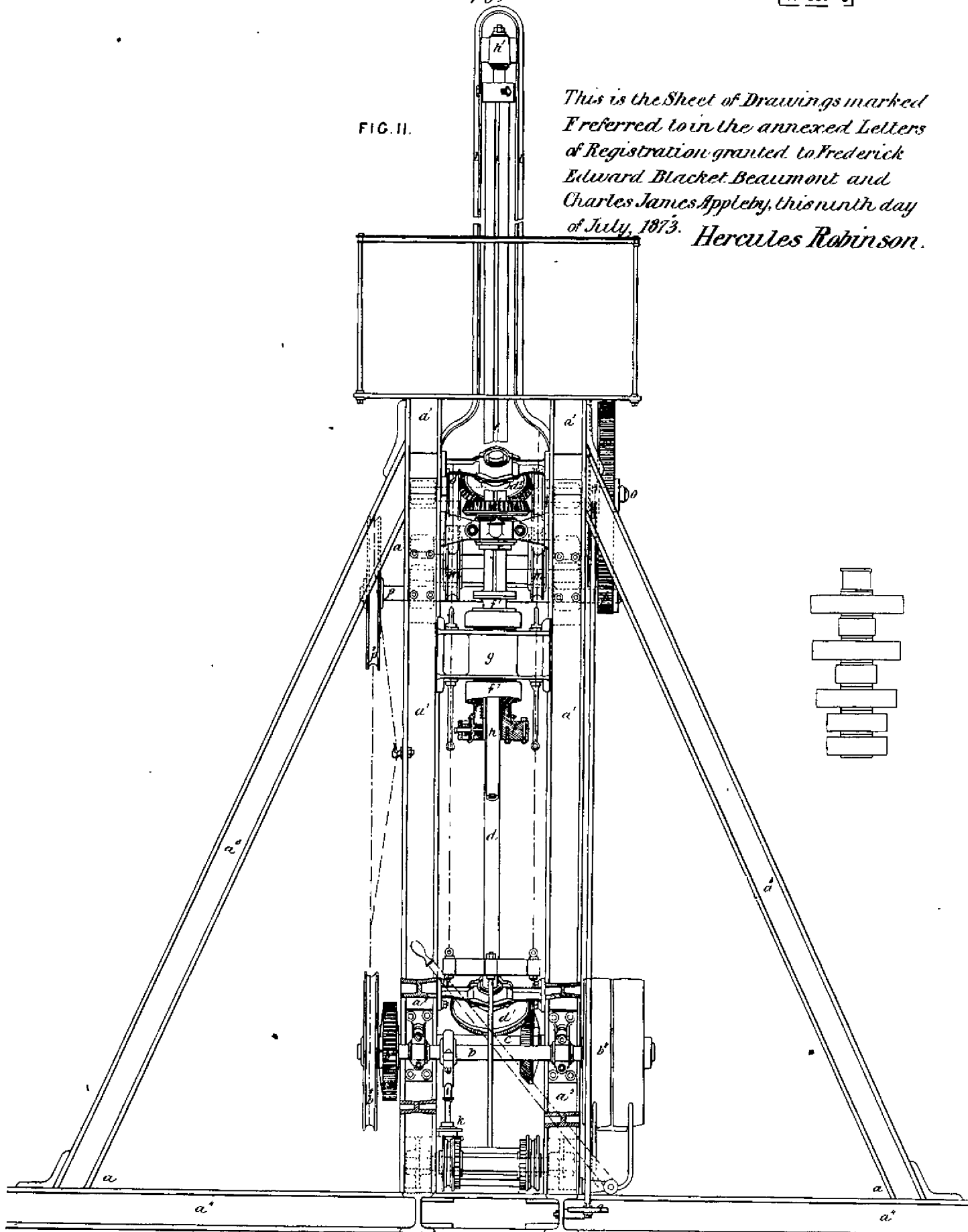
This is the Sheet of Drawings marked E, referred to in the annexed Letters of Registration granted to Frederick Edward Blacket Beaumont and Charles James Appley, this ninth day of July, 1873. Hercules Robinson.

(Copy) F.

N^o 365-5

FIG. II.

*This is the Sheet of Drawings marked
E referred to in the annexed Letters
of Registration granted to Frederick
Edward Blacket Beaumont and
Charles James Appleby, this ninth day
of July, 1873. Hercules Robinson.*



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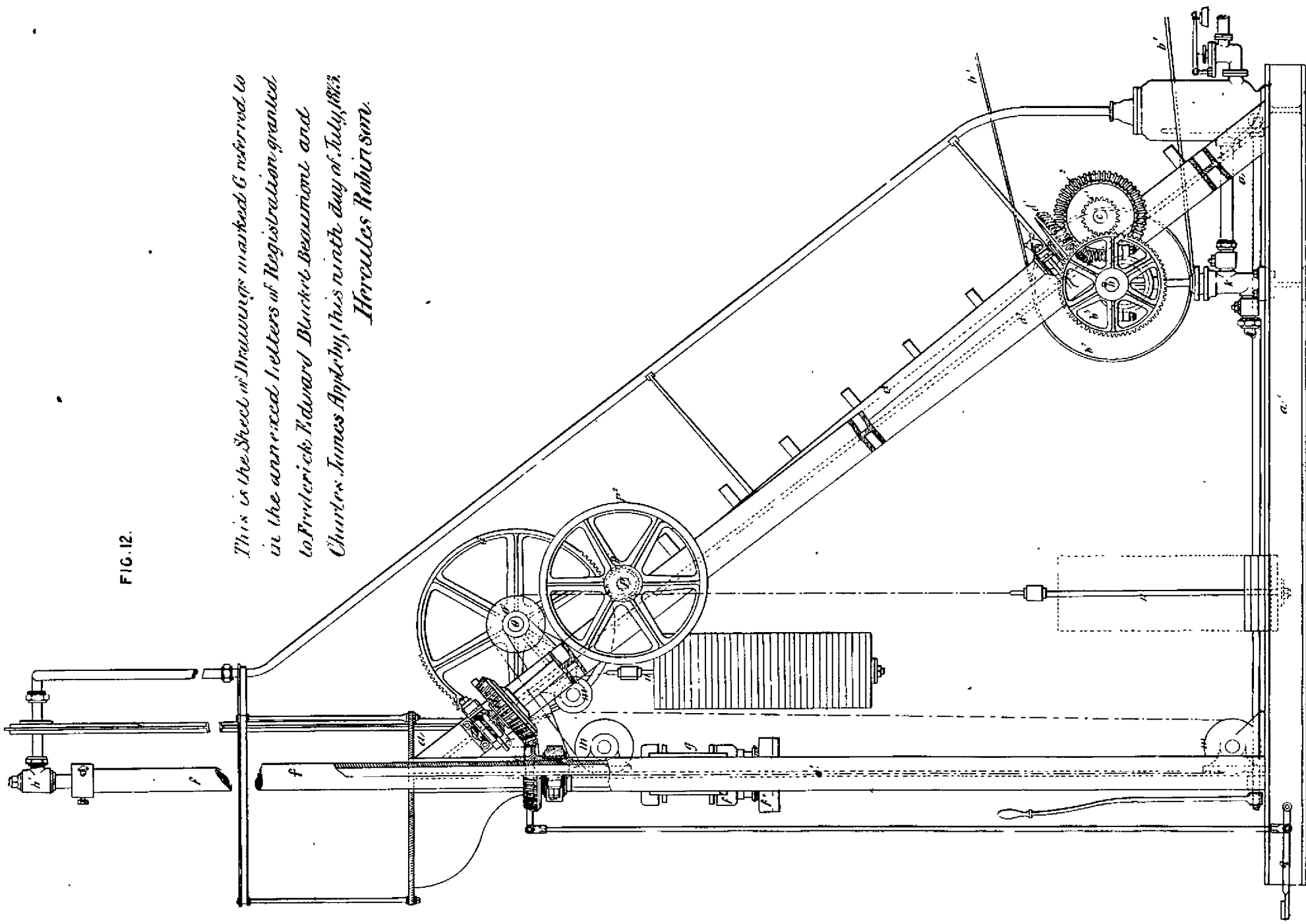
(Sig. 1.)

(Copy) G.

[No 368-6]

FIG. 12.

*This is the Sheet of Drawings marked G referred to
in the annexed Letters of Registration granted
to Frederick Edward Buckle Beaumont and
Charles James Appleby, this ninth day of July, 1873.
Heracles Robinson.*



(Sigl.)

PHOTO-LITHOGRAPHED AT THE GREAT BRITISH PATENT OFFICE
BY ROBERT H. & S. WALKER

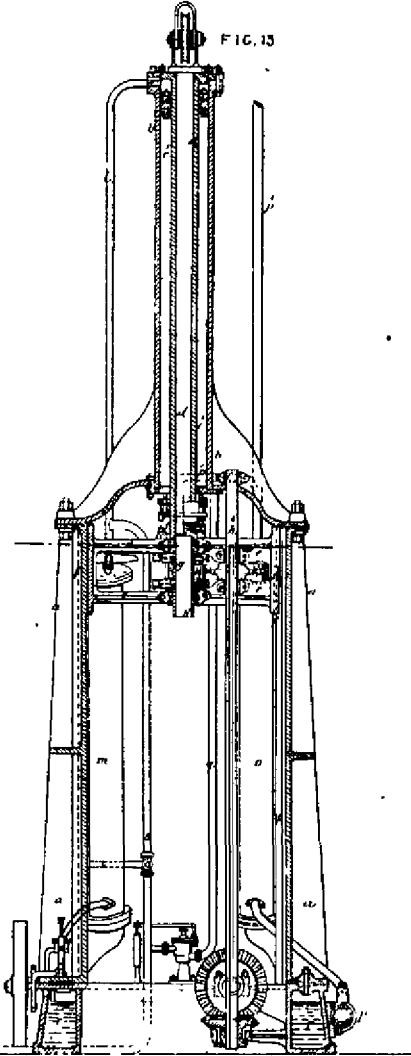


FIG. 13.

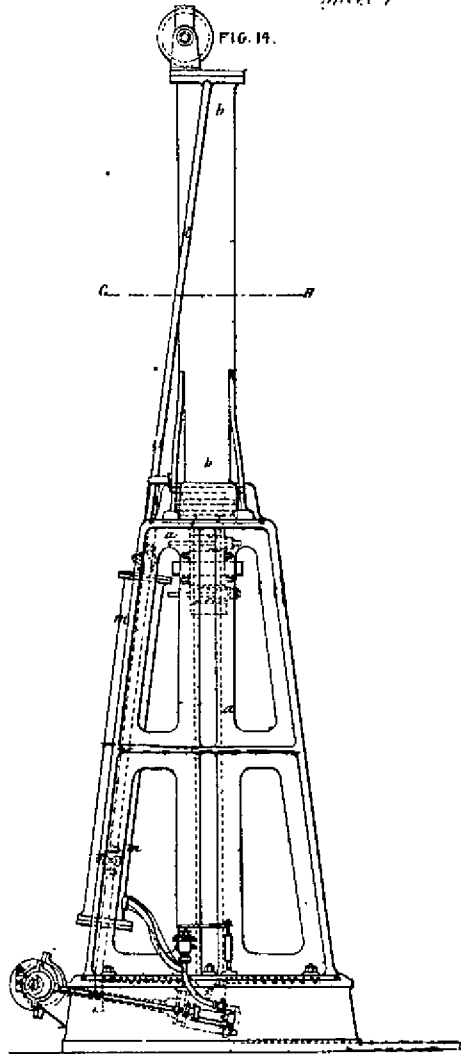


FIG. 14.

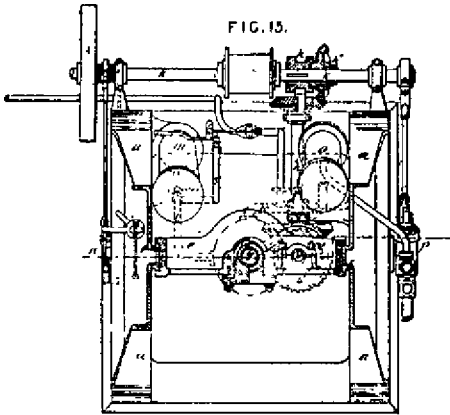


FIG. 15.

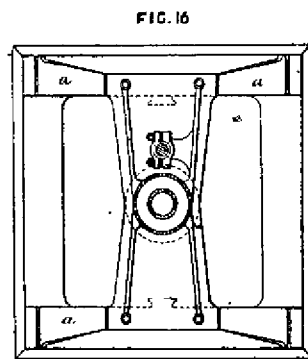


FIG. 16.

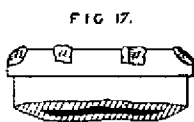


FIG. 17.

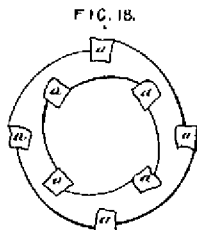


FIG. 18.

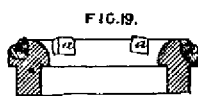


FIG. 19.

This is the Sheet of Drawings marked H, referred to in the annexed Letters of Registration, granted to Frederick Eduard Blacket, Beaumont and Charles James Appleyby this ninth day of July 1873.

Hercules Robinson.

[67]



A.D. 1873, 9th July. No. 366.

**IMPROVEMENTS IN MACHINERY FOR DRILLING OR PERFORATING ROCKS
AND OTHER HARD SUBSTANCES.**

**LETTERS OF REGISTRATION to Thomas Brown, for Improvements in Machinery
for drilling or perforating rocks and other hard substances.**

[Registered on the 10th day of July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS THOMAS BROWN, of London, England, civil engineer, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in Machinery for drilling or perforating rocks and other hard substances," which is more particularly described in the specification, marked A, and the three sheets of drawings, marked B, C, and D respectively, which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Thomas Brown, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Thomas Brown, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Thomas Brown shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this ninth day of July, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in Machinery for drilling or perforating rocks, &c.

A.

SPECIFICATION of THOMAS BROWN, of London, England, civil engineer, for an invention entitled "Improvements in Machinery for drilling or perforating rocks and other hard substances."

THE said invention relates to machinery for drilling or boring rocks and other hard substances, and is designed to render the said machinery more efficient, convenient, and economical than other machines heretofore used for similar purposes. I will first describe the parts of my invention illustrated in figures 1 to 12 of the accompanying drawings, in which figure 1 is a side elevation of my improved machine; figure 2 is a plan of the same; figure 3 is a vertical section through the centre of the same; figure 4 is a transverse section on the line *xx*, figure 1; figure 5 is a transverse section on the line *yy*, figure 1; figure 6 is an enlarged view of the under side of the valve-chest and valve; figure 7 is a horizontal section on the line *zz*, figure 6; figure 8 is a transverse section on the line *ww*, figure 6; figure 9 is an elevation of one end of the piston-bar with its annular cam; figures 10, 11, and 12 are detached portions hereinafter described.

A is the cylinder, within which works a piston driven by compressed air or steam; this cylinder is provided with projecting ribs, *a*, fitting into grooves, *b*, in a slide or drill frame, B, and on this frame the cylinder and parts connected therewith are made to advance as the work progresses. The drill-frame B is bevelled on its under side, and slides in a dovetailed recess in a clamp, C, which is constructed as follows: *c* is an ordinary box which embraces the column or bar D whereon the drill is mounted, and is made in two parts held together by screws, by which the box may be secured in the required position; on one portion of this box *c* is a bevelled disc, *d*, to which is fitted the upper portion of the clamp; this clamp is made in two pieces, A' and B', held together by bolts *e* and nuts *f*; by loosening which the machine can be revolved around the disc as a centre, or advanced or withdrawn in line with the drill; it will thus be seen that by means of this clamp a universal motion is obtained, together with a movement towards or from the work. E is the piston-bar attached to the piston *g*; it carries at its forward end the drill F, the piston-bar being made solid except at its rear end, which is hollowed out for the reception of the feed-screw G; this screw G is secured to and revolves in a bar, *h*, at the end of the drill-frame B, by which it is supported, as seen in figures 2 and 3, and it is held with sufficient friction to prevent its turning when the drill is in operation; *i* is a winch by which it may be revolved by hand when required. To the rear end of the cylinder A is secured a hollow tube or casing, H, which acts as a guide for the feed and valve gear, and also for the ratchet which rotates the drill. Upon the rear end of this casing H is screwed a cap, I, containing the feed nut and ratchet J, either made in one piece or permanently secured together, the nut J being held in place by a washer, 14, which rests against a shoulder on the inside of the cap I, thus allowing the nut to revolve freely as required. Instead of the feed-screw passing into the end of the piston bar as above described, it may be attached permanently to a ratchet J and screw through the bar *h*.

A partial revolution is given to the drill after each blow, as follows:—At the rear end of the piston-bar E is cut a spiral groove, *j* (figure 9), into which projects a feather on the inside of a ratchet ring, *l*, through which the piston-bar passes; this ratchet *l* is supported in the casing H in a slot which is pivoted to the pawl *m*; the latter engages with the teeth of the ratchet, being kept in contact with the same by a spring, 15. The ratchet is confined on one side by a shoulder, 16, on the inside of the casing H, and on the other side by a washer, 17, which rests against a shoulder, 18, and thus allows it to be revolved freely. As the piston-bar moves forward towards the rock, the ratchet *l* is turned so that the pawl *m* falls into the next succeeding notch, there being more weight and friction on the piston-bar than on the ratchet, and consequently the latter is turned as required. In the backward stroke, however, the ratchet is held stationary by the pawl *m*, and the feather causes the piston-bar to be partially revolved by means of the spiral groove, *j*. Instead of a spiral groove the piston-bar may be made polygonal in cross section and twisted, so that in passing through an opening in the ratchet of corresponding form it will be turned as required; or instead of the piston-bar being grooved or twisted, a piece attached thereto may be turned in a similar manner by passing through the ratchet or rotating device. By these contrivances I am enabled to protect the working parts from the effects of the concussion, and consequently lessen the liability to be broken.

The valve K through which the compressed air or steam is admitted into the cylinder A is a hollow, double-acting rotary valve; it works in a chest or casing, L, seen enlarged in figures 6, 7, and 8, and is so constructed that the pressure of the air or steam will hold it firmly upon its seat. The valve K is formed with two ports, *n*, figure 10, which connect with the exhaust passage *o* in the interior, and is also provided with longitudinal bars or toes, *p*, to cover the ports *q* in the valve-chest L, which communicate with the interior of the cylinder, there being a space, *r*, around the valve, so that the air or steam may pass through the holes *s*, figure 6, on both sides round to either port in the valve-chest. When the valve is in a position to take air or steam at either port, the port at its opposite end will be in such a position that the exhaust will pass through it into the interior of the valve, and this valve being in line with the cylinder, the exhaust air or steam is discharged towards the drill, and serves to blow away the dust or water from the working parts of the machine.

The required motion is given to the valve K by means of a rod, *t*, supported in standards 19 on the casing H and cap I, and is rocked or partially revolved by means of the jointed tappets *u* *v*, whose lower ends project through slots in the casing H; these tappets are raised at the required times by an annular cam, M, secured to the rear end of the piston-bar E, which passes under them as the bar E is reciprocated. By moving the rear tappet *u* on the valve-rod *t* towards or from the cylinder the air or steam will be cut off sooner or later, so that the drill may be operated to advantage in any desired position, either vertically or horizontally. Instead of the cam M being attached directly to the piston-bar E, it may be secured to a piece connected thereto. The feed of the drill is effected in the following manner:—*a'* is a lever pivoted at *b'* to the casing H, and carries at one end the spring-pawl *c'*, which engages with the ratchet-teeth of the feeding-nut J; the opposite end of the lever *a'* passes through a slot, 20, in the casing H into a position to be struck and raised by the annular cam M as it passes beneath it; the pawl *c'* thus revolves the nut J on the screw G which feeds forward the drill as required. The end of the lever *a'* which passes through the slot 20 is so curved and formed that the annular cam M does not lift it sufficiently to effect the feed until after it has raised the tappet *v* on the forward stroke to shift the valve; by this means I am enabled to regulate the

the

Improvements in Machinery for drilling or perforating rocks, &c.

the feed to correspond with the penetration of the drill—the valve, however, will be shifted at each stroke without reference to the feed. The rear end of the drill *F* is enlarged to give it an increased bearing surface, and is formed with a taper shoulder, 21; over the shoulder fits a clasp-nut, *N*, figures 3, 11, and 12, which is screwed into the end of the piston-bar *E*. The nut *N* is made in two pieces, hinged together at 22, so that it may be easily fitted over the drill, and when screwed down serves to hold the latter in a central position with regard to the piston-bar. The nut *N* is provided with a groove, 23, into which fits a feather or projection on the drill, so that as the latter is revolved it tends to tighten the screw-nut; by this means the drill is held tightly in place and prevented from becoming loose while the machine is in operation. Instead of the spline and feather above described, a portion of the drill may be made polygonal and the inside of the clasp-nut of a corresponding form.

I will now proceed to describe the modifications of my invention illustrated in the remaining figures of the drawing. Figure 13 is a plan of a machine constructed according to this part of my invention. Figure 14 is a longitudinal central section of the same on the line *z z*, figure 13. Figure 15 shows one end of the said machine, and figure 16 shows the other end. Figure 17 is a longitudinal central section on the line *y y*. Figure 15 shows the feed mechanism, and figure 18 is a cross section showing parts in elevation.

The body, *a*, of this machine made in one casting constitutes the steam or air cylinder, and covers and protects most of the feeding and turning mechanism. This body or cylinder has two wings, one on either side, fitted in ways planed in a trough-like bed, *b*, provided with a “frusto” conical plate, by which the machine is clamped to a box or bearing fitting on a cylindrical bar forming part of a support or carriage, so that the drilling machine may be presented to its work in any direction and at any angle. The cylinder *a* has its front end closed by a head, *c*, into which a long stuffing-box, *d*, is screwed. The rear head of the cylinder is an annular sleeve, *f*, held from endwise movement by screws, *g*, the ends of which enter a groove turned in the periphery of the sleeve, the joint between the sleeve and the piston being made tight by the ring-packing *h*, which receives on its outer surface air or steam pressure from within the cylinder to force the packing closely upon the piston-rod. The piston rod and head are made of one steel forging, two metallic packing-rings being used in the piston-head, which are pressed outward by the entrance of steam or compressed air against their concave surfaces. The drill is secured to the protruding end of the piston-rod.

The ratchet-wheel *i* by which the drill is turned is placed upon the piston-rod at some distance from the rear piston-head, and is kept from endwise movement with respect to the head by the sleeve *f* and the collar *k*. Between the collar *k* and the ratchet-wheel *i* is a friction ring, *l*, whose purpose will be hereinafter explained. The sleeve *f* forms part of the rear cylinder-head, and affords facility for placing and removing the packing shown in the rear cylinder-head. In one end of the sleeve *f* a score is turned to receive the ends of screws *m*, which aid in preventing endwise movement of the rear cylinder-head. The collar *k* has also a groove turned in its periphery to receive screws *n*, which prevent endwise movement of the said collar. The ratchet *i* has a feather over which the inclined slot at the rear end of the piston-rod *e* can slide freely, effecting the turning of the drill, piston-rod, and piston-rod head, in the back stroke of the piston-rod. During the time the piston-rod is making its back stroke the rotation of the ratchet-wheel is prevented by a pawl which engages therein, consequently the piston and drill are turned by reason of the traversing of the inclined groove in the piston-rod over the inclined feather in the ratchet-wheel. When the piston makes its forward stroke it does not turn, but the ratchet does.

Besides the inclined groove in the piston-rod, there is a straight groove in which fits a feather fixed in the friction ring *l*. This ring serves as a brake on the piston to prevent its turning back during its forward stroke from the position given it by the inclined feather and groove before mentioned. In its backward stroke the ring *l* serves as a medium through which to make the friction on the piston greater than the friction on the ratchet *i*, so that the ratchet *i* will turn in the forward stroke of the piston rather than the piston. On the cylinder *a* is pivoted a bent lever, the long arm of which is provided with an adjusting screw, and the short arm with a copper pad or face. By adjustment of the said screw the face is forced with more or less pressure upon the periphery of the friction-wheel *l*, so that the resistance to turning the piston can be made greater than the resistance of the ratchet *i* in the direction permitted by the form of its teeth under the pawl when riding or slipping over the ratchet-teeth, and without having to depend for the necessary friction on the piston in tightening up the packing in the front head *c* of the cylinder. Provision is made to prevent breakage in the case of obstruction by the debris, by making the pawl *p* which acts to detain the ratchet *i* as a bent spring of sufficient stiffness to prevent its yielding under the normal conditions of action, but capable of yielding when obstructions occur. The form given to the pawl *p* to allow it to yield when necessary is best seen in figures 15 and 18.

The machine is provided with the ordinary slide-valve, which is operated by a rod attached to a pivoted or momentum piece, *q*, made sufficiently heavy to possess considerable momentum when in motion. This piece and the valve-gearing are most clearly seen in figure 14. Two arms of the piece *q* extend through a slot in the rear end of cylinder *a* to a position where, in the stroke of the piston, they are acted upon by an annular or elliptical projection or tappet, *r*, fixed on the rear end of the piston-rod *e*. The arm of the piece *q* to which the valve is connected extends upward, and serves as a handle whereby the valve may be shifted as the piston moves rapidly to and fro. The tappet *r* strikes first one of the lateral arms of the piece *q* then the other, thus rapidly, effectively and simply operating the valve. When the tappet *r* strikes either of the lateral arms of the piece *q*, the arm and the valve connected therewith are moved by momentum much beyond the distance which they would travel if the tappet *r* moved slowly; but owing to the rapidity with which the tappet *r* moves, the lever *q* is thrown at each stroke of the piston a distance clearly indicated in figure 15, and so quickly shifts the steam-valve as to make it almost an instantaneous operation.

On the sides of the rear of the cylinder-holder *b* are fixed the ends of a staple-formed strap, *s*; in a bearing formed therein is fixed by suitable collars the end of the feed-screw *t*, so that it can freely turn but cannot move endwise. In the rear end of cylinder *a* is screwed a head, *u*, fixed by set screws, and in which is made a bearing for the nut; the latter, on being turned, moves the cylinder *a* towards the rock or other substance to be drilled. On this nut is fixed a ratchet-wheel, *v*, operated by a pawl, *w*, to move the cylinder *a* towards the rock or other substance to be drilled. This pawl *w* is hung on the short arm of a pivoted lever, *a'*, the long arm of which extends through a slot in the cylinder *a*, so formed and placed that, when the piston makes its back stroke, the tappet *r* may come into contact with the arm moving the lever *a'* to cause

Improvements in Machinery for drilling or perforating rocks, &c.

cause the pawl *w* to turn the ratchet *v* and the nut connected therewith, thus moving the cylinder *a* and all parts connected therewith towards the rock or other substance to be drilled. To create enough frictional resistance on the nut connected with the ratchet *v* to prevent the turning of the nut by the vibration of the machine, small spiral springs are located in the rear head *w*, which are compressed between it and a friction ring bearing against the ratchet, as clearly shown in figure 14. The rear end of the piston-rod is bored to receive the feed-screw *t*.

The feeding of the cylinder towards the rock or other substance to be drilled is automatically effected as described, but the withdrawal of the cylinder is accomplished by turning the screw by a hand-crank at the rear end of the same.

During the time that the drill is being automatically fed forward toward the rock, the turning of the screw in the staple-formed strap *s* is prevented by the friction of the nut on the outer end of the screw, which is tightened for that purpose; but when the drill is to be drawn back, by turning the hand-crank the said nut is loosened, and the ratchet *v* fixed on the feeding-nut will remain without rotating by reason of the friction thereon.

To prevent any injurious variation between the feed and the penetration of the drill, I employ mechanism which automatically preserves a practical uniformity of feed and penetration. In the slot in the cylinder in which the long arm of lever *a'* vibrates is fixed a trigger, *b'*, figure 17, that springs into position to hold and sustain the lever *a'* out of reach of the tappet *r* when the feed of the cylinder is in excess of the penetration of the drill. In this case the tappet *r* does not in the forward stroke of the piston reach and displace the trigger *b'*, and the said lever *a'* remains supported so that the tappet *r* will not act fully thereon but only raises the lever slightly from the trigger, consequently no feed takes place on the next back stroke of the piston, and the reciprocations of the piston and drill continue without further advance of the cylinder until the penetration of the drill equals the previous feed or advance of the cylinder, then the tappet will on a forward stroke of the piston reach and displace the trigger so that the lever *a'* will be left free to spring into the path traversed by the tappet *r*, so that on the back stroke of the piston the lever *a'* is worked by the tappet, and the pawl *w* takes into the teeth of the ratchet *v* and gives a partial turn of the feed-screw; when the long arm of the lever *a'* is raised by the tappet the trigger *b'* will catch and sustain the said lever out of reach of the tappet, so that no feed will be again effected until the penetration of the drill allows the tappet to reach and displace the trigger *b'*. When a feed of the cylinder takes place, the piston on its back stroke might possibly come into contact with the back cylinder-head *f'*; I therefore place a rubber cushion, *c'*, against the rear head *u*, to check the back stroke of the piston.

In connection with the machine illustrated in figures 1. to 12 I claim—

First.—Passing the piston-bar E or an attachment thereto through the ratchet-ring *l* or rotating device, substantially as and for the purposes set forth.

Second.—The hollow valve K with its chest L, constructed and operating substantially as described.

Third.—The clamp C, consisting of the box *c* and pieces A' and B', constructed and operating substantially as described.

Fourth.—The clasp-nut N for holding the drill in place, operating substantially as set forth.

And in connection with the machine illustrated in the remaining figures of the drawing I claim—

Fifth.—Actuating the slide-valve by means of the pivoted or momentum piece *g* in combination with the annular or elliptical tappet *r*, described and shown in figure 14.

Sixth.—The feed-lever *a'* and qualifier *b'* acting in connection with the tappet *r*, as described and shown in figure 17.

Seventh.—The combination of the spiral and straight slots formed in the piston-rod in the manner and for the purpose above described, and shown in figure 14.

Eighth.—The universal clamp, by means of which the machine is set and secured at any desired angle, substantially as above described.

Ninth.—The general construction and arrangement of the parts of the hereinbefore described machine or apparatus, substantially as above set forth.

In witness whereof, I, the said Thomas Brown, have hereunto set my hand and seal, this twentieth day of February, in the year of our Lord one thousand eight hundred and seventy-three.

THOMAS BROWN. (L.S.)

Witnesses—

W. T. MANNING, Accountant,
86, Newgate-street, London, E.C.

GEO. HASELTINE,
8, Southampton Buildings, London.

This is the specification, marked A, referred to in the annexed Letters of Registration granted to Thomas Brown, this ninth day of July, 1873.

HERCULES ROBINSON.

Improvements in Machinery for drilling or perforating rocks, &c.

REPORT.

Sydney, 25 June, 1873.

SIR,

We do ourselves the honor to return to you the documents transmitted to us under your B.C. of the 11th instant, No. 4,409, and we recommend the issue of Letters of Registration, securing to Mr. Thomas Brown the exclusive right to his invention for "Improvements in Machinery for drilling or perforating rocks and other hard substances," in accordance with his Petition, drawings, specification, and claims.

We have, &c.,

GOTHER K. MANN.
E. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—three sheets.]

Fig. 1.

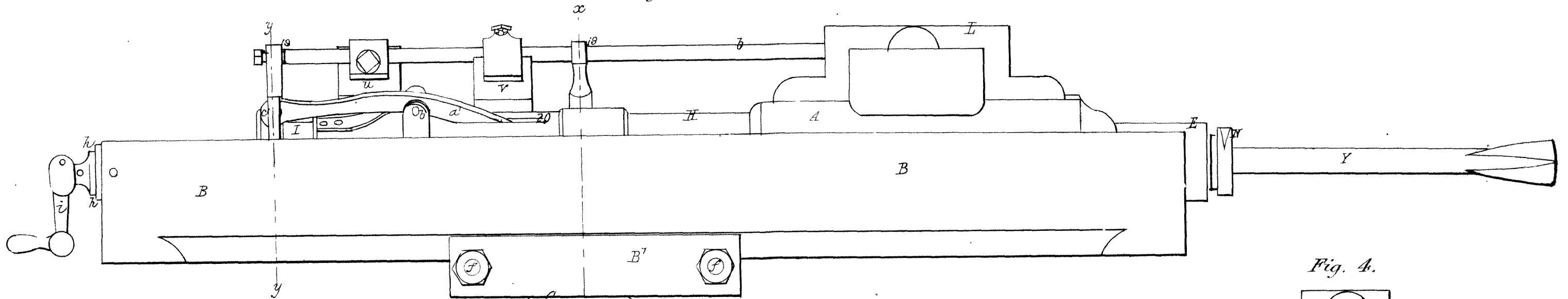


Fig. 5.

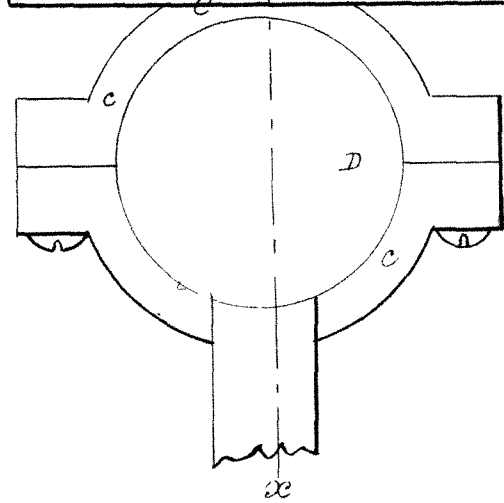
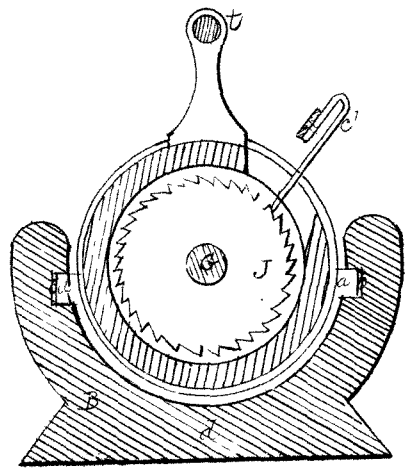


Fig. 2.

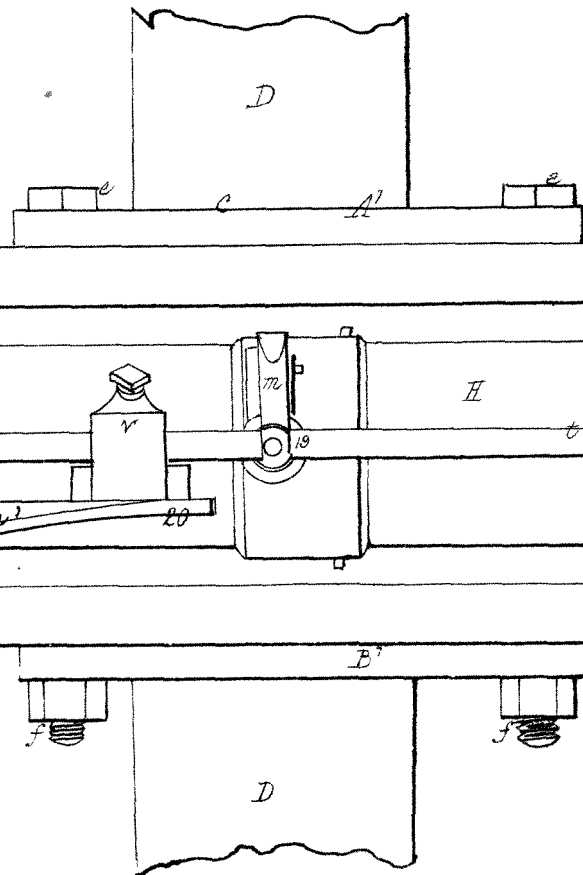
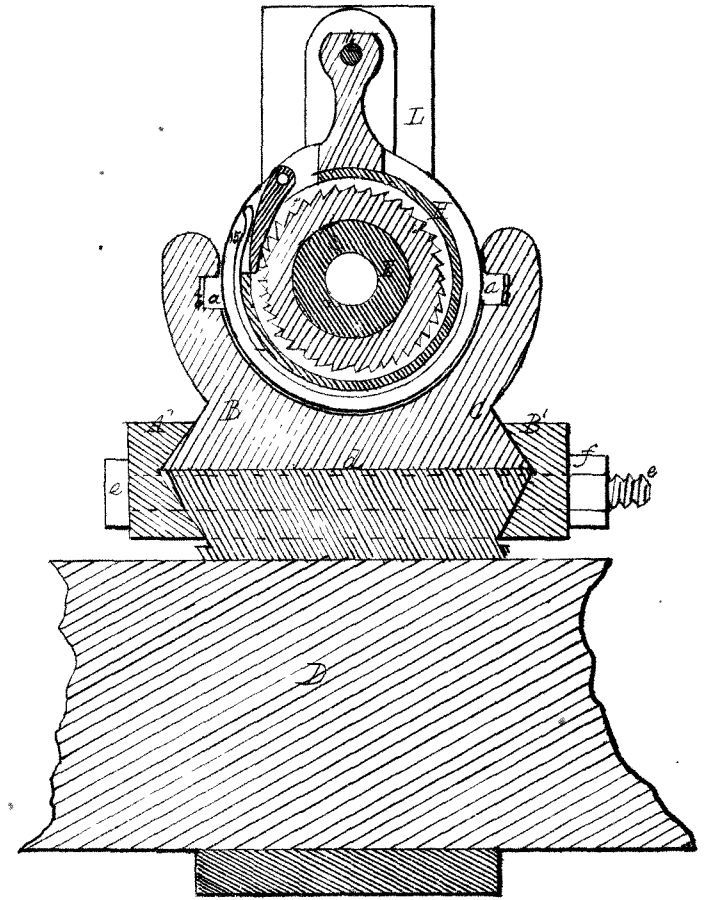


Fig. 4.



This is the Sheet of Drawings marked B, referred to in the annexed Letters of Registration granted to Thomas Brown, this ninth day of July, 1873.

Hercules Robinson.

Fig. 3.

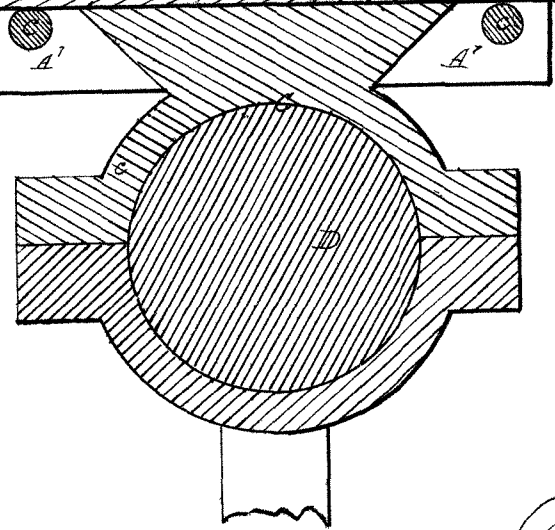
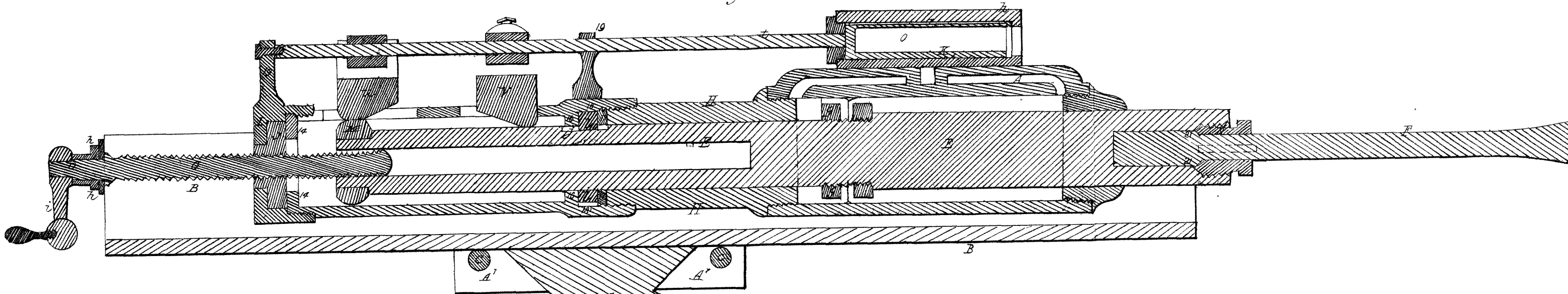


Fig. 12

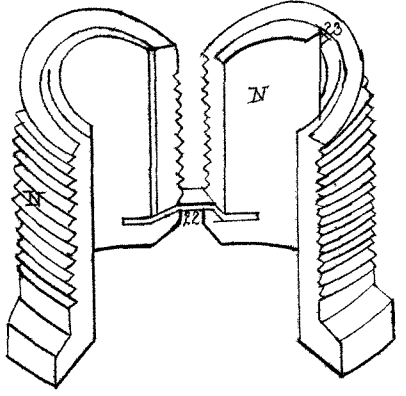


Fig. 8.

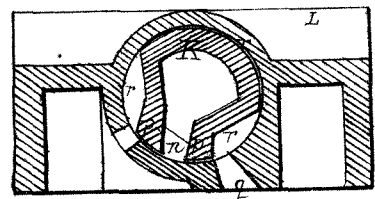


Fig. 11.

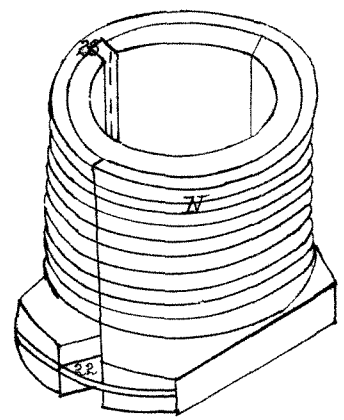


Fig. 7.

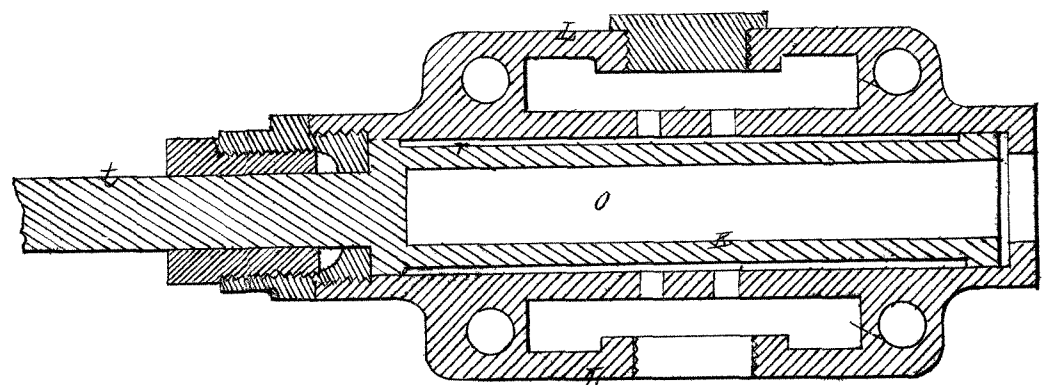


Fig. 10

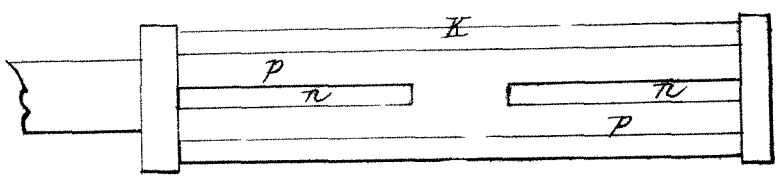


Fig. 9.

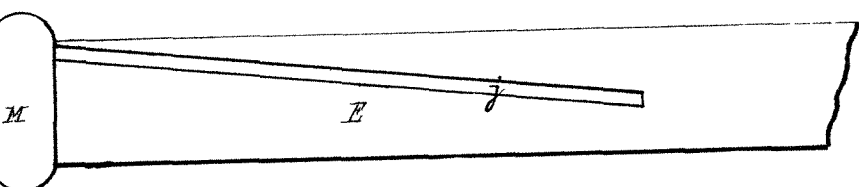
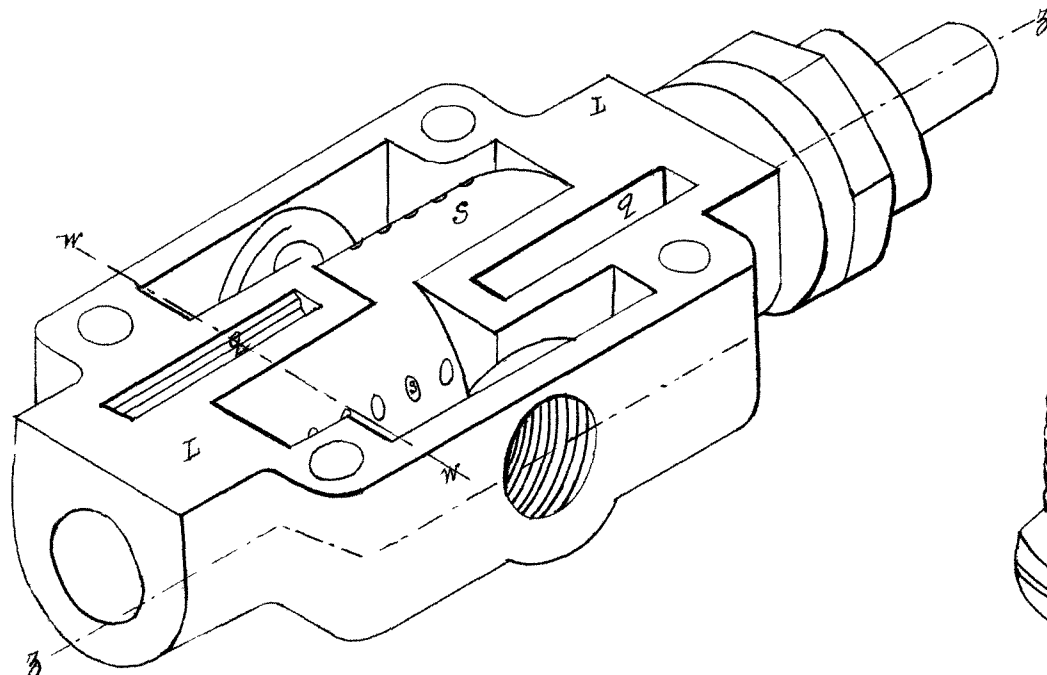


Fig. 6.

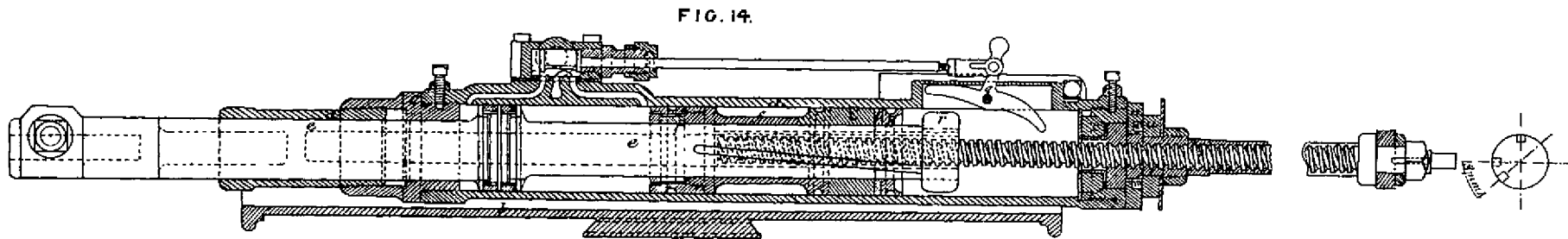
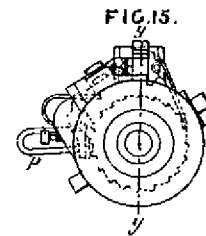
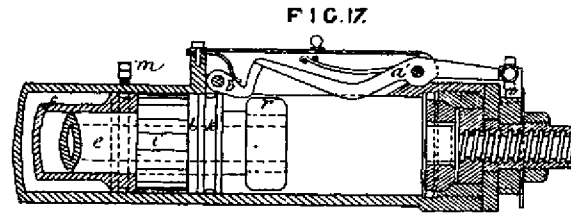
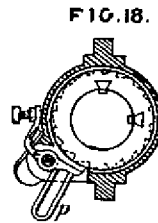
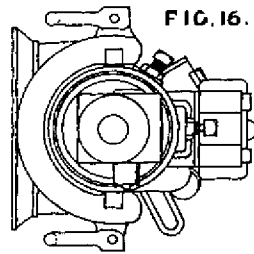
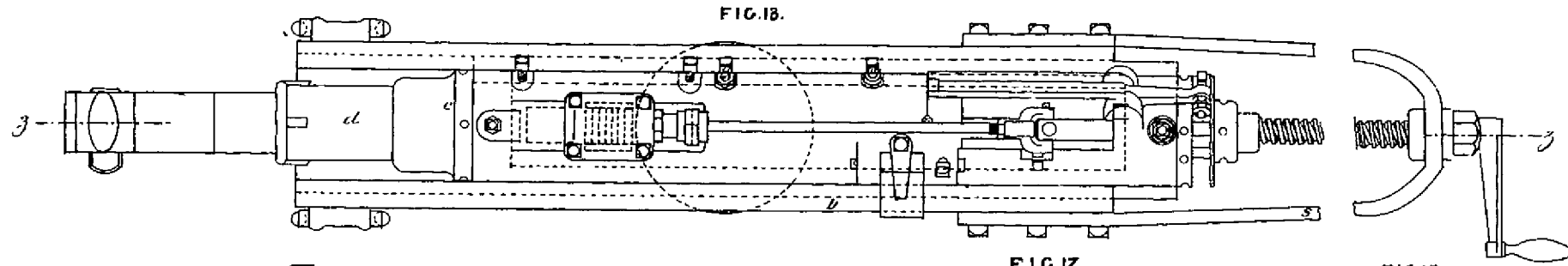


This is the Sheet of Drawings marked C, referred to in the annexed Letters of Registration granted to Thomas Brown, this ninth day of July, 1873

Hercules Robinson.

(Copy) D.

[No 368]



This is the Sheet of Drawings marked D. referred to in the annexed Letters of Registration. granted to Thomas Brown this ninth day of July 1873.

Hercules Robinson.

(Sig 1)

[73]



A.D. 1873, 7th July. No. 367.

**IMPROVEMENT FOR PULVERIZING AND CONCENTRATING FOR THE SURE
SAVING OF GOLD AND PYRITES.**

LETTERS OF REGISTRATION to Thomas Denny, for an Improvement for
pulverizing and concentrating for the sure saving of Gold and Pyrites.

[Registered on the 10th day of July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS THOMAS DENNY, of Bathurst, in the Colony of New South Wales, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for an "Improvement for pulverizing and concentrating for the sure saving of Gold and Pyrites," which is more particularly described in the specification and sheet of drawings which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years; and I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Thomas Denny, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Thomas Denny, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Thomas Denny shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this seventh day of July, in the year of our Lord one thousand eight hundred and seventy-three.

(L's.)

HERCULES ROBINSON.

Improvement for pulverizing and concentrating for

SPECIFICATION of THOMAS DENNY, of Bathurst, in the Colony of New South Wales. Improvement for pulverizing and concentrating for the sure saving of Gold and Pyrites.

My invention of certain improvements in the construction of the buddle, and in the combination of a pulverizer so constructed and attached to the buddle that the whole of the material passed through them shall by the action of the pulverizer be so reduced before going into the buddle that a buddle one quarter of the diameter of those now in use will be sufficient for the same quantity of material. For the reason that the ones now in use receive the crushed material as it leaves the stamper box, they possess no power of further reducing, but simply concentrate the coarse and imperfectly crushed quartz, consequently a very large quantity of useless material is retained, which must be further reduced or pulverized in some way before the gold it contains can be got from it, whilst with my invention the whole of the substance treated is reduced to such a state of minute divisions that the whole of the precious metal and auriferous pyrites it may contain is completely released from the matrix with which it was associated before it enters the buddle, and in passing through which a complete separation is effected.

I commence my description with the vertical shaft A, the middle portion of which is square, the bottom being turned and fitted into the centre of bottom of discharge pan. In order to prevent the oil used for lubricating this from mixing with the tailings, two recesses have been left in the castings for passing the oil through the centre. The top part of this shaft is turned also for working in a bearing, and for receiving the crown wheel which will be keyed on at the top; said crown wheel will receive motion from the pinion wheel, which is keyed on to the horizontal shaft, which also carries the driving pulley. On the square part of the vertical A the cast-iron receiver B (shown half in section) will work loose, whilst connected with the receiver are four arms, C; said arms are semi-circular on the top side for receiving the wrought-iron arms D, which are bolted through C with two bolts, EE.

At the extremity of the arms D a set screw is fitted, for the purpose of fitting and keeping the rollers always in the same position; this being necessary in consequence of the whole weight of the rollers bearing on the brass washers F. The corresponding brass cap G is the adjusting one. When the brass washer F wears, so as to let the roller down, the cap is set up by means of the set screw, this having the effect of keeping the roller always in the one place.

The regulating discharge pipes are bolted on to the receiver B (as shown in section and plan), so as to equally distribute the material to be treated under each of the four rollers H. The material so discharged under the face of the rollers is reduced immediately, because the angle of the roller and basin is such that no quantity of material can lodge on the basin I; but should any of the material be not sufficiently reduced after the rollers having passed over it once, it is again brought up under the face of the roller by the swirl of the water, which acts more powerfully on coarse particles than on that which is reduced to the required degree of fineness.

I may here explain that this peculiar and advantageous result is owing to the shape of the rollers, whose outside diameter is one-fourth greater than the inside diameter (being the frustum of a cone whose apex is the vertical centre of the vertical shaft A). As these revolve they have the effect of forcing the water and material from the outside of the circle to the inside, thus always keeping it under the rollers till fine enough to flush over the edge of the pan with the water. I mention this, because in all other pans it is necessary to fix scrapers for the purpose of shifting the uncrushed material from the outer circle to the centre of the pan. In this pan it is shown above that the swirl of the water acts in place of the scrapers, and much more efficiently. So complete is the action of the swirl of the water, that the mercury in the lower rifle or lower angle of the pan is kept perfectly clear from sand, and ready to receive any gold that may be in the material treated. Too much cannot be said in favour of this basin or pan, because in every respect it has the advantage over all other basins made, some of which advantages I will here mention.

The objections to the Chilian mill is the bottom of the pan is horizontal, it receives the material to be operated on in mass, and in one spot. The quicksilver which is put in is generally ground to flour and destroyed, carrying away with it large quantities of fine gold. The wear and tear is likewise great, because the rollers are square across the face, that is to say, the two diameters are alike in both the inside and outside of the roller, and thus when revolving, as they have to travel different distances in the same space of time, a grinding motion is the consequence, which flours the quicksilver, destroys the rollers and basin, reduces its efficient action, and vastly increases the friction and strain on the machinery; thus wasting much power. All the objectionable qualities are set aside by this invention. The face of the rollers are made at such an angle that they may be compared to a Chilian roller running on a plane; the pan being made at such an angle that it protects the silver in the well J so completely that it is impossible for the rollers to injure it at any time. After the material is sufficiently reduced it flows over the edge of the pan K into the outside pan L, thence under the angle pan M through the radiating depressions in the surface of the bottom of the outside pan L, such depressions being made with sufficient area to discharge the same quantity as will pass through the pipes in the receiver. After passing through these channels it falls with a drop of five inches into the silver well N, it then passes under the adjusting slide O, passing over the mercury P, thence into the outer circle Q of the buddle, thence over the stop into the second circle R of the buddle, thence over the stop into the third circle S, thence over the stop into the discharge pan T.

The outside pan L, the silver N, the buddle pan Q R S, are all one casting; the pulverizing angle pan M is a separate casting, and sits on the outer pan in two places, U V, no fastening being required.

The rakes W are made of wrought iron, with adjusting screws, also adjusting screws in the centre of rake arms, so arranged that one turn of the two screws lifts it to any required height.

I do not bind myself to the precise details herein stated, as it is evident that they may be altered or varied without departing from the nature of my invention, but I claim as my invention the combination of pulverizer with buddle, the peculiar shape of the rollers and pans (which of course will vary according to the diameter of the pan).

The adjusting brass cap and washers at the extremity of the wrought-iron arms. The distributing of the material by means of the receivers and pipes, said material being discharged immediately under the face of the rollers to be pulverized. The depressions in the outer pan for passing the pulverized material into the silver well.

the sure saving of Gold and Pyrites.

The silver well at the outer periphery of the buddle basin, and the right to make them to any diameter required, and with any number of arms, pipes, and rollers, also with any diameters of rollers, pipes, pans, and arms.

The arrangement for self-cleaning consists of fitting pieces of wrought iron fitted into a gap in each of the buddle stop circles No. 2, 2, 2. I take one wrought-iron rake off the arms for each circle, and fix a cleaning brush in its place. I then take out the fitting piece 2 2 2, to allow the mercury, gold, pyrites, &c., to pass through the gaps; said mercury, gold, pyrites, &c., forces through by action of the brushes aforesaid into the bottom pan.

I also claim as my invention the self-acting cleaning out of the top pan by means of a properly fitted brush, said brush to revolve, sweeping the pan till all materials are clean swept out, the means of egress being through a properly fitted pipe and cock, fitted into the pulverizing pan, and passing out through the outer pan. I also claim the right to make the pan flat if necessary, and the rollers cone-shaped, the arms for which would be depressed, so as the rollers would coincide with the pan.

THOMAS DENNY,
Denison Foundry,
Bathurst.

This is the specification referred to in the annexed Letters of Registration granted to Thomas Denny, this seventh day of July, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 19 June, 1873.

SIR,

We do ourselves the honor to return to you the documents transmitted to us under your B.C. communication of 11th instant, No. 73-4026, which have reference to Mr. Thomas Denny's application for Letters of Registration for "Improvements for pulverizing and concentrating for the sure saving of Gold and Pyrites"; and we do ourselves the honor to recommend that Letters of Registration be granted, securing to Mr. Denny the exclusive right to his invention, in accordance with his Petition, specification, drawings, and claims.

We have, &c.,

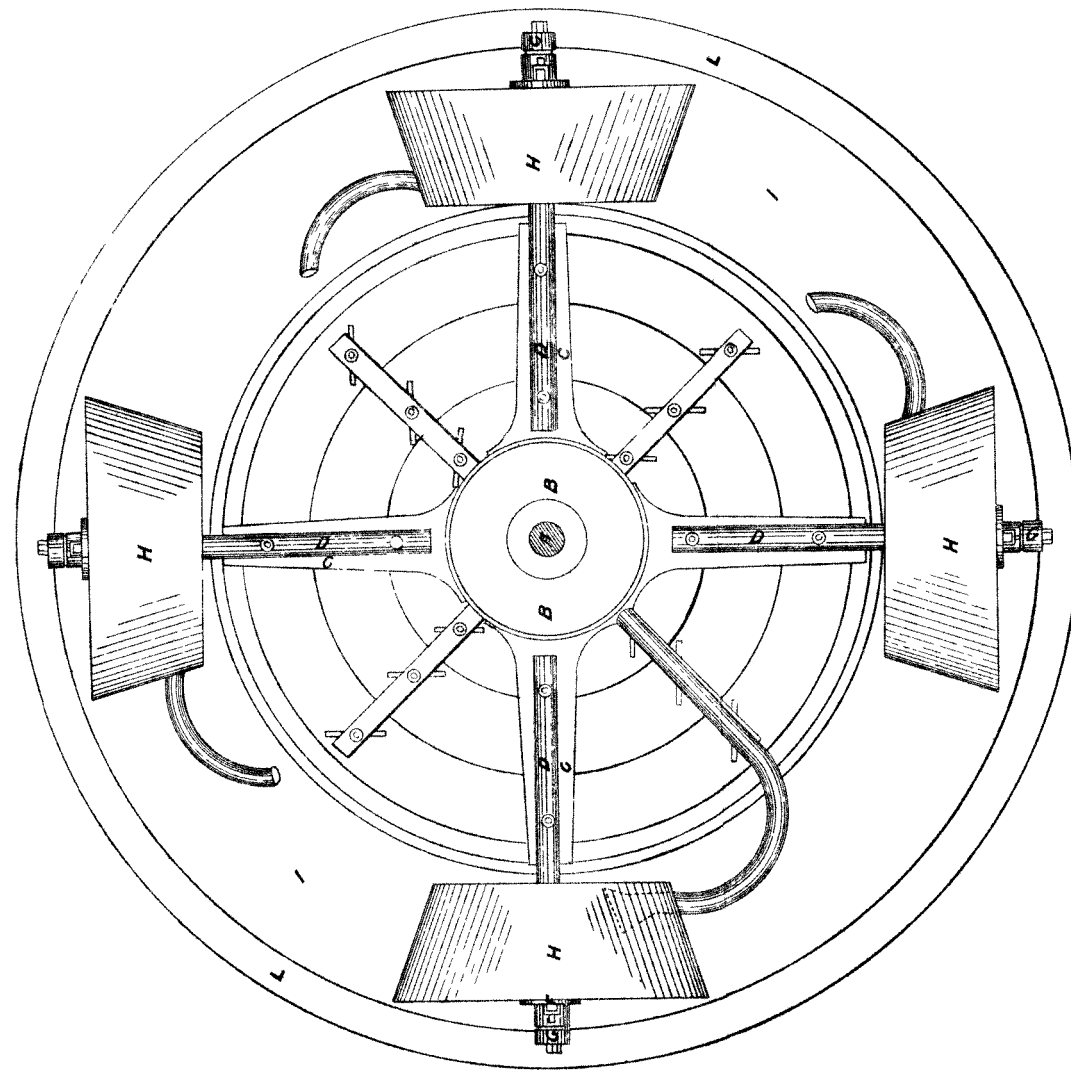
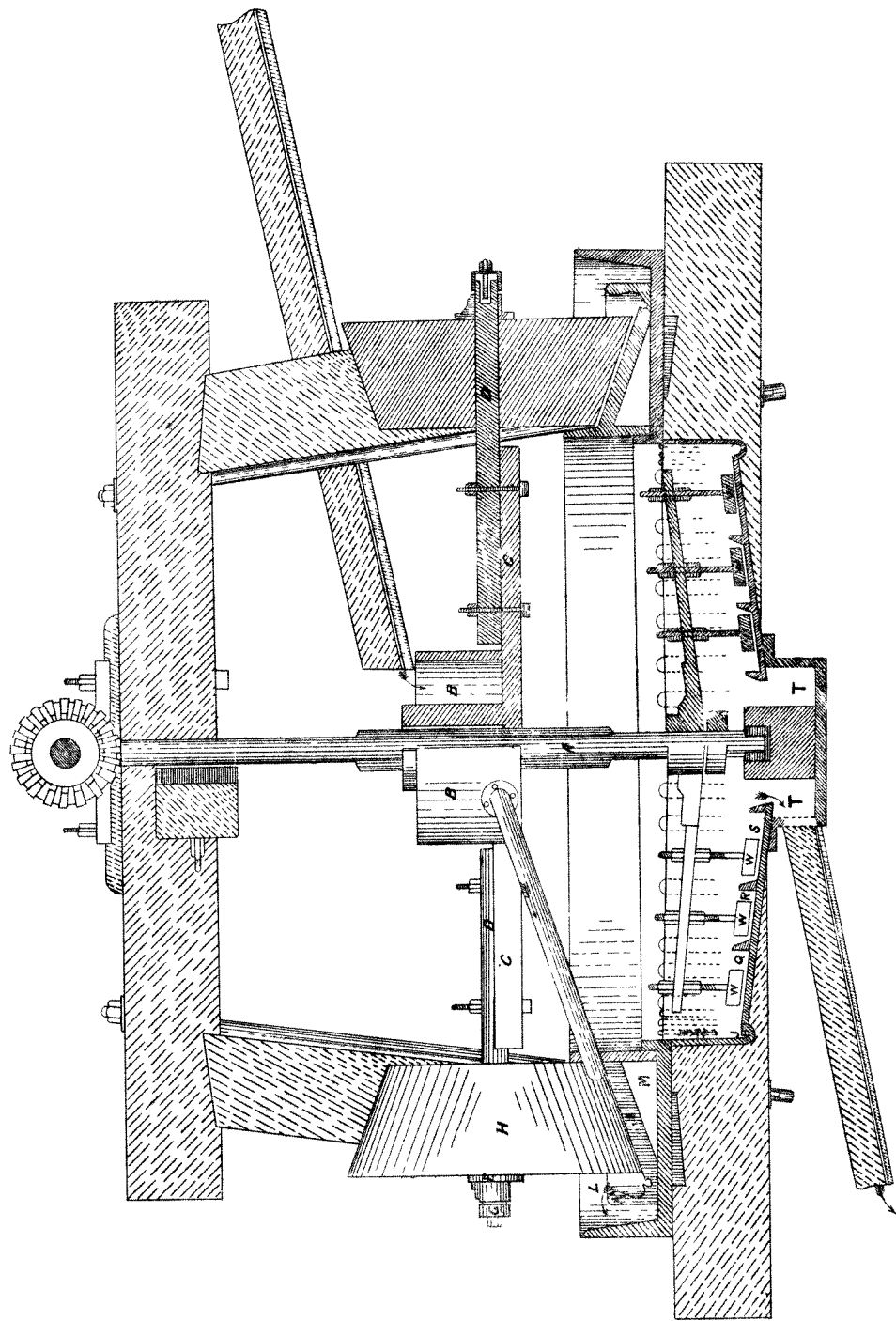
GOTHER K. MANN.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

(Copy)

N^o 367



*This is the Sheet of Drawings referred to in the
annexed Letters of Registration granted to
Thomas Denny this seventh day of July 1873.
Hercules Robinson.*

(Sig 1)

[77]



A.D. 1873, 7th July. No. 368.

AN IMPROVED METHOD OF COLLECTING AND RETAINING GOLD AND SILVER, &c.

LETTERS OF REGISTRATION to Allen Hollinshed and James Smith Norrie, for an improved method of collecting and retaining Gold and Silver, by the process of amalgamation from quartz and other mineral substances.

[Registered on the 10th July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS ALLEN HOLLINSHED and JAMES SMITH NORRIE, both of the city of Sydney, in the Colony of New South Wales, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention for the better method of collecting and retaining Gold and Silver, by the process of amalgamation from quartz and other mineral substances containing those metals, which said invention is more particularly described in the specification which is hereunto annexed; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Allen Hollinshed and James Smith Norrie, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Allen Hollinshed and James Smith Norrie, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Allen Hollinshed and James Smith Norrie shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this seventh day of July, in the year of our Lord one thousand eight hundred and seventy-three.

(T.S.)

HERCULES ROBINSON.

An improved method of collecting and retaining Gold and Silver, &c.

SPECIFICATION of an improved method of collecting and retaining Gold and Silver, by the process of amalgamation from quartz and other mineral substances.

INSTEAD of the usual process of passing quartz and other mineral substances over the surface of mercury, we convey them, together with the water used in the process of washing, through a tube, at a sufficient elevation to overcome the pressure of a column of mercury, whereby the lighter substances rise to the surface and are conveyed away, while the precious metals are effectually retained in the amalgamator, which may be of any convenient shape or size, provided with perforated diaphragms, for the better distribution of the passing current. By this means any alluvial soil or tailings may be expeditiously and effectually treated.

We claim by this principle to extract the precious metals from quartz or other mineral substances by passing them through mercury obtained by pressure of a column of water or other mechanical contrivance. We also use sodium amalgam with the mercury in cases where its presence is found desirable, and especially in mineral substances containing pyrites.

ALLEN HOLLINSHED.
JAMES SMITH NORRIE.

Dated at Sydney, this 27th day of May, one thousand eight hundred and seventy-three.

This is the specification referred to in the annexed Letters of Registration granted to Allen Hollinshed and James Smith Norrie, this seventh day of July, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 19 June, 1873.

SIR,

We do ourselves the honor to return the documents transmitted for our report, under your B.C. communication of the 4th instant, No. 73/4149, and which have reference to an improved method of collecting and retaining Gold and Silver, by the process of amalgamation from quartz and other mineral substances; and we do ourselves the honor to recommend the issue of Letters of Registration securing to Messrs. Allen Hollinshed and James Smith Norrie the exclusive right to their invention, in accordance with their Petition, specification, and claim.

We have, &c.,
GOTHEK K. MANN.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

[79]



A.D. 1873, 7th July. No. 369.

**A METHOD OF REDUCING ALL MINERAL ORES AND QUARTZ STONE TO
A POWDER, &c.**

LETTERS OF REGISTRATION to Edward Reading, for an Invention for reducing mineral ores and quartz stone to a powder, by means of which all the Gold that may be therein may be readily extracted therefrom.

[Registered on the 10th day of July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS EDWARD READING, of the city of Sydney, in the Colony of New South Wales, dentist, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for reducing mineral ores and quartz stone to a powder, by means of which all the Gold that may be therein may be readily extracted therefrom with a great saving of labour, which said invention is more particularly described in the specification which is hereunto annexed ; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four ; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years : And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Edward Reading, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof ; to have, hold, and exercise unto the said Edward Reading, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended : Provided always, that if the said Edward Reading shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supremo Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this seventh day of July, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

A method of reducing all mineral ores and quartz stone to a powder, &c.

SPECIFICATION.

THE invention consists of a method for reducing all mineral ores and quartz stone to a powder. The mineral ore or quartz stone is burnt or roasted; while in a heated condition it is submitted to an acid bath made with sulphuric acid, or any other strong acids, by which means the mundic and sulphur contained in the stone is destroyed; this reduces the mineral ore or quartz to a rotten state, and it may then be easily converted to an impalpable powder. The stone is now crushed in the mills, and while being crushed an alkaline solution may be used which is composed with any strong potash. After grinding, the quicksilver can be used for amalgamation.

EDWARD READING.

This is the specification referred to in the annexed Letters of Registration granted to Edward Reading, this seventh day of July, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 13 June, 1873.

SIR,
The application of Mr. Edward Reading for Letters of Registration for a "method of reducing all mineral ores and quartz stone to a powder, by means of which all the Gold that may be therein may be readily extracted therefrom," having been referred to us, we have examined the specification accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,

J. SMITH.

A. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY.



A.D. 1873, 15th July. No. 370.

LYONS'S CHLORO-ALKALINE DEODORIZER AND DISINFECTANT.

LETTERS OF REGISTRATION to John Christian Lyons and Frederic John Christian Lyons, for Lyons's Chloro-alkaline Deodorizer and Disinfectant.

[Registered on the 16th July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS JOHN CHRISTIAN LYONS and FREDERIC JOHN CHRISTIAN LYONS, both of Botany, near Sydney, in the Colony of New South Wales, operative chemists, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention styled "Lyons's Chloro-alkaline Deodorizer and Disinfectant," which is more particularly described in the specification which is hereunto annexed; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said John Christian Lyons and Frederic John Christian Lyons, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said John Christian Lyons and Frederic John Christian Lyons, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided-always, that if the said John Christian Lyons and Frederic John Christian Lyons shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this fifteenth day of July, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Lyons's Chloro-alkaline Deodorizer and Disinfectant.

SPECIFICATION for manufacturing Lyons's Chloro-alkaline Deodorizer and Disinfectant.

NOW KNOW YE that the process we employ for making our patent chloro-alkaline preparation, and the mode or manner of using the same, is ascertained in and by the following description, that is to say,—we take two parts by weight of a certain natural deposit, which is chiefly composed of chlorine, iron, alumina, and silica, and is found at Bass's Straits and on the sea-shore generally, and one part by weight of dolomite or native carbonate of lime and magnesia—both articles should be perfectly well dried; we then have them crushed and prepared into a very fine powder and thoroughly well mixed; this forms No. 1 powder and is intended for deodorizing and disinfecting purposes generally, but more particularly for destroying all foul and putrescent smells from whatever cause arising, arresting the decomposition of animal and vegetable matters, by the fixing of the ammoniacal and also the nitrogenous elements of fertilizing elements, intended by these means to utilize all fecal and decayed garbage or other waste of our soap-works, tanneries, abattoirs, cesspits, and gas-works, &c., in combination with certain chemical substances, as they may be found necessary according to the kind and particular special character of each concentrated manure required for the soil or crop, by the employment of the chloro-alkaline deodorizer and disinfectant in the large way for the effectual treatment of water-closets, gases principally composed of hydrogen, sulphur, and ammonia. We propose to avail ourselves of our invention either in the form of powder or in solution. For water-closets, and for the purpose of cleansing drains and sewers, we cause a funnel-shaped box with self-acting valve which is made to open and close for the purpose of delivering the powder simultaneously with the water, to be fixed in such a manner that the ordinary motive power employed to discharge the one shall also effect a discharge of the other, and thus a perfect and cleanly system of disinfection will be developed at one and the same time, without giving rise to any other smell or mal-odour whatever, as is found to be the case in the use of most preparations for a similar object. For the use of sick rooms, fever-wards in hospitals, barrack quarters, ship's use, &c., &c., we simply to every given quantity by weight of our No. 1, or the chloro-alkaline deposit, add sufficient rain or soft water to saturate until a corresponding quantity of solution filters or percolates through the filter, and is then bottled for use. This solution of chloro-alkaline is non-odorous, and also non-poisonous to animal life, and the way to use it to arrest all kinds of pestilential effluvia or noxious gases from cholera, typhus, scarlatina, or other infectious or contagious disease, is to sprinkle it about the walls or floors of sick rooms, &c., or it can be very effectually distributed through the surrounding atmosphere by means of a spray distributor or any similar mode. Diluted with equal parts of water and solution, it will remove and prevent all taint in fish, meat, fowl, and most perishable articles for culinary use, as it is an antiseptic and preservative. Although we have named and described the composition of our No. 1 preparation, we also for cheap use and effectual treatment of night-soil, blood, offal, and sewerage generally, mix the chloro-alkaline deodorizer and disinfectant with fresh burnt lime, dried peat, charcoal, wood ashes, bone dust, dolomite, or other convenient absorbent material.

RIDER A.

We therefore claim as our invention the admixture of a certain natural compound described above with dolomite in various proportions, as a disinfectant, which is of an entirely new and improved character, and which we propose to carry into effect in the manner hereinbefore described.

Dated this eighth day of May, A.D. 1873.

JOHN CHRISTIAN LYONS.
FREDERIC JOHN CHRISTIAN LYONS.

This is the specification referred to in the annexed Letters of Registration granted to John Christian Lyons and Frederic John Christian Lyons, this fifteenth day of July, 1873.

HERCULES ROBINSON.

REPORTS.

Sydney, 26 May, 1873.

SIR,

The application of Messrs. John C. Lyons and Frederic J. C. Lyons for Letters of Registration for a "Chloro-alkaline Deodorizer and Disinfectant" having been referred to us, we have the honor to report thereon as follows:—

The specification is not so explicit as we should desire in defining what it is exactly that is to be protected, and we have endeavoured to communicate with the applicants on this subject, but without success. On the understanding, however, that Messrs. Lyons propose to take a certain natural product, composed chiefly of "chlorine, iron, alumina, and silica" found on the sea-shore, and to mix this with "dolomite or native carbonate of lime and magnesia" for the purpose of forming a disinfectant, and that this mixture is what they claim in their specification, we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,

J. SMITH.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

P.S.—We have just seen Mr. John C. Lyons, who explains that our letter of date May 19th was not delivered to him till this morning. He is willing to accept the definition of his claim as expressed above.

J. S.
C. W.

Sydney,

A.D. 1873. No. 370.

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Lyons's Chloro-alkaline Deodorizer and Disinfectant.

Sydney, 8 July, 1873.

SIR,

In the matter of Messrs. Lyons's application for Letters of Registration for a Deodorizer and Disinfectant, we have the honor to report further that an amended specification has been submitted to us (enclosed herewith), and that with this specification we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,

J. SMITH.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

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A.D. 1873, 21st July. No. 371.

**IMPROVEMENTS IN TOOLS FOR BORING, AND IN APPARATUS FOR WORKING
THE SAME.**

LETTERS OF REGISTRATION to John Melton Black, for Improvements in
Tools for boring, and in apparatus for working the same.

[Registered on the 2nd day of July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS JOHN MELTON BLACK, of Bedford-place, Russell-square, in the county of Middlesex, England, hath by his Petition humbly represented to me that he is the assignee of Jean Rodolphe Leschot, of Paris, in the Republic of France, who is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in Tools for boring, and in apparatus for working the same," which is more particularly described in the specification and sheet of drawings which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said John Melton Black, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said John Melton Black, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said John Melton Black shall not, within three days after the granting of these Letters of Registration, register the same in the proper office at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-first day of July, in the year of our Lord one thousand eight hundred and seventy-three.

(r.s.)

HERCULES ROBINSON.

Improvements in Tools for boring, and in apparatus for working the same.

SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN MELTON BLACK, of 26, Bedford-place, Russell-square, in the county of Middlesex, England, send greeting:

WHEREAS I am desirous of obtaining Letters of Registration under the sign manual and seal of the Colony of New South Wales, for the exclusive enjoyment and advantage, for a period of fourteen years, of an invention for "Improvements in Tools for boring, and in apparatus for working the same," invented by Jean Rodolphe Leschot, of Paris, in the Republic of France, and of which I am the assignee: Now know ye, that the nature of the said invention, and the manner in which the same is to be performed, is particularly described and ascertained in and by the following statement, that is to say:—

This invention relates to the construction of and means for employing boring tools which are intended to be used for boring rocks, for blasting, for "prospecting," and for other purposes. These tools are armed with diamond-cutters, to which a rotary and an advancing motion are simultaneously communicated. The tool consists of a metal tube with a ring (preferably of iron or steel) at the working end, into which the cutters are fitted. This tube is connected by a bayonet joint or otherwise to a hollow rotary shaft, which, on rotary motion being communicated to it, carries forward the tool and causes it to cut out from the rock, stone, or other material acted on, a core of the material, which core is disengaged and severed from time to time, thus allowing of the inspection of the rock as the boring operation proceeds. This annular rock drill is studded at its cutting end with diamonds or equivalent hard natural substances, as for example that known as "bort," which substances are embedded in the face of the ring so as to utilize in the best manner their cutting faces, and channels or grooves may be formed on the exterior and interior surfaces of the ring to facilitate the passage of the water and detritus.

In the accompanying drawing, fig. 1 is a side view of the annular cutting tool, fig. 2 is a plan view of the same, and fig. 3 is a section taken in the plane of the axis of the tool, and showing it attached to its rotary shaft; *a* is a tube of steel or iron or other metal, *b* is a ring or crown carrying on its face two or three rings of cutters, *cc*, consisting of hard minerals, by preference of the carbon series in their natural state.

This ring is shown as formed with a bayonet joint to fit on to the hollow shaft by which it is operated. The mechanism for presenting the tool to its work, and imparting a simultaneous rotary and advancing motion thereto, admits of various modifications to suit varying circumstances. I will, however, describe but one arrangement, as it will sufficiently indicate what is required to put the invention into practical operation.

Fig. 4 shows in side elevation an arrangement of mechanism for adapting the tool for boring in mines. *A* is a standard rising up from a wheel-carriage, *B*, and fitted at its upper end with a screw, *A*¹, for operating a clamp, *C*, and causing the same to bind against the roof of the "cutting" and hold the mechanism firmly in position. On the side of the standard is mounted an adjustable rocking-plate, *D*, which is movable round the vertical upright *A*, and capable of being raised or lowered to enable it to be worked at all heights. By means of three bolts, *a*, the conical heads of which slide in a circular groove or slot, the tool may be also inclined to bore holes at any angle or in any direction. The plate *D* carries at its extremities bearings, *dd*, for receiving a hollow shaft, *E*, which has an endway motion in its bearings, and also a driving shaft, *F*. The shaft *E* carries at its forward end the annular cutting tool *G*, and at its rear it is threaded left-handed as at *E*¹ to fit into a stationary nut, *e*, which carries a spur pinion.

Fitted on to the shaft *F* is a flanged pinion, *f*, provided with a feather which enters the groove in the shaft *F*, and thus allows the pinion to travel from end to end of that shaft. *f*¹ is a bevelled pinion gearing into a bevelled pinion, *h*, on the boss of the pulley *H*, which pulley is mounted on a stud axle carried by the plate *D*. This pulley is shown as driven by a strap, *I*, from any first mover. By its rotation rotary motion will be communicated through the bevelled gear *h f*¹ to the shaft *F*, and thence to the spur pinion *f*. In gear with this pinion is a spur pinion, *e*¹, on the shaft *E*, and through it a rapid rotary motion is given to the cutter. Made fast to the shaft *F*, by means of a friction clutch, is a pinion, *f*², which gears into the spur teeth on the nut *e*, and serves to rotate that nut. This arrangement of gearing is intended to give a rapid rotary and a slow advancing motion to the cutter, but in order to effect this it is necessary that the pinion *e*¹ and nut *e* should vary slightly in their speeds. The nut *e* is therefore arranged to overrun slightly the pinion *e*¹, and in case the tool should meet with an undue resistance, the pinion *f*² is allowed to slip on its shaft, and thus retard the advance of the tool. As the tool advances in its cut, the pinion *e*¹ will be carried forward, and with it the flanged pinion *f* until they have reached the end of their traverse. The rotary motion of the apparatus is still continued, but on slackening the friction clip *f*² without reversing the rotary motion of the apparatus, the now quiescent nut will reverse the direction of traverse of the shaft *E*, and bring back the spur pinions to their starting position.

Attached to the rear end of the hollow shaft *E*, by means of a box coupling in which the shaft freely rotates, is a flexible tube, *K*, in connection with a force pump or head of water.

By means of this tube a stream of water is caused to pass into the boring and discharge the detritus therefrom, whereby the tool will be prevented from choking, and will at the same time be kept well lubricated. It will be understood that, according to the work it is to be put to, the boring tool may be single or multiple, that is to say, any number may be fitted on one frame, being so arranged as to work at all angles and in all directions, parallel, convergent, or divergent. Motion may be communicated by hand, steam, or other power.

Having now described the nature of the invention of "Improvements in Tools for boring, and in apparatus for working the same," I wish it to be understood that I claim—

First.—Constructing boring tools with a ring or crown at the working end, armed with diamond or equivalent cutters, as hereinbefore described and illustrated in the accompanying drawing.

Secondly.—The apparatus for imparting simultaneous rotary and advancing motions to boring tools, substantially as hereinbefore described, and illustrated in the accompanying drawings.

In witness whereof, I, the said John Melton Black, have hereunto set my hand and seal, the twenty-first day of February, in the year of our Lord one thousand eight hundred and seventy-three.

J. M. BLACK. (L.S.)

This is the specification referred to in the annexed Letters of Registration granted to John Melton Black, this twenty-first day of July, 1873.

HERCULES ROBINSON.

REPORT.

Improvements in Tools for boring, and in apparatus for working the same.

REPORT.

Sydney, 12 June, 1873.

SIR,

In returning to you the enclosed documents, being the application of Mr. John Melton Black for Letters of Registration securing to him the exclusive right to an invention of certain "Improvements in Tools for boring, and in apparatus for working the same,"—we do ourselves the honor to report that we find, on examination, that so much of this invention as involves the principle of forming the boring tools in the form of a tube is embodied in the clauses attached to Messrs. Beaumont and Appleby's application, 73/3521, but we recommend Mr. J. M. Black's claims for registration in their entirety, it appearing on reference to dates that they have priority to those of the former applicants.

We have, &c.,

GOTHER K. MANN.
E. C. CRACKNELL.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

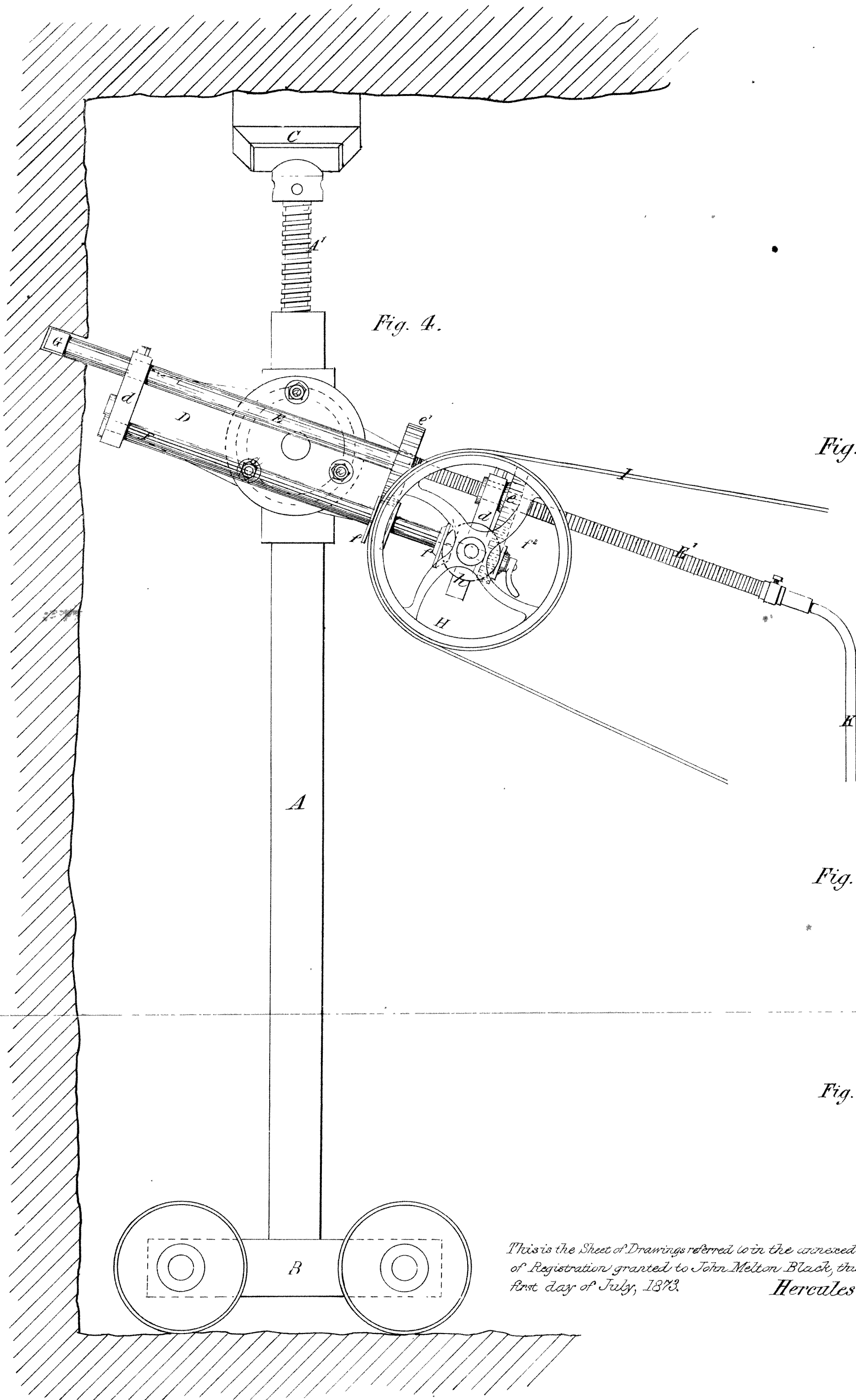


Fig. 4.

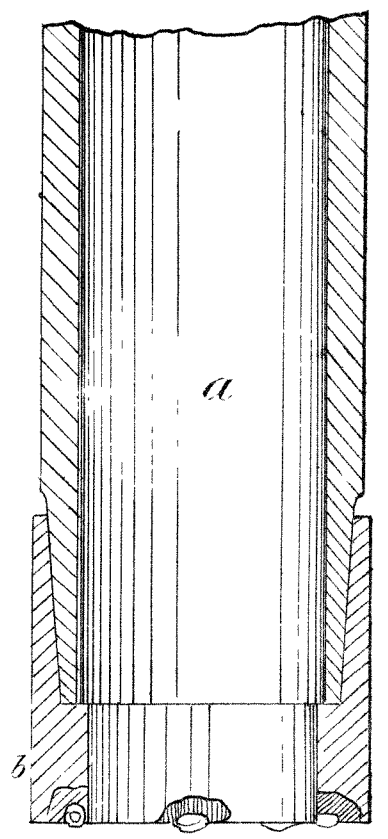


Fig. 3.

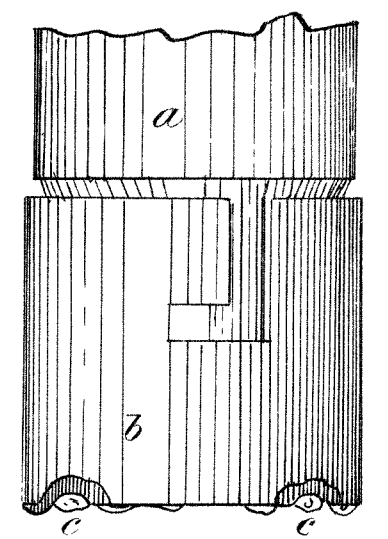


Fig. 1.

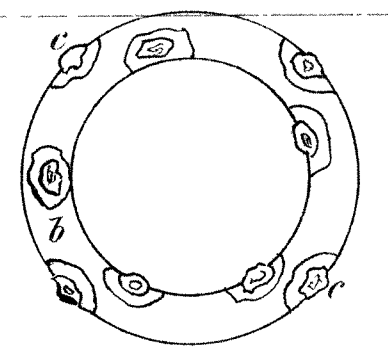


Fig. 2.

This is the Sheet of Drawings referred to in the annexed Letters
of Registration granted to John Melton Black, this twenty-
first day of July, 1843. *Hercules Robinson.*

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A.D. 1873, 21st July. No. 372.

PERRINS'S PATENT HYDRAULIC CEMENT.

LETTERS OF REGISTRATION to James Bishop Perrins, for "Perrins's Patent Hydraulic Cement."

[Registered on the 23rd day of July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS JAMES BISHOP PERRINS, of Melbourne, in the Colony of Victoria, brewer, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention known as "Perrins's Patent Hydraulic Cement," which is more particularly described in the specification which is hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said James Bishop Perrins, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said James Bishop Perrins, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said James Bishop Perrins shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-first day of July, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Perrins's Patent Hydraulic Cement.

SPECIFICATION.

THE materials to be used are limestone and bluestone, or limestone and any basaltic rock, the proportions being sixteen pounds of bluestone to forty-nine and a half pounds of limestone, or in other proportions as the materials may be required to set or harden slowly or more quickly. They are first ground to a fine powder and properly mixed, water is added sufficient to form the mixture into a plastic state, then moulded into bricks or slabs, and subjected to pressure, after which it is baked and then re-ground.

This is the specification referred to in the annexed Letters of Registration granted to James Bishop Perrins, this twenty-first day of July, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 28 June, 1873.

SIR,

The application of Mr. James B Perrins for Letters of Registration for the manufacture of a Cement known as "Perrins's Patent Hydraulic Cement," having been referred to us, we have examined the specification accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,

J. SMITH.
JAMES BARNET.THE PRINCIPAL UNDER SECRETARY.



A.D. 1873, 25th July. No. 373.

IMPROVEMENTS IN APPARATUS FOR WORKING BRAKES FOR RAILWAY AND OTHER CARRIAGES.

LETTERS OF REGISTRATION to Jacob Heberlein, for Improvements in Apparatus for working Brakes for Railway and other Carriages.

[Registered on the 25th day of July, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS JACOB HEBERLEIN, of Munich, in the Kingdom of Bavaria, engineer, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in Apparatus for working Brakes for Railway and other Carriages," which is more particularly described in the specification, marked A, and the three sheets of drawings, marked B, C, and D, respectively, which are hereunto annexed ; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expuse of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four ; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years : And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Jacob Heberlein, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof ; to have, hold, and exercise unto the said Jacob Heberlein, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended : Provided always, that if the said Jacob Heberlein shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-fifth day of July, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in Apparatus for working Brakes for Railway and other Carriages.

A.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN: Be it known that I, JACOB HEBERLEIN, of Munich, in the Kingdom of Bavaria, engineer, do hereby declare the nature of the said invention for "Improvements in Apparatus for working Brakes for Railway and other Carriages," and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, reference being had to the accompanying drawings, and to the figures and letters marked thereon, that is to say:—

This invention applies to that kind of brakes which are worked by the frictional contact of drums fixed on some of the running axles with other drums which are brought in contact with them, and which are thereby caused to revolve and to wind up chains attached to the brake levers and so to press the brake blocks against the wheels.

Certain brakes of this kind are already known, but they are in some respects defective. The object of the present improvements is to remedy those defects, and to secure simplicity and efficiency in the working of the apparatus and control of its action.

The accompanying drawings represent brake apparatus constructed so as to embody these improvements and show their application on railway trains and tramway cars.

Figure 1, sheet I, represents a side view of the invention applied to a locomotive and tender. Figure 2, sheet I, shows it applied to two carriages of a train. Figures 3 and 4, sheet II, represent, respectively, a side view and plan of details to a larger scale. The remaining figures show modifications which are hereafter referred to.

In the figures 1 to 4, A is one of the running axles, on which is fixed a drum, B, having its periphery formed of numerous wedge-shaped pieces of wood laid with the fibres radial, or nearly so, and held between two metals rings, CC, by means of bolts which pass through the rings and the wooden segments. The rings CC are made in halves, so that they can be put on the axle without taking off either wheel. By preference the wood is put on in two widths, and the pieces of the one width breaking joint with those of the other.

It is to be understood that either the drum fixed on the running axle may have a wooden periphery as above described, or it may be of iron, the wooden periphery being applied to the drum driven by it; also, instead of putting such wooden periphery on in segments, it may be made in tenon-shaped pieces driven into mortises in the rim of the drum, and secured by cross-pins in a manner similar to that adopted in putting in and fixing the wooden cogs of mortise wheels. D is a friction drum, which may be of cast-iron with a wrought-iron tire. This drum is fixed on an axle which is mounted in bearings in a forked lever, E. Upon each end of the axle of the drum D is fixed a pulley, D², to which one end of a pitch chain, F, is fixed by a pin passed through its last link and the cheeks of the pulley, so that when the pulley is caused to revolve in either direction the chain is wound thereon. The chain being nearly of the same width as the space between the cheeks of the pulley, it cannot jam when it is wound thereon. The other end of each chain is attached to the arm of a lever, G, which is forked so as to receive both chains, and from which rods are connected to the brake levers. In the case of the locomotive and tender (as shown in figure 1, sheet I) the chains F are connected by rods to the middle of an equal armed lever or sway-beam, G¹, from the ends of which rods, G² and G³, are connected respectively to the brake levers of the locomotive and tender, so that when the chains F are pulled the strain is divided equally over both sets of brakes.

In the case where the brakes of two carriages are to be worked, the connections from the lever G to the several brake levers are arranged as shown in figure 2, sheet I. The lever G has jointed to it two rods, H and H¹. The rod H works the brakes of the brake carriage, and the other rod, H¹, is carried through a guide bracket, M, and is coupled to the brake rod of the next carriage. When it is so coupled the strain of the chains F on the lever G causes it to act on both sets of brakes; but when the hinder carriage is detached from the brake carriage, the coupling of the brake rod is hooked on to one end of a lever, K, which is thereby turned so that its other end butts against the bracket M¹, as shown in figure 2^a, sheet I. In this condition the rod H¹ becomes fixed, so that the lever G turns on the pin at its end as its fulcrum, and acts only by the rod H on the brakes of the brake carriage itself.

The lever E, on which the friction drum D is mounted, stands in a vertical position for the locomotive, as shown in figure 1, sheet I, and a weight, E², is placed on a lever, E¹, connected with the lever E by levers E³ in such a manner as to press the drum D against the axle drum B. A rod, I, is carried from the lever E along the boiler to a point within reach of the engine-driver, and is made with a catch or projection which can be engaged on a tumbler, I¹. When it is so engaged, the lever E is held in such a position that the drum D is clear of the axle drum B; but when the rod I is released from the tumbler I¹, either by being lifted off it by the hand of the driver, or by the tumbler I¹ being turned by the pull of the cord i connected to it so as to be disengaged from the catch on the rod I, then the weight E², acting on the lever E, causes it to swing, so as to bring the drum D in contact with the axle drum B.

For a brake carriage of the train, the lever E has a horizontal position, as shown in figure 2, sheet I, and is loaded with a weight, E². The end of the lever E is held up by a rod, K, which catches in a tumbler, K¹, and in this position the drum D is clear of the axle drum B; but when the rod K is released, either by the guard pushing its catch off the tumbler K¹ or by the tumbler itself being turned by the pull of a cord or chain k connected to it, the lever E descends and brings the drum D in contact with the axle drum B.

When the two drums D and B are thus brought into contact with a pressure which may be regulated by adjusting the weight of the load E² or its position on the lever, the rotation of the axle drum B, acting by frictional contact on the drum D, causes it to rotate. The chains EF are thus wound on the pulleys D²D², and pull the brake levers and rods so as to put on the brakes. The chains F are carried in such a direction, as shown, that their tension when the brakes are on tends to increase the pressure of the drum D against the drum B, and thereby to sustain or augment the frictional working power.

When, by the action of the brakes, the train has been brought to rest, the frictional force relieves itself, and the lever E can then be moved by hand so as to take the drum D out of contact with B, and the rods I and K being again secured on their respective tumblers I¹ and K¹, the brake apparatus ceases to operate.

In

Improvements in Apparatus for working Brakes for Railway and other Carriages.

In addition to the weight on the lever E, it is useful to apply also a spring, E⁴, which has the effect of diminishing oscillation when the apparatus is in action.

In figure 5, sheet III, is represented a side view, and in figure 6, sheet III, a plan of a modified form of the brake apparatus, wherein two friction drums, N N¹, are mounted on one lever, E, so as to wind chains, F F¹, which extend backwards and forwards, and are coupled to rods, F² and F³, for working the brakes of carriages before and behind that in which the drums are mounted. Either of these rods F² may be made to act on the brakes of two carriages, by connecting it to the middle of a way beam, G¹, from the ends of which the rods are connected, one to the brake lever, G, of each carriage.

Figure 7, sheet III, represents a side view of apparatus, such as has been described above, applied to a tramway car. In this case the lever E is connected to an upright rod, K, at each end of the car, which can be raised or lowered by the driver or conductor, and held either up or down by a set screw in a guide bracket, K², through which it passes. In this case, as in those described with reference to railway trains, the ordinary screw gear L can be employed to work the brakes; the holes at L¹, in the rods or levers through which the screw gear acts, being for that purpose slotted so as to leave the brakes free to be put on either by the screw gear or by the friction apparatus as above described. In the case of a tramway car there is a like slotting of the holes in the connections K³ to the rod K at one end of the car, so that the friction brake apparatus can be put on from either end of the car, and likewise the brakes can be put on by the action of the screw hand gear.

The weight E², used for loading the bar B, may be slid along the lever and fixed in any required position by a set screw, and thus the frictional pressure of the drums may be adjusted. In some cases, however, it is desirable to alter this pressure during the action of the apparatus on the locomotive and tender, as when the train runs down an incline of greater or less steepness. Figure 8, sheet II, shows a side view of a locomotive fitted with an arrangement for this purpose. The rod I, by which the lever E is moved, so as to put the brake apparatus in action or take it out of action, has several notches at I², any one of which can be engaged on a fixed stud. The other end of the rod is connected to a bent lever, I³, the pin of which works in a slotted hole in the rod I. The bent lever I³ is connected to the lever E, and there are two levers, I⁴ and I⁵, forming a connection from the rod I to the weight E², which is made to slide along the lever E. The levers I⁴ and I⁵ have slotted holes, to allow freedom of motion to their connecting pins.

When the rod I is released from the stud at I², the lever E descends and brings the drum D in contact with the drum B, thereby causing the brakes to be applied. Should the driver desire to increase the brake power, he pushes the rod I farther forward (the slot at its end permitting the movement), and he thus moves the levers I⁴ and I⁵ so as to slide the weight E² towards the outer end of the lever E, and thus to increase the frictional pressure of the drum D on the drum B.

On the drawings are represented the means which I adopt for applying the brakes from any part of a railway train, and which I will now describe, referring to figures 1 and 2, sheet I.

The tumbler I¹ on the locomotive has attached to it a cord, chain, or rod, *i*, which is carried by suitable guide rollers, and coupled from carriage to carriage, serving as a line of communication throughout the train for operating the brakes. The tumbler K¹ of my carriage is connected by a cord or chain, *k*, to a handle, *i*², whereon is mounted a pulley, *i*¹, round which passes the chain coupling the communicating line *i*. According to this arrangement, the engine-driver can lift the rod I off its tumbler I¹, and so put on the brakes of the locomotive and tender only; or he can also, by pulling the line *i*, move the several tumblers K throughout the train, and thus bring the several brakes into operation. By pulling the line *i* less or more, he can regulate the amount of brake power, a moderate pull serving to operate the brake apparatus nearest to him, and a greater pull, communicated round the pulleys *i*¹, bringing into operation the brakes farther from him.

Also, the guard on a brake carriage can release his rod K from its tumbler, and so put on the brakes of his own carriage, or he can also, by pulling down the handle *i*², draw the line *i* both ways, and thereby move the tumbler I¹ on the locomotive, and tumblers, such as K¹, on other carriages throughout the train, so as to bring the several brakes besides his own into operation. Thus, a guard at the rear of the train has it in his power to apply the brakes of the engine and tender as well as others throughout the train, in case of danger which may have escaped the notice of the engine-driver.

A line of communication, *j*, can also be connected from the line *i* to a pull in any compartment of the train, so that a passenger can, by pulling the line *j*, bring the brakes into action.

Should the train accidentally separate, or should a carriage run off the line, or should an axle break so that one end of a carriage drops below its proper level, a strain is immediately put on the line of communication *i*, such as to cause the various tumblers I¹ and K¹ to be moved, and thereby to bring the brakes into operation.

It is often convenient, especially for goods trains or trains of a mixed character, to arrange the line of communication under the carriages instead of leading it along their roofs. For this purpose the rods K and their tumblers K¹ may be constructed and arranged as shown at figure 5, sheet II, and to an enlarged scale in figure 9, sheet II. Here the line of communication *i* passing under the carriages is lead around guide pulleys, and round a pulley, *i*¹, mounted on the arm of the tumbler K¹, a handle, *i*², being also attached to the pulley. The rod K, by which the lever E is held up, catches on a pin, and roller K² being pressed over it by a spring at the back. It can be released from this catch, either by hand applied to the top of the rod pulling up the handle *i*² and thereby turning the tumbler K¹ down, or by the pull of the line *i* turning the tumbler K¹ upwards.

Any one of the brake apparatus can be taken out of action by the driver or guard moving his rod I or K till it becomes held on its tumbler I¹ or K¹. The driver may also be enabled to take off the brakes behind the locomotive by means of a pull, *m*¹, figure 1, drawing a line of communication, *m*. The line *m* is attached to a bent lever, *m*², figure 2, from which a rod, *m*³, is connected to the lever E. When the line *m* is pulled, the lever E is raised and the brakes taken out of action. The line *m* may, like the line *i*, be carried along the train so as to operate on other bent levers, *m*², for taking other of the brake apparatus out of action.

Instead of employing two lines of communication, one for bringing the brakes into action, and the other for taking them out of action, I sometimes use a single line, alternate pulls of which are made to accomplish these objects by means of an apparatus which I will now describe, referring to figure 10, sheet II,

Improvements in Apparatus for working Brakes for Railway and other Carriages.

II, which shows an enlarged view of this apparatus. The line of communication i , which may be carried along the roofs of the carriages or under them, is, at each brake apparatus, led round guide pulleys and round a pulley on a lever V . This lever is mounted loose on a shaft, S , on which is fixed a ratchet wheel, S^1 , of four teeth. A spring pawl, v , on the lever V , engages with the teeth of the ratchet wheel, and another pawl, Z , prevents the wheel from turning backwards. On the shaft S are fixed two cam segments or wipers, $T T^1$, which come directly under a roller mounted on the lever E . When either of these wipers T is standing upwards, as shown in figure 10, the lever E is held up by it, and the brake apparatus is out of action; but when the line i is pulled so as to lift the lever V to the position marked by the dotted line V^1 , the ratchet wheel is thereby turned one-quarter of a revolution around, and the wiper T being thus turned from under the lever E , it descends and brings the friction drums into contact, whereby the brakes are applied. The line i being slackened, the lever V descends, being urged by the spring W , and its pawl engages on another of the ratchet teeth. The next pull of the line i again raising the lever V and turning the ratchet wheel, another tooth brings the second wiper T^1 under the lever E , and thus lifts it and takes the brake drums out of contact. The outermost part of the wipers $T T^1$ is preferably made with a slight hollow, in which rests the roller of the lever E so as to remain steady therein until the wiper be moved a little round by the action of the lever V . Suitable stops, $n n$, are provided to limit the stroke of the lever V .

Having thus described the nature of my invention, and in what manner the same is to be performed, I would have it understood that I make no claim generally to the working of brakes by means of the frictional contact of a drum or wheel on a carriage axle with another drum or wheel, causing the latter to revolve and thereby to move apparatus which applies the brakes; apparatus of that kind being well known, and having been first described in the Specification of Letters Patent of the United Kingdom of Great Britain and Ireland, dated the 17th September, 1856, No. 2,180, granted to George Davies, for an invention communicated from abroad to him by me, but I claim,—

- First.—The wooden periphery for the friction drum B , or D , with the fibres of the wood arranged radially, or nearly so, and secured between metal cheeks, or in mortises, substantially in the manner set forth.
- Second.—The lever E with adjustable weight, operating in combination with the friction drum D , pulleys D^2 , chains F , and lever G , substantially as and for the purposes described.
- Third.—The arrangement of the chains F in connection with the brake drum and brake lever, so that their tension in applying the brakes increase the frictional pressure of the drums substantially as described.
- Fourth.—The lever E operating in combination with the suspending rod K and tumbler K^1 , substantially as and for the purposes described.
- Fifth.—The cords, chains, or rods, i, j , and k , and pulley, i^1 , or their equivalent, operating in combination with the rods K and tumblers K^1 for bringing the brake apparatus into action from any part of the train, substantially as described.
- Sixth.—The chord or chain m , lever m^2 , and rod m^3 , or their equivalents, operating in combination with the levers e , and rods K , and tumblers K^1 , for putting the brake apparatus out of action from any part of the train, substantially as described.
- Seventh.—The combination of the rod I , and levers I^1, I^2 , and I^3 , with the lever E , and weights, E^2 , for adjusting the brake power, substantially as described with reference to figure 8, sheet II.
- Eighth.—The lever h operating in combination with the coupling of the brake rods, substantially as described with reference to figures 2 and 2^a, sheet I.
- Ninth.—Combining with friction brake apparatus with the ordinary screw brake gear, the holes in the connections of the screw brake apparatus being slotted so that the brakes can be worked by friction apparatus or by hand, or by both, substantially as described.
- Tenth.—The use of an adjustable weight on the lever E for adjusting the friction pressure of the drums substantially as described.
- Eleventh.—In friction drums brake apparatus combining the chains F with a lever G , and rods $G^2 G^3$, or $H H^1$, whereby their tension is distributed among the several brakes, substantially as described.
- Twelfth.—The combination of two sets of friction drums on one lever with one axle drum and chains conveying the brake power forwards and backwards, substantially as described with reference to figures 5 and 6, sheet III.
- Thirteenth.—The connection of the brake chains F to the pulleys D^2 in such a manner that the pulleys wind up the chains so as to put on the brakes in whichever direction the friction drums may rotate, substantially as described.
- Fourteenth.—The apparatus substantially as described with reference to figure 10, sheet II, whereby the friction drum apparatus can be brought into action and taken out of action by alternate pulls of the line of communication.
- Fifteenth.—The arrangement of the line of communication i in such a manner that the brake apparatus is brought into action automatically when a train becomes divided, or when a carriage runs off the line, or when an axle breaks, substantially as described.

Sixteenth.—

A.D. 1873. No. 373.

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Improvements in Apparatus for working Brakes for Railway and other Carriages.

Sixteenth.—The arrangement of the friction brake apparatus on a tramway car, and its combination with the hand screw brake gear, substantially as described with reference to figure 7, sheet III.

In witness whereof, I, the said Jacob Heberlein, have hereunto set my hand and seal, this sixth day of February, in the year of our Lord one thousand eight hundred and seventy-three.

JACOB HEBERLEIN. (L.S.)

Witness,—

R. RODNEY FOWLER.

This is the specification referred to in the annexed Letters of Registration granted to Jacob Heberlein, this twenty-fifth day of July, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 2 July, 1873.

SIR,

We do ourselves the honor to return to you the documents transmitted for our report, under your B.C. communication, 19th June, No. 4,708, and which have reference to Mr. Jacob Heberlein's Petition for Letters of Registration for his invention for "Improvements in Apparatus for working Brakes for Railway and other Carriages"; and we recommend the issue of Letters of Registration, in accordance with Mr. Heberlein's Petition, drawings, specification, and claim.

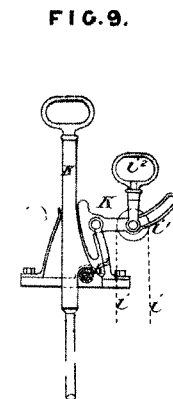
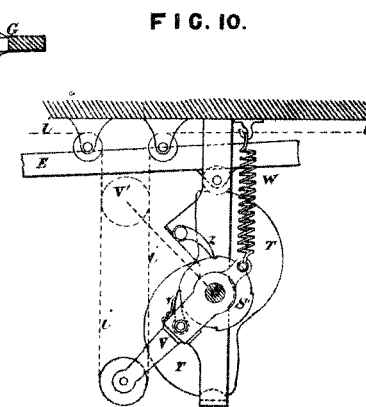
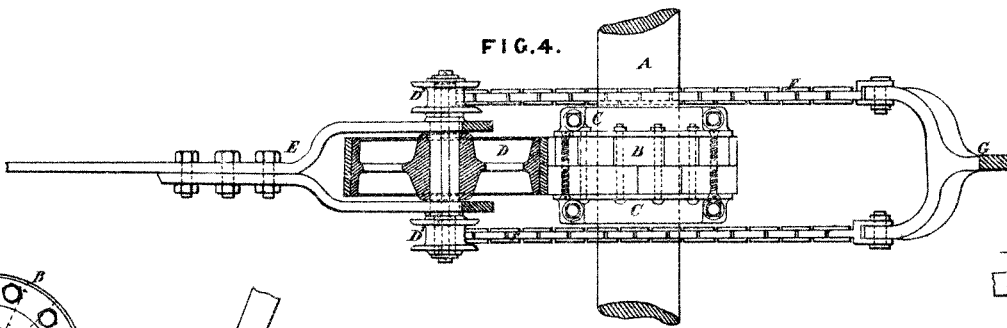
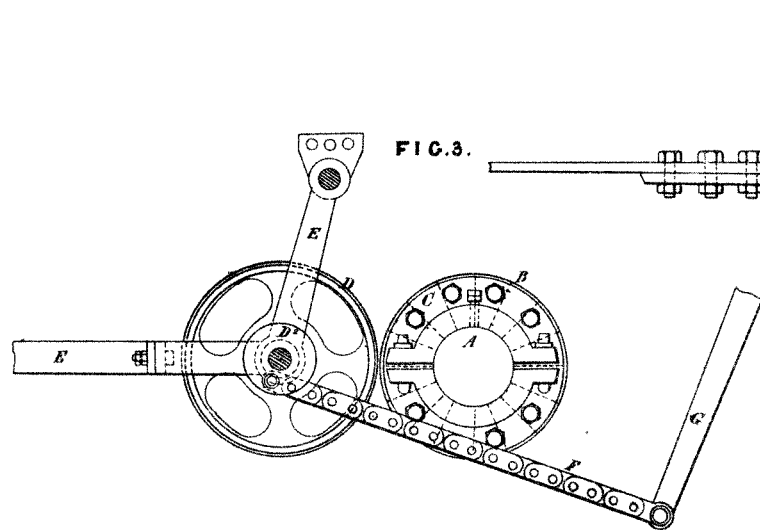
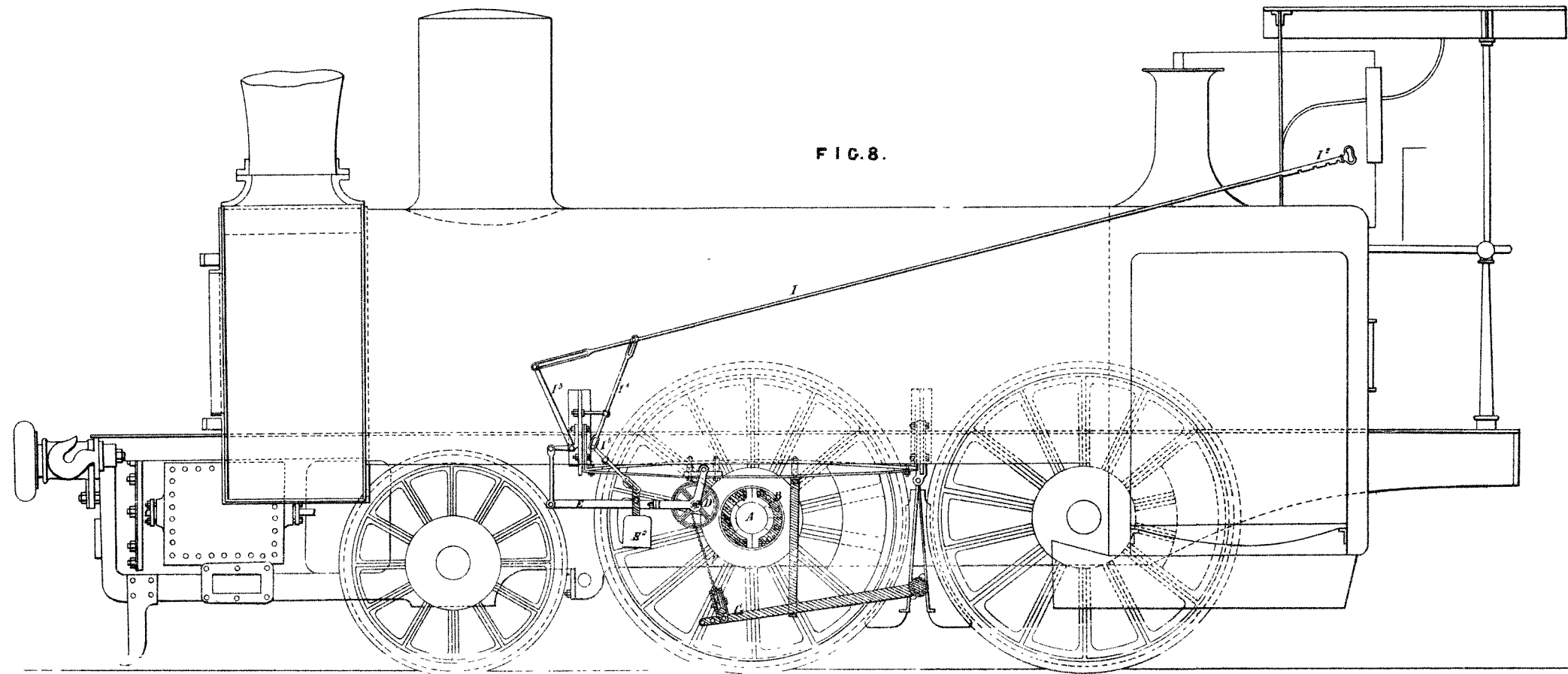
We have, &c.,
GOTHER K. MANN.
JOHN WHITTON.

THE PRINCIPAL UNDER SECRETARY.

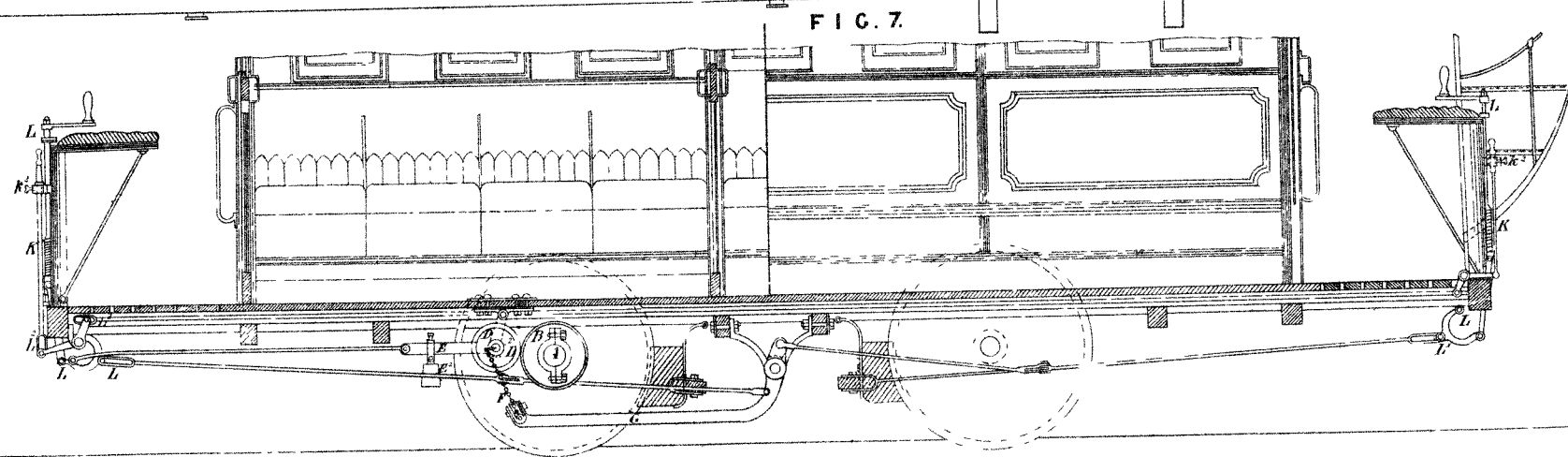
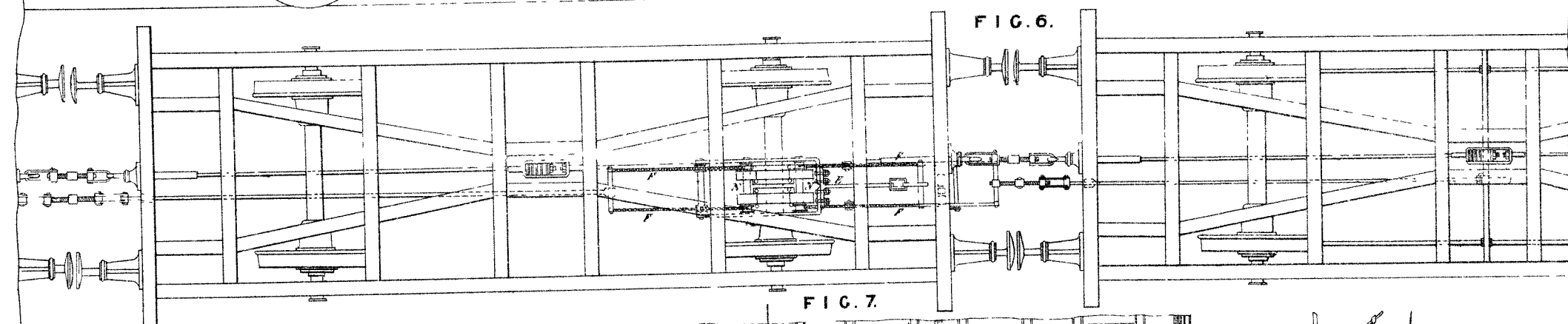
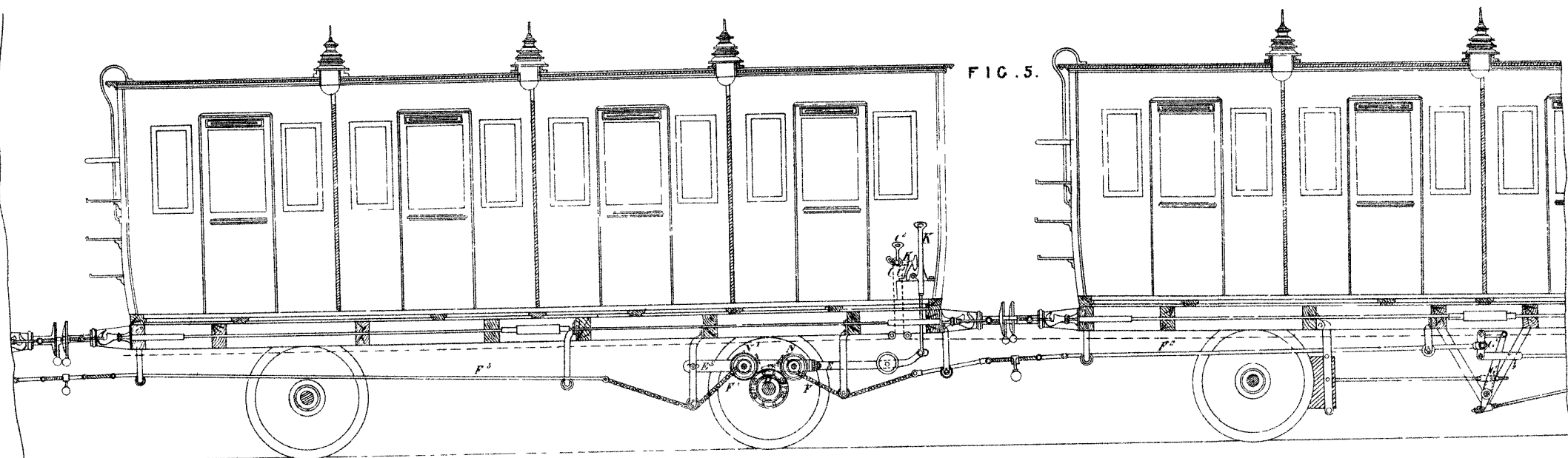
[Drawings—three sheets.]

No. 374.

[Assignment of No. 242a. See page 73 of Return of 21 June, 1872.]



This is the Sheet of Drawings marked C. referred to in the annexed Letters of Registration granted to Jacob Heberlein, this twentyfifth day of July, 1873.
Hercules Robinson.



This is the Sheet of Drawings marked D referred to in the annexed letters
of Registration granted to Jacob Heberlein this twenty fifth day of July 1872.
Heretles Robinson.

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A.D. 1873, 11th August. No. 375.

**PHILLIPS'S STAMPER, GRINDER, AMALGAMATOR, AND WASHER OF
GOLD AND SILVER ORES.**

LETTERS OF REGISTRATION to John Phillips, for Improvements in amalgamation, trituration, and washing of Gold and Silver Ores, &c.

[Registered on the 12th day of August, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS JOHN PHILLIPS, of Sydney, in the Colony of New South Wales, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for Improvements in amalgamation, trituration, and washing of Gold and Silver Ores, or the pulverization and washing of any mineral, animal, or vegetable matter, and the separation of the lighter from the heavier, and the soluble from the insoluble matters, which is more particularly described in the specification which is herunto annexed ; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four ; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years : And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said John Phillips, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof ; to have, hold, and exercise unto the said John Phillips, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended : Provided always, that if the said John Phillips shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this eleventh day of August, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Phillips's Stamper, Grinder, Amalgamator, and Washer.

REPORT.

Sydney, 22 July, 1873.

SIR,

The application of Mr. John Phillips for Letters of Registration for a Machine for amalgamation, trituration, and washing of Gold and Silver Ores, &c., having been referred to us, we have examined the specification and drawings accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

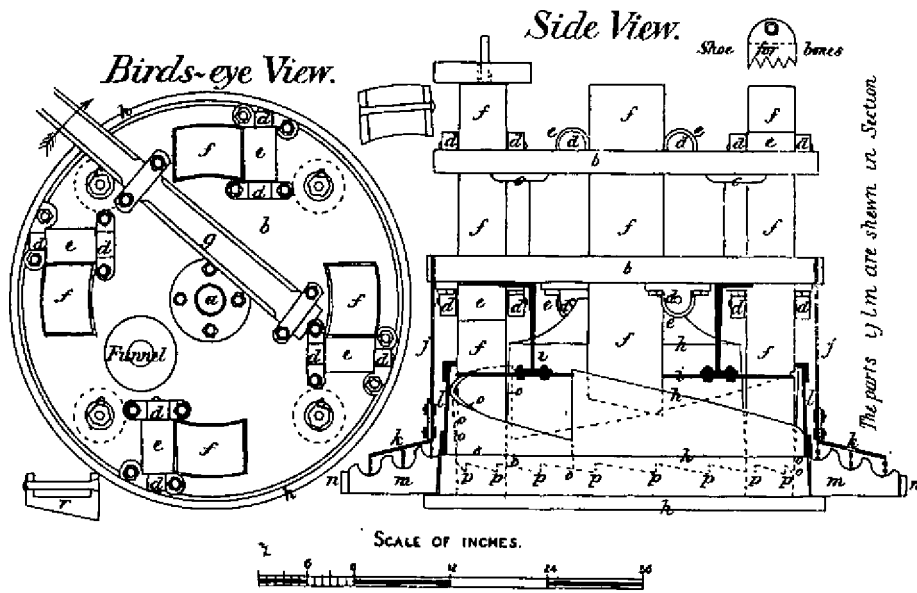
We have, &c.,

J. SMITH.
GOTHER K. MANN.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

DRAWINGS and Specification of Phillips's Stamper, Grinder, Amalgamator, and Washer of Gold and Silver Ores, for the pulverization and washing of any mineral, animal, or vegetable matter, the separation of the lighter from the heavier, and the soluble from the insoluble matter, for reef-testing, metallurgical, and other purposes.



EXPLANATION.

The letter *a* shows the axis of wrought or cast iron. The letter *b* the parallel plates of wood, wrought or cast iron, held together by four bolts through the distance pillars, *c*, *d*, blocks for carrying the rollers *e*. *f*, the stampers and mullers, which may be made of metal, wood, or stone, to be loaded and shod according to the nature of their work, whether on mineral or organic matter. *g* is the horse-arm in case of no belt or wheel-gear, as in remote mining districts. *h*, the stamper, grinder, and amalgamator trough. *i*, splash-plates within the machine; *j*, the outer splash-plate or apron all around. *k*, bars attached to the outer apron, to carry chains, rakes, or coulters, to keep the contents of grooves *m* loose. *l*, a circular grating all around the stamper trough, shiftable according to its wear. *m*, three annular troughs of iron, wood, or stone, and bound around with iron band, *n*, the contents of troughs *m* being constantly agitated by *k*. *o* shows the rise of the stamper bottom within, for lifting the stamper and grinding the stuff. *p*, the form of the grinder and amalgamator bottom. *q*, a circular lump or cap of iron, or other matter, about half cwt., with a hole in the middle; the stampers or mullers being thus loaded with any number of such cap-pieces. *r* is a vertical section of steel shoe; *s* is the plan of same.

Peculiarities, new — 1st Its arrangement for portability. 2nd. There is nothing to force the mercury out of the trough as the Chilean rollers do. 3rd. The shiftable of the grating according to worn parts. 4th. The troughs and chains close to the grating, making blankets and other things unnecessary. 5th. The ready conversion from a stamper and grinder to a grinder and amalgamator, by merely changing the bottom or bed within. 6th. The stamper-beds in this invention taking the place of lifting-rams. 7th. The rise as well as the fall of the stampers being utilized, and friction being subdued into the work. 8th. The ready removal of the machine from place to place without mechanical skill. 9th. The loading and shoeing of the stampers to suit the work to be done. 10th. A horse-power applied to this machine, giving out three times the quantity of work that it would if applied to the ordinary stamper, because the grinding action on half-crushed stone is double as efficient as the blow which is half defeated by the rush of water from beneath the dropping stamper carrying the fine gravel away. The blow here has its usual efficiency, the molar action in addition being double, hence three times the work for each horse-power.

This is the specification referred to in the annexed Letters of Registration granted to John Phillips, this eleventh day of August, 1878.

HERCULES ROBINSON.

(Sig 1)

[99]



A.D. 1873, 11th August. No. 376.

IMPROVEMENTS IN THE MANUFACTURE OF LEATHER.

**LETTERS OF REGISTRATION to George Rawle and William Nathaniel Evans,
for Improvements in the manufacture of Leather.**

[Registered on the 12th day of August, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS GEORGE RAWLE, of Temple-street, in the city of Bristol, and WILLIAM NATHANIEL EVANS, of Bedminster, in the county of Somerset, England, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in the manufacture of Leather," which is more particularly described in the specification which is hereunto annexed ; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four ; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years : And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said George Rawle and William Nathaniel Evans, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof ; to have, hold, and exercise unto the said George Rawle and William Nathaniel Evans, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended : Provided always, that if the said George Rawle and William Nathaniel Evans shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this eleventh day of August, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in the manufacture of Leather.

SPECIFICATION.

TO ALL TO WHOM IT MAY CONCERN, Be it known that we, GEORGE RAWLE, of Temple-street, in the city of Bristol, and WILLIAM NATHANIEL EVANS, of Bedminster, in the County of Somerset, England, are in possession of an invention for "Improvements in the manufacture of Leather"; and we, the said George Rawle and William Nathaniel Evans, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:—

THE object of this invention is mainly to diminish the time now required for tanning hides and skins. In tanning hides and skins, it is now usual to commence the tanning operations by subjecting the skins to weak solutions of tannin material, and gradually to increase the strength of the solution as the process proceeds. By proceeding in this manner a considerable length of time is necessarily occupied; and if, in order to save time, the skins are at once subjected to a strong solution of tannin, the grain side of the skin becomes hardened, and the leather produced is comparatively valueless.

According to our invention, we protect the grain side of the skins or hides from the action of the liquor before placing them into the pits, so that the skins may at once be placed into a strong tannin solution; and, consequently, the tanning of the skins will be greatly expedited, whilst the grain side, being protected from the action of the liquor, will remain soft and pliable. The hides or skins may also be first partly tanned in weak tannin solutions, in the ordinary manner, and be afterwards protected on the grain side from the action of the tannin liquor before submitting such partially tanned skins to the action of strong tannin solutions. To protect the grain side from the action of the tannin liquor, we prefer to rub it over with a dubbing of grease and oil; but other modes of protecting the grain side from the liquor may be adopted. When we employ a mixture of grease and oil as the protecting material, we use by preference a mixture composed of cod oil and tallow, in the proportion of about 2 lbs. of tallow to 1 gallon of the oil. In carrying out our invention we prefer to proceed as follows:—The skins, after being unhaired, and after being washed in water, are rubbed down in the usual way; the grain side of the skins is then smeared over with the mixture of tallow and oil, and the skins are placed into a pit containing a strong tannin solution, say of a strength of 80 to 90 degrees, which is the usual strength for the last bath when tanning skins in the ordinary manner. A stronger liquor may, however, be used with advantage. We prefer that the skins should be suspended in the pit, at a short distance apart from one another, so that the tannin liquor may have free access to the flesh side of each skin. By this means the tanning of the skins or hides may be effected without removing them from the pit, tanning material being from time to time added to the liquor in the pit, as usual, to keep it up to the required strength. In place of coating the grain side of the skins or hides with a protecting coating, the grain side of two skins might be placed together, and caused to adhere to one another by rubbing them down before placing such skins into the tan pit, or the grain side might be in other ways protected from the action of the tannin liquor. We, however, prefer to apply a coating of protecting material to the grain side, as above described. By thus tanning hides and skins, not only will the tanning process be greatly expedited, but a superior leather will be produced to that tanned by the present tedious tanning process.

Having thus described the nature of our invention and the manner of performing the same, we would have it understood that we claim—

- 1st. Coating the grain side of skins or hides with a protecting coating of grease and oil, or other coating capable of protecting such grain side from the action of tannin liquor, and subsequently submitting the skins so prepared to the action of tannin liquor in a tan pit, substantially as herein described.
- 2nd. Protecting the grain side of skins and hides from the action of the tannin liquor during the tanning process.

In witness whereof, we, the said George Rawle and William Nathaniel Evans, have hereunto set our hands and seals, this twenty-ninth day of March, in the year of our Lord one thousand eight hundred and seventy-three.

GEORGE RAWLE. (L.S.)
WILLIAM N. EVANS. (L.S.)

This is the specification referred to in the annexed Letters of Registration granted to George Rawle and William Nathaniel Evans, this eleventh day of August, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 22 July, 1873.

SIR,

We do ourselves the honor to return to you the documents transmitted for our report, under your B.C. communication of the 11th instant, No. 73/5499, and which have reference to Mr. George Rawle and William Nathaniel Evans's application for Letters of Registration for their "Improvements in the manufacture of Leather"; and we recommend the issue of Letters of Registration securing to Messieurs Rawle and Evans the exclusive right to their invention, in accordance with their Petition and specification.

We have, &c.,

GOTHER K. MANN.
JAMES BARNET.

THE PRINCIPAL UNDER SECRETARY.

[101]



A.D. 1873, 21st August. No. 377.

INVENTION OF CERTAIN CHEMICAL COMPOUNDS FOR PRESERVATION OF WOOD.

LETTERS OF REGISTRATION to William Malpas, for an invention of certain chemical compounds for preservation of Wood without impregnation by pressure.

[Registered on the 23rd day of August, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS WILLIAM MALPAS, of Athelstone, near Adelaide, in the Colony of South Australia, gentleman, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an "invention of certain chemical compounds for preservation of Wood without impregnation by pressure," which is more particularly described in the specification which is hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales, the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said William Malpas, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said William Malpas, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said William Malpas shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-first day of August, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Invention of certain chemical compounds for preservation of Wood.

AMENDED SPECIFICATION.

The following is a description of the invention:—

The application to wood by immersion therein or otherwise of sulphate of copper dissolved in water, and in combination with arsenious acid dissolved in water only or by means of carbonate of soda or other chemical agent, used for the purpose of rendering arsenious acid more soluble in water, so as to protect the wood from injury by white ants or other insects.

The application of sulphate of copper without arsenious acid will protect wood from white ants or other insects, but the addition of arsenious acid will render the solution more poisonous, its application more efficacious, and its effect more lasting.

The invention your Petitioner claims is the application to wood, as above set forth, of sulphate of copper in combination with arsenious acid in a state of solution, for the purpose of protecting such wood from injury by white ants or other insects.

WILLIAM MALPAS,

By his Attorney,

J. K. BRADLEY.

This is the specification referred to in the annexed Letters of Registration granted to William Malpas, this twenty-first day of August, 1873.

HERCULES ROBINSON.

REPORTS.

Sydney, 10 May, 1873.

SIR,

The application of Mr. Wm. Malpas for Letters of Registration for an "invention of certain chemical compounds for preservation of Wood without impregnation by pressure," having been referred to us, we have examined the specification accompanying the same, and have the honor to report thereon as follows:—

Mr. Malpas claims as his invention—

1st.—The use of sulphate of copper either alone or in conjunction with arsenious acid, or arsenious acid with carbonate of soda.

2nd.—The external application of the solution or mixture to the wood intended to be preserved, instead of the impregnation of the same by pressure.

It is within our own knowledge that both sulphate of copper and arsenious acid have been used many years ago for the preservation of wood without pressure, and therefore we cannot recommend that Letters of Registration be granted to Mr. Malpas.

We have, &c.,

J. SMITH.

CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

Sydney, 30 July, 1873.

SIR,

In the matter of the application of Mr. Wm. Malpas for Letters of Registration for an "invention of certain chemical compounds for preservation of Wood without impregnation by pressure," which has been again referred to us, we have the honor to report further that, with the amended specification now submitted, in which the claim is restricted to a mixture of sulphate of copper with arsenious acid, we consider that Letters of Registration may now be granted.

We have, &c.,

J. SMITH.

CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

[103]



A.D. 1873, 18th September. No. 378.

IMPROVEMENTS IN MOTIVE-POWER ENGINES.

LETTERS OF REGISTRATION to Theodore Frederic Sandback Tinne, for
Improvements in Motive-power Engines.

[Registered on the 19th day of September, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS THEODORE FREDERIC SANDBACK TINNE, of Auckland, in the Colony of New Zealand, engineer, hath by his Petition humbly represented to me that he is the assignee of James Robertson, of the city of Glasgow, engineer, who is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in Motive-power Engines," which is more particularly described in the specification, marked A, and the three sheets of drawings, marked B, C, and D, respectively, which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Theodore Frederic Sandback Tinne, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Theodore Frederic Sandback Tinne, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Theodore Frederic Sandback Tinne shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this eighteenth day of September, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in Motive-power Engines.

A.

SPECIFICATION of James Robertson's Invention for "Improvements in Motive-power Engines."

My invention relates to various novel motions, constructions, combinations, and arrangements of the parts of engines adapted to utilize power obtained from steam, water, or gas under pressure, or from a vacuum.

I cause a piston formed or constructed with passages therein and fitted with a piston-rod to partake of two motions, or a compound motion, within a cylinder, such cylinder being provided with induction and eduction ports, and a cover and stuffing gland.

The said two motions of which the piston partakes are—one a motion of reciprocation, and another a motion of rotation on its own axis.

These motions are imparted to it simultaneously, and they serve to bring the passages in the piston opposite the induction and eduction ports in the cylinder in the proper sequential time; and by making the passages in the piston partly on the surface and partly within its interior, I can obtain any required degree of expansive working of the steam or other fluid employed.

As mechanism for imparting the motion of rotation to the piston, I secure to the piston-rod, under one modification, a hollow cylindrical casing, which encloses a corresponding bush, in which latter is fitted a crank pin, fixed firmly on a revolving shaft, which is the main or crank shaft. Room must be provided so that the crank-pin can play lengthwise in the bush.

The importance of these features will become apparent in the following description of engines which are constructed in accordance with my invention, and illustrated on the drawings. These several modifications have been appended that others may be enabled to carry my improvements into beneficial effect.

The accompanying drawings form a part of this specification, and with the descriptive references hereafter contained, mechanics will be enabled to build and work my said motive-power engines.

DESCRIPTION OF THE DRAWINGS.

Figure 1 is a side elevation; figure 2, a plan view, the cylinder being shown in section; figure 3, a sectional plan view of the cylinder looking from below; and figure 4, a sectional end elevation of the cylinder through the line AA, all of one modification of my improved motive-power engine. Figure 5 is a sectional end elevation of the cylinder through the line BB, but showing the ports so constructed as to work steam expansively. In these views like letters denote the same parts.

The arrangement of ports is such as affords ready facility to form them, to cut off the steam at any desired point of the stroke from about one-tenth of the stroke to any greater fractional part thereof.

The steam in this modification is admitted by the branch pipe A round the passage a^1 to the port A^1 underneath the cylinder, seen in section in figure 4, and exhausts from the top side of the cylinder by the exhaust port A^2 and exhaust branch-pipe A^3 ; the exhaust port in the cylinder and exhaust passages B^1 B^2 in the piston bearing on the top side.

The form of the exhaust passages B^3 and B^1 is seen in the plan (see figure 2) of the cylinder; they are formed the full length of the stroke of the engine, and therefore give for nearly the full stroke a free exhaust for the steam. The inverted sectional plan of the cylinder and external plan of the piston B (figure 3) shows the length and form of the steam ports longitudinally, and the corresponding inverted sectional elevation shows the ports in the cylinder and passages in the piston, in section through the line BB (figure 3).

As will be seen by figure 3, the steam passages in the piston are only left open toward the port or ports about one-half of the length of the stroke; the steam thereafter in its passage to the cylinder is cut off to this extent, and the steam passage continued underneath the surface of the piston, as indicated by the dotted lines and arrow shown in port B^1 . In this way, as will be readily seen by shortening the opening or open part of the steam passages B^1 and B^2 in the piston out to the port in the cylinder, the steam cut off will be proportionately shortened, so that within about the limits stated any degree of cut off in the length of the stroke can be effected. The motion of the steam is as indicated by the arrows. The connection of the arm D to the crank on the revolving shaft as shown in figures 2 and 6 is what I consider the best form of universal joint or crank connection for coupling the arm from the piston-rod to the crank-shaft.

In this bush-joint the oscillating bush D^1 is placed in the arm D fixed on the piston-rod C^1 , and is worked upon the pin E^2 , which is fixed in the crank E, keyed upon the crank-shaft F. When the oscillating bush D^1 is placed in the arm D as in this example, it only requires to oscillate in one plane or direction, as the axis of the crank-pin E^2 on which it works remains parallel to the axis of the crank-shaft F at every point of the circle which it is caused to describe.

Hence the oscillating bush D^1 in this modification is of a cylindrical form, with flat ends, its axis lying parallel to the axis of the piston-rod C^1 . It is formed in halves to receive the crank-pin E^2 , which passes through or into it at a right angle to the axis of the piston-rod C^1 . When the piston C is at mid-stroke, the arm or bush-holder D is oscillated to one side the full radius of the crank E. Figure 6 shows in section the position of the arm D, bush D^1 , crank E, and pin E^2 at mid-forward stroke, and figure 2 shows the position assumed by these parts when the piston-rod is at one end of its stroke. The seat of the bush D^1 is turned out, all the parts are easily made, are adjustable for wear, and work smoothly.

Figure 7, sheet I, is a front external elevation, figure 8 a side external elevation, and figure 9, in part, an external plan, and in part a sectional plan of a pair of oscillating and reciprocating pistons, combined and connected to one crank-shaft, to act as a water-engine or water-meter, whereby when at work the water passing can be measured.

The form of the ports and passages in the pistons used is the same as described in connection with figures 1, 2, 3, and 4. The same letters of reference refer to the same parts in these figures as in this combination, and do not require to be otherwise further described. The water enters by the branch pipe A, and passing through the channels and ports as indicated by the arrows, passes out by the exhaust pipe

A²,

Improvements in Motive-power Engines.

A⁵, the capacity of the cylinders being made to any desired aliquot part or understood quantity, as indicated by an ordinary liquid index through a small wheel, Q, which has formed on its spindle the small worm R gearing with the worm-wheel S, to which an ordinary index can be geared, and forming thereby a complete water-engine and meter. Two cylinders can be coupled in various ways as a coupled engine, and this illustrates one way of doing so.

Figure 10, sheet I, is an external side elevation of a condensing engine, constructed in accordance with my invention. Here *a* is the steam cylinder receiving steam through *b c* exhaust pipe, through which steam exhausts into the condenser *d e*, waste pipe for condensed steam. In this modification the ports in the piston are constructed similarly to those described under figures 1, 2, 3, and 4.

Figure 11, sheet II, is an external side elevation; figure 12 a plan with the cylinder shown in section, the piston being in external plan, and figure 13 is an end elevation showing the cylinder with its steam ports and passages in-section through the line *c c* in figure 12.

The form of the steam ports in this engine are similar to those described above, but there are two sets of passages formed in the piston B in a reverse way, to give reversing action. As these parts are the same, and the same letters of reference are used, they need not be again described, the ports in the cylinder and passages in the piston shown out of action being left without letters of reference. Those shown in action have the same letters on like parts as in figures 1, 2, 3, and 4; and the courses of the currents and motion indicated by the arrows as before. For reversing the currents the cylinder is provided with two slide-valves as represented. The slide-valve seen in action in figure 13 has the steam port A¹ open to the casing, and the slide-valve J has the exhaust port A² open, giving motion to the engine accordingly. On the handle *k* being raised, and the slide-valves I and J moved to the opposite ends of their casings, the other set of ports and passages shown comes into action, and the motion of the engine is thereby reversed. The connection of the arm D to the crank on the revolving shaft here represented is perfectly practicable, and is clearly represented as one of the modifications which will allow the benefit of some parts of my invention, but I prefer the different connection hereinbefore described.

Figure 14, sheet II, is an external side elevation of a combined condensing pump constructed in accordance with my invention; *a*, steam cylinder; *b*, induction port; *c*, eduction port exhausting into the water exit pipe *d*; *e*, air vessel; *f*, pumping cylinder; *g*, suction pipe.

Figures 15 and 16, sheet II, are external side elevations of a blasting engine, constructed in accordance with my invention; *a*, steam cylinder; *b*, blowing cylinder. The ports in the pistons of the engines, illustrated in figures 14, 15, and 16, are similar to those hereinbefore described. All the modifications of my engines are (by making the ports and piston passages without cut off of the actuating current) suitable for being worked or actuated by water or other liquids, as well as by elastic fluids.

Figure 17, sheet III, is a transverse section of an expanding piston for engines of large size or high pressure, and for pumps for high lifts constructed in accordance with my invention. For these purposes, and in all others where a powerful vacuum or pressure of fluid is required, it becomes necessary to have these peculiarly constructed pistons to compensate for the wear of both piston and cylinder. Figure 18 is a longitudinal section through line AB of figure 17, and figure 19 is a longitudinal section through the centre of piston. CC are the portions of the piston which are fixed to its rod and receive the driving pressure; when required, they carry the packing rings. DD are the parts which form the centre of the piston in which are the steam ports or passages. These parts are forced from each other, and against the inner surface of the cylinder or pump, by means of the wedge-shaped pieces EEEE, which are carried on and moved to and fro by the screw FF, and work against similar wedge-shaped pieces on back of parts DD. In order to work said screws, it is necessary to remove the whole or a portion of the cylinder or pump cover, when a wrench can be applied to them.

Having now described the nature of my said invention, and particularized the same by the several modifications herein referred to and delineated on the drawings, I would have it understood that I do not confine myself to the exact details set forth, as many modifications may be made without departing from the leading features of my improvements; many of the parts shown are common to other, and some to all engines, pumps, and analogous machines now in use.

What I do claim is—

- I. The within-described piston, constructed with passages, B¹ and *c*, formed partly on the surface and partly under the surface, and so connected and operated that it partakes simultaneously when at work of a motion of reciprocation and a motion of rotation on its own axis, to receive, direct and cut off the impelling fluid without a necessity for valves, all as herein set forth.
- II. In connection with the above, the bush D¹ free to oscillate in the arm D secured to the piston-rod in combination with the crank or eccentric stud E², and arranged as represented, so as to serve as means both for transmitting motive power to or from the crank-shaft or mechanism, and for ensuring a motion of rotation in the piston, all substantially as described and shown in the drawings.
- III. Expanding that portion of the piston of engines and pumps made according to my invention, which contains the port and passages, so as to compensate for the wear, and so prevent leakage, substantially as herein described and shown in the drawings.

This is the specification referred to in the annexed Letters of Registration, and marked A, granted to Theodore Frederick Sandback Tinne, this eighteenth day of September, 1873.

HERCULES ROBINSON.

Improvements in Motive-power Engines.

REPORT.

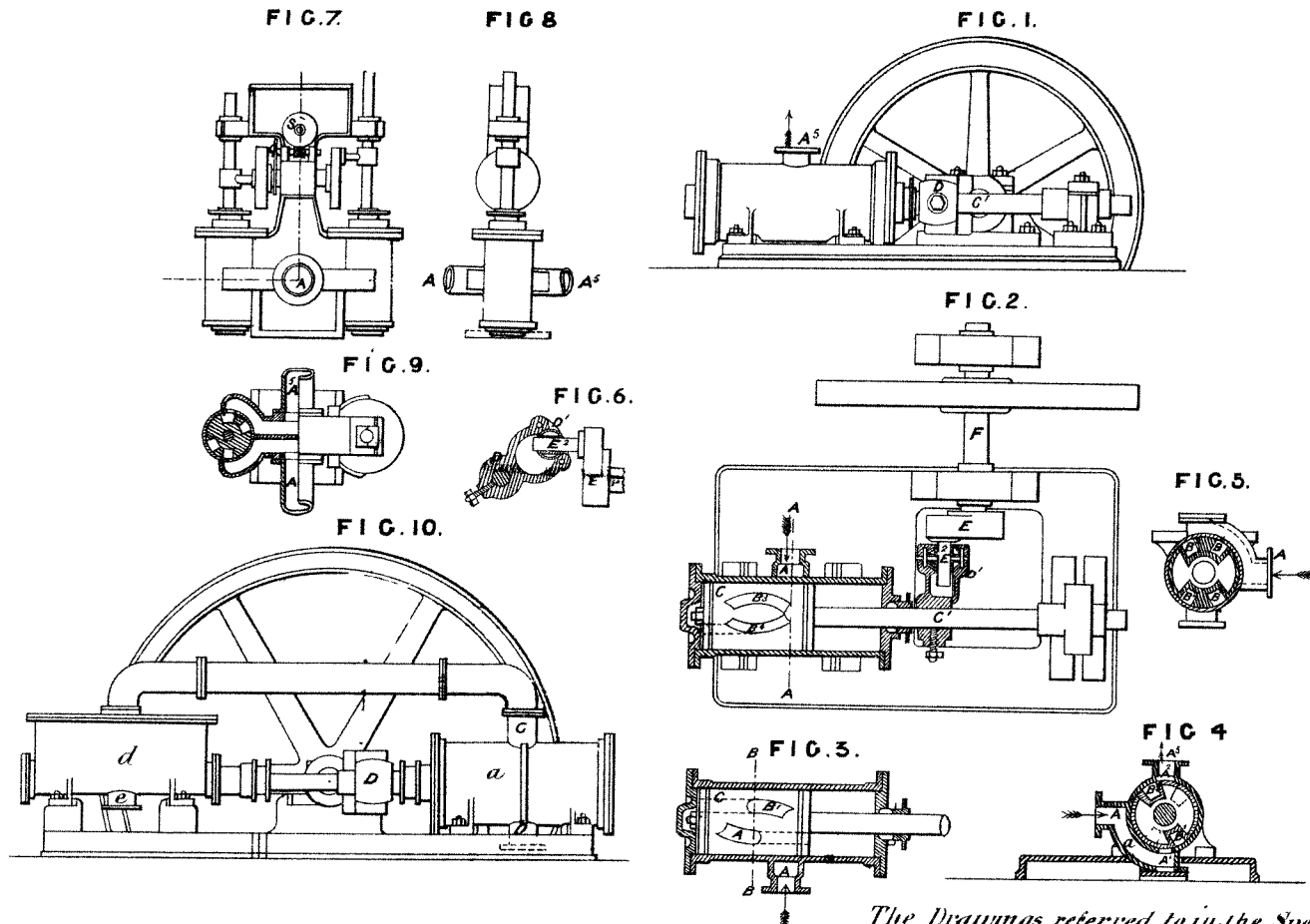
Sydney, 1 September, 1873.

Sir,
The application of Mr. Theodore F. S. Tinne, for Letters of Registration for "Improvements in Motive-power Engines" having been referred to us, we have examined the drawings and specification accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,
J. SMITH.
E. O. MORIARTY.

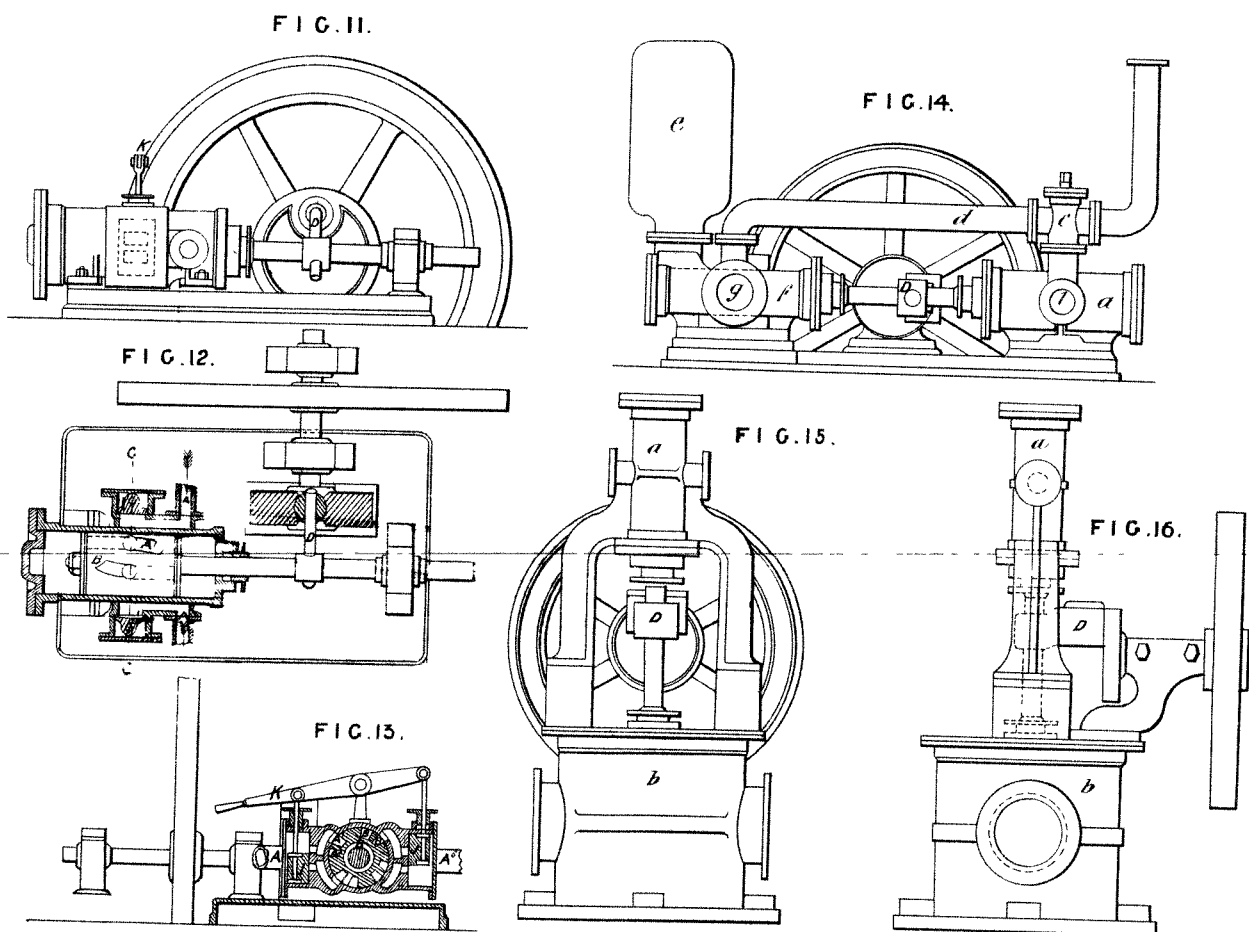
THE PRINCIPAL UNDER SECRETARY.

[Drawings--three sheets.]



The Drawings referred to in the Specification.
James Robertson

This is the Sheet of Drawings marked B. referred to in the annexed Letters of Registration granted to Theodore Frederic Sandbach Tinné this eighteenth day of September 1873.
Hercules Robinson.



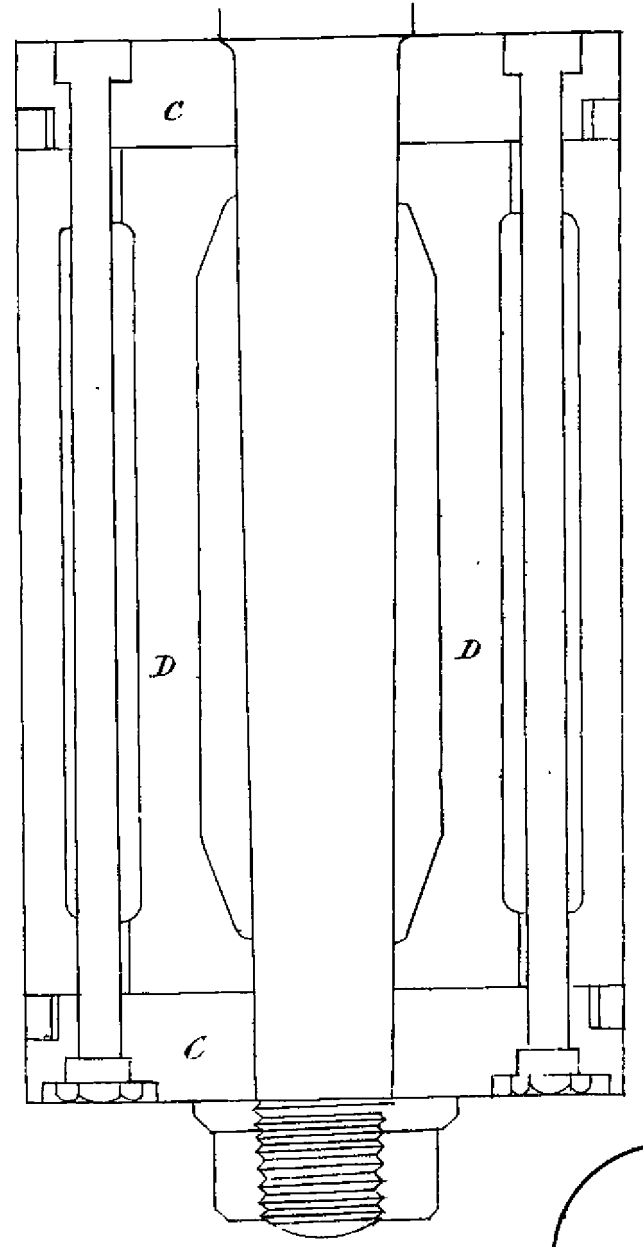
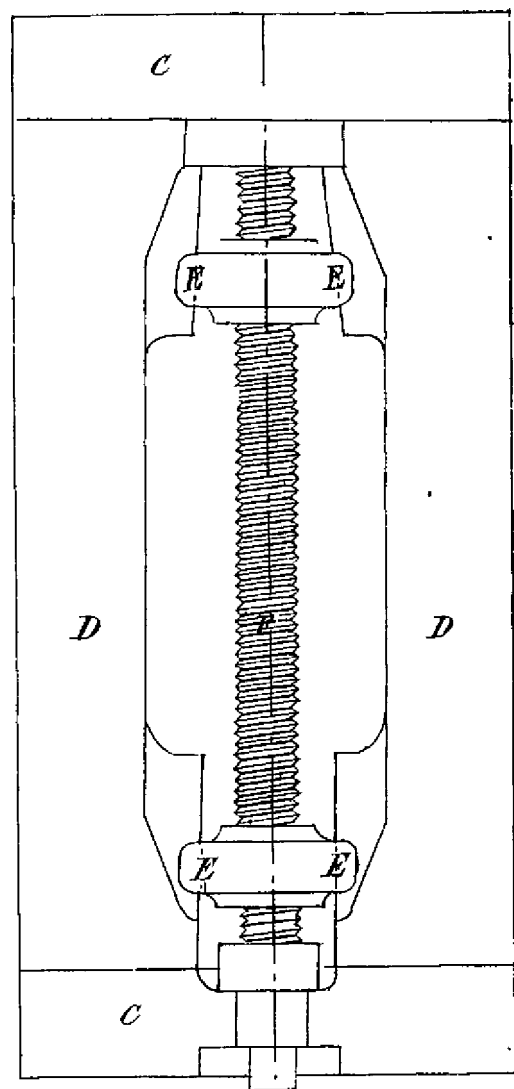
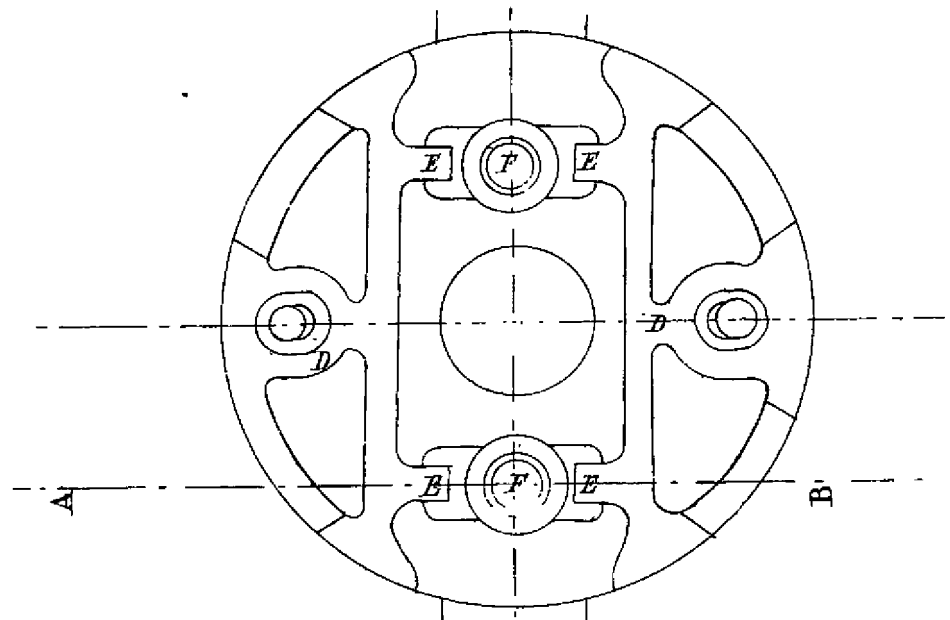
The Drawings referred to in the Specification.
James Robertson.

This is the Sheet of Drawings marked C. referred to in the annexed Letters of Registration granted to Theodore Frederic Sandbach Tinné this eighteenth day of September 1873.
Hercules Robinson.

Fig. 18.

Fig. 19.

Fig 17.



This is the Sheet of Drawings marked D, referred to in the annexed Letters of Registration granted to Theodore Frederic Sandbach Finne, this eighteenth day of September, 1873.

Hercules Robinson

[107]



A.D. 1873, 29th September. No. 379.

BASSETT'S CONDENSATIVE AMALGAMATOR.

LETTERS OF REGISTRATION to William Frederick Bassett, for Improvements for the more complete removal of Gold or Silver from the sludge of puddled earth, &c.

[Registered on the 30th day of September, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS WILLIAM FREDERICK BASSETT, of Bathurst, in the Colony of New South Wales, Esquire, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an Invention for the more perfect separation of Gold or Silver from the sludge of puddled earth or tailings of crushing machines, also the self-retorting of Gold obtained and complete saving of the Mercury employed, which said invention is more particularly described in the specification and sheet of drawings which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said William Frederick Bassett, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said William Frederick Bassett, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said William Frederick Bassett shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-ninth day of September, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Bassett's Condensative Amalgamator.

SPECIFICATION of W. F. BASSETT, of Bathurst, in the Colony of New South Wales, of Condensative Amalgamator.

IMPROVEMENTS for the more complete removal of Gold or Silver from the sludge of puddled earths or from tailings of crushing machines, by the use of heated mercury, also the self-retorting of Gold obtained and the complete saving of the Mercury employed.

My invention consists primarily of an Amalgamator, No. 1 on plan A. This will be made an iron or iron-lined receiver of any size suited to the quantity of stuff to be heated in a given time, and will contain the sludge or tailings used. In a cast-iron socket, at the centre of the receiver, an iron revolving shaft will be set, having projecting arms carrying blades capable of being removed, and varied in sizes and shapes, and fitted at convenience with brushes to sweep the bottom of receiver. The necessary rotary motion to the shaft, which will be supported at top by a cross beam on stayed uprights, will be communicated either by hand or cog-wheel, as best suited to connect with the driving power, either steam, horse, water, or hand.

The contour of the bottom of receiver will be conical, as shown on Section C, having also a gradual descent at the outer circumference to a well, where a tap will be fixed to draw off amalgam, and a sluice-trap to complete any cleansing operation; provision is also made to raise the whole of the revolving machinery during the cleansing time, and to facilitate the fixing of blades or brushes.

Whether used for sludge or tailings, the flow into the amalgamator will be immediately in front of the condenser, and at the highest containing level of the receiver, and in the direction of the current formed by the revolving blades.

Under these circumstances the incoming matter will immediately be brought into contact with the vapour of mercury which, condensing, will percolate, in a state of extreme division, through the liquid to be heated, and amalgamating with every particle of floating gold, will fall gradually to the floor of the receiver, to be swept forward into the well as amalgam and drawn off by the tap there, while the surplus sludge will run over at a low edge of the receiver into an over-flow trough.

Section C shows, on a larger scale, a sectional line of the amalgamator, taken through the centre of furnace, retort, receiver, and condenser.

The furnace will be of fire-brick, built to receive the retort, which will be movable, and connected with the condenser by an adapter. A tube, with funnel, top, and tap, will stand out from the top of retort above the movable cap, and pass down to below the ordinary level of quicksilver in retort. A movable cap will be placed over the retort connecting with the space between the outer and inner skins of the condenser by a telescopic tube, the whole protecting the retort, its tube and adapter, from the cooling effects of the atmosphere.

The fire of the furnace after ignition by use of its own flue may be shut off at that vent, and will then pass through the cap and telescopic tubes to the space between the outer and inner skins of the condenser, and escape by the flue at its point.

In cases where the use of a portable furnace might be found desirable, additional heat would be readily obtained by a continuation of the furnace along the neck of the retort.

The condenser will consist of an iron chamber, open at bottom, suspended over, and its edges dipped into the sludge. A double skin, as shown in Section E and plan D, will form part of furnace flue, increasing heating power, and protecting the inner skin in contact with the heated mercury from the cooling effects of the atmosphere.

From the edge of the condenser furthest from the inlet to receiver a hinged iron flap will be suspended, lifted by the revolving blades, but returning to its position in each interim; the object being to retard the active current of sludge as long as possible beneath the condenser, and to direct amalgam to the lowest level. A tube, with tap reaching the interior, will be placed on the top of the condenser, to admit air when needed, or to indicate the rapidity of evaporation.

The iron retort having been supplied with quicksilver and fixed, the movable cap and telescopic tubes secured, and heat generated, the vapour from the retort will pass into the condenser, where it will come into contact with the liquid to be acted on. Afterwards the fire may be supplied with fuel through orifices in the brick furnace, and the supply of quicksilver kept up by passing into the retort the amalgam drawn from the tap in the well of receiver through the funnel-tube; this tube will also be used to pass a test rod down to ascertain the amount of gold retorted, and govern the times of opening retort.

Attached to the amalgamator at its lowest side is the "Mercurial Arrester," F G and H plan and sections. This consists of a wood receiver, into which will descend an iron pipe from the overflow of the Amalgamator receiving the puddle of same. On a level with the bottom of the pipe, and forming a complete false bottom, a finely perforated plate is placed, and over it a depth of quicksilver. In the iron pipe a revolving rod works an Archimedian screw, forcing the puddle descending the pipe up through the perforated plate, and through the over-lying mercury, thence overflowing as waste.

The result will be to recover any mercury escaping by the overflow of Amalgamator.

The principle of the invention here claimed is the discovery that mercury will not pass through a finely perforated plate or wire gauze through which sludge or water can be forced. The motive power to the screw will be the same as for Amalgamator. It is claimed for this portion of the patent that while the invention may be used with effect in the Amalgamator, it can be applied for similar uses in any condition where the escape of mercury requires to be arrested.

Bassett's Condensative Amalgamator.

The puddling machine shown on plan A, as feeder for the Amalgamator, claims to act more effectively than an ordinary puddling machine, on the principle of the iron bottom sloping to the outlet hastening the delivery of gold and reducing the need of cleaning out. A grating and sluice would be placed at the outlet to Amalgamator.

The working of pump in well would only be useful when a short supply of water necessitated re-use, or the supply was deep.

WM. F. BASSETT.

This is the specification referred to in the annexed Letters of Registration granted to William Frederick Bassett, this twenty-ninth day of September, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 8 September, 1873.

SIR,

We do ourselves the honor to return to you the documents transmitted for our report under your B.C. communication of the 30th August, No. 73/6742, and which have reference to Mr. William Frederick Bassett's "Invention for the more perfect separation of Gold or Silver from the sludge of puddled earth or tailings of crushing machines, also the self-retorting of Gold obtained, and complete saving of the Mercury employed"; and we recommend the issue of Letters of Registration securing to Mr. Bassett the exclusive right to his invention, in accordance with his Petition, drawings, specification, and claim.

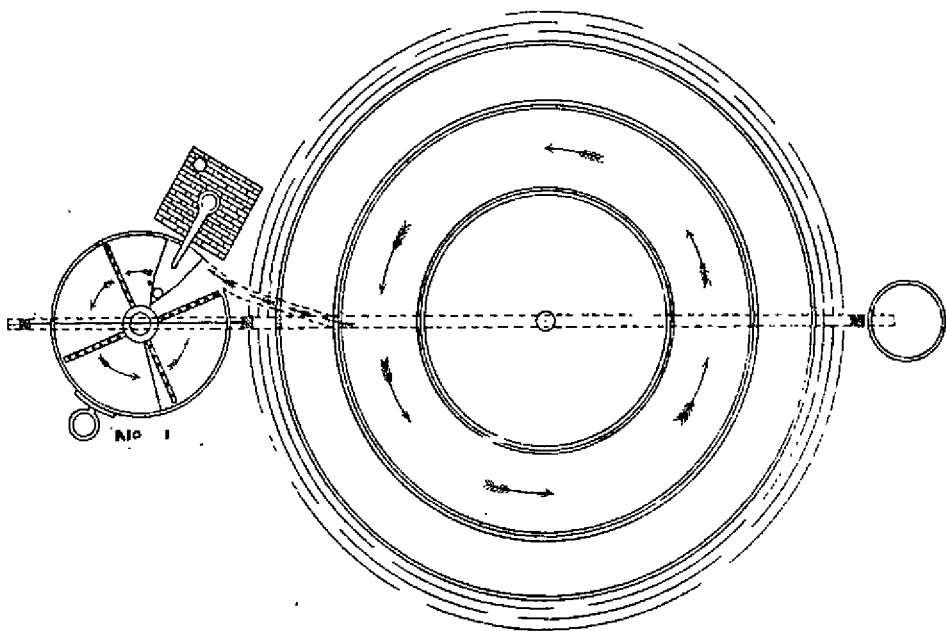
We have, &c.,

GOTHER K. MANN.
CHAS. WATT.

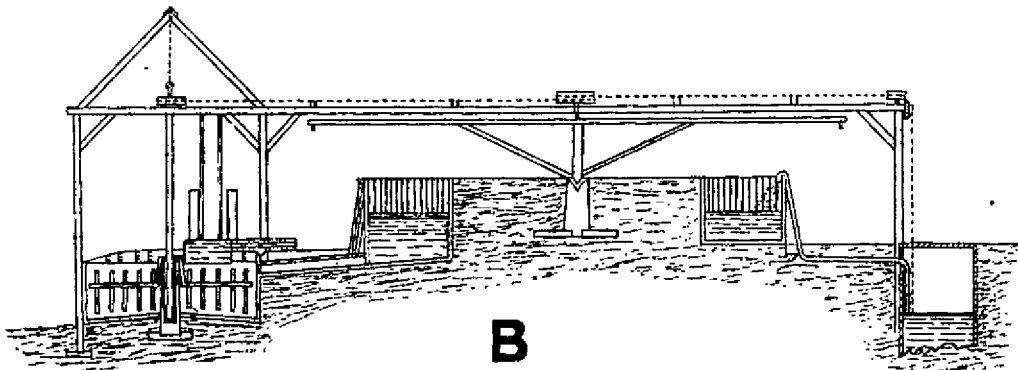
THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

(C)

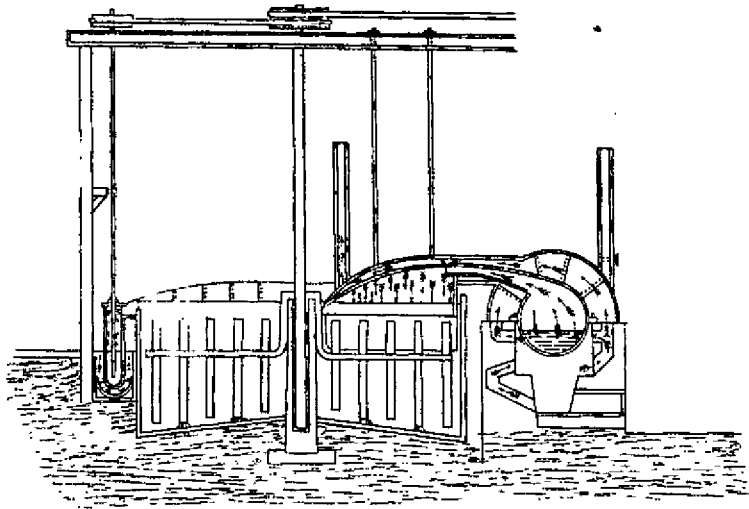


A

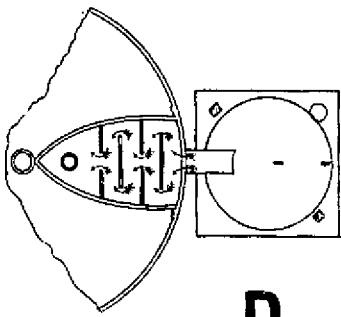


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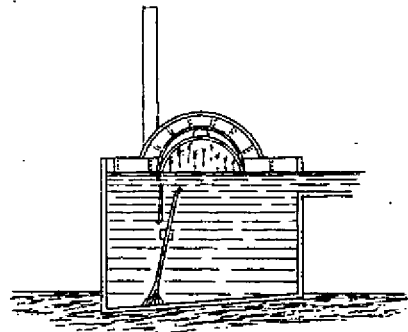
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C



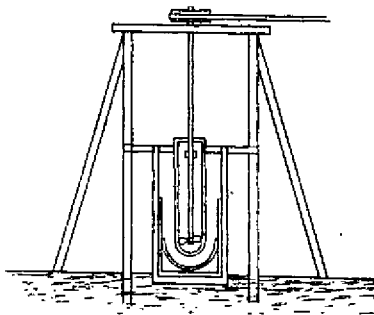
D



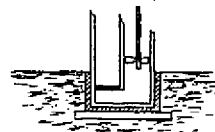
E



F



G



H

This is the Sheet of Drawings referred to in the annexed Letters of Registration granted to William Frederick Bassett, this twenty ninth day of September, 1873.

Hercules Robinson.

(Sig 1.)

[111]



A.D. 1873, 7th October. No. 380.

AN INVENTION FOR THE IMMEDIATE EXTRACTION OF GOLD AND SILVER.

LETTERS OF REGISTRATION to James Lawson and Thomas Jaffrey, for an Invention for the immediate extraction of Gold and Silver from any mineral substance, either oxidized or unoxidized.

[Registered on the 9th day of October, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS JAMES LAWSON, of George-street, in the city of Sydney, in the Colony of New South Wales, and THOMAS JAFFREY, of the Exchange, in the city of Sydney aforesaid, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention for the immediate extraction of Gold and Silver from any mineral substance containing one or both of these metals, either oxidized or unoxidized, such as pyrites, quartz, granite, slate, cement, sand, gravel, or other substances containing Gold and Silver, which said invention is more particularly described in the specification and sheet of drawings which are hereunto annexed; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said James Lawson and Thomas Jaffrey, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said James Lawson and Thomas Jaffrey, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said James Lawson and Thomas Jaffrey shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this seventh day of October, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

An Invention for the immediate extraction of Gold and Silver.

SPECIFICATION of an Invention for the immediate extraction of Gold and Silver from any mineral substance, either oxidized or unoxidized.

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, JAMES LAWSON, of George-street, and THOMAS JAFFREY, consulting engineer, of the Exchange, in the city of Sydney, in the Colony of New South Wales, do hereby declare the nature of our invention, and the manner in which the same is to be performed, to be particularly described and ascertained in and by the following statement and the accompanying drawings:—

The machine as shown upon the drawings consists of two (2) revolving drums, A and B, driven by a pulley, J, and fitted on hollow axles, C and D. A feeding-hopper, H, to be fixed at the mouth of the axle C, through which the ore is passed into the axle C, which is constructed in the form of an internal female screw, by which the ore from the hopper is discharged into the drum A, where it is submitted to a process of grinding, by means of two or more balls, EE, of the same diameter as the half-circle of the drum. Hot or cold water is introduced into the drum through the hopper and axle, by pipes, AA. On the mouth of axle D a grating, G, is fixed, through which the ground ore passes into and through the axle D into the drum B, where it is further submitted to a similar grinding process as in drum A, from which it passes through a grating, F (which is much finer than grating G), into a series of revolving ripples, RRR, screwed upon the drum and charged with mercury. The ripples discharge upon a perforated plate, P, through which it passes into a trough, T, charged with mercury, and fitted with a regulating plate, K, from which it can be passed on to blanketing-table or through pipe L into a revolving barrel, M, charged with mercury, from which it is discharged through the axle X into the waste spout Y.

Having thus described the nature of our invention and the manner in which the same is to be performed, we wish it to be understood that we do not confine ourselves to the number of drums or the precise details and proportions hereinbefore described, as the same might be varied without departing from the nature of the said invention, but we claim as our invention—

Firstly.—A new and inexpensive method for the immediate extraction of gold and silver.

Secondly.—Superior grinding power and economy of motive power.

Thirdly.—The method of feeding and discharging through hollow or tubular axles.

Fourthly.—Revolving ripples.

Fifthly.—The continuous feeding and discharge of the drums and barrel.

Sydney, N.S.W., 12 September, 1873.

JAMES LAWSON.
THOMAS JAFFREY.

REPORT.

Sydney, 20 September, 1873.

SIR,

The application of Messrs. James Lawson and Thomas Jaffrey for Letters of Registration for an invention for the "immediate extraction of Gold and Silver from any mineral substance," having been referred to us, we have examined the specification and drawings accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,

J. SMITH.

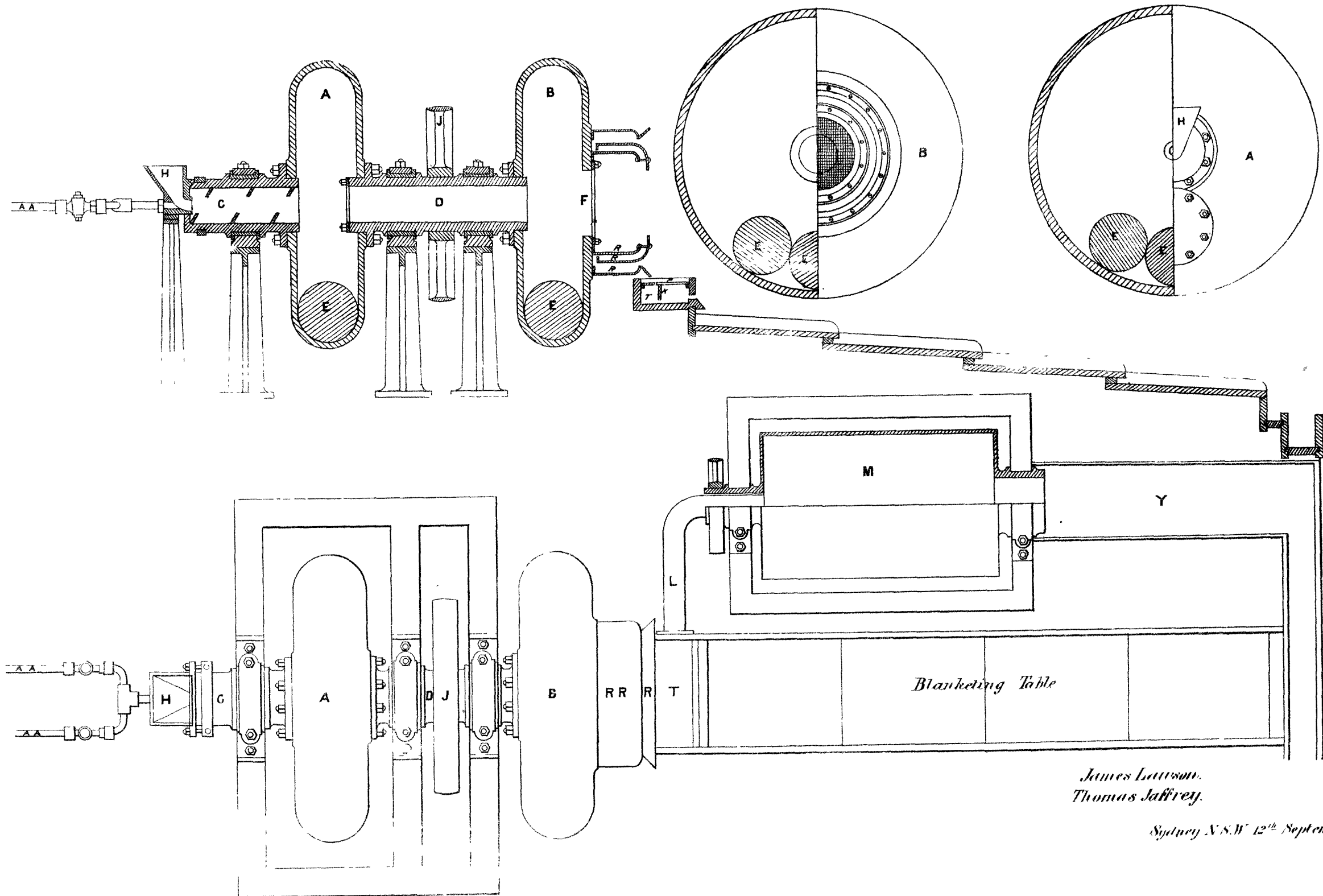
GOTHER K. MANN.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

(Copy)

No 350.



SCALE OF FEET
0 1 2 3 4 5 Feet

James Latson.
Thomas Jeffrey.

Sydney N.S.W 12th September 1863.

(Sig 1.)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE
SYDNEY N.S. WALES.



A.D. 1873, 14th October. No. 381.

INVENTION FOR THE SEPARATION OF MINERAL SUBSTANCES, &c.

LETTERS OF REGISTRATION to John Phillips, for an Invention for the separation of Mineral Substances, cleaning of Tin and other ores, the amalgamation and separation of Gold and Mercury from lighter substances, and the exposition of Precious Stones.

[Registered on the 16th day of October, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS JOHN PHILLIPS, of Sydney, in the Colony of New South Wales, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for the separation of Mineral Substances, cleaning of Tin and other ores, the amalgamation and separation of Gold and Mercury from lighter substances, and the exposition of Precious Stones, which said invention is more particularly described in the document marked A which is hereunto annexed ; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expence of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four ; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years : And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said John Phillips, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof ; to have, hold, and exercise unto the said John Phillips, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended : Provided always, that if the said John Phillips shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this fourteenth day of October, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Invention for the separation of Mineral Substances, &c.

REPORT.

Sydney, 24 September, 1873.

SIR,

The application of Mr. John Phillips for Letters of Registration for an "invention for the separation of Mineral Substances, cleaning of Tin and other ores, the amalgamation and separation of Gold and Mercury from lighter substances, and the exposition of Precious Stones," having been referred to us, we have the honor to report that we have examined the drawings and descriptions accompanying the same, and see no objection to the issue of Letters of Registration in accordance therewith.

We have, &c.,

J. SMITH,
GOTHER K. MANN.

THE PRINCIPAL UNDER SECRETARY.

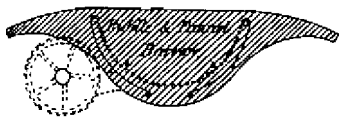
[Drawings—one sheet.]

No. 382.

[Assignment of No. 365. See page 61 of this Return.]

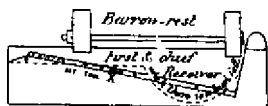
A.

DRAWINGS of the Six Parts of Machinery for the Separation of Minerals, Cleaning of Tin and other Ores, the Amalgamation and Separation of Gold and Mercury from lighter Substances, and the Exposition of Precious Stones (Scale 1 inch = 1 foot), with Descriptions, for the purpose of Registration under the Letters of Registration Act, 1852. By John Phillips, Mining Surveyor and Engineer, of Sydney.



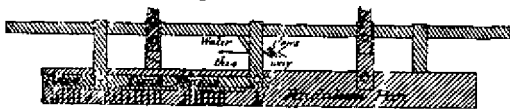
No. 1.—Rocking berran, with or without a wheel

Instead of bars *a*, a perforated plate may be employed, for passing the fine matter, & retaining the stones. This berran may be made wholly of iron, with riddled sides as well.



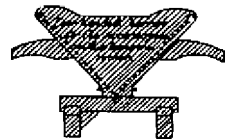
This Berran-rest, and Receiver, may be made wholly, or partly of iron.

Length View.

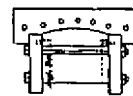


- (A) Teeth made of the common wood screw thus altered
- (B) Steps, for the retention of the heavy substances, tin, lead, gold, or mercury and heavy stones, the use of screw teeth being, to prevent clogging & to precipitate the fine tin by keeping the passing soil loose & floating.
- (C) Ricking arms extending two feet up, broken off

Sections.



No. 2.



Another view of Number 2

No. 3, for catching the fine tin.

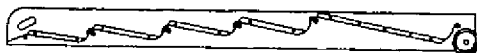


Cross View.

This denotes parts, which either rock, or oscillate
" " " " are fixtures

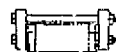
No. 4, for cleaning the ores by the hand.

Central Section, far side shewn.



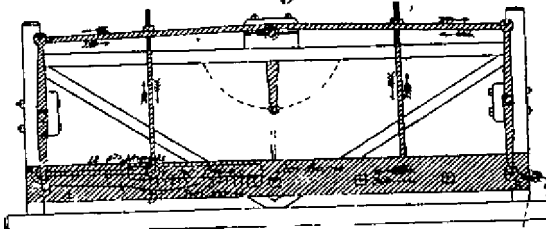
This is recommended for small quantities

End View.



Side-Elevation of Cleaner.

The Pan is hinged at A, & falls down at B for discharge; the mercury pan, D, is half an inch deeper, & the number of oscillations 180 per minute. C is set out of magnets for the separation of iron, they are placed in inch, or less, apart, across the stream.

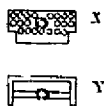


In numbers 5 and 6, the comb-frame moves up and down, while the pans move horizontally, so that the heavy metals are pulled against the stream, while the lighter are hastened downwards.

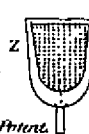
No. 5 is a mechanical appliance for large quantities to be turned slowly by hand

No. 6 is a modification of 5, as shown by the dots, for amalgamation and separation of gold from tin or pyrites, and saving pyrites

John Phillips,
Mining Surveyor & Engineer,
Sydney, Sept. 1th 1873.



X, a tool used with No. 2, A, & Z is used with Nos. 2, 3, & 4 and is extremely for precious stones, gold nuggets, and as a sieve. The anglebars and tool X, are together a part of the subject of Patent.

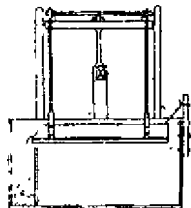


This is the Document marked A, referred to in the annexed letters of Registration, granted to John Phillips, this fourteenth day of October, 1873.

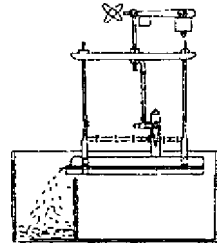
Hercules Robinson

DESCRIPTIVE DRAWINGS prepared agreeably with the requirements specified in the letter from the Colonial Secretary's Office, New South Wales, dated 10th May, 1873, to be lodged with specification, and application for patent, in the Colony of New South Wales, representing H. R. Hancock's invention in the improved mode of jigging ores, consisting chiefly in the introduction of a peculiar compound motion, the principle of which is illustrated in the four following diagrams: and which is specially applied to machines previously in use, as described in figures No. 1 and 2 and more thoroughly detailed in machines invented and specially arranged for the more perfect application of the principle, as illustrated below in figures No. 3 and 4.

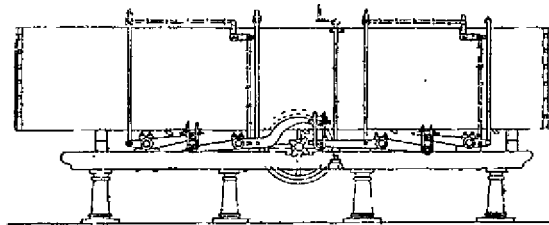
No. 1.



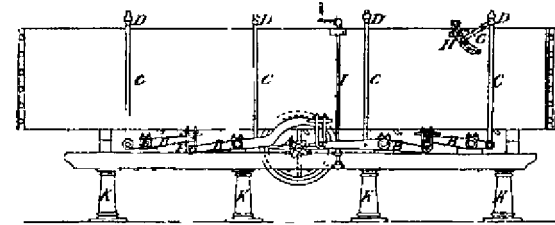
No. 2.



No. 3.



No. 4.



HERSCHEL

... by Cornish Hand-Brake Staff Jigging Machine, which ...
 ... Hancock's invention, it consists of a hopper fitted to the bulk, this causes the ore to have ...
 ... instead of vertical or nearly up and down ...
 ... motion of up, tilt, up and down, and also a for- ...
 ... which produces the effect of protecting the ...
 ... the part of the case from whence it was ...
 ... as toward an every pulsation forwards towards the red ...
 ... which greatly facilitates the separating of the waste from the ...
 ... or to speedily find its way through the jigging and ...
 ... below ...
 ... on that example previous machines a different ...
 ... the ore, producing marked results, inasmuch as the ...
 ... can be jiggered faster, the dressed ore brought to a higher ...
 ... as a reduced rate of labour cost ...
 ... however has been extended to the construction of iron ...
 ... the following ...
 ... to the rock ...
 ... Original are shown thus -

Sketch of Jigging Machine of the ordinary Cornish type, driven by machinery, motion being imparted by a cam-wheel striking against a lever. Hancock's principle is applied to this jigger, and is represented on the sketch in red, by which compound motion (somewhat similar to that described in No. 1) is obtained. The use of this Jigging Machine, however, is also almost superseded by the improvements shown in the following sketches.

The mechanism of this machine is essential throughout. It is similar to No. 4, except that the forward and backward motion is obtained in a different manner. On both sketches, viz. 3 and 4, the gear for obtaining the motion on a given rod, is not to make the 4 strokes conspicuous. Both arrangements produce nearly the same effect, only that in No. 4 it is superior, as in the working of it there is less wear and tear. The reference shown in No. 4 can be applied to this machine, except G and H, both of which refer to the horizontal motion. The No. 4 machine is the best that are in such use in the operation at the Mounta Mines, South Australia, one of which recently jigs from 100 to 150 tons of crushed stuff per diem.

H. R. HANCOCK,
 Mounta Mines, South Australia,
 20th September, 1873.

Witness to signature -
 Joseph Jolly, Clerk, Mounta Mines.

A. Cam-wheel and driving shaft, giving motion to the whole apparatus.
 B. Levers running lengthwise, connected by logs and pins, keyed to arbor. The cam-wheel which strikes the end of one of the levers conveys uniform motion to the machine.
 C. Horizontal rods conveying motion from the levers to the sieve bars.
 D. Horizontal screw-bars resting on the upright rods and suspending the sieves.
 E. Arches on which the levers are keyed running screws underneath the hatch in order to convey the motion uniformly to both sides of the sieve.
 F. Logs connecting the different levers with parallel pins.
 G. Oil-spout or lever, fixed to the hatch and connected with the sieve, thus giving compound motion to the sieve, viz. up and down, combined with forward and backward movements.
 H. Iron (cast), cranked, fastened to the hatch, and to which rod G is fastened with a screw, which can be moved so that the obliquity of the angle of rod G can be set at pleasure.
 I. Rod for regulating the extent of the motion and by which means the machine can be quickly thrown out of gear by screwing the lever high enough to allow the cam-wheel to pass without striking it.
 K. Cast-iron pillars, which can be made any height that may be most desirable for any particular situation in which the machine may be required.
 L. Fly-wheel, which also serves as belt-driving wheel.

This is the sheet of drawings, referred to in the annexed Letters of Registration, granted to Henry Richard Hancock, the twenty-first day of November, 1873.
 HERCULES RODENSON

[117]



A.D. 1873, 21st November. No. 384.

**IMPROVEMENTS IN MACHINERY FOR MAKING ICE, COOLING LIQUIDS,
REFRIGERATING ROOMS, &c.**

LETTERS OF REGISTRATION to Samuel Barclay Martin and John M'Gough Beath, for Improvements in Machinery for making ice, cooling liquids, refrigerating rooms, and for other like purposes.

[Registered on the 22nd day of November, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS SAMUEL BARCLAY MARTIN and JOHN M'GOUGH BEATH, of San Francisco, State of California, United States of America, engineers, have by their Petition humbly represented to me that they are the authors or designers of a certain invention or improvement in manufactures, that is to say, of an invention intituled "Improvements in Machinery for making ice, cooling liquids, refrigerating rooms, and for other like purposes," which is more particularly described in the specification and sheet of drawings which are hereunto annexed; and that they, the said Petitioners, have deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and have humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to them for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Samuel Barclay Martin and John M'Gough Beath, their executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Samuel Barclay Martin and John M'Gough Beath, their executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Samuel Barclay Martin and John M'Gough Beath shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-first day of November, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in Machinery for making ice, cooling liquids, refrigerating rooms, &c.

SPECIFICATION of SAMUEL BARCLAY MARTIN and JOHN M'GOUGH BEATH, of San Francisco, California, United States of America, engineers, for an Invention intituled "Improvements in Machinery for making ice, cooling liquids, refrigerating rooms, and for other like purposes."

OUR said invention relates to that part of an ice or refrigerating machine known as the congealer or refrigerator, and to that class of ice machines in which cold is continuously produced by the vaporization and condensation of volatile fluid.

Our object is to produce a wide-spread, simple, and efficient distribution of the fluid, to entirely dispense with the use of an uncongealable liquid, and to make transparent, solid, and homogeneous ice, free from seams, air cells, and all impurities held in suspension by the water from which it is made.

We will first speak of the objectionable features in the present methods of ice manufacture, and next, of the principle on which our invention is based, in order that we may better show wherein it differs from all others before known or used.

It will be apprehended by those skilled in the art to which our invention relates, that the withdrawal of heat from water in quantities sufficient to produce ice in bulk by the vaporization of a volatile liquid contiguous to it, involves either a rapid transmission of heat from the water to the liquid, or the action must be spread over a large surface.

As ice is a slow conductor of heat, and as the heat withdrawn has to pass through the ice already formed, a rapid formation of ice of any considerable thickness is impracticable, and can only be partially urged by vaporizing the liquid at extreme low temperature, and consequently low pressure, which can only be accomplished by an unwarrantable expenditure of power; therefore, a uniform distribution of both liquid and water over a large surface is a condition indispensable to the production of ice with economy, and we have found its consequent slow formation is essential in producing it in solid and transparent form from undistilled water.

Heretofore, the methods of freezing by direct contact have been by means of spraying the liquid within the freezing surface, and by covering the inner surface of the freezing vessels with absorbents of the liquid, or by means of expansion chambers, and more recently by means of hollow slabs, or long and narrow chambers holding a specific charge of liquid sufficient by its vaporization to give a stated result or form a given quantity of ice on the surface of the containing vessel. But the vaporization of any liquid in a vessel offering free space for the escape of the vapour from the surface of the liquid will absorb nearly all its latent heat of vaporization before leaving the surface of the liquid, therefore the constant subsidence of the liquid as it passes off in the gaseous form will inevitably produce an irregular formation of ice.

These different methods of applying the cold-producing agent renders the machines employing them irregular in their action, limited in their capacity, difficult and expensive to construct and operate.

From actual experiment we have found that we are able, with great security, economy, and simplicity of construction, to produce an immensely large surface for the formation of ice by the use of metallic plates traversed by parallel channels in which the volatile liquid flows as it expands into vapour, thereby forming ice on either surface from the water in which it is submerged.

The value of these channelled plates is greatly enhanced by reason of the plates being rendered practically uniformly cold, even when the channels are placed ten or twelve diameters apart.

The value of our invention is still further increased by the discovery of means of regulating the intensity and uniformity of the cold throughout the whole extent of the congealer composed of these channelled plates however large they may be.

We find that when volatile liquids are vaporized in their passage through long channels or pipes of small sectional area the fluid remains a homogeneous mass, that is to say, the liquid particles, completely and uniformly mixed with the vapour, are carried along with it without reference to the grade of the pipe, be it either up or down, and when, by reason of the great expansion caused by the absorption of heat, the velocity becomes as high as desirable, the stream of mixed vapour and liquid may be equally divided by simply forking or branching the pipe, and each one of these branches may, after a further expansion by heat, be again divided, and thus the subdivisions may be carried to any number and length of pipe desired, each pipe always carrying its due proportion of liquid and gas, and producing a uniform degree of cold throughout the whole system of pipes, by simply adjusting the pressure in the pipes so that the vaporization of the liquid is not entirely complete before it reaches the outlet.

Our congealer, constructed so as to embody this principle of action, consists of the before-mentioned channelled plates, each plate being traversed by a branch or division of this system of pipes.

The construction and form of the plates may be varied to suit the size of the machine desired by the maker.

The whole system may be embodied in a single plate, which may be put in the form of a scroll, with the necessary space between the parts of the scroll for the formation of ice on both sides of every part of it. In this form it may be lodged in a tub of cylindrical shape, for holding the water, or each division of the pipe may be enclosed in a single plate of plane surface, as is shown in the drawings.

All the divisions may be of equal length, and the plates equal in size.

In the annexed drawings, which form a part of this specification, figure 1 is a perspective view of our congealer, and also shows a form of liquefying apparatus which may be used in connection with it.

Figure 2 is a side view of one of the channelled plates composing the congealer.

Figure 3 is a vertical section of one of these plates.

As a means of security against leakage, when we use ammonia as a freezing agent, we make our system of pipes in which it is expanded into vapour of lead, making the parts which form the lining of the channels much lighter than that which is exposed outside and has to resist the pressure. Each channel is formed by two pieces of plate rolled longitudinally, with semi-tubular depressions to receive the pipe; these are riveted on each side of the pipe, closing between them the edge of the plate which fills the space between the parallel channels. The whole being thus firmly riveted together, forms one plate with the lead-lined channels before described, and as is shown in figures 2 and 3.

In figure 1, seven of these plates are placed in a tank, A, and are fastened to it by bolts or screws passing through the flanges on each end of the plates. We make the space or distance between the plates sufficient so that, when sheets of ice are formed on them of the thickness required, a few inches
of

Improvements in Machinery for making ice, cooling liquids, refrigerating rooms, &c.

of water will remain. This water space allows the ice to be removed from the plate when loosened, and it is also a receptacle for air and impurities held in suspension and rejected or thrown out by the freezing.

The tank A, containing these plates, is made non-conducting, to keep out the external heat, and the plates are raised from the bottom of the tank, to allow a free circulation of water under them, and prevent the ice from freezing or becoming attached to the bottom of the tank.

The freezing liquid is introduced at *a*, which, after passing back and forth through the plate *b*, as is shown by the arrows, makes its exit at *c*. By the time the fluid has reached *c*, it has become so much expanded by the heat absorbed from the freezing water surrounding the plate that its velocity has become greatly increased, so that it may be equally divided into two streams by the fork *c*, from which it passes, by the pipes *d*, *e*, into the plates *f*, *g*.

By the time it has passed through these plates its velocity has again been brought up to a point which requires it to be again divided at *h*, *i*; the four divisions thus formed pass through the plates *j*, *k*, *l*, *m*.

An important advantage of this method of distribution is that all danger of clogging is avoided, as no divisions are made until the volume of the fluid is brought up to a point which permits it to be made without diminishing the size of the pipe or channel in which it flows.

The gasified liquid is still of low temperature and contains some liquid particles after its freezing power is nearly exhausted, and we further utilize it by continuing the congealer pipes through the coil B, over which the incoming water of the natural temperature is passed in a shower from the perforated pipe *n*, and is cooled down before passing into the tank to fill the place of the ice removed.

The congealer pipes on leaving this coil terminate in the large pipe *o*, which conveys the gasified liquid to the liquefying apparatus. This liquefying apparatus may consist of any of the known methods or apparatus used for liquefying the different gases in ice-making machines.

The apparatus shown in the drawings (figure 1) consists of a compressing pump and condensing coil. From the latter the heat is withdrawn by applying water to the surface by any of the usual methods. Any means by which the gas or vapour is constantly withdrawn by the eduction pipe *o*, and returned through the pipe *p*, in the liquid form, may be used. The quantity of liquid received and gas withdrawn is a measure of the quantity of ice produced.

The ice first commences forming on the plate around the channels, but when the thickness of the ice is equal to the distance between the channels, it presents a smooth external surface, therefore we make the distance between the chambers equal to the thickness of ice required. We find the quantity of ice formed for each lineal foot of channel should not be greater than 5 or 6 inches per hour on each side of the plate.

By observing these rules we construct channelled plates for making transparent and compact ice as much as 12 inches in thickness if desired.

The construction of our congealer is such that the ice will not be detached from the plate, by allowing the gas or vapour from the condenser or liquefying apparatus to flow into it, as practised heretofore.

In our experiments we have found that the accumulation of condensed liquid in the pipes would obstruct the flow of gas so that portions of the plate would not be affected by it; we have therefore devised special means for more effectually accomplishing this object, and also means by which the ice is detached and taken from one or more of the plates without interrupting or checking the formation of ice on the other plates of the congealer.

The pipe *p* is connected with the pipe leading to the condenser as shown, and with each one of the congealer plates, by the two-way cocks *q*, *r*, *s*, *t*, *u*, *v*. These cocks are so constructed that they may be set to open a free passage from one plate to the other as the liquid flows in freezing, and by turning them 90 degrees this passage is closed, and the passage from the pipe *p* is opened.

Then to detach the ice from any plate it is only necessary to turn the two-way cock connected with that plate to open a passage for the gas from the condenser, while the cock on the opposite side of the plate is opened sufficiently to allow the condensed liquid produced by the rapid condensation of the gas rushing into the plate under the high pressure of the condenser to pass out.

As we consider ammonia the best cold-producing agent of any of the many substances which have been used or capable of being used for that purpose, we have proportioned the annexed drawings for the use of that agent.

To determine the proportions for any liquid, we ascertain from standard authority on the subject the latent heat of the liquid in question, the specific heat of its vapour, also the tension and volume of its vapour at different temperature, from which we are enabled to calculate the amount of ice or equivalent refrigeration produced by the vaporization of a given quantity of the liquid, also the size of the pipe, and the rate at which the pipe should be increased in number or divisions as the liquid expands into gas, always observing that the velocity may be greatly increased as the fluid approaches the outlet and is nearly all vaporized, but in no case should it be greater than 30 or 40 feet per second.

Our channelled plates may be used for refrigerating rooms by extending the plates through the rooms. The width of room on each side refrigerated by a single plate may be equal to about twice its height.

A descending current of cold air in the vicinity of the plate is replaced by warmer air from the ceiling, by which means a nearly uniform low temperature may be secured throughout the room.

Liquid baths or air may be cooled by extending this system of pipes through them without their being encased in the plates or the liquid, or air may be passed in a current over the pipe.

The channelled plates which form the principal or most important feature of our invention may be made in a variety of ways. That shown in figures 1, 2, and 3 is considered best for ordinary work. We make the thickness of the plate and diameter of pipe proportionate to the size of the plate. For plates (say) 6 feet in depth we make the plate of No. 10 (Birmingham gauge) rolled iron, and the pipes three-fourths of an inch in inside diameter.

To facilitate the removal of the ice in large machines, we usually make the length of the plates less than the width of the tank by a distance equal to about the depth of the plates, and place one end of the plate against one side of the tank, leaving a water space the whole length of the tank on the opposite side.

Improvements in Machinery for making ice, cooling liquids, refrigerating rooms, &c.

As the ice is detached from the plate it is split vertically into square blocks, which are floated into the open space, where they turn on their sides, and may be easily drawn out on an incline fixed at any point required on the side of the tank. The top edges of the plates, especially the end which does not reach the side of the tank, should be stayed by pieces running across from plate to plate, at a height sufficient to allow the ice to float on its edge under them.

In the place of each one of the two way-cocks described two single cocks may be used, so placed as to force the gas from the condenser into any one of the plates for the purpose of loosening the ice from the plate as described.

Having thus fully described the nature of our said invention, together with the methods of carrying the same into practical effect and operation, we wish it to be distinctly understood that we claim the novel arrangements, combinations, and methods of construction and operation, and arrangement of apparatus for effecting the desired objects, as hereinafter set forth and illustrated in the accompanying drawings.

This is the specification referred to in the annexed Letters of Registration granted to Samuel Barclay Martin and John M'Gough Beath, this twenty-first day of November, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 16 October, 1873.

SIR,

The application of Messrs Samuel Barclay Martin and John M'Gough Beath for Letters of Registration for "Improvements in Machinery for making ice, cooling liquids, refrigerating rooms, and for other like purposes," having been referred to us, we have examined the specification and drawings accompanying the same, and have now the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,

J. SMITH.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

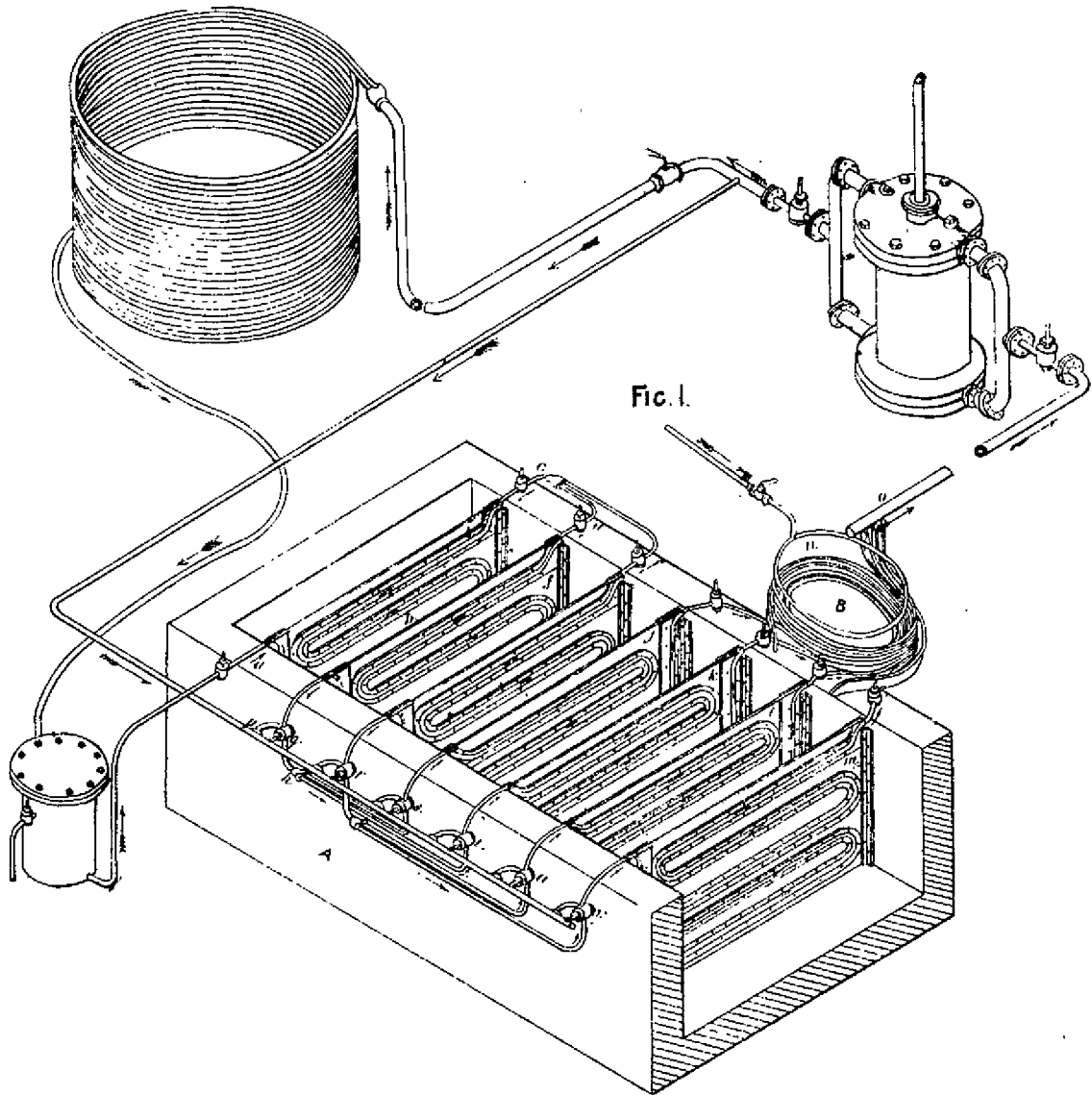


Fig. 1.

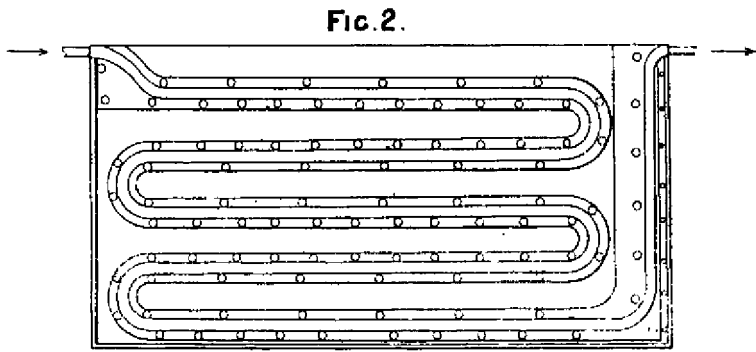


Fig. 2.



Fig. 3.

*This is the Sheet of Drawings referred to in the annexed
 Letters of Registration granted to Samuel Barclay Martin
 and John M^c Gough, Beath, this twenty first day of November 1863.
 Hercules Robinson.*

(Sig. 1.)

[121]



A.D. 1873, 21st November. No. 385.

IMPROVEMENTS IN COOLING, BY THE EVAPORATION OF VOLATILE LIQUIDS, &c.

LETTERS OF REGISTRATION to James Harrison, for Improvements in Cooling, by the evaporation of volatile liquids, &c.

[Registered on the 22nd day of November, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS JAMES HARRISON, of Melbourne, in the Colony of Victoria, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in Cooling, by the evaporation of volatile liquids and by the solution of salts in the apparatus and processes for the manufacture of ice, and in the application of ice and cold solutions to the regulation of temperature," which is more particularly described in the specification, marked A, and the two sheets of drawings, marked B and C respectively, which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said James Harrison, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said James Harrison, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said James Harrison shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-first day of November, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in Cooling, by the evaporation of volatile liquids, &c.

A.

SPECIFICATION of JAMES HARRISON, of Melbourne, in the Colony of Victoria, for an invention intituled, "Improvements in Cooling, by the evaporation of volatile liquids and by the solution of salts in the apparatus and processes for the manufacture of ice, and in the application of ice and cold solutions to the regulation of temperature."

THIS invention relates to improvements in the apparatus and processes for the reduction of temperature, by the evaporation of volatile liquids and condensed gases and by the solution of salts; to improvements in the apparatus and processes for the manufacture of ice thereby; and in the modes of economically applying ice and cold liquids to the cooling of enclosed spaces, to the cooling of worts and other liquids, and to the preservation of perishable animal and vegetable substances. The processes and apparatus for cooling by evaporation to which my improvements refer are those by which cold is produced by the evaporation of ether, ethyle, chloride of ethyle, methyle, chloride of methyle, sulphurous anhydride, and other homogeneous liquids, the vapours of which, after producing cold, are reduced again to the liquid state by pressure in a separate condenser, and returned in a liquid state to the evaporating vessel. The process for cooling by the solution of salts to which my improvements refer is that wherein the salts are mixed with water to produce refrigeration and the salts recovered by evaporating the brine.

My improvements in the manufacture of ice consist in a radiating process, and relate to the mode of applying cooled brine irrespective of the process by which the cold is primarily produced; and my improvements in the use of ice and cold liquids relate to the maintenance of a low temperature in any enclosed space by regulated streams of cold water or brine over the interior of the boundary walls, irrespective of the modes of producing the ice or cooling the brine.

The apparatus for cooling by the evaporation of homogeneous liquids, such as ether, usually consists of an evaporating chamber, a pump for withdrawing and confining the vapour, a condenser, in which the vapour is reduced to the liquid state, and a trap-valve which prevents any air or non-condensed vapour from returning to the evaporating chamber. My improvements in the evaporating chamber consist in the adoption of an annular boiler, made of two sheets of boiler plate or copper placed within a sixteenth or other small portion of an inch apart at their lower edge, the distance between them gradually increasing to an inch or more at their upper edge. The boiler thus constructed forms a ring of large diameter in proportion to the enclosed space. The ether occupies the narrow space of the bottom half of the boiler, and the vapour collects in the wider space at top. There is one cross partition, on one side of which the liquid ether enters, and from the other side of which the vapour is withdrawn, so that the vapour traverses the whole length of the enclosed space. Another new form of boiler which I also employ consists of perpendicular or horizontal coils of pipe, the liquid ether entering the lower end of the coil and the vapour being withdrawn from the upper end. The diameter of the pipe is small in the bottom coils, and increases upwards; or the diameter may be constant, and the area of the lower tubes diminished by the insertion of a solid core or of a core formed of a closed tube. Large boilers of either of these forms have a separate vapour chest, from which the vapour pump is supplied, but in small boilers the vapour chest is dispensed with. The advantages of these boilers consist in the facility they afford for the detection and repair of any leak, the avoidance of the annoyance caused by the bursting of tubes from freezing or otherwise, the facility they afford for utilizing the cooled surface either by radiation or by conducting streams of brine over the surface, and in the economy of materials and the small quantity of evaporable liquid required.

To the boiler or evaporating chamber I affix a subsidiary vessel for the purification of the volatile liquid, which in the course of its circuit becomes contaminated with oil and other impurities. This separate evaporator is at a lower level than the refrigerating boiler, with which it communicates by two pipes fitted with stop-cocks, by one of which the impure liquid passes downward, and by the other the vapour passes into the vapour space of the refrigerating boiler or into the pipe leading into the vapour pump. When it is deemed requisite to purify the volatile liquid, the cocks are opened and the lower evaporating chamber fills. The stop-cock on the liquid supply pipe is then closed, and the vapour pipe left open. The cold produced in this subsidiary chamber may be utilized either in cooling brine or in subjecting to a preliminary cooling the water to be afterwards converted into ice. This subsidiary chamber is also used as a reservoir for the volatile fluid employed. When the works are stopped the whole of the fluid is run into the reservoir, which is kept at a lower temperature than the rest of the apparatus, whereby the risk of loss by leakage or in starting the apparatus is diminished.

The vapour pump is usually fitted with self-acting drop valves or with slide valves. My improvements in the valves consist in having slide valves actuated by gearing on the suction or vacuum side, and self-acting valves on the exhaust or pressure side. The valves on the suction side are open during the whole stroke, those on the pressure side remain closed until the pressure inside the cylinder exceeds the pressure in the condenser and close at the end of the stroke. For horizontal pumps I employ on the pressure side a valve which runs down an inclined plane to its seat, and is forced up the inclined plane when the vapour is passing from the pump to the condenser.

My improvements in the stuffing-boxes for the piston and valve rods consist in providing an interspace in the middle of the packing, so that when the pump is sucking and there is any leakage in the stuffing-box, the interspace will become filled with air or oil, and when the pressure is reversed the vapour will drive out the air or oil and take its place. Any through leakage will thus be prevented or reduced to a minimum by connecting by a tube the two interspaces of any couple of valves; there will be an interchange of the contents of the interspaces, and any leakages between the interior of the pump and its exterior are rendered still more improbable. By connecting the interspace with an oil chamber, the lubrication is best provided for, and leakage at the same time prevented.

I also employ a condenser, in which the condensation is produced by a jet of the same volatile liquid as that employed for refrigeration. In an ether apparatus the condensation of the ether vapour is accomplished by a jet of liquid ether combined with surface condensation. The condensed ether is cooled in a subsidiary refrigerator before being thrown in a jet into the condenser. The condenser, under this arrangement, consists of a single chamber, into which the jet is thrown. The condensed ether is with-

same

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same pump withdrawing the warm liquid ether and forcing it, when cooled, into the condenser. This form of condenser is of especial advantage when the volatile liquid is evaporated under a pressure less than that of the atmosphere, and when there is a liability to its becoming mixed with air, the presence of air in the vapour acting as a serious hindrance to its contact with the sides of a surface condenser, while it interferes but slightly with the operation of a jet. In addition to the jet, the external surface of the condenser is kept wet, so that it may be kept cool by the evaporation of the moisture. By the subsidiary cooling of the condensed liquid, an economy in the use of the condensing water is effected. When the volatile liquid is evaporated under a pressure equal to or in excess of the atmosphere, the use of a jet is not of so much advantage, and for the sake of simplicity it may be dispensed with, and the vapour be reduced to the liquid state by surface condensation alone.

My improved surface condenser consists of a perpendicular or horizontal coil of pipes covered with network, so as to cause the dispersion of the water over the surface, and at the same time to admit of free radiation from the pipes and free access of air to the moistened surface; a current of air being at the same time maintained by a fan or other external arrangement over the wet surface. This current of air is thrown into the centre of the coil when horizontal and spiral, so that it may flow outward and not merely upward, and is thrown across the tubes when arranged perpendicularly, the object being to supply each round or layer of the pipe with fresh dry cold air, instead of allowing the heated and saturated air from one round to rise to the next.

My improvements in the trap-valve for supplying the boiler or evaporating chamber with returned liquid consist in a lever with a solid plunger of metal at one extremity and a valve at the other, the fulcrum being placed so that the metal plunger shall float in the liquid and fall when the liquid falls. The hollow balls usually employed are superseded, as they are liable to become partly filled with liquid. When jet condensation is employed, the trap arrangement is connected with the boiler so as to regulate the supply thereto.

In order to get rid of the air which is apt to accumulate in the condensers of apparatus wherein the volatile liquid is evaporated under a pressure less than that of the atmosphere, I employ an arrangement on the principle of Wolfe's bottles. A pipe is carried from that part of the condenser most remote from the pump, and when the pressure in the condenser exceeds that of the atmosphere the mixed air and vapour are allowed to escape through a series of cells filled with a liquid in which the volatile liquid is soluble. After passing through these cells the air is allowed to escape into the chimney or waste steam pipe. The oil or other liquid is removed when saturated, and the volatile liquid is recovered from it in the subsidiary vessel already described.

In making a selection of the kind of volatile liquid or condensed gas that it may be most profitable to use, regard must be had to the temperature required to be produced, and to the pressure or tension of the vapour at that temperature. As a rule, it is best to employ that liquid the vapour of which at the temperature required is about equal to the pressure of the atmosphere, not less, but as little over as possible. The object is to prevent leakage either of the vapour outwards or of the air inwards. Mixtures of the materials, provided they are not chemically incompatible, may be made according to the following rule and data. At the temperature of zero, Fahrenheit, the vapour of ammonia has a pressure of 90 inches of mercury; vapour of oxide of methyle, 32 inches; of sulphurous acid, 23 inches; of chloride of ethyle, 10 inches; of sulphuric ether, 3 inches; of pyroxylic spirit, 0.56; and of alcohol, 0.37. Either of these fluids may be mixed, the quantities being in the proportion of the pressure of their vapour, and the mixture will evaporate without leaving a residuum. If there be an excess of the less evaporable liquid it will remain inert in the boiler, but may be removed by distillation.

My improvements in refrigeration by the solution of salts, such as chloride of calcium, in water, consists in arrangements whereby the solid salt descends and meets an upward current of water, whereby the resulting cold solution is often doing the work of refrigeration required of it conveyed still upward, meeting separate descending currents of water and of solid salts, reducing them nearly to the initial temperature of the current of cold brine; and whereby the water of solution is evaporated, the solution passing downward in a long trough, while the heated products of combustion from a furnace pass underneath in an opposite direction, and whereby salt is crystallized from the concentrated solution.

In the use of crystallized chloride of calcium or other salt which produces cold by solution in water for making ice, I make a long and deep but very narrow receptacle, the walls of which are preferably of sheet metal. I feed in the broken or pulverized crystals of the salt at the top, and introduce the water at the bottom. The resulting cold solution flows upward and outward from side perforations near the top, or is conveyed away by a pipe to be applied to any cooling purpose. After having done its work the brine is pumped up in two separate streams, one to meet the descending supply of water, and the other to meet the descending salt. The stream for cooling the salt is carried up between two plates of metal, while the salt falls gradually downward on either side, the broken crystals being fed in from a hopper at the top and raked out at the bottom. The stream for cooling the water is conveyed through a pipe surrounded by another pipe or open channel containing the water to be cooled. The central pipe has a solid core of smaller diameter inserted for the purpose of forcing the brine in a thin stream along the sides of the tube, so that there is no central current carrying off material without doing work. Any of the ordinary refrigerators already known may be used for this purpose. The evaporator consists of a shallow trough divided into narrow channels, along which the brine flows; while the flame and heated gases pass through corresponding channels in the flue underneath. The concentrated brine thence flows into a cooling trough, where it is kept at the desired density by either increasing or diminishing the supply thereto. The concentrated brine is thence run into shallow pans placed in recesses, between and around which a stream of cold water is maintained until the mass in each is crystallized. I also concentrate the brine in an open shallow pan, removing the crystals as they form. The former arrangement is best where economy of space is required. The solid salt is then broken into pieces or pulverized, according to the rapidity with which the refrigerating process is required to be carried on, and is then shovelled into the hopper of the receptacle, when it is cooled by ascending spent brine.

My improvements in the making of ice by streams of cold brine, no matter by what process the cooling has been produced, consist in arrangements for submitting a continuously renewed film of water flowing over a flat surface to the direct radiating surface of the boiler or vessel containing the refrigerating material,

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material, over which surface a stream of saline solution or other liquid non-solidifiable at the required temperature is maintained. Additional radiating surface is obtained by conveying the saline solution over surfaces of cloth or other porous or roughened surface, and when the brine has at last fallen into the bottom trough it is again raised by an endless web of cloth passing over three rollers, one at top and two at bottom, so arranged that the cloth takes up the brine on one side and delivers it on the other. The water to be frozen flows downward on alternate surfaces until the requisite thickness of ice is produced. The surplus water flows into a trough below, whence it is pumped up to be again passed over the moulds. There is a perforated pipe or trough over each set of moulds, with a cloth or canvas covering over the perforations, and with a depending serrated edge: the rapidity of the flow being regulated by the thickness or texture of the envelope. The number of these alternations will of course depend on the height of the apparatus on the degrees of cold produced, and on the rapidity of the downward current and consequent quantity of brine. When the brine in the last compartment has reached 31 or 32 degrees it is available for cooling fresh supplies of water or other materials, and is then returned to the refrigerating surface to do duty once more in the same way, or is pumped to the evaporating pans, as the case may be. The ice moulds are of simple sheets of metal turned out at the edges, but they may be of any material, as there is no conduction of heat required. The ice is thus made partly by radiation and partly by evaporation, the vapour condensing on the opposite colder surface, and the air escapes from the water without forming bubbles. The ice is thus formed more quickly, more economically, of better quality, with equal facility in thick and thin pieces, and more nearly resembles natural ice than that made by any other process.

My improvements in cooling worts consist in an arrangement for passing the worts either directly over the surface of the refrigerating boiler or receptacle for the solution of salts, or over or through any of the refrigerators already known, supplied by a stream of water or brine previously cooled down, by being placed over the refrigerating surface. Where the cold is produced by the solution of salts, the resulting brine is passed directly through the tubes or channels over or along which the worts are conveyed. The worts may thus be cooled from their boiling temperature, or they may be previously cooled by any of the processes now in use, and the final reduction of temperature effected in either of the modes described. I also employ the artificially cooled water or brine in attemperators to regulate the heat during fermentation, so that the Bavarian system is rendered practicable in the hottest of climates. I also cool the beer after fermentation, either in the gyles, the cleansing casks, or store casks. In the latter case the cooling is effected by an attemperator, consisting of a fold of pipes, along which a stream of saline solution is passed, or of a single pipe filled with pieces of solid salt to which water is added, and the whole left in till an equilibrium of temperature is maintained. This pipe may remain as a fixture, so that it may be supplied by a syphon and refilled at pleasure. These arrangements are applicable to the cooling of water or any other liquid in casks or tanks, as well as to the cooling of ice chests, without ice, cupboards, cellars, &c.

My improvements in the cooling of enclosed spaces, such as the hold of a ship, with a view to the preservation of perishable articles by cold, consist in the maintenance and regulation of streams of cooled water or brine carried over the interior lining of the enclosed space, the use of pipes being dispensed with, the cold liquid flowing over the naked surface or between two sheets of metal or waterproof material. The floor walls and roof of the enclosed space are first protected with a thickness of non-conducting material. Where ice alone is employed as the cooling agent I stow the ice at the bottom of the enclosed space and pump up the water as it melts to a reservoir over the deck or roof, whence it flows over the deck or roof and down the sides of the enclosed space, and is again allowed to flow among the ice until its quantity becomes inconvenient. When the temperature is to be reduced below 32° I mix salt with the ice when it is stowed away or with the water which flows over it. It is already known that an intense cold can be produced by a mixture of ice and salt, and refrigeration is produced in vessels brought in contact with such a mixture, but it is not known that after the lowest temperature of the mixture is reached the ice ceases to melt, and the remainder of the ice will remain unmelted for so long a time as the ice alone would remain; the rate of melting in either case being due to the difference in temperature between the enclosed space and the external air, and to the thickness of the imperfectly conducting envelope and its co-efficient of conductivity. This fact being ascertained, it follows that a current of brine flowing over the ice will not melt more than is requisite to keep the brine at the temperature due to its strength. The action ceases so soon as the minimum temperature is attained. The rule which I lay down for ascertaining the quantity of brine required to produce any given effect is this: Take the number of degrees which the brine before mixture is above the temperature required, with this number divide 140, the number of units of heat required to melt the ice; this will give the number of gallons required to melt ten pounds of ice. The percentage of salt (when common salt is used) which the brine shall contain is ascertainable on inspection of the following table of the cold produced by various solutions.

1 per cent. of salt	...	...	...	...	30 $\frac{3}{4}$ Fahr.
5 " "	...	...	...	...	25 "
10 " "	...	...	...	...	18 $\frac{1}{2}$ "
15 " "	...	...	...	...	12 "
20 " "	...	...	...	...	6 "
25 " "	...	...	...	...	0 "
Saturated solution	...	...	...	...	5 below zero.

To produce these effects the brine must be of the specified strength after its augmentation of bulk by the water from the melted ice. The strength of the brine before use must therefore be in excess by a variable quantity, proportioned to the temperature at which it is used, and consequently to the quantity of ice which it is capable of melting. I have ascertained by experiment that one ton of ice and one hundredweight of salt are sufficient for the maintenance during fifteen days of a temperature below the freezing point in an enclosed chamber having walls of two feet thickness of sawdust, and a superficial internal area of two hundred feet, the external air being of the average temperature of 70 degrees. As the conductivity of materials is proportionate to their thickness, the quantities of ice and salt required to maintain a given temperature in a chamber with walls of a given superficies and thickness for a given time are exactly ascertainable from these data. Of course, where the cooling has to be done at sea, or other place where ice is not freely obtainable, a liberal allowance must be made for unforeseen contingencies.

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I also maintain a cold temperature in enclosed spaces, without ice, by the use of deliquescent salts. In this process I supply the dry salts to the bottom of the hold or other enclosed chamber, and allow water or the returned brine to flow over them, pumping up the solution and conveying it over the sides and deck or roof. When the solution has become saturated, it is pumped out and employed to cool fresh supplies of materials, and is afterwards evaporated and crystallized as already described. The quantity of salt required for this process is about three times the quantity of ice specified above, but as it is continually renewable it will not be requisite to have more than a day's supply, with, of course, a reasonable allowance for emergencies, such as a stopping of the evaporating process. My purpose in placing the ice and salt, or the deliquescent salt, as the case may be, on the floor of the chamber is the preservation of a dry atmosphere in the chamber. If the ice or the deliquescent were placed over or at the side of the chamber, the bottom would be the warmest, and evaporation would proceed therefrom, filling the air of the chamber with moisture, which would condense on its colder contents. By keeping the bottom cold, the contents are not only kept dry but are slightly desiccated. If a moist atmosphere is wanted, it may, of course, be had by placing the ice or salts overhead. In fitting up the hold of the ship for either of these processes, the non-conducting materials are of course fixed on the inside of the floor and sides, but to protect the top they are placed above the deck, leaving an interspace in which the cold brine circulates. The ice may also be stowed between decks, and the upper protecting envelope raised above the upper deck. When the hold or chamber is fitted up so that the brine shall flow between two sheets of metal or waterproof material, the ice may be stowed above or below the cold chamber, as may be most convenient. In order to insure the regular flow of the brine over the interior surface or in the space between the two sheets of waterproof material, I use a lining of blanketing or other porous fabric, through and over which the brine spreads laterally while flowing downwards. To insure a regular feed and a steady current of brine, I use a perforated supply pipe covered with cloth or other porous fabric, through which the brine will ooze with more regularity than if delivered through naked perforations. The supply pipe, if below the level of the ice chamber, will be kept filled by gravitation, but if, when the ship is on a wind, one side is raised so as to be above the brine level in the ice chest, the brine must be supplied to the pipe at its highest part by pumping. Instead of this pipe the brine may be supplied from a trough in the lower angles of the ice chest, into which the brine flows from the melting ice, the trough being divided by partitions, so that when the ship rolls or pitches some of the brine will remain in each compartment. To ascertain the quantity of brine which should be kept in circulation to produce a given effect, the rules I have already given for ascertaining the quantity of ice melted by a given superficies with a given difference of temperature require to be kept in view. Ascertain the quantity of ice melted in a given time at a given temperature with a given thickness of envelope by a square foot of the surface, multiply this by 140, and by the number of square feet of surface over which the brine has to travel, and the quantity found will be that which is required to protect the surface from external heat, so that the brine, after it has performed this service, shall be only one degree higher than it was before. Thus, in the instance I have given of one ton of ice melting in fifteen days with a surface of 200 square feet, the quantity of brine required to be kept in circulation is eighty-eight gallons per hour. As it is impossible to give rules applicable to all circumstances, it is desirable to ascertain the data for each particular case by actual experiment. Different kinds of sawdust, charcoal, coke, straw, or other imperfectly conducting materials, will have different co-efficients of conductivity, and the relation of the external walls to surrounding objects will be so different that the agreement of any two experiments will be a rare occurrence. As the ice melts, the brine will accumulate to an amount in excess of what is required to keep up the circulation. This excess contains a quantity of cold which is rendered useful by being drawn off very slowly through a pipe embedded in the envelope, so that it shall emerge and run off as waste at a temperature but slightly below that of the external source of heat. The quantity run off in a given time should be as nearly as possible equal to the ice melted in the same time. If a deliquescent salt be used instead of ice similar rules will apply, with this difference, that instead of the melting being in proportion to the strength of the resulting brine it is in proportion to its weakness, pure water giving the maximum degree of cold, and the result being diminished by an excess of either salt or liquid.

Where the cold is applied for the preservation of meat or other perishable article, it is desirable to subject the air to a process of drying and purification. This I accomplish by a self-acting process of respiration. A pipe, communicating with an air space at the bottom of the chamber, rises through the protecting envelope, becoming slightly heated as it ascends, thus establishing a current. The pipe passes into a small apparatus consisting of three chambers, the first of which contains broken pieces of chloride of calcium, the second concentrated sulphuric acid, and the third a freezing mixture of ice and salt, or of crystallized chloride of calcium and water. The air thus dried, purified and cooled, descends through another tube into the meat chamber. This process is self-acting, the only attention required being the renewal of the substances in the three chambers, when they have become saturated or ineffective. An enlargement of either tube at entering or leaving this apparatus is loosely plugged with cotton wool, that, according to Dr. Tyndall, being the best arrester of germs and other impurities. The air within the meat chamber is thus kept dry and pure, without any loss of heat.

Having thus described and ascertained the nature of my invention and the manner in which it is to be performed, and having given a concise description of the principles of the various processes, so that the details of their application to special purposes may be worked out by any intelligent expert, I have to state that I claim—

First.—The forms of boiler and condenser.

Second.—The valves.

Third.—The stuffing boxes.

Fourth.—The trap valve.

Fifth.—The arrangement for getting rid of any air that may have leaked into the apparatus, substantially as described.

Sixth.—The employment of a subsidiary boiler, wherein the evaporating fluid is purified without any stoppage of the works, as described.

Seventh.—The cooling of the liquified vapour or gas in a separate vessel, and employing it in a jet for the condensation of vapour within the condensing chamber.

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- Eighth.—The use of mixtures of evaporating liquids in such proportions described, as that they will evaporate without leaving a residuc.
- Ninth.—The use of crystallized chloride of calcium or other deliquescent salt and of a stream of water, passing in opposite directions, as described, for the production of a brine of intense coldness.
- Tenth.—The arrangement described for utilizing the cold remaining in the brine for the purpose of cooling fresh supplies of the salt and water.
- Eleventh.—The use of pipes with central solid core, so as to diminish the quantity of contained liquid and increase relatively the extent of cooling surface.
- Twelfth.—The arrangement for evaporating the brine and recovering the solid salt, substantially as described.
- Thirteenth.—The making of ice by the accretion of thin films of water flowing over surfaces exposed to the radiating surface of a boiler or other surface, over which a stream of cold brine is kept flowing.
- Fourteenth.—The use over again of brine which has not been deprived of the whole of its refrigerating power, by raising it on endless webs passing over rollers, as described.
- Fifteenth.—The perforated pipes or troughs with cloth coverings and serrated depending edging, as described.
- Sixteenth.—The application of the previously described processes to the cooling of worts or other liquids, as described.
- Seventeenth.—The arrangement for the maintenance of an equably cold temperature in enclosed chambers, by streams of cold brine flowing over the interior surface without tubes, as described.
- Eighteenth.—The arrangement of two sheets of metal or other waterproof material with blanketing or other porous substance (sandwich fashion) between, to insure a regular and diffused flow of brine downward.
- Nineteenth.—The application of a mixture of ice and salt, and of ice over which a stream of brine is kept flowing, to the maintenance of a low temperature for any required space of time, the temperature being regulated as described.
- Twentieth.—The mode of perpetually renewing the purity and dryness of the air in any enclosed space by the process of self-acting respiration described, a process applicable to other purposes than that stated.

This is the specification, marked A, referred to in the annexed Letters of Registration granted to James Harrison, this twenty-first day of November, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 27 September, 1873.

SIR,
The application of Mr. James Harrison for Letters of Registration for "Improvements in Cooling, by the evaporation of volatile liquids, and by the solution of salts in the apparatus and processes for the manufacture of ice, and in the application of ice and cold solutions to the regulation of temperature," having been referred to us, we have examined the specifications and drawings accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

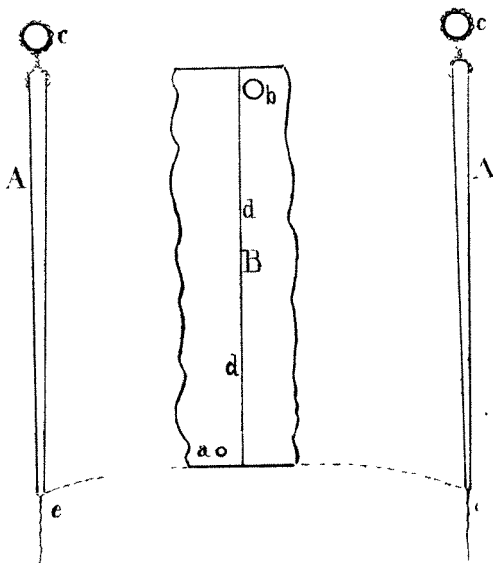
We have, &c.,

J. SMITH.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

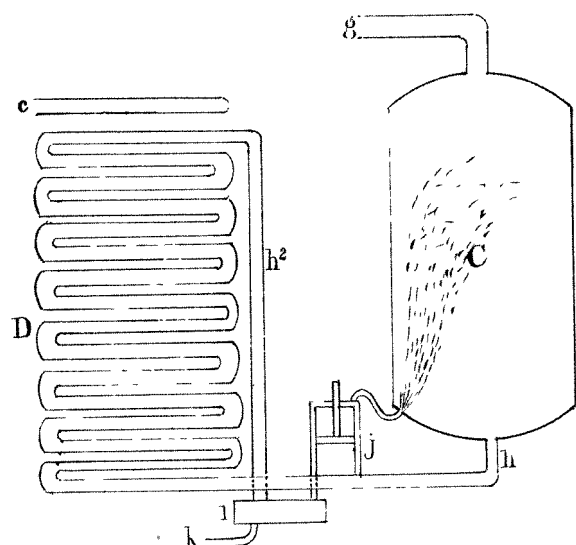
[Drawings--two sheets.]

Figure 1. Annular boiler referred to in first claim.



AA, section of the annulus; B, outside of annulus at partition; a being the aperture for the return-pipe conveying liquid, and b being the pipe through which the vapour is withdrawn; d is the partition or division between the return and exhaust sides of the boiler; cc is a perforated pipe (as shown in figure 12) for supplying brine; ee, a prolongation *ad lib.* of brine surface.

Figure 3. Section of condenser referred to in first and second claims.



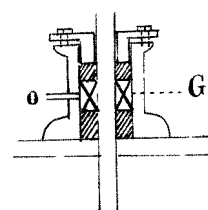
C, condensing chamber; f, being the jet; g, the vapour pipe; h, the pipe for outflow of liquid leading to subsidiary cooler D, with perforated pipe c, for supply of condensing water; h², leading to the pump j, and to reservoir i, the pipe k carrying off the supply of volatile liquid to the boiler.

Figure 5. Section of spherical valve for horizontal vapour-pump referred to in second claim.



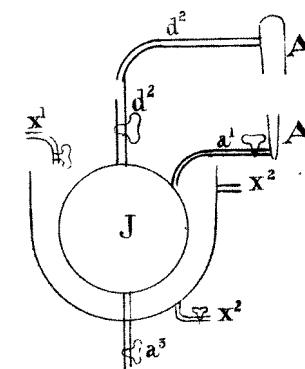
F, spherical valve running on grooved inclined plane or curve; mm, end plate of pump-cylinder; n, valve-seat; g, vapour-pipe leading to condenser. The slide and self-acting valves referred to are of the ordinary description, their combination only being claimed.

Figure 6. Section of stuffing-box referred to in third claim.



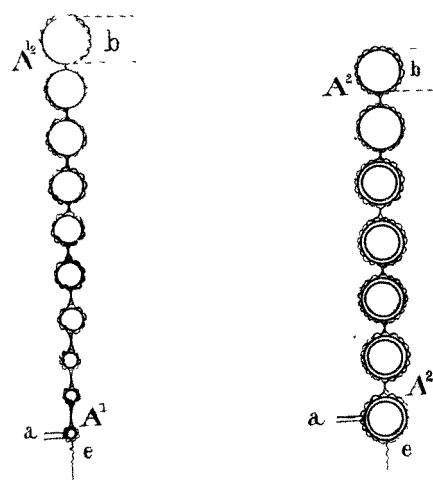
G, interspace in stuffing-box; o, pipe leading from one box to another or to a lubricator, but this is not essential. The vacancy is provided for by a hollow ring or X-shaped ring.

Figure 9. Section of subsidiary boiler for purifying volatile liquids referred to in sixth claim.



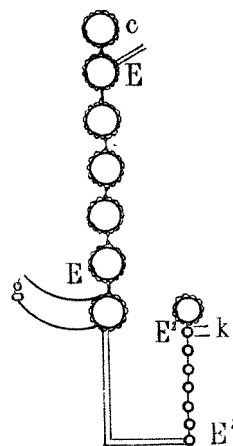
J, subsidiary boiler surrounded with water or brine. A, refrigerating boiler, a¹, the tube through which the impure liquid runs into J; a², the tube by which the pure vapour returns into A; a³, the tube by which the impurities are drawn off; x¹ x², tubes by which the brine or water enters and overflows and is drawn off.

Figure 2. Sections of coil-boilers referred to in first claim.



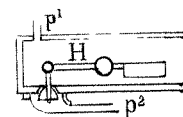
A¹A¹ section of boiler with tapering tubes or with tubes of small uniform diameter below connected with tubes of large diameter above; A²A² section of tubes of equal diameter with central core, as shown in figure 13. These pipes are either straight or curved, so as to form a wall, a square, or a circle, as required. aa, bb, cc, and ee, as in figure 1.

Figure 4. Section of surface condenser referred to in first claim.



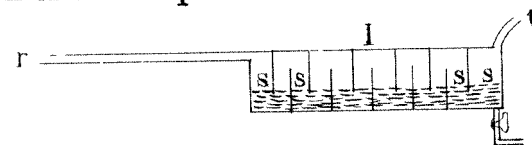
EE, tubes through which the vapour passes, covered with interwoven strings or strips of open textile fabric to diffuse the descending film of cold water, c being the perforated supply pipe. E², tube similarly covered, through which the liquid passes to undergo a further cooling. g, vapour pipe, k, pipe returning liquid to boiler, and l, pipe leading to air-escape, figure 8. The fans or blowers are of ordinary description, no special form being claimed.

Figure 7. Section of trap-valve referred to in fourth claim.



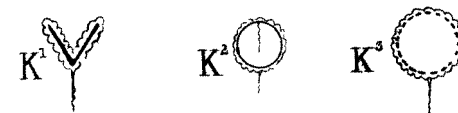
H, valve-chest; p¹, pipe bringing liquid from the condenser; p², pipe leading to the boiler; v, valve; w, weight poised, so that when the valve-chest is full of liquid the valve descends, and when filled with vapour the weight lifts the valve to its place.

Figure 8. Section of air-escape referred to in fifth claim.



I, liquid-trap; r, pipe leading from condenser, bringing air mixed with vapour; ss, alternate partitions dipping into and rising above the liquid or substance in which the volatile liquid is soluble; t, pipe leading to chimney.

Figure 12. Section of pipe and trough used for regulating the flow of liquids referred to in fifteenth claim.



K¹ is the trough, the wavy line representing an absorbent textile fabric such as flannel. K², a pipe with a slit along the top in which a textile fabric is inserted. K³, a perforated pipe covered with canvas to prevent the too rapid dispersion of the contained liquid.

Figure 13. Section of pipe with central solid core, which may be of any solid not acted on by the contents, in order to diminish the area relatively to the surface referred to in eleventh claim.



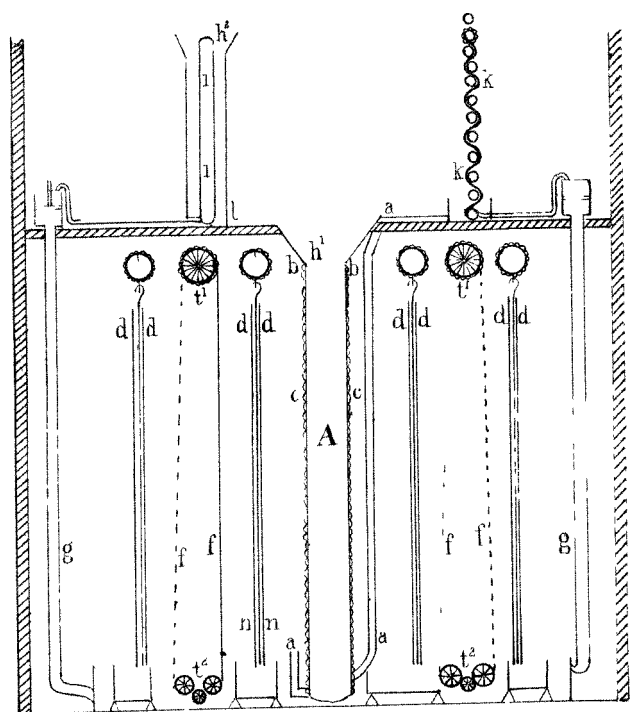
L, the pipe with its core, upon which there are projections to keep it equidistant from the surface of tube. The core may also be a pipe closed at the ends.

(Sig.1)

This is the sheet of drawings, marked B, referred to in the annexed Letters of Registration granted to James Harrison, this twenty-first day of November, 1873.

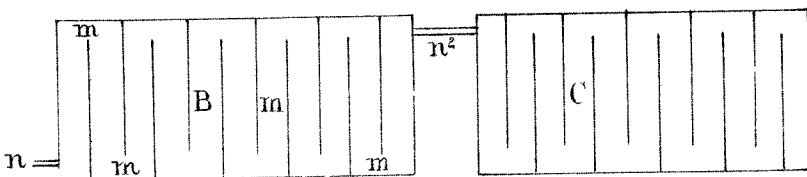
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Figure 10. Section of refrigerators referred to in the ninth, tenth, twelfth, and thirteenth claims.



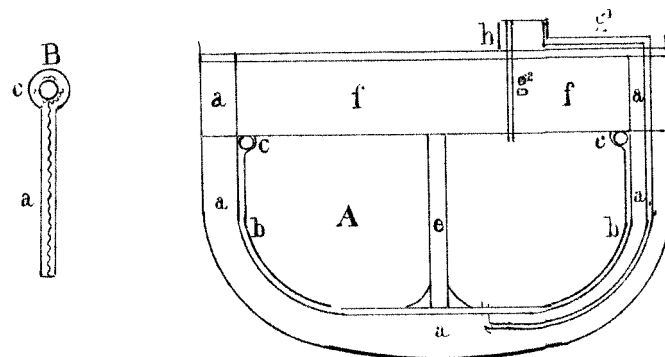
Aa, an oblong receptacle equal in length to its height, for deliquescent salt fed in at the hopper h¹.
 aa, pipes through which cold water is conveyed to the lower part of A.
 bb, apertures through which the brine of the deliquescent salt flows down, cc.
 cc (waved line), network or textile covers, down which the brine flows.
 dd, strips of sheet metal, boarding, or canvas, down which the pure water to be frozen flows. These strips to be removed when covered with the required thickness of ice.
 ee, pans into which the unfrozen water drops, the surplus of which flows into a receptacle (not shown), whence it is pumped up to be again passed over nn. These pans rest on the floor of the chamber, which is flooded with the surplus brine from A, and a portion of the water in the pans is thus frozen simultaneously with the films on dd.
 ff, endless webs of blanketing, or other absorbent fabric, passing over rollers, t¹t¹ and t²t²; the upper rollers, t¹t¹, are kept in revolution by any ordinary gearing.
 gg, pipes through which the surplus brine is pumped to cool the fresh supplies of crystals and water.
 ii, plates (for which a framework of tubes may be substituted) through which a moiety of the surplus brine passes to cool the fresh crystals fed into the hopper h², the cooled crystals being drawn out at l, thence to be shovelled into h¹.
 kk, framework of tubes through which a moiety of the surplus brine passes, cooling a descending film of water, which is afterwards conveyed through the pipe a into A. The arrangement under the thirteenth and fourteenth claims, where other cooling surfaces than the vessel A are employed, is substantially the same.

PLAN OF EVAPORATOR AND CRYSTALLIZER.



B, shallow evaporating-pan, with furnace-flues below corresponding with the divisions mm, between which the spent brine, after doing its work in ii and kk, flows, entering at n, and passing to the cooling and crystallizing pan C, at n², the flow into which is so regulated that the contents, when drawn off, shall be of such specific gravity as to crystallize without residue. Cold water is kept flowing in corresponding divisions below C. The crystals are removed as formed, and conveyed to h².

Figure 14. Section of hold of ship (applicable to other enclosed spaces) fitted up for the regulation of temperature referred to in seventeenth, eighteenth, and nineteenth claims.

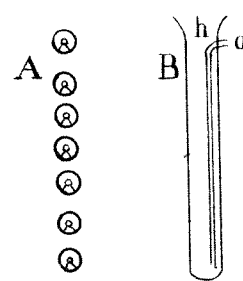


A, lower hold to be filled with meat or other cargo requiring to be refrigerated; aa, space filled with ground bark, sawdust, packages of tallow or other material of low conducting power; bb, double iron or other waterproof skin, between which cooled brine flows from the perforated tubes cc. The ice and salt or other refrigerant is supplied to the bottom of the hold through the well e; the store of ice is kept between decks, f, and the upper deck is protected by a covering of low conducting power. The brine is pumped from the lower part of the double skin, thence delivered into the perforated tubes cc, and thus kept in perpetual flow between the plates of the lining. The pumping apparatus is between

decks, either fore or aft of the ice store. The brine may be allowed to flow over the floor of the ice chamber before being passed into the perforated tubes, in which case the well e is dispensed with.

The tubes g¹g², and vessel h, constitute a self-acting respiratory apparatus referred to in claim 20. The tube g¹ passes up through the relatively warm envelope of the cold chamber, and leads to the vessel h, which contains sulphuric acid, chloride of calcium, or other desiccant germ-destroying and refrigerating material, the air descending by the colder pipe g². B, enlarged section of double skin with enclosed absorbent cloth.

Figure 11. Spiral arrangements for the cooling of worts referred to in sixteenth claim.



The refrigerator may be of any of the ordinary forms such as A, but with solid core tubes, the cooling water, brine, or vapour being passed through the interspace between the core and the outer tube.

B is a section of a single tube attemperator, suitable for insertion in the bung-hole of a cask suitable for cooling any contained liquid. The ice or refrigerant salt is filled in at h, and the cold solution after having done its work, flows out at o. The only attention it requires is keeping up the supply of the ice or salt.

This is the sheet of drawings, marked C, referred to in the annexed Letters of Registration granted to James Harrison, this twenty-first day of November, 1873.

HERCULES ROBINSON.

[127]



A.D. 1873, 21st November. No. 386.

IMPROVEMENTS IN THE MANUFACTURE OF GLASS BOTTLES, AND IN APPARATUS EMPLOYED THEREIN.

LETTERS OF REGISTRATION to Hiram Codd, for Improvements in the manufacture of Glass Bottles, and in Apparatus employed therein.

[Registered on the 22nd day of November, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS HIRAM CODD, of Grove-lane, Camberwell, in the County of Surrey, England, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in the manufacture of Glass Bottles, and in Apparatus employed therein," which is more particularly described in the specification and sheet of drawings which are hereto annexed ; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four ; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years : And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Hiram Codd, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof ; to have, hold, and exercise unto the said Hiram Codd, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended : Provided always, that if the said Hiram Codd shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-first day of November, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in the manufacture of Glass Bottles, and

SPECIFICATION.

TO ALL TO WHOM IT MAY CONCERN : Be it known that I, HIRAM CODD, of Grove-lane, Camberwell, in the County of Surrey, England, am in possession of an invention for Improvements in the manufacture of Glass Bottles, and in Apparatus employed therein; and I, the said Hiram Codd, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:—

Heretofore, in the manufacture of glass bottles, when each bottle has been formed by blowing out a bubble of glass into a mould of the shape of the bottle to be produced, such bottle after it has been removed from the mould has required to have the ring or head subsequently formed upon the top of the neck. According to my invention, I form the ring or head upon the top of the neck before removing the bottle from the mould in which it has been blown.

For this purpose I mount the mould in such manner that it is capable of being revolved; and after the mould has been closed upon a bubble of glass, and the bubble has been expanded into it by blowing in the ordinary manner, the bubble outside the neck is burst, or broken off, and a mould suitable for shaping the exterior and interior of the head is then brought over the top of the mould in which the bubble has been expanded. This mould is then revolved, in order to prevent the bottle from collapsing, and to enable glass to be gathered into the mould in which the head is to be shaped. When the head has been properly formed, the revolving of the mould is arrested, and the mould is opened, and the finished bottle quickly removed from it.

Figure 1 shows a side view, and figure 2 a front view of apparatus for constructing bottles in the manner above described. Figures 3 and 4 are plan views of parts of the same. *a* is the mould into which the bottle is blown; it is made in two parts, hinged together at *a'*; one half of the mould is secured to a table, *b*, mounted on a vertical axis, *c*, with which the axis of the mould is made to coincide; the vertical axis *c* is driven by bevel friction gear, *d*, but can be prevented from revolving by a catch, *e*. The mould for shaping the head is in two parts, *f* and *g*, each capable of sliding along an arm, *h*, which stands out from a boss capable of moving up or down, and around a fixed axis, *k*; to this boss is also jointed an arm, *l*, which carries two inclined projections, *mm*, which pass between pins on the two parts *f* and *g*, so that by raising or lowering the arm *l* the parts *f* and *g* can be moved towards or from one another. The operation of forming a bottle is as follows:—A bubble is first blown at the end of a blow-pipe, and roughly moulded to the desired form, and it is then enclosed in the mould *a*, whilst the mould is held from revolving by the catch *e*, as shown at figure 1; the two parts of the mould *a* are then held together at the top by two pieces, *mm*, which embrace the upper parts of the mould *a*, and also form the mould for the upper part of the neck of the bottle; the mould is also kept closed by a spring stop, *o*, being turned upwards to support its movable portion, as shown, the stop itself being held in this position by a spring acting upon a flat surface at its lower end. When the bubble has been blown out so as to expand it into the mould, the end of the blow-pipe is slightly raised away from the mould, by which the small amount of glass between itself and the mould is attenuated, and is blown out into a thin bubble until it bursts, or is broken, as shown at figure 5; the two parts *mm* are then turned aside, as shown at figure 4, and the mould for shaping the head is brought over and down on to the top of the mould *a*, by the handle *l* being pressed down, at the same time the catch *e* is released, and the mould containing the bottle is allowed to revolve; the workman then takes a rod with a small quantity of glass or "metal" upon its end, and touches with it the top of the revolving bottle; the metal is then, by the revolution of the bottle, drawn away from the rod, and gathered into the mould for shaping the head, until the head has been completely formed; the gathering in of the metal is then stopped, and after allowing the bottle to revolve for a short time its movement is arrested, the lever handle *l* is lifted, and the mould by which the head has been shaped is thus opened, and raised up so as to be clear of the bottle; it can then be turned aside, to be out of the way, and is held in its raised position by a cord and counterbalance weight, as shown; one side of the mould is then turned down into a horizontal position, carrying the bottle with it, and the bottle is at once lifted out therefrom by a wire, and is carried away thereon to be annealed; the mould is then ready for another bottle to be blown in it, and the same operation is repeated. In place of the mould being mounted upon a vertical spindle, as in the apparatus just described, it may be mounted upon a horizontal spindle, as shown at figures 6 and 7. In this case the whole of the mould *a* is made capable of being turned upwards, upon a joint, *a'*, so that the mould may be retained in a vertical position when a bottle is being blown in it, the two parts of the mould being at this time held together by two pieces, such as *mm*, but which are not shown in this drawing. When a bottle has been blown into the mould and a bubble blown upon it and burst, as before described, the pieces *mm* are turned aside, and the whole of the mould is turned downwards in a horizontal position, and at once caused to revolve by shifting the band *p* from the loose to the fast pulley on the spindle *c*; the tool for forming the head, which is not shown in the drawing, but which is carried by the slide *x*, is then moved up to the mould *a*, and the head is formed in the manner before described. The mould for shaping the head, which I have shown at figures 1 and 2, is constructed in such manner as to form a groove around the interior of each head, as well as to shape the exterior of the head; but when making ordinary bottles, without any groove around the head, the mould for shaping the head may be formed in a similar manner to the tongs ordinarily used for shaping the head of a bottle. By the apparatus hereinbefore described, not only is the making of bottles greatly facilitated, but all the bottles will be made of one uniform size. The making glass bottles with heads of large dimensions, such as pickle jars, and the like, or the forming of the heads of glass bottles of large size, such as those used for containing acids, is also greatly facilitated.

Having thus described the nature of the invention, and the manner of performing the same, I would have it understood that I claim—

1. The manufacture of glass bottles, substantially as herein described, the head being formed upon the bottle before withdrawing it from the mould in which it has been blown.

in Apparatus employed therein.

2. Mounting upon spindles the moulds in which glass bottles are blown, so that the moulds and bottles may be revolved during the time the head is being formed.
3. The combined arrangements of apparatus, substantially as herein described, for manufacturing of glass bottles.

In witness whereof, I, the said Hiram Codd, have hereunto set my hand and seal, this eleventh day of July, in the year of our Lord one thousand eight hundred and seventy-three.

H. CODD. (J.S.)

This is the specification referred to in the annexed Letters of Registration granted to Hiram Codd, this twenty-first day of November, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 21 October, 1873.

SIR,

We have the honor to inform you that, having examined the specification and drawings for "Improvements in the manufacture of Glass Bottles, and in Apparatus employed therein," &c., by Hiram Codd, we see no objection to the issue of Letters of Registration, and therefore advise accordingly.

We have, &c.,

CHAS. WATT.
E. C. CRACKNELL.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—one sheet.]

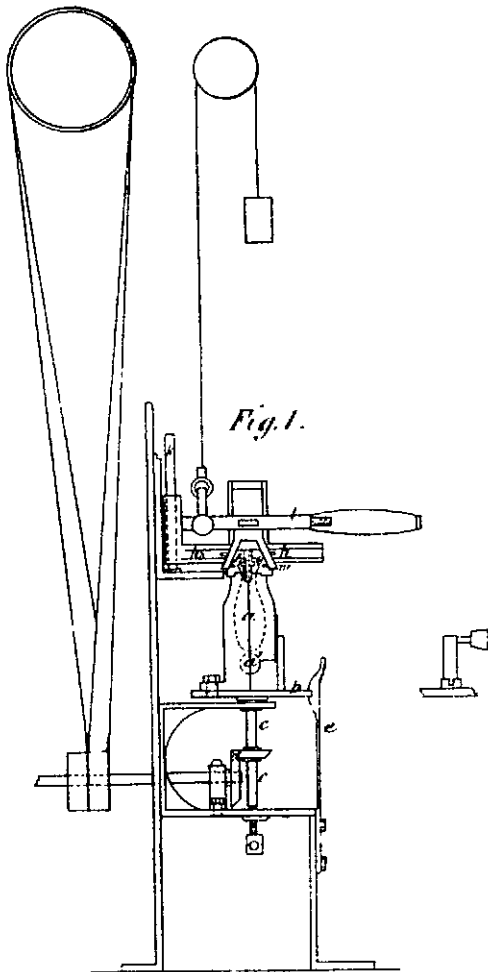


Fig. 1.

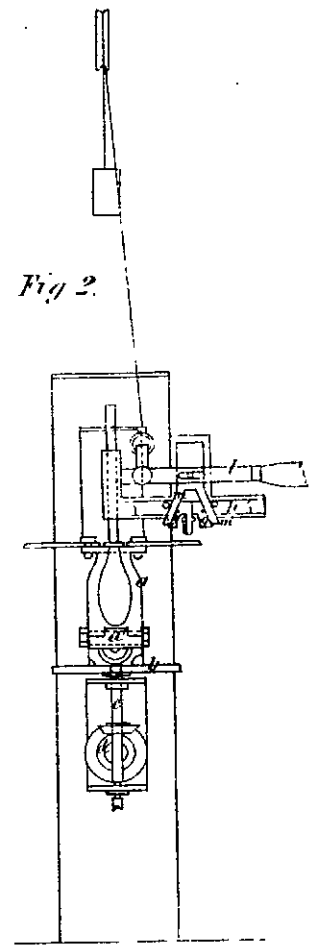


Fig. 2.

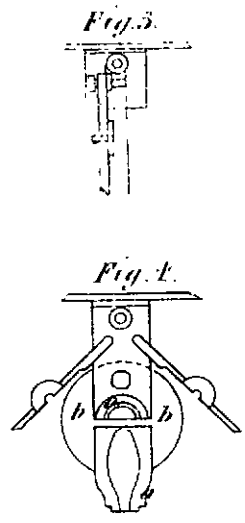


Fig. 3.

Fig. 4.

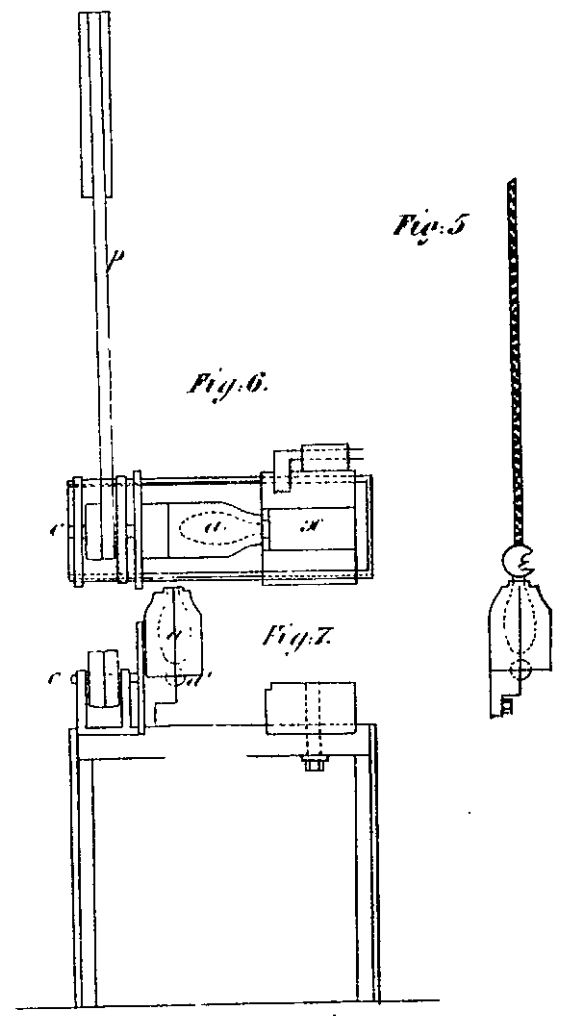


Fig. 5.

Fig. 6.

Fig. 7.

This is the Sheet of Drawings referred to in the annexed Letters of Registration granted to Hiram Codd this twenty first day of November 1873.

Hercules Robinson.

(Sig. 1.)

[131]



A.D. 1873, 21st November. No. 387.

IMPROVEMENTS IN BOTTLES FOR CONTAINING AERATED LIQUIDS, &c.

LETTERS OF REGISTRATION to Hiram Codd, for Improvements in Bottles for containing Aerated Liquids, and in Apparatus for making and filling such Bottles.

[Registered on the 22nd day of November, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS HIRAM CODD, of Grove-lane, Camberwell, in the county of Surrey, England, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention for "Improvements in Bottles for containing Aerated Liquids, and in Apparatus for making and filling such Bottles," which is more particularly described in the specification, marked A, and the two sheets of drawings, marked B and C respectively, which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Hiram Codd, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Hiram Codd, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Hiram Codd shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have herunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-first day of November, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in Bottles for containing Aerated Liquids, &c.

A.

SPECIFICATION.

TO ALL TO WHOM IT MAY CONCERN, Be it known that I, HIRAM CODD, of Grove-lane, Camberwell, in the county of Surrey, England, am in possession of an invention for "Improvements in Bottles for containing Aerated Liquids, and in Apparatus for making and filling such Bottles"; and I, the said Hiram Codd, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say—

THIS invention consists, firstly, in constructing bottles for containing effervescing wines and other aerated or gaseous liquids in such a manner that the bottle when filled is closed by a glass ball, held by the pressure within the bottle against a ring of elastic material placed around the interior of the mouth; secondly, in forming the interior diameter of the mouth of the bottle, above such ring or seat of elastic material, of smaller diameter than the ball, so that however great may be the pressure within the bottle the ball cannot be forced through the ring of elastic material; thirdly, in contracting the lower part of the neck of the bottle to prevent the stopper from dropping into the lower part of the bottle; and fourthly, in forming contractions in the sides of the neck, or otherwise forming the neck in such a manner as to impede the stopper from moving up to the mouth of the bottle during the time that the contents are being poured out. The invention also consists in the construction of tools for shaping the heads of such bottles.

Figure 1 shows a side elevation, partly in section, and figure 2 shows an opposite side elevation of a bottle constructed according to my invention. The bottle in these figures is shown to have been opened and inverted for the purpose of pouring out its contents. Figure 3 shows a side elevation, partly in section, of the bottle when closed. In these figures *a* is the glass-ball stopper; *b*, a ring of elastic material, against which the ball is held by the pressure within the bottle; *c* is a groove formed around the mouth of the bottle to receive the elastic ring *b*. It will be seen that the internal diameter of the mouth of the bottle is smaller than the diameter of the mouth below the groove, and also smaller than the diameter of the ball *a*, so that the ball cannot be forced out through the mouth. In order to construct such a bottle, a tool, shown at figures 4, is employed. This tool is similar to the ordinary tongs heretofore used for moulding the heads of glass bottles, in so far as regards the parts required for shaping the exterior of the head; but in addition to each arm or limb of the tongs, carrying at its ends half-moulds for shaping the exterior of the head, as heretofore, they also carry pieces, *dd*, for shaping its interior. These parts are drawn together when the tongs are opened, so that they can readily enter the neck of a bottle and move apart when the tongs are closed, and they then come into position for shaping the interior of the head, as shown in the drawing. The projections *e* on the pieces *d* form a groove around the interior of the head, whilst, at the same time, the top of the head, above where the groove is formed, is contracted so as to bring it to a less internal diameter than the lower part of the head below the groove. Another way in which the tongs for shaping the head of the bottle may be formed is shown at figure 5. In this case the pieces *dd*, for shaping the interior of the head, in place of being carried by the ends of the tongs, are carried by jointed levers, *d**, carried by the limbs or arms of the tongs, as shown. The bottle is formed in the following manner:—A bubble of glass is first blown, and is roughly reduced to the desired form by rolling and pressing it upon a stone; the roughly shaped bubble is then enclosed in a mould of the form desired, and the bottle is blown therein in the ordinary manner. When the bottle has been removed from the mould, a glass marble, previously heated, is dropped into the bottle through the neck; the ring or head is then formed at the top of the neck in the ordinary manner, by means of the tool above described. After the bottle has been allowed to cool, a ring of cork or other elastic material, as, for example, of vulcanized india-rubber, is inserted into the groove formed around the interior of the head, and the bottle is ready for filling with an effervescing or aerated liquid; the pressure of gas within the bottle will then hold the glass stopper against the elastic ring, and a perfect closing of the bottle will be instantaneously effected. To open a bottle which is closed in this manner, it is only necessary to press back the ball away from its seat; the ball may then either be allowed to drop to the bottom of the bottle, or if the bottle is formed as shown at figures 1 and 2, with the lower part of the neck contracted at *f*, the ball may simply drop to the lower part of the neck. It will be seen from the drawings that the lower part of the neck is contracted from two sides only, so that the passage between the interior of the bottle and the neck can never be closed by the ball-stopper, and therefore no difficulty will be experienced in filling the bottle.

In order also to prevent the ball-stopper from rolling back to its seat as the contents of the bottle are being poured out, contractions, *g g*, are formed down two opposite sides of the neck of the bottle. The forming the contractions *f* and *g* in the neck of the bottle is effected by making the mould in which the bottles are blown of a suitable form to produce the contractions. By forming the contractions *g* down the sides of the neck of the bottle, the ball-stopper, when pressed back from its seat, will fall down in the direction shown by the arrows on one side of these contractions, until it is arrested by the contraction *f*; then, if the bottle be inclined to pour out the contents, the ball will come on the opposite side of the contractions, and will by them be impeded from rolling back to the mouth of the bottle. Another way of forming internal projections in the neck of the bottle to prevent the ball rolling back to its seat when the contents of the bottle are being poured out is shown at figures 6. In this case four short projections are formed at the points *g*. The ball, as it drops from its seat, falls between these projections until it is arrested by the contraction *f*; then, if the bottle be inclined to pour out its contents, the ball will rest in one or other of the semi-circular recesses *h* which are formed at the lower part of the neck, and will be impeded by the projections *g* from rolling back to its seat, or the semi-circular recesses *h* might be used for this purpose, as shown at figures 7, without forming the projections *g*.

Internal projections, *g*, may also be formed in the neck of the bottle in the manner shown at figures 8. In this case the lower part of the internal projections are curved, so that when the ball has fallen from its seat, and has been arrested by the contraction *f*, and when the bottle is inclined to pour out its contents, the ball drops into the position shown by the drawing, and remains there whilst the contents are being poured out. In this case the contents of the bottle, as they are being poured out, pass below the ball-stopper, in place of flowing over it, as in the other arrangements. Similar contractions may also be made

in

Improvements in Bottles for containing Aerated Liquids, &c.

in the necks of bottles which are fitted with internal stoppers, carrying an elastic ring or cap to fit against a seat formed near the mouth of the bottle. Figure 9 shows a bottle fitted with a stopper of this kind, and formed with contractions, *f* and *g*, in the neck, as in the bottle shown at figures 1 and 2. When the stopper is pressed back from its seat, it drops down on one side of the contractions *g* until it is arrested by the contraction *f*; and when the bottle is inclined to pour out its contents, the elastic head or cap, *k*, of the stopper is caught between the contractions *g*, and is prevented from moving back to the mouth of the bottle.

In addition to deriving this advantage from forming the contractions *f* and *g* in the neck of a bottle, when such a stopper is used, a much smaller stopper may be employed than heretofore when the stopper was allowed to drop down into the bottle, as in this case the stopper had to be formed of a length greater than the internal diameter, so that it could not turn over in the bottle; whereas by forming the contraction *f* at the lower part of the neck, the stopper is retained in the neck, and consequently a much shorter stopper can be used.

In order to fill bottles which are closed by stoppers in the manner above described with aerated liquids, as, for example, with soda-water, I employ an arrangement of apparatus such as shown at figures 10, 11, and 12. Figure 10 shows a front view, and figures 11 and 12 show end views of the apparatus. *a* is a nipple, up to which the mouth of the bottle to be filled is held in the ordinary manner; the nipple *a* is carried on a hollow axis, *c*, mounted in bearings, *d*, so that after a bottle has been filled it may be inverted into the position shown at figure 11 before removing it from the nipple. This allows the stopper to fall to the mouth of the bottle, so that immediately the bottle is removed from the nipple the stopper closes the mouth. On one end of the axis is a lever arm with a balance weight, *e*, upon it, and the opposite end is fitted by a stuffing-box to a pipe, *f*, through which aerated liquid is supplied to the hollow axis. *g* is a screw stop-cock on the pipe *f*, to shut off the supply of liquid to the hollow axis after a bottle has been filled. Projecting from the axis *c* are also two arms, *k*, one on either side of the nipple, and upon these slides a plate, *k'*, which carries a cap for the bottom of the bottle to rest in whilst the bottle is being filled. The plate *k* can be pressed up to the nipple by turning the eccentric *b* by its handle *b'*. When a bottle has been filled and inverted into the position shown at figure 10, the eccentric is turned into a position to allow of the bottle being removed; the apparatus is then again brought into the position shown at figures 10 and 12, to be ready for filling another bottle.

Having thus described the nature of my invention, I would state that I claim—

1. The construction of bottles for containing effervescing wines and other aerated or gaseous liquids, in such a manner that the bottle when filled is closed by a glass ball, held by the pressure within against a ring of elastic material placed around the interior of the mouth.
2. Forming the interior diameter of the mouth of such bottles above the ring of elastic material of smaller diameter than the ball, so that the ball cannot escape from the bottle.
3. Contracting the lower part of the neck of bottles fitted with internal stoppers, to prevent the stopper dropping into the lower part of the bottle.
4. Forming contractions in the sides of the neck, or otherwise forming impediments in the neck, to prevent the stopper moving up to the mouth of the bottle during the time that the contents are being poured out.
5. The combined arrangement of apparatus for filling internally stoppered bottles with aerated liquids.
6. The construction of tools for shaping the heads of bottles to be closed by ball-stoppers, substantially as herein described.

In witness whereof, I, the said Hiram Codd, have hereunto set my hand and seal, this eleventh day of July, in the year of our Lord one thousand eight hundred and seventy-three.

H. CODD. (L.S.)

This is the specification, marked A, referred to in the annexed Letters of Registration, granted to Hiram Codd, this twenty-first day of November, 1873.

HERCULES ROBINSON.

REPORT.

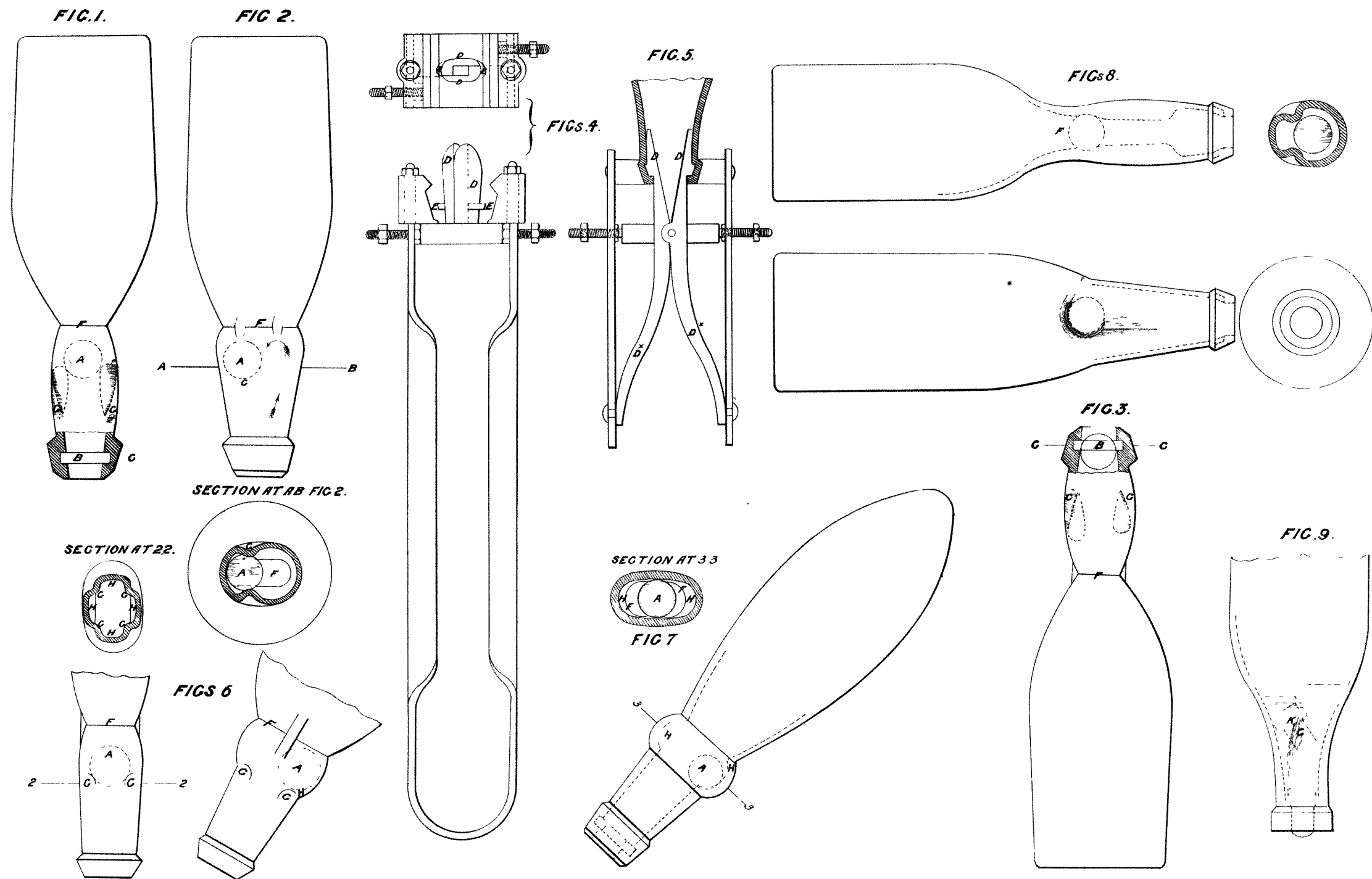
Sydney, 21 October, 1873.

Sir,

We have the honor to inform you that, having examined the specification and drawings for "Improvements in Bottles for containing Aerated Liquids, and in Apparatus for making and filling such Bottles," by Hiram Codd, we see no objection to the issue of Letters of Registration, and therefore advise accordingly.

We have, &c.,
CHAS. WATT.
E. C. CRACKNELL.

THE PRINCIPAL UNDER SECRETARY.



*This is the Sheet of Drawings marked B,
referred to in the annexed Letters of
Registration granted to Hiram Codd,
this twenty first day of November 1873.
Hercules Robinson*

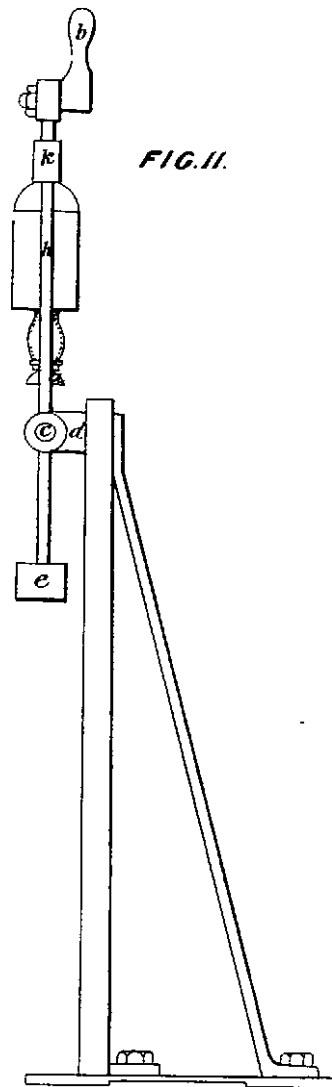


FIG. 11.

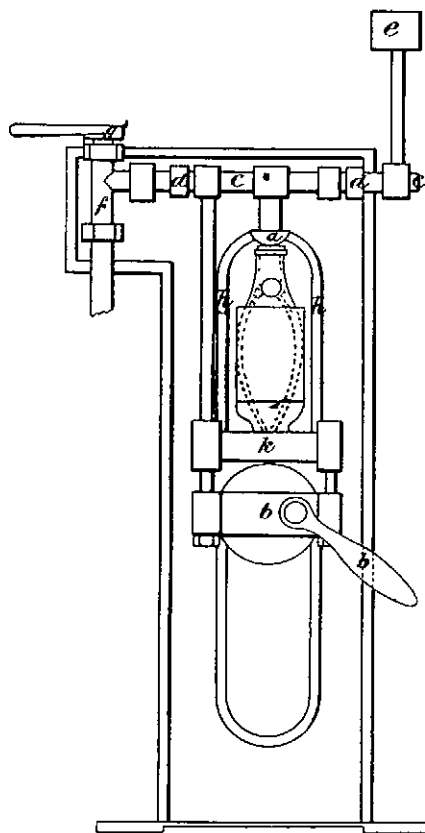


FIG. 10.

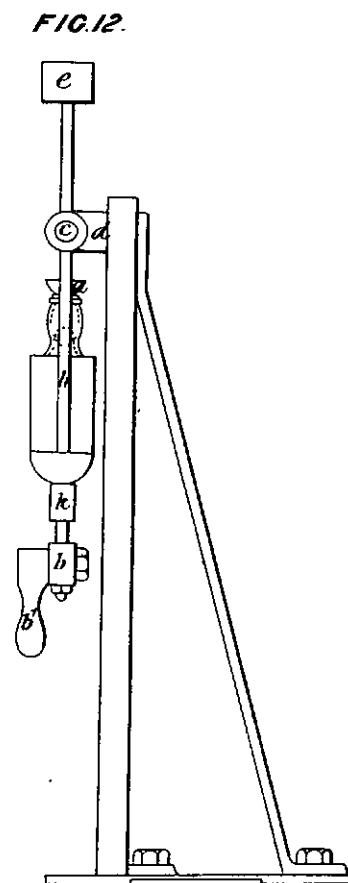


FIG. 12.

This is the Sheet of Drawings marked C, referred to in the annexed Letters of Registration granted to Hiram Codd, this twenty first day of November, 1873.

Hercules Robinson.

[135]



A.D. 1873, 24th November. No. 388.

MACHINE FOR LAMINATING AND CRUSHING BARK.

LETTERS OF REGISTRATION to John Thomas Stamp, for a Machine for laminating and crushing Bark.

[Registered on the 26th day of November, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS JOHN THOMAS STAMP, of Melbourne, in the Colony of Victoria, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention of a "Machine for laminating and crushing Bark," which said invention is more particularly described in the specification, marked A, and the two sheets of drawings, marked B and C respectively, which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said John Thomas Stamp, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said John Thomas Stamp, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said John Thomas Stamp shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-fourth day of November, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Machine for laminating and crushing Bark.

A.

SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN THOMAS STAMP, of Melbourne, in the Colony of Victoria, send greeting :

WHEREAS I am desirous of obtaining Letters of Registration for securing unto me Her Majesty's special license that I, my executors, administrators, and assigns, or such others as I or they should at any time agree with, and no others, should and lawfully might, from time to time, and at all times during the term of fourteen years (to be computed from the day on which this instrument is left at the office of the Colonial Secretary, at Sydney), make, use, exercise, and vend within the Colony of New South Wales an invention of a Machine for laminating and crushing Bark; and in order to obtain the said Letters of Registration I must, by an instrument under my hand and seal, particularly describe and ascertain the nature of the said invention, and in what manner the same is to be performed: Now know ye that I, the said John Thomas Stamp, do hereby declare the nature of the said invention, and the manner in which the same is to be performed, to be particularly described and ascertained in and by the following statement (that is to say): My invention is for a machine for the laminating and crushing of bark by direct percussion, whilst it is being driven freely towards the periphery of the mill by the centrifugal action set up in the interior of the mill. The utility of this invention consists in obtaining a greatly increased result from the same expenditure of power as in an ordinary bark mill. I will now proceed to describe the machine for so doing, reference being had to two sheets of drawings annexed hereto, and numbered 1 and 2. Figure 1 is a side elevation, partly in section, showing the general arrangement. Figures 2 and 3 show sections of pulley boss and bearings. Figure 4 is an end elevation with part of casing removed, to show the cages and bars. A is the casing open at the side, to allow the bark to enter the centre of the mill by the hopper B; C is a wrought-iron disc attached by bolts to the pulley boss D, which revolves on the shaft F. The boss D has adjustable bearings (by preference filled with patent metal); these bearings are acted on by the screws *d d d*, which are kept tight by jam nuts; by this means the disc C can always be kept running true. The interior of the boss D is hollowed out to hold a supply of oil, which is kept in by the plates and washers of leather E E. The shaft F, on which is keyed the pulley G, is carried in two bracket bearings, H H. The disc C is 3 feet outside diameter, and carries on it three sets of wrought-iron or steel bars, placed concentrically to form cages. These bars are fastened to the disc by two nuts, to allow of easy replacement, and are shanked and riveted over on outer rings, C1, C2, C3, or they can be riveted at both ends. Cage C1 is thirty-four and three-quarter inches diameter, and contains sixty bars; cage C2 is twenty-seven and three-quarter inches diameter, and contains forty-three bars; cage C3 is twenty and three-quarter inches diameter, and contains twenty-nine bars; a wrought-iron disc, K, thirty-two and one-half inches diameter, carries the cages K1, K2, K3; cage K1 is thirty-one and one-quarter inches diameter, and contains fifty-four bars; cage K2 is twenty-four and one-quarter inches diameter, and contains thirty-eight bars; cage K3 is seventeen and one-quarter inches diameter, and contains twenty-one bars. The disc K is attached by the bars K3 to the cast-iron disc I, keyed on to the shaft F, and revolving with it. An iron bar, L, carried on bracket M, projects into the interior of the mill, and causes the bark to press against the inner cage, whence the centrifugal action is set up. The shaft F, together with the cages K1, K2, K3, revolve in one direction, at from five to six hundred revolutions per minute, and the pulley boss, together with the cages C1, C2, C3, revolve at the same speed, but in a contrary direction, so that the bark entering the centre and flying towards the periphery receives the blows from each set of bars in a contrary direction, and is laminated and crushed as required. The bark having previously been broken into short lengths by any ordinary process, enters the mill by the hopper B, and is delivered fit for use into the casing A. I do not confine myself to the number of bars or cages indicated in this specification, or to any particular number thereof, but what I claim as the novelty of this invention is the Machine for laminating and crushing Bark by direct percussion, whilst being driven freely toward the periphery of the machine, as herein described.

In witness whereof, I, the said John Thomas Stamp, have hereunto set my hand and seal, this third day of June, one thousand eight hundred and seventy-three.

JNO. T. STAMP. (l.s.)

This is the specification, marked A, referred to in the annexed Letters of Registration granted to John Thomas Stamp, this twenty-fourth day of November, 1873.

HERCULES ROBINSON.

REPORTS.

No. 3, Gresham-street,
Sydney, 11 June, 1873.

SIR,

We have the honor to return the Petition of Mr. John Thomas Stamp, forwarded to us with the accompanying specification and drawings, by your blank cover of the 9th instant, for Letters of Registration of an invention for laminating and crushing Bark, by direct percussion, &c.; and we now desire to state that, having considered the allegations set forth in the said Petition and specification, we are of opinion that the applicant should be required to amend the latter, so as to limit his claim to the machinery or appliances indicated in the drawings appended to the specification.

We have, &c.,

GOTHER K. MANN.
A. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY.

Sydney,

Machine for laminating and crushing Bark.

Sydney, 19 July, 1873.

SIR,

In returning to you the documents transmitted for our reconsideration, we do ourselves the honor to state that we are still of opinion that the Registration should not be granted unless the specification is amended, as suggested in our former Report. We do not think it necessary that the applicant should confine himself to the number of bars or cages indicated by his drawing, or to any number thereof; but we are of opinion that the Registration should be for the machinery, and not for laminating by direct percussion, which as a principle appears to us incapable of being patented.

We have, &c.,

GOTHER K. MANN.
E. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY.

WE are not aware of any objection to Letters of Registration being granted in accordance with the specification as now amended.

GOTHER K. MANN.
E. O. MORIARTY.

THE PRINCIPAL UNDER SECRETARY,
B.C., 10th October, 1873.

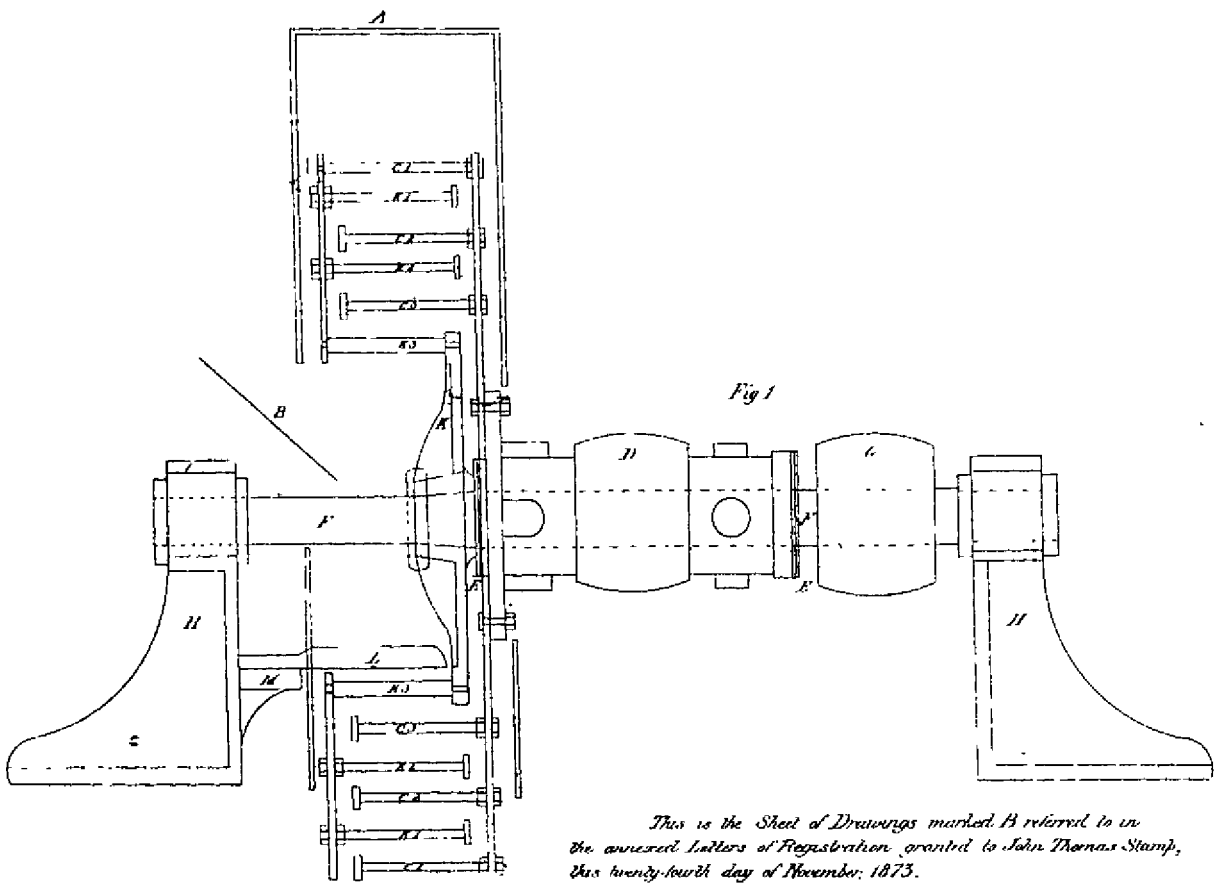
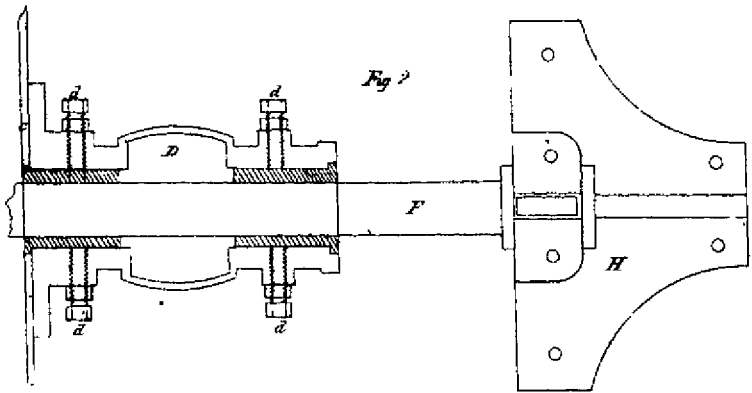
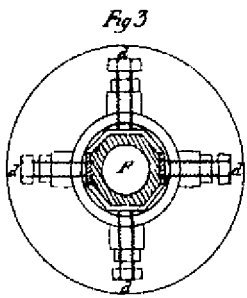
{Drawings—two sheets.}

1870

The following is a list of the names of the persons who have been
 admitted to the membership of the Society since the last meeting.
 Their names are given in alphabetical order, and the date of their
 admission is also given.

Mr. J. H. [Name] [Date]
 Mr. W. B. [Name] [Date]
 Mr. C. D. [Name] [Date]
 Mr. E. F. [Name] [Date]
 Mr. G. H. [Name] [Date]
 Mr. I. J. [Name] [Date]
 Mr. K. L. [Name] [Date]
 Mr. M. N. [Name] [Date]
 Mr. O. P. [Name] [Date]
 Mr. Q. R. [Name] [Date]
 Mr. S. T. [Name] [Date]
 Mr. U. V. [Name] [Date]
 Mr. W. X. [Name] [Date]
 Mr. Y. Z. [Name] [Date]

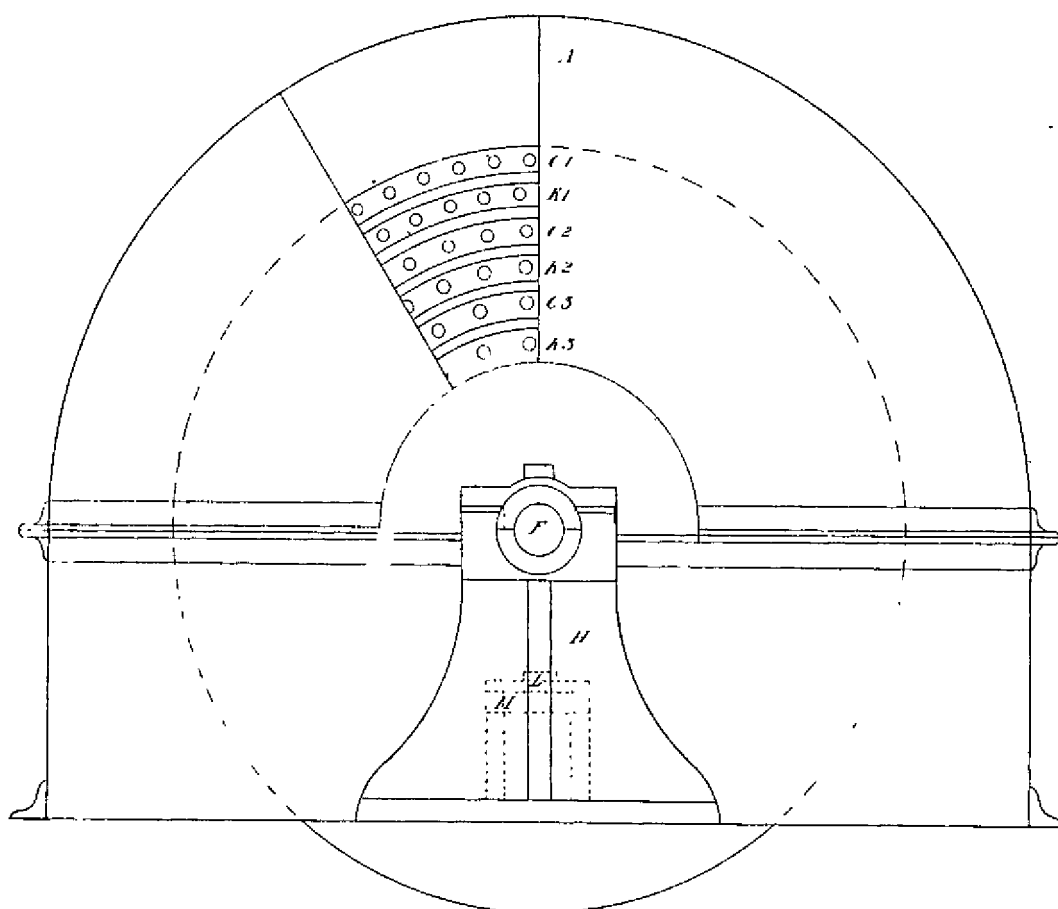
LAMINATING AND CRUSHING BARK.



This is the Sheet of Drawings marked B referred to in the annexed Letters of Registration granted to John Thomas Stamp, this twenty-fourth day of November, 1873.

Hercules Robinson

LAMINATING AND CRUSHING BARK



*This is the Sheet of Drawings marked C, referred to in the annexed
 Letters of Registration granted to John Thomas Stamp, this twenty fourth
 day of November, 1873*

Horatio Robinson

(Sig 2)

[139]



A.D. 1873, 24th November. No. 389.

GLEDHILL'S PATENT AERATED WATER-BOTTLE AND STOPPER.

LETTERS OF REGISTRATION to George Gledhill, for an Invention or Improvement styled "Gledhill's Patent Aerated Water-bottle and Stopper."

[Registered on the 26th November, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS HENRY HURTLBURY STAITE, of Melbourne, in the Colony of Victoria, merchant, hath by his Petition humbly represented to me that he is the duly authorized attorney of George Gledhill, of Auckland, in the province of Auckland and Colony of New Zealand, who is the author or designer of a certain invention or improvement styled "Gledhill's Patent Aerated Water-bottle and Stopper," which is more particularly described in the specification, and the three sheets of drawings, marked A, B, and C, respectively, all of which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to the said George Gledhill for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said George Gledhill, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said George Gledhill, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said George Gledhill shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-fourth day of November, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Gledhill's Patent Aerated Water-bottle and Stopper.

This is the Specification referred to in the annexed Petition of Henry Hurtlebury Staite.—Dated the twenty-eighth day of July, 1873.

HENRY H. STAITE.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, GEORGE GLEDHILL, of the city of Auckland, in the Province of Auckland and Colony of New Zealand, Aerated Water Manufacturer, send greeting :

WHEREAS I am desirous of obtaining Royal Letters Patent for securing unto me Her Majesty's special license that I, my executors, administrators, and assigns, and such others as I or they should at any time agree with, and no others, should and lawfully might, from time to time, and at all times during the term of fourteen years, make, use, exercise, and vend within the Colony of New South Wales and its Dependencies, an invention for Improvements in the bottling of Aerated Waters, by dispensing with the corking and wiring thereof, to be called "Gledhill's Patent Aerated Water-bottle and Stopper"; and in order to obtain the said Letters Patent, I must, by an instrument in writing under my hand and seal, particularly describe and ascertain the nature of the said invention, and in what manner the same is to be performed, and must also enter into the covenant hereinafter contained: Now know ye, that the nature of the said invention, and the manner in which the same is to be performed, is particularly described and ascertained in and by the following statement (that is to say), my invention is particularly described and shown by the accompanying drawings and the following explanation of such drawings:—In sheet No. 1, figure No. 1 represents a perpendicular section of a full-sized bottling machine for filling these particular kind of bottles. DD are the handles of the machine, connected together at EE by means of two pins and two small plates, see figure 4. KL is a steel spring, fastened to one of the handles at M, by means of a screw. A is a round hole with a female thread in it, for the reception of one end of a small high-pressure tap, the other end being fastened to a flexible tube connected with a soda-water machine. CC is a passage for the aerated water to flow through into the bottle when filling. RR is a circular india-rubber washer for the neck of the bottle to rest against. JJ is a leather pad fastened to the bottom jaw of the machine, by means of a small screw, H, for the bottom of bottle, G, to rest upon. Figure 2, section line 7, represents a horizontal section of figure 1 along section line 6. Figure 3 represents a perpendicular section of the machine along section lines 2, 3, and horizontal section along section lines 4, 5, figure 1. Figure 4K represents the shape of two small plates which connect the two halves of the machine together at EE. Figure 1, Q, N is an iron pin for the machine to turn on one end, passing through a hole in the top of the machine at N, the other end being flattened out and screwed to a bench. O is a small washer on the end of the iron pin N. V is a small hole for receiving a pin to prevent the machine from slipping off. Sheet No. 2, figure No. 1, represents a perpendicular section of a full-sized bottling machine for filling these particular kind of bottles. DD are the handles of the machine, connected together at EE by means of two pins and two small plates (see figure 4). KL is a steel spring fastened to one of the handles of the machine at N by means of a screw. AA is a tap. B is a handle. OO is a stuffing-box metal. II is a stuffing-box for the tap plug to work through. CC is the passage by which the aerated water is admitted into the bottle when the tap plug AA is open. RR is a circular india-rubber washer with a hole in it for the neck of the bottle to rest against. JJ is a leather pad fastened to the bottom jaw of the machine by means of a small screw for the bottom of the bottle, G, to rest upon. Figure 1 continued—CC is the passage for the aerated water to flow through. XXXX is a continuation of XX, figure 1, with a washer, VV, screwed tight on to one end. WW is a stuffing-box metal. QQ is a stuffing-box. ZZZZ are four small lugs cast on the stuffing-box, for the purpose of fastening down to a bench or stand by means of four holes, VVVV. This is connected with a soda-water machine at T by means of a pipe; this figure is drawn horizontal, to show the position of the plugs. Figure 5 represents a perpendicular section of figure 1 continued along section line 8. Figure 2 represents a horizontal section of figure 1 along section line 6. Figure 3 represents a perpendicular section of the machine along section lines 2 and 3, and horizontal section along section lines 4 and 5, figure 1. Figure 4K represents the shape of two small plates which connect the two halves of the machine together at EE. Figure 6 represents a perpendicular section of a cone and socket for putting the stopper into the bottle. Place the bottle G inside the socket C so that the neck will rest against the leather padding BBB, close to the bottom of the cone A. Stand the bottle on a bench, place the stopper *f* into the wide end of the cone, the cover having been previously lubricated with soap and water, then take the tool, figure 8, which is made of either wood or iron, and drive the stopper through the cone A into the bottle by means of a few blows from a mallet. Figure 8 is a tool for driving the stopper through a cone into the bottle. CC is a leather washer to prevent the punch from injuring the cone. Figure 7 is a round piece of wood with a flat top for pushing down the stopper into the bottle when it requires emptying. Sheet No. 4, figure 1, represents a perpendicular section of an aerated water bottle with an india-rubber stopper, *f*, in its position when the bottle is full. DD forms the curved neck of the bottle made to fit the stopper *f*. BB each form the arc of a circle, for the stopper *f* to lodge in when emptying the bottle of its contents. Figure 2, section line 4, represents a horizontal section of the bottle and stopper along section line 4. Figures 3, 4, 5, represent horizontal sections of the bottle along section lines 1, 2, 3, respectively. My method of filling the bottle is as follows:—Supposing the machine to be connected with a soda-water machine as previously described, press the two handles DD together so as to open the jaw of the machine, then place the bottle G in position, as shown in the drawing; the stopper *f* will then be in the bottom of the bottle, section F. Turn on the tap which is fixed in the machine at A till the bottle is sufficiently full, then stop the tap. Take hold of the handle DD and turn the machine upside down so that the stopper will occupy position in neck of the bottle marked *f* in the drawing; now press the two handles DD together and take out the bottle while in this position, the stopper will then maintain its position, on account of the expansive force contained in the bottle; turn the machine right side up and repeat the operation.

Now what I particularly claim as my invention and as novel is the round india-rubber stopper which supplies the place of the cork as ordinarily used, and the improved shape of the neck of the bottle as shown in the drawings, which facilitates the easy and proper working of the india-rubber stopper; and

Gledhill's Patent Aerated Water-bottle and Stopper.

I do hereby, for myself, my heirs, executors, and administrators, covenant with Her Majesty, Her Heirs and Successors, that I believe the said invention to be a new invention as to the public use and exercise thereof, and that I do not know or believe that any other person than myself is the true and first inventor of the said invention, and that I will not deposit these presents at the office of the Chief Secretary with any such knowledge or belief as last aforesaid.

In witness whereof, I have hereunto set my hand, this twenty-eighth day of July, in the year of our Lord one thousand eight hundred and seventy-three.

GEORGE GLEDHILL.

By his Attorney,—

HENRY H. STAITE.

Witness to the signature of George Gledhill,

By his Attorney,—

HENRY H. STAITE,

ALFRED DE LISSA,

Solr., Sydney.

This is the specification referred to in the annexed Letters of Registration granted to George Gledhill, this twenty-fourth day of November, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 13 October, 1873.

SIR,

We have examined the specification of Mr. George Gledhill for an improved method of stoppering Bottles, and consider that there is sufficient originality in the invention to entitle him to Letters of Registration being granted for a period of fourteen years, and we therefore advise accordingly.

We have, &c.,

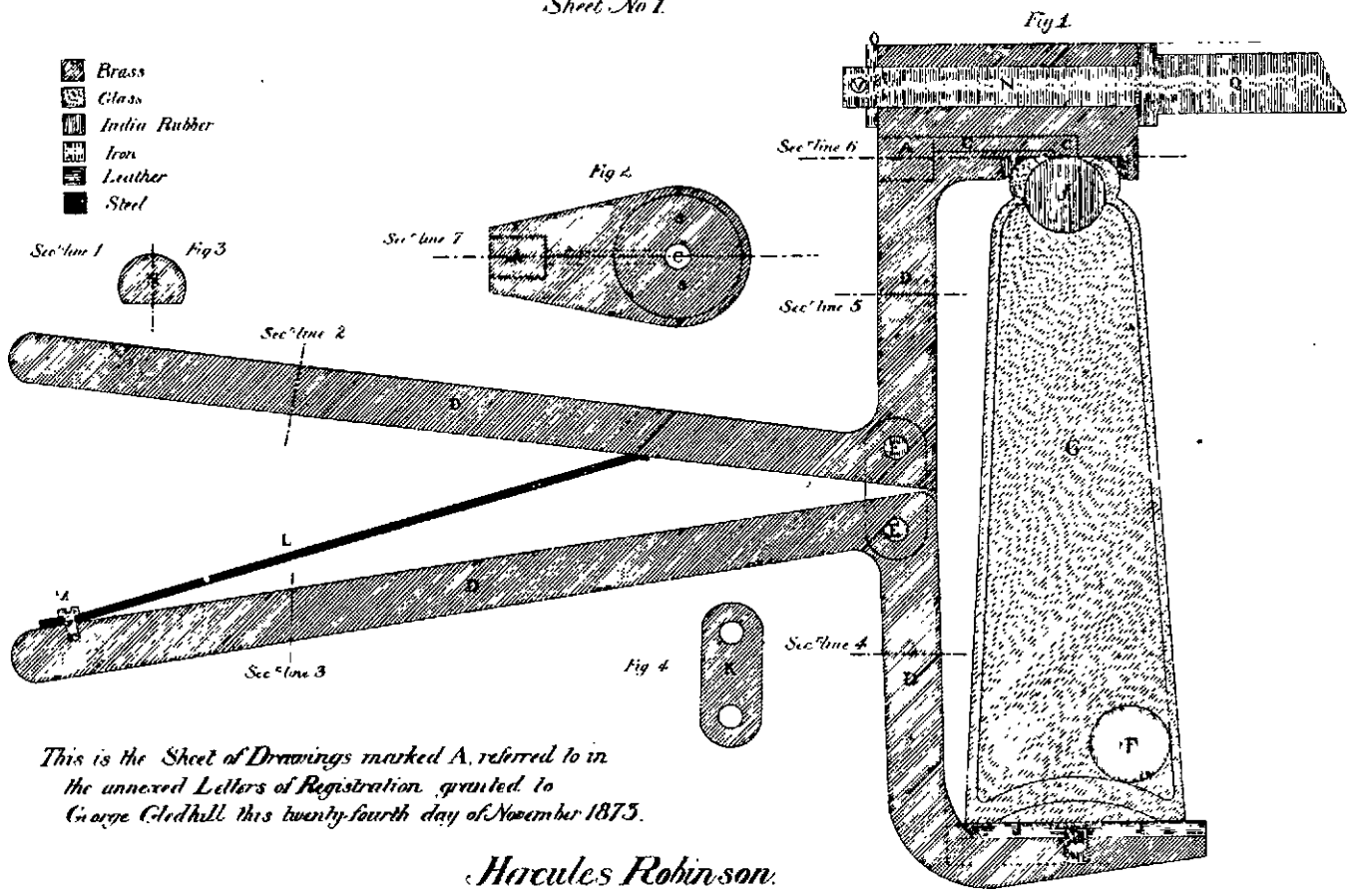
CHAS. WATT.

E. C. CRACKNELL.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—three sheets.]

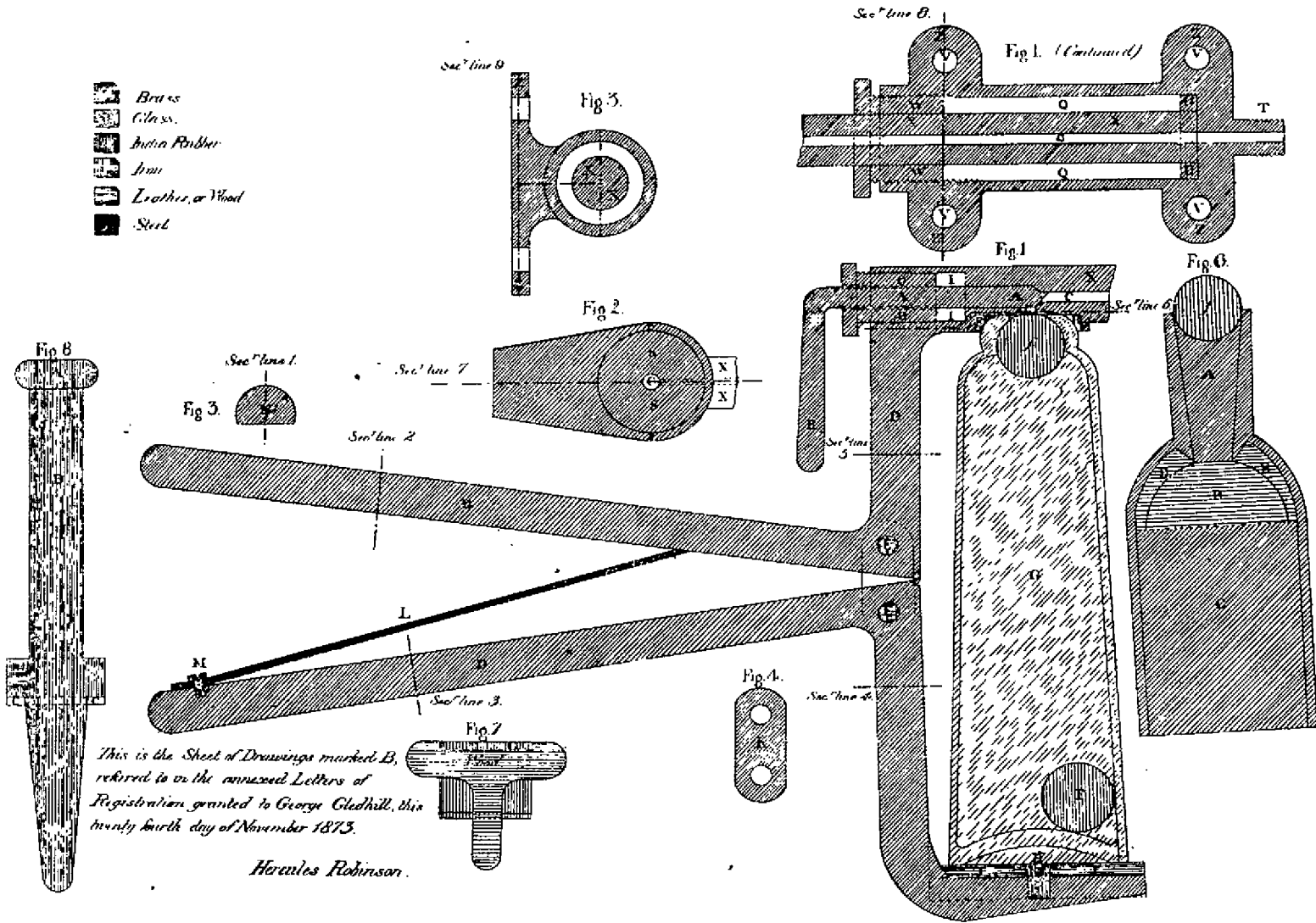
Sheet No 1.



*This is the Sheet of Drawings marked A, referred to in
 the annexed Letters of Registration, granted to
 George Gledhill this twenty-fourth day of November 1875.*

Hercules Robinson.

-  Brass
-  Glass
-  India Rubber
-  Linn
-  Leather, or Wood
-  Steel

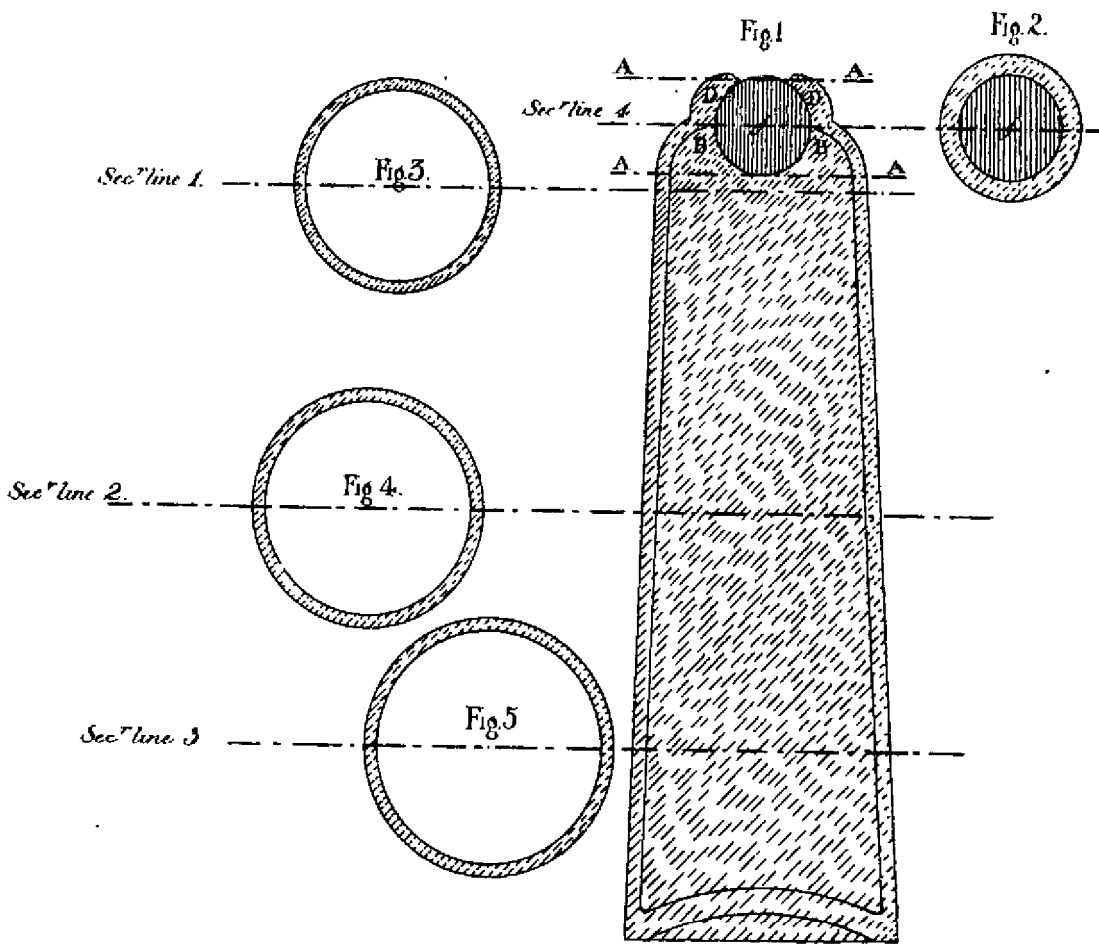


This is the Sheet of Drawings marked B,
 referred to in the annexed Letters of
 Registration granted to George Gledhill, this
 twenty fourth day of November 1873.

Hercules Robinson.

Sheet IV

 Glass
 India Rubber



This is the Sheet of Drawings marked C, referred to in the annexed Letters of Registration granted to George Gledhill this twenty fourth day of November 1873.

Hercules Robinson

(Sig 1)

[143]



A.D. 1873, 9th December. No. 390.

**IMPROVEMENTS IN MACHINERY FOR WASHING AURIFEROUS OR
STANNIFEROUS DRIFTS, &c.**

LETTERS OF REGISTRATION to Benjamin R. Brown, for "Improvements in Machinery for washing auriferous or stanniferous drifts, &c.

[Registered on the 12th day of December, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting:

WHEREAS BENJAMIN ROGERS BROWN, of Sydney, in the Colony of New South Wales, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is to say, of an invention of "Improvements in Machinery for washing auriferous or stanniferous drifts, for concentrating sand or slime ores, and for separating pyrites and gold from crushed quartz," which said invention is more particularly described in the specification, marked A, and the two papers of drawings, marked B and C respectively, which are hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Benjamin Rogers Brown, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Benjamin Rogers Brown, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Benjamin Rogers Brown shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have hereunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this ninth day of December, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Improvements in Machinery for washing auriferous or stanniferous drifts, &c.

A.

SPECIFICATION of the Invention of BENJAMIN ROGERS BROWN.

This invention refers to Improvements in Machinery for washing auriferous or stanniferous drifts, for concentrating sand or slime ores, and for separating pyrites and gold from crushed quartz.

For this purpose I use pans of iron, or other suitable material, suspended from above or supported from below by springs, chains, rods, or other appliances, in such manner as to permit of the pans receiving a reciprocating motion in a longitudinal direction, which motion is derived from revolving shafts, by means of cranks or eccentric wheels and connecting rods. Each pan is formed with a bottom sloping downwards from the sides towards the middle, and along the middle of the pan a space is partitioned off, communicating with the other parts of the pan only by means of apertures situated close to the bottom. This central space is provided with another adjustable aperture, by means of which the concentrated material is discharged from the pan, at pleasure, into suitable receivers. The material to be concentrated is fed with water into the pan, near the middle, outside of each central partition, and is kept, by the motion of the pan, in such a state of suspension as to permit the various particles to arrange themselves in the pan according to their specific gravity, those of the greatest specific gravity falling to the bottom, and those having the least specific gravity remaining at the top. The water flowing into the pan is constantly discharged over the sides, carrying the lightest particles with it, whilst the heaviest particles pass through apertures at the bottom of the central partitions, and are discharged by themselves, at pleasure, by the adjustable apertures.

The accompanying drawings exhibit one form of this invention. Fig. 1 is a side elevation; fig. 2 is a plan; fig. 3 is an end elevation; fig. 4 is a cross section; and fig. 5 is a longitudinal section.

In these figures A represents a frame of wood, iron, or other suitable material. P represents the pan, suspended by chains, rods, bladesprings, or other suitable means, from the frame A, and deriving motion from the crank-shaft S, through the connecting rod C. The crank-shaft is furnished with a fly-wheel, W, and is caused to revolve by the belt pulleys B, or by other suitable means. EE represent the side edges of the pans over which the light waste material is discharged into the troughs or launders TT. DD represent the central partitions, with apertures, FF, near the bottom, which form the only communication with the central space G. H represents the adjustable aperture for discharge of concentrated material. The material to be concentrated is supplied to the pan by the troughs or launders II, from which it passes through the longitudinal distributing wells KK (which also serve to collect mercury, if any be present) and passing over the aprons MM falls into the pan at NN.

I do not limit myself to the exact details herein described, which are capable of modification to suit the various localities in which, or the various purposes for which the machine may be used.

I claim as my invention the peculiar arrangement and form of pan herein described, the central partitions with their apertures at bottom, the longitudinal central supply, and the side discharge of refuse material.

Sydney, 23rd October, 73.

BENJAMIN ROGERS BROWN.

This is the specification, marked A, referred to in the annexed Letters of Registration granted to Benjamin Rogers Brown, this ninth day of December, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 17 November, 1873.

SIR,

The application of Mr. Benjamin R. Brown for Letters of Registration for "Improvements in Machinery for washing auriferous or stanniferous drifts, &c.," having been referred to us, we have examined the specification and drawings accompanying the same, and have the honor to report that we see no objection to the issue of Letters of Registration for the machine as described and figured.

We have, &c.,

J. SMITH.

GOTHEB K. MANN.

THE PRINCIPAL UNDER SECRETARY.

[Drawings—two sheets.]

Fig. 1.

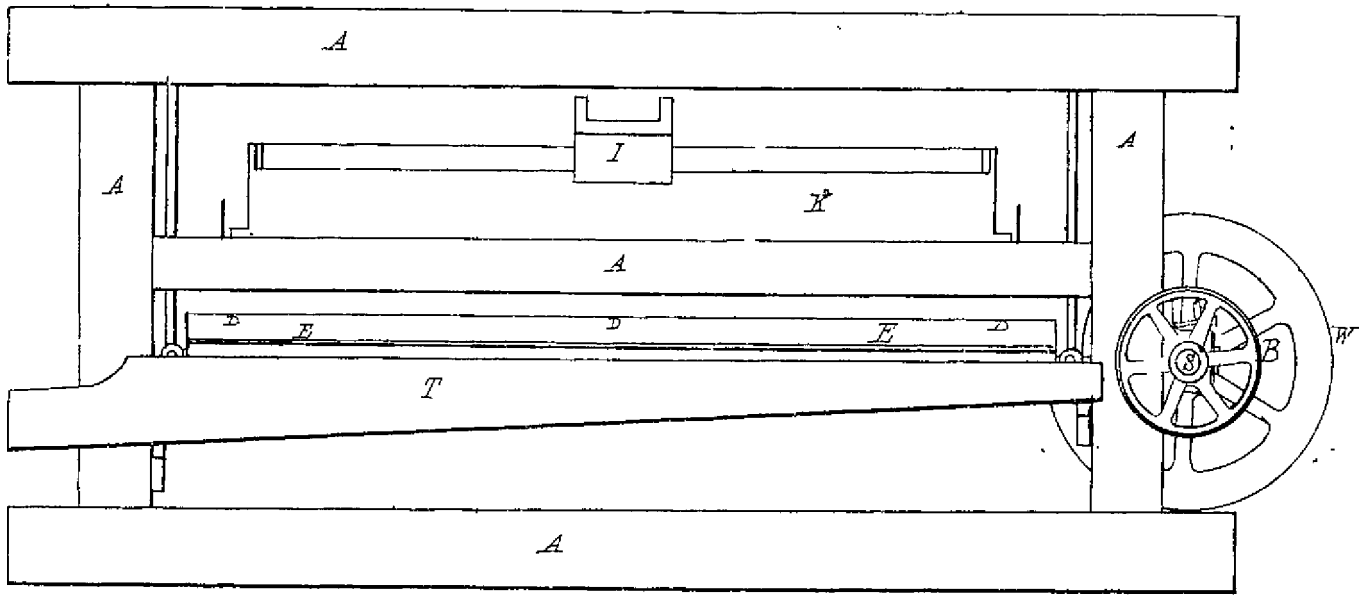
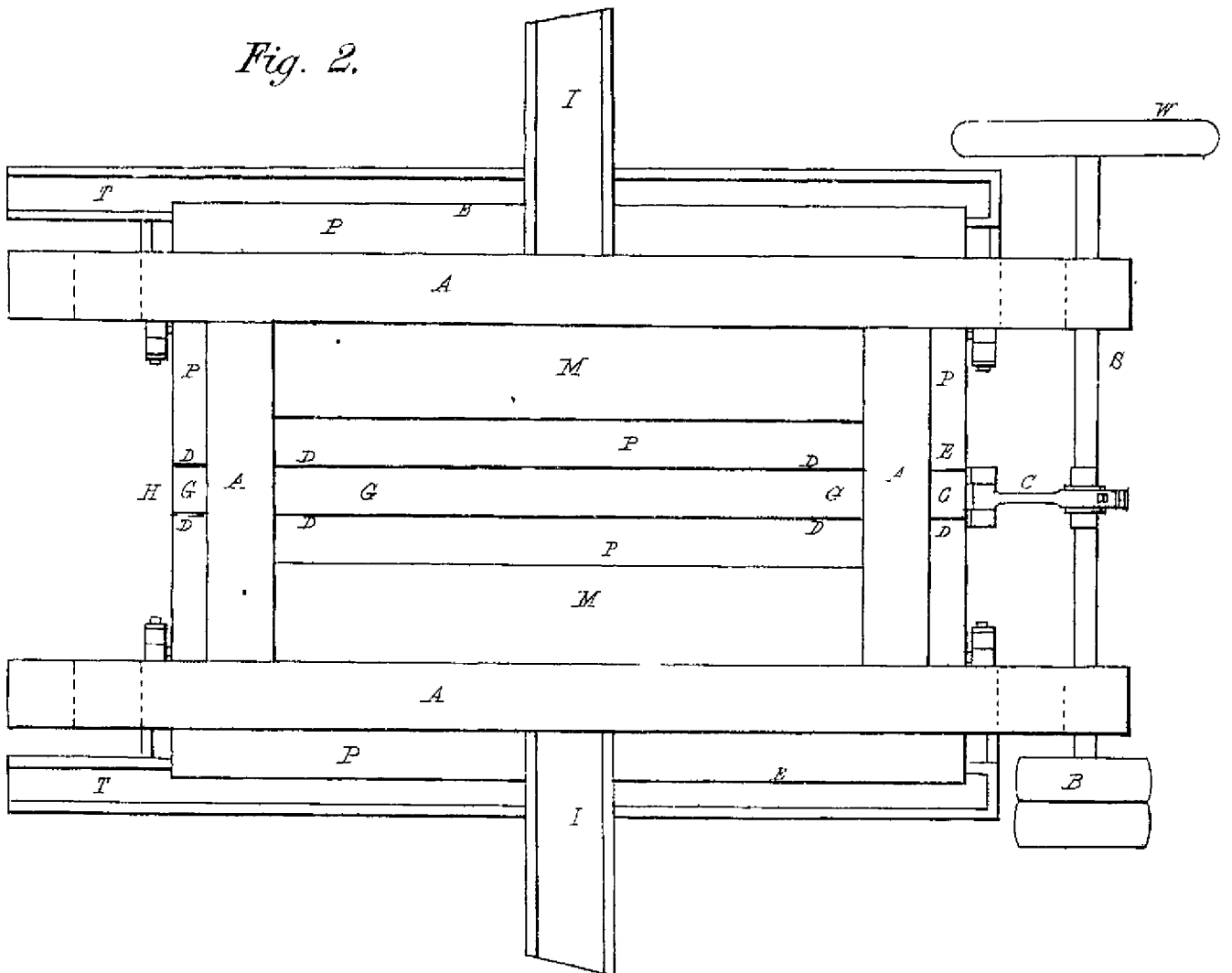


Fig. 2.



This is the Paper of Drawings referred to in the annexed Letters of Registration granted to Benjamin Rogers Brown, this ninth day of December, 1873.

Hercules Robinson

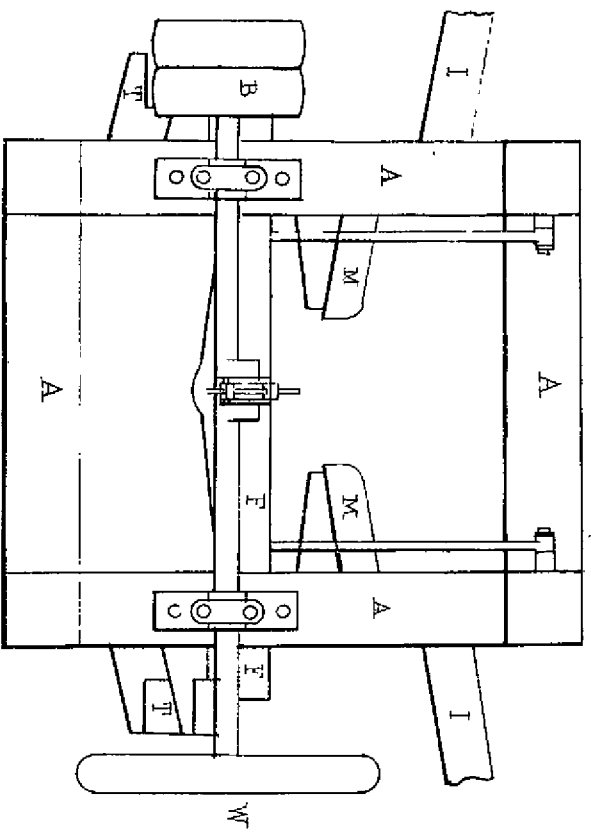


Fig. 3.

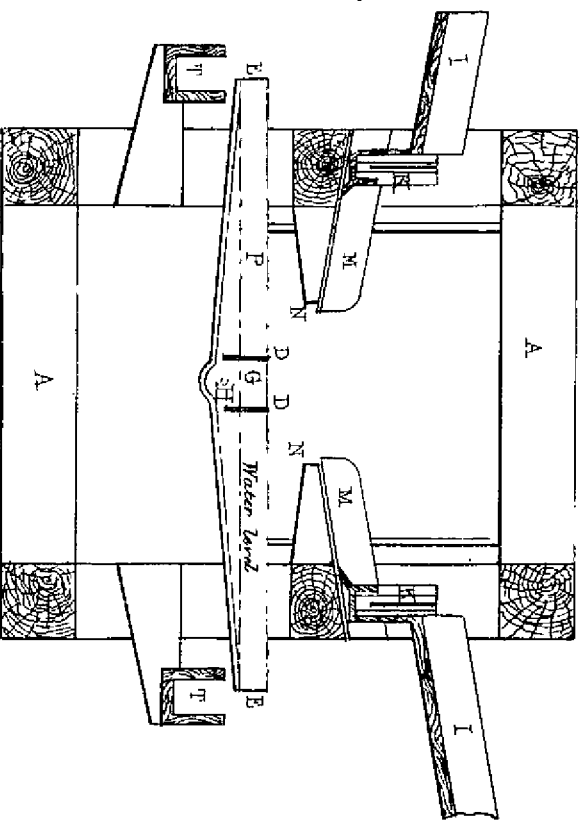


Fig. 4.

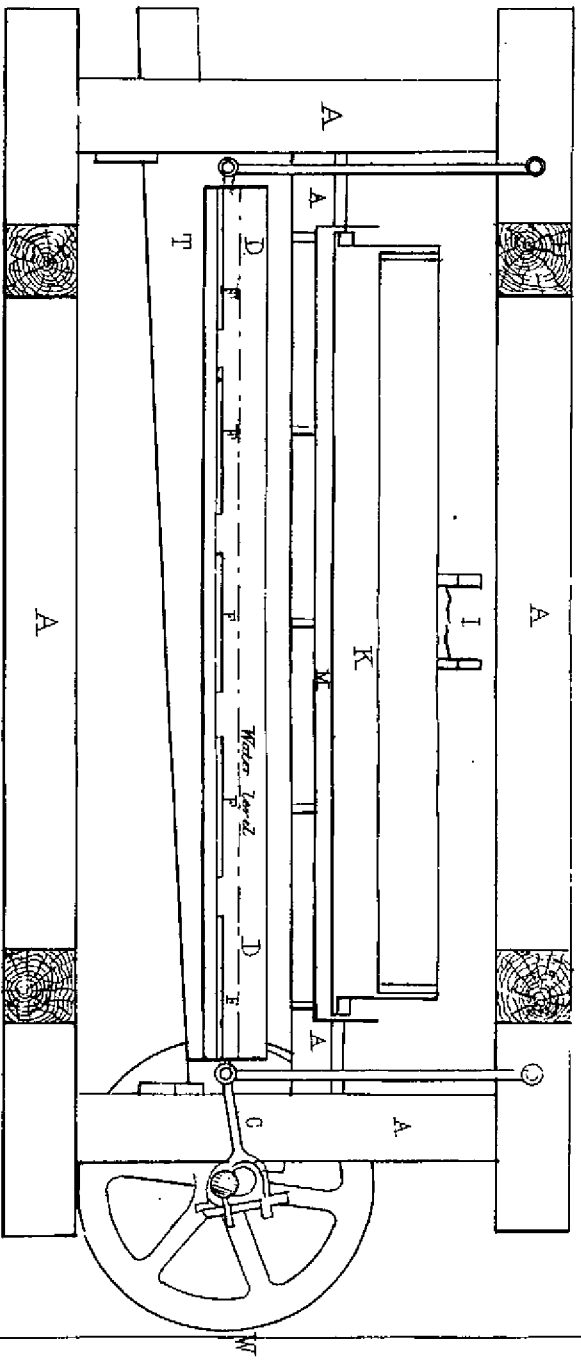


Fig. 5.

This is the Paper of Drawings marked C, referred to in the appended Letters
of Registration granted to Benjamin Rogers Brown, this ninth day
of December, 1873
Hercules Robinson.

[145]



A.D. 1873, 23 December. No. 391.

**INVENTION FOR IMPREGNATING OR AERATING MALT LIQUORS BY
CARBONIC ACID GAS.**

LETTERS OF REGISTRATION to Robert Henry Prendergast, for an Invention
for impregnating or aerating Malt Liquors by Carbonic Acid Gas.

[Registered on the 23rd day of December, 1873, in pursuance of the Act 16 Vic., No. 24.]

BY HIS EXCELLENCY SIR HERCULES GEORGE ROBERT ROBINSON, Knight Commander 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, and Vice-Admiral of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME, greeting :

WHEREAS ROBERT HENRY PRENDERGAST, of the city of Sydney, in the Colony of New South Wales, brewer, hath by his Petition humbly represented to me that he is the author or designer of a certain invention or improvement in manufactures, that is say, of an invention for impregnating or aerating Malt Liquors by Carbonic Acid Gas, which is more particularly described in the specification which is hereunto annexed; and that he, the said Petitioner, hath deposited with the Honorable the Treasurer of the said Colony of New South Wales the sum of Twenty Pounds sterling, for defraying the expense of granting these Letters of Registration, as required by the Act of Council, sixteenth Victoria, number twenty-four; and hath humbly prayed that I would be pleased to grant Letters of Registration, whereby the exclusive enjoyment and advantage of the said invention or improvement might be secured to him for a period of fourteen years: And I, being willing to give encouragement to all inventions and improvements in the arts or manufactures which may be for the public good, and having received a report favourable to the prayer of the said Petition, from competent persons appointed by me to examine and consider the matters stated therein, and to report thereon for my information, am pleased, with the advice of the Executive Council, and in exercise of the power and authority given to me by the said Act of Council, to grant, and do by these Letters of Registration grant unto the said Robert Henry Prendergast, his executors, administrators, and assigns, the exclusive enjoyment and advantage of the said invention or improvement, for and during the term of fourteen years from the date hereof; to have, hold, and exercise unto the said Robert Henry Prendergast, his executors, administrators, and assigns, the exclusive enjoyment and advantage thereof, for and during and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended: Provided always, that if the said Robert Henry Prendergast shall not, within three days after the granting of these Letters of Registration, register the same in the proper office in the Supreme Court, at Sydney, in the said Colony of New South Wales, then these Letters of Registration, and all advantages whatsoever hereby granted, shall cease and become void.

In witness whereof, I have herunto set my sign manual, and have caused the present Letters of Registration to be sealed with the seal of the said Colony of New South Wales, at Government House, Sydney, in New South Wales, this twenty-third day of December, in the year of our Lord one thousand eight hundred and seventy-three.

(L.S.)

HERCULES ROBINSON.

Invention for impregnating or aerating Malt Liquors by Carbonic Acid Gas.

SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, ROBERT HENRY PRENDERGAST, of Sydney, brewer, do hereby declare the nature of my invention, and the manner in which the same is to be performed.

THE machine used is similar to the one in use by aerated water manufacturers, with the addition of having all the internal parts thickly plated with silver.

The gas proposed to be used is the ordinary carbonic acid gas used in the manufacture of soda water, or the natural carbonic acid gas that is generated in brewery vats during the process of fermentation, thus impregnating the beer with its natural gas.

This gas will be collected by pumping it from the fermentating vats into a gasometer, where it will be stored for use.

First.—I claim charging fermenting liquors, as before stated, with carbonic acid gas.

Secondly.—I claim collecting gas during fermentation for the purpose above mentioned.

In witness whereof, I, the said Robert Henry Prendergast, have hereunto set my hand and seal, this thirteenth day of November, one thousand eight hundred and seventy-three.

ROBERT HENRY PRENDERGAST. (t.s.)

Witness to signature of Robert Henry Prendergast—

JNO. SAUNDERS.

—

This is the specification referred to in the annexed Letters of Registration granted to Robert Henry Prendergast, this twenty-third day of December, 1873.

HERCULES ROBINSON.

REPORT.

Sydney, 25 November, 1873.

SIR,

In the matter of the application of Mr. Robert H. Prendergast for Letters of Registration for an "Invention for impregnating or aerating Malt Liquors by Carbonic Acid Gas," which has been referred to us, we have the honor to report that we see no objection to the issue of Letters of Registration as prayed for.

We have, &c.,

J. SMITH.
CHAS. WATT.

THE PRINCIPAL UNDER SECRETARY.

1875.

NEW SOUTH WALES.

IMMIGRATION.

(REPORT FROM AGENT FOR 1874.)

Presented to Parliament by Command.

THE AGENT FOR IMMIGRATION TO THE PRINCIPAL UNDER SECRETARY.

Government Immigration Office,
Sydney, 2 March, 1875.

SIR,

I have the honor to submit, for the information of the Honorable the Colonial Secretary, my Report on Immigration for the year 1874.

2. The "British Commodore" was the last ship which arrived (on 24th April, 1873) under the Instructions given in 1870 by the Honorable the Colonial Secretary, granting free passages to single females, accompanied by a few married people, a portion of whose cost of passage was paid by themselves. A total of 653 single females were thus introduced in 1871, 1872, and 1873, thereby disposing of the unexpended balance from former Immigration votes of about £11,000, referred to in my communication of 18th February, 1870.

3. The existing "Regulations for the promotion of Immigration" on the principle of assisted passages, by the payment either in this Colony or in Great Britain of about one-third of the cost of passage money, came into operation on the 1st June, 1873.

4. Under these Regulations there have arrived during the past year four ships with immigrants, viz., the—

"Samuel Plimsoll," arrived February 1, 1874,
"Jerusalem," " June 22, 1874,
"Tyburnia," " October 5, 1874,
"Samuel Plimsoll," " December 16, 1874,

bringing 1,080 immigrants, 475 of whom were sent for by their relatives or friends resident in this Colony; the remainder, viz., 605 individuals, were selected by the Agent General. During the outward voyage of these several ships there occurred thirteen births and thirteen deaths, viz., one adult and twelve infants.

5. The immigrants by these ships were natives of—

England and Wales	...	...	...	...	...	524
Ireland	...	...	...	...	...	432
Scotland	..	.	...	...	...	108
Foreign Parts	..	..	...	...	...	6
Born on the voyage	...	...	...	...	...	10
Total	...	...	..	...	...	1,080

of whom were—

Male adults	..	...	...	...	...	427
Female adults	...	..	...	...	...	411
Children under 12 years of age	{ Male, 109 }		...	...	...	242
	{ Female, 133 }		...	...	...
Total	...	...	...	...	...	1,080

6. The religious denominations of these immigrants were—

Protestants	...	...	...	...	...	721
Roman Catholics	...	...	...	...	...	359
Total	...	...	...	...	...	1,080

7. Their educational attainments, as compared with their native countries, were—

<i>From England and Wales.</i>					
Cannot read (9 born on voyage)	...	...	...	129	} 533
Read only	...	...	...	26	
Read and write	...	...	...	378	
<i>From Ireland.</i>					
Cannot read (1 born on voyage)	...	...	...	121	} 433
Read only	...	...	...	23	
Read and write	...	...	...	289	
<i>From Scotland.</i>					
Cannot read	...	...	...	33	} 108
Read only	...	...	...	2	
Read and write	...	...	...	73	
<i>From Foreign Parts.</i>					
Cannot read	...	...	...	1	} 6
Read only	...	...	...	1	
Read and write	...	...	...	4	
Total				...	1,080

8. The disposal of the immigrants has been notified in my separate reports on the arrival of each vessel; by which reports it appears that of the 284 single women who arrived only sixty-three were willing to engage as domestic servants; the larger number, viz. 221, were received by their relatives and friends resident in the Colony. The average wages obtained by those who were hired at the Depôt was at the rate of £22 10s. per annum, with board and lodging. The greater proportion of the married people and of the single men immediately joined their friends, the remaining few readily found remunerative employment, viz.—married couples at from £60 to £70 per annum; single men at from £30 to £40 per annum, in both cases with board and lodging; carpenters and plasterers at from 30s. to 40s. per week, with board; masons and bricklayers at 10s. per day of eight hours.

9. The Collector of Customs has, as usual, furnished me with a return, by which it appears that, during the year 1874, the total number of individuals arrived in the Colony from the United Kingdom, irrespective of the assisted immigrants, has been 576, and the departures to the United Kingdom have numbered 605 individuals.

10. From the Report published by the Marine Department of the Board of Trade on Emigration from the United Kingdom for the year 1873 (that for 1874 is not yet published), the following information is obtained:—The total emigration from the United Kingdom during the past fifty-nine years has amounted to 7,871,897 persons, including 1,042,954 who have emigrated to the Australian Colonies and New Zealand. The average annual emigration from the United Kingdom for the ten years ending 1873 was 233,908 persons; but for the year 1873, the larger number of 310,612 emigrated, of which number 26,428 individuals emigrated to the Australian Colonies and New Zealand, of whom only 941 emigrated to New South Wales.

I have the honor to be,

Sir,

Your most obedient servant,

GEORGE F. WISE,

Agent for Immigration.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

IMMIGRATION.

(PETITION OF RESIDENTS OF ANVIL CREEK AND GRETA.)

Ordered by the Legislative Assembly to be printed, 4 June, 1875.

To the Honorable the Speaker of the Legislative Assembly of New South Wales.

The Petition of the undersigned residents of Greta, Anvil Creek, and the surrounding districts,—

HUMBLY SHOWETH :—

That as a community of working men, we view with regret and alarm the motion now before your Honorable House having for its object the introduction of a large number of immigrants to this Colony, at a very extensive expenditure of the public funds.

We protest against this expenditure, on the following grounds :—

- 1st. That for every person so introduced into this Colony we, as working men, have to pay in the shape of taxation a certain share of the cost attending their introduction.
- 2nd. That it is an established and acknowledged fact that at the present time there are thousands of men in this and the adjacent Colonies who are unable to find employment; and we most respectfully desire to record our opinion that it would be an act of gross injustice to the present colonists on the one hand, and to those who may be introduced as immigrants on the other, to offer inducements which cannot fail to end in disappointment to them and injury to us.

We beg most humbly, further, to pray and express our strong opinion against Chinese immigration, now being so extensively introduced into the neighbouring Colony of Queensland, and pray that your Honorable House will see fit to enact some law of capitation, or otherwise, in order to prevent the evils that must inevitably arise from this course being extended to the land of our adoption.

We pray that your Honorable House will take these promises into consideration, and grant the prayers of our petition, by refusing to accept the proposed immigration scheme, and by legislating against the introduction of Chinese labour.

And your Petitioners will ever pray, &c., &c., &c.

(Here follow 402 signatures).

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

IMMIGRATION.

(PETITION OF RESIDENTS OF LAMBTON, NEW LAMBTON, AND WARATAH.)

Ordered by the Legislative Assembly to be printed, 4 June, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned residents of Lambton, New Lambton, and Waratah,—
HUMBLY SHOWETH :—

That your Petitioners view with alarm the motion now before your Honorable House having for its object the introduction of a large number of immigrants to this Colony at a very extensive expenditure of the public funds.

Your Petitioners protest against this expenditure, on the following grounds :—

- 1st. That every person so introduced into this Colony your Petitioners have to pay in the shape of taxation a share of the cost attending their introduction.
- 2nd. That it is an established and acknowledged fact that at the present time there are thousands of men in this and the adjacent Colonies who are unable to find employment; and your Petitioners most respectfully desire to record an opinion that it would be an act of gross injustice to the present colonists on the one hand, and to those who may be induced to immigrate on the other hand, to offer inducements which cannot fail to end in disappointment to them and injury to the community in general.

Your Petitioners beg most humbly further to express their strong opinion against Chinese immigration, now being so extensively introduced into the neighbouring Colony of Queensland, and pray that your Honorable House will see fit to enact some law of capitation or otherwise, in order to prevent the evils that must inevitably arise from this course being extended to the land of our adoption.

Your Petitioners therefore pray that your Honorable House will take these premises into consideration and refuse to accept the proposed immigration scheme, and legislative against the introduction of Chinese labour into this Colony.

And your Petitioners, as in duty bound, will ever pray, &c.,

[Here follow 907 signatures.]

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

IMMIGRATION.

(PETITION AGAINST—RESIDENTS OF WALLSEND.)

Ordered by the Legislative Assembly to be printed, 14 June, 1875.

To the Honorable the Members of the Legislative Assembly of the Colony of New South Wales, in Parliament assembled.

The Petition of the undersigned Inhabitants of Wallsend and the surrounding district,—

HUMBLY SHOWETH:—

That your Petitioners, having observed that a measure for promoting immigration to this Colony has been introduced in the Legislative Assembly, are of opinion that any such measure as the one proposed is exceedingly inopportune, and wholly uncalled for by the requirements of the Colony.

That a scheme of immigration such as the one proposed is, in the opinion of your Petitioners, calculated to import into the labour market of this Colony a redundancy of that element of which a surplus already exists, and thus have the effect of lowering the condition of the class who live by their labour, without any corresponding advantages being derived from an extension of colonial industries.

That until such time as the capitalists of this Colony are prepared to extend and sustain the manufacturing and other productive interests of the Colony generally, the introduction here of a large number of the wage-earning class from the Mother Country can only be attended with disastrous consequences to labour in particular and the Colony in general, more especially as the cost of these importations must be borne by the producers out of their contributions to the Revenue of the State, the burdens of which already press heavily upon the only partially employed labour of the Colony.

Your Petitioners, therefore, pray that your Honorable House will take the foregoing Petition into your favourable consideration.

And your Petitioners will ever pray, &c.

[Here follow 860 signatures.]

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

IMMIGRATION.

(PETITION AGAINST—INHABITANTS OF MINMI.)

Ordered by the Legislative Assembly to be printed, 19 July, 1875.

To the Honorable the Members of the Legislative Assembly of the Colony of New South Wales, in
Parliament assembled.

The Petition of the undersigned inhabitants of Minmi,—

HUMBLY SHOWETH :—

That your Petitioners having observed that a measure for promoting Immigration to this Colony has been introduced into the Legislative Assembly, are of opinion that any such measure as the one proposed is exceedingly inopportune and wholly uncalled for by the requirements of the Colony.

That a scheme of Immigration such as the one proposed is, in the opinion of your Petitioners, calculated to import into the labour market of this Colony a redundancy of that element of which a surplus already exists, and thus have the effect of lowering the condition of the class who live by their labour, without any corresponding advantage being derived from an extension of colonial industries.

That until such time as the capitalists of this Colony are prepared to extend and sustain the manufacturing and other productive interests of the Colony generally, the introduction here of a large number of the wage-earning class can only be attended with disastrous consequences to labour in particular and the Colony in general, more especially as the cost of these importations must be borne by the producers out of their contributions to the Revenue of the State, the burdens which press heavily upon the only partially employed labour of the Colony.

Your Petitioners therefore humbly pray that your Honorable House will take the foregoing Petition into your favourable consideration.

And your Petitioners will ever pray, &c.

[*Here follow 124 signatures*]

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

AMOS DAVIS.

(PETITION FROM INHABITANTS OF WALLABADAH TO SECRETARY FOR PUBLIC WORKS.)

Ordered by the Legislative Assembly to be printed, 4 June, 1875.

To the Honorable John Sutherland, Minister for Works of the Colony of New South Wales.

The Petition of the undersigned Inhabitants of Wallabadah, in the Colony of New South Wales,—
HUMBLY SHOWETH:—

That your Petitioners are freeholders and householders residing in Wallabadah aforesaid, which is a township situated on the Great Northern Road, in the county of Buckland, Liverpool Plains, in the Colony aforesaid.

2. That having known Amos Davis as a contractor for Government for a number of years, and we, the undersigned, knowing him to be a persevering and straightforward man; also, having been at a great expense in purchasing plant to enable him to complete the several contracts previously granted him by the Government.

3. And for some cause unknown to us, he has not obtained any contracts of late from the Government, which has caused him, the aforesaid Amos Davis, a great amount of loss on account of having the said plant laying idle on his hands.

4. That if there is any cause which disqualifies him from obtaining Government contracts, we, the undersigned, do hereby pray that an investigation may be held, and a report made as to the cause thereof.

5. That your Petitioners are desirous, if the aforesaid Amos Davis be not disqualified, he may be permitted to obtain Government contracts as hitherto.

6. Your Petitioners, therefore, humbly prayeth that your Honor will remove the present cause for him not obtaining Government contracts for public works, if cause there be any.

And your Petitioners, as in duty bound, will ever pray, &c.

Names.	Occupation.	Residence.
J. P. Davies	Surgeon	Wallabadah.
Chas. P. Gruggen	Manager, Quirindi	Wallabadah Creek.
John M'Donald	Grazier	Wallabadah Station.
John Gardiner	Storekeeper	Wallabadah.
Solomon Brothers	Saddlers	"
George H. Wheatley	Blacksmith	"
John Cuming	Freeholder	"
Charles J. Smith	"	"
Jonathan Cock	Innkeeper	"
Alfred O. Fox	Draper	"
William Taylor	Storekeeper	"
John M'Farlane	Freeholder	"
George Chapple	Carpenter	"
George Nash	Butcher	"
John Farrell	Freeholder	"
C. M'Gillivay	"	"
Anthony Whitton	"	"
Alfred Kelly	"	"
William Cropper	Innkeeper	"

1875.

—
LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

ON THE

PETITION OF AMOS DAVIS;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND

APPENDIX.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
10 *August*, 1875.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

—
1875.

1875.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES No. 35. FRIDAY, 7 MAY, 1875.

7. PETITION OF AMOS DAVIS (*"Formal" Motion*):—Mr. Bennett moved, pursuant to Notice,—
- (1.) That a Select Committee be appointed, with power to send for persons and papers, to inquire into and report on certain allegations contained in a Petition from Amos Davis, which was presented to this House, and ordered to be printed, on the 11th November last.
- (2.) That such Committee consist of Mr. Lackey, Mr. Cameron, Mr. Macintosh, Mr. Jacob, Mr. Cohen, Mr. T. G. Dangar, Mr. Scholey, Mr. Gray, Mr. W. C. Browne, and the Mover.
- Question put and passed.
-

VOTES No. 99. FRIDAY, 6 AUGUST, 1875.

17. PETITION OF AMOS DAVIS (*Suspension of 47th Standing Order*):—Mr. Fitzpatrick moved, pursuant to Notice (*as amended by consent*), the suspension of the 47th Standing Order, to enable the Acting Chairman to sign the Report of the Select Committee on the Petition of Amos Davis, the Honorable Member for Liverpool Plains, who was chosen Chairman, having declined to sign the Report agreed to by the Committee.
- Question put and passed.
-

VOTES No. 101. TUESDAY, 10 AUGUST, 1875.

3. PETITION OF AMOS DAVIS:—Mr. Macintosh, as Acting Chairman, brought up the Report from, and laid upon the Table the Minutes of Proceedings of, and of Evidence taken before, the Select Committee for whose consideration and report this subject was referred on 7th May, 1875, together with Appendix.
- Ordered to be printed.
-

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Separate Appendix (Diagrams).	

1875.

PETITION OF AMOS DAVIS.

REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on the 7th May, 1875,—“with power to send for persons and papers, to inquire into and report on certain allegations contained in a Petition from Amos Davis, which was presented to this House and ordered to be printed on the 11th November last,”—have agreed to the following Report:—

1. That after having examined the witnesses named in the List,* and carefully considered the Evidence, together with the documents appended thereto, your Committee have decided that Mr. Amos Davis has no claim against the Government. See List, page 8.

2. Under the circumstances revealed in the Evidence, your Committee are of opinion that the Commissioner for Roads was justified in refusing to entertain any application from Mr. Amos Davis for any further work until such time as his differences with the Roads Department were adjusted.

JOHN MACINTOSH,
Acting Chairman.

No. 3 Committee Room,
Sydney, 10th August, 1875.

PROCEEDINGS OF THE COMMITTEE.

TUESDAY, 11 MAY, 1875.

MEMBERS PRESENT:—

Mr. Bennett,	|	Mr. W. C. Browne,
Mr. Cunneen,	|	Mr. T. G. Dangar,
Mr. Cameron,	|	Mr. Jacob.

Mr. Bennett called to the Chair.

Entry from Votes and Proceedings, appointing the Committee, read by the Clerk.

Printed copies of the Petition referred, before the Committee.

Committee deliberated.

Ordered,—That Mr. Amos Davies be summoned to give evidence next meeting.

[Adjourned to Thursday next, at half-past Ten o'clock.]

THURSDAY, 13 MAY, 1875.

MEMBERS PRESENT:—

Mr. Bennett in the Chair.

Mr. Scholey,	|	Mr. Jacob,
Mr. T. G. Dangar,	|	Mr. W. C. Browne,
Mr. Gray,	|	Mr. Cameron.

Mr. Amos Davies* called in and examined.

Witness handed in certain documents which were ordered to be appended. (See Appendices A1 to A9.)

Witness withdrew.

Committee deliberated.

[Adjourned to Tuesday next, at half-past Ten o'clock.]

TUESDAY, 18 MAY, 1875.

Meeting called for this day postponed by the direction of the Chairman.

WEDNESDAY, 19 MAY, 1875.

MEMBERS PRESENT:—

Mr. Bennett in the Chair.

Mr. Jacob,		Mr. Scholey.
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Mr. Amos Davies called in and further examined.

Witness handed in certain documents which were ordered to be appended. (See Appendices A10 to A24.)

Witness withdrew.

Committee deliberated.

Ordered,—That W. C. Bennett, Esq., and Mr. Henry Holloway, be summoned to give evidence next meeting.

[Adjourned to Friday next, at half-past Ten o'clock.]

FRIDAY, 21 MAY, 1875.

MEMBERS PRESENT:—

Mr. Bennett,		Mr. T. G. Dangar.
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In the absence of a quorum, the meeting called for this day lapsed.

WEDNESDAY, 26 MAY, 1875.

MEMBERS PRESENT:—

Mr. Bennett in the Chair.

Mr. T. G. Dangar,	|	Mr. Scholey,
Mr. W. C. Browne.	|	

Mr. George Holloway called in and examined.

Witness withdrew.

Committee deliberated.

Resolved,—That the Clerk be instructed to supply Mr. W. C. Bennett with a copy of the evidence already taken before this Committee.

Ordered,—That Mr. George Holloway and W. C. Bennett, Esq., be summoned to give evidence next meeting.

[Adjourned to Wednesday next, at half-past Ten o'clock.]

WEDNESDAY,

* *Davis* in Votes and Proceedings.

WEDNESDAY, 2 JUNE, 1875.

MEMBERS PRESENT :—

Mr. Bennett in the Chair.

Mr. Macintosh,	|	Mr. T. G. Dangar,
Mr. Lackey,	|	Mr. Cameron.

William Christopher Bennett, Esq. (*Commissioner and Engineer for Roads*), called in and examined.
Witness handed in certain documents, which were ordered to be appended. (*See Appendices B1 to B9.*)

Witness withdrew.

Committee deliberated.

Resolved,—That the Clerk be instructed to supply Mr. Amos Davies with a copy of the evidence already taken.

Ordered,—That Mr. G. Holloway and Ernest A. Nardin, Esq., be summoned to give evidence next meeting.

[Adjourned to Friday next, at half-past Ten o'clock.]

FRIDAY, 4 JUNE, 1875.

MEMBERS PRESENT :—

Mr. Bennett in the Chair.

Mr. Scholey,	|	Mr. T. G. Dangar,
Mr. Cohen,	|	Mr. Cameron.

Mr. George Holloway called in and further examined.

Witness withdrew.

Ernest A. Nardin, Esq. (*Superintendent of Roads*), called in and examined.

Witness handed in certain documents which were ordered to be appended. (*See Appendices C 1 to*

C 11.)

Witness withdrew.

Ordered,—That A. C. Bailey, Esq., Henry Quodling, Esq., and Mr. John Anderson, be summoned to give evidence next meeting.

[Adjourned to Wednesday next, at half-past Ten o'clock.]

WEDNESDAY, 9 JUNE, 1875.

MEMBERS PRESENT :—

Mr. Bennett,		Mr. T. G. Dangar.
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In the absence of a quorum, the meeting called for this day lapsed.

THURSDAY, 10 JUNE, 1875.

MEMBERS PRESENT :—

Mr. Bennett,	|	Mr. Scholey.
--------------	--	--------------

In the absence of a quorum, the meeting called for this day lapsed.

FRIDAY, 11 JUNE, 1875.

MEMBERS PRESENT :—

Mr. Bennett in the Chair.

Mr. Scholey,	|	Mr. W. C. Browne,
	|	Mr. T. G. Dangar.

Henry Quodling, Esq., called in and examined.

Witness handed in Specification for first-class timber culvert at Wallabadah Gap, which was ordered to be appended. (*See Appendix D.*)

Witness withdrew.

Ernest A. Nardin, Esq., called in and further examined.

Witness handed in certain documents which were ordered to be appended. (*See Appendices E 1 to*

E 4.)

Witness withdrew.

Committee deliberated.

Ordered,—That E. A. Nardin, Esq., W. C. Bennett, Esq., and A. C. Bayley, Esq., be summoned to give evidence next meeting.

[Adjourned to Monday next, at half-past Ten o'clock.]

MONDAY,

MONDAY, 14 JUNE, 1875.

MEMBERS PRESENT :—

Mr. Bennett in the Chair.

Mr. Scholey,	|	Mr. T. G. Dangar,
Mr. W. C. Browne,	|	Mr. Lackey.

Ernest A. Nardin, Esq., called in and further examined.

Witness handed in a Statement showing the average price of formation of the Mudgee Road, which was ordered to be appended. (See Appendix E 5.)

Witness withdrew.

Alexander Charles Bayley, Esq. (Road Superintendent), called in and examined.

Witness handed in certain documents which were ordered to be appended. (See Appendices F 1 to F 8.)

Witness withdrew.

Committee deliberated.

Ordered,—That W. C. Bennett, Esq., and Mr. Amos Davies be summoned to give evidence next meeting.

[Adjourned to To-morrow at Two o'clock.]

TUESDAY, 15 JUNE, 1875.

MEMBERS PRESENT :—

Mr. T. G. Dangar,	|	Mr. W. C. Browne,
Mr. Scholey,	|	Mr. Macintosh.

In the absence of the Chairman, Mr. T. G. Dangar called to the Chair, *pro tem*.

William C. Bennett, Esq., called in and further examined.

Witness handed in certain documents which were ordered to be appended. (See Appendices G 1 and 2.)

Witness withdrew.

Mr. Amos Davies called in and further examined.

Room cleared.

Committee deliberated.

William C. Bennett, Esq., called in and further examined.

Witness handed in certain documents which were ordered to be appended. (See Appendices G 3 and 4.)

Witness withdrew.

Committee deliberated.

Re-assembling of the Committee to be arranged by the Chairman.

[Adjourned.]

THURSDAY, 1 JULY, 1875.

MEMBERS PRESENT :—

Mr. Scholey,	|	Mr. T. G. Dangar,
	|	Mr. Cohen.

In the absence of the Chairman, Mr. T. G. Dangar called to the Chair, *pro tem*.

Committee deliberated.

Re-assembling of the Committee to be arranged by the Chairman.

[Adjourned.]

FRIDAY, 2 JULY, 1875.

MEMBERS PRESENT :—

Mr. Bennett in the Chair.

Mr. T. G. Dangar,	|	Mr. Cohen,
	|	Mr. Jacob.

The Chairman proposing to further examine Mr. Amos Davies,—

Mr. T. G. Dangar moved,—“That the Committee shall forthwith proceed to consider the evidence with a view to reporting to the House.”—

Question put and agreed to.

Committee deliberated.

Re-assembling of the Committee to be arranged by the Chairman.

[Adjourned.]

TUESDAY,

TUESDAY, 20 JULY, 1875.

In the absence of a quorum the meeting called for this day lapsed.

FRIDAY, 23 JULY, 1875.

MEMBERS PRESENT:—

Mr. T. G. Dangar,	|	Mr. Gray,
Mr. Macintosh,	|	Mr. Cameron,
Mr. Lackey,	|	Mr. W. C. Browne.

In the absence of the Chairman Mr. Macintosh called to the Chair *pro tem*.

Clerk laid before the Committee a letter of Mr. Davies, and a memorandum of Mr. Bennett (Chairman), having reference to the inquiry.

Committee deliberated, and declined to receive the documents.

Draft Report, as proposed by the Chairman (Mr. Bennett), read 1^o, as follows:—

“DRAFT REPORT.

“THE SELECT COMMITTEE of the Legislative Assembly, appointed on the 7th May, 1875,—‘with power to send for persons and papers to inquire into and report on certain allegations contained in a Petition from Amos Davis, which was presented to this House and ordered to be printed on the 11th November last,’—have agreed to the following report:—

“1. Your Committee having examined the witnesses named in the List,* and carefully considered the evidence and documents appended thereto, have come to the conclusion that Mr. Davies’s claim against the Government has not been disproved. * See List, page

“2. That certain departmental documents, known as I Forms (generally used as measurement forms), were asked for by your Committee, but have not been supplied by the Commissioner for Roads, in whose custody the several witnesses stated them to be, and which that officer acknowledged had been forwarded to his department.

“3. Therefore, in the absence of the measurement forms alluded to, it is impossible for your Committee to furnish a complete Report; and in order to expedite the duties of your Committee it devolves on the Chief Commissioner to lay before them these particular measurement forms.

“4. The assumption that your Committee cannot bring up a final Report is fully justified by the answers given to questions 232 and 240 of Commissioner W. C. Bennett’s evidence. See questions 232 and 240.

“5. It further appears to your Committee that the answers to Questions from 277 to 291 are of that ambiguous character that your Committee deem it desirable that further explanation should be afforded before any final Report can be brought up.

“6. It also further appears to your Committee to be inopportune to submit a final report on the present occasion, from the fact that some alterations have been made by the Chief Commissioner, Mr. W. C. Bennett, in two documents put in evidence, marked E 3 and 4, without the concurrence of Contractor Davies or Mr. Nardin, Road Superintendent, under whose supervision the work referred to in these papers was performed.

“7. It still further appears to your Committee undesirable for the present to bring up a Final Report; which objection may be reasonably based upon the answer given by the Chief Commissioner, Mr. W. C. Bennett, to question 958,—having special reference to a letter from Contractor Davies to Road Superintendent Nardin, which he stated to have been received but cannot be found.

“8. Therefore in justice to all parties concerned your Committee are of opinion that this letter, if such letter ever passed from Contractor Davies to Road Superintendent Nardin, should be produced, otherwise the natural presumption is that no such letter did pass from Contractor Davies to Road Superintendent Nardin. Hence, if such should be the case, as is here suggested, and if this particular letter be not produced, your Committee must, under all circumstances, consider Contractor Davies’s claim proven beyond all doubt.

“9. There is also a plan with specifications for the erection of Goonoo Goonoo Bridge which is of material importance to the inquiry, and which has not been laid before your Committee.

“10. Your Committee therefore, for the reasons above-mentioned, are of opinion, that it would be prejudicial to the interest of all parties concerned to submit a final Report until all documents and other papers, which have been ordered by your Committee, and do not appear in the printed evidence, shall have been laid before them.

Draft Report, as proposed by Mr. T. G. Dangar, read 1^o, as follows:—

“DRAFT REPORT.

“THE SELECT COMMITTEE of the Legislative Assembly, appointed on the 7th May, 1875,—‘with power to send for persons and papers, to inquire into and report on certain allegations contained in a Petition from Amos Davis, which was presented to this House and ordered to be printed on the 11th November last,’—have agreed to the following Report:—

“1. That after having examined the witnesses named in the List,* and carefully considered the evidence, together with the documents appended thereto, your Committee have decided that Mr. Amos Davies has no claim against the Government. * See List, page

“2. Under the circumstances revealed in the evidence, your Committee are of opinion that the Commissioner for Roads was justified in refusing to entertain any application from Mr. Amos Davies for any further work until such time as his differences with the Roads Department were adjusted.

Motion made (Mr. Gray) *pro forma* and Question proposed, “That the Draft Report of ‘the Chairman’ be read 2^o paragraph by paragraph.”

Amendment

Amendment proposed (*Mr. Cameron*),—To omit the words “the Chairman” and to insert the words “Mr. T. G. Dangar” instead thereof.

Question,—That the words proposed to be omitted stand part of the question,—put and *negatived*.

Question,—That the words proposed to be inserted be so inserted,—put and *agreed to*.

Question then,—That the Draft Report of Mr. T. G. Dangar be read 2^o, paragraph by paragraph—put and *agreed to*.

Paragraphs 1 and 2 respectively read and *agreed to*.

Motion made (*Mr. Cameron*) and Question,—“That the Report as proposed by Mr. T. G. Dangar be the Report of the Committee,”—put and *agreed to*.

Chairman to report to the House.

MONDAY, 9 AUGUST, 1875.

In the absence of a quorum, the meeting called for this day lapsed.

TUESDAY, 10 AUGUST, 1875.

MEMBERS PRESENT:—

Mr. Macintosh,	Mr. Cameron,
Mr. T. G. Dangar,	Mr. Scholey,
Mr. W. C. Browne.	

In the absence of the Chairman, Mr. Macintosh called to the Chair *pro tem*.

Clerk submitted letter from Mr. Bennett (the Chairman), declining to sign the Report agreed to by the Committee.

Entry from Votes and Proceedings, suspending the 47th Standing Order, to allow the Acting Chairman to sign the Report, *read* by the Clerk.

Committee deliberated.

Resolved,—That the Acting Chairman do sign and bring up the Report.

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SEPARATE APPENDIX.

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1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON

PETITION OF AMOS DAVIS.

THURSDAY, 13 MAY, 1875.

Present:—

Mr. BENNETT,
Mr. W. C. BROWNE,
Mr. CAMERON,

Mr. T. G. DANGAR,
Mr. GRAY,
Mr. JACOB,

Mr. SCHOLEY.

H. BENNETT, Esq., IN THE CHAIR.

Mr. Amos Davis examined:—

1. *Chairman.*] You are the person whose petition has been referred to this Committee? I am.
2. Will you state as briefly as possible what is the nature of your grievance, or of your claim against the Government? That I am unpaid for extra work on contracts 10 and 16—£716 Os. 5d.
3. That is the amount the Government owe you? Yes, on these two contracts; also, on the sheathing on Dangar's Creek Bridge, £5 7s. 5d.; and on the sheathing on bridges on Liverpool Range, £10 Os. 8d.; total on sheathing work, £15 Ss. 1d. Prior to these claims there were three debts against the Government respectively,—one for metal ballast, and fine on the construction of bridge and approach at Goonoo Goonoo, North Tamworth—this was in 1864 that the work was finished—amounting to £93 10s. 8d. When the Commissioner came to the consideration of the contracts 10 and 16, he referred to it in an impatient manner, and I replied that I thought it was still an undischarged obligation.
4. Have you applied for the payment of this sum of which you have now given us the detail? The above claims I did place, together with two others, in the hands of a solicitor, Mr. Wallace, of Tamworth, who communicated with the Government—such proceedings subsequently being suspended at the instance and solicitations of Superintendent Bailey, pending their consideration by the Commissioner for Roads. After correspondence, dating from the 11th January, 1870, to 6th September, 1870, the Commissioner writes that the matter had been referred to a Mr. Statham, who considered that no further consideration should be given to such claims; adding, that no farther employment would be given to the contractor until such claim be withdrawn. The contractor never received certificates for the work referred to from the time they were done till the 6th September, 1870, a period of six years.* Indeed, so far as regarded the work at Goonoo Goonoo, during the same month that the Commissioner wrote that he had referred the matter to Mr. Statham, that person had to be removed from our district because of some unfortunate sickness of a character that rendered his performance of the Commissioner's duty in this matter unsatisfactory.
5. Have you any other claim against the Government? Yes, £73—arising from an excess of work over the Government schedule of quantities on contract 8-64; also, £69 Ss. 8d., being a fine and extra culvert on contract 3-67, Great Northern Road. This extra culvert was rendered necessary by the Superintendent diverting the road from the cleared line over two instead of one gully. The Committee are invited to consider if the contractor is not entitled to compensation for the loss of the use of the money detained from him—his compulsory suspension from his usual work—and the loss sustained by him in consequence of his expensive plant lying idle.
6. *Mr. Dangar.*] That is a full statement of your claims against the Government? Yes.
7. When were these contracts entered into? Contracts 10 and 16, in August, 1872.

Mr. A. Davis.
13 May, 1875.

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8.

* *NOTE (on revision)*:—That is to say, from the date of finishing the Goonoo Goonoo work, on the 25th May, 1864, to the date of the Commissioner's writing on the 6th September, 1870, a period of six years did elapse.

- Mr. A. Davies. 8. Were they all entered into at the same time? No.
- 13 May, 1875. 9. Are all these claims under one contract or under two contracts? No; they were entered into at different times, and are under seven contracts.
10. Is the sum that you allege is due to you the full amount of the contracts or balances due? Balances due.
11. On what contract are they due? They are balances due on several contracts.
12. You have received some money from the Government on account of them? Yes.
13. What are the reasons alleged by the Government for refusing to pay these balances? As far as I understand the Commissioner refuses to pay.
14. Have you demanded payment from Government? Yes.
15. And they have refused? Yes.
16. For what reason? He has never assigned a reason to myself, but he told Mr. Bowden, of Messrs. Allen, Bowden, and Allen, that the earthwork claimed for —
17. Who told? Mr. Commissioner Bennett. The earthwork I claimed for was outside the contract.
18. What do you mean by outside the contract? It was not included in the contract. This is what Mr. Bowden told me, and I have been so circumstanced that I have not been able to approach Commissioner Bennett.
19. You say you demanded it from Government;—how did you demand it? I put in a written demand.
20. Have you a copy of that written demand? I have. (*The witness handed in the same. Vide Appendix A 1.*)
21. Had you a reply? Yes. (*The witness handed in the same. Vide Appendix A 2.*)
22. *Chairman.*] Who instructed you to do this work for which you claim now? Overseer Holloway.
23. *Mr. Dangar.*] Then I infer that you have not accepted the tender from the Government direct, but as a sub-contractor? No; I was the original contractor.
24. How came Mr. Holloway to instruct you then? He was the Government overseer of the work.
25. *Chairman.*] What was the additional work that Mr. Holloway instructed you to do? Earthwork—to make up the embankments on the line of formation on contracts 10 and 16. This earthwork, not being provided for in the original tender or specifications, it was supplied in obedience to a pencil line, struck on the longitudinal plans after—perhaps three weeks after—the contracts were entered into. The formation clause of the specification does not provide for any earthwork at all.
26. *Mr. Dangar.*] Do I understand that you took the original contract from Government, and then Mr. Holloway directed you to perform extra work, and that it is for this extra work, ordered by Mr. Holloway, you make the demand, and for nothing that was in the original contract? Yes—this earthwork was substituted for metal work. The formation clause states the formation to be in the solid or made up with metal, and all holes, ruts, or depressions to be filled in with metal ballast or other allowed material—that is obliterated—“extra material for embankment to be obtained from any distance not exceeding yards.” That printed line is also obliterated. I received a written order from Mr. Holloway to reduce the quantity of metal that was in the original specification, and to put this earthwork in the formation; no metal whatever was used in the formation.
27. *Mr. Browne.*] Have you the order to substitute? Yes.
28. Will you put it in and also the original contract? Yes. (*The witness handed in the contract and order. Vide Appendices A 3 and 4.*)
29. *Chairman.*] Have you ever received any order from any other overseer or road superintendent to do any extra work for which you have not been paid? There is the sheathing.
30. Who gave you the order to do that? That for Dangar's Creek Bridge—Mr. Nardin.
31. When? At the time of my ordering the timber from the sawyers.
32. Have you got any written order? No, not for that.
33. Have you never been paid anything for doing that work? Yes, £36 10s. 11d.—and claims £5 7s. 5d. more—and on Liverpool Range sheathing have been paid £80 6s. 3d., leaving £10 0s. 8d. unpaid. I have been paid for 2-inch thickness of timber, and I used 2½-inch with the concurrence, not order, of Mr. Nardin.
34. What is the balance you claim upon that? The difference of thickness between 2 inches and 2½.
35. What does that amount to? £10 0s. 8d.
36. Has Mr. Nardin ever instructed you to do any other work besides the sheathing of this bridge for which you have not been paid? Dangar's Creek Bridge—Mr. Nardin returned the bridge as being sheathed 13 feet wide, whereas it was 15 feet, leaving a strip of 2 feet unreturned. This contained 30 cubic feet 8 inches at 3s. 8d. per foot. That is all the work for which I have received orders from Mr. Nardin.
37. Have you ever received any other orders from any road overseer or road superintendent to do any work which you had not contracted to do? Yes, from Mr. Bailey.
38. What is the nature of the work you have done under his order? I built an extra culvert on contract 3-67.
39. Anything else? No.
40. Did you receive that order from him verbally or by written authority? Verbally.
41. What was the amount due upon that work? £47; and there is a fine inflicted in that work of £21 18s. 8d., making together £69 8s. 8d.
42. Have you done any other work besides that, on the order of Mr. Bailey, at any time, for which you have not been paid? Yes, this is his authority. (*The witness handed in the same. Vide Appendix A 5.*)
43. This is the paper Mr. Bailey gave you? Yes.
44. You received it from him personally? Yes.
45. Have you done any other work under Mr. Bailey for which you have not been paid? That is all.
46. Have you done any other work by order of a road superintendent or overseer for which you have not been paid? Yes—Superintendent Quodling.
47. Have you any written document from him? That was a contract. I have not got the contract here to put in. The contract was for four bridges and a culvert.
48. Were you paid anything at all for that? I was paid the bulk sum of the tender.
49. What is the amount you now claim for extras? £73.
50. What was the nature of the extras you performed? I have not got the papers in connection with this claim—I gave them to Mr. Wallace, the solicitor, and he has been unable to find them. This was in 1865.
51. What was the nature of the work? I substituted a first class for a second class culvert.

52. What was the difference in the amount of the original contract and the work substituted? I cannot give the particulars; Mr. Bennett can supply them from the office, as this amount was carefully estimated by Superintendent Quodling himself. Sills were substituted for piles. The contract was for piles, but we found that the earth was too shallow to hold the piles. Mr. A. Davis.
13 May, 1875.
53. *Mr. Gray.*] The rock was too close to the surface, and you could not drive the piles? Yes, there was not sufficient holding ground.
54. *Mr. Cameron.*] And you substituted wooden sills? Yes; we blasted the rock, and bolted it to the rock. I speak from memory, and I think it was 15s. for blasting the channel and 3s. for removing the earthwork.
55. *Chairman.*] That is all the claim you now have against the Government with respect to works done under the order of Mr. Quodling? Yes; he gave me no written order for this change.
56. It was a verbal agreement? Yes.
57. Have you done any other work for any other officer in the department for which you have not been paid? No, that is all.
58. You have no further claim against the Government than those you have now stated? No.
59. *Mr. Scholey.*] You say that you have had seven contracts with the Government? Yes; seven contracts, on which I claim balances.
60. Is the £716 Os. 5d. the balance of a contract? It is for extra work done outside the contract; that is, the tender or specification does not provide for the work done.
61. You have received the amount for the original contract? No, I have been paid only £1,421 4s. on contract 10, the tender being £1,911 8s. 6d.
62. Then about £500 is due on that amount, and the rest of the amount of £716 Os. 5d. is for extras? No, the difference between what I was paid and the bulk sum of the tender arose from deductions made on the metalling and six culverts.
63. What I want to know is, whether this amount is due for extras or for part of the original contract? This is for extra work.
64. The whole of it? Yes. When I say that there have been other deductions made on the contract—that is, I have not been paid this £1,911 8s. 6d.—there were deductions made and other work substituted. There were 1067.47 cubic yards of metal deducted;—so much less had to be supplied on the work, and this had to be paid for at 5s. 6d. per cube yard. The original contract states that metal shall be filled into the hollows and depressions, but when earth was substituted it enabled us to dispense with the metal that is stated in the original contract to be used in the ruts and hollows to make up the line of the road.
65. Did you allow the Government for using earth instead of stone? The metal that was dispensed with was deducted from my account at the rate of 5s. 6d. per cube yard. I have allowed this deduction.
66. And your claim is what you believe to be right? My claim is just. There was no metal used in making the formation as required in the original tender, and there was a farther deduction from the original contract of six culverts.
67. *Mr. Gray.*] Had you the usual authority for all these alterations? Yes.
68. *Mr. Dangar.*] What was the original amount of the 10 contract? £1,911 8s. 6d.
69. How much have you received off that? £1,421 4s.
70. What extra work have you done under that contract? £532 7s. 9d.
71. Have you received any payment for that extra work? Yes; £84 18s. 6d., leaving £448 1s. still due.
72. You still hold that claim? Yes.
73. Has there been any substitution work done under the original contract No. 10? Yes, this earthwork has been put in.
74. You claim under that? Yes.
75. As an extra claim? Yes.
76. What is the other contract on which you claim? No. 16.
77. What was the original amount of that contract? £1,115 19s.
78. What balance is due on that contract? £267 19s. 5d.
79. That still remains unpaid by Government? Yes.
80. Have you any extra work on 16 contract? That amount was for extra work.
81. Then on each of these contracts you did extra work? Yes.
82. Has No. 16 contract been paid in full? No; I have been paid about £1,114 12s. 6d.
83. What remains? About £267 19s. 5d. There were deductions made from the original contract.
84. Those deductions you agreed to? Yes.
85. What is due to you from the original contract? There is nothing due for work done within the contract.
86. What is due outside the contract No. 16 for extra work? £267 19s. 5d.
87. Do I understand that all your claims are embraced in these two contracts, Nos. 10 and 16, for extra work performed outside of them? No, there is the sheathing, and these that I consider old claims for work done under Mr. Nardin, Mr. Bailey, and Mr. Quodling.
88. That is your claim against the Government? Yes.
89. Reverting to your petition;—what do you mean when you say that “work is now withheld from your petitioner, thereby depriving him of his ordinary means of livelihood, and rendering his costly working plant useless”? They have refused to consider my tenders.
90. By whom was that work withheld—by the Government? By the Government.
91. Upon what grounds? They are stated in the letters I now hand in. (*The witness handed in the same. Vide Appendices A 6, 7, and 8.*)
92. In your second paragraph you say you have been “denied facilities of tendering for works”;—what does that mean? I allude to the letters which I have just handed in.
93. By whom were you denied facilities for tendering? The Government.
94. Then you go on to say: “And that there is now being unjustly detained from your Petitioner large sums of money for work actually performed, for no other apparent reason than to coerce your Petitioner”;—what do you mean by the word “coerce” here? At the time of that petition, Mr. Bennett acknowledged to be due to me something over £600, and he detained that in his hands until the 25th March last.
95. Did you receive any representation from Government that seemed to you to warrant the words used in this petition, that you were coerced;—did the Government ask you to take a less sum than was owing? Yes, Mr. Bennett offered this amount on condition of my signing the final voucher upon the receipt of £384 Os. 7d. He has since paid £637.

Mr. A. Davies. 96. After signing that final receipt? No; I signed nothing at all. The Bank authorities signed in the usual manner. I had given an order on the commencement of the contract 10, 16, 17-72 to pay—as we are entitled by the general condition—"Pay all moneys due on account of contracts to my credit in the Bank of New South Wales, Tamworth." Such order was never withdrawn. When this difficulty arose I pointed out the better way was open for paying me, but I should sign only ordinary receipts.

13 May, 1875.

97. In the third paragraph you say you have been "restrained from legal remedy by the officers of the Road Department"? Yes; I will put in Mr. Abbott's statement of the case, and Mr. Butler's opinion. (*The witness handed in the same. Vide Appendix A 9.*)

98. Will you state what reason was alleged by the Government for not making these payments—Did they say they were not indebted, or that you had performed your work badly? The Commissioner's position, as far as I understood it, was, that the payment of 2s. 6d. per lineal yard of formation was ample remuneration for the work as done.

99. That was the sole reason he assigned for non-payment? Yes.

100. That could not have applied to your contract if you had an amount specified in the contract? That is the only reason he has assigned for it.

101. Mr. Browne.] In connection with contract 16, did you receive the whole amount upon the original contract, as tendered by you? No.

102. Do you say that you did not receive £15 due to you upon the contract No. 16? Yes; but I did receive £14 12s. 6d. for extra quantity of stone in culverts, being the amount of receipts on contract 16 to £1,114 12s. 6d., leaving a balance due of £267 19s. 5d. on that contract.

WEDNESDAY, 19 MAY, 1875.

Present:—

MR. JACOB, | MR. SCHOLEY.
H. BENNETT, ESQ., IN THE CHAIR.

Mr. Amos Davies further examined:—

Mr. A. Davies. 103. Chairman.] Are you prepared to place any further evidence before the Committee in support of the allegations of your petition? At the last meeting of the Committee I fear I did not present my case so clearly as I could have desired, and I would therefore beg permission to make a continuous and detailed statement of the contracts out of which my claim arose. About the year 1863 I was first employed by Government in the erection of a bridge over Goonoo Goonoo Creek, South Tamworth. Immediately after the completion of that bridge the floods of 1864 occurred, taking away the old Goonoo Goonoo Bridge over the North Creek, situated about a hundred yards from the bridge I had recently erected. The Commissioner for Roads telegraphed to Mr. Superintendent Bailey to inquire if I was still in Tamworth, and if so he was to engage me to re-erect the bridge that had been swept away, at the same schedule of prices as that for the work I had just completed. Mr. Bailey telegraphed to me to meet him at Tamworth. I did so, and the agreement I have produced was the result. (*Vide Appendix A 5.*) We at once marked out the site of the bridge, the length of the approaches, and I proceeded to its erection. After the woodwork of the bridge was finished, the metal and ballast was coming on the approaches—Mr. Boyd, the overseer, had measured the stone and ballasting metal,—when Mr. Bailey remarked about the great expense of the bridge, and stated that he was getting metal broken on the Moonboys at 9s. per cube yard, and that I ought to reduce my rate of metal to 9s. My schedule price for previous work had been 20s., and I therefore objected to do this. Some months after I visited Sydney, and found on inquiry that the balance due on the work had not been paid. I asked to know the amount and when it would be paid, and on looking over the items I found that the price for metal had been reduced from 20s. to 9s. per cube yard, the ballast from 15s. to 4s. 6d., and that I had been fined £5 for one week over time,—making a difference in the total amount to be received by me of £93 10s. 8d. I complained bitterly of the injustice I felt I was suffering, to Mr. Commissioner Bennett, but failed to obtain the amount. During this visit to Sydney I tendered for four bridges and a culvert at Wallabadah Gap, the Government schedule of quantities being attached to the specification which was adopted by me in my tender. The culvert in the specification was a second-class culvert. My tender was accepted, and I proceeded to carry out the work under Superintendent Quodling. Mr. Quodling substituted a first-class culvert on the site where one of the second-class was intended to be, furnishing me with a plan from his own office. On completion of the contract, Mr. Quodling carefully went through the measurements of the quantities actually used, the result being that, allowing for the increased price of the culvert, if my memory serves me rightly, £30, excavating rock for sills, and earth excavation, bolting sills to rock, and deducting the schedule for piles which were originally intended—the amount of work performed by me exceeded the original amount of my tender by £73. Mr. Quodling furnished the particulars of these measurements, of which I retained a copy, but having subsequently placed them in the hands of my solicitor, Mr. Wallace, they were mislaid by him, and I am therefore unable to produce them. This amount of £73 the Government have refused to pay. They paid only the bulk sum of my tender, which amounted to £823 16s., notwithstanding that there was the usual condition in the tender for additions or reductions. About the latter part of 1867 I undertook the contract known in the Department as 3-67, for the sum of £1,096 15s. 6d. Extra metal was supplied to the value of £111 3s. 4d., and an extra culvert was erected on this work, ordered by Mr. Bailey, in the presence of Mr. George Crawford. For this extra culvert I have been refused payment and am still. In addition to this I was charged with fines to the amount of £21 18s. 8d.; so that there was a deduction of £69 8s. 8d. from the amount I should have received upon this contract. The fines were, as I believed, improperly deducted, as some delay took place in getting the bonds signed, they having to be sent to bondsmen in Denison Town, where I had recently erected a bridge, and Mr. Bailey refused to recognize me as a contractor until the said bonds were received. I was therefore prevented from proceeding with the work. From the date of his recognition to the completion of the work the contract time was not exceeded although the extra work required was done within that period. About this time a disagreement arose between the Commissioner and myself in connection with the purchase of some timber at Cox's Creek, on which he first suspended me from work. Reference to this circumstance is made

in the Commissioner's letter of 11th February, 1869. The next item, I believe to be a mistaken measurement; it is the sheathing of Dangar's bridge, returned as 13 feet wide, whereas the actual width is 15 feet; making a difference in the amount of £5 7s. 5d. In August, 1872, three contracts were given me, known as contracts 10, 16, and 17-72. On two of these, 10 and 16, there was a dispute. On the first contract, 10, I supplied 4,476 cubic yards of earthwork, not required by the original specification, in raising the road. For this work I charged 1s. 3d. per cube yard, making £279 15s. On the same contract I substituted, at the instance of overseer Holloway, cube ashlar work instead of rubble. For this difference of work I charged 25s. 3d. per cube yard, making £162 17s. 3d., total not included in the original contract, £442 12s. 3d. The supply of the earthwork referred to resulted in a saving of 1,066 cubic yards of metal at 5s. 6d. per yard, equal to £293 3s. Difference in favour of making up earthwork in formation, £13 8s. The construction of these embankments also had the effect of diverting the water to fewer openings and thereby of reducing the number of culverts to four instead of ten, and three pipe drains, which involved a deduction of £280. The deductions therefore from the original contract amounted to £574 11s. 3d., leaving upon the original contract £1,336, to which should be added £83 18s. 6d. for extras allowed by the Government, and the £442 12s. 3d., making the total due to me according to this statement of £1,863 8s. Of this I have received £1,421 4s., leaving a balance due to me of £442 4s., which the Government have refused to pay. On contract 16, the tender for which was £1,115 19s. deductions were made on this by authority of Mr. Holloway (*Vide Appendix 4*): Metal to the value of £59 7s. and admitted additions, £43 8s. 8d., showing a nett deduction of £15 19s. There has also since been admitted as extras £14 12s. 6d., making a total of £1,114 12s. 6d. The whole amount of this I have received. But besides this work I supplied 1,468 cubic yards of earth in raising the roadway, at 1s. 3d. a cubic yard, £91 15s., and substituted in this work also ashlar instead of rubble, for which I claim £126 11s. 5d. There were other items to the amount of £9 13s. I also claim £40, there being a schedule price in my accepted tender of £20 per month, and I maintained the work for two months in accordance with the specification. The total value of work done on this contract is £1,382 11s. 11d., and I have received £1,114 12s. 6d.; balance therefore is left to me of £267 19s. 5d., which the Government have refused to pay me. The extra work to which I have just referred was performed by me in accordance with instructions received by me from Mr. Holloway, and I may add that Mr. Holloway during the last week went before the Secretary for Public Works and acknowledged that he authorized the doing of this earthwork, and the substitution of ashlar for rubble. Another item, for which I remain unpaid, is £10 0s. 8d. for sheathing three bridges on Liverpool Range, Doughboy Hollow. This work was originally specified as 2 inch sheathing. With the concurrence of Mr. Nardin I increased the thickness to 2½ inches, thus adding one-eighth to the original amount. I beg also to hand in a tabulated statement of my claim (*Vide Appendix A 10*); also details of measurement of earthwork and the trade difference between rubble and ashlar work in connection with contract 10-72. (*Vide Appendix A 11*.) I also hand in final certificate for contract 16-72, detailed statement of earthwork and trade difference between rubble and ashlar work. (*Vide Appendix A 12*.) I also hand in final certificates for replacing Goonoo Goonoo Bridge, for contract 8-64, for 3-67, for Dangar's Creek Bridge, and for three bridges, Liverpool Range. (*Vide Appendices A 13, 14, 15, 16, and 17*.) I should wish to add that I have no ill-feeling whatever against any officers of the Department, and my confidence in the Department is shown by my large expenditure of money in the purchase of plant for carrying on the public works of the Colony.

104. Have you any further evidence to offer to-day? I wish, in order to show the efforts I have made to obtain certificates, to put in the following correspondence: The first is a letter addressed by me to Mr. Nardin, dated 27th December, 1873 (*Vide Appendix A 18*), and his reply thereto. (*Vide Appendix A 19*.) Also a letter to Mr. Donnelly. (*Vide Appendix A 20*.) To the last letter I received no reply.

105. You did not receive any certificate in reply to that letter? I have not received any certificate at all. Mr. Nardin said he always forwarded the certificates to the head office. Mr. Donnelly never replied. I also beg to hand in the telegram, to which I have referred in my statement, from Mr. A. C. Bayley. (*Vide Appendix A 21*.) A copy of schedule of prices for bridge over Goonoo Goonoo Creek, Tamworth, as per tender. (*Vide Appendix A 22*.) An order from Mr. Boyd with reference to the level of the bridge. (*Vide Appendix A 23*.) And also an order from Mr. Boyd that no border stones are required on the approaches to the bridge. (*Vide Appendix A 24*.)

106. *Mr. Scholey.*] Am I to understand that the whole of your claims against the Government are contained in the statements you have handed in, and that they amount to £967 7s. 10d.? Yes.

107. You are sure this is correct? Yes.

108. *Mr. Jacob.*] This tabular statement which you have handed in shows various balances due to you from time to time? Yes.

109. As each of these balances became due did you apply for payment? I did.

110. During the ten years over which these items extend was there any attempt made at an adjustment with the Government? Yes; the only reason assigned was, as I have stated, that Mr. Bayley asked me to reduce the amount.

111. For instance there is a balance of £93 10s. 8d. due to you as the first item? Yes.

112. How was it that it was not settled;—did you apply for it? Yes. The only reason I can give is the one I have stated.

113. It was not settled? It was not settled.

114. Still you went on contracting with the Government? Yes.

115. Under various other contracts other sums became due? Yes.

116. As they became due did you not endeavour to get a settlement with the Government? Yes.

117. And you could not get it? No.

118. Still you went on undertaking other contracts. Had you any hope that your claims would ultimately be allowed? Yes, in the case of Bowling Alley Point, work done in 1869 was not paid for until 1874.

119. Did the Government hold out any hope that they would settle these balances, or did they deny that they were due to you? Mr. Commissioner Bennett wrote me that he had received a report from Mr. Bayley that the approaches were not included in the engagement at schedule prices for Goonoo Goonoo Bridge South.

120. And therefore that this balance was not due to you? Yes.

121. Then you still disputed that with them and went on contracting for other work? Yes.

122. Then comes the item of £73. Did the Government dispute owing you that money? I will tell you how that occurred: The tender is for £823 16s. The final payment on that work was in abeyance some months

- Mr. A. Davies. months till the Commissioner visited the place. He inquired about how the difference arose between my claim and the bulk sum, and if I had not tendered for the work at a bulk sum.
- 19 May, 1875. 123. He wanted to know if you had not done so? Yes. I replied that the usual clause of increase and decrease was attached to the tender, and that I expected to be paid for this increase at the schedule of quantities; that the quantities exceeded the schedule in the total.
124. Did he admit that? He admitted that it did.
125. Did he ultimately admit that this £73 was due to you from the Government? No. He said I should only be paid the bulk sum of the tender.
126. Then, in fact, the Government did dispute this sum, and denied owing it to you? Yes.
127. In what way has this denial been made—in correspondence or verbally? Verbally as to this transaction with respect to the bridge, on the occasion when he visited it on its completion.
128. Has he always visited your work after its completion? Usually.
129. Then you have submitted your claims, and they have been refused in every instance? Yes.
130. In the last allegation of your petition you say: "That your Petitioner is restrained from legal remedy by the officers of the Roads Department unjustly withholding your Petitioner's certificates for the several works completed." How come you to make such a serious assertion; what grounds have you for saying that they unjustly withhold from you your certificates? I have handed in Mr. Nardin's refusal.
131. He may refuse feeling justified in doing so; you say they are unjustly withheld? On the previous day I handed in Mr. Butler's opinion.
132. Why do you believe that you are entitled to these certificates? Because the work is done under the usual authority.
133. Has it been customary to furnish you with this certificate? No, I never obtained any.
134. Why then do you think you are entitled to it, so much as to justify your making the severe assertion in the petition? Because in clause 15 of the general conditions, attached to the contract, to which I have subscribed, it states that the obtaining of a certificate shall be a condition precedent to the contractor having any claim or cause of action.
135. Therefore you endeavoured to obtain this necessary certificate? Yes.
136. Was it refused to you? Yes.
137. It is upon that you maintain your complaint—that the certificates are unjustly withheld from you? Yes.
138. You have been advised that you could not take legal proceedings against the Government without these certificates? Yes; Mr. Butler states in his opinion that the certificates being sent in to the department does not meet the case, when it is definitely stated that the contractor and not the department shall obtain the certificate.
139. You have had legal advice that you could not successfully take legal steps against the Government without these certificates? Yes.
140. If you had obtained those certificates you would have resorted to law instead of applying to Parliament by petition? Yes.

TUESDAY, 26 MAY, 1875.

Present:—

MR. W. C. BROWNE, | MR. T. G. DANGAR,
MR. SCHOLEY.

H. BENNETT, ESQ., IN THE CHAIR.

Mr. George Holloway examined:—

- Mr. G. Holloway. 141. *Chairman.* What position have you occupied under the Department of Works? Road overseer and road superintendent.
- 26 May, 1875. 142. On the northern line? Yes; and also on the western.
143. Do you know Mr. Amos Davies, the petitioner? Yes.
144. Had he any contracts on the northern line while you had the supervision of it? Yes.
145. Did you ever order him to do any extra work on any portions of that line of road, to any contracts he had accepted? No, I did not, that I am aware of.*
146. Did he ever do any extra work in addition to any accepted tender? He may have done, but he has not been authorized by me.†
147. Did you ever authorize him to do any work on the line for which he had not contracted? Yes.
148. What was the nature of the work? Small tasks I have let to Mr. Davies.
149. Can you tell us the nature of the works you have let to him—that you have instructed him to perform? The repair of bridges at Doughboy Hollow, and sundry other little jobs—such as repairs to culverts—small jobs.
150. And those works which you called upon him to do were necessary? Yes.
151. Have you any authority or power, in your position as road superintendent, to instruct contractors to do this kind of emergency work? I had the power to order small works that I saw required to be done, such as necessary repairs, without receiving written instructions, but no large contract.
152. Were you aware that Davies had to build a first-class culvert at any point on the northern line, instead of a second-class culvert, according to the contract? No.
153. There was no such change made? Not that I am aware.
154. You are not aware of any change in the class of culvert? I do not know that while I was overseer a first-class was substituted for a second-class culvert.
155. Do you know of any ashlar work being substituted for rubble? Yes; on 10-72 ashlar was used instead of rubble; rubble was specified—ashlar was used.
156. Do you know of any extra earthwork being substituted for other work in the specification? There were some heavy banks made in 10-72 and 16-72. 157.

* NOTE (on revision):—On taxing my memory I find I did—to the amount of about £3—in a contract between 10 and 16-72.

† NOTE (on revision):—I find he did, in a contract between 10 and 16-72—amount about £3.

157. Was that earthwork provided for in Mr. Davies's tender? The banks were not actually specified; the word used was "forming" or "formation."

158. But he did supply these earthworks? Yes, a large amount of earthwork in banks.

159. In addition to what was in the specification and contracts in this contract 10-72? There was a large amount of earthwork there. There was no earthwork specified in the banks; it was merely formation.

160. But he did supply a large number of yards of this earthwork in excess of what was in the specification? I believe he did; there was no bank specified at all.

161. For any of these extra emergency works that Mr. Davies performed did you send vouchers to the Department? Yes, for certain works that were finished—for any small jobs; but they extend over some years.

162. Then I am to understand that you did authorize Mr. Davies to do this additional earthwork? I did not.

163. Who did? I am not aware. The section was provided him. I took a section, and the lines and grades were given him to work by. I was authorized to take the section by my superior officer, Mr. Nardin.

164. Did you authorize Mr. Davies to do any work on any other portion of the road you had the supervision of, besides the length of road between Murrurundi and Tamworth? There was a taskwork between Tamworth and Manila, but I think he had authority from Mr. Nardin to do this.

165. *Mr. Scholey.*] Do you know that? I do not; he did not get any authority from me.

166. *Chairman.*] To return to the other line of road;—with regard to this earthwork, was this returned for by you? No, it was not.

167. Then you have no knowledge whether it was returned for by anyone else of course? No.

168. That portion of road between Murrurundi and Tamworth was the only portion under your supervision on which you ever instructed Mr. Davies to do any work? Yes.

169. For all the works you have instructed him to do you have returned? Yes, for any small job previous to this 10-72 and 16-72.

170. Did you not receive some new plans from the Department, and at the same time instructions that this necessary earthwork should be performed by Mr. Davies? I made the section myself—there were no plans besides what I drew myself.

171. Did you return these plans to the Department when you returned for the work? No I did not return for anything on that job; I left before it was done.

172. Who succeeded you in that work? Mr. Dowling was there afterwards, but I do not know whether he had the supervision of that work or not.

173. Was it under you that Mr. Davies agreed to sheath the bridges and place the culverts between Doughboy Hollow and the Willow-tree? Yes.*

174. What was the substance of the timber agreed upon between you and him? Any bad planks in the bridges were to be taken up and fresh ones put in with 4-inch stuff, and portions of the handrail that were rotten were to be taken out and replaced with new.

175. Was there any specified thickness? Yes, the top rail 4 by 4; the centre rail 3 by 3; and the planking 4 inches thick.

176. Only 4? Yes.

177. Did you not give any further order with regard to the thickness of the planking—that it was to be more than 4 inches? No, I think not; the work had not been started when I left the district.†

178. Have you travelled over these culverts and bridges at any time? When I came from Gunnedah I believe I did, but it was at night.

179. You had not an opportunity of seeing whether he had put thicker planking? No, I had not.

180. You do not know of your own knowledge whether he had or not? No.

181. You are not aware that Mr. Davies has been paid for these extra works that you instructed him to perform? Do you refer to the culverts in Doughboy Hollow?

182. Or to any other work. Was he ever paid for any additional work, such as sheathing the culverts and bridges? I am not aware that the culverts and bridges were paid for, for they were not started when I left the district.

183. Where there any other? There may have been some small jobs. I am not sure whether he was paid for them, but it is so many years ago I cannot say. If they were paid I paid them. That is, Mr. Nardin paid them by cheque through me.

184. How many years have you known Mr. Davies as a contractor at work under the Department? Between six and seven years I think.

185. Has he always done his work in a workmanlike manner—were you satisfied with the manner in which he performed his work? Yes.

186. *Mr. Scholey.*] I suppose you are supported by the Government? Yes, by Mr. Bennett.

187. That is your authority? Yes.

188. You say at the commencement you did not ask Mr. Davies to do any extra work? That referred to contract 10-72 and 16-72. The work was only half completed when I was there.

189. You say you had only a few small jobs? Yes, during that time.

190. What do you think would be the value of them? They varied.

191. Could you give an idea? I really could not. There were little jobs—such as a culvert washed away in time of flood; this had to be repaired and covered with stone.

192. Would it amount to £20—more or less? I dare say it would be likely to be about that—probably rather more than less.

193. Will you try to tax you memory;—would it be anything like £207 11s. 9d.? No.

194. If it has been stated before this Committee that the extra work was performed by Mr. Davies, and ordered by Mr. Holloway, on any contract—is that correct? It is not.

195. Could you give any idea what the extras would amount to? Do you mean the extras connected with the 10-72 and 16-72, and all the small jobs?

196.

* NOTE (on revision):—I must have misunderstood this question. There was no sheathing in the task I let Davies; the task for sheathing was let to him after the other was completed, and was started after I left the district.

† NOTE (on revision):—The task I let to Davies was to repair the bridges in Doughboy Hollow with 4-inch planking; no alteration in thickness was made; after its completion another task was let by Mr. Nardin for sheathing; this was not started when I left.

- Mr. G. Holloway.
26 May, 1875.
196. The whole of the works you ordered? I dare say about £20 would cover all the small jobs I let him, extending over the time I was in charge.
197. Do you include the earthwork? No, that is irrespective of these two contracts.
198. What would be the extras on the line between Tamworth and Murrurundi—supplying the extra earthwork? I could not answer—I never measured it. The work was not completed when I left.
199. Could you have any idea by looking at the plans? I could not say whether the work was carried out according to the plan.
200. Supposing it were, what would be the extra work? I really could not say.
201. I will take you back again to what I asked you: If it has been stated that the extra work ordered by you amounted to £207 11s. 9d., is that true? It is not.
202. *Mr. Dangar.*] How long were you engaged in superintending the Northern Road? About three years.
203. For what period? From about the year 1869 to 1873.
204. How many contracts had Mr. Davies from the Government during the time you had charge of the road? About five, I think.
205. Among which were those two contracts? Yes; 10-72 and 16-72.
206. Were they completed during your superintendence? No; only partially completed.
207. What extra work did you give Mr. Davies during the time outside these contracts while you had charge of these roads? In a contract near the wire fences we put extra sills in a second-class culvert. I think I gave him £3 extra for that, to raise the culvert the proper height. There was also another culvert in the place called Sugarloaf Gap; the sills were giving way, and I had it blocked up at a cost of £1. There were also several little jobs between there and Murrurundi.
208. Were these paid for by you? Yes; except that at Sugarloaf Gap; that was not paid by me; whether it was paid after I cannot say.
209. All the extra work you gave him you paid him for? Yes, I believe I did.
210. Had you authority from the head department to give him extra work? In times of flood, if I saw a culvert dangerous, I had authority.
211. I am alluding to work given by you to Mr. Davies? I had authority, if I saw a culvert dangerous, to give orders for its repair without writing to the head office, to save delay—small jobs amounting to a few pounds.
212. It was not necessary to obtain the sanction of the Commissioner in such cases? No.
213. *Chairman.*] Did you and Mr. Davies agree at the time as to the prices for this extra work, exclusive of the earthwork you have mentioned? Yes; I believe we did. In some cases it was task; for instance, that work at Doughboy Hollow was on the task-book, and signed by Mr. Davies; that was a final agreement.
214. For these other extra jobs did you agree? Yes; for small jobs; sometimes a mere matter of a pound.
215. You state that you paid Davies for these minor works? Yes; excepting for that in Doughboy Hollow; that was not started when I left.*
216. I allude more to items 3 and 1? There was one item at the wire fences that was put as an extra in the I form; it was paid in the final payment at the winding up, by cheques from Mr. Nardin, which were paid through me to Mr. Davies.
217. Where are these plans now? I do not know.
218. Did you forward them to the Department? No; I believe they were left in the hands of Mr. Davies.
219. Did you superintend the work at Dangar's Creek Bridge? No; I never saw that; that was below my district.

WEDNESDAY, 2 JUNE, 1875.

Present:—

Mr. CAMERON,	|	Mr. LACKY,
Mr. T. G. DANGAR,	|	Mr. MACINTOSH.

H. BENNETT, Esq., IN THE CHAIR.

William Christopher Bennett, Esq., called in and examined:—

- W.C. Bennett, Esq.
2 June, 1875.
220. *Chairman.*] You are Commissioner and Engineer for Roads? I am.
221. Since the adjournment of the Committee have you directed your attention to the evidence given by Mr. Davies before this Committee, and the Appendices to that evidence? I have.
222. Have you paid any portion of the account stated in Appendix A 1; and, if so, to what amount? There are two statements of account, and the difference between the two schedules A 1 and A 10 will show what has been paid.
223. Can you now concur in the payment of any of these amounts or portions of the amounts stated in Appendix A 10? No, I cannot recommend the payment of any amount where no certificate has been received by me from any local officer for the payment of that amount.
224. Did you, in February, 1864, authorize Mr. Superintendent Bailey to let to Mr. Amos Davies the construction of a bridge and approaches over Goonoo Goonoo Creek, north of Tamworth? No; I authorized Mr. Bailey to let the construction of a bridge only, which was let according to a statement put in by Mr. Davies.
225. Was the same schedule of prices he had been paid for bridges over the south branch of the creek adopted? For the bridge only.
226. Was Mr. Davies paid for all the work under the same schedule of prices—for the second as for the first bridge? Yes, for all the work contained in his agreement.
227. What were the exceptions? The approaches.
228. Why were the ballast and metal not paid for on the same schedule of prices for the second as for the first? Because they were not included in the agreement. The agreement says, "for erecting a bridge over Goonoo

* NOTE (on revision):—This refers to the task for sheathing—not to the task for the supply of 4-inch planking.

Goonoo Creek," and because the road superintendent reported to me that Davies was advised before he commenced the work that he would get only current rates, as the prices for the other bridge at Tamworth were excessive. If I may be allowed to read a statement I have prepared, I think the matter will be more clearly understood by the Committee. I have read all Mr. Davies's assertions and have replied to them in detail. The facts as far as I know are, Mr. Davies signed an agreement to do the second bridge over Goonoo Goonoo Creek in lieu of that carried away, at the same rates as the first bridge. The signed agreement does not include approaches, the prices for which were more than the usual rates. During the progress of the work on 29th March, 1864, Mr. Bayley told Mr. Davies that he would give him the current rates, 9s. per cubic yard for metal, and 4s. 6d. for ballast; he also informed Mr. Boyd, the overseer, of the same. I now hold Mr. Boyd's letter, corroborating the statement which I beg to hand in. (*Vide Appendix B 1.*) Mr. Bayley on a subsequent occasion told Davies that he proceeded with this work on his own responsibility, and it is clear that though there was no agreement in writing Mr. Davies was verbally advised, and still proceeded with the work. I hold that his doing so was a tacit assent to Mr. Bayley's price, which Mr. Statham reported "though the price ruling at the time the work was done" to be excessive at the date of his report. I beg to hand in a letter from Mr. Amos Davies, stating that he was prepared to sign the usual receipt on being paid the amount certified (*Vide Appendix B 2*); also a letter from Mr. Davies, stating his abandonment of all claims on account of the Goonoo Goonoo approaches. (*Vide Appendix B 3.*) I also hand in Mr. Statham's report. He was an entirely disinterested officer, who was sent up there to relieve Mr. Bayley. He became ill from brain fever, but the report was written previous to his illness. (*Vide Appendix B 4.*)

229. Was Mr. Davies paid £5 on this work; if so, why? I have no recollection of that.

230. After the work was completed did Davies claim to be paid at the same schedule of prices as for his first work? Yes.

231. Why was he not paid? Because Mr. Bayley did not certify to it.

232. Have you any documentary evidence to show that Davies concurred in the deductions made on the metal and ballast on this second work; if so will you produce it, and also the tender and specifications for the first work? I cannot produce the tender and specification for the first work; I cannot find them in the office; it is ten years since the thing occurred—possibly Mr. Davies has a copy of them. But with reference to the first part of your question, as to documentary evidence of Davies's concurrence in the price, I have no documentary evidence from him; but I have Mr. Bayley's statement, corroborated by the letter of Mr. Boyd I have put in. I have nothing from Mr. Davies, except that he went on with his work after, as both these men say, he was told the price would be so and so.

233. Was Davies known as the contractor for S-64, being for the construction of four bridges and culverts in Wallabadah Gap? Yes, Davies was the contractor for that.

234. What was the bulk sum of the accepted tender? £823 16s.

235. How much has been paid on that contract? From the admission of Davies there has been paid £823 16s.

236. Was there in this contract the usual condition: "And do hereby agree that any addition, deduction, or alteration shall be valued at the following rates, or at a price to be agreed upon at the time, and added to or deducted from the above amount, as the case may be"? Yes, in the general conditions. May I add that there was a clause also to this effect: "The contractor to satisfy himself of the nature of the material and quantity, as the Commissioner will not hold himself responsible for either." That is a special written clause in the specification. And there is also clause 13 in the printed general conditions: "As this contract is for the entire completion of bridges and road, except ballasting and metalling, it is to be expressly understood that all bolts, screws, rivets, washers, keys, pins, spikes, and all minor parts which may not be shown on the drawings or mentioned in the specification, but which may reasonably and obviously be considered requisite for the proper completion of the work, are to be provided by the contractor and included in his tender."

237. Had Mr. Superintendent Quodling the authority to make any necessary additions, deductions, or alterations, found advisable to carry out this work? Officers in Mr. Quodling's position generally have. I have searched, but cannot find any special authority for Mr. Quodling. I should like to add alterations, not of material importance—not large alterations.

238. Is this power to make alterations usually exercised by road superintendents? Not without consulting me.

239. If alterations were made in the work done, why was not a corresponding alteration made in the amount paid? I cannot tell you why in that particular case; I have not written to or asked Mr. Quodling for any explanation. There is no written statement by Mr. Quodling whether those alterations were made, or, if so, why; but Mr. Quodling is at Murrurundi, and can be examined by the Committee. I have no doubt he will be able to give a good explanation, for he is a very accurate officer.

240. Will you be good enough to furnish to the Committee Mr. Davies's tender and Mr. Quodling's full report of the measurement made and the work done? (*Vide Appendix B 5.*) I cannot trace Mr. Quodling's final I form, but I have the payments on account of the work referred to. (*Vide Appendix B 6.*)

241. Did Mr. Davies claim additional payment after finishing this work? Not to my knowledge. I have no application of Davies's at all near this period for this; cannot trace any reference to it in the correspondence or reports of the officers of that date. It is evident the question was never raised until the claims under contracts 10 and 16 were made, or the department could not have allowed Davies to resume work unless this claim were withdrawn with the others mentioned in letter of 11 September, 1870. Mr. Quodling certified for a certain amount, which was paid without question by this officer. I do not recollect the circumstance of any change. Mr. Quodling is now in the Railway Department at Murrurundi, and could be examined if necessary. There was in this contract a written clause: "The contractor to satisfy himself of the nature of the material and the quantity, as the Commissioner will not hold himself responsible for either." Mr. Davies's schedule rates have no quantities worked out; he tendered a bulk sum and there does not appear to have been any Government schedule with which to compare Mr. Quodling's quantities, but no doubt the question was gone into at the time and settled. We have Davies's own signature to the vouchers as in full of all demands. I fail to see why Mr. Quodling would not have returned for any money due to Davies. There is a question arises in this case to which I would like to draw the attention of the Committee. I refer to A. 14, where an error occurs in the name of the overseer, which is printed "Bevols;" it should be Boyd; Mr. Boyd never did sign either of those documents A. 14 or A. 11, certifying to their correctness.

W. C. Bennett,
Esq.
2 June, 1875.

- W.C. Bennett, Esq.
2 June, 1875.
242. *Mr. Lackey.*] Did Mr. Boyd not sign these? Never. A 11, which is perhaps the more important, and A 12, the forms are printed as if signed by Mr. Nardin, the road superintendent, but Mr. Nardin has not signed them, for if he had there would be no occasion for this Committee, for here he is made to certify to the disputed items. Might I ask for the production of the original documents. (*The original papers were referred to.*) I find that the disputed items are here written in red ink, but no such distinction is shown in the document as printed, and it is therefore calculated to mislead the Committee.
243. *Chairman.*] Have you any more papers to hand in with regard to the matter of the Wallabadah and Goonoo Goonoo bridges under the superintendence of Mr. Quodling? No, except the papers you have asked me for.
244. In the year 1867 was Mr. Davies's tender for £1,096 15s. 6d. accepted for contract 3-67, Sugarloaf Gap? Yes, it was accepted.
245. Are you aware that only two first-class culverts were specified, but that three were supplied? No, I could not trace anything with reference to that on the papers, and I have telegraphed to Mr. Bayley for an explanation, but have not received his reply.
246. Was the length of road embraced by this contract pegged out and cleared some years before this contract was accepted? Yes, I believe it was.
247. Are you aware that Mr. Superintendent Bayley diverted the new road from the cleared line, thereby rendering this extra culvert necessary? I am not particularly aware; he may have found the ground more uneven, and have found it necessary in order to improve it to make a slight diversion.
248. At the time of its completion did Mr. Davies claim payment for this extra culvert? I have no knowledge of it, and can trace no application. He made no claim to me. At the same time I beg the Committee to consider that it is eight years ago, and I am dealing with hundreds, perhaps thousands, of such cases every year.
249. Was Davies paid for this extra culvert? I have no idea that it existed; he may or may not have been paid for it under some other name.*
250. In the memo. on Appendix A 15 Mr. Davies states: "From date of payment to date of final voucher is only four months and five days; the contract time was five months, which time would be extended by the extra work being done. A fine of £21 18s. was hereon imposed; its remission is now sought." Is this memorandum true? No. The specification distinctly states that the time is to be five months from the date of the acceptance of the tender. The date of the acceptance of the tender was the 9th May, 1867; the date of the final measurement was 17th January, 1868,—which was eight months and seven days, which was more than 50 per cent. over the specified time; the amount of extra work was only 10 per cent.
251. What do you say was the time over and above the contract time? Three months and seven days.
252. Do you not consider that the delay in making first and subsequent payments materially retards the contractors in carrying out their work, and affords to them a reasonable ground for extension of time, if required by them? I have no knowledge if that delay existed or not. I know no possible delay is allowed to exist; every nerve is strained to pay the men promptly; in fact we advise the road superintendents by telegram when the payments are ready. Those officers have a large extent of country to attend to; but they do everything in their power to comply with the terms of the contract.
253. Do you know of any just ground why this fine of £21 18s. 8d. should not be remitted, and the amount paid to Davies? I do not see why this matter, disposed of eight years ago, should be ripped up again. The law itself does not allow of such claims—it is beyond the Statute of Limitations. We were constantly harassed by these applications, and feeling that Mr. Davies's complaints were becoming chronic, we were obliged to disregard them altogether. If fines were to be remitted it would become impossible to depend upon contractors to carry out their works; in fact, of late we have given up putting fines in the contracts.
254. Did you, after the completion of this contract, receive on behalf of Mr. Davies any communication from Solicitor Wallace, of Tamworth, respecting the balance claimed on this? We received a communication from Mr. Wallace, the solicitor, of Tamworth.
255. As also for Goonoo Goonoo Bridge, and the metal and ballast for work done on four bridges and culverts on the Wallabadah Gap? I do not know that the work was specially set forth in the communication, but we did receive such a communication.
256. Will you produce the same? Yes. (*Vide Appendix B 7.*)
257. Did Davies ever obtain the certificates of the three preceding mentioned works? The certificates were all sent in, in the usual course, for all the work done, to the office, and those sent to the office were paid.
258. I want to know whether you can say, from your knowledge, Davies received any of these certificates? He never asked for them.
259. You do not know whether he ever did receive them? I think in all probability before the certificates were sent in the whole thing was gone into by the road superintendent with the contractor on the spot, and the certificate sent in was the result of that. We do not usually give certificates to contractors.
260. You do not know of your own knowledge that he did obtain these certificates? No; in fact I might say absolutely I know he did not.
261. You have refused to pay Davies the amount he has claimed? I never refused to pay Davies anything that was certified by any of our officers; of course I refused to pay what he claimed, unless authenticated by the certificate of an officer.
262. Did Mr. Davies in 1870 send to you a letter agreeing to suspend legal proceedings pending your consideration of his claim? No. I think the letter must be that which is withdrawing all claim, which is about that time. There may be such a letter. I will search for it. I know our reply to Mr. Wallace was that we had receipts from Mr. Davies for all the amounts due to him.
263. Did you afterwards devote to Mr. Statham the duty of considering such claim? Yes. I told Mr. Statham to inquire into his claims, and I have put in his report with reference to one of them. There were several claims of Davies's inquired into by Mr. Statham, some three or four, and on his recommendation some two or three were conceded. I did not trouble the Committee with those but only with the
extract

* *NOTE (on revision):*—What I wish to convey is that Davies may have been paid for this under some other contract or work, or on a separate voucher, though it does not appear on the final voucher for the contract.

extract relating to the particular one before the Committee. If they wish, the whole letter can be put in. W.C. Bennett, Esq.

264. Did Mr. Statham become so unwell about this time—in September, 1870—as to render his consideration of the matter in dispute unsatisfactory? No; he was quite competent to make the report at that time. After that time he went to Armidale; it was very hot and wet weather; he wore a white puggaree on his head, had inflammation of the brain, and became delirious. This was after he had sent in his report, and the report itself will show that the man was perfectly competent, as he was before and has been since. He is one of our best officers.

265. Some time prior to this, and after the completion of contract 3-67, did you dispute Davies's right to remove some timber and iron that he (Davies) had purchased at Cox's Creek by public auction? I did not dispute his right to remove the iron.

266. Nor the timber? Yes, the timber, because the timber had been cut on Crown Land for the use of the Crown alone for the building of these bridges, and it was my business to protect the interests of the Crown. A contractor broke down, Mr. Davies bought his timber, and he wanted to exact from another contractor and from the Government what I considered a disproportionate price, the timber being really Government, and the workmanship only the property of Davies. The matter was arranged at law between Davies and the contractor.

267. Did you threaten Davies with a criminal prosecution if he did remove it? Yes; at least I wrote to him to say that he rendered himself liable to a criminal prosecution. That is simply what I did.

268. Are you aware that Davies subsequently got a verdict at law for the full value of the timber and iron that you claimed, and all expenses against the person who did remove this property? There was an arrangement made with Davies and the contractor for the bridge, and they went to law about it, but I have no knowledge of the merits of the case. My point was simple enough; the timber was cut upon Crown land for Crown purposes and was the property of the Crown.

269. *Mr. Dangar.*] How was the Crown protected in this matter by you if Davies ultimately became possessed of this timber? I know the Crown did not lose anything by it; the contractor had to pay this. I cannot tell how the Crown was protected, but I will look up the papers.

270. I understood from you that the reason you took this step was to protect the interests of the Crown? Yes. This verdict was given perhaps not for the value of the timber but for the value of the workmanship upon it.

271. *Chairman.*] With reference to some sheathing at Dangar's Creek Bridge. This was under the supervision of Superintendent Nardin, and in Davies's evidence of 19th May he says: "The next item I believe to be a mistaken measurement—it is the sheathing of Dangar's Creek Bridge, returned as 13 feet wide, whereas the actual width is 15 feet, making a difference in the amount of £5 7s. 5d." Is this true? The mistaken measurement is on Davies's part. Mr. Nardin contracted to have this bridge sheathed 13 feet wide—the sheathing to be laid diagonally; but Davies, in sheathing, put it at an angle less than 45°, and that made it wider. Mr. Nardin did not consider that he would be justified in returning for what he had not ordered, so that though the sheathing was 15 feet wide it was returned as only 13 feet, as ordered.

272. Did the quantity of sawn timber delivered by the sawyers just about suit the sheathing of this bridge 15 feet wide? I have no knowledge of that; Mr. Nardin can answer that.

273. In August, 1872, was Mr. Davies the accepted tenderer for the contracts 10, 16, and 17-72? Yes, I believe he was.

274. Will you produce those contracts? Yes. (*Vide Appendix B 8.*)

275. Are those contracts now completed to your satisfaction? Mr. Nardin has certified that they are completed.

276. Were these performed under overseer Holloway? Mr. Holloway was never in charge of contracts; he was assisting Mr. Nardin.

277. Who drew the plans and specifications for contracts 10, 16, and 17-72? The specifications were drawn by Mr. Nardin, and perhaps amended in the office, and the plans were lithographed; the only plans belonging to the contracts, and recognized by the office, are those lithographs.

278. Had this length of road, contract 10, been let to any person previous to being let to Mr. Davies, and afterwards cancelled? I cannot answer that question.

279. Between the cancellation of the other tender, and the acceptance of Davies's tender, was there any change made in the specification; if so, how, and when was the change made? I do not recollect of my own knowledge that any change was made, but Mr. Nardin says there was, that I made it myself, but I do not recollect it.

280. Was the metal increased, and the 1,500 cubic yards of ballast, specified for in the previous specification, dispensed with? I have no knowledge of that; I do not recollect it.

281. Did you use printed forms of specification, with blank spaces to be filled in, to show the special character of the work you required on this contract? Yes, I think so; they are in the bond at all events.

282. Do you use more than one kind of printed forms? They are amended from time to time.

283. In the formation clause, as filled in for contract 10-72, as let to Davies, what is the meaning of the words, "formation to be in the solid, or made up with metal"; and further on, "all holes, ruts, hollows, or depressions to be filled in with metal"? "In the solid" means to be cut out of the earth entirely, or made up with metal—that is alternative, "or made up with metal."

284. *Mr. Macintosh.*] What do you mean by the term "alternative," in interpretation of that clause? I consider that the context bears on that, that the contract evidently contemplated something besides metal. I have dealt with the specification as a whole, not with any special clause in it.

285. *Chairman.*] I was desirous of knowing in answer to my question what is the meaning of the words "formation to be in the solid";—is it to be understood that it is to be in the solid, or that it is to be made up with metal, and that all holes, ruts, hollows and depressions are to be filled in with metal? I have read the whole together, and Mr. Davies tenders for the formation at 2s. 6d. a yard; the specification says farther down that so much metal is to be provided, and no metal is to be spread until the formation is completed.

286. Then you will not give any direct answer with regard to the meaning of the word "formation"? I would give this direct answer, that it is slightly contradictory, because the formation is contracted for at a certain price. It was never contemplated to make an embankment of metal, and the formation has been done in this way by Davies himself and by every other contractor we have ever had; and if that interpretation

W.C. Bennett, tation is to be taken, that the formation is to be made up with metal, you must read the next clause. If all this were required, Mr. Davies's interpretation of the clause might be turned on himself, and we might have insisted upon his supplying all the metal for this embankment, in addition to the quantity specified.

Req. 2 June, 1875. 287. *Mr. Macintosh.*] It is a schedule of prices is it not? No, it is a bulk sum. It is very specific in the metal clauses afterwards. When the whole or any well defined length of formation is ready to receive metal, it is after measurement, and on receipt of a written order from the road superintendent or overseer, to be evenly spread to a width of 20 feet, and a depth of about $7\frac{1}{2}$ inches, or at the rate of one and a third cubic yard to the lineal yard of road. That is *after* the formation is completed, and then it says afterwards: "The road is to be kept raken in, and maintained with the remaining five-twelfths of a yard of metal to the yard run."

288. We have the words "approved hard material" in the third line obliterated, and in the seventh and eighth lines "ballast or approved gravel"; further on the words "extra material for embankment to be obtained as will be directed from any distance not exceeding"—? They have evidently been obliterated to insert the word "metal"; but if this interpretation is insisted on, the interpretation on the opposite side would be that Davies would be obliged to make all these embankments with metal, and was afterwards obliged to supply the specified quantity of metal.

289. The first clause, giving the general interpretation, is printed, but the other is obliterated, and the special terms are put in, so that the general terms must be interpreted by the special or written agreement? I am prepared to stand by the literal interpretation; and if so, Mr. Davies is obliged to make all these embankments of metal, and afterwards to supply the specified quantity of metal.

290. Special written instructions must override all general printed instructions? I am not prepared to enter upon the legal question, but I am prepared to abide by the literal interpretation of the contract. I wish to put this point strongly to the Committee: If Mr. Davies wishes the literal interpretation of this clause to be taken, it is clear to me he was bound to make the formation first with metal, and then to supply the specified quantity of metal, for it is said, "When the whole or any well defined length of the formation is ready to receive metal it is after measurement, and on receipt of a written order from the road superintendent or overseer, to be evenly spread to a width of 20 feet, and a depth of about $7\frac{1}{2}$ inches, or at the rate of one and a third cubic yard to the lineal yard of road." After the formation is done, which it is specified is to be done with metal.

291. *Chairman.*] Would not these obliterations of these printed words and the insertion of the written word "metal" reasonably lead the contractor to conclude that metal only was to be used in making up the formation? Not if he read the context; he would see it was doubtful.

292. Did Davies's tender include a schedule rate of 5s. 6d. per cubic yard for all the metal supplied on this contract? Yes, for a certain quantity of 3,729 cubic yards; not for all metal for a specific quantity.

293. I would like the answer to be a little more definite. Did Davies's tender include a schedule rate of 5s. 6d. per cubic yard for all the metal supplied on this contract? It included a schedule price of 5s. 6d. per cubic yard for 3,729 cubic yards of metal.

294. That 5s. 6d. would apply to deductions or increases? Yes.

295. Has there been 1,067 $\frac{1}{2}$ cubic yards, at 5s. 6d. a cubic yard, dispensed with, and its value £293 11s. 3d. deducted from the contract? Yes.

296. Were these six culverts dispensed with, and their schedule value of £280 deducted from the contract? Yes, but there were substituted in lieu three pipe drains.

297. Did you visit this work during its progress? Yes.

298. Did Davies, during your visit, show you some new plans which he said had been furnished to him by overseer Holloway, the carrying out of which to the pencil line struck thereon rendered necessary the supply of 4,476 cubic yards of earth embankment to fill up the hollows and depressions? When I was on the work Mr. Holloway produced sections that he had made for their guidance in laying down the pipe drain and culverts, showing the lines of the formation. I then pointed out to Mr. Nardin that the cuttings proposed were rather heavier than could be required under a formation clause, and told him not to carry out the pencil lines shown on these sections, which I cannot recognize in any way as documents connected with the contract; they were merely memo. made by the road overseer for his own guidance; they are not signed by me or by the road superintendent, and were not carried out.

299. Did not the supply of this earthwork straighten and shorten the length of the contract 7 lineal yards, besides enabling you to dispense with the metal specified in the contract to be used in the ruts, hollows, and depressions? No; the culverts, it was found, could be dispensed with for various reasons; the shortening of the contract 7 yards is immaterial. It may or may not have done that, and in fact the question of formation had nothing whatever to do with the supply of metal; the metal clause is entirely distinct from the formation. A certain quantity of metal is specified to be supplied and spread a certain width and depth "at the rate of $1\frac{1}{2}$ cubic yard to the lineal yard," and the remaining $\frac{1}{2}$ to be used for maintenance metal afterwards. The formation clause stands alone; whether it was to be done with metal or earth is open to question.

300. What I was wanting to know from you with regard to this question was, would the supply of this earthwork straighten and shorten the length that was contracted for, and by so doing enable you to dispense with the metal specified in the contract? No.

301. Did the construction of this earth embankment have the effect of diverting the water to fewer openings, and so enable you to dispense with six out of ten culverts originally specified? No, I do not think so.

302. If metal to the value of £293 11s. 3d., and six culverts of the value of £280, has been saved, what objection have you to pay Mr. Davies for the supply of 4,476 cubic yards of earthwork substituted for the metal ordered, and for which Davies now claims 1s. 3d. a cubic yard? I cannot see why Davies should be paid for 4,000 yards of earthwork to save 1,000 yards of metal. It would be an anomaly, and if he is to be paid for replacing metal with earthwork it ought only to be to the same extent as the metal saved, but I cannot admit that he is entitled at all.

303. Did you, on your visit at the time referred to in one of the previous questions, amend or in any way alter the pencil line in the new plan, and then leave such plan with Davies to carry out? I objected to the depth of the cuttings, and reduced them considerably to what I thought was fairly comprised in the term formation, for which Davies had tendered half-a-crown a yard.

304. After going over the whole of this work in progress on contracts 10, 16-72 in company with Mr. Nardin, Mr. Holloway, and Mr. Davies, did you not express to Davies your approval of the manner in which such work had been carried out? Yes.

305. Will you produce the new plans referred to? I cannot recognize them as new plans; they are simply memoranda made by the road overseer to assist him in determining the position of the culverts. W.C. Bennett, Esq.
306. During the erection of the first ashlar culvert, did Davies call your attention to the fact that he was obliged to do a better class of work than was required; that instead of rubble he was putting in ashlar work? It is not ashlar work, and Davies did not call my attention to it. 2 June, 1875.
307. Will you produce the printed specifications for the stone culverts in contracts 10, 16, and 17-72? They are already before the Committee. I say that Mr. Davies did not draw my attention to it; but I, of my own motion, drew the attention of the road superintendent—as they were the first works of the sort—to the fact that they were unnecessarily neat on the front; and said that I would rather have what I considered good honest work, rough and strong, than this neat work. It appeared to me that the stones were all edgers, what they technically term soldiers. I left written instructions to the effect that what was required in a stone culvert was good flat-bedded masonry.
308. Do you think that Mr. Davies's estimate in detail of the trade difference between ashlar and rubble, of £1 5s. 3d. per cubic yard, as shown in the Appendix to his evidence, is a fair estimate? I never went into that, for I never considered they were ashlar.
309. Has Davies ever offered to accept the bulk sum of his accepted tender in full payment of his claim? Yes, in this way: I went to Tamworth with the view of going into these things on the ground; I met Davies and asked him for an explanation; but all the explanation I could get from him, was, "I want my bulk sum; I want my bulk sum; I want my bulk sum" reiterated. That was all the explanation I could get out of him.
310. What is the amount of the tender for contract 10-72? £1,911 8s. 6d.
311. And the amount you paid him on that? £1,421 4s.
312. On contract 16-72 Davies claims payment for 1,468 cubic yards of earthwork embankment at 1s. 3d. per yard; and this was supplied in obedience to new plans given to him by overseer Holloway, shown to you, and after your emendation of the pencil line given to Davies as his guide in carrying out the work;—what objections are there to payment for this earthwork? Because it was included in his formation, tendered for at half-a-crown a yard. If not I cannot see what that half-a-crown a yard was put in for.
313. What was the value of the metal dispensed with on this contract? 215 yards of metal appear to have been dispensed with.
314. Davies claims £126 11s. 5d. for ashlar work done in culverts;—was ashlar work done in these culverts instead of rubble work? No; "first-class coursed rubble work, set in mortar" was specified for "quoins to be hammer-dressed."
315. He also claims £40 for two months' maintenance of road, as per tender of £20 a month;—was this £20 a month a stated condition of Davies's accepted tender? It is not in the specification.*
316. There are other items—34 cubic yards of 5-inch ballast at 4s. 6d. per cubic yard, £7 13s., and another item of £2? Really I am not prepared to give an answer upon these small things. I confined myself to the two questions of ashlar and earthwork.
317. Davies also claims £10 0s. 8d. in Appendix A 17, for sheathing done on bridges at Liverpool Range and Doughboy Hollow? This sheathing was specified to be 2 inches thick, and he claims for 2½. Mr. Nardin explains it to me, that from some difference in the railway tariff Mr. Davies could carry 2½ plank as cube timber. I do not know the details, and that he preferred to supply it himself, as he got it cut for the same amount. Mr. Nardin instructed him to put 2-inch planks on, and he was paid for what he was instructed to do. If he put planking a quarter of an inch thicker of his own motion, we do not think the Government should be obliged to pay it. Supposing he had chosen to put 4-inch sheathing he could hardly have come to us and demanded double the amount of his contract. We should have no control over the contractors if we allowed them to act as they liked, and then to come to us for payment of sums in excess of their contracts. We have only a small amount of money at our disposal and we feel bound to economize as far as possible.
318. *Mr. Cameron.*] This extra thickness of timber was used by mutual consent? No, it was Mr. Davies's own act, and he would have had a stronger ground of complaint against the Department if he had offered to use 2½-inch without extra payment and we had insisted upon 2-inch. He might have said that he had offered to do what was better for the Government, and we had objected.
319. It was done with a view of obliging Davies? Yes.
320. *Chairman.*] The second clause of the general conditions of road contract says: "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." Has it been the practice to furnish the contractor with such written order when additions, deductions, and alterations have been found necessary in carrying out contracts? As far as possible it has been the practice; when it is not possible to get my signature, which is not always the case, an order signed by the Superintendent is sufficient.
321. Has Davies at any time been furnished with such an order, signed by the Commissioner and countersigned by the Superintendent, on any contract? I do not know that he was ever furnished with an order signed by me—I am not sure.
322. With respect to the foregoing works, has Davies ever been furnished with the final certificates referred to in the 15th clause of the general conditions, which states, "that the obtaining of such certificate shall be a condition precedent to the contractor having any claim or cause of action"? He has been furnished with copies of them—I do not know whether they have been signed in due form. If he wants them we can furnish them—of course we cannot furnish him with certificates for work to which our officers have declined to certify.
323. I want a direct answer to the question I have just put? He has been furnished with copies of the certificates.
324. Would that be considered by the 15th clause? We have no objection if he asks for a signed copy to give it him.
325. What extent of alterations, additions, and deductions was made in contract 17-72, without a written order signed by the Superintendent and subsequently concurred in by the Commissioner for Roads? I am

NOTE (on revision):—I failed to find this clause when being examined. I now find that it is provided for in both specifications; in No. 10 until thoroughly consolidated by traffic and roller; and in No. 16 for a period of two months after the completion of the work.

W.C. Bennett, Esq. am not prepared to answer that question, for I did not get up the facts of contract 17-72, but I will state this, that any alterations made in that contract were made on my written order to the road superintendent—I remember enough of the case to say that.

2 June, 1875. 326. Will you produce the final certificate for contract 17-72? Yes. (*Vide Appendix B 9.*)

FRIDAY, 4 JUNE, 1875.

Present:—

MR. CAMERON,	MR. T. G. DANGAR,
MR. COHEN,	MR. SCHOLEY.

H. BENNETT, Esq., IN THE CHAIR.

Mr. George Holloway further examined:—

- Mr. G. Holloway. 327. *Chairman.*] Do you remember attending a public auction sale of contractor Atchison's timber and iron at Cox's Creek? Yes.
- 4 June, 1875. 328. As the Government officer, had you received instructions to purchase? Yes.
329. Did you do so; if not why not? I did not, because I had not sufficient money at the time.
330. On your telling Davies, did he offer to send you sufficient money to purchase? He offered to lend me sufficient money.
331. Did you avail yourself of this offer? No.
332. Did Mr. Davies afterwards authorize you to go to the new contractor, Mr. Turner, and to say if he would purchase, Davies would send him the money to do so? Yes, Davies asked me to do so, and I did.
333. Did Davies afterwards become the purchaser at auction? He did.
334. Was this timber and iron afterwards sold by a police officer*? Yes, he was a police officer stationed at Gunnedah.
335. Did Davies afterwards sue the new contractor for the value of the timber and iron? Yes.
336. Did you, and the road overseer, Mr. Donaldson, attend as witnesses at that trial? Yes.
337. From your own knowledge of the property sued for, did Davies get a verdict for the value of the whole of the timber and iron that he purchased? I believe he got my estimated value.
338. Did you, about this time, call on Davies to go with you to meet Superintendent Bayley at Bowling Alley Point, regarding claims Davies had against the Government for work previously performed? Yes, at the instance of Mr. Bayley.
339. Do you know the contract 3-67, carried out by Davies? I know the contract 3-67.
340. That was carried out by Davies? I believe it was.
341. Cannot you say whether it was or was not? I passed over it once, and saw Mr. Bayley, and Mr. Davies with him, and I supposed Davies was the contractor.
342. Can you not say yes or no? I had not charge of the road then.
343. Had you any doubt about it? No.
344. There are two or three first-class culverts on that work†? Three first-class.
345. Did you ever give orders on behalf of Mr. Nardin for Davies to commence that work? No; because Mr. Nardin was not the superintendent.
346. Did you ever give orders on behalf of Mr. Nardin? Not on that contract.
347. Some time after did you make longitudinal plans on the line of road on contract 10 and 16-72? I made sections of 10 and 16-72.
348. Are those the new plans referred to as made by you? (*Witness examined the plans handed in by Mr. Bennett.*) Yes, these are the plans I referred to.
349. Who struck the pencil lines on these new plans? Mr. Nardin.
350. Did the Commissioner see these plans and amend the pencil line? Yes, I believe he saw the plans and amended one portion of them.
351. Were these new plans afterwards left with Davies to bring up the line of formation to the pencil line without embankments‡? Yes, they were.
352. Do you know what it cost Davies for stone delivered on contract 10 and 16 for the metal supplied? I think there was some delivered there for 2s. 3d. a cubic yard.
353. Would any of that stone have been suitable for building rubble work? I believe some of it would.
354. Has Davies got an efficient contractor's working plant? He had when I was in charge of the district.
355. When Mr. Murphy used broken ballast to make up hollows in the formation of the contract opposite to M'Mahon's, between Davies's contract 10 and 16, did you pay at per cubic yard for the quantity of ballast there used? Yes, there was a schedule price for the ballast.
356. Up to the time of Davies taking contract 10, 16-72, can you point out to the Committee any one contract that would have been likely to have come under Davies's knowledge where the metal supplied has not been stacked, measured, and paid for at per cubic yard? No—metal on all contracts has to be stacked and measured before it is spread; that is in the general conditions.
357. Is 5s. 6d. per cube yard for 3-inch metal a low price for contracts 10 and 16? It is reasonable; I could not say very low.
358. Is 1s. 3d. per yard for earthwork a reasonable price? In some of the banks it is a reasonable price, according to the length of cartage.
359. Were the designs of the culverts altered? Partially so in one that I saw; in the parapet-wall it was square instead of round, I think.
360. Are the four culverts and three drain-pipes doing the duty of ten culverts as originally specified? I could not say that positively, because the four culverts were not built when I was there.
361. From your own knowledge had Davies ever received a written order, signed by the Commissioner and countersigned

* NOTE (*on revision*):—I understood my reply was to a question, "Was the timber and iron sold by a police officer?" the word "afterwards" omitted.

† NOTE (*on revision*):—I understood the question to be "Are there" instead of "There are two or three culverts, &c."

‡ NOTE (*on revision*):—I understood this question to be *with* embankments, instead of "without."

countersigned by the superintendent, for all alterations, additions, and deductions done by him? Not to my knowledge.

362. Since the Commissioner visited that contract 10, 16, has it not been regarded as certain that Davies would claim payment for the earthwork in the embankment, and an increased rate for culverts? I heard some rumours in reference to that.

363. *Mr. Scholey.*] You do not know it? No, not positively.

364. *Chairman.*] Did you consider, after yourself and Mr. Davies met Mr. Bayley at Bowling Alley Point, that Government owed Davies for past work done? I came to the conclusion that something was owing to Davies just from the tenor of the remarks of Mr. Bayley and Mr. Davies.

365. For what purpose did you go there? Mr. Bayley sent me a letter to bring Mr. Davies to Bowling Alley Point; I did so, as he required.

366. Has Mr. Davies ever remarked that he would require the payment of the bulk sum of the contract 10 when he was signing advance vouchers for that? I have some recollection at the time* of seeing the work, of his saying that he wanted the bulk sum, or something to that effect.

367. *Mr. Scholey.*] At any time did you give orders from Mr. Nardin for Mr. Davies to do work? Yes, I gave him authority to start the contract after the bonds were signed—a written authority was required.

368. That was in the place of Mr. Nardin? On behalf of Mr. Nardin.

369. You say that Mr. Nardin struck the line on these plans? Yes.

370. Were you there? Yes, I was there at the time.

371. With reference to the culverts, you say there is some alteration;—has that alteration made the work more expensive than the original plan? Yes, I think there was more stone in it; it was square instead of round.

372. What do you think would be about the difference in the expense? A matter of four or five pounds on each culvert.

373. I suppose you are aware that Government has paid Davies since this conversation between you and Mr. Bayley? Yes, since that conversation money has been paid to Davies.

374. Might not the whole of these claims have been paid? They might without my knowing it; some money has been paid that has gone through my hands.

375. You do not know whether it was for this matter or not? No.

376. You are not sure that Government owe any money to Davies? No.

377. *Mr. Dangar.*] During what portion of this contract were you superintendent of roads? Not at any time.

378. What position did you occupy? Road overseer.

379. Were you in that capacity during the execution of the works in dispute? No, I was not.

380. You have stated that the work of the culverts was ashlar? Yes, I believe it was.

381. Did you ever superintend any masonry work before to enable you to judge what was ashlar and what was not? No, I did not.

382. What was the difference between the work specified for and ashlar? Ashlar I understand to be punched and picked, jointed and bedded.

383. Did Mr. Nardin through you order any change in the character of the work? No.

384. *Mr. Cohen.*] Did you of yourself, irrespective of Mr. Nardin or of any superior officer, give instructions to Mr. Davies to alter the character of his work? No.

385. You were asked as to the difference in the value between four culverts and three drain pipes put down in lieu of ten culverts, and you said the difference in the value of the culverts would be about £5 each? Yes.

386. I understand the original specification to have been for ten culverts instead of four culverts and three drain-pipes? I could not say whether that was so, because I left before the whole of the culverts were formed.

387. Assuming that you knew what those culverts were — ? I saw only one culvert built and another commenced.

388. Have you seen the drain pipes? Yes.

389. Can you form an estimate of the difference in value between the four culverts and three drain-pipes as now put down, and the ten culverts originally specified? I could not.

390. You were asked by Mr. Dangar whether you gave orders to Mr. Davies by authority of Mr. Nardin, and I understood you to say that he gave authority to start with the contracts? Yes, it was usual for him to get the bonds signed and then to authorize me to start the contract.

391. Are those the only orders you gave on behalf of Mr. Nardin? Yes, in writing.

392. Did you ever give orders verbally? In some little matters.

393. You referred in your previous evidence to having given orders in some little matters—for some few pounds? Yes, in case of repairs being urgently necessary in time of floods. If a hole were washed under a culvert, and the soil was likely to shift, I repaired it at once without instructions from the head office.

394. Then I take it that the orders to which you have already alluded in your evidence are all the orders you ever gave Mr. Davies to authorize him to depart from the original specification? Yes.

395. *Mr. Cameron.*] You have stated in your evidence that certain portions of these culverts has been done with ashlar work? Yes.

396. Were they specified to be ashlar or rubble? Rubble.

397. Rubble work is work roughly composed of stones without dressing? Yes.

398. Could you give the Committee a rough estimate of what the difference would be for having altered the work from rubble to ashlar work? I could not. I never studied the matter at all.

399. As a matter of fact is ashlar work more expensive than rubble? Yes, I should say so, because it is punched, picked, and jointed. ‡

400. You said in answer to the Chairman's questions that there had been some slight alterations in these culverts; for instance, that they had square instead of round parapets; would not square parapets be more expensive? They would be in that class of work.

* NOTE (on revision):—Of signing advance voucher.

† NOTE (on revision):—My answer to this question refers to work done at Goonoo Goonoo Creek at Tamworth, and contract 3-67. I was overseer on contracts 10 and 16-72.

‡ NOTE (on revision):—Yes, because the stones were cubed, with punched-in picked beds and joints.

- Mr. G. Holloway.
4 June, 1875.
401. Would it not be in any class of work where there was a parapet? With rubble work it would be necessary to have it round.
402. In any dressed stone would it not be less labour to put on a square parapet than a round one? I should think so.
403. Were you present on the works at the time of the visit of Commissioner Bennett? Yes.
404. Do you recollect anything taking place about Davies offering to take a bulk sum of money? I do not remember anything of that sort on the works.
405. Do you remember any other occasion on which Mr. Davies wanted to take the bulk sum of the contract instead of any claim he had? Not at that time.*
406. At any time? I was asked a question, when the advance vouchers were being signed, and Davies signed the vouchers, but that was some time after.
407. *Chairman.*] Was the subject of Davies's claim for any further payment on account of the Goonoo Goonoo Bridge and the approaches to Tamworth discussed at Bowling Alley Point? I believe it was discussed at that time.
408. *Mr. Dangar.*] The answers you have given to Mr. Cameron's questions are merely your private opinion; you are not skilled in masonry? No.
409. *Mr. Cameron.*] Still any man who knew anything of ordinary masonry could with a certain amount of truthfulness give evidence whether work was ashlar or rubble? Yes, if he had given the matter any study.
410. *Chairman.*] Do you know the difference between ashlar and rubble work? There are several kinds of ashlar work, as far as I have read. The work there is not what I should call rubble, and therefore I suppose it to belong to the next class of work, which is ashlar.
411. *Mr. Cameron.*] You consider ashlar to be dressed stone, laid in jointed courses, and rubble to be undressed stone of any size, put into any position in which it will fit.

Ernest Anthony Nardin, Esq., examined:—

- Mr. E. A. Nardin.
4 June, 1875.
412. *Chairman.*] What position in the Government service do you hold? Superintendent of Roads.
413. Do you know Mr. Davies as having been the contractor for sheathing Dangar's Creek Bridge—contracts 10, 16, and 17-72—and for sheathing three bridges at Liverpool Range and Doughboy Hollow? Yes.
414. How many of these works were finished under your supervision? All, except the sheathing of the bridges at Doughboy Hollow—that is to say, 16 was not quite completed; but the principal part was done under me, excepting the sheathing of the bridges.
415. Were those contracts that were finished completed to your satisfaction? Yes, those that I have certified for.
416. Was Dangar's Creek Bridge sheathed 15 feet wide? Yes.
417. Did the specification for contract 10, as let to Mr. Pyrk, of Nundle, contain a provision to supply 1,500 cubic yards of ballast, to be used outside scrap hollows and depressions at per cubic yard? I estimated in the first place for ballast. I am not sure whether it was advertised in that way, but I know the specification was altered afterwards; but I think Mr. Pyrk's tender will show that he tendered in the same way. I am not sure, but there are the tenders to refer to.
418. Will you produce Davies's tender for that work under that specification? They are not in my possession.
419. Did Davies ever offer to do that contract without receiving any money advances till the year following—No. 10? I think he did. I think there was something said about it.
420. In the specification and contract, as let to Davies, was the 1,500 cubic yards of ballast in the preceding specification dispensed with, and the metal increased in quantity? Certainly—a fresh specification with the ballast struck out and metal put in the place of it. We make roads in both ways.
421. Who made the change in the specification, dispensing with the ballast and increasing the metal? The Commissioner for Roads.
422. After Davies commenced on the contract 10 and 16, did Mr. Holloway make longitudinal plans of the line of road on these two contracts, and forward such plans to you? Yes, by my instructions.
423. While these plans were in your possession did you put on this a longitudinal pencil line that runs in places several feet along the then line of road? I did, for Mr. Holloway's guidance, as an experimental line only.
424. Did you afterwards return these plans to Mr. Holloway to give to Davies? I returned them to Mr. Holloway, but not to give them to Mr. Davies.
425. Would it require the supply of 4,476 cubic yards of earth embankment to bring up this line of formation to the pencil line referred to? I cannot say. I never measured it.
426. Did the Commissioner ever see these plans and amend or alter your pencil line on them, and afterwards leave them for Davies to work to? The Commissioner saw these sections. When he was on the ground he thought the cuttings too deep and the banks too high—unnecessarily so—and he instructed me to reduce them. I have his written instructions to that effect. (*Vide Appendix C 1.*)
427. Did the Commissioner after inspection and consultation with you approve of the manner in which the work had been done? Yes, with those exceptions referred to in the letter I have read. Those were the remarks he made on them.
428. Did this earth embankment shorten the lineal length of the road seven yards? I do not know that it did. I do not see how that could be effected, the formed road being on the old cleared line, unless the undulations were followed.
429. Did you dispense with 1067½ cubic yards of metal, and deduct its value from the contract as per cubic yard? I cannot say how much I dispensed with, but I have a letter here which refers to the matter. (*Vide Appendix C 2.*)
430. Will you produce the reply of Mr. Davies? I have not it.
431. Will you furnish it? I left all my papers at Murrurundi with Mr. Donnelly.
432. *Mr. Cameron.*] Can you give the substance of his reply? Certainly, agreeing to these terms.
433. *Chairman.*] Did you dispense with six culverts, and deduct their value from the contract? My final certificate shows how many; I know there were some deducted in consequence of what the Commissioner wrote to me.

* NOTE (on revision):—He did when signing advance vouchers some time after.

Mr. E. A.
Nardin.

4 June, 1875.

434. Do you put in that final certificate? It is in the possession of the Commissioner.
435. Did you ever report to the Commissioner for Roads that Davies's claim should be paid for the earthwork supplied to make the embankments and formation? Yes.*
436. When Mr. Murphy used broken ballast to fill up hollows in the formation of the contract opposite M'Mahon's, between Davies's contract 10 and 16, did you pay him at per cubic yard for the quantity of ballast he used? I do not remember that there was ballast there, it is so long ago; of course if he supplied ballast he was paid for it. Sometimes we make ballasted road—sometimes metalled.
437. When Mr. M'Call broke ballast to make up depressions in the formation on his contract, near the Company's old sheep station, between Davies's contract 16 and 17, did you pay him for the quantity of ballast used in the formation, in addition to so much per lineal yard for forming? I cannot remember if he used ballast; if he used it it was measured and paid for in the usual way.
438. Could you not say whether you did pay him or not? I could not from memory.
439. You have no memorandum of it? I did not know that such a question would be asked; if I had known I could have referred to papers. I could not speak from memory.
440. Was Davies's schedule rate for forming on contract 10 and 16, 2s. 6d.? I believe it was, but the tender will show.
441. In addition to the 3s. per lineal yard, did you pay him for the earth supplied to make up the approach up to the proper level? Certainly not; I paid him by the lineal yard for forming.
442. In addition to the 3s. per lineal yard, did you pay him for the earth supplied to make up the approaches to the proper level? No.
443. Do you know any reasonable cause why Davies should not be paid for the earth embankment on the contract? Because it is included in the stipulated price for forming.
444. Up to the time of Davies taking contract 10, 16-72, can you point out to the Committee any one contract that would be likely to have come within Davies's knowledge where the metal supplied has not been stacked and measured at per cubic yard? Never was such a contract; metal always is stacked and measured before being used.
445. Is 5s. 6d. per cubic yard for 3-inch metal a low price on contract 10 and 16? Yes, it is rather low; about 6s. I think is the usual price.
446. Is 1s. 3d. per cubic yard for earthwork a reasonable price? That is high.
447. Is 4s. 6d. per cubic yard for 5-inch ballast a reasonable price? Yes.
448. Have you any knowledge of the price that Davies paid for stone delivered on contract 10 and 16—for metal supplied? No.
449. Were the designs of the culverts altered? No, not that I know of.
450. Are four culverts and three pipe-drains doing the duty of the ten culverts originally specified? No, there were wooden culverts specified, I think, when there were to be ten; now we have culverts and pipes. The Commissioner himself dispensed with them.
451. Would any of that stone have been suitable for building rubble work? Not such work as was described for these culverts. It would have made random rubble, but that is not what is described.
452. Do you mean to say that none of the stone you saw was suitable? Not for coursed rubble, but for random rubble, and the former had been described.
453. Is the quality of the stone and the workmanship in the culverts better than what was specified;—are they built of ashlar instead of rubble work? No, certainly not ashlar.
454. Did you concur in all the changes that had been made in contracts 10 and 16-72? In all those changes which are shown by the final certificate to have been made.
455. Do you know the usual detailed trade difference between rubble and ashlar work? Yes; I can give my definition of it. Ashlar I look upon as either chiselled, tooled, or picked with through stones and joints crossed,—that is ashlar. Then with a draft round is rock ashlar. Then there is random rubble and coursed rubble in same course; one stone may have full height, and the rest may be in two heights, but they are all good large stones, and are described in the specification as not less than half a cubic foot. That is first-class coursed rubble with quarry faces. Random rubble is any sort of stone laid at random.
456. The specification for stone culverts enjoins that the roadway shall have a level of 5-inch ballast and 3-inch metal;—did you pay for the metal at per cubic yard and leave the ballast unpaid for, both being specified and both done? That is included in the price of the culvert itself. So far as I can remember, I went over the final certificate with Mr. Davies, and everything that was reasonable, proper, and just, in my idea I allowed him, and the only two items we could not agree about were this large quantity of earthwork which he claims, and which I maintain is part of the forming, and the extra quality of work in the culverts. I stated he must deal with the Commissioner if there were ambiguity in the matter, and that if he would write to me I would send his letter on to the Commissioner with my report, and if he did not like that he must appeal to the Commissioner direct.
457. Did you concur with Davies in increasing the size of the sheathing on the three bridges? No, not in increasing the thickness. I concurred in this way: as he acknowledged that he made a saving by it, I let it go.
458. Will you explain how he made a saving by his timber? Mr. Davies informed me that by the sawyer's measurement at Newcastle, 2½ in. could be had for the same price as 2 in., and that the additional ½ in. brought it within some regulation of the railway, by which it could be brought at a cheaper rate than 2 in. could have been.
459. Mr. Dangar.] Then the substitution of 2½ in. for 2 in. was in favour of Davies? Yes.
460. Then you allowed it for the advantage of the contractor? Yes.
461. Chairman.] Does not the increase of a quarter of an inch thickness of sheathing increase the wearing power of the bridges, and enable it to bear a larger amount of traffic? I think 2 in. would see out these old floors; of course 2½ in. is stronger; that is obvious to anybody.
462. Are you aware that the four bridges in Wallabadah Gap, that you ordered Davies to sheathe with 2 in. stuff, have been taken from Davies and given to Connell with 4 in. stuff, the full width of the bridges? I know nothing of the sort.
463. Has Davies ever been furnished with original final certificates for the aforementioned works? Not from me.

* NOTE (on revision):—Reply given in error—corrected before the termination of my evidence.

- Mr. E. A. Nardin.
- 4 June, 1875.
464. Have you ever heard or known that the Commissioner for Roads has refused Davies permission to obtain certificates? The Commissioner instructed me that it was not usual to give them. I never furnished them before, and the Commissioner informed me that it was not usual to do so.
465. From your knowledge, has Davies ever received a written order from the Commissioner, signed by the Commissioner, and countersigned by the superintendent, for alterations, additions, and deductions in the contracts done by him? Never under me.
466. Since the Commissioner visited contracts 10 and 16-72, has it not been regarded as certain that Davies would claim payment for the earthworks in the embankment, and an increased rate for culverts? After the Commissioner left, some time afterwards, Mr. Davies first mentioned this claim to me. I have a letter here from him, which I beg to hand in. (*Vide Appendix C 3.*) I also beg to hand in copy of a letter from myself to Davies. (*Vide Appendix C 4.*)
467. Contracts 10 and 16 being within a short distance from each other, did you, after Davies commenced work, suggest that a steam metal-breaking machine should be procured for the metal supply? A conversation arose about that, and I gave Mr. Davies all the information I could in reference to the working of it in Maitland under me.
468. You did not say that he must provide it then? Decidedly not. I told him to be very careful, in fact to calculate well before he bought it.
469. *Mr. Cameron.*] As a matter of fact it does not matter to you how the metal is broken so long as they are well broken? No; and I explained that the machine did not break it so well as the hand—that it broke the metal into flat instead of cubical, and that the Commissioner required it to be screened.
470. *Chairman.*] Did the Commissioner, by a written communication, concur in such a machine being procured? In my next monthly report I mentioned to the Commissioner that Mr. Davies had done this thing. The Commissioner was pleased, and said he was glad to hear of it, and I told Mr. Davies so. It was a quick way of getting through the work.
471. Will you produce a copy of your letter, dated 8th February, 1873, relating to the Commissioner's ordering that metal should be broken by hand, and Davies's reply thereto, dated 10th of the same month? Yes. (*Vide Appendix C 5.*) The reply I have already handed in—it is marked Appendix C 3.
472. On tenders being called for in your district for road work, have you known higher tenders than Davies's to be accepted? One, I think, from Currabubula to Tamworth.
473. Has Davies ever failed to do his work to your satisfaction, or hesitated to do anything you ordered in regard to work then in hand? No.
474. Have you any reason to conclude that Davies and the Commissioner for Roads have been of contrary opinions for years past? I heard about some bridge work some years ago—long before I saw Mr. Davies. I knew there had been some discussion, and that Mr. Holloway had been mixed up in it. Mr. Holloway told me all about it.
475. Has Mr. Davies an efficient contractor's working plant? Yes; at least he had.
476. *Mr. Cameron.*] You have, I presume, had several years practical knowledge of earth and brick work? Going on seventeen years in this department alone.
477. With reference to these culverts, were they originally specified to be built in rubble or ashlar work? Ashlar was never mentioned—"first-class coursed rubble."
478. You condemned the stone that Davies brought on the ground because you believed it was not fit for rubble? I told Mr. Holloway that it would not do.
479. Was it the quality of the stone you objected to? It was of blue metal and of all shapes; you could not get a bed.
480. Have you any knowledge of the fact, that Mr. Davies has made an offer to Mr. Commissioner Bennett, or anyone else, to take the residue of his contract money without any extras at all to settle this business? I think he asked the bulk sum in discussing this question.
481. When Mr. Bennett was up there? No, I think it was in the office when I was called down about twelve months ago.
482. Did you notice anything particular in his manner, reiterating that he declined to go into the matter at that time? No, at that time it was all settled, when he demurred to what he had previously agreed before the Minister to do. The Commissioner wrote an account of that agreement and I signed it, and Mr. Davies afterwards refused to act up to what he had agreed to do in the presence of the Minister; at least what I understood him to have agreed to do.
483. You are aware that the two largest items are with reference to contracts 10 and 16? Yes.
484. Do you know the different items he claims for each of these contracts? No.
485. You are not aware that for contract 10-72 he claims a sum of £448 ls.? I do not know the particulars of his claim.
486. Provided he has done so, can you give the Committee any opinion whether that is a reasonable or an unreasonable claim? As I consider he is not entitled to anything at all I think it is a most unreasonable one.
487. He has also made a claim for £267 19s. 5d., for contract 16-72;—is your opinion the same with regard to that? Yes, decidedly. I have certified in all cases for what he is justly entitled to, and cannot admit that he has a right to anything beyond that.
488. With reference to the sheathing of the three bridges at Liverpool Range, is it the fact that the sheathing is wider than it was originally specified to be? I never saw them; that work was done after I left.
489. Presuming it were so, is it not usual in contracts of this kind for a discretionary power to be given to the party overseeing the work to make slight deviations from the original contract? There was an agreement for this, but I forget now what it was.† I left before the work was done, and never saw the timber.
490. As a matter of fact, is it not usual to insert such a clause in the specification —? That any change shall not vitiate the contract—Yes.
491. *Mr. Dangar.*] The Chairman asked you did you ever report to the Commissioner, recommending Davies's claim for this earthwork, and you replied Yes? Decidedly not so. (*The Short-hand writer read his note of the preceding evidence.*) If I did make such an answer it is incorrect. I understood the Chairman to say had I reported upon this claim made by Mr. Davies, and I answered Yes.

492.

* NOTE (on revision):—This question is evidently intended to refer to Dangar's Creek Bridge; my reply refers to bridges on the Liverpool Range.

† NOTE (on revision):—This reply likewise refers to the bridges on the Liverpool Range.

492. Will you be good enough to produce that report? Yes. This is my report upon the letter which was sent to me by Davies to be sent to the Commissioner. (*Vide Appendix C 6*)

493. Why did the Commissioner order the metal to be broken by hand? I ordered that.

494. For what reason? The machine broke down.

495. It was making no progress with the work? Yes, the jaws would not work, and Davies had to get fresh jaws, and could not proceed with the work.

496. As this has been stated to be different from other contracts, is there any reason why the metal should be supplied without measurement to make up these banks? If the banks had to be made of metal there would have been no measurement about that; it is only covering metal to be measured.

497. This contract is stated to be different from other contracts. I ask you is this any reason why the metal should be supplied without measurement to make up these banks? If that specification were adhered to —

498. I will come to that presently. This contract is stated to be different from other contracts; there are some words obliterated and others interlined;—is that any reason why the metal should be supplied without measurement to make up these banks? Not to be measured if it were to go into these banks, of course not.

499. The instructions read by you from the Commissioner were general and not applicable to Mr. Davies's work only? I think Mr. Davies's were the only two works of construction going on at the time. Yes, there was 19.

500. Then it applied to others as well as to his? Yes, I think there was one other—Conlan's. I remember now that Conlan had no stone culverts; therefore that applies entirely to Davies, who built the only stone culverts there.

501. Are the usual memoranda given by the Commissioner when he goes through your district? He always leaves me memoranda for my guidance.

502. What proportion of this work was done at the time of the Commissioner's visit? There was not much done to 16; I think 10 was about half done.

503. Can you explain why Davies did not make his claim before the Commissioner's visit? I do not suppose he ever thought of it.

504. Were the Commissioner's instructions not intended to apply to future works under you? Yes, for my future guidance.

505. We now come to the contracts 10 and 16-72. If the strict interpretation of the first paragraph of formation clause was insisted on would not the contractor have been obliged to make all the embankments of metal? Certainly he would.

506. That is your interpretation of that clause? That would be an absurdity. It is ambiguous, but must be read with the other portion. I interpret it that the formation was to be done in the usual manner, and that after traffic over it, all holes, ruts, and depressions made by such traffic were to be filled up with metal.

507. Did you ever explain your interpretation of it to Davies? Yes, I explained it to Mr. Davies, and told him that I must refer him to the Commissioner for Roads.

508. When did Davies first make a claim for payment for this earthwork? In November, 1872.

509. After Davies had completed formation was he bound by the second clause of metal specification to metal such formation 20 feet wide, 7½ inches deep, or at the rate of 1½ cube yard to the yard run? Yes, that was the measured metal for the construction specified for in that clause.

510. Has he done so? He supplied sufficient—as much as we wanted. The quantity measured will show what he has put on—I could not say the exact quantity; I think it was a little under.

511. You are sure it was not more? Yes.

512. Have you any idea of the quantity of such metal he did supply? I can furnish it. (*Vide Appendix C 7*.)

513. In blinding clause of contract 10—the last paragraph—is not the contractor bound to supply five-twelfths of a cubic yard of metal on side of road after completion for maintenance? Yes, five-twelfths.

514. He is bound to do so? Yes, if required.*

515. Did he supply that quantity? No, we had not the money to pay for it, and we had to reduce the quantity.

516. Was he agreeable to this reduction? There was a letter from him which cannot be found, in which he expressed his agreement.

517. Is that about the amount deducted from him on this contract? I think so.

518. Did he not in the following year supply this quantity, and at contract price, and was he not allowed to do so without competition? I think so, according to the terms of that letter.

519. In contract 17 was not the formation taken by Davies at 3s. per yard run much heavier than the formation on these two contracts? On Tamworth side is a heavy piece of cutting, as heavy as anything in 10, and heavier than 16, which is ordinary forming—17 is heavier than 16.

520. He took that at 3s. per yard run? Yes.

521. Did Davies make any claim for payment for cubic quantities on that contract? No, not to me.

522. Did you ever know formation to be paid for at per cubic yard? No, not for years back.

523. Is it not always paid for by the lineal yard, and why? Yes, because it is the simplest way, and to prevent any fraud.

524. Was not much heavier formation done at per lineal yard on the Northern and Mudgee Roads? Atcheson's contract (No. 19) is heavier, and on the Mudgee Road there are far heavier works done.

525. What was the average price of the formation on those roads, and generally is not 2s. 6d. a high price? It is a very fair price.

526. Do you consider it high or reasonable? Reasonable.

527. Was the metal on contract 16 reduced by your order? No; there was not the specified quantity when it came to be measured up.

528. How did the deficiency deducted in voucher arise? It was not supplied by Mr. Davies.

529. Was the contractor bound to maintain both contracts? Yes.

530. Will you point out the maintenance clause in both those specifications? (*The witness referred to the specifications.*)

NOTE (*on revision*):—The qualification of my answer referred to the power of the Commissioner to reduce and deduct amount—which is practically what was done.

- Mr. E. A. Nardin.
4 June, 1875.
- specifications.*) One is in manuscript, and the other is in print. No. 10 is to be maintained until consolidated, and No. 16 is to be maintained for two months only.
531. Will you point out those clauses? (*The witness pointed them out.*)
532. Was not the price for this included in the bulk sum? Yes.
533. Is the stonework in the culverts ashlar? No.
534. Did you order Davies yourself, or through your assistant, to put in better work than was specified for? No.
535. Did the contractor apply to you for extra payment for the improved character of this work before it was commenced, or object to do it in the way pointed out by you? No, not until after the Commissioner had visited the work.
536. Did the Commissioner give you written instructions, when he visited this work in progress, both with reference to culverts and banks, and for your general guidance? Yes, those I have handed in.
537. Were there not some culverts omitted, and why and when? The Commissioner did not think them necessary, and they were omitted.
538. Was it owing to the greater amount of excavation? No, the excavation would have been the same in any case.
539. Did you not receive a letter from Davies, through the Minister for Works, with a postscript asking you if you wished all future communications sent that way? Yes, I have it here.
540. There is a postscript to that letter;—is there not? Yes.
541. Did you not regard that postscript as an insinuated threat that he would expose some secrets between you? Not the postscript merely. I object to the whole letter, as my reply shows. (*Vide Appendices C 8 and 9.*)
542. Davies in giving evidence before this Committee, in answer to a question from myself, said, "The formation clause states the formation to be in the solid or made up with metal; and all holes, ruts, or depressions to be filled in with metal, ballast, or other allowed material" that is obliterated—"extra material for embankment to be obtained from any distance not exceeding — yards." That printed line is also obliterated;—can you explain that? It is an ambiguity—a bad description. I have already given my interpretation of the clause "extra material to be obtained"—shows that it was the same as any other.
543. Who was the overseer at the time this contract was completed; Mr. Holloway says he was there part of the time; who succeeded him? No one. I had Mr. Dowling, a cadet, there some months afterwards, but I had no one to deal with this matter after Mr. Holloway.
544. Will you look at this paper (*Appendix A 10*), which contains a statement of Mr. Davies's claims against the Government, and state whether the items for which he claims are correct or not? (*The witness referred to the Appendix.*) There are only three items I know of. The first is with reference to the sheathing of Dangar's Creek Bridge, £5 7s. 5d., and I say he is not entitled to that amount.
545. For what reason? Because against my instructions he made the sheathing 15 feet wide when I ordered 13. I have here the correspondence with reference to it. (*Vide Appendices C 10 and 11.*)
546. On the next item for 16-72, there is a claim of £448 1s.;—do you think this claim unjust or correct? Not correct.
547. In what respect? He is not entitled to what he claims for earthwork, and for stonework for culverts. I have certified to something extra for stonework.
548. What are your reasons for saying he is not entitled? Because the earthwork is included in the price for formation by lineal yard, and the stonework in the culverts is not beyond what we could demand by the specification.
549. We now come to contract 16-72;—will the same answer apply to that? Yes.
550. We now come to "sheathing three bridges, Liverpool Range"? That was ordered by me, and completed under my successor. That claim is for 2½ in. sheathing instead of 2 in., and I have already explained that it was done for his own accommodation, and that he is not therefore entitled to payment.
551. Who were the road overseers under you during the time of Mr. Davies's contract? Only Mr. Holloway; Mr. Dowling, a cadet in the department, was there afterwards.
552. Did you ever give instructions to Mr. Holloway to instruct Davies to do other work than in this contract? No other than I have certified for.
553. You say you had a letter from Mr. Davies, agreeing to your proposal? Yes, I am sure he agreed to my instructions.
554. Were the usual certificates given to Davies for these contracts on their completion? I never gave him any.
555. For what reason? I never gave them to any one.
556. Were they forwarded to the head of the department? Yes.
557. Was it not usual to furnish them to contractors? Not that I know. I was never asked for one before.
558. *Mr. Cohen.*] Under the rules of the department, would Mr. Holloway, as road overseer, have authority to order deviations from accepted specifications? No.
559. Mr. Dangar asked you whether you had given any order to reduce the metal, and you said you think not? Only with regard to No. 16.
560. Could you speak positively? It is my strong impression—I have no paper or document with reference to it—I did so in the case of 10, but not of 16.
561. Is it likely you would have given any verbal authority for any such reduction? I might have said it did not matter if there was not the full quantity. I was leaving the district, and was finishing up the work for my successor.
562. I will just call your attention to these figures in contract 10/72. The amount of the original contract was £1,911 8s. 6d.; the amount paid seems to be £1,421 4s.,—leaving a balance of £448 1s. You consider that charge ought not to be made? He has not done the work.
563. Then we can take the sum of £1,421 4s. as the value of the work done under that contract? Yes, the full value at schedule rates.
564. Then I see in contract No. 16 that the amount of the original contract was £1,115 19s., and that he has been paid £1,114 12s. 6d., leaving a balance of £1 13s.? Yes.
565. As to the extras, Davies claims £267 19s. 5d.? They are not extras—I could not certify to them as extras.

566. Keeping in your mind what has been done under contract 16-72, do you say that £1,114 12s. 6d. is a fair and reasonable compensation under that contract and for the work done? Certainly, according to my certificate.

Mr. E. A.
Nardin.

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567. Supposing we regard the work done irrespectively of the contract, would that be a fair and reasonable compensation? I have known men to get good prices and very bad prices.

568. Supposing there had been no contract, do you think £1,114 12s. 6d. would have been a fair remuneration for the work done? It is the remuneration he asked for under the contract. I cannot say whether it paid him or not.

569. What do you say to the three first items, under the head of additions, in Appendix A 11? What I certified for is right, and no other.

570. *Chairman.*] Will you explain to the Committee how the contractor can be asked to supply 4,476 cubic yards of earthwork on contract 10? From the way I interpret this as ordinary forming, and I look upon that alteration of top metal as a mistake which will creep into these things, and for which a clause provides in the general conditions, namely, that the Commissioner's decision upon such matters shall be final. It mentions that it shall be boned through, and that the banks shall be made up, allowance being made for shrinkage. That first mention of metal I look upon as a discrepancy which has crept in, and which the Commissioner should decide.

571. Did you pay for the maintenance of contract 10 what Davies claimed? I never heard of that claim, I think, before lately. It is not in my final certificate.

572. You have no recollection of its having been paid for? It has not been paid for under my certificate.

573. *Mr. Dangar.*] I understand that the signature to the document marked A 11 is not yours? Certainly not, and I should wish it to be struck out.

FRIDAY, 11 JUNE, 1875.

Present:—

MR. W. C. BROWNE, | MR. T. G. DANGAR,
MR. SCHOLEY.

H. BENNETT, Esq., IN THE CHAIR.

Henry Quodling, Esq., examined:—

574. *Chairman.*] Did you hold the position of road superintendent in the year 1864? I did.

575. Did you know Mr. Amos Davies as contractor for 1864, being for four bridges and a culvert in Wallabadah Gap? Yes.

H. Quodling,
Esq.

576. Did Mr. Davies complete those works to your satisfaction? Yes.

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577. Will your memory serve you to say if a first-class culvert was erected on the site of a second-class culvert, specified for in the contract? No, there was no class specified in the specification.

578. Is there a first-class culvert erected on that contract? Yes.

579. By whose authority was that done? The specification provided for it.

580. Were there sills used in three of the bridges? I am not quite certain, but there were sills used in place of piles in certain cases.

581. Mr. Davies's tender not having included a schedule rate of earth and rock excavations, did you arrange to pay Davies the schedule price of 15s. a cubic yard for rock excavation, and 3s. for earth excavation? That is where sills were used in place of piles. The specification provided first for piles, and, in the event of the ground not admitting of piles being driven, sills were to be placed, as far as my memory serves me.

582. Then how am I to understand your answer to the question to be that you did agree to give Mr. Davies the schedule price of 15s. a cubic yard for rock excavation, and 3s. for earth excavation? If I agreed to give it him he was paid certainly.

583. What will your answer be? That is my answer simply, and that I would not agree to the thing without having the authority of my superior officer, and if I agreed to it he was paid it.

584. Did you or overseer Brookes make the measurement of all the work done on this contract? I do not think overseer Brookes did anything in the way of measurement.

585. Did you do the measurement yourself then? Any measurements that were done on that work were done by myself altogether. I do not think any one else did any measurement. I used to make it a point to do my own work in that respect.

586. Did the value of the work done, estimated at schedule prices, exceed the bulk sum of the tender? That is a matter I never went into.

587. Did you report this excess of value to the Commissioner for Roads? No, I do not think I ever did, or made any comment upon it. The tender was for a bulk sum.

588. Was this excess of value paid to Mr. Davies, or only the bulk sum of the tender? I do not know anything of his doing any excess. He carried out his contract for a lump sum. I know nothing beyond that.

589. Did Davies claim to be paid more than the bulk sum of this tender? Not that I am aware of.

590. Was there anything special about this bridge and culvert contract that would prevent any alterations made in carrying out the work from being valued at schedule rates of tender or the prices agreed on at this time—anything special about this bridge and culvert contract? That is a very long question. It is simply this, as far as my memory serves me—but bear in mind it is quite ten years ago: Mr. Davies contracted to do the work for a lump sum, and beyond that I think the specification—as far as I can recollect—was carried out in its entirety, and I returned for that lump sum.

591. Is there anything special about the receipt signed by Mr. Davies for money received for this contract? Not that I am aware of. I am under the impression that at the conclusion of the work Mr. Davies signed a receipt in full for all demands. That was my practice, and I presume I did not deviate from it in this case.

592. Is there anything special about the receipts—what is it and why were they made special? I do not know anything special about this. Everything with reference to Mr. Davies was carried on in the ordinary way. I know of nothing special with reference to his affairs.

- H. Quodling, Esq. 593. On completion or since, did you ever furnish Davies with certificates for this work? Certainly not.
594. Were you aware of any difference between the Commissioner for Roads and Mr. Davies, that existed prior to Davies doing this No. 8-64 contract? No.
- 11 June, 1875. 595. Did you ever know of any metal or broken ballast to be brought on to a road contract and to be used without first being measured and paid for as per cubic yard? There may have been instances. I do not think in Mr. Bennett's time as Commissioner, but perhaps in Mr. Collett's time the practice may have been to measure it on the road a certain width and a certain thickness, but I do not think that has been the case in Mr. Bennett's time.
596. It is either yes or no that is wanted in reply to this question (*The Chairman repeated the question*)? Really it is a difficult matter to say yes or no to that question, inasmuch as I believe that some of the specifications during Mr. Collett's time as Commissioner provided not for the measurement of the metal in heaps as Mr. Bennett is in the habit of having done, but for being measured on the road.
597. If you have seen metal used without being measured, where was it? Ah, there is the question. Really I cannot tax my memory to say where. There may have been solitary instances of it.
598. Did you supply plans of the culverts that were built from your office? Yes, I believe I did.
599. When was it first intimated to you that you would be called upon to give evidence in this case? I got a communication I think on Sunday last by letter. Yes, it was on Sunday.
600. Have you previously stated anything that you believed you would be called upon to give in evidence before this Committee? It is just possible. Coming down by the train I was asked what was taking me down to Sydney by Dr. Creed, the late Member of the Assembly—a gentleman I do not know much about—but I do not know that I afforded him much information. I may have said that I was coming down for this purpose, but as to affording him any information I do not think I did. I do not suppose I would, he being a stranger.
601. We are to understand you have spoken to Dr. Creed of what evidence you were going to give here? I may have made remarks about it to Dr. Creed, but nothing that would in any way injure Mr. Davies, or compromise myself in any way. I am certain of that.
602. *Mr. Dangar.*] Will you look at that document marked A No. 10 (*handing the Appendix to witness*)? Yes.
603. That is a statement of Davies's claim against the Government;—will you kindly state what portion of that was under your supervision? The only item is this for which he claims £73 1s.
604. That is for contract 8-64 "for bridges and culvert, Wallabadah Gap"? Yes.
605. He obtained this work under tender? Yes.
606. Are you aware whether he did any work outside the contract? I am not aware that he did. If he did it is returned for. My memory will not serve me sufficiently to enable me to say whether he did or not.
607. Was there any dispute with Davies when you conferred with him as to the final voucher? I think not. I have no recollection of any dispute with Mr. Davies.
608. Did he make any claims for extras when signing the receipt? Not that I am aware of, or that I recollect.
609. Did he sign the specification for the culvert when he was signing for the other works? Yes.
610. Why did he not sign the plan? The plan is not forthcoming, and I cannot say positively whether he did or not, but I am satisfied that he did.
611. You cannot say his reason for not signing it? I say the plan is not forthcoming; I have made inquiry for it in the office but it cannot be found, but I have seen the specification which is signed, and that is for a first-class culvert, and I should have insisted upon his signing the plan.
612. Was a second-class culvert mentioned at all in the specification? Never. I beg to hand in the specification. (*Vide Appendix D.*)
613. Did not Davies sign a receipt in full of all demands? I believe so.
614. How many years ago was this? Some ten years.
615. Was there any Government schedule of quantities for this? No.
616. Did the Commissioner ever refuse to pay anything certified for by you? No.
617. Did you not alter the printed heading of the receipt column when Davies signed, making it a receipt in full of all demands? Very possibly I might have done so; if not so printed I should have altered it unquestionably; that is the practice.
618. *Mr. Scholey.*] Is it common to give certificates of work when a question is disputed. Mr. Davies has applied for a certificate for work done, and states that he cannot take legal proceedings for the recovery of his claim without it. Is it common to give certificates to contractors? No, it is not our practice. I do not know of any document being given to the contractor; he simply signs the receipt.

Ernest A. Nardin, Esq., further examined:—

- E. A. Nardin, Esq. 619. *Chairman.*] On your previous appearance before this Committee did you read a document purporting to be a report on Mr. Davies's claims to payment for earthwork and embankment, and ashlar work in stone culverts on contracts 10 and 16-72? Yes, and I furnished a copy of that report.
- 11 June, 1875. 620. Is the contract 19-69, referred to by you in that report, the same contract that was let to T. B. Kelly, afterwards carried out by Atcheson? Yes.
621. Was the length of road embraced by that contract pegged out and cleared before the work was let to Kelly? Yes; Mr. Bayley I believe pegged it out, but I did not follow his pegs.
622. In carrying out that contract did you adhere to that pegged and cleared line? To my own pegs.
623. Did you adhere to the pegged and cleared line—one line I suppose was cleared and the other not cleared? We adhered to the cleared line, excepting at the south end, where we made two through cuttings.
624. As a matter of fact did you not leave the cleared line and make two deep cuttings through projecting spurs of hills, whereas the cleared line ran round the end of those spurs? Yes.
625. For a considerable time after the completion of contract 19-69 did not some of the workmen that had been employed thereon complain to you that they had not been paid by Atcheson for work that had been done on that contract? I think not; I do not recollect anything of it.
626. Did J. C. Smith ever complain that he was not paid? The butcher at Wallabadah—Yes, he did; he spoke to me about it.

627. Are you aware that Atcheson is still using Kelly's name on the Mallice Bridge contract? I do not know anything about it. E. A. Nardin, Esq.
628. Is the formation clause of contract 19-69 the same as the formation clause of 10 and 16-72? I produce the specification for 19-69; it is in manuscript. (*Vide Appendix E 1.*) Printed forms were not then issued to us. (*The witness read the clause.*) 11 June, 1876.
629. Have you ever heard of Mr. Davies's workmen complaining of not having been paid for their work? No.
630. If you told Davies to make two deep cuttings not specified for in this contract, is it not likely he would ask you to pay for those cuttings if not included in his contract? Decidedly, if not included in his contract; anything not included in his contract would have to be paid for.
631. Would you have the Committee to infer, because you made Atcheson make deep cuttings and earth embankments on contract 19-69, referred to in your report, it privileged you to make Davies make deep cuttings and large embankments on contract 10 and 16-72, without rendering the Government liable to be paid for such contract? The intentions of the Government in both cases being the same I certainly look upon them in the same way. Mr. Davies tendered for Atcheson's contract at 2/6 per lineal yard. (*Vide Appendix E 2.*) He tendered for the others in the same way, and the printed specification for formation is more stringent than the manuscript specification that I have put in.
632. Are the Committee to understand that this earth embankment for which Davies now claims payment are actually performed in contracts 10 and 16-72? They have been done in terms of the specification, and to such gradients as I approved.
633. If these embankments are actually made in contracts 10 and 16-72, who do you suppose was the cause of their being made? I was the cause; they were made to such gradients as I approved.
634. You refer in your previous evidence to a pencil line having been struck by you on the longitudinal plans? Sections.
635. After you had struck that pencil line did you return the plans to Mr. Holloway with the pencil line remaining on them? I returned them only once with the pencil line on them; they were on the ground always afterwards; there was only one pencil line on them.
636. Does the pencil line show seven lineal yards shorter on the contour line of this road? -I cannot say.
637. Was 2,130 lineal yards of formation specified in Davies's contract 10-72 as being the length of formation? The specification will show—I cannot remember; but on the completion of a road it often varies a few yards one way or the other. It is impossible in the rough to measure so correctly as within seven yards in a length of that kind.
638. Was the length of 2,130 lineal yards of formation arrived at as the result of actual measurement before the contract was let? Whatever was specified was measured by Mr. Holloway, I think, but we never measure so accurately as to a yard or two.
639. After the completion of the formation by Mr. Davies, did you measure the length of the formation as finished and find it to be 2,123 lineal yards, that is, seven yards shorter than specified in the contract? It is seven yards shorter, and I measured it.
640. Did not this shortening clearly result from Mr. Davies working on the pencil line on the plan, making earth embankments and cuttings? Davies has not worked to the pencil line, and had he done so it would not have produced such a result as that.
641. You also referred to your having struck these pencil lines as only experimental lines? For our own guidance and use.
642. Did the Commissioner for Roads also experimentalise with pencil lines on these plans? I think not.
643. When the Commissioner visited contract 10 and 16-72, did he find Davies working to your experimental lines, and the plans with these pencil lines on them in Davies's possession? The sections were in Mr. Holloway's possession, and Mr. Davies never attained to the depths shown by this pencil line.
644. That is not an answer to my question: When the Commissioner visited contract 10 and 16-72, did he find Davies working to your experimental pencil lines, or were the plans with these pencil lines on them in Davies's possession? I think they were in Mr. Holloway's possession, and Mr. Davies was at work at the forming.
645. Did not these plans remain in Mr. Davies's possession till the completion of both contracts? They were left by Mr. Holloway, I believe, with Mr. Davies, but I did not know that till afterwards, when I wanted them.
646. Did you frequently visit the contracts while in progress, and see that Davies was carrying the embankment up to the pencil line? I frequently visited the contracts, but I never made any reference to the pencil lines.
647. If the pencil lines were only experimental lines, why did you not order Mr. Davies to desist from making these earth embankments, unless you had the intention of paying him? When the Commissioner expressed his opinion as to the depth of cutting, I explained to him that it was only an experimental line. There was no further reference made to that pencil line; it might as well have been rubbed out.
648. Is it possible that you were experimentalising on Mr. Davies's credulity, in allowing him to work to those experimental lines? I merely had the work carried out as I think it ought to have been done, and as Mr. Davies was bound to do it I did not wish to put Mr. Davies to any further trouble than was absolutely necessary.
649. As a matter of fact, did you not frequently refer to the subsequent measurement of these earth embankments, and payments at the rate of 10d. per cubic yard? Not that I know of.
650. In a memo. of instructions, as given by the Commissioner for Roads, relating to works in culverts, is it stated that they need not be of coursed masonry, but of flat stones, and the size of the culverts not to exceed the lithographed plans? That paper is in evidence.
651. Is it not the fact that there were hundreds of cubic yards of such thin, flat, stones brought on to contract 10 and 16-72? No, but stone to make metal of—not thin, flat bedded stones—ordinary quarry rubble—bluestone rubble.
652. Did you carry out these instructions as to the using of those flat stones, instead of coursed masonry in culverts? No; the culverts are all of the same character of work; boulders such as these would only cut into chunks. You could not make slices of it, as it was not laminated stone.
653. Did you carry out the instructions as to the size of the culverts not to exceed the lithographed plans? Yes.
654. Is it not the fact that two of the culverts built on contracts 10 and 16 exceed the lithographed plan by 2 feet? Yes; that is what the Commissioner referred to. 655.

- E. A. Nardin, Esq.
11 June, 1875.
655. Is it not the fact that in the two culverts referred to that the cover stones have since given way? There is a crack in the outer covering stone in both.
656. Did you not as a matter of fact instruct Davies that he should continue work in the culverts the same as that done before the Commissioner's visit? I do not think I ever said anything about it. The Commissioner's instructions were not for me to convey to Mr. Davies, they were for my own guidance, and Mr. Holloway was instructed thereupon.
657. Did you not, to the Commissioner, deprecate his interference in the way in which you were having the work carried out, as likely to lead to dispute hereafter? I did say something of the sort: that it was a pity to mention these matters before the contractor; the Commissioner was not aware that Mr. Davies was standing so close by.
658. Is it not the fact that the stones in these culverts are cubical through stones with picked or punched beds? The bodies of the culverts are made of ordinary rubble; the parapet walls are good coursed rubble with quarry faces.
659. Should you think that portions are not of ashlar stone? There is no ashlar in the culverts at all. I have already said that.
660. Have you seen Mr. Davies's estimate of the difference of prices between ashlar and rubble of 25s. 3d. per cubic yard? I saw something of the kind in one of the papers handed in by him.
661. Is that a fair estimate of the difference in value? It is rather high I think for the difference between rubble and ashlar, but there is no ashlar in the culverts.
662. Are you aware that in Davies's accepted tender for contracts 10 and 16-72, there is contained a schedule price per month for maintenance of road after completion? Yes, I am perfectly aware of that.
663. Did you dispense with the maintenance of the road on contract 10-72 under the £24 per month clause, and subsequently employ him for a few days with a small gang of men to put the road in order, for which he has been paid? That was after the expiration of his term.
664. If Davies maintained contract 16-72 for two months under your supervision, would you not consider him entitled to £40, at £20 per month, as per schedule in his accepted tender? Certainly not; had he maintained it for three months I should have considered him entitled to £20 for the extra month; the two months maintenance was part of his contract.
665. Did you ever see Mr. Davies's steam stone-breaking plant after fixing on contract 16-72? I saw it—once I think only.
666. How do you know that machine was broken and unfit for breaking metal? Mr. Davies told me so; he told me he had fresh jaws made of hardened iron.
667. Had Mr. Davies the same person in his employment as was employed in Maitland at steam-machine metal breaking under your supervision;—he had young Paton, I believe, at one time? Yes.
668. Is it not the fact, that when Davies was written to on the 8th February, 1863, to break the metal by hand, that his machine was in perfect order and working, and that it has never wrought since? I do not know.
669. Is it not the fact that there was a considerable outcry made by some of the workmen against the introduction of a steam stone-breaking machine in that district? I do not know; I dare say they did not like it.
670. Supposing the contractor had provided himself with expensive machinery for metal breaking, would you think it fair to lessen the metal supply? Certainly; he procured the machinery without reference to our accommodation; it was not for our accommodation he got it.
671. In a letter you laid before the Committee you referred to the shortness of money as the reason why the metal should be reduced on contract 10 and 16;—if Davies had previously offered to carry out contract 10 without receiving any money for the contract till the following year, why ask him to reduce the metal? Because the Commissioner wrote to me to say there was no more money. Mr. Davies spoke to me some time before about doing work on credit, but it was not thought advisable that he should be allowed to do so. Mr. Davies had the maintenance metal afterwards to supply, or most of it.
672. Is it not the fact that Davies did not during the carrying out of the contract 10 and 16-72 assent to reductions being made? He assented, as I have said before, by letter, as I believe, but the letter cannot be found.
673. Did you not think it a hardship on the contractor to have such machinery thrown altogether out of employ? I cannot say.
674. Could there not have been drawn a specification that would have distinctly described contracts 10, 16, and 17-72, as now completed? The specification does in my opinion describe it, with the exception of the mistake as to the first metal—and that is evidently a mistake.
675. *Mr. Dangar.*] You said in your evidence the other day before the Committee, that the only work that Davies did under your superintendence, and for which he had a claim upon the Government, was for those works contained in the vouchers you gave him? Yes, for works completed until the time I left.
676. Will you look at these two vouchers (*handing the same to witness*), and say if these are the vouchers to which you allude? Yes, copies of them. (*Vide Appendices E 3 and 4.*)
677. Will you look at the Appendix to the printed evidence, marked A 11, and say whether the signature to that form "E. A. Nardin, Road Superintendent" is yours? Certainly it is not.
678. Did you certify to the correctness of this statement? Certainly not.
679. Will you also look at Appendix A 12, and state whether that is your signature? Certainly it is not.
680. You have not certified to the items contained in these schedules? To some of the items, but not as they appear here.
681. You have certified to no original document of which this is a copy? No.
682. These documents to which your name is appended are not original documents? No, I know nothing about them.
683. A 11 refers to contract 10-72, and I find, on comparing it with Schedule E 3, that Mr. Davies's claims for "4,476 cubic yards of earthwork used in rising roads at 1s. 3d.,—£279 15s."? That is included in the bulk price for formation.
684. There is also "129 cubic yards 10 ft. 4 in. ashlar work in culverts, at 25s. 3d.,—£162 17s. 3d."? That cannot be admitted.
685. Is that a just claim? No, it is included in the specification.
686. It is not extra? It is not extra work.
687. You said before that there was no ashlar work? Yes.

688. "26 cubic yards 5 in. ballast, at 4s. 6d.—£5 17s;"—is that extra work, or has he any claim for it? I E. A. Nardin, do not know anything about it. Esq.
689. On referring to these papers I see that the fines have been remitted? I deducted them as directed by the Commissioner; they have since been remitted. 11 June, 1875.
690. Then, adding up this amount, I find it to be £223 19s.;—am I to infer that that is the correct sum due upon that voucher to Mr. Davies? It is £104 more than I certified for; that is to say, the fine has been remitted, and £20 for culverts was paid, which I did not return for.

MONDAY, 14 JUNE, 1875.

Present —

MR. W. C. BROWNE,
MR. T. G. DANGAR,

MR. LACKEY,
MR. SCHOLEY.

H. BENNETT, ESQ., IN THE CHAIR.

Ernest A. Nardin, Esq., further examined:—

691. *Mr. Dangar.*] That is the voucher, marked E 4, which you gave Mr. Davies? Yes. E. A. Nardin, Esq.
692. Do I understand that the whole of the work performed by Davies is included in this voucher? With the exception of £14 12s. 6d. for extra stone work; that is on a supplemental voucher. 14 June, 1875.
693. That supplemental voucher is for an extra quantity of stonework, amounting to £14 12s. 6d. in this Appendix A 12? Yes.
694. In this document, marked A 12, there is "1,468 cubic yards earthwork used to rise the road, at 1/3, £91 15s.";—is that correct, or is it included in that voucher? It is included in the formation.
695. In this final certificate? Yes.
696. "101 cubic yards 7 feet ashlar work in culverts, at 25/3"? Not admitted; there is no ashlar work done at all.
697. Is it included in this? It is included in the price of the culvert.
698. "Two months' maintenance, as per tender, per month £20—£40?" That is included in the bulk sum, according to the tender.
699. The next item is "34 cubic yards 5 inches ballast, at 4/6—£7 13s."? I presume it is the ballast that went on the top of the culvert, and therefore it is included in the bulk sum for the culvert.
700. Then there is the item "misdeducted from 12-inch pipe drain, intended for contract 17-72—£2?" I do not know what that is for—something on contract 17-72.
701. I suppose that is some other contract? Yes.
702. There is an item of £5 7s. 5d. for sheathing Dangar's Creek Bridge, at 3/8 per foot;—perhaps you will explain that? That is for the additional two feet, respecting which I have already given evidence.
703. That is an extra item, not included in this voucher? It is not included in this contract.
704. Also a sum of £10 for sheathing three bridges? That has nothing to do with this contract.
705. Are these two claims correct? No.
706. They have never been done? The two feet extra has been done, but done wrongfully and against instructions. The £10 was for the quarter inch of extra thickness which he did for his own convenience.
707. *Mr. Scholey.*] You do not admit this £10? No.
708. Nor the £5 7s. 5d.? No; in my first examination both these items were explained.
709. *Mr. Lackey.*] You have stated that Mr. Davies had a good plant to carry on the work;—will you state what that consisted of? A steam-engine, stone-breaking machine, a plough for forming, a horse-scoop, sufficient drays, tools, and so forth.
710. Was the stone-cracking machine fit for work? It worked at first but the jaws failed after.
711. Did Davies break the maintenance metal supplied in 10-72 with it? No, not what he supplied for me; it was broken by hand.
712. Was the Commissioner aware that Davies offered to complete the work on credit? No, I think not.
713. Were these so-called embankments more than was contained in the formation clause? No.
714. Did the price contained in the schedule as for formation include everything to be done under that heading in the specification? Yes.
715. Was not Davies paid for such formation at the full price per lineal yard tendered? Yes.
716. Was it not a fair price, and the same that Davies tendered for No. 17, which was heavier work? 17 was 3/, and this work was 2/6.
717. Was not the formation on the Mudgee Road generally heavier than that done by Davies on this contract? A great deal heavier in most parts.
718. What was the average price given for that? I have made out a statement and will put it in evidence. (*Vide Appendix E 5.*)
719. Was not the quantity of metal omitted on No. 10 about equal to that specified to be left stacked outside of the road after the completion of the contract? Yes.
720. Was not the greater portion of this supplied by Davies in the following year and paid for as maintenance metal? Yes.
721. *Mr. Scholey.*] Are there any extras in 10-72 contract? Yes.
722. What is the amount? It is shown in the form which I have handed in. The additions amount to £83 18s. 6d.
723. That he has not been paid? Yes, but the deductions amount to £594 3s., and the one amount has been added and the other subtracted.
724. Then there is nothing due on No. 10 contract? I say nothing is due.
725. What do you say about No. 16? I say there is nothing due.
726. Is it common to give certificates to contractors after work is finished? I never was asked for one, and I never gave one.
727. *Chairman.*] You said something about your name being on the certificates handed in by Davies to the Committee? Yes.
728. In these printed papers? Yes.
729. Have you seen the originals of these certificates in Davies's handwriting? No, I have not.
730. Is the name written on them anything like your own signature? I have never seen them, therefore I cannot say.

Alexander Charles Bayley, Esq., examined:—

- A. C. Bayley, Esq.
14 June, 1876.
731. *Chairman.*] What is your position in the Government service? Road Superintendent.
732. How long have you held that position? About nineteen or twenty years.
733. During that period have you been entrusted with the supervision of the contracts of the bridge and approaches at Goonoo Goonoo south of Tamworth, and of the bridge and approaches north of Tamworth, of contract 3-67 at Sugar-loaf Gap, and others performed by Amos Davies as a contractor? Yes, of Goonoo Goonoo Bridge south and approaches.
734. And of Goonoo Goonoo north? Of a bridge at Goonoo Goonoo north under a schedule of prices, but no approaches.
735. Did Mr. Davies perform those several contracts under your supervision and to your satisfaction? Yes.
736. Do you think that inviting competitive tenders for public works a conclusive mode of ascertaining the current prices for such work? That is a mere matter of opinion.
737. Were tenders invited by the Government for the first or the one known as the south bridge over the Goonoo Goonoo Creek, Tamworth? I believe so.
738. Was Mr. Davies's tender accepted? I believe so. I know I took it from another road superintendent. He did not sign the bonds with me—I have not seen the bonds.
739. Did the specification for the south bridge include the supply of earthwork, ballast, metal, and border stone for the approaches? Yes.
740. Did Davies's tender include a schedule price of 3s. for earthwork at per cubic yard, 15s. [for ballast, and 20s. for metal per cubic yard? Yes, I think that is correct.
741. Were there any alterations, additions, or deductions made in carrying out the south bridge contract? No, I think not.
742. Were there alterations in the shape of additions or deductions on the amount of contract? I think not. I could not recollect, it is so long ago. There may have been some deductions made for less piles driven.
743. Do the tenders mention a bulk sum for this bridge contract, Goonoo Goonoo Bridge south? Yes.
744. And are the Committee to understand that you made no deductions from the bulk sum of this contract? I am not sure whether there were some deductions for piles driven less the quantity specified. There was no other that I remember.
745. You have no recollection that you made any yourself? No.
746. Soon after the completion of this work was the old north bridge that was over Goonoo Goonoo Creek washed away by the flood? Yes.
747. Did the Commissioner for Roads instruct you to let to Mr. Davies the construction of the north bridge with the schedule of prices for Goonoo Goonoo south, and according to the plan and specification for Goonoo Goonoo Bridge south? Yes.
748. Did you make such an engagement with Davies? I made an engagement for the erection of a bridge.
749. I suppose that answer is in effect that you did make an engagement? For a bridge but not for approaches.
750. I did not say anything about approaches in that question. On the completion of the second work were there any alterations made in the schedule of prices for ballast and metal? There was a new agreement for approaches.
751. There is nothing about approaches in the question. On the completion of the second work were there any alterations made in the schedule of prices for ballast and metal? There was another agreement.
752. To what amount were the alterations made? There was a different class of work altogether. There were stone walls built, and there were different prices for that. The price for earthwork and metal were different.
753. Were the alterations that were made deductions on the schedule of prices? They came to as much as if he had the original schedule of prices, but it was a different description of work altogether to the approaches to Goonoo Goonoo Bridge south.
754. Did Davies object to deductions being made as being a breach of engagement? There was no engagement for approaches.
755. Did Davies object to deductions being made as being a breach of engagement? He objected to these prices, but he had commenced the work before any order had been given or any sanction had been given to begin the approaches.
756. Have you any documentary evidence to produce to the Committee to show that Davies in any way concurred in the deduction being made? The vouchers were forwarded to the office.
757. Do you produce any documentary evidence to the Committee to shew that Davies in any way concurred in the deductions being made? As I have been informed, the documents are already before the Committee, with the exception of those of which I now beg to hand in copies. (*Vide Appendix F 1 to 4.*)
758. Supposing the Commissioner to have stated that approaches were not intended in the second work, can you show any other written agreement for the approaches? No, only verbal. Here is the original agreement for the erection of the bridge. (*Vide Appendix F 5.*)
759. Are the Committee to understand that no deductions were made on the metal and ballast from the previous schedule rates, and that you cannot produce any written engagement with Davies embodying such alterations in prices? It had nothing to do with the schedule of prices—the approaches. There is a document signed for the erection of a bridge, and no approaches are included, and they were not included.
760. Is it not the fact that there never was any separate engagement for approaches in existence? A verbal agreement.
761. Have you seen the two letters of Mr. Wm. Boyd to Mr. Amos Davies in the Appendix A 23 and 24, and also the documents marked A 21 and 22? No. (*The witness referred to the papers.*) Of course I have seen the schedule of prices.
762. Was this work at a standstill until Mr. Davies received Mr. Boyd's letter, marked A 23, giving the level of the shoulder of the piles? No, it was not.
763. Was the bridge finished within seven weeks and one day from the date of Mr. Boyd's letter, giving the height of the bridge? It was from the time of entering on his contract that the time was to count according to the agreement in the document I have handed in.
764. How do you justify the infliction of a fine of £5 on this work? Because he was actually over his time.

765. A week? A week.

766. Seeing that the work was completed in May, 1864, why was the sum of £49 ls. detained till December, 1864? I do not know.

767. Did you make the engagement with Davies, marked A 5 in the Appendix to Mr. Davies's evidence? That is the document (F 5) referred to in this A 5.

768. Is the schedule marked A 22 a correct schedule of prices in the first bridge contract as per tender? Yes.

769. Will you look over the schedule list of items;—is the first item, piles over ground per lineal foot of 2s., a very low price? No, not at that time.

770. Look at the items 3 and 4;—are not they also very low prices for the material and workmanship of fixing that bridge? No, not as prices were generally going then.

771. Are the items of earthwork 3s., of ballast 15s., and of metal 20s. per cubic yard, high prices or low? Exceedingly high.

772. Were these high and low rates taken together and paid in the first bridge contract? There were no low rates.

773. My question was, whether taking them altogether? There were no low rates; it was the average rate that was going at the time.

774. Was the making of the approaches included in the specification of the Goonoo Goonoo Bridge south? Yes.

775. Were the approaches included in the tenders that were accepted for the first bridge contract? South?

776. North? No, the approaches were not included in the north.

777. In the south bridge they were included? Yes.

778. Then the Committee are to understand that the tenders for the first bridge being competitive and accepted, containing the schedule rates marked A 22 in the Appendix, brings down the rates when taken together to be correct rates? Yes, they were correct rates.

779. That is, the schedule rates in the tender, when taken together, were current rates and accepted by the Government for the first bridge contract? Yes.

780. On the other hand would it not, if you cut down the highest items without raising in proportion the lower items, bring the cost below the lowest rates in accepted tenders? They were not below the current prices.

781. Is not this what you did on the second bridge contract,—that is, you cut down the prices of metal and ballast by more than a half without proportionately raising the lower price of the timber in the schedule? It is not the lower price of timber in the schedule. It was not a low price at the time.

782. The question rather more bears on this: Is not this what you did on the second bridge contract, that you cut down the price of the metal and ballast? I did not cut down the price. It was a separate agreement altogether.

783. Turn to the account marked A 13 in the Appendix, and say were the items entered under the original contract column in accordance with the first bridge contract? This is not my certificate—I have nothing to do with that. My signature has no business to be attached to that, and I beg to have it withdrawn.

784. *Mr. Dangar.*] You deny the authenticity of that document? I deny that it was ever sent into the office by me.

785. Look at that document and say if the signature appended to that document is yours (*handing the original of the Appendix A 13 to witness*)?

786. *Chairman.*] How do you justify the items headed—"Disputed Deductions?" I dispute the document altogether.

787. Was Mr. Davies the contractor for contract 3-67 under your supervision? Yes.

788. How many first-class culverts were specified? Two.

789. How many were built? Three.

790. Was Mr. Davies paid any additional sum for the extra culvert? No.

791. What is the date of the first payment on this work? 24th August, 1867.

792. As the contract was entered into in May or June, why was the first payment delayed till the 12th of September? It was on the 24th August it was paid.

793. *Mr. Dangar.*] Were the payments made by you or by Mr. Bennett? They were paid by the Commissioner of Roads.

794. I suppose you were merely the superintendent of the work? Yes.

795. *Chairman.*] As a matter of fact, was not this contract, including this extra work, completed within four months of the first payment, the specified time being five months? It is not from the first payment, but from the date that the contract was accepted. It has nothing to do with the first payment.

796. On your giving Davies an order for extra metal did you not promise to allow him one month's extension of time if required? He was over the month—nearly three months over time on the work, and he was fined only one.

797. Since the infliction of this fine of £21 18s., have you not promised Mr. Davies to recommend its remission? No.

798. Are you aware that the recovery of the balance due on contract 3-67 was placed in the hands of Mr. Wallace, the solicitor, of Tamworth? I heard so.

799. Did you instruct Mr. Holloway to bring Mr. Davies to meet you at Bowling Alley Point, for the purpose of discussing these claims? No, never.

800. Are you aware that the consideration of such claims was afterwards deputed to Mr. Statham? Yes, I heard so.

801. *Mr. Scholey.*] You only heard so? No, I never knew it officially.

802. *Chairman.*] Did Mr. Statham have charge of the completion of the iron foot-bridge at Bowling Alley Point? No, he did not finish.

803. Did he have charge of it at all? Yes.

804. Did Mr. Davies send in any tender addressed to you for this work? Yes.

805. Did you ever furnish Davies with certificates that would enable him to go to law to recover the balance before-mentioned? I never gave certificates to any one; they were always forwarded to the head office.

806. Have you ever known Davies to receive a written order, signed by the Commissioner and counter-signed

- A. C. Bayley, Esq.
14 June, 1875.
- signed by the superintendent, for any alterations, additions, or deductions in the contracts? No.
807. Is it customary to make alterations, additions, and deductions on contracts without a written order, when alterations have been necessary? They have always required the sanction of the Commissioner before they have been carried out.
808. Had you sometime ago charge of the road between Wallabadah and Tamworth? Yes.
809. What is the average price of a second-class timber culvert, having a 6 feet waterway, in the neighbourhood of Round Hill, near Goonoo Goonoo? I could not tell; I have not done any work there since 1870.
810. Do you know the road contract that was done by Mr. Davies at the foot of the Round Hill, near Goonoo Goonoo, and known as contract 17-72? No, I do not know.
811. Are there any large earth embankments on that work, excepting the approaches to the culverts, as to what you would call heavy forming? I do not know anything about the work.
812. Have you ever received instructions not to employ Mr. Davies on public work? Yes, not to accept his tenders without referring them to the head office first.
813. How often have you received such instructions? Once or twice.
814. When the damage was done by the floods some months ago to Tamworth Bridge approaches, that made it necessary to lengthen the bridge, did you give Mr. Davies the opportunity to carry out that work? I obeyed the orders given me to carry out that work.
815. Did you let the lengthening of Tamworth Bridge to the contractor for Cockburn Creek Bridge without competition? It was let to him without competition, with the proviso that he took the timber that was ready at Cockburn Bridge into Tamworth, so that there should be no delay in the opening of the bridge.
816. Did you pay him any higher rates for the lengthening of the bridge than the schedule prices for Cockburn Bridge? At the schedule of prices that were sanctioned by the officers.
817. Did you ever know of metal or broken ballast to be brought on to a road contract and used without being first measured and paid for at per cubic yard? No.
818. Did you ever send a report to the Commissioner for Roads, stating that if the south bridge in Tamworth had been valued at the schedule rates of tender that the amount to be paid would have been for the first work exceeding £1,500? No.
819. Are you aware that such a report, if made, would have been untruthful? Of course it would be untruthful.
820. Will you look at the certificate marked A 15 in the Appendix. Is that a true certificate of contract 3-67 as finished? No, it is not. Here is a copy of the certificate I sent in. (*The witness handed in the same. Vide Appendix F 6.*)
821. Will you point out the error, if there is any? There is an error in the number of cubic yards of metal, there is an error in the first-class culvert, and there is omitted nine chains of clearing at 10s. May I give an explanation as to this claim for a first-class culvert in A 15? In the specification and tender put in for this work there was a 26 feet culvert required, and the line of road was altered a little above, for which an allowance of nine chains of clearing was made for shifting the road. It was found then that a 26 feet culvert was not required, and instead of it there were two culverts of 13 feet each put in. There were actually three culverts put in instead of two as in the original specification, but one instead of being 26 feet was converted into two of 13 feet each. This was agreed to by Mr. Davies at the time.
822. *Mr. Dangar.*] Will you show the Committee what portion of this work, for which Mr. Davies claims, was done under you? This contained in A 13.
823. Is that the only portion of this work done under you? Goonoo Goonoo Creek Bridge north, and Goonoo Goonoo Creek Bridge south, and 3-67, Flaggy Gully to Sugar-loaf siding.
824. In paper A 13 Mr. Davies has "disputed deductions," "the ballast reduced by 10s. 6d. per yard—£59 17s."—is that correct? No, he has no claim at all for it.
825. "The metal reduced by 11s. per yard—£28 13s. 8d."? He has no claim for it.
826. "Fine imposed, £5"? That was imposed.
827. That was all you had to do with? Yes.
828. Refer to A 5 in the Appendix. What do you mean by your undertaking "to pay Amos Davies for erecting a bridge over Goonoo Goonoo Creek at schedule of prices for G. G. B. South, for completing to his satisfaction the following works, according to the general printed conditions and within the space of two months";—is that an extra payment to anything included in this? That is for the erection of the woodwork of a bridge.
829. And according to your undertaking included in this certificate A 13? That is not my certificate; and is calculated to place me in a false position.
830. *Mr. Scholey.*] I suppose you protest against that? Yes, against anything that bears my signature, which is not really signed by me, as this is not.
831. *Mr. Lackey.*] Were you present at Tamworth when the Commissioner was trying to arrange with Mr. Davies about No. 10 and 16-72? Yes.
832. Did not Davies refuse all explanation and confine himself to reiterating, "I want my bulk sum"? Yes.
833. Did you not in Mr. Boyd's presence make a verbal agreement with Mr. Davies for this work at Goonoo Goonoo? Yes.
834. Did not Mr. Boyd write to the office confirming this? Yes.
835. Was there a telegram to the same effect? Yes.
836. Do you produce those papers? Yes. (*Vide Appendices F 7 and 8.*)
837. Had Davies any timber ready for the Tamworth Bridge prepared at the time of the flood, when it was lengthened? Not that I am aware of; I never heard of such a thing.
838. Was there not the most pressing necessity for the immediate completion of that work? Yes, it was exceedingly urgent.
839. Did the Commissioner ever refuse the payment of any amount certified to by you? No.
840. Never at any time? No.
841. *Mr. Browne.*] Are you aware whether Mr. Davies has any plant on hand? I am not aware what he has.
842. *Chairman.*] Did not Mr. Davies lend Mr. Murphy piles for Cockburn Bridge at the time of the flood? I am not aware that he did.
843. And his plant too—the piling plant? I never inquire of a contractor where he gets his plant; he has simply to carry out the work.

844. *Mr. Lackey.*] Did you see copies of the printed evidence taken before this Committee exhibited at A. C. Bayley, Esq. Tamworth before you came away? Yes, I did.
845. Did it include copies of all these papers (*referring to the printed evidence, Appendix, &c.*)? Yes, it was like these. 14 June, 1875.

Ernest A. Nardin, Esq., further examined:—

846. *Chairman.*] Are these papers your original final certificate for contract 10 and 16-72 (*handing to Witness originals of Appendices A 11 and A 12*)? No. E. A. Nardin, Esq.
847. Is the Committee to understand that you have certified by final certificate for work shown as completed on contract 10 and 16-72? Yes. 14 June, 1875.
848. After making final certificates what do you do with them? Send them to the Commissioner for Roads for payment.
849. Did you for contracts 10 and 16 send final certificates to the head office for payment? Yes.
850. Were such certificates paid by the head office in due course? They were paid.
851. *Mr. Browne.*] Do you know that of your own knowledge? No, I had left the district.
852. *Chairman.*] You do not know whether they were paid or not? I do not know as a fact that they were paid.
853. Did Davies apply to you by letter to obtain final certificates for 10 and 16? Yes, as in my former evidence I stated.
854. Did you furnish Davies with them? No, I handed in my letter in reply to him.
855. Did Mr. Davies more than twelve months after you had left the office point out to you and the Commissioner that your certificates, then in the Commissioner's office, were incorrect? No, not that I am aware of.
856. Have they since been altered or fresh ones made? No, they have not been altered since. The Commissioner has added to them as to the fines, as I have before pointed out.
857. Then they have been altered since? They have been added to.
858. Then they have been altered since in the Commissioner's handwriting? Yes, added to.
859. Are those papers the altered certificates (*referring to those handed in by the Witness*)? Those are copies of the final certificates referred to.
860. Who made those certificates? I copied them from the originals; that is my handwriting.
861. Is it not usual when you make out final certificates to fill in the printed form on the other side with the detail and measurement of the work done? Certainly—all the details.
862. Was your final certificate filled up with the details of the measurement? Yes.
863. Where did this paper come from? It was copied by me in the office here in Sydney.
864. This detailed measurement form after being filled up has it not to be signed: "We hereby certify that the above return is a fair and correct statement of the contract to which it refers"? Yes.
865. Did you sign the warrants you sent in to the head office? Yes, both sides.
866. *Mr. Dangar.*] I infer from you that the papers marked A 11 and 12 are not true copies of the final certificates? No, they contain items which do not appear in my final certificates.
867. How is it that the documents you have handed in are not true copies of the others—how is it they are not filled in this side? Because this side as being the final certificate is considered to be sufficient.
868. *Mr. Lackey.*] Will you state the nature of the alteration in both documents? There is no alteration.
869. *Mr. Dangar.*] These alterations are in favour of Mr. Davies? The additions are.
870. There is none against him? No.
871. What was the gross sum remitted? There was a fine of £84 in the case of 10 A, and of £132 in the case of 16 A.
872. Both of these have been remitted? Yes.
873. *Mr. Lackey.*] Are not the final certificates handed in by you complete for payment of contractor? Yes.
874. *Chairman.*] Are these papers true copies of the final certificates you have put in to-day? Yes; that is all that is in my handwriting and that is signed by me.

Alexander Charles Bayley, Esq., further examined:—

875. *Chairman.*] Was the bridge only included in the second contract? Only the bridge in Goonoo A. C. Bayley, Esq. Goonoo north. 14 June, 1875.
876. Are the papers you have put in to-day true copies of the final certificates? I believe they are—they are certified copies.
877. Would you read W. Boyd's telegram referring to this work? It is in evidence before the Committee.
878. Was Boyd's telegram three months after the work was completed? I could not recollect the actual date.
879. Was Mr. Boyd discharged from service about this time? I think it was about October he left my district.
880. Is there not much more work in building two 13 feet culverts than in building one 26 feet? There is more work, but there is a great deal less work in the approaches in the two different sites. There would have been more than treble the amount of earthwork in the original culvert than where the two were put.
881. *Mr. Lackey.*] Was it not agreed to by Mr. Davies, this change from two to three culverts? Yes; it is much easier to get timber for 13 feet culverts than for 26 feet.
882. Then you think the change was to his advantage? I think it was about equal, it was a benefit to him not to have to get timber for twenty-six feet span culvert.
883. Then he rather benefited by it? Yes.
884. Did he claim extra payment at the time of completion? No, I never saw anything about it until I saw it in these printed documents in Tamworth.
885. Where did you see these printed documents in Tamworth? In the public street.

- A. C. Bayley, Esq. 886. In this was the first intimation you had of his making such a claim? Yes.
 887. *Chairman.*] What is the length of the sills and caps? My memory would not go that distance. I could not tell from memory what that work was. I have so much going through my hands every year that it would be impossible for me to give the particulars of a special culvert so far back as 1867.
 14 June, 1875. 888. Are the sills and caps not as long as the girders would have been for the large culvert? No, certainly not.

TUESDAY, 15 JUNE, 1875.

Present:—

MR. W. C. BROWNE, | MR. MACINTOSH,
 MR. SCHOLEY.

T. G. DANGAR, ESQ., IN THE CHAIR.

William Christopher Bennett, Esq., further examined:—

- W. C. Bennett, Esq. 889. *Chairman.*] I think when you were examined the other day there were some documents which it was thought necessary to have before the Committee you could not then produce? Yes, I now beg to hand them in. The first is Mr. Bayley's report on Goonoo Goonoo Bridge (*Vide Appendix G 1*); also a report on the transactions with reference to Cox Creek Bridge. (*Vide Appendix G 2*.) I think those are all the documents that were asked for, with the exception of the original specification for Goonoo Goonoo Bridge, which is missing, and Mr. Davies's reply to Mr. Nardin's letter, in which Mr. Davies assented to the changes in the contracts. The letter was lost when Mr. Nardin removed from Murrurundi. We have sent up directions to look through the papers that were left and it has not been found.
 15 June, 1875. 890. Mr. Davies in his petition to the Assembly states that "work is now withheld from your petitioner, thereby depriving him of his ordinary means of livelihood;"—was there any justification for that? Somewhere in 1869 Mr. Davies made so many claims and disputed every arrangement that had been made with reference to his contracts that we found it impossible to get on with him unless these things were arranged, and we refused to give him any further public works unless they were settled up.
 891. I suppose that would allude to the second paragraph? We could not accept his tenders because we could not get the work out of his hands. There were contracts on the Manilla road that have not been referred to in this evidence, that we could not get out of Mr. Davies's hands. There were great complaints made about the state of the road, and we were at length obliged to wind up the contracts and to take them out of Davies's hand unfinished. There were all sorts of disputes arising with reference to them, and the time of the department was constantly wasted with these disputes.
 892. Is it the fact that other tenders have been accepted at higher prices than his? I think they have, but we found that although Mr. Davies's prices might be lower in the first instance they were higher in the end, because all these inquiries into complaints cost money or the time of officers of the department which is even more important.
 893. Mr. Davies in his petition says "there is now being unjustly detained from your petitioner large sums of money for work actually performed, for no other apparent reason than to coerce your petitioner into the acceptance of a much less sum of money than is actually due and owing;"—is that true? No, it is not the fact. Mr. Davies's accounts remained unsettled, and of course we could not make payments unless the accounts were settled some way or other. He was paid up very closely, excepting in these two large contracts on which he was paid within £300 of the amount due, deducting fines.
 894. Then he says he "is restrained from legal remedy by the officers of the Roads Department unjustly withholding your petitioner's certificates for the several works completed;"—has he been refused these certificates, or is it necessary that he should have them? It is not the usual course to give certificates to the contractors. We hold his receipts for the earlier works, and his letter withdrawing all claims, which he has ignored altogether. We gave copies of the certificates of the later works, with the view of enabling him to institute legal proceedings, and we never knew that they were invalid without my signature, or that legal objection had been taken against them, until we heard it in the course of the evidence given before this Committee. If he had applied to me for my signature to the certificates I would have given it, as I should have been glad to have had the matter disposed of in a Court of Justice, but Mr. Davies never applied for it. In fact Mr. Davies made such constant complaints that it was almost impossible to attend to anything else but his business. I used to get two or three letters a day from him.
 895. *Mr. Scholey.*] With reference to Appendix A 10 there is a balance of £93 10s., stated to be due to Mr. Davies;—is that due to him? No, that is a claim by Davies for 10/6 a yard on stone supplied for the approaches to this bridge. There was no contract with Davies to supply this stone at that price. Mr. Bayley made an arrangement with him to supply it at a lower price, which he has paid.
 896. He has paid that as per agreement? Yes, Mr. Bayley has explained that Mr. Davies has signed a receipt in full, and he has written a letter to the department withdrawing all that claim.
 897. Then there is £73? That is the contract in which Mr. Quodling was concerned as superintendent, and it is distinctly stated in the specification. Mr. Davies tendered a bulk sum for that contract, and he was paid at the time, as Mr. Quodling states, all that was due to him, and made no remonstrance, and no remonstrance was made to me.
 898. Did he give you a receipt in full? Yes, for that also, the usual receipt.
 899. Then there is £68 8s. 8d.? A portion of that is for the culvert which Mr. Bayley explains was altered with Mr. Davies's consent. In order to save Mr. Davies expense in timber in embankments he was allowed to put in two 13 feet culverts instead of one 26 feet. That was clearly for his advantage, as it saved embankment and long timber. Davies consented to it, and gave his receipt for it. There was also a fine on that contract, which Mr. Davies claims to have remitted, but he is not quite accurate in his statement, as I will explain:—The time dated not from the first payment but from the acceptance of the tender, and it was eight months and seven days from the latter date to the forwarding of the final voucher, and Mr. Bayley has explained that although Mr. Davies was three months over the time only one month's fine was deducted, and no claim was made for it at the time.

W. C.
Bennett,
Esq.

15 June, 1875.

900. £5 7s. 5d. for sheathing Dangar's Creek Bridge? That has been explained to the Committee where the sheathing was made 2 feet wider than the contract.
901. Has he been paid for that? No.
902. The work is there? The work is there, but he has not been paid, and is not entitled to it.
903. Then there is the balance of £448 1s.? That is made up of a claim for earthwork formation, and ashlar in culverts in contract 10.
904. Is there anything due on that? No.
905. Did he give a receipt in full for that? No, he has given the ordinary receipt; when I say the ordinary receipt I think we got a receipt from the Bank for that.
906. I suppose on his account? On his account.
907. Then there is an amount of £267 19s. 5d. for contract 16-72? I might add, before we leave No. 10, that of this metal which is deducted from that contract half, if not more than half, was supplied by Mr. Davies in the next year, and paid for as maintenance metal at his contract rate. There was 1,067 yards deducted, and 665 supplied in the next year, so that the actual deduction would be only 400 yards.
908. Do you consider that there is anything due on that £267 19s. 5d.? No, nothing.
909. Davies has been settled with for the whole? The amount due to him has been paid.
910. Then there is a sum of £10? That is where Davies employed timber a quarter of an inch thicker than was specified for, for his own advantage. That is not due; in fact every voucher certified by an officer has been paid by me; I never stopped anything from him.
911. There has been a great deal said about certificates;—is it usual to give these certificates to contractors? No, it is not; but we have no objection to give this certificate; we gave what we understood to be enough, but it was not signed by me, but if my signature were required I should have had no objection to do so.
912. *Mr. Browne.*] How long is it since Davies has been engaged as a contractor under the Government? More than eleven years, because it is eleven years since his first claim is dated here.
913. How long ago is it since the first complaints were made to the department of the unsatisfactory manner in which he was carrying on the contracts? The complaints were not so much of the unsatisfactory manner in which he was carrying out his contracts as of his constant wranglings and disputes. The first time I interdicted Mr. Davies having any work was when he was tendering for the Bowling Alley Point Bridge, about 1868, and then he wrote a letter withdrawing all claims, and was allowed to tender again.
914. This continued wrangling was of such an insuperable nature in the opinion of the department as to justify the department in refusing any tender from him? I thought so; I found my time and the time of the office was taken up in considering Mr. Davies's claims, and we had sufficient to attend to and full employment without that.
915. Previous to this wrangling had he given satisfaction? I had not heard any complaints.
916. You are quite of opinion that he has no claim whatever? None. I gave everything I could concede to him, and indeed several things that I was not quite convinced he was entitled to in order to clear the ground for legal investigation. Anything that was doubtful I gave at once.
917. Instead of throwing obstacles in his way you have endeavoured to smooth matters over, and to make them as pleasant as possible? Yes; there have been grave and harsh accusations against me in this matter. It is not for me to say what I have done, but every officer of the department who has been examined has been asked whether I ever refused a payment to Davies, and if their evidence is read over it will be found each one has stated that I have never done so. The only covert act of mine with reference to Davies will be found to be where I said that those cuttings were too deep for formation, and that the masonry of the culverts was better than was required. That certainly was not calculated to prejudice him, but inferentially in his favour. But I have resisted what I considered to be his unjust claims.
918. During the whole of this time you have always given the fullest opportunity for investigating any claims brought forward by Mr. Davies? Yes, when I could. On one or two occasions I have been in the country going north on business, and Davies has protracted these investigations and desired to go into long discussions. My time has been cut out. I have had engagements to meet road superintendents and persons interested in the roads, and when I have found I could not arrive at a satisfactory conclusion with Davies, who has gone back from one thing to another, I have been obliged to cut him short. I could not disappoint all the people who were waiting for me north, and keep them waiting a day or two days while I was investigating some trivial matter that could be settled by any road overseer.
919. *Chairman.*] If you turn to page 4 in the Appendix you will see Mr. Butler's opinion, in which he states that Mr. Davies has not got a good claim in law because he has not got an order in writing, signed by the Commissioner and countersigned by the superintendent, without which according to the second regulation no such work is to be paid for. Did you refuse that certificate? That order was not given, because we do not consider that he did any extra work, or that any extra work was necessary.
920. Was that applied for? I was never applied to for it. We maintained that there was no extra work done, so that we were not justified or called on to give an order, but we were prepared to give a certificate for work done. The order and the certificate are different—the order is for work to be done, the certificate is given after it is finished. Of course this work, not being extra work in our eyes, we did not give an order.
921. Has this been unjustly withheld, as stated in the petition? As I have already stated, Mr. Davies got copies of the certificates, and if my signature had been required to authenticate them, and he had applied to me, he would have had it, but he did not so apply.
922. He applied for the certificate, but did not get your signature? He got the certificate from the officers of the department, and if I had been made aware that my signature was required it would have been attached to them.
923. Are these documents marked A 13 and 14 original documents or copies? They are neither original documents nor copies.
924. They are not recognized in your office? They are not recognized in any place at all.
925. Are the two documents marked A 11 and A 12 original? No. In addition to these additions in red ink (*referring to the original documents handed in*) the totals are wrong, which are in black ink, and I request that these documents may be withdrawn from the evidence altogether, because, independently of any action that may be taken by this Committee, who may understand the matter, these may be produced in after years, when there may be no one to explain the circumstances under which they were laid before the Committee, as authentic. I think these documents should be cancelled.

- W. C. Bennett, Esq.
15 June, 1875.
926. *Mr. Scholey.*] With reference to some fines of £139 13s. and £84? They have been remitted and paid.
927. Why were they remitted and paid if they were not due to Davies? To close the matter, and from a disposition to pay him all that he could possibly be entitled to.
928. Then you remitted these fines of £139 13s. and £84 in order to settle the matter? Yes.
929. Then you consider that there is no claim due to Davies? Not the shadow of a claim.
930. *Chairman.*] Have you ever paid further moneys to Mr. Davies after his signing receipts in full? It is possible we may have done so, if we have found any claim of his at all valid. Unfortunately we did not hold back such payments, but we were anxious to do justice, and when we found anything like a legitimate claim we paid. It was Mr. Davies's own fault that it was not argued out and settled with the road superintendent.
931. Did you send a letter to Davies saying that no farther employment would be given him unless he sent you a letter? Yes, I think we did. We found we could not get on with him unless he wrote withdrawing all his claims.

Mr. Amos Davies further examined:—

- Mr. A. Davies.
15 June, 1875.
932. *Chairman.*] How do you account for the papers marked A 10, 11, 12, 13, and 14, handed in by you to the Committee, not being original documents? They are original documents, made out by myself for the information of the Committee.
933. They are not recognized documents in the Works Department? They are not recognized documents in the Works Department whatever. I sent down copies of the whole seven, similar copies of these documents, for the information of the Department, the day before I presented them before the Committee, in order that Mr. Bennett might bring the originals. I put the names at the bottom in consequence of Mr. Hanley Bennett recommending me to do so for the instruction of the Committee, to show under whose charge the work was done.
934. Then I infer from you that they are not original documents at all? They are my accounts, and the officer's name has no business to be there as a matter of fact.
935. *Mr. Macintosh.*] They are simply claims which you suppose you have against the Government? Yes. The officers' names might have been mentioned somewhere else, under whose charge the work was done.
936. *Chairman.*] All the items in black ink in these schedules are included in the original vouchers, and those in red ink are what you now claim? Yes.*
937. The former are in Mr. Nardin's final certificate? Yes.†
938. And all in red ink are omitted and extra for which you are now claiming? Yes. The certificate for 16 he has put in is in a different form, but the result is the same. That in red ink is the disputed work.
939. *Mr. Macintosh.*] From his view the certificate is final? Yes.
940. You make this as part payment on account of the work? Yes; that in black ink I am paid for—the red I am not. The red items are disputed items.
941. *Mr. Browne.*] Did you offer any explanation to the Committee when you handed in these documents as to the signatures of these officers being attached to them? I think not.
942. None whatever? None whatever. I had no thought that they would be published; but I could see immediately they were printed that they placed me in a false position.
943. Why did you not explain to the Committee at the time you handed in these papers that the names at the foot were not the signatures of the individuals whose names they purported to be? As soon as Mr. Bennett called attention to the matter the original documents were produced, that is, those I had filled up, and the red ink pointed out to him; I think it is in the records that he withdrew the kind of insinuation of my having used their names wrongly, and that the matter was ended there.
944. You tendered no explanation at all when these were handed in to the Committee? No; but I had certainly no intention of leading the Committee astray. The names were put there at the instance of Mr. Hanley Bennett, for the information of the Committee, as he has himself stated before the Committee.
945. *Mr. Macintosh.*] Is there any other matter you wish to explain to the Committee, anything that would throw light upon any matter of which you think they have not a proper view? I should like to go through the disputed items from the commencement, and give some further proof that my claims are in each and every instance to be substantiated. It could be done shortly.‡

William Christopher Bennett, Esq., further examined:—

- W. C. Bennett, Esq.
15 June, 1875.
946. *Chairman.*] These two documents E 3 and 4 are handed in as copies of final certificates, forwarded by Mr. Nardin, of the work done and balances due to Amos Davies, on contracts 10 and 16-72, are they not? Yes, with some additions by me.
947. Will you state the actual balance due to Davies on each of these contracts? There is nothing due.
948. The balances represented on these sheets, have they been paid to Davies? Yes.
949. On E 3 the balance £223 19s., including fines and everything, has been paid? Yes.
950. Do you hold his receipt for that? We hold the Bank receipt, and his order to pay the money into the Bank.
951. On E 4 there is a balance of £297 12s. 6d., including additions and other matters;—has that balance been paid to Davies? Yes, and we hold the Bank receipt for that also.
952. What is the present amount due by the Government to Mr. Davies, on account of any work he has performed, and for which he claims on A 10? Nothing whatever.
953. Do I clearly understand that at the present time the Government do not owe Mr. Davies anything whatever on account of any work he has performed? Nothing whatever on any work he has performed.

954.

* Added on revision:—The black ink items have been paid; the red ink not paid.

† Added on revision:—Excepting the sums of £19 11s. 9d. and £84, on contract 10; and £132, £50, and £14 12s. 6d. on contract 16-72. Mr. Nardin's true original final certificates have not yet been produced before the Committee—not even true copies of those sent to my solicitor.

‡ Added on revision:—By the aid of the documents now before the Committee, and some that I yet hold and desire to put in.

W. C.
Bennett,
Esq.

15 June, 1876.

954. In a note to A 10, Mr. Davies says:—"To avoid delay and dispute I, on the 2nd December, 1873, offered to accept as final payment the bulk sums of tenders in contracts 10 and 16-72";—is that correct? It is very possible he did. Several times he made an offer of that sort, but then the bulk sum was more than he was entitled to.

955. Am I to understand that all balances due to him have been paid since that? When Mr. Davies said the bulk sum he meant the original sum for the contract, without reference to the deductions. In one case there was an absolute deduction of £15 19s., and he is now paid that bulk sum, all but £15 19s.

956. The inference from this note is, that on 2nd December, 1873, there was some money owing to Davies;—has any been paid to him since that? Yes, payment has been made to him since that.

957. All that Government considered to be due to him? Yes.

958. In your previous evidence reference was made to a letter from Mr. Davies? Yes, it was a reply to a letter of Mr. Nardin, assenting to these alterations. That letter cannot be found, but Mr. Nardin states positively that he did receive such a letter. I append letter from him to this effect. (*See Appendix G 3.*)

959. Is it usual for you sometimes to alter your officer's returns? Yes; if I think there is something that ought not to be paid I alter it. If the contractor thinks he has been unjustly treated by the officers under me I inquire into the matter, and if I find the charge well founded remedy it.

960. Have you laid before the Committee the Bank receipts for these payments? No; but I will hand them in. (*Vide Appendix G 4.*)

961. *Mr. Macintosh.*] Did you pay these balances into the Bank? All the money noted here has been paid.

962. You paid these amounts by Davies's order into the Bank of New South Wales? Yes.

963. *Mr. Scholey.*] Something has been said with reference to an ill-feeling between yourself and Mr. Davies;—has that had any effect upon you to lead you to annoy him in any way? Decidedly not; the only ill-feeling has arisen from his constant complaints and disputes. I never had anything to do with Mr. Davies, except as a road contractor, and I never heard his name until he was so employed, and I think the evidence of the various officers who have been examined will bear me out that I have never thrown any difficulty in his way or refused payment for any amount certified for.

964. If this matter is settled by the Committee would you afterwards be willing to give Mr. Davies work? Judging from Mr. Davies's antecedents I would rather have nothing to say to him. If he were employed he should have a special officer to take charge of his work; for the present, officers of the department have quite sufficient to do without having their time constantly occupied with his complaints.

965. *Mr. Macintosh.*] You want give and take contractors? Yes, rough and ready men, who will undertake work and go through with it. I have been twenty years in the service of the Colony, and fifteen in the Imperial and other service, in all thirty-five years—in fact ever since I was a boy have had dealings with contractors—and have never had such accusations brought against me by them before.

966. *Chairman.*] In calling for tenders, is it the rule of the Government that you need not accept the lowest or any tender? It is in the printed notice in the Government Gazette.

967. Have not the certificates now laid before the Committee been altered since they were sent to your office? This is the only portion that was the final certificate; all that has been omitted were memoranda of Mr. Nardin, which was superfluous. This is all that is necessary to enable Mr. Davies to go into Court if he desires to do so, and if he requires signed copies he can have them.

PETITION OF AMOS DAVIS.

APPENDIX.

[To the Evidence of Mr. Amos Davies, 13 May, 1875.]

A 1.

Department of Roads, Dr. to Amos Davies,—		£	s.	d.
25th May, 1864.	To construction of bridge and approaches, Goonoo Goonoo, North Tamworth, on metal, £28 13s. 8d.; ballast, £59 17s.; and fine, £5	93	10	8
22nd March, 1865.	„ construction of 4 bridges and culvert, Wulabaddy Gap, an excess of work over Government schedule of quantities	73	0	0
17th Jan., 1868.	„ Contract 3-67, Great Northern Road, 3rd District, one extra culvert £47; and fine, £21 18s. 8d.	68	18	8
1871.	„ sheathing Dangar's Creek Bridge, G. N. Road; timber, 92' 0" x 2'-0" x 2" = 30 cub. feet 8", at 3/8	5	7	5
4th June, 1873.	„ Contract 10-72, earthwork in formation, £279 15s.; ashler work in culverts, £162 17s. 3d.; balances, £103 11s. 9d.	546	4	0
12th Sept., 1873.	„ Contract 16-72, earthwork in formation, £91 15s.; ashler work in culverts, £126 11s. 5d.; two months' maintenance, £40; and balances, £297 12s. 6d.	555	18	11
27th Sept., 1873.	„ Contract 17-72, balances.....	194	2	1
Sept., 1873.	„ construction of bridge and approaches, Old Goonoo Goonoo Creek—posts, £5 2s. 8d.; balances, £4	9	2	8
Oct., 1873.	„ repairs to Nundlo Bridge.....	20	5	2
„	„ repairs to Bowling Alley Point Bridge	14	16	8
Jan., 1874.	„ sheathing 3 bridges, Liverpool Range and Doughboy Hollow, 4-inch thick, omitted in Mr. Donnelly's return, 48 cub. feet 2 in., at 4/2	10	0	8
		£1,591 18 11		

A 2.

The Commissioner for Railways to Mr. Amos Davies.

Department of Public Works,
Sydney, 12th February, 1874.

Sir,

I am directed to inform you that the Honorable the Secretary for Public Works having personally gone over the items of your disputed account with the Roads Department, in the presence of Hanley Bennett, Esq., M.P., who attended on your behalf, I am now to offer you without prejudice the sum of £384 0s. 7d., in full satisfaction of all claims upon the Department, for the receipt of which you will be required to sign the usual final voucher.

I am to add that, upon your adopting this course, the fines for non-fulfilment of your contracts, amounting to £242 10s. in all, will be remitted.

I have, &c.,
JOHN RAE.

P.S.—The foregoing is not intended to include items for day-work in dispute, which could not be settled at the time, but which will be arranged between yourself and the Commissioner for Roads; nor any amounts of certificates for other works received since the dispute in this Department, which will be paid in due course.

A 3.

Memo.—These specifications for contract 10-72 are to be substituted for those sent some time ago; they had better be attached to those just forwarded for new contracts.—E. A. NABBIN, 18/7/72.

DEPARTMENT OF PUBLIC WORKS—ROAD BRANCH.

Great Northern Road, First District.—Contract 10 of 1872, 18th July, 1872; also Contracts 16 and 17-72.

General Conditions of Road Contracts and Taskwork.

1. The works to which these conditions refer, include the supply of all tools, materials, and labor, 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 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 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 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 one 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 $1\frac{1}{2}$ to 1.

11. The contractor to be liable to all risk from floods or other accidents during the execution of the works.

12. The road superintendent will have power to employ men, horses, and carts, and purchase materials to do all necessary or 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. 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, and all the then remaining materials, implements, and plant that may be required to complete the work.

15. Payments to be made at the rate of 90 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 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.

16. All moneys due on account of contract, will be paid to the credit of contractor in Bank of New South Wales, or such other Bank as contractor 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.

17. 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.

18. 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.

19. The contract to be completed in the time specified under a penalty of 2 per cent. per month on the total amount, for every month that such work shall remain incomplete after the expiration of the said five months, amount of penalty to be deducted on face of pay-sheet from moneys due to contractor by department under this or any other contract.

CONSTRUCTION—SPECIFICATION.

Great Northern Road.—First district, 10-72 contract. Sugarloaf Gap to metalling at M' Mahon's.

Contract.	THIS contract commences at end of metalling over Sugarloaf Gap, and extends northward to metalling at "M' Mahon's Inn," comprising the draining, ballasting, culverting, forming, metalling, blinding, and consolidating, on the following sections:— Section 1.—Sugarloaf to 1st culvert, 1,602 lineal yards. " 2.—1st culvert to 2nd culvert, 528 lineal yards. Making a total of 2,130 lineal yards road construction, 2,130 lineal yards drain, and eight 2nd class and two 3rd class stone culverts.
Drains.	Drains to be cut where directed by the road superintendent; to be 1 foot wide at bottom, with an average depth of 2 feet, and side slopes of one to one drains to discharge freely to culverts, and proper inlets or outlets shall be cut from them wherever the superintendent shall direct. The material excavated from drain to be evenly banked up on lower side $\frac{1}{2}$ feet clear from the edge, or to be distributed as may be directed by road superintendent.
Formation.	Roadway to be formed 30 feet wide, on lines pegged out by road superintendent, and to be cut to the inclination directed by him, the gradients being properly boned through and due allowance made for shrinkage of banks. The formation to be in the solid, or made up with metal, as the nature of the ground may require, to be uniform in cross section, having a convexity of 9 inches to the margin or water-table, and were embanked on a sidling the scarp side to be left slightly high to allow for settlement in consolidation. All stumps, rocks, or other obstructions to be removed, and all holes, ruts, hollows, or depressions to be filled in with metal.* Wherever the formation is not altogether in the solid, it must be consolidated by the traffic before any metal is spread, fresh material being supplied to make up convexity where required. The material excavated in forming the road, unless the contractor receives written instructions to the contrary from the road superintendent, shall be thrown back (6) six feet clear of the water-tables. Wherever it is practicable, mitre drains 18" wide shall be cut to relieve the water-tables, at such intervals as shall be directed, a solid block being left and the tabling recommenced 2 feet below each mitre drain. The length of formation required is 2,130 lineal yards.
Metal.	The metal to be of the hardest and best description of bluestone procurable within 3 miles of the work; to be approved by the superintendent, to whom a sample is to be submitted before any quarrying is done. To be broken to a strict 3 inch gauge, with clean, sharp, and cuboidal fracture, and stacked on even ground by the side of the road for measurement. The metal to be quite free from spawls, quarry face, dirt, chips, &c., and shall be turned over by a fork having tines $1\frac{1}{2}$ " apart. The heap shall be opened out for inspection as directed. The metal to be provided at the rate of $1\frac{1}{2}$ cubic yard to each yard of road.
Blinding.	When the whole or any well defined length of formation is ready to receive metal, it is after measurement, and on receipt of a written order from the road superintendent or overseer, to be evenly spread to a width of 20 feet and a depth of about 7 $\frac{1}{2}$ inches, or at the rate of $1\frac{1}{2}$ cubic yard to the lineal yard of road. Until so spread, examined, and blinded, no more metal shall be stacked within such distance of the measured metal as shall be directed by the road superintendent.
Progress.	When this quantity of metal is properly spread, and after inspection by the superintendent, the central 12 feet of road shall receive an even coat of blinding 3 inches thick, or at the rate of $\frac{1}{2}$ cubic yard to the lineal yard of road. Blinding to consist of decomposed granite, clean ridge gravel, or other approved gritty material. No clay, loam, or black soil on any account to be used as blinding. Quantity of blinding required—532 cubic yards. The road is then to be kept raked in, and maintained with the remaining $\frac{1}{2}$ of a yard of metal to the yard run, until thoroughly consolidated by traffic and roller; any metal not so required to be stacked alongside for further maintenance.
Culverts.	The contractor shall be bound to proceed with the works in such order and at such times as he may be instructed. If required he shall supply all the metal, and construct all the culverts before commencing the formation, or <i>vice versa</i> . The culverts are to be of the dimensions shown on drawings, and in all other respects in accordance with the plans hereto attached; to be of rough hammer-dressed stone, laid in mortar composed of one part approved stone-lime to two parts of clean sand; stones to be well bedded, and joints to be flushed throughout. Parapets to be dressed inside, and all quoins to be drafted. The height of parapets, &c., to be according to position.

All

*Notice that no other kind of material was to be used other than metal.—A.D.

All the works specified to be completed within five months from date of signing the bond under a penalty provided for in the "General Conditions for Road Contracts," hereto attached, which penalty will in all cases be strictly enforced, 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.

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.

In all matters relating to this contract, not herein specified, the contractor to be bound by the printed general conditions hereto attached.

Six of the 2nd class culverts are to have waterways of 8 feet, and two of them waterways of 5 feet each.
The 3rd class culverts are to have waterways of 5 feet each.

CONSTRUCTION—SPECIFICATION.

Great Northern Road.—First District. 16-72 Contract. Wire fence to south end of Apple-tree Flat.

THIS contract commences at end of metalling at the wire fence, and extends northwards to 1,508 lineal yards, comprising Contract. draining, culverting, forming, metalling, blinding, and consolidating of road, being a total of 1,508 lineal yards road construction, 1,508 lineal yards drain, and four 3rd class culverts of stone, and the laying of five 15-inch pipe drains.

Drains to be cut where directed by the road superintendent; to be 2 feet wide at bottom, with an average depth of 2 feet, and side slopes of 1 to 1. Drains to discharge freely to culverts, and proper inlets or outlets shall be cut from them wherever the superintendent shall direct. The material excavated from drain to be evenly banked up on lower side 4 feet clear from the edge, or to be distributed as may be directed by road superintendent. Length of drain required, 1,508 lineal yards.

Roadway to be formed 30 feet wide, on lines pegged out by road superintendent, and to be cut to the inclination directed by him, the gradients being properly boned through and due allowance made for shrinkage of banks. The formation to be in the solid, or made up with metal as the nature of the ground may require, to be uniform in cross section, having a convexity of 9 inches to the margin or water-table; and where embanked on a siding the scarp side to be left slightly high to allow for settlement in consolidation. All stumps, rocks, or other obstructions to be removed, and all holes, ruts, hollows, or depressions to be filled in with metal. Wherever the formation is not altogether in the solid, it must be consolidated by the traffic before any metal is spread, fresh material being supplied to make up convexity where required. The material excavated in forming the road, unless the contractor receives instructions to the contrary from the road superintendent, shall be thrown back (6) six feet clear of the water-tables. Extra material for embankment to be obtained as will be directed from any distance not exceeding 50 yards. Wherever it is practicable, mitre drains 18 in. wide shall be cut to relieve the water-tables, at such intervals as shall be directed, a solid block being left, and the tabling recommenced two feet below each mitre drain. The length of formation required is 1,508 lineal yards.

Metal to be of the hardest and best description of blue stone procurable within three miles of the work; to be approved by the superintendent, to whom a sample is to be submitted before any quarrying is done. To be broken to a strict 3-in. gauge, with clean, sharp, and cuboidal fracture, and stacked on even ground by the side of the road for measurement. The metal to be quite free from spawls, quarry face, dirt, chips, &c. The heaps shall be opened out for inspection as directed. The total quantity required will be 2,262 cubic yards.

When the whole or any well defined length of formation is ready to receive metal, it is after measurement, and on receipt of an order from the road superintendent or overseer, to be evenly spread to a width of 20 feet, and a depth of 8 inches, or at the rate of 1½ cubic yard to the lineal yard of road. Until so spread, examined, and blinded, no more metal shall be stacked within such distance of the measured metal as shall be directed by the road superintendent.

When the metal is properly spread, and after inspection by the superintendent, the central eleven feet of road shall receive an even coat of blinding two inches thick, or at the rate of one-fifth cubic yard to the lineal yard of road. Blinding to consist of decomposed granite, clean ridge-granite, or other approved gritty material. No clay, loam, or black soil on any account to be used as blinding. Quantity of blinding required, 300 cubic yards.

The contractor shall maintain the road in good order and condition, keeping the ruts well raked in, to the satisfaction of the road superintendent, for a period of two months after the completion of the work, and shall force the traffic off or on the road, as may be directed.

The contractor shall be bound to proceed with the works in such order and at such times as he may be instructed. If required he shall supply all the metal and construct all the culverts before commencing the formation, or *vice versa*.

The culverts are to be of the dimensions shown on drawing, and in all other respects in accordance with the plans hereto attached. The stone is to be approved of, to be quarry dressed, but to have faced joints; to be laid in mortar composed of one part best stone-lime to two parts of approved sand; joints to be flushed throughout.

All the works specified to be completed within five months from date of signing the bond under a penalty provided for in the "General Conditions for Road Contracts," hereto attached, which penalty will in all cases be strictly enforced, 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.

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.

In all matter relating to this contract, not herein specified, the contractor to be bound by the printed general conditions hereto attached.

The pipes will be provided by the Government and delivered to the contractor, at the railway goods-shed, Murrurundi; the contractor will have to cart them to the work, and be responsible for breakage. They are to be laid in Portland cement, in such positions and with such fall as will be directed. At each end of each pipe-drain two stones, cut to receive pipes, shall be provided and set in cement; each stone to be 3' 6" x 1' 6" x 1' 0". The trench to be filled over pipes with approved ballast up to the level of tops of stones at ends of pipe-drains, rummed above.

A 4.

MEMO. for Mr. Davies, in reference to Contracts 10 and 17-72.

Contract 10-72. The quantity of metal to be reduced to 1½ cub. yd.
Contract 17-72. To be postponed until after the others are finished.

GEO. HOLLOWAY,
2/10/72.

A 5.

No. 10.

NORTHERN ROAD.—3 DISTRICT, — DIVISION.

24 February, 1864.

MR. A. C. BAYLEY, road superintendent, hereby undertakes to pay AMOS DAVIES, for erecting a bridge over Goonoo Goonoo Creek, at schedule of prices for G. G. B. South, for completing to his satisfaction the following works, according to the general printed conditions, and within the space of two months:—

Erecting a bridge over Goonoo Goonoo Creek, according to the plan and specification of Goonoo Goonoo Bridge South.

4

A 6.

The Under Secretary for Public Works to Mr. Amos Davies.

Department of Public Works,
Sydney, 31 December, 1873.

Sir,

I am directed by the Secretary for Public Works to inform you that no tender of yours can be taken into consideration by the Government until the matters now in dispute have been arranged by you with the Roads Department.

I have, &c.,

GERALD HALLIGAN,
(For U.S.)

A 7.

The Under Secretary for Public Works to Mr. Amos Davies.

Department of Public Works,
Sydney, 10 February, 1874.

Sir,

Referring to your letter of 28th ultimo, stating that your horses, plant, &c., are disengaged, and offering their services in case of flood, to effect any road repairs, &c., that may become necessary, I am directed by the Secretary for Public Works to inform you that no further work can be given to you to perform for the Government until your differences with the Roads Department are satisfactorily adjusted.

I have, &c.,

JOHN RAE.

A 8.

The Commissioner and Engineer for Roads to Mr. Amos Davies.

Department of Public Works,
Roads Branch, Sydney, 11 February, 1869.

Sir,

In reply to your letter of 8th instant, respecting information to enable you to tender for creation of proposed bridge at Wellington, I have to inform you that, in consequence of your conduct in reference to the timber for Cox's Creek Bridge, I have recommended that your name be noted as ineligible for any further works under the Government.

I am, &c.,

WILLIAM C. BENNETT,
Commissioner and Engineer.

A 9.

Ex parte Amos Davies. Case for opinion of Mr. Butler.

MR. AMOS DAVIES has, for many years, been a contractor performing road works for the Government. In 1872 he entered into three different contracts for the performance of works on the Great North Road, known in Department as contracts 10 A, 16 A, and 17 A.

In each case there was a tender by Davies to do certain specified works, deductions or additions to be charged for, allowed according to rates in tender. The work was also to be done according to general conditions, and to satisfaction of Commissioner for Roads. The obtaining a certificate that work has been completed to satisfaction of road superintendent and overseer was, by clause 15 of general conditions, to 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 on completion of the contract."

Clause 2 of general regulations stipulates that "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 schedule to be determined on previous to its execution, and set forth in the said order."

After work commenced under contract 10 A, it was carried on by Davies under superintendence of Mr. Holloway, road superintendent assistant, and with concurrence of principal, Holloway, instructed Davies to alter the plan, in fact the culverts were to be stonework of a much more expensive kind than that specified for, and the plan of the road was so altered as to necessitate the doing of a large amount of earthwork not provided for in contract, but the doing of which made less the quantity of metal required, and in fact in that way made the amount payable for the whole work, as claimed by Davies, less than the amount of the original contract.

The change of road formation was carried out in obedience to a plan furnished to Davies by Mr. Holloway after work had been commenced; it was prepared in office of road superintendent, and was carried out under his superintendence. It shows the necessity for the work charged for, and for which the Government refuse payment; it was not required by plan or specification originally furnished, and tender accepted did not provide for it.

The Commissioner visited the work whilst in progress, and his attention was called by Davies to increased value of stonework in culverts, and the supply of the material for embankments, and in both cases he, in presence of road superintendent and Mr. Holloway, admitted that the work was in excess of contract. The change in formation of road saved a large quantity of metal, and three openings or culverts.

Contracts 16 A and 17 A were carried out in the same way, and altered under similar circumstances, and in a similar manner. Davies has not been paid in full; he claims £1,190 as due to him. The Government agree to pay £626 on his releasing all claim. This he refuses to do, and advice is now sought as to whether, under the circumstances, he would recover at law for the extra work referred to. It may here be remarked that no certificate has ever been given to him as rendered necessary by general conditions—the Roads Department refusing to give them, when requested to do so by Davies's solicitor, although they were in possession of the Commissioner, who stated that, it was "not the practice of the Department to give them to contractors." He however did furnish copies of two of the certificates, but would not give up the originals. The following papers are sent herewith:—

Tenders for three contracts.

Specifications for three contracts, with general conditions.

Written statement of Mr. Davies.

And Counsel is requested to advise whether Davies has a good cause of action for amount he claims over and above sum offered him by the Government, and to state his opinion as to the course which should, under the circumstances, be pursued by Mr. Davies.

Ex parte DAVIES.

As I understand the facts of Mr. Davies's case, he is claiming mainly for work not done under his tender and the plans and specifications to which the tender had reference, and I suppose part of his claim is for work done under such tender and in accordance with such plans and specifications. The work not done under his tender must be considered extra, and for this, as I understand his case, he did not get and has not got an order in writing signed by the Commissioner and countersigned by the superintendent, without which according to the 2nd regulation no such work is to be paid for. It is quite clear therefore that he cannot recover for such work in an action against the Government. Again, I understand he has not got the certificate required by the 15th regulation, and on this ground also he cannot recover in an action. He is upon this state of facts simply at the mercy of the Government.

June 30th, /74.

E. BUTLER.

Having

Having further under my consideration the form of certificate given to the department in this case, it may be argued and it admits of being fairly argued that such a certificate is sufficient to satisfy the 15th section of the general conditions. If the Judge were to hold so, of course this difficulty would be removed. But in my opinion it is not sufficient, for I read that condition to mean the "obtaining of a certificate" by the contractor and not its being obtained by the department, to be delivered or not delivered by them to the contractor, as they may think fit. With regard also to the great quantity of work which I am informed was done not under the original plans but under new plans, the question would be whether the first contract was entirely abandoned and rescinded. If it were not but still subsisted and was being partly carried out, then in my opinion the work done upon the new plans would be work extra the contract; in other words would be "extra works" within the meaning of the second condition, and the contractor was bound to have obtained an order in writing for such work.—E.B.

A 10.

(To the evidence of Mr. Amos Davis, 19 May, 1876.)

AMOS DAVIES' claims against the Government, for work done.

Date when finished.	Description of work.	Amount of contract.	Value of work done.	Amount paid.	Amount due.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.
26 May, 1864...	Bridge and approaches, Goonoo Goonoo Creek, North Tamworth, at Schedule rates of bridge south....	Schedule rates ...	759 14 5	666 3 9	93 10 8
22 Mar., 1865...	Contract 8-64—4 bridges and culvert, Wallabadah Gap	823 16 0	896 16 0	823 16 0	73 0 0
17 Jan., 1868...	Contract 3-67—Construction new road and culverts	1,096 15 6	1,255 8 10	1,186 0 2	69 8 8
— Dec., 1872...	Sheathing Dangar's Creek Bridge, @ 3/8 per foot ...	41 18 4	36 10 11	5 7 5	
4 Nov., 1873...	Contract 10-72—Construction new road and culverts	*1,911 8 6	1,869 5 0	1,421 4 0	448 1 0
18 Sept., 1873...	Contract 16-72—Construction new road and culverts	*1,115 19 0	1,382 11 11	1,114 12 6	267 19 5
— Jan., 1874...	Sheathing 3 bridges, Liverpool Range, at Schedule rate of.....	4/2 per foot—48 cubic feet 2 inches			10 0 8
		Total claim for work done	£		967 7 10

*NOTE.—To avoid delay and dispute, I, on the 2nd December, 1873, offered to accept as final payment the bulk sums of tenders in contracts 10 and 16-72.

AMOS DAVIES, 12/5/75.

A 11.

Final Certificate for works shown as completed, 4 June, 1873.

I HEREBY certify that the whole of the works on Contract 10-72 have been completed in strict accordance with the specification and plans, with the following alterations, additions, or deductions.

Description and Dimensions.	Deductions.	Additions.	Original Contract.
	£ s. d.	£ s. d.*	£ s. d.
Amount of original contract according to tender			1,911 8 6
Forming 2,130 lin. yards, @ 2/6	£266 5 0		
Drains, 2,130 lin. yards, @ 1/-	106 10 0		
Metal, 3,729 cub. yards, @ 5/6	1,025 9 6		
Blinding, 532 cub. yards, @ 2/-	53 4 0		
4 3rd-class culverts, @ 40/-	160 0 0		
6 2nd-class culverts, @ 50/-	300 0 0		
	£1,911 8 6		
168 lin. yards of drain, @ 1/-		8 8 0	
7 " " formation @ 2/6	0 17 6		
1,067.47 cubic yards of metal, @ 5/6	293 11 3		
14 " " blinding, 2/-	0 2 6		
4 2nd-class culverts, 50/-	200 0 0		
2 3rd-class " 40/-	80 0 0		
2 24-inch pipe drains 20/4		40 8 0	
1 16-inch " 11/-		11 0 0	
Extra stone in culverts		24 2 6	
4,476 cubic yards earthwork used in rising roads, @ 1/3		279 15 0	
129 cub. yds. 10 ft. 4 in ashlar work, in culverts, @ 25/3		162 17 3	
26 cub. yds. 5 in. ballast, @ 4/6		5 17 0	
Total	574 11 3	532 8 9	1,911 8 6
Net deduction			42 3 6
Net total			1,869 5 0
Amount of payments on account			1,421 4 0
Balance due			448 1 0

E. A. NARDIN, Road Superintendent.
AMOS DAVIES, Contractor, 15/5/75.

Ordered by GEO. HOLLOWAY, Overseer.

CONTRACT

CONTRACT 10-72.

DETAILED measurements of earth in embankments.

Section at	1½ ch	depths on centre road	1' 0"	length	99'	width	31' 6"	=	3,018	cubic feet
"	8 chs.	9 ft.	"	2' 0"	×	330'	×	33' 0"	=	21,780
"	17 and 19 chs.	"	"	3' 0"	×	396'	×	34' 6"	=	40,986
"	26 chs.	5 ft.	"	2' 6"	×	420'	×	33' 9"	=	35,438
"	39 chs.	59 ft.	"	3' 0"	×	366'	×	34' 6"	=	37,881
"	47 chs.	"	"	1' 6"	×	165'	×	32' 3"	=	7,965
"	62 chs.	"	"	3' 0"	×	132'	×	34' 6"	=	13,660

To get average depths divide by2)160,728

To get cubic yards divide by27) 80,364

2,976
Add.....1,500

Total4,478 cubic yards.

The added 1,500 cubic yards is the estimated quantity of ballast required in a previous specification to fill ruts, &c., at 1s. 3d. per cubic yard = £279 15s. (Same price as Manilla Road Schedule.)

Four Ashlar stone Culverts.

Detail trade difference between ashler and rubble work:—

	£	s.	d.
<i>Ashlar</i> .—Quarry and carting, at per cubic yard	0	15	0
Cutting punched or picked beds and joints	0	12	0
Setting, at 3d. per cubic foot	0	6	9
Mortar.....	0	1	1
Working price per cubic yard	1	17	10
<i>Rubble</i> .—Quarrying and carting, per cubic yard	0	2	3*
Setting (per C. Mayes' Contractor's p. book)	0	6	6
Mortar	0	4	4
	0	12	7
Total difference in value	£1	5	3

There being 129 cubic yards 10 feet 4 inches ashler used, at 25s. 3d., increased value, the contractor claims £162 17s. 3d. for such work.

* I had many hundred yards brought on the road at this price

AMOS DAVIES.

A 12.

Final Certificate for Works shown as completed, 18th Sept., 1873.

I HEREBY certify that the whole of the works on Contract 16-72 have been completed in strict accordance with the specifications and plans, with the following alterations, additions, or deductions.

Description and Dimensions.	Deductions.		Additions.		Original Contract.
	£	s. d.	£	s. d.	
Contract, as per Tender					1,115 19 0
86 lin. yards of drain, 1/-			4	6 0	
48 " " formation, 2/6			6	0 0	
11 cubic yards blinding, 2/-			1	2 0	
215½ cub. yards metal, 5/6	59	7 0			
Six 16-inch pipe-drains, 11/-			66	0 0	
*One 12 " drain, 6/-			6	0 0	
Five 15 " drains, 8/-	40	0 0			
Extra quantity stonework			14	12 6	
1,468 cubic yards earthwork, used to rise the road, @ 1/3			91	15 0	
101 cubic yards 7 feet ashlar work in culverts, @ 25/3			126	11 5	
2 months' maintenance, as per tender—per month, 20/-			40	0 0	
34 cubic yards 5-inch ballast, @ 4/6			7	13 0	
*Misdeducted from 12-inch pipe drain, intended for Contract 17-72			2	0 0	
Total	99	7 0	365	19 11	1,115 19 0
Net addition					266 12 11
Net total					1,382 11 11
Amount of payments on account					1,114 12 6
Balance due					£ 267 19 5

* Ordered by GEO. HOLLOWAY, Oversecr.

E. A. NARDIN, Road Superintendent.
AMOS DAVIES, Contractor, 15/5/76.

CONTRACT 16-72.

Detail measurements of earth in embankments:—

Section at 1' ch.,	depths 0' 9"	lengths 80'	width 31' 1"	= 1,865 cub. ft.
" 8' "	0" "	2' 0" "	× 100' × 31' 10"	= 3,979 "
" 15' "	12" "	2' 0" "	× 231' × 33' 0"	= 15,180 "
" 19' "	18" "	1' 0" "	× 231' × 31' 6"	= 2,079 "
" 23' "	53" "	0' 6" "	× 165' × 30' 9"	= 2,537 "
" 29' "	41" "	1' 6" "	× 132' × 32' 3"	= 6,385 "
" 37' "	0" "	1' 0" "	× nil.	
" 40' "	0" "	1' 0" "	× 264' × 31' 6"	= 8,316 "
" 43' "	18" "	nil		
" 50' "	34" "	nil.		
" 57' "	0" "	1' 9" "	× 264' × 32' 7"	= 15,003 "
No section at 46' "	0" "	2' 0" "	× 165' × 33' 0"	= 10,890 "
" 48' "	25" "	2' 0" "	× 198' × 33' 0"	= 13,068 "

To get average depths divide by2)79,302

To get cubic yards divide by27)39,651

Total cubic yards 1,468 15'

At 1/3 per cubic yard = £31 15s. (Same as Manilla Road Schedule.)

Four Culverts (Stone).

Detailed trade difference between ashlar and rubble work, quarry and carting, @ per cubic yard	£ s. d.
.....	0 15 0
Cutting punched or picked beds and joints, @ -/2	0 12 0
Setting, @ -/3 per cubic foot	0 9 9
Mortar	0 1 1

Per cubic yard£ 1 17 10

Rubble work, quarrying, and carting, per cubic yard 0 2 3 I had many hundred yards brought on the road at this price.

Setting (per C. Mayes', Contractor's, P. Books)..... 0 6 6

Mortar 0 4 4

Per cubic yard £ 0 12 7

Increased cost of ashlar work ... £ 1 5 3

There being 101 cubic yards 7 feet of ashlar used, @ 25/3 increased value, the contractor claims £126 11s. 5d. for such work.

AMOS DAVIES.

A 13.

Final Certificate for Works shewn as completed, 25th May, 1864.

I HEREBY certify that the whole of the works on Contract replacing Goonoo Goonoo Bridge have been completed in strict accordance with the specification and plans, with the following alterations, additions, or deductions.

Description and Dimensions.	Deductions.	Additions.	Original Contract.
Erecting bridge and approaches Goonoo Goonoo Creek, North Tamworth, at schedule of prices for Goonoo Goonoo Bridge, South Tamworth.			£ s. d.
Value of work in Bridge at the abovementioned rates			468 13 3
Stone in walls, 199.17 cub. yds. @ 4/6			44 15 6
724 cubic yards earthwork @ 3/-			108 12 0
114 cubic yards ballast @ 15/-			85 10 0
52 cub. yds. 5 feet feet metal @ 20/-			52 3 8
<i>Disputed deductions.</i>			
The ballast reduced by 10/6 per yard	69 17 0		
The metal reduced by 11/- per yard	28 13 8		
Fine imposed	5 0 0		
Total	98 10 8		759 14 5
Net addition or deduction			
Net total			
Amount of payments on Account			666 3 9
Balance due			93 10 8

M. BOYD, Overseer.

Ordered by A. O. BAYLEY, Road Superintendent.
AMOS DAVIES, Contractor, 15/5/75.

A 14.

Final Certificate for works shown as completed, 22nd March, 1865.

I HEREBY certify that the whole of the works on contract 8-64 have been completed in strict accordance with the specification and plans, with the following alterations, additions, or deductions.

Description and dimensions.	Deductions.	Additions.	Original Contract.
	£ s. d.	£ s. d.	£ s. d.
Four bridges and culvert, Wallabadah Gap—amount of tender.....			823 16 0
<i>Deductions.</i>			
One second-class class culvert			
Piles in three bridges			
<i>Additions.</i>			
One first-class culvert			
Uprights set in sills and tarred			
Increase of smithwork			
Excavation in earth @ 3/			
Do. in rock @ 15/			
<i>Note.</i> —I cannot give accurate quantities of prices for the additions or deductions, having lost my copy.—Mr. Superintendent Quodling sent to the head office such returns, by which I am willing to be paid. I believe the net addition was		73 0 0	
Total.....		73 0 0	823 16 0
Net addition.....			73 0 0
Net total			896 16 0
Amount of payments on account			823 16 0
Balance due		£	73 0 0

W. BEVOLS, Overseer.

Ordered by H. QUODLING, Road Superintendent.
AMOS DAVIES, Contractor, 15/5/75.

A 15.

Date of first payment, 12th September, 1867.—Final Certificate for works shown as completed, 17th January, 1868.

I HEREBY certify that the whole of the works on contract 3-67, have been completed in strict accordance with the specification and plans, with the following alterations, additions, or deductions.

Description and dimensions.	Deductions.	Additions.	Original Contract.
	£ s. d.	£ s. d.	£ s. d.
Amount of tender			1,096 15 6
333½ cubic yards, 3 in. metal, at 6/8-		111 3 4	
One first-class culvert		47 10 0	
From date of first payment to date of final voucher is only 4 months and 5 days. The contract time was 5 months, which time would be extended by the extra work being done. A fine of £21 13s. was hereon imposed; its remission is now sought.—A.D.			
Total.....		158 13 4	1,096 15 6
Net addition			158 13 4
Net total			1,255 8 10
Amount of payments on account			1,186 0 2
Balance due..... £			69 8 8

Overseer.

Ordered by A. C. BAYLEY,
Road Superintendent.
AMOS DAVIES, Contractor, 15/5/75.

9

A 16.

Final Certificate for works shown as completed.—1872.

I HEREBY certify that the whole of the works on Contract, Dangar's Creek Bridge, have been completed in strict accordance with the specifications and plans, with the following alterations, additions, or deductions:—

Description and dimensions.	Deductions.	Additions.	Original Contract.
Sheathing, Dangar's Creek Bridge.	£ s. d.	£ s. d.	£ s. d.
Tarred timber and spiked, 92' 0" x 15' 0" x 2" = 230 cubic feet, at 3s. 8d. per foot	41 18 4
Total	41 18 4
Net addition or deduction
Net total
Amount of payments on account	36 10 11
Balance due	5 7 5

Ordered by E. A. NARDIN, Road Superintendent.
AMOS DAVIES, Contractor, 15/5/75.

— Overseer.

A 17.

Final Certificate for works shown as completed, January, 1874.

WE hereby certify that the whole of the works on contract, three bridges, Liverpool Range, have been completed in strict accordance with the specification and plans, with the following alterations, additions, or deductions:—

Description and dimensions.	Deductions.	Additions.	Original Contract.
Liverpool Range and Doughboy Hollow—Sheathing three bridges as per tender accepted.	£ s. d.	£ s. d.	£ s. d.
60' 0" x 13' 0" x 2" } 56' 0" x 13' 0" x 2" } = 348' 10" cub. feet @ 4/6 per foot	72 13 6
45' 0" x 13' 0" x 2" }
As done.
45' 6" x 13' 0" x 2 1/4" } 57' 0" x 13' 0" x 2 1/4" } = 433 feet 8 inches @ 4/6 per foot	90 6 11	.....
54' 6" x 13' 0" x 2 1/4" }
Total	72 0 0	90 6 11	72 13 6
Not addition or deduction	17 13 5
Net total	90 6 11
Amount of payments on account	80 6 3
Balance due	10 0 8

Ordered by AMOS DAVIES, Contractor.
Concurred in by E. A. NARDIN, Road Superintendent.

— Overseer.

A 18.

Mr. A. Davies to Mr. Road Superintendent Nardin.

Mountain View, *via* Murrurundi,
27 December, 1873.

Sir,

I do myself the honor to hereby request that you furnish to me the "certificates" referred to in the 15th clause of the general conditions governing contracts 10, 16, and 17-72, Great Northern Road, First District.

I have, &c.,
AMOS DAVIES.

A 19.

Mr. Road Superintendent Nardin to Mr. A. Davies.

Road Superintendent's Office,
Mudgee, 24 January, 1874.

Sir,

In reply to your letter of the 27th of last month, applying to me for final certificates for contracts 10A, 16A, and 17A, Great Northern Road, I have to inform you that it is not usual to furnish contractors with such certificates; that documents of the kind have always been forwarded to the head office for payment.

I am, &c.,
ERNEST A. NARDIN,
Road Superintendent.

Received 1st February, 1874.—A.D.

10

A 20.

Mountain View, *oid* Murrurundi,
27 December, 1873.

Sir,

As the latter portion of my two months maintenance of contract 16-72 has been performed under your supervision as road superintendent, I beg to request that you furnish me with the "certificate" referred to by the 15th clause of the general conditions governing said contract.

No reply has yet been received from Mr. Donnelly.—A.D., 21/6/74.

I have, &c.,
AMOS DAVIES.

A 21.

Telegram from Mr. A. C. Bayley to Mr. A. Davies.

I SHALL be down to-morrow; want to see you particularly.

A 22.

COPY of Schedule of Prices for Bridge over Goonoo Goonoo Creek, Tamworth, as per Tender :—

	s.	d.
Piles over ground, per lineal foot, at	2	0
Capsills, 12 x 12	3	0
Girders, squared one side, at	1	9
" " three sides, at	2	0
Handrails, fixed, per cubic foot, at	7	2
Flooring, including spikes, at	6	5
Piles below surface, per lineal foot, at	6	0
Smithwork, per lb., at	1	2
Tarring, per superficial yard, at	2	0
Painting,	3	0
Slabbing, per superficial foot, at	1	0
Earthwork, per cubic yard, at	3	0
Sandstone ballast, per cubic yard, at	15	0
Granite metal,	20	0
Border stones, per lineal yard, at	10	0

Over South Branch.

Amount of contract, £364 0s. 4d. Time, 6 months.

Over North Branch.

Amount of contract, £759 14s. 5d. Time, 3 months and 1 day.

AMOS DAVIES.

A 23.

Mr. W. Boyd to Mr. A. Davies.

THE level of shoulders of piles (Goonoo Goonoo Creek Bridge) is to be 2 ft. 6 in. above the floor of Goonoo Goonoo Bridge South.

4 ft. 10 in. higher than first ordered.—A.D., 16./

W. BOYD, 14/3/64.

A 24.

Mr. W. Boyd to Mr. A. Davies.

Tamworth, 16 April, 1864.

Sir,

I beg to inform you that no border stones are required on approaches to Bridge.

I am, &c.,
W. BOYD.

[To the Evidence of W. C. Bennett, Esq., 2 June, 1875.]

B 1.

Mr. W. Boyd to The Commissioner and Engineer for Roads.

Uralla, 22 August, 1864.

Sir,

With reference to your telegram of the 20th instant, I have the honor to inform you, that Mr. Bayley told me on or about the 29th March that Mr. Davies was to have nine (9) shillings per cub. yd. for the metal; this was to the best of my knowledge before any metal was got.

Mr. Davies mentioned *several* times that Mr. Bayley was going to allow him 9s. per cub. yd.; the last time I heard him was about the end of April, or beginning of May, as stated in telegram, when none of the metal was drawn.

I have, &c.,
W. BOYD.

Seen. Put with Goonoo Goonoo Bridge papers.—W.C.B., 27/8/64.

B 2.

Mr. A. Davies to The Commissioner and Engineer for Roads.

Wallabadah, 26 November, 1864.

Sir,

In reply to your letter of the 1st, I have to inform you that I am prepared to sign the usual receipt on being paid the amount certified for by Mr. Superintendent Bayley, on account of Goonoo Goonoo Bridge contract.

I have, &c.,
AMOS DAVIES,
Contractor.

P.S.—I shall be in Sydney on the 2nd December, and will call at the office for payment.—A. DAVIES.

Take care the receipt is in full of all demands.—W.C.B., 29/11/64. Mr. Chisholm,—Mr. Quodling requested to obtain receipt in full.—A.J.C., 3/12/64.

B 3.

The prices in the preceding schedule include all labour, materials, tools, and workmanship of every kind necessary for the full and perfect completion of the work, to the entire satisfaction of the Commissioner for Roads, or other authorized officer.

AMOS DAVIES,
Tamworth.

To the Under Secretary for Public Works.

Should the foregoing tender be accepted we, the undersigned, do hereby agree to be responsible for the due performance of the contract, and we hereby undertake, within _____ days from the date of the notification of the acceptance of the said tender, jointly and severally to execute and deliver a bond to Her Majesty in the penal sum of _____ for securing such performance.

Witness to signatures of Daniel Regan }
and Oswald Brackenreg, — }
JAS. GARLAND, J.P.

DANIEL REGAN.
OSWALD BRACKENREG.

B G.
DEPARTMENT OF ROADS AND BRIDGES.
Northern Road.

[Pay Voucher No. 511.]

ABSTRACT and acquittances of amounts paid to Contractors and others employed as herein described, from the 8th of February to the 22nd day of March, 1865.

Names.	Locality. Nature and quantity of work done by each Individual or Party to be here stated.	No. of Contract or Task.	Rate.	No. of full working days.	Amount.	Total.	We, the undersigned, hereby acknowledge to have received from the Commissioner for Roads the sum set down opposite to our several names, being in full of our demands respectively, for the services specified in this abstract.	Date of payment and by whom paid.	Witness.
Amos Davies..	Wallabadah Gap. Completion of four bridges and culvert according to plan and specification. Balance of contract.	Bond forwarded to Audit Office and noted.	...	...	.....	£ s. d. 279 19 4	Amos Davies	15th May, 1865. The Commissioner for Roads.	Henry Quodling.

We hereby certify the above account, amounting to two hundred and seventy-nine pounds nineteen shillings and four-pence, is correct in every particular; that the persons therein named have fully and fairly performed the work contracted for by them; and that the day labourers have been employed for the time stated against their respective names, and at the current rate of wages.

True copy,—THOMAS R. STEEL, 31/5/75.

HENRY QUODLING,
Superintendent.

DEPARTMENT OF ROADS AND BRIDGES.
Northern Road, 2nd District.

[Pay Voucher No. 61.]

ABSTRACT and acquittances of amounts paid to Contractors and others employed as herein described, from the 9th of November, 1864, to the 11th of January, 1865.

Names.	Locality. Nature and quantity of work done by each Individual or Party to be here stated.	No. of Contract or Task.	Rate.	No. of full working days.	Amount.	Total.	We, the undersigned, hereby acknowledge to have received from the Commissioner for Roads the sum set down opposite to our several names, being in full of our demands respectively, for the services specified in this abstract.	Date of payment and by whom paid.	Witness.
Amos Davies..	Contract 8-64. Wallabadah Gap Bridge—1st advance on Cont.	Bond with final certificate.	...	.....	.....	£ s. d. 170 0 5	Amos Davies.....	10th February, 1865. Commissioner and Engineer for Roads.	Henry Quodling.
						£ 170 0 5			

We hereby certify that the above account, amounting to one hundred and seventy pounds and five pence, is correct in every particular; that the persons therein named have fully and fairly performed the work contracted for by them; and that the day labourers have been employed for the time stated against their respective names, and at the current rate of wages.

True copy,—THOMAS R. STEEL, 31/5/75.

HENRY QUODLING,
Superintendent.

DEPARTMENT OF PUBLIC WORKS.
Northern Road, 2nd District, Division.

RETURN showing the amount and value of work done on this division, from 9th November, 1864, to the 11th January, 1865.

No. of Contract.	Name of Contractor.	Date of last measurement or completion of Work.	Date of present measurement, or completion of Contract.	Total amount of Contract.	Total value of work executed to this date.	Amount already advanced on account.	Amount of advance now recommended.
8-64	Amos Davies	1864. 9 November ...	1865. 11 January ...	£ s. d. 823 16 0	£ s. d. 169 17 5	£ s. d.	£ s. d. 169 17 5

Details of measurement of the above work, as stated in the fourth column.

No. of Contract.	Description of Work.	Dimensions.	Quantity.	Price.	£ s. d.
8-64	<i>No. 5 Bridge.</i>				
	Piles below the surface including driving .....	.....	51 8 l. ft.	s. d. 6 6	16 15 10
	Do. above ground .....	.....	19 2 "	3 0	2 17 6
	Capsills (2)	23' x 12" x 12"	46 0 c. ft.	5 0	11 10 0
	Girders (5)	23' x 1' 2" diameter	115 0 l. ft.	3 4	19 3 4
	Flooring	23' x 18' 6" x 4"	141 10 c. ft.	4 2	29 10 11
	Smithwork .....	.....	223 lbs.	0 10	9 5 10
	<i>No. 4 Bridge.</i>				
	Sills (2)	27' x 12" x 12"	54 0 c. ft.	5 0	13 10 0
	Uprights .....	.....	80 6 "	5 0	20 2 6
	Capsills (2)	27' x 12" x 12"	54 0 "	5 0	13 10 0
	Corbels (6)	6' 6" x 12" x 12"	29 0 "	5 0	9 15 0
	Girders (3)	34' x 12" x 12"	102 0 "	5 0	25 10 0
	Smithwork .....	.....	168 lbs.	0 10	7 0 0
Excavation—					
Earth and rock ...	28' x 6' 4" x 3'	c. ft. in. 532 0	2 17 3 c. yds.	15 0	1 19 7
Rock	9' 6" x 3' x 2' 6"	71 3			
Earth .....	.....	460 9	41 25 9 "	4 0	8 7 9
Do.	28' x 8' x 8'	672 0			
			1,132 9		
Less 10 per cent. ....			.....	.....	18 17 10
Total .....			£ .....	.....	170 0 5

We hereby certify that the above return is a fair and correct statement of the contract to which it refers, and that the above measurements were made by

HENRY QUODLING,
Road Superintendent.

Overseer.

DEPARTMENT OF ROADS AND BRIDGES.
Northern Road, 2nd District.

[Pay Voucher No. 144.]

ABSTRACT of payments to Contractors and others employed as herein described, from the 11th January to the 8th February, 1865.

Names.	Locality. Nature and quantity of work done by each Individual or Party to be here stated.	No. of Contract or Tusk.	Rate.	No. of full working days.	Amount.	Total.	We, the undersigned, hereby acknowledge to have received from the Commissioner for Roads, the sum set down opposite to our several names, being in full of our demands respectively, for the services specified in this abstract.	Date of payment and by whom paid.	Witness.
Amos Davies.	Contract 8-64. Wallabadah Gap Bridge—2nd advance on Contract	Bond with final Certificate.	...	.....	.....	£ s. d. 373 16 3	Amos Davies	21st February, 1865. The Commissioner for Roads.	Henry Quodling.

We hereby certify that the above account, amounting to three hundred and seventy-three pounds sixteen shillings and three pence, is correct in every particular; that the persons therein named have fully and fairly performed the work contracted for by them; and that the day laborers have been employed for the time stated against their respective names, and at the current rate of wages.

HENRY QUODLING,
Superintendent.

True copy,—THOMAS R. STEEL, 31/5/75.

DEPARTMENT

DEPARTMENT OF PUBLIC WORKS.

I

Northern Road, 2nd District.

RETURN showing the amount and value of work done on this Division, from 11th January to the 8th February, 1865.

No. of Contract.	Name of Contractor.	Date of last measurement, or completion of work.	Date of present measurement, or completion of contract.	Total amount of work.	Total value of work executed to this date.	Amount already advanced on account.	Amount of advance now recommended.
8/69	Amos Davies	1865. 11 January ...	1865. 8 February ...	£ s. d. 823 16 0	£ s. d. 543 13 8	£ s. d. 169 17 5	£ s. d. 373 16 3

DETAILS of Measurements of the above Work, as stated in the fourth column.

No. of Contract.	Description of Work.	Dimensions.	Quantity.	Price.	£ s. d.	
8-64	<i>No. 3 Bridge.</i>					
	Excavation--Earth and rock	23' 0" x 3' 0" x 3' 6"	241 6			
	Rock	23' 0" x 3' 0" x 1' 6"	†103 6			
	Earth .....	.....	*138 0		
	Rock	23' 6" x 3' 6" x 3' 0"	†246 9			
	Earth and rock	24' 0" x 3' 0" x 6' 0"	432 0			
	Rock	24' 0" x 3' 0" x 1' 0"	† 72 0			
	Earth .....	.....	*360 0		
	<i>No. 2 Bridge.</i>					
	Earth	24' 6" x 3' 0" x 4' 3"	*312 4			
	„	24' 0" x 3' 0" x 3' 0"	*216 0			
	Rock	24' 0" x 3' 6" x 3' 0"	†252 0			
	Earth	24' 0" x 3' 0" x 5' 6"	*396 0			
			*Earth.			
			138 0			
			†Rock.			
			103 6			
			246 9			
			72 0			
			396 0	1,422 4		
			674 3		
				52 18 c. yds.	s. d. 4 0	10 10 8
				24 26 „	15 0	18 14 6
	Sills 4--Hewn	24' 0" x 12" x 12"	96 0 c. ft.			
	„ 4 „	23' 0" x 12" x 12"	92 0 „			
	Wing pieces	6' 9" } x 12" x 12"	17 6 „			
		10' 9" }				
	Uprights--Round .....	.....	205 6 c. ft.	5 0	51 7 6
	Braces--Sawn .....	.....	104 0 l. ft.	3 0	15 12 0
	Girders, squared 2 sides	22' 6" x 10" x 4"	} 12 7 c. ft.	5 8	3 11 3	
	„ „ 1 „	23' 0" x 10" x 4"				
	Flooring--Sawn .....	.....	136 8 l. ft.	3 8	25 1 1
	Smithwork .....	.....	216 0 „	3 4	36 0 0
		66' 0" x 18' 4" x 4"	403 4 c. ft.	5 8	114 5 6	
		.....	504½ lbs.	0 10	21 0 5
	<i>No. 5 Bridge.</i>					
	Wing pieces--Hewn .....	.....	38 0 c. ft.		
	<i>No. 4 Bridge.</i>					
	Wing pieces--Hewn .....	.....	46 0 c. ft.		
	4 corbels „	6' 6" x 12" x 12"	26 0 „			
	2 girders „	34' 0" x 12" x 12"	68 0 „			
		.....	178 9 c. ft.	5 0	44 13 4
	Flooring--Sawn	34' 0" x 18' 4" x 4"	207 9 „	5 8	58 17 3	
	Smithwork .....	.....	377½ lbs.	0 10	15 14 7
					415 8 0	
		Less 10 per cent. (say) .....	.....	.....	41 11 9
					373 16 3	

HENRY QUODLING,
Road Superintendent.

15

B 7.

Mr. G. Wallace to The Commissioner and Engineer for Roads.

Tamworth, 16 August, 1869.

Davies v. Government.

MR. AMOS DAVIES has instructed me to apply for payment of £110 11s. 4d., being the balance due to him for certain road-works performed by him on or about May, 1864, and January, 1868.

Will you kindly inform me if the Government are prepared to make any settlement of Mr. Davies's claim? I have your letter to Mr. Davies of 9th June last, No. 891, but Mr. Davies informs me that he has not been paid in full.

An early answer will oblige

Yours truly,
GEO. WALLACE.

Inform that we hold Mr. Davies's receipt in full for these works.—W.C.B., 14/9/69. Mr. Wallace, 15/9/69.

The Commissioner and Engineer for Roads to Mr. Geo. Wallace.

Department of Public Works,
Office of Commissioner and Engineer for Roads,
Sydney, 15 September, 1869.

Sir,

In reply to your letter of the 16th ultimo, relative to a claim of £110 11s. 4d., alleged to be due to Mr. Amos Davies in respect of works performed by him under this Department, I have to inform you that receipts showing payment in full for the works in question are duly filed in this office.

I am, &c.,
WILLIAM C. BENNETT,
Commissioner and Engineer.

B 8.

KNOW all men by these presents, that we, Amos Davies, of Wallabadah, in the Colony of New South Wales, contractor, Charles John Smith, of Wallabadah, in the Colony aforesaid, butcher, and Jonathan Cock, of Wallabadah, in the Colony aforesaid, freeholder, are hold and firmly bound unto our Sovereign Lady Victoria, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, in the sum of thirty-seven pounds sixteen shillings, of good and lawful money of Great Britain, to be paid to our said Lady the Queen, her heirs or successors, to which payment, well and truly to be made, we bind ourselves, and each and every of us, jointly and severally, for and in the whole, our and each of our heirs, executors, and administrators, and every of them, firmly by these presents. £37 16s.

Sealed with our seals. Dated the twenty-eighth day of August, in the year of our Lord one thousand eight hundred and seventy-two.

WHEREAS the above-bounden Amos Davies made the tender hereunto annexed, under the terms and conditions of a notice dated the tenth day of July now last past, and published in the New South Wales *Government Gazette* of the nineteenth day of July, 1872 (of which notice a copy, signed by the said Amos Davies, Charles John Smith, and Jonathan Cock, is also hereunto annexed), and at the prices and under the stipulations in the said tender mentioned or referred to, to complete the whole of the works required in Contract 17-72, Great Northern Road, 1st District, "Thom's Gulleys," according to specification and general conditions hereto attached: And whereas the above-bounden Amos Davies, Charles John Smith, and Jonathan Cock, have severally agreed 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 His Excellency the Governor of the said Colony, on condition that this bond should be entered into by them the said Amos Davies, Charles John Smith, and Jonathan Cock: Now, the condition of the above-written bond and obligation is such, that if the said Amos Davies shall and do 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 to be void and of none effect, otherwise to remain in full force and virtue.

Signed, sealed, and delivered by the abovenamed Amos Davies, in the presence of,—
GEORGE HOLLOWAY.

AMOS DAVIES.

Signed, sealed, and delivered by the abovenamed Charles John Smith, in the presence of,—
GEORGE HOLLOWAY.

CHARLES JOHN SMITH.

Signed, sealed, and delivered by the abovenamed Jonathan Cock, in the presence of,—
GEORGE HOLLOWAY.

JONATHAN COCK.

GREAT NORTHERN ROAD—1ST DISTRICT—CONTRACT 17-72.

Department of Public Works—Road Branch.

General conditions of Road contracts and taskwork.

1. The work 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 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 Commissioners 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 accident 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 subcontract 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 one chain of centre thereof, for purposes of this contract, to become the property of the Commissioner when so placed.

7.

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 $1\frac{1}{2}$ to 1.

11. The contractor to be liable to all risk from floods or other accidents during the execution of the works.

12. The road superintendent will have power to employ men, horses, and carts, and purchase materials, to do all necessary or 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. 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.

15. Payments to be made at least once a month, at the rate of 90 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 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.

16. All moneys due on account of contract will be paid to the credit of contractor in Bank of New South Wales, or such other Bank as contractor 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.

17. 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.

18. 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.

19. The contracts to be completed in the time specified for each under a penalty of 2 per cent. per month on the total amount of each contract, for every month that such work shall remain incomplete after the expiration of the specified time;— amount of penalty to be deducted on face of pay-sheet from moneys due to contractor by department under this or any other contract.

THESE are the general conditions, with specification attached, referred to in our bond to Her Majesty, dated 28th August, A.D. 1872.

Witness—GEORGE HOLLOWAY.

AMOS DAVIES.
CHARLES JOHN SMITH.
JONATHAN COCK.

CONSTRUCTION.—SPECIFICATION.

Great Northern Road.—First District, 17-72 Contract.—Thom's Gulleys.

- Contract.** This contract commences at south side of Thom's Gully, No. 1, and extends northwards to north side of Thom's Gully, No. 2, comprising the draining, culverting, forming, and metalling of 350 lineal yards road, cutting 350 lineal yards drain, and one 1st class, one 2nd class culverts, and the laying of one 12" pipe drain.
- Drains.** Drains to be cut where directed by the road superintendent; to be 2 feet wide at bottom, with an average depth of 2 feet, and side slopes of one to one. Drains to discharge freely to culverts, and proper inlets or outlets shall be cut from them wherever the superintendent shall direct. The material excavated from drain to be evenly banked up on lower side 4 feet clear from the edge, or to be distributed as may be directed by road superintendent.
- Formation.** Length of drain required, 350 lineal yards.
Roadway to be formed 30 feet wide, on lines pegged out by road superintendent, and to be cut to the inclination directed by him, the gradients being properly boned through and due allowance made for shrinkage of banks. The formation to be in the solid, or made up with approved hard material as the nature of the ground may require, to be uniform in cross section, having a convexity of 9 inches to the margin or water-table, and where embanked on a sideling the scarp side to be left slightly high to allow for settlement in consolidation. All stumps, rocks, or other obstructions to be removed, and all holes, ruts, hollows, or depressions, to be filled in with ballast or approved gravel. Wherever the formation is not altogether in the solid, it must be consolidated by the traffic before any metal is spread, fresh material being supplied to make up convexity where required. The material excavated in forming the road, unless the contractor receives written instructions to the contrary from the road superintendent, shall be thrown back (6) six feet clear of the water-tables. Extra material for embankment to be obtained as will be directed from any distance not exceeding 50 yards. Wherever it is practicable, mitre drains 18" wide shall be cut to relieve the water-tables, at such intervals as shall be directed, a solid block being left, and the tabling recommended 2 feet below each mitre drain.
- Metal.** The length of formation required, 350 lineal yards.
Metal to be of the hardest and best description of blue stone procurable within three miles of the work; to be approved by the superintendent, to whom a sample is to be submitted before any quarrying is done. To be broken to a strict 3-inch gauge, with clean, sharp, and cuboidal fracture, and stacked on even ground by the side of the road for measurement. The metal to be quite free from spawls, quarry faces, dirt, chips, &c. The heaps shall be opened out for inspection as directed.
Quantity of metal required, 200 cubic yards.
When the whole length of formation is ready to receive metal, it is after measurement, and on receipt of order from the road superintendent or overseer, to be evenly spread, as will be directed.
- Progress.** The contractor shall be bound to proceed with the works in such order and at such times as he may be instructed. If required, he shall supply all the metal, and construct all the culverts before commencing the formation, or *vice versa*.
- Culverts.** The culverts are to be of the dimensions shown on drawings, and in all other respects in accordance with the plans hereto attached. The stone is to be approved of; to be quarry dressed, but to have faced joints; to be laid in mortar, composed of one part best stone-lime to two parts of approved sand; joints to be flushed throughout.
- Time.** All the works specified to be completed within four months from date of signing the bond under a penalty provided for in the "General Conditions for Road Contracts," hereto attached, which penalty will in all cases be strictly enforced, 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.

Tenders

Tenders to state a bulk sum for the execution of all the works specified, also a schedule of prices at which any Tenders. deductions or additions shall be valued; such additions or deductions, no matter to what extent ordered, shall not vitiate or set aside the contract.

In all matters relating to this contract, not herein specified, the contractor to be bound by the printed general conditions hereto attached. General conditions.

12" Pipe drain.—The pipes will be provided by the Government, and delivered to the contractor at the Railway goods-shed at Murrurundi; the contractor will have to cart them to the work and be responsible for breakage. They are to be laid in Portland cement, in such position and with such fall as will be directed. At each end of each pipe drain two stones, cut to receive pipes, are to be provided and set in cement, each stone to be 3' x 1' x 10". The trench to be filled over pipes with approved ballast up to the level of tops of stones at ends of pipe drains, and to be well rammed after.

ROADS DEPARTMENT.

Contract 17-72.

2nd-class Stone Culvert—Flagged top, 6ft. span.

THE culvert to be built in general accordance with drawing (as figured),* the water-way being 6 feet x 2½ feet in the clear between abutment walls. The roadway 20 ft. wide in the clear between parapets. * Design. (See separate Appendix No. 1.)
Foundation.

The trenches for foundations shall be dug on lines pegged out by the superintendent, and shall be excavated to such a depth as will ensure sound, permanent, and level foundations for footings on rock or other approved hard stratum. Benching will be allowed or not at the discretion of the superintendent, who will examine and pass the foundation before any masonry is laid. The contractor to keep the foundation trenches free from water either by drains or pumping until such time as the road superintendent may direct.

On receipt of a written order from the superintendent, the main and face walls may be carried up as nearly level in height all round as the nature of the work will allow, so that settlement may be as uniform as possible. Walls to be built in first-class coursed rubble-work set in mortar composed of two parts best stone lime, mixed with three parts of clean sharp sand. No stone to be less than half a cubic foot in dimension. Walls to be of the thickness shown on drawing. Quoins to be hammer-dressed. No stone to be less on bed than height of course. Headers to be at least double the height of course on bed. Masonry.

The trench for the culvert shall be dug across the full width of the road at such inclination as may be directed, and if to be paved shall be shaped with a concavity of 4 inches; the inlet being if necessary either double or bell-mouthed at its junction with side drain. Inlet and outlet.

When the walls are carried up to the required height, and shall have passed inspection and approval by the superintendent, the foundation trenches shall be filled in with the material excavated if of approved quality, rammed in layers. If quality be not approved, fresh material must be obtained. The whole back of the culvert to be covered in with a layer of puddle of approved clay, as shown in drawing.

The bed of waterway shall be either flagged or paved as shown in drawing, with rough spawled pavours 12 inches deep on edge, close laid in the dry, rammed and grouted with lime and fine clean sharp sand. The downstream course to be of the largest stones obtainable, well bedded into remainder of work and to side walls. Paving.

Corbel flags 3 feet 6 inches long, not less than 2 feet wide, and 12 inches thick, shall be bedded on the top of main walls, which shall be built up smooth without spawls to receive them, the tops to be dressed off flat to receive covering flag. The top of culvert shall be covered in by flags 6½ feet long, not less than 2 feet wide or 12 inches thick in any place. All flags to be roughly edged, to lay close and bed truly, jointed and pointed with mortar, and to be thoroughly hard, sound, and free from fractures. Flagging.

The face walls being carried up 18 inches thick to level shown on drawings, shall finish in a parapet of 12 inch rubble masonry, having a coping of rough hammered stone rounded at top and set on edge in mortar, as shown in drawing. Parapets.

When the masonry and flagging has been inspected and passed, and not before, the whole of the culvert between parapets shall be filled into the formation level of roadway with approved material, shale, clay, or earth, rammed in layers, the formation having a convexity of 9 inches in the centre. A perfect junction to be effected with existing road formation. Filling.

The roadway between parapets shall be covered with a layer of approved ballast 6 inches thick, broken to a strict 5 inch gauge, which shall be blinded and consolidated by traffic. Then a layer of the hardest blue metal, 6 inches thick, shall be evenly spread over the whole, and a perfect junction made with existing roadway wherever disturbed. Metal to be broken to a strict 3-inch gauge, clean, cuboidal, and with sharp fractures. To facilitate passage of traffic, if required, the contractor shall build only half of the length of the culvert at one time,—great care being taken to bind the work properly at the joining; and also, if required, shall keep a light burning all night—contractor being responsible for all accidents to vehicles arising from his neglect. Ballast and metal.

Contractor to find all plant, tools, and materials required, and to remove same on completion of work, and clear away all rubbish.

In all matters relating to this contract not set forth herein, the contractor to be bound by the general conditions of contract attached.

ROADS DEPARTMENT.

Contract 17-72.

Stone Culvert—Arch.

THE culvert to be built in general accordance with drawings (as figured), the span being 14 feet clear at springing of arch. Roadway to be 20 feet clear in width between parapet walls. Design. (See separate Appendix No. 2.)
Foundations.

The trenches for foundations shall be dug on lines pegged out by the superintendent, and shall be excavated to such a depth as will ensure sound, permanent, and level foundation for footings on rock or other approved hard stratum. Benching will be allowed or not, at the discretion of the superintendent, who will examine and pass the foundation before any masonry is laid. The contractor to keep the foundation trenches free from water either by drains or pumping until such time as the road superintendent may direct.

On receipt of a written order from the superintendent, the abutment and face walls of the culvert may be carried up as nearly level in height all round as the nature of the work will allow, so that settlement may be as uniform as possible before springing the arch. Masonry.

Footings to be through stones 3 feet long bedded truly on the foundations, no spawling or packing under being allowed. Footings.

Abutments and face walls to be built in first-class coursed rubble-work set flush in mortar composed of two parts best stone lime, with three parts clean sharp sand, well mixed and beaten, no stone to be less on bed than height of course, headers to be at least double the height of course on bed. No stone to be less than half a cubic foot in dimension. Walls to be of the thicknesses shown on drawing, according to their height from footing courses. Abutment walls to have a batter of 1 in 10 on face. The quoins of abutment and outer ring of arch to be neatly hammer-dressed, beds of ring stones being truly radial, and soffits neatly dressed to curve of arch. Skewbacks to be through stones 2 feet on bed. The sheeting of arch to be of the flattest stones obtainable, and if not flat to be roughly hammered and bedded skin to skin flush in fine mortar; the backs carefully spawled up and well grouted with mortar, half lime and half sand. Arch to be built over a centre of planks of sufficient thickness laid on dry stone walls. The joints of soffit to be neatly pointed and struck on removal of centering. Face walls to be carried up 18 inches thick to level shown on drawing, with a parapet of 12 inch rubble masonry, coped with rough hammered and rounded stones set on edge in mortar, as shown in drawing. Walls, and arch.

The bed of waterway or creek shall be shaped out to a regular incline of 1 in 60, with a concavity of 8 inches; then paved with rough spawled pavours 12 inches deep on edge, close laid without mortar, rammed and grouted with lime and fine clean sharp sand, the downstream course to be of the largest stones obtainable, well bonded into remainder of work, and to side walls.

When

Filling and puddle.

When the masonry is carried as high as the springing, and has been examined and approved by the superintendent, the foundation trenches shall be filled in with the material excavated, if of approved quality, rammed in layers. If quality be not approved, fresh material must be obtained. When the whole of the masonry has been inspected and passed, and not before, the whole of the culvert between wing walls shall be covered and backed in with a layer of puddle of approved clay, as shown in drawing, and subsequently raised to formation level by rammed earth as shown; the formation having a convexity of 9 inches in centre.

Ballast and metal.

The roadway between parapet walls shall be covered with a layer of approved ballast 6 inches thick, broken to a strict 5 inch gauge, which shall be blinded and consolidated by traffic. Then a layer of the hardest blue metal 6 inches thick shall be evenly spread over the whole, and a perfect junction made with existing roadway wherever disturbed. Metal to be broken to a strict 3 inch gauge, clean, cuboidal, and with sharp fractures.

To facilitate passage of traffic, if required, the contractor shall build only half the length of this culvert at one time—great care being taken to bond the work properly at the joining; and also, if required, shall keep a light burning all night—contractor being responsible for all accidents to vehicles arising from his neglect.

In places where suitable stone for sheeting of arch cannot be obtained, brick-work of the same thickness may be substituted, with the same conditions as to centering, grouting, and quality of mortar.

The bricks to be laid on edge in concentric rings, bond carefully attended to, and the soffit neatly pointed on removal of centering.

Contractor to find all plant, tools, material, centering, &c., required, and to remove same on completion of work, and clean away all rubbish, &c.

In all matters relating to this contract, not set forth herein, the contractor to be bound by the general conditions of contract attached.

Form of Tender for Road.
DEPARTMENT OF PUBLIC WORKS—ROAD BRANCH.

I HEREBY propose to execute the whole of the works required on Contract No. 17-72, Great Northern Road, First District, Thom's Gullies, in strict accordance with specification, general conditions, and to the satisfaction of the Commissioner for Main Roads or other authorized officer, and to complete the same within _____ months after signing the contract for the sum of £ _____; and do hereby agree that any addition, deduction, or alteration, shall be valued at the following rates, or at a price to be agreed upon at the time, and added to or deducted from the above amounts, as the case may be:—

	£	s.	d.
Clearing road wide			
Excavation in earth			
Do. rock			
Forming 350 lin. yards, at 3s.			
Side drains, 350 „ at 1s.			
Ballast gauge, 200 cubic yards, at 6s.			
Metal, 3-in. gauge			
Gravel gauge			
One 1st class culvert, stone, 14 ft. span			
One 2nd class culvert, stone			
Laying 12-in. drain pipe			
	£	378	0 0

The prices in the preceding schedule include all labor, materials, tools, and workmanship of every kind necessary for the full and perfect completion of the works to the entire satisfaction of the Commissioner for Roads or other authorized officer.

To the Under Secretary for Public Works, AMOS DAVIES,
Wallabadah, 4/8/72.

Should the foregoing tender be accepted, we, the undersigned, do hereby agree to be responsible for the due performance of the contract, and we hereby undertake within _____ days from the date of the notification of the acceptance of the said tender, jointly and severally to execute and deliver a bond to Her Majesty in the penal sum of _____ for securing such performance.

CHARLES JOHN SMITH,
Wallabadah.
G. H. WHEATLEY,
Wallabadah.

Department of Public Works,
Sydney, 10th July, 1872.

GREAT NORTHERN ROAD.—FIRST DISTRICT.

TENDERS will be received at this Office, until 11 o'clock of Tuesday, the 6th day of August next, from persons willing to contract for the following Works on the Great Northern Road, 1st District:—

- Contract 16-72.—Wire fence to south end of Apple-tree Flat.
- „ 17-72.—Thom's Gullies.
- „ 18-72.—South of Red Hill.
- „ 19-72.—Martindale's Culvert to The Furrows.

Plan, specification, and form of tender may be seen at the Office of the Commissioner for Roads, Sydney, and at the Court Houses, Murrurundi and Wallabadah. Tenders to be addressed to the Under Secretary for Public Works, Sydney, and to be marked outside "Tender for Contract, Great Northern Road, 1st District."

AMOS DAVIES.
CHARLES JOHN SMITH.
JONATHAN COCK.

JOHN SUTHERLAND.

Witness—GEORGE HOLLOWAY.

KNOW all men by these presents, that we, Amos Davies, of Wallabadah, in the Colony of New South Wales, contractor; Jonathan Cock, of Wallabadah, in the Colony aforesaid, freeholder; and Charles John Smith, of Wallabadah, in the Colony aforesaid, butcher, are held and firmly bound unto our Sovereign Lady Victoria, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, in the sum of one hundred and ninety-one £191 2s pounds and two shillings, of good and lawful money of Great Britain, to be paid to our said Lady the Queen, her heirs or successors, to which payment, well and truly to be made, we bind ourselves, and each and every of us, jointly and severally, for and in the whole, our and each of our heirs, executors, and administrators, and every of them, firmly by these presents.

Sealed with our seals. Dated the twenty-eighth day of August, in the year of our Lord one thousand eight hundred and seventy-two.

WHEREAS the above-bounden Amos Davies made the tender hereunto annexed, under the terms and conditions of a notice dated the tenth day of July now last past, and published in the New South Wales *Government Gazette* of the nineteenth day of July, 1872 (of which notice a copy, signed by the said Amos Davies, Jonathan Cock, and Charles John Smith, is also hereunto annexed), and at the prices and under the stipulations in the said tender mentioned or referred to, to complete the whole of the works required in Contract 10-72, Great Northern Road, 1st District, Sugarloaf, to metalling at M'Mahon's, according to specification and general conditions hereto attached:

And whereas the above-bounden Amos Davies, Jonathan Cock, and Charles John Smith, have severally agreed 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 His Excellency the Governor of the said Colony, on condition that this bond should be entered into by them the said Amos Davies, Jonathan Cock, and Charles John Smith:

Now the condition of the above-written bond and obligation is such, that if the said Amos Davies shall and do 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 to be void and of none effect, otherwise to remain in full force and virtue.

AMOS DAVIES.

Signed, sealed, and delivered by the abovenamed Amos Davies, in the presence of—

GEORGE HOLLOWAY.

JONATHAN COCK.

Signed, sealed, and delivered by the abovenamed Jonathan Cock, in the presence of—

GEORGE HOLLOWAY.

CHARLES JOHN SMITH.

Signed, sealed, and delivered by the abovenamed Charles John Smith, in the presence of—

GEORGE HOLLOWAY.

DEPARTMENT OF PUBLIC WORKS—ROAD BRANCH.

I HEREBY propose to execute the whole of the works required on Contract No. 10-72, Great Northern Road, First District, Sugar-loaf Gap, to metalling at M'Mahon's, in strict accordance with specification, general conditions, and to the satisfaction of the Commissioner for Main Roads, or other authorized officer, and to complete the same within six months after signing the contract, for the sum of £1,911 8s. 6d.; and do hereby agree that any addition, deduction, or alteration, shall be valued at the following rates, or at a price to be agreed upon at the time, and added to or deducted from the above amounts, as the case may be:—

	£	s.	d.
Clearing road wide per lineal chain			
Excavation in earth, per cubic yard.....			
Do. rock, per cubic yard			
Forming 2,130 lineal yards, at 2s. 6d. per lineal yard	266	5	0
Side drains, 2,130 lineal yards, at 1s. per lineal chain	106	10	0
Ballast gauge, per cubic yard.....			
Metal, 3 in. gauge, 3,729 cubic yards, at 5s. 6d. per cubic yard	1,025	9	6
Blinding gauge, 532 cubic yards, at 2s. per cubic yard	53	4	0
Four 3rd class culverts, 5 feet waterway, at £40 each	160	0	0
Six 2nd class do., stone, 8 feet waterway, at £50 each.....	300	0	0
Maintenance of road after completion of construction, £24 per month.			
	£1,911	8	6

The prices in the preceding schedule include all labour, materials, tools, and workmanship of every kind necessary for the full and perfect completion of the works to the entire satisfaction of the Commissioner for Roads, or other authorized officer.

To the Under Secretary for Public Works.

AMOS DAVIES,

Wallabadah, 3 August, 1872.

Should the foregoing tender be accepted, we, the undersigned, do hereby agree to be responsible for the due performance of the contract, and we hereby undertake within _____ days from the date of the notification of the acceptance of the said tender, jointly and severally, to execute and deliver a bond to Her Majesty in the penal sum of _____ for securing such performance.

JONATHAN COCK,
CHARLES JOHN SMITH,
both of Wallabadah.

DEPARTMENT OF PUBLIC WORKS—ROAD BRANCH.

Great Northern Road, First District.—Contract 10 of 1872.

General Conditions of Road Contracts and Taskwork.

1. The works to which these conditions refer, include the supply of all tools, materials, and labor, 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 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 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 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 one 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 $1\frac{1}{2}$ to 1.

11. The contractor to be liable to all risk from floods or other accidents during the execution of the works.

12. The road superintendent will have power to employ men, horses, and carts, and purchase materials to do all necessary or 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. 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.

15. Payments to be made at the rate of 90 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 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.

16. All moneys due on account of contract, will be paid to the credit of contractor in Bank of New South Wales, or such other Bank as contractor 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.

17. 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.

18. 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.

19. The contract to be completed in the time specified under a penalty of 2 per cent. per month on the total amount, for every month that such work shall remain incomplete after the expiration of the said five months, amount of penalty to be deducted on face of pay-sheet from moneys due to contractor by department under this or any other contract.

These are the general conditions with specification attached, referred to in our bond to Her Majesty, dated 28th August, A.D. 1872.

Witness,—GEORGE HOLLOWAY.

AMOS DAVIES.
JONATHAN COCK.
CHARLES JOHN SMITH.

CONSTRUCTION—SPECIFICATION.

Great Northern Road.—First District, 10-72 contract. Sugarloaf Gap to metalling at M'Mahon's.

Contract. THIS contract commences at end of metalling over Sugarloaf Gap, and extends northwards to metalling at "M'Mahon's Inn," comprising the draining, culverting, forming, metalling, blinding, and consolidating, on the following sections:—

Section 1.—Sugarloaf to 1st culvert, 1,602 lineal yards.

" 2.—1st culvert to 2nd culvert, 528 lineal yards.

Making a total of 2,130 lineal yards road construction, 2,130 lineal yards drain, and eight 2nd class and two 3rd class stone culverts.

Drains. Drains to be cut where directed by the road superintendent; to be 1 foot wide at bottom, with an average depth of 2 feet, and side slopes of one to one; drains to discharge freely to culverts, and proper inlets or outlets shall be cut from them wherever the superintendent shall direct. The material excavated from drain to be evenly banked up on lower side 4 feet clear from the edge, or to be distributed as may be directed by road superintendent.

Formation. Roadway to be formed 30 feet wide, on lines pegged out by road superintendent, and to be cut to the inclination directed by him, the gradients being properly boned through and due allowance made for shrinkage of banks. The formation to be in the solid, or made up with metal, as the nature of the ground may require, to be uniform in cross section, having a convexity of 9 inches to the margin or water-table, and were embanked on a sidling the scarp side to be left slightly high to allow for settlement in consolidation. All stumps, rocks, or other obstructions to be removed, and all holes, ruts, hollows, or depressions to be filled in with metal. Wherever the formation is not altogether in the solid, it must be consolidated by the traffic before any metal is spread, fresh material being supplied to make up convexity where required. The material excavated in forming the road, unless the contractor receives written instructions to the contrary from the road superintendent, shall be thrown back (6) six feet clear of the water-tables. Wherever it is practicable, mitre drains 18" wide shall be cut to relieve the water-tables, at such intervals as shall be directed, a solid block being left and the tabling recommenced 2 feet below each mitre drain. The length of formation required is 2,130 lineal yards.

Metal. The metal to be of the hardest and best description of bluestone procurable within 3 miles of the work; to be approved by the superintendent, to whom a sample is to be submitted before any quarrying is done. To be broken to a strict 3 inch gauge, with clean, sharp, and cuboidal fracture, and stacked on even ground by the side of the road for measurement. The metal

metal to be quite free from spawls, quarry face, dirt, chips, &c., and shall be turned over by a fork having tines $1\frac{1}{2}$ " apart. The heap shall be opened out for inspection as directed. The metal to be provided at the rate of $1\frac{3}{4}$ cubic yard to each yard of road.

When the whole or any well defined length of formation is ready to receive metal, it is after measurement, and on receipt of a written order from the road superintendent or overseer, to be evenly spread to a width of 20 feet and a depth of about $7\frac{1}{2}$ inches, or at the rate of $1\frac{1}{2}$ cubic yard to the lineal yard of road. Until so spread, examined, and blinded, no more metal shall be stacked within such distance of the measured metal as shall be directed by the road superintendent.

When this quantity of metal is properly spread, and after inspection by the superintendent, the central 12 feet of road shall receive an even coat of blinding 3 inches thick, or at the rate of $\frac{1}{2}$ cubic yard to the lineal yard of road. Blinding to consist of decomposed granite, clean ridge gravel, or other approved gritty material. No clay, loam, or black soil on any account to be used as blinding. Quantity of blinding required—532 cubic yards. The road is then to be kept rolled in, and maintained with the remaining $\frac{1}{2}$ of a yard of metal to the yard run, until thoroughly consolidated by traffic and raker; any metal not so required to be stacked alongside for further maintenance.

The contractor shall be bound to proceed with the works in such order and at such times as he may be instructed. If required he shall supply all the metal, and construct all the culverts before commencing the formation, or *vice versa*.

The culverts are to be of the dimensions shown on drawings, and in all other respects in accordance with the plans hereto attached; to be of rough hammer-dressed stone, laid in mortar composed of one part approved stone-lime to two parts of clean sand; stones to be well bedded, and joints to be flushed through. Parapets to be dressed inside, and all quoins to be drafted. The height of parapets, &c., to be according to position.

All the works specified to be completed within five months from date of signing the bond under a penalty provided for in the "General Conditions for Road Contracts," hereto attached, which penalty will in all cases be strictly enforced, 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.

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.

In all matters relating to this contract, not herein specified, the contractor to be bound by the printed general conditions hereto attached.

Six of the 2nd class culverts are to have waterways of 8 feet, and two of them waterways of 5 feet each.

The 3rd class culverts are to have waterways of 5 feet each.

ROADS DEPARTMENT.

Contract 10-72—2nd Class Stone Culvert—Flagged Top.

THE culvert to be built in general accordance with drawing (as figured), the waterway being 8 feet x $2\frac{1}{2}$ feet in the clear between abutment walls. The roadway 22 feet wide in the clear between parapets. Design. (See Separate Appendix No. 3) Foundation.

The trenches for foundation shall be dug on lines pegged out by the superintendent, and shall be excavated to such a depth as will ensure sound, permanent, and level foundations for footings on rock or other approved hard stratum. Benching will be allowed or not, at the discretion of the superintendent, who will examine and pass the foundation before any masonry is laid. The contractor to keep the foundation trenches free from water either by drains or pumping until such time as the road superintendent may direct.

On receipt of a written order from the superintendent, the main and face walls may be carried up as nearly level in height all round as the nature of the work will allow, so that settlement may be as uniform as possible. Walls to be built in first-class coursed rubble-work set in mortar composed of two parts best stone lime, mixed with three parts of clean sharp sand. No stone to be less than half a cubic foot in dimension. Walls to be of the thicknesses shown on drawing. Quoins to be hammer-dressed. No stone to be less on bed than height of course. Headers to be at least double the height of course on bed.

The trench for the culvert shall be dug across the full width of the road at such inclination as may be directed, and to be paved shall be shaped with a concavity of 5 inches; the inlet being if necessary either double or bell-mouthed at its junction with side drain. Masonry. Inlet and outlet.

When the walls are carried up to the required height, and shall have passed inspection and approved by the superintendent, the foundation trenches shall be filled in with the material excavated, if of approved quality, rammed in layers. If quality be not approved, fresh material must be obtained. The whole back of the culvert to be covered in with a layer of puddle of approved clay, as shown in drawing.

The bed of waterway shall be either flagged or paved as shown in drawing with rough spawled paviments 12 inches deep on edge, close laid in the dry, rammed and grouted with lime and fine clean sharp sand. The downstream course to be of the largest stones obtainable, well bonded into remainder of work and to side walls. Paving.

Corbel flags, 6 feet long, not less than 2 feet wide and 12 inches thick, shall be bedded on the top of main walls, which shall be built up smooth without spawls to receive them, the tops to be dressed off flat to receive covering flag. The top of culvert shall be covered in by flags 7 feet long, not less than 2 feet wide or 12 inches thick in any place. All flags to be roughly edged, to lay close and bed truly, jointed and pointed with mortar, and to be thoroughly hard, sound, and free from fractures. Flagging.

The face walls being carried up 18 inches thick to level shown on drawings, shall finish in a parapet of 12-inch rubble masonry, having a coping of rough hammered stone rounded at top and set on edge in mortar, as shown in drawing. Parapets.

When the masonry and flagging has been inspected and passed, and not before, the whole of the culvert between parapets shall be filled in to the formation level of roadway with approved material, shale, clay, or earth rammed in layers; the formation having a convexity of 9 inches in the centre. A perfect junction to be effected with existing road formation. Filling.

The roadway between parapets shall be covered with a layer of approved ballast 6 inches thick, broken to a strict 5-inch gauge, which shall be blinded and consolidated by traffic. Then a layer of the hardest blue metal, 6 inches thick, shall be evenly spread over the whole, and a perfect junction made with existing roadway wherever disturbed. Metal to be broken to a strict 3-inch gauge, clean, cuboidal, and with sharp fractures. To facilitate passage of traffic, if required, the contractor shall build only half of the length of the culvert at one time,—great care being taken to bind the work properly at the joining; and also, if required, shall keep a light burning all night—contractor being responsible for all accidents to vehicles arising from his neglect. Ballast and metal.

Contractor to find all plant, tools, and materials required, and to remove same on completion of work, and clear away all rubbish.

In all matters relating to this contract, not set forth herein, the contractor to be bound by the general conditions of contract attached.

ROADS DEPARTMENT.

Contract 10-72—3rd Class Stone Culvert—Flagged Top.

THE culvert to be built in general accordance with drawing (as figured), the waterway being 5 feet x $2\frac{1}{2}$ feet in the clear between abutment walls. The roadway 20 feet wide in the clear between parapets. Design. (See Separate Appendix No. 4.) Foundation.

The trenches for foundation shall be dug on lines pegged out by the superintendent, and shall be excavated to such a depth as will ensure sound, permanent, and level foundations for footings on rock or other approved hard stratum. Benching will be allowed or not, at the discretion of the superintendent, who will examine and pass the foundation before any masonry is laid. The contractor to keep the foundation trenches free from water either by drains or pumping until such time as the road superintendent may direct.

On receipt of a written order from the superintendent, the main and face walls may be carried up as nearly level in height all round as the nature of the work will allow, so that settlement may be as uniform as possible. Walls to be built in first-class coursed rubble-work, set in mortar composed of two parts best stone lime, mixed with three parts of clean sharp sand. Masonry.

No

No stone to be less than half a cubic foot in dimension. Walls to be of the thicknesses shown on drawing. Quoins to be hammer-dressed. No stone to be less on bed than height of course. Headers to be at least double the height of course on bed.

Inlet and outlet. The trench for the culvert shall be dug across the full width of the road at such inclination as may be directed, and if to be paved, shall be shaped with a concavity of 4 inches; the inlet being if necessary either double or bell-mouthed at its junction with side drain.

When the walls are carried up to the required height, and shall have passed inspection and approval by the superintendent, the foundation trenches shall be filled in with the material excavated, if of approved quality, rammed in layers. If quality be not approved, fresh material must be obtained. The whole back of the culvert to be covered in with a layer of puddle of approved clay, as shown in drawing.

Paving. The bed of waterway shall be either flagged or paved as shown in drawing, with rough spawled pavours 12 inches deep on edge, close laid in the dry, rammed and grouted with lime and fine clean sharp sand. The down stream course to be of the largest stones obtainable, well bonded into remainder of work and to side walls.

Flagging. The top of main walls shall be built up smooth without spawls, dressed off flat to receive covering flag. The top of culvert shall be covered in by flags 7 feet long, not less than 2 feet wide or 12 inches thick in any place. All flags to be roughly edged, to lay close and bed truly, jointed and pointed with mortar, and to be thoroughly hard, sound, and free from fractures.

Parapets. The face walls being carried up 18 inches thick to level shown on drawings, shall finish in a parapet of 12 inch rubble masonry, having a coping of rough hammered stone rounded at top and set on edge in mortar, as shown in drawing.

Filling. When the masonry and flagging has been inspected and passed, and not before, the whole of the culvert between parapets shall be filled in to the formation level of roadway with approved material, shale, clay, or earth rammed in layers; the formation having a convexity of 9 inches in the centre. A perfect junction to be effected with existing road formation.

Ballast and metal. The roadway between parapets shall be covered with a layer of approved ballast 6 inches thick, broken to a strict 5-inch gauge, which shall be blinded and consolidated by traffic. Then a layer of the hardest blue metal 6 inches thick, shall be evenly spread over the whole, and a perfect junction made with existing roadway wherever disturbed. Metal to be broken to a strict 3-inch gauge, clean, cuboidal, and with sharp fractures. To facilitate passage of traffic, if required, the contractor shall build only half of the length of the culvert at one time,—great care being taken to bind the work properly at the joining; and also, if required, shall keep a light burning all night—contractor being responsible for all accidents to vehicles arising from his neglect.

Contractor to find all plant, tools, and materials required, and to remove same on completion of work, and clear away all rubbish.

In all matters relating to this contract not set forth herein, the contractor to be bound by the general conditions of contract attached.

Department of Public Works,
Sydney, 10 July, 1872.

GREAT NORTHERN ROAD.—FIRST DISTRICT.

TENDERS will be received at this office, until 11 o'clock of Tuesday, the 6th day of August next, from persons willing to contract for the undermentioned works on the Great Northern Road, 1st District:—

- Contract 10-72.—Sugarloaf to metalling at M'Mahon's.
 " 13-72.—Singleton to Camberwell.
 " 14-72.—South of Grass-tree Hill to Muswellbrook.
 " 15-72.—Skinner's Lun to top of Warland's Range.

Plan, specification, and form of tender may be seen at the office of the Commissioner for Roads, Sydney, and at the Court Houses, Muswellbrook and Murrurundi.

Tenders to be addressed to the Under Secretary for Public Works, Sydney, and to be marked outside "*Tender for Contract, Great Northern Road, 1st District.*"

JOHN SUTHERLAND.

AMOS DAVIES.
 JONATHAN COX.
 CHARLES JOHN SMITH.

Witness,—

KNOW all men by these presents, that we, Amos Davies, of Wallabadah, in the Colony of New South Wales, contractor, Jonathan Cock, of Wallabadah, in the Colony aforesaid, freholder, and Charles John Smith, of Wallabadah, in the Colony aforesaid, butcher, are held and firmly bound unto our Sovereign Lady Victoria, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, in the sum of one hundred and eleven pounds and twelve shillings of good and lawful money of Great Britain, to be paid to our said Lady the Queen, her heirs or successors, to which payment, well and truly to be made, we bind ourselves, and each and every of us, jointly and severally, for and in the whole, our and each of our heirs, executors, and administrators, and every of them, firmly by these presents.

Sealed with our seals. Dated the twenty-eighth day of August, in the year of our Lord one thousand eight hundred and seventy-two.

WHEREAS the above-bounden Amos Davies made the tender hereunto annexed, under the terms and conditions of a notice dated the tenth day of July now last past, and published in the New South Wales *Government Gazette* of the nineteenth day of July, 1872 (of which notice a copy, signed by the said Amos Davies, Jonathan Cock, and Charles John Smith, is also hereunto annexed), and at the prices and under the stipulations in the said tender mentioned or referred to, to complete the whole of the works required in Contract 16-72, Great Northern Road, 1st District, "wire fence to south end of Apple-tree Flat," according to specification and general conditions attached hereto:

And whereas the above-bounden Amos Davies, Jonathan Cock, and Charles John Smith have severally agreed 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 His Excellency the Governor of the said Colony, on condition that this bond should be entered into by them the said Amos Davies, Jonathan Cock, and Charles John Smith: Now the condition of the above-written bond and obligation is such that if the said Amos Davies shall and do 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 to be void and of none effect, otherwise to remain in full force and virtue.

Signed, sealed, and delivered by the abovenamed Amos Davies, in the presence of—

AMOS DAVIES.

GEORGE HOLLOWAY.

Signed, sealed, and delivered by the abovenamed Jonathan Cock, in the presence of—

JONATHAN COCK.

GEORGE HOLLOWAY.

Signed, sealed, and delivered by the abovenamed Charles John Smith, in the presence of—

CHARLES JOHN SMITH.

GEORGE HOLLOWAY.

DEPARTMENT

DEPARTMENT OF PUBLIC WORKS—ROAD BRANCH.

Great Northern Road, First District.—Contract 16-72.

General Conditions of Road Contracts and Taskwork.

1. The works to which these conditions refer include the supply of all tools, materials, and labor, 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 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 accident 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 one 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 $1\frac{1}{2}$ to 1.
11. The contractor to be liable to all risk from floods or other accidents during the execution of the works.
12. The road superintendent will have power to employ men, horses, and carts, and purchase materials, to do all necessary or 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. 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.
15. Payments to be made at least once a month, at the rate of ninety 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 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.
16. All moneys due on account of contract will be paid to the credit of contractor in Bank of New South Wales, or such other Bank as contractor 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.
17. 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.
18. 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.
19. The contracts to be completed in the time specified for each, under a penalty of 2 per cent. per month on the total amount of each contract, for every month that such work shall remain incomplete after the expiration of the specified time; amount of penalty to be deducted on face of pay sheet from moneys due to contractor by department under this or any other contract.

These are the general conditions, with specification attached, referred to in our bond to Her Majesty, dated 28th August, A.D. 1872.

Witness,—GEORGE HOLLOWAY.

AMOS DAVIES.
JONATHAN COCK.
CHARLES JOHN SMITH.

CONSTRUCTION—SPECIFICATION.

Great Northern Road.—First District. 16-72 Contract.—Wire fence to south end of Apple-tree Flat.

This contract commences at end of metalling at the wire fence, and extends northwards 1,508 lineal yards, comprising the Contract. draining, culverting, forming, metalling, blinding, and consolidating of road, being a total of 1,508 lineal yards road construction, 1,508 lineal yards drain, four 3rd class culverts of stone, and the laying of five 15-inch pipe drains.

Drains to be cut where directed by the road superintendent; to be 2 feet wide at bottom, with an average depth of Drains. 2 feet, and side slopes of 1 to 1. Drains to discharge freely to culverts, and proper inlets or outlets shall be cut from them wherever the superintendent shall direct. The material excavated from drain to be evenly banked up on lower side 4 feet clear from the edge, or to be distributed as may be directed by road superintendent. Length of drain required, 1,508 lineal yards.

Roadway to be formed 30 feet wide, on lines pegged out by road superintendent, and to be cut to the inclination Formation. directed by him, the gradients being properly boned through and due allowance made for shrinkage of banks. The formation to be in the solid, or made up with metal as the nature of the ground may require, to be uniform in cross section, having a convexity of 9 inches to the margin or water-table; and where embanked on a sideling the scarp side to be left slightly high to allow

allow for settlement in consolidation. All stumps, rocks, or other obstructions to be removed, and all holes, ruts, hollows, or depressions to be filled in with metal. Wherever the formation is not altogether in the solid, it must be consolidated by the traffic before any metal is spread, fresh material being supplied to make up convexity where required. The material excavated in forming the road, unless the contractor receives instructions to the contrary from the road superintendent, shall be thrown back (6) six feet clear of the water-tables. Extra material for embankment to be obtained as will be directed from any distance not exceeding 50 yards. Wherever it is practicable, mitre drains 18 in. wide shall be cut to relieve the water-tables, at such intervals as shall be directed, a solid block being left, and the tabling recommenced two feet below each mitre drain. The length of formation required is 1,508 lineal yards.

Metal.

Metal to be of the hardest and best description of blue stone procurable within three miles of the work; to be approved by the superintendent, to whom a sample is to be submitted before any quarrying is done. To be broken to a strict 3-in. gauge, with clean, sharp, and cuboidal fracture, and stacked on even ground by the side of the road for measurement. The metal to be quite free from spawls, quarry face, dirt, chips, &c. The heaps shall be opened out for inspection as directed. The total quantity required will be 2,262 cubic yards.

When the whole or any well defined length of formation is ready to receive metal, it is after measurement, and on receipt of an order from the road superintendent or overseer, to be evenly spread to a width of 20 feet, and a depth of 8 inches, or at the rate of $1\frac{1}{2}$ cubic yard to the lineal yard of road. Until so spread, examined, and blinded, no more metal shall be stacked within such distance of the measured metal as shall be directed by the road superintendent.

Blinding.

When the metal is properly spread, and after inspection by the superintendent, the central eleven feet of road shall receive an even coat of blinding two inches thick, or at the rate of one-fifth cubic yard to the lineal yard of road. Blinding to consist of decomposed granite, clean ridge gravel, or other approved gritty material. No clay, loam, or black soil on any account to be used as blinding. Quantity of blinding required, 300 cubic yards.

Consolidation.

The contractor shall maintain the road in good order and condition, keeping the ruts well raked in, to the satisfaction of the road superintendent, for a period of two months after the completion of the work, and shall force the traffic off or on the road, as may be directed.

Progress.

The contractor shall be bound to proceed with the works in such order and at such times as he may be instructed. If required he shall supply all the metal and construct all the culverts before commencing the formation, or *vice versa*.

Culverts.

The culverts are to be of the dimensions shown on drawing, and in all other respects in accordance with the plan hereto attached. The stone is to be approved of, to be quarry dressed, but to have faced joints; to be laid in mortar composed of one part best stone-lime to two parts of approved sand; joints to be flushed throughout.

Time.

All the works specified to be completed within five months from date of signing the bond under a penalty provided for in the "General Conditions for Road Contracts," hereto attached, which penalty will in all cases be strictly enforced, 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.

Tenders.

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.

General conditions.

In all matters relating to this contract, not herein specified, the contractor to be bound by the printed general conditions hereto attached.

Pipe-drains.

The pipes will be provided by the Government and delivered to the contractor, at the railway goods-shed, Murrurundi; the contractor will have to cart them to the work, and be responsible for breakage. They are to be laid in Portland cement, in such positions and with such fall as will be directed. At each end of each pipe-drain two stones, cut to receive pipes, shall be provided and set in cement; each stone to be 3' 6" x 1' 6" x 1' 0". The trench to be filled over pipes with approved ballast up to the level of tops of stones at ends of pipe-drains, rammed above.

ROADS DEPARTMENT.

*Contract 16-72—Four 3rd Class Culverts—Stone culvert—Flagged Top.*Design. (See separate Appendix No. 5.)
Foundation.

THE culvert to be built in general accordance with drawing (as figured), the waterway being 4 feet x 2½ feet in the clear between abutment walls. The roadway 20 feet wide in the clear between parapets.

The trenches for foundation shall be dug on lines pegged out by the superintendent, and shall be excavated to such a depth as will ensure sound, permanent, and level foundations for footings on rock or other approved hard stratum. Benchings will be allowed or not, at the discretion of the superintendent, who will examine and pass the foundation, before any masonry is laid. The contractor to keep the foundation trenches free from water either by drains or pumping until such time as the road superintendent may direct.

Masonry.

On receipt of a written order from the superintendent, the main and face walls may be carried up as nearly level in height all round as the nature of the work will allow, so that settlement may be as uniform as possible. Walls to be built in first-class coursed rubble-work set in mortar, composed of two parts best stone lime, mixed with three parts of clean sharp sand. No stone to be less than half a cubic foot in dimension. Walls to be of the thickness shown on drawing. Quoins to be hammer-dressed. No stone to be less on bed than height of course. Headers to be at least double the height of course on bed.

Inlet and outlet.

The trench for the culvert shall be dug across the full width of the road at such inclination as may be directed, and if to be paved shall be shaped with a concavity of 4 inches; the inlet being if necessary either double or bell-mouthed at its junction with side drain.

When the walls are carried up to the required height, and shall have passed inspection and approval by the superintendent, the foundation trenches shall be filled in with the material excavated, if of approved quality, rammed in layers. If quality be not approved, fresh material must be obtained. The whole back of the culvert to be covered in with a layer of puddle of approved clay, as shown in drawing.

Paving.

The bed of waterway shall be either flagged or paved as shown in drawing, with rough spawled pavours 12 inches deep on edge, close laid in the dry, rammed and grouted with lime and fine clean sharp sand. The downstream course to be of the largest stones obtainable, well bonded into remainder of work and to side walls.

Flagging.

The top of main walls shall be built up smooth, without spawls, dressed off flat to receive covering flag. The top of culverts shall be covered in by flags 6 feet long, not less than 2 feet wide or 12 inches thick in any place. All flags to be roughly edged, to lay close and bed truly, jointed and pointed with mortar, and to be thoroughly hard, sound, and free from fractures.

Parapets.

The face walls being carried up 18 inches thick to level shown on drawings shall finish in a parapet of 12 inch rubble masonry, having a coping of rough hammered stone rounded at top and set on edge in mortar, as shown in drawing.

Filling.

When the masonry and flagging has been inspected and passed, and not before, the whole of the culvert between parapets shall be filled in to the formation level of roadway with approved material, shale, clay, or earth rammed in layers; the formation having a convexity of 9 inches in the centre. A perfect junction to be effected with existing road formation.

Ballast and metal.

The roadway between parapets shall be covered with a layer of approved ballast 6 inches thick, broken to a strict 5 inch gauge, which shall be blinded and consolidated by traffic. Then a layer of the hardest blue metal, 6 inches thick, shall be evenly spread over the whole, and a perfect junction made with existing roadway wherever disturbed. Metal to be broken to a strict 3-inch gauge, clean, cuboidal, and with sharp fractures. To facilitate passage of traffic, if required, the contractor shall build only half of the length of the culvert at one time, great care being taken to bind the work properly at the joining; and also, if required, shall keep a light burning all night—contractor being responsible for all accidents to vehicles arising from his neglect.

Contractor to find all plant, tools, and materials required, and to remove same on completion of work, and clear away all rubbish.

In all matters relating to this contract, not set forth herein, the contractor to be bound by the general conditions of contract attached.

DEPARTMENT OF PUBLIC WORKS.—ROAD BRANCH.

I HEREBY propose to execute the whole of the works required on Contract No. 16-72, Great Northern Road, First District, wire fence to northern end of Apple-tree Flat, in strict accordance with specification, general conditions, and to the satisfaction of the Commissioner for Main Roads or other authorized officer, and to complete the same within six months after signing the contract, for the sum of £1,115 19s.; and do hereby agree that any addition, deduction, or alteration, shall be valued at the following rates, or at a price to be agreed upon at the time, and added to or deducted from the above amounts, as the case may be:—

	£	s.	d.
Clearing road, wide, per lineal chain			
Excavation in earth, per cubic yard			
Do. rock, per cubic yard			
Forming 1,508 lin. yds., at 2/6 per lineal yard	188	10	0
Side-drains, 1,508 lin. yds., at 1/- per lineal chain	75	8	0
Ballast, gauge, per cubic yard			
Metal, 3" gauge, 2,262 cub. yds., at 5/6 per cubic yard	622	1	0
Blinding, gauge, 300 cub. yds., at 2/- per cubic yard	30	0	0
Four 3rd-class stone culverts, at 40/- each	160	0	0
Laying five 15" drain-pipes, at 8/-	40	0	0
Maintenance of road after completion of construction, 20/- per month			
	£1,115	19	0

The prices in the preceding schedule include all labour, materials, tools, and workmanship of every kind necessary for the full and perfect completion of the works to the entire satisfaction of the Commissioner for Roads or other authorized officer.

AMOS DAVIES,

Wallabadah, 3rd August, 1872.

To the Under Secretary for Public Works.

Should the foregoing tender be accepted, we, the undersigned, do hereby agree to be responsible for the due performance of the contract, and we hereby undertake within _____ days from the date of the notification of the acceptance of the said tender, jointly and severally to execute and deliver a bond to Her Majesty in the penal sum of _____ for securing such performance.

JONATHAN COCK,
CHARLES JOHN SMITH,
Both of Wallabadah.

Department of Public Works,
Sydney, 10th July, 1872.

GREAT NORTHERN ROAD.—FIRST DISTRICT.

TENDERS will be received at this Office, until 11 o'clock of Tuesday, the 6th day of August next, from persons willing to contract for the following Works on the Great Northern Road, 1st District:—

- Contract 16-72.—Wire fence to south end of Apple-tree Flat.
 „ 17-72.—Thom's Gullies.
 „ 18-72.—South of Red Hill.
 „ 19-72.—Martindale's Culvert to The Furrows.

Plan, specification, and form of tender may be seen at the Office of the Commissioner for Roads, Sydney, and at the Court Houses, Murrurundi and Wallabadah.

Tenders to be addressed to the Under Secretary for Public Works, Sydney, and to be marked outside "*Tender for Contract, Great Northern Road, 1st District.*"

JOHN SUTHERLAND.

AMOS DAVIES.
JONATHAN COCK.
CHARLES JOHN SMITH.

Witness,—GEORGE HOLLOWAY.

B 9.

Final Certificate for works shown as completed.

I HEREBY certify that the whole of the works on Contract 17 A have been completed in strict accordance with the specification and plans, with the following alterations, additions, or deductions.

Description and dimensions.	Deductions.		Additions.		Original Contract.
	£	s. d.	£	s. d.	
Total amount of contract					£ 378 0 0
<i>Deductions.</i>					
Stone bridge	180	0 0			
Stone culvert	60	0 0			
Drain pipe	8	0 0			
2 yards drain, at 1s.	0	2 0			
<i>Additions.</i>					
Timber bridge			197	17 7	
Culvert and approaches			35	0 0	
7 yards forming, at 3s.			1	1 0	
29½ c. yards metal			8	15 6	
Total	248	2 0	242	14 1	
Net deduction					5 7 11
Net total					372 12 1
Amount of payments on account	178	10 0			178 10 0
Balance due				£	194 2 1

WILLIAM C. BENNETT.

[To the Evidence of E. A. Nardin, Esq., 4 June, 1875.]

C 1.

EXTRACTS from Commissioner's instructions.

Memoranda for Mr. Nardin.

* * * * *
With respect to the work being executed, I think that so much high bank is not desirable—the metal will sink in it. Mr. Nardin, while not to follow the surface as in the older works, not to make such heavy cuttings and banks as seems to be the rule now on his work.

Great care should be taken not to have any unnecessary culverts or pipes. I pointed out many to Mr. Nardin which, I think, might be dispensed with, especially the pipes for which oblique cuts into upper drain should be substituted.

* * * * *
The stone culverts need not be of coursed masonry, but of thin flat-bedded stuff; they should have a considerable fall; but all but the bottom course to be level on top bed. The sizes on lithographs not to be exceeded.

* * * * *
WILLIAM C. BENNETT,
6 November, 1872,
Murrurundi.

C 2.

Mr. Road Superintendent Nardin to Mr. A. Davies.

Murrurundi, 7 October, 1872.

Sir,

I have to inform you that in consequence of the votes for 1872 being insufficient to meet all liabilities, it becomes necessary for me to reduce the quantity of work now in hand.

Instead of shortening your Contracts 10 and 16, I propose to reduce the present supply of metal for them to one and a third cubic yards to the yard run, and to obtain the remainder from you as early as possible in 1873, under a taskwork, at present rates; also, I propose to postpone Contract 17-72, and to execute it by task on the completion of the works you have now in hand.

You will please inform me if you agree to these terms.

I am, &c.,
ERNEST A. NARDIN,
Road Superintendent.

C 3.

Mr. A. Davies to Mr. Road Superintendent Nardin.

Sugarloaf Road Works, *via* Murrurundi,
11 February, 1873.

Sir,

In reply to yours of the 8th instant, I beg to inform you that I shall use all available means to finish Contracts 10 and 16-72 by the time stated, viz., end of March, 1873.

We have had great difficulty in introducing steam stone-breaking machine for these contracts, and shall suffer some loss by its being unused on the metal supply. We are getting on fairly in procuring timber for bridge over Old Goonoo Goonoo Creek, and hope to be able to finish within contract time.

It will be necessary at an early date to make a further return on Contracts 10 and 16-72. I may mention that there is a considerable amount due as extra for filling up embankments in construction of formation in these contracts that I think has not as yet been estimated in making out of previous returns.

I have, &c.,
AMOS DAVIES.

Saw Mr. Davies and explained that I could not entertain any claim for extra on formation.—E.A.N., 20/2/73.

C 4.

Mr. Road Superintendent Nardin to Mr. A. Davies.

Murrurundi, 23 June, 1873.

Sir,

Your particulars of claims for extras on Contracts 10A and 16A have been reported upon by me, and submitted for the consideration of the Commissioner for Roads, who now instructs me to inform you that no claims for extra on stone culverts or formation can be allowed. You were furnished with a plan and specification of the former to work to, and were not authorized to deviate from them, and the latter is not heavier than is required by the specification.

I am, &c.,
ERNEST A. NARDIN.

C 5.

Mr. Road Superintendent Nardin to Mr. A. Davies.

Murrurundi, 8 February, 1873.

Sir,

The Commissioner for Roads is dissatisfied with my progress report upon your Contracts 10 and 16 of 1872, in so far as the supply of metal is concerned; it is most desirable that these works should be out of hand by the 31st of next month, and the metal must therefore be broken by hand.

I am further directed to state that the erection of the bridge over Old Goonoo Goonoo Creek must be at once commenced, and to inform you that all fines incurred for delay will be most strictly enforced.

I am, &c.,
ERNEST A. NARDIN,
Road Superintendent.

C 6.

Mr. Road Superintendent Nardin to The Commissioner and Engineer for Roads.

CONTRACTS 10A AND 16A.

Memoranda as to Mr. Amos Davies's claims for extras on stone culverts and formation in the above contracts.

Culverts.—Mr. Davis was furnished with plan and specification to work to, and he had no authority to deviate from them.

Formation.—The Commissioner struck out the ballast and increased the quantity of metal, and alteration which has nothing to do with the question now raised by Mr. Davies, who tendered upon the specification which he signed with his bond. The formation is not, in my opinion, heavier than is warranted by the true intent and meaning of the specification, nor than was

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was done under the same conditions in Contract 19-69, a work for which Mr. Davies tendered, and which he had before him as a finished example when tendering afterward for Contracts 10A and 16A. It being the first time of using stone culverts and pipe drains, I was more than usually anxious to ensure their being placed in the most advantageous position; therefore the sections sent herewith were made; the pencil lines were merely experimental, and they have not been (nor were they intended to be) worked up to, as sections along the finished work would show.

It was not until after the Commissioner's visit that Mr. Davies introduced these claims to me.

E. A. NARDIN, 18/6/73.

C 7.

Total quantity of metal supplied by Mr. Amos Davies for—

Contract 10A	2661.53 cubic yards.
Contract 16A	2046.18 "

ERNEST A. NARDIN.

C 8.

Mr. A. Davies to Mr. Road Superintendent Nardin.

Mountain View, *via* Murrurundi,
7 January, 1875.

Sir,

I beg to acknowledge the receipt of your letter of the 4th instant, wherein you state that as the "dispute with the Roads Department is a public and not a private matter" you "cannot furnish copies of any correspondence without the permission of the Commissioner for Roads."

In reply, I have no doubt but that this reticent course, so well according with the previous practice of the Commissioners, will meet with his approval and will consequently render futile any further such application.

But as the dispute has originated either by individual or the concerted action of the officers of the Roads Department, and is maintained by much misrepresentation—this is an occurrence at every meeting and other opportunity—it almost becomes on me an imperative duty to ask the removal of all documents and reports from the custody of the several officers concerned, pending the appointment of a competent tribunal.

I think you will freely admit that our present difficulty is not of my seeking, but is the result of circumstances over which I have had no control whatever.

I propose at an early date to write to you of a few matters regarding our relations as contractor and Government superintendent, the explanation of which will appear to me largely rest with yourself. I will explain anything desired from me. Believe me, without prejudice,—

Yours faithfully,
AMOS DAVIES,
Contractor.

P.S.—Say if you prefer this channel for communication?—A.D.

Roads, 13/1/75.—J.R., B.C., 16. Mr. Nardin.—W.B., 16 Jan., /75. Recd., 22/1/75.—E.A.N. For reply, see letter-book this date, 22/1/75.—E.A.N.

Department of Roads and Bridges,
Sydney, 2 March, 1875.

Some time ago I forwarded Mr. Nardin a letter from Mr. Davies, which I think should have been returned to this office. Will he be good enough to return it with any remarks he may have to offer, and state nature of reply.

W. C. BENNETT,
2 Mar., 1875.

Letter and copy of my reply herewith.—E.A.N., 4/3/75.

C 9.

Mr. Road Superintendent Nardin to Mr. A. Davies.

Road Superintendent's Office,
Mudgee, 22 January, 1875.

Sir,

I have to acknowledge the receipt, through the Commissioner for Roads, of your letter of the 7th instant.

It matters nothing through what channel you correspond with me in reference to your disputed contracts; but, while desirous of treating you with perfect courtesy, as heretofore, I shall certainly decline to reply to communications which you may address to me in future if in them you adopt the unwarrantable tone which characterizes your letter of the 7th instant.

Yours obediently,
ERNEST A. NARDIN,
Road Superintendent.

Put with Davies's papers and resubmit.—W.C.B., 6/3/75.

C 10.

Memo. for Mr. Nardin.

Crawford was not to blame in putting the sheathing 15 feet wide on Dangar's Creek Bridge. I find that you and me went down to Dangar's and Walden's Bridges to see to quantity of timber required, and Cox, the sawyer, met us by appointment near the latter bridge, when I gave him a pencilled order for the lengths of plank and quantity suitable for each bridge, which order accords singularly with the work as finished, there having been neither a plank more or less than was required. The fact is, we had made a rough diagram on the bridge with your tape, thereby getting the proper lengths for planks. Allowing in doing so the skew you required the planks laid, error was impossible. You may have arranged with the Commissioner afterwards.

AMOS DAVIES, 28/12/74.

C 11.

Mr. Road Superintendent Nardin to Mr. A. Davies.

Road Superintendent's Office,
Mudgee, 4 January, 1875.

Sir,

I beg to acknowledge the receipt of your letter of the 28th ult.

As your dispute with the Roads Department is a public and not a private matter, it should be obvious to you that I cannot furnish you with copies of any correspondence relating to it without the permission of the Commissioner for Roads.

With regard to the Dangar's Creek Bridge, I am perfectly clear as to the fact that I ordered the sheathing to be 13 feet wide, and laid at an angle of 45°. Moreover, you admitted the error at the time, although urging that the deduction in measurement should not be made. I think Crawford will bear me out in this. Cox, the sawyer, I did not see on this matter.

Yours faithfully,
ERNEST A. NARDIN.

[To

[To the Evidence of Henry Quodling, Esq., 11 June, 1875.]

D.

DEPARTMENT OF PUBLIC WORKS, ROAD BRANCH.

SPECIFICATION for First-class Timber Culvert, Wallabadah Gap Works.

THE timber for culvert is to be ironbark, yellow box, blue or red gum, if procurable within a distance of 3 miles; stringybark, white box, or blackbutt may be used with the sanction of the road superintendent if other timber is not procurable—all to be sound, straight, free from cores, waness, shakes, gum-veins and all other defects, and approved by the superintendent. All timber, except posts and handrails, to be round, barked, and the diameter given is to be taken at the smallest end, exclusive of bark.

The trenails are to be oak, ironbark, or blue gum, cut from sound, old well-seasoned timber, approved by the superintendent, of an hexagonal section, 1 inch across sides, and driven into holes bored with 1 inch auger.

The waterway or span of culvert is to be 10 feet in the clear, and the roadway above kept 18 feet wide between ballast logs.

The trench for culvert is to be cut to the proper depth, and where directed by the road superintendent, with a fall of 1 in 50 towards the outlet; two sills, 12 inches diameter and 28 feet long, will have to be laid apart 10 feet, solidly bedded on a well-rammed foundation, into which will be tenoned four uprights, 12 inches diameter, on each side of culvert, as shown in drawing.

Every upright to be tenoned into sills at least 2 feet below surface.

The whole bottom of culvert will have to be shaped with a concavity of 6 inches in centre, and the earth well rammed in.

Two capsills, 12 inches diameter and 25 feet long, to be mortised and trenailed over uprights, tenons being 5" x 2½" and 6 inches long. The underside of capsill to have a flat seating over each upright to secure a good bearing.

Five joists, 16 inches diameter and 16 feet long, have to be laid as shown in drawing, scribed and notched on to capsills, 1 inch being taken out of each, and trenailed. The upper side of joists is to be adzed off to an even surface about 5½ inches wide, to receive flooring.

At each end of capsills a log 9 inches diameter is to be halved and trenailed; to be sloped with an incline of 1½ to 1, its lower end being sunk in the ground about 2 feet 6 inches deep, and well rammed in.

A lining of slabs, close-jointed, 4 inches thick, is to be trenailed or spiked on the landward side of uprights and sloping logs.

The slabs to break joint over piles, the backing to extend from the bottom of culvert to the underside of joists, the space left open between them filled in with blocks or stones.

Flooring logs, 8 inches in diameter, to be squared on three sides, not less than 6 inches broad, and laid close; the underside of logs over joists to be adzed, to allow a true bearing and leave an even surface on top. Flooring logs to be secured alternately to every joist with a trenaile 4 inches deep.

Ballast logs, 9 inches diameter and 20 feet long, are to be fixed at each end of flooring 18 feet apart, bearing on an adzed face, and secured to outer joists through flooring with ½ inch bolts, as shown in drawing.

Posts 6" x 6" are to be stump-tenoned into each capsill, let 2 inches into ballast logs and outer joists and spiked to them, a strut 4" x 4" is to be stepped and spiked to each post and the projecting end of capsills. The tops of posts to be shaped and kept 4 feet above flooring as shown in drawing.

Round posts, 9 inches diameter, are to be sunk 3 feet at least in the solid ground, 8 feet from the square posts, and set back to form wings as shown, the top left level with the square posts. A rail 6" x 4" is to be halved and spiked on posts 3' 9" above level of floor.

All timber under or in contact with ground to be charred.

The side slopes of the road to be carefully dressed to an incline of 1½ to 1 towards the inlet and outlet of culvert as shown in drawing. The roadway is to be restored to the same condition as when the culvert was commenced, the earth is to be well rammed in by layers not exceeding 1 foot to the sides of culvert, and the junction of the road with flooring to be properly made, all to the entire satisfaction of the road superintendent.

Parties tendering will state the time within which they will complete the works; other things being equal, a preference will be given to those who offer to perform the work in the shortest time.

AMOS DAVIES.
DANIEL REGAN.
JOHN BARNES.

Witness—EDWARD ROWETT.
WILLIAM ACHESON.
JNO. McDONALD.

[To the Evidence of E. A. Nardin, Esq., 11 June, 1875.]

E 1.

EXTRACT from the Specification for Contract 19-69.

* * * * *

Formation.

To be on line marked out by the road superintendent, to be 30 feet wide with a convexity of 9 inches; where the natural surface is undulating the formation is to be cut down to level, or to such gradients as the road superintendent shall direct. It is to be thoroughly consolidated by the traffic before any metal is spread, and the material from it not required is to be thrown at least 4 feet back from edges of water-tables.

* * * * *

E 2.

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E 2.

DEPARTMENT OF PUBLIC WORKS—ROAD BRANCH.
Form of Tender for Contract 19-69, Northern Road.

WE hereby propose to execute the whole of the works required on Contract No. 19-69, Great Northern Road, Gaspard's Gully, in strict accordance with specification, general conditions, and to the satisfaction of the Commissioner for Main Roads, or other authorized officer, and to complete the same within four months after signing the contract for the sum of £1,498 15s.; and do hereby agree that any addition, deduction, or alteration shall be valued at the following rates, or at a price to be agreed upon at the time, and added to or deducted from the above amounts, as the case may be:—

		£	s.	d.
Clearing road	wide at 10/-			
Excavation in earth	per lineal chain			
Do	per cubic yard			
Forming 1,950 yards, at 2s. 6d.	per lineal yard	243	15	0
Side drains	per lineal chain			
Ballast gauge	per cubic yard			
Metal, 2½-in. gauge, 2,600 yards, at 7s.	"	910	0	0
Gravel, 2-in. gauge, 650 yards, at 2s.	"	65	0	0
Two 1st class culverts, at £60	each	120	0	0
Eight 3rd class culverts, at £20	each	160	0	0
		£	1,498	15 0

The prices in the preceding schedule include all labor, materials, tools, and workmanship of every kind necessary for the full and perfect completion of the works to the entire satisfaction of the Commissioner for Roads or other authorized officer.

AMOS DAVIES,
THOS. BURKE,
Wallabadah.

To the Under Secretary for Public Works.

Should the foregoing tender be accepted, we, the undersigned, do hereby agree to be responsible for the due performance of the contract, and we hereby undertake within _____ days from the date of the notification of the acceptance of the said tender, jointly and severally to execute and deliver a bond to Her Majesty in the penal sum of _____ for securing such performance.

JONATHAN COCK,
Wallabadah.
C. J. SMITH,
Wallabadah.

E 3.

Final Certificate for works shown as completed.

I HEREBY certify that the whole of the works on Contract 10 A have been completed in strict accordance with the specification and plans, with the following alterations, additions, or deductions.

Description and dimensions.	Deductions.		Additions.		Original Contract.
	£	s. d.	£	s. d.	
Amount of original contract according to the tender					1,911 8 6
168 lin. yards of drain, @ 1/-			8	8 0	
7 " " formation, @ 2/6	0	17 6			
1,066 cub. yards of metal, @ 5/6	293	3 0			
14 " " blinding, @ 2/-	0	2 6			
6 2nd-class culverts, @ 50/-	300	0 0			
2 24-inch pipe drains, @ 20/4/-			40	8 0	
1 16-inch " @ 11/-			11	0 0	
Extra stonework in culverts			24	2 6	
Total	594	3 0	83	18 6	1,911 8 6
Net addition or deduction					510 4 6
Net total					1,401 4 0
Amount of payments on account			1,197	5 0	
Amount of fine for delay			84	0 0	1,281 5 0
Balance due					119 19 0

Overseer.

ERNEST A. NARDIN, Road Superintendent.

Add £20 for culverts, as explained by Davies	20	0	0
	139	19	0
Add fine remitted	84	0	0
	£	223	19 0

WILLIAM C. BENNETT.

Bond signed 28th August, 1872.

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E 4.

Final Certificate for works shown as completed.

I HEREBY certify that the whole of the works on Contract 16 A have been completed in strict accordance with the specification and plans, with the following alterations, additions, or deductions.

Description and dimensions.	Deductions.			Additions.			Original Contract.		
	£	s.	d.	£	s.	d.	£	s.	d.
Contract, as per tender							1,115	19	0
86 lin. yards of drain, 1/-					4	6	0		
48 ,, ,, formation, 2/6					6	0	0		
11 cubic yards gravel blinding, 2/-					1	2	0		
215½ cubic yards 3-inch metal, 5/6	59	7	0						
One extra pipe-drain, 16-inch, £8					8	0	0		
One extra 12-inch pipe-drain, £6					6	0	0		
Difference in value between 15-inch and 16-inch pipe-drains, 6 No., at £3 each					18	0	0		
Total	59	7	0	43	8	0	1,115	19	0
Net deduction								15	19
Net total							1,100	0	0
Amount of payments on account					817	0	0		
Fine for delay 6 months, at 2 per cent., or £22					132	0	0		
							940	0	0
Balance due							151	0	0

Overseer.

ERNEST A. NARDIN, Road Superintendent.

Fine remitted

132 0 0

283 0 0

A supplementary voucher, No. 173, was paid for extra thickness of flags in culverts

14 12 6

Bond signed 28th August, 1872.

E 5.

[To the Evidence of E. A. Nardin, Esq., 14 June, 1875.]

AVERAGE PRICE OF FORMATION.

Mudgee Road.

1870.

Contract 1-70, W. Conn	£	s.	d.
3-70, R. Rowe	0	1	4
" 4-70, J. Conn	0	1	6
" 5-70, J. Conn	0	1	6
" 6-70, T. Finn	0	1	9
" 7-70, T. Conran	0	1	6
	6)	0	9
		6	

Average price

£ 0 1 7

1871.

Contract 2 & 3-71, W. Wright

0 0 10½

1872.

Contract 6-72, W. Conn	0	1	9
" 7-72, H. Winter	0	1	9
" 8-72, W. Readford	0	2	0
" 9-72, R. Rowe	0	1	9
" 10-72, W. Readford	0	2	0
" 11-72, W. Readford	0	2	9
" 12-72, W. Readford	0	1	11
" 14-72, G. Webb	0	4	0
" 15-72, W. Conn	0	2	9
" 17-72, G. Webb	0	2	0
" 19-72, McDonald and Herriot	0	2	9
" 20-72, McDonald and Herriot	0	3	0
" 21-72, McDonald and Herriot	0	3	6
" 22-72, G. Well	0	2	6

14) 1 14 5

Average price

£ 0 2 5½

Average price formation, 1870

0 1 7

" 1871

0 0 10½

" 1872

0 2 5½

Note.—No formation in 1873.

The formation on Contracts 10 and 16 A, done by Mr. Ainos Davies, is not heavier than that for which average prices are here given.

ERNEST A. NARDIN, 9/6/75.

[To

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[To the Evidence of A. C. Bayley, Esq., 14 June, 1875.]

F 1.

DEPARTMENT OF ROADS AND BRIDGES.

[Pay Voucher No. 734.]

Northern Road, 3rd District.

ABSTRACT and acquittances of amounts paid to Contractors and others employed as herein described, from the 24th of February to the 4th day of May, 1864.

Names.	Locality. Nature and quantity of work done by each Individual or Party to be here stated.	No. of Contract or Task.	Rate.	No. of full working days.	Amount.		Total.	I, the undersigned, hereby acknowledge to have received from the Commissioner for Roads the sum set down opposite to my name, being in full of all demands respectively, for the services specified in this abstract, viz. :-	Date of payment and by whom paid.	Witness.
					£ s. d.	£ s. d.				
Amos Davies.	Erecting bridge over Goonoo Goonoo Creek. ....	...	...	...	468	13	3	Erection of bridge over Goonoo Goonoo Creek. Amos Davies	25th May, 1864. The Commissioner for Roads.	John Turner.
	Penalty for one week over time.	10	5	0	0				468 13 3

We hereby certify that the above account, amounting to four hundred and sixty-three pounds thirteen shillings and three-pence, is correct in every particular; that the persons therein named have fully and fairly performed the work contracted for by them; and that the day labourers have been employed for the time stated against their respective names, and at the current rate of wages.

True copy,—THOMAS R. STEEL, 31/5/75.

A. C. BAYLEY,
Superintendent.

I forwarded this voucher to Mr. Quodling for Davies' signature. Received on the 27th unsigned, Mr. Quodling informing Davies refused to sign.—A.C.B., 27/11/64.

F 2.

DEPARTMENT OF ROADS AND BRIDGES.

[Pay Voucher No. 93.]

ABSTRACT of payments to Contractors and others employed as herein described, from the of 18, to the of 18

Names.	Locality. Nature and quantity of work done by each Individual or Party to be here stated.	No. of Contract or Task.	Rate.	No. of full working days.	Amount.		Total.	We, the undersigned, hereby acknowledge to have received from the Commissioner for Roads the sum set down opposite to our several names, being in full of our demands respectively, for the services specified in this abstract.	Date of payment and by whom paid.	Witness.
					£ s. d.	£ s. d.				
Amos Davies.	Goonoo Goonoo Bridge — Extra works.	...	s. d.	.....	£	s. d.	£ s. d.	Amos Davies.....	29th January, 1864. Commissioner for Roads.	W. Acheson
	Sill south abutment 23 lineal feet	...	1 9	.....	2	0	3			
	3 uprights 3 feet each—9 feet	...	2 0	.....	0	18	0			
	Tarring, 45½ yards	...	1 8	.....	3	16	0			
					£	6	14	3		

We hereby certify that the above account, amounting to six pounds fourteen shillings and three pence, is correct in every particular; that the persons therein named have fully and fairly performed the work contracted for by them; and that the day labourers have been employed for the time stated against their respective names, and at the current rate of wages.

True copy,—THOMAS R. STEEL, 31/5/75.

A. C. BAYLEY,
Superintendent.

F 8.

32

F 3.

DEPARTMENT OF ROADS AND BRIDGES.

[Pay Voucher No. 1311.]

Northern Road, 3rd District.

ABSTRACT and acquittances of amounts paid to Contractors and others employed as herein described, from the 4th May to the 25th May, 1864.

Names.	Locality. Nature and quantity of work done by each Individual or Party to be here stated.	No. of Contract or Task.	Rate.	No. of full working days.	Amount.	Total.	We, the undersigned, hereby ac- knowledge to have received from the Commissioner for Roads, the sum set down opposite to our several names, being in full of our demands respectively, for the services speci- fied in this abstract.	Date of payment and by whom paid.	Witness.
Amos Davies.	Approaches Goonoo Goonoo Bridge.— 197 cubic yards 17 feet of stone 724 cubic yards excavation .....	.....	s. d.	.....	£ s. d.	£ s. d.	Amos Davies	20th August, 1864. The Commissioner for Roads.	A. J. Chisholm.
			4 6		44 15 6				
			3 0		108 12 0				
						153 7 6			

We hereby certify that the above account, amounting to one hundred and fifty-three pounds seven shillings and six pence, is correct in every particular; that the persons therein named have fully and fairly performed the work contracted for by them; and that the day laborers have been employed for the time stated against their respective names, and at the current rate of wages.

True copy,—THOMAS R. STEEL, 31/5/75.
W.C.B.—14/9/64.

A. C. BAYLEY,
Superintendent.

F 4.

DEPARTMENT OF ROADS AND BRIDGES.

[Pay Voucher No. 1950.]

Northern Road, 3rd District.

ABSTRACT and acquittances of amounts paid to Contractors and others employed as herein described, from the 4th of May to the 25th of May, 1864.

Names.	Locality. Nature and quantity of work done by each Individual or Party to be here stated.	No. of Contract or Task.	Rate.	No. of full working days.	Amount.	Total.	We, the undersigned, hereby ac- knowledge to have received from the Commissioner for Roads the sum set down opposite to our several names, being in full of our demands respectively, for the services specified in this abstract.	Date of payment and by whom paid.	Witness.
Amos Davies.	Approaches to Goonoo Goonoo Bridge. 114 cubic yds ballast 52 do. metal	Agreement with Superintendent.	s. d.	.....	£ s. d.	£ s. d.	Received the sum of forty- nine pounds one shilling in full of all demands. Amos Davies.	6th December, 1864. Henry Quodling.	John Turner.
			4 6		25 13 0				
			9 0		23 8 0				
						49 1 0			

We hereby certify that the above account, amounting to forty-nine pounds one shilling, is correct in every particular; that the persons therein named have fully and fairly performed the work contracted for by them; and that the day labourers have been employed for the time stated against their respective names, and at the current rate of wages; and that the expenditure is duly authorized in terms of the Audit Act.

True copy,—THOMAS R. STEEL, 31/5/75.

A. C. BAYLEY,
Superintendent.

F 5.

(No. 10.)

24 February, 1864.

Northern Road.—Third District, Division.

I, AMOS DAVIES, hereby undertake to execute the following works to the satisfaction of Mr. A. C. Bayley, according to the general printed conditions, and within the space of two months, at schedule of prices of Goonoo Goonoo Bridge South, under a penalty of £5 per week, to be deducted from the amount due on work performed, or if insufficient to be sued for:—

Erection of a bridge over Goonoo Goonoo Creek, Tamworth.

AMOS DAVIES.

F 6.

33

F 6.

ROADS.

Amos Davies. Contract No. 3-67.

Flaggy Gully to Sugar-loaf Sideling.

	£	s.	d.
Total amount of contract.....	1,096	15	6
320 cubic yards, at 6s. 8d.	108	13	4
	1,203	8	10
Less advanced	777	8	8
	426	0	2
Less one month overtime, 2 per cent. on contract.....	21	18	8
	404	1	6
Clearing 9 chains	10/-	4	10
	£48	11	6

January 17th, 1868.

I certify this to be a true copy from the Contract Measurement Book of A. C. Bayley, Esq., Road Superintendent, Great Northern Road, 3rd District.

J. WICKHAM,
Chief Clerk Roads, 11/6/75.

F 7.

Telegram from Mr. W. Boyd to The Commissioner and Engineer for Roads.

Armidale, 22 August, 1864.

I UNDERSTOOD Davies to say that Mr. Bayley told him he would reduce the metal to 9s. about the end of April or beginning of May.

F 8.

Mr. W. Boyd to Mr. Road Superintendent Bayley.

Uralla, 17 September, 1864.

Sir,

With reference to your letter of the 14th instant, I have the honor to inform you that I never heard you offer Mr. Amos Davies 6d. per foot for piles that were too short for bridge.

The only timber I can remember condemning are one outside bearer and one pile, for being too crooked.

I have, &c.,
W. BOYD.

[To the Evidence of W. C. Bennett, Esq., 15th June, 1875.]

G 1.

Bendemeer, 3 October, 1864.

Sir,

I have the honor to forward you report on Mr. Amos Davies's letter, in reference to Goonoo Goonoo Bridge.

I pointed out to Mr. Davies site of the bridge, on the 24th of February, at the same time informed him I could not decide on the length of the bridge until I communicated with you on the subject, and as I was not aware of what length the bridge would be, I could only give Mr. Davies the centre line. I did not peg out any length for approaches, nor did I say the approaches were included in the contract, neither had I any conversation with Mr. Davies, in reference to the approaches, at the Caledonian Hotel.

When I received your telegram of March 3rd, informing me that the stringers of bridge were to be six inches above highest known flood level, I started the following morning to Tamworth and took the levels. On my return to Bendemeer, reduced and plotted levels and wrote to Mr. Boyd, instructing him the height of shoulders of piles above floor Goonoo Goonoo Bridge South. At the time I took the levels there was no timber on the ground.

Pile driving was not commenced till the 22nd March. No piles were delivered on the ground and condemned for being too short.

I never had any conversation with Mr. Davies in reference to offering him 6d. per lineal foot, as stated in his letter. I append a statement of Mr. Boyd's to this effect.

I took no notice of Mr. Davies's offer in respect to the stone wall, as I had received no instructions from you. On visiting the bridge, on the 14th April, I found Mr. Davies had commenced the approaches, and told him, in the presence of Mr. Boyd, that I had given him no instructions to make the approaches, and what he was doing was on his own responsibility.

I did inform Mr. Boyd that no border stones were required in any case.

When I visited the bridge on the 4th May, about 2 p.m., the bridge was completed, except last coat of paint to rails.

I told Mr. Davies, on or about the 29th March, I would give him 9s. per cube yard for metal, and 4s. 6d. for ballast for what would be required for approaches. I also informed Mr. Boyd of the same.

With reference to your memo. on 4th page, I distinctly deny ever having had any such conversation with him. I never held up my hands and called out "Davies, remember!"

After receiving your telegram of the 9th of May, to proceed with approaches, I visited the bridge on the following morning and measured the stone walls. Davies took down the measurements as I called them out.

I have, &c.,
A. C. BAYLEY.

Inform Mr. Davies that Mr. Bayley states he never informed him that approaches were included in contract, and that Davies commenced the work on his own responsibility; that on the 29th March he offered 9s. per cube yard for metal, and 4s. 6d. for ballast, and that Davies going on with the work was an acceptance of this offer, and that I now, by virtue of clause of General Conditions, giving me power to decide finally any dispute, determine that Davies shall get the amount certified for by Mr. Bayley, and no more, and that when he undertakes to sign the usual receipt, this amount—£40 1s.—will be handed to him by Mr. Quodling. Wrote, Mr. Davies, 1/11/64.

G 2.

Cox Creek Bridge.

- Mr. ACHESON, contractor for Cox Creek Bridge, having made application to transfer his contract to Mark Turner, the Superintendent visited the works, March 26, 1863, and found the timber, &c., in charge of a bailiff, under distress warrant against Acheson from the Tamworth Bench. Declaration was immediately made that the timber was the property of the Government. On April 2nd, information was received in this office that the timber had been sold by the bailiff to Amos Davies, another contractor, for £34 4s. 6d. Permission was now given for Turner to complete the work at Acheson's prices. Negotiations were then entered into between Davies and Turner for the purchase of the timber. Davies at first offered it for the amount realized (£34 4s. 6d.) to both Turner and the sub-overseer (Holloway), but subsequently demanded £165 8s. 5d. He was then informed (copy of letter herewith) from this office that the trees were only allowed by the Crown to be cut for this bridge, and were still the property of the Government—the workmanship only being the contractor's (Acheson's) property, and that any attempt to remove the trees would be met with legal proceedings. No reply was received. The Superintendent visiting the work on April 27th, found that Turner was using the disputed timber. On remonstrating with him, he (Turner) expressed his intention of using the timber, and abiding by the consequences. He was then informed that a receipt for payment for the timber must be produced before final payment could be made.

Completion of the bridge was reported on December 4th, 1863, and negotiations again entered into for a satisfactory settlement without avail; Davis still demanded the large sum of £165.

Before payment of the final voucher the question arises as to the liability of the Government.

The timber, at the time of sale by the bailiff, being Government property, the workmanship only could have passed over at the sale against the Government.

I forward the case for the opinion of the Crown Solicitor before payment of final voucher to Turner. Everything possible has been done by Turner and the Department to settle with Davis; he has been offered by Turner the sum he paid, with 25 per cent. interest, but declines to take less than £165 8s. 5d.

I forward this statement in order that we may be instructed by the Crown Solicitor if we are safe in paying Turner.—W.C.B., 18/1/69. Under Secretary B.C. Crown Solicitor to advise accordingly.—J.R., B.C., 19/1/69.

Mr. R. Donaldson to The Commissioner and Engineer for Roads.

Murrurundi, 19 October, 1868.

Sir,

In reply to Mr. Davies's letter of the 2nd instant, relative to the purchase by him of Mr. Contractor Acheson's timber at Cox's Creek Bridge, I have the honor to state:—

1st.—That Mr. Holloway was instructed by me to purchase the timber at a reasonable rate. His report herewith will explain the reason he did not do so.

2nd.—Mr. Turner was never authorized by any officer in the department to use the timber bought by Davies at the sale. In my report on this bridge, dated 2nd May, I notified to you that Turner was using the timber, and after remonstrating with him about it, he said he had offered Davies the amount that he paid for it at the sale; and as Davies would not take it he was quite willing to put up with the consequences, &c. On the 8th May I wrote to Turner and quoted your remarks on my report: "That this would not do, and that he must before final payment is made produce a receipt in full from Davies"—and advising him to try and arrange with Davies at once. Mr. Turner's reply to my letter was verbal, and that he had offered Davies a fair price for the timber, and as they could not agree he would take the consequences.

I also, on the same date, wrote to Mr. Holloway, who was on the spot, to urge upon Turner the necessity of coming to some arrangement with Davies and settling matters.

I have, &c.,

ROBT. DONALDSON.

Seen—W.C.B., 21/10/68.

Mr. G. Holloway to The Commissioner and Engineer for Roads.

Tamworth, 12 October, 1868.

Sir,

With reference to the sale of Contractor Acheson's timber at Cox's Creek, I have to state:—

A few days before the sale I received instructions from Mr. Donaldson to attend and purchase the timber at a reasonable rate, but I was unable to do so, not having sufficient money on hand. The bailiff informed me that he would take nothing but ready money.

Mr. Davies offered to lend me the amount, but I refused to take it, not feeling justified in borrowing from a contractor.

The timber was put up for sale first, in different lots, and was purchased, for the sum of £13 odd, by Mr. Davies; but as that was not sufficient to cover the amount of the distress—£34 odd—the bailiff declared to the people present that the sale was null and void, and handed over the timber into my charge.

A short time after this the bailiff asked me to go down to the bridge with him and Mr. Davies, and be a witness to the sale of the ironwork. I did so. The ironwork was put up and realized £21 odd, which, with the £13 odd, the amount the timber realized, brought it up to the amount of the distress. The timber was not put up a second time for sale.

As soon as work was recommenced at the bridge I discovered that the contractor was using the timber that Mr. Davies had bought. I spoke to Mr. Contractor Turner on the subject, and told him he had no right to use the timber, and that I would be obliged to report the matter. He said that he considered the sale illegal, and did not recognize Mr. Davies as the purchaser of the timber, but would still continue to use it and bear all the responsibility himself.

On my way to Gunnedah the next day I saw Mr. Donaldson, and verbally reported the matter to him.

I have, &c.,

GEORGE HOLLOWAY.

Mr.

Mr. R. Donaldson to The Commissioner and Engineer for Roads.

Murrurundi, 7 January, 1869.

Sir,

I have the honor to inform you that I am detained here awaiting the arrival of Messrs. Turner and Davies, relative to settling the point of the disputed timber at Cox Creek Bridge. I wrote to these parties some time ago to meet me, and Davies's reply to my letter, requesting him to name an early day, was, that he had forwarded my letter to Mr. Wallace, solicitor, Tamworth, asking his advice, and that he would write on receipt thereof. I have been, and am still, waiting here with a view of trying to settle the matter previous to my departure for the Narrabri or Cassilis Roads.

I enclose voucher No. 51, and receipted ditto, for salary and travelling allowance to 31st December, 1868.

Seen.—W.C.B., 9/1/69.

I have, &c.,
ROBT. DONALDSON.

Mr. R. Donaldson to The Commissioner and Engineer for Roads.

Murrurundi, 13 January, 1869.

Sir,

I have the honor to report, relative to the dispute between Turner and Davis about the timber sold at Cox Creek on the 30th of March, 1868.

In accordance with your instructions, I got Davies and Acheson (who is acting as agent for Turner in the matter) to meet me here yesterday, with a view of settling the dispute. I stated the object for which the meeting had been convened, and tried everything to get them to agree and settle the matter, but without success. Davies insists upon asking £165 8s. 5d. (notwithstanding his having offered it to Mr. Holloway and Mr. Turner for £34 4s. 6d., the amount paid by him at sale), and will not abate one shilling of that price. Acheson, on the other hand, offered Davies the amount the timber realized at sale, and, at my suggestion, that Davies should be allowed fair interest in addition, Acheson offered interest at the rate of 25 per cent., or to meet him half way in the transaction; but Davies would do nothing but persist in asking the abovenamed amount. It therefore remains as it did before.

I think your determination to pay the balance to Turner is a just one: Davies may then sue Turner, or adopt any measures he may think advisable for the recovery of this money.

I have, &c.,
ROBT. DONALDSON.

Received vouchers, Nos. 49 and 50; also, return of men and horses up to the 16th instant, and receipt for travelling allowance herewith.—R.D.

Mr. Wickham,—Please make out statement to enable me to consult Crown Solicitor.—W.C.B., 15/1/69. Statement herewith—J.W., 16/1/69.

G 3.

Mr. Road Superintendent Nardin to The Commissioner and Engineer for Roads.

Road Superintendent's Office,
Mudgee, 16 June, 1875.

Sir,

My evidence before the Select Committee on Friday last, in regard to the letter written by Mr. Amos Davies in reply to mine of the 7th October, 1872, and assenting to the alterations in contract 10 A, is represented to me as not being sufficiently conclusive. I beg now to state that I have no doubt whatever that I received such a letter, although it cannot now be produced, having been mislaid on my removal from Murrurundi to this place.

I have, &c.,
ERNEST E. NARDIN,
Superintendent of Roads.

Re-submit.—W.C.B., 18/6/75.

G 4.

DEPARTMENT OF ROADS AND BRIDGES.

[Pay Voucher No. 755]

Main Northern Road.

ABSTRACT of payments to Contractors and others employed as herein described from the of to the 28th February, 1875.

Names.	Locality. Nature and quantity of work done by each Individual or Party to be here stated.	No. of Contract or Task.	Rate.	No. of full working days.	Amount.		Total.	We, the undersigned, hereby acknowledge to have received from the Commissioner for Roads the sum set down opposite to our several names, being in full of our demands respectively, for the services specified in this abstract.	Date of payment and by whom paid.	Witness.
					£	s. d.				
Amos Davies.	Culverts on Cont.							Paid into Bank of New S. Wales, 25th March, 1875. W. H. Payten.		
	10 A. ....	..	..	..	20	0	0
	Remission of Fine...	..	..	..	84	0	0
	Balance of Cont.									
	16 A. ....	..	..	..	165	12	6
	Remission of Fine...	..	..	..	132	0	0
	Balance on Cont.									
	17 A., including fine. ....	..	..	..	194	2	1
Balance due on Goonoo Goonoo Bridge .....	..	..	..	2	18	8	
" "	4	0	0				
							602	13	3	

We hereby certify that the amount, six hundred and two pounds thirteen shillings and three pence, charged in this voucher as to computations, castings, and rates is correct; that the persons therein named have fully and fairly performed the work contracted for by them; and that the day laborers have been employed for the time stated against their respective names, and at the current rate of wages; and that the expenditure is duly authorized in terms of the Audit Act.

True copy,—THOS. R. STEEL, 21/6/75.

Bank Signature—W. C. HILL.

WILLIAM C. BENNETT, Superintendent.

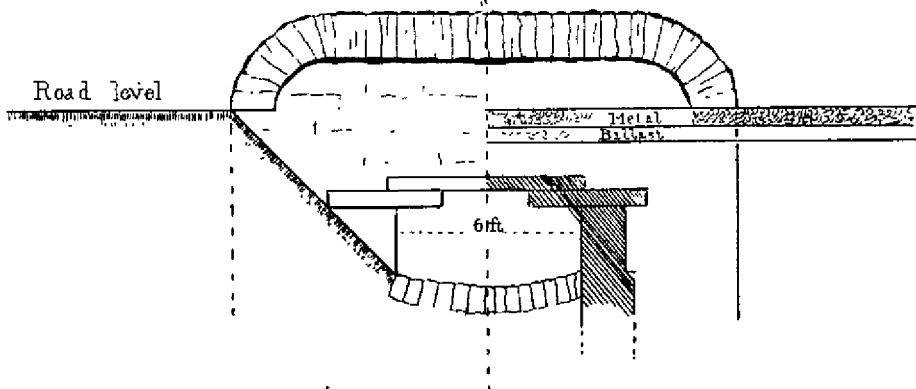
[Plans.]

Culvert in Contract 17-72.

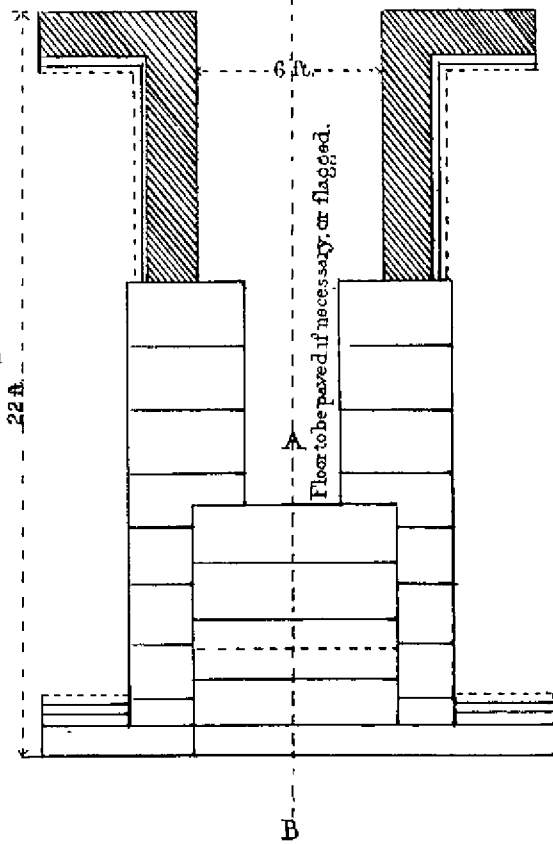
Stone Culverts.

6 feet span.

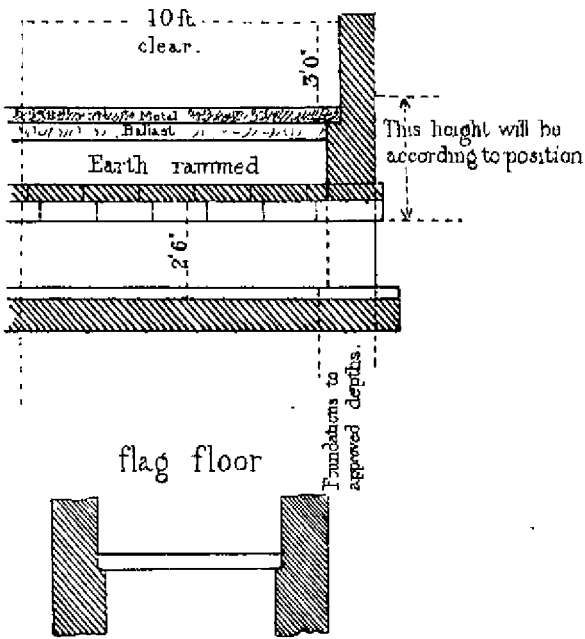
Elevation Section.



Plan



Section. A. B

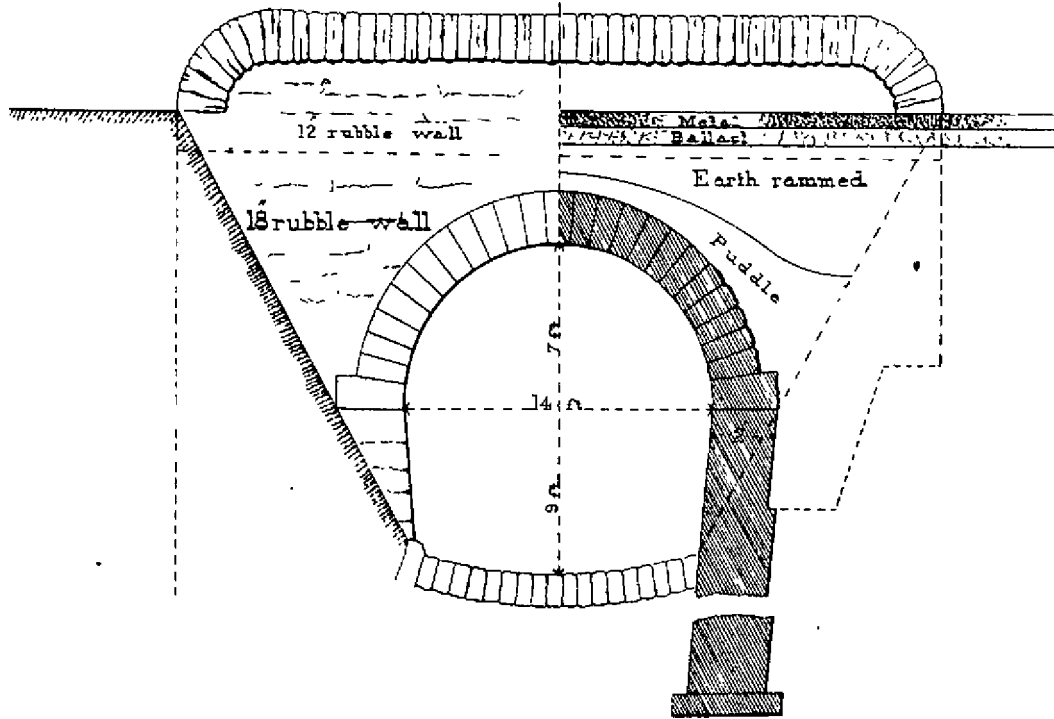


Stone Culvert Arch

14 feet Span

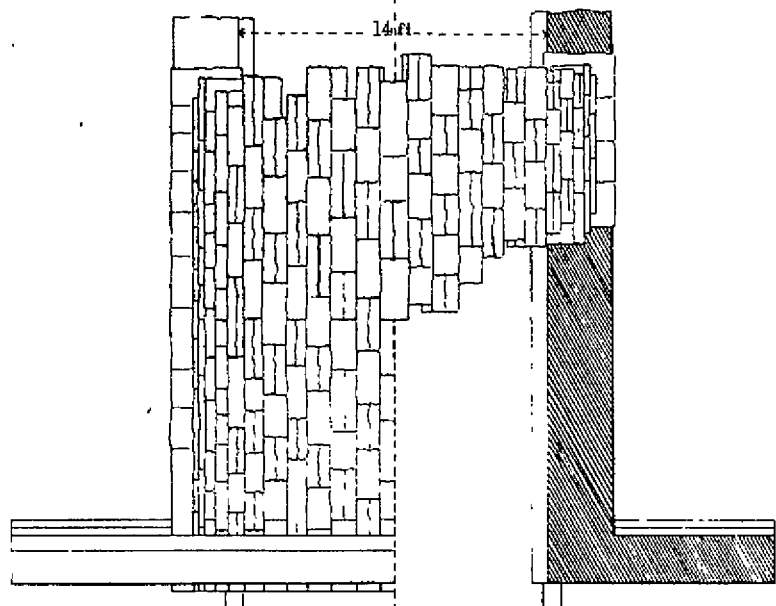
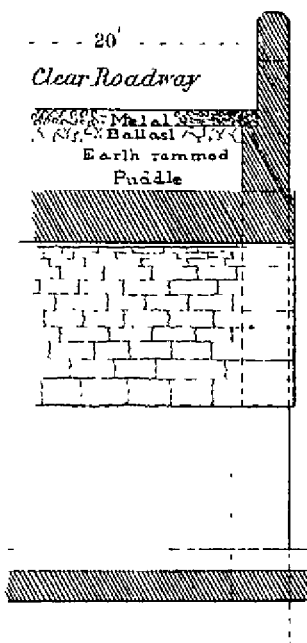
Elevation

Section



Section

Plan



72

(Sig. 233)

2ND CLASS

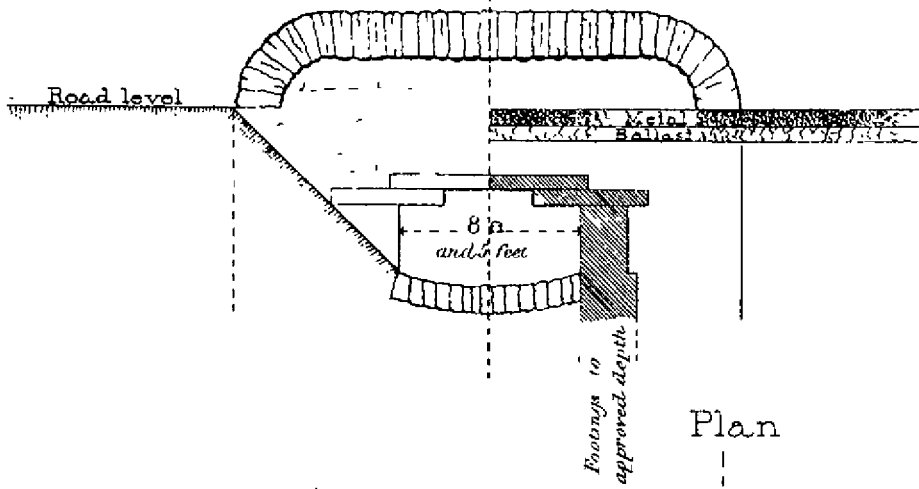
Separate Appendix N^o 3

Stone Culverts

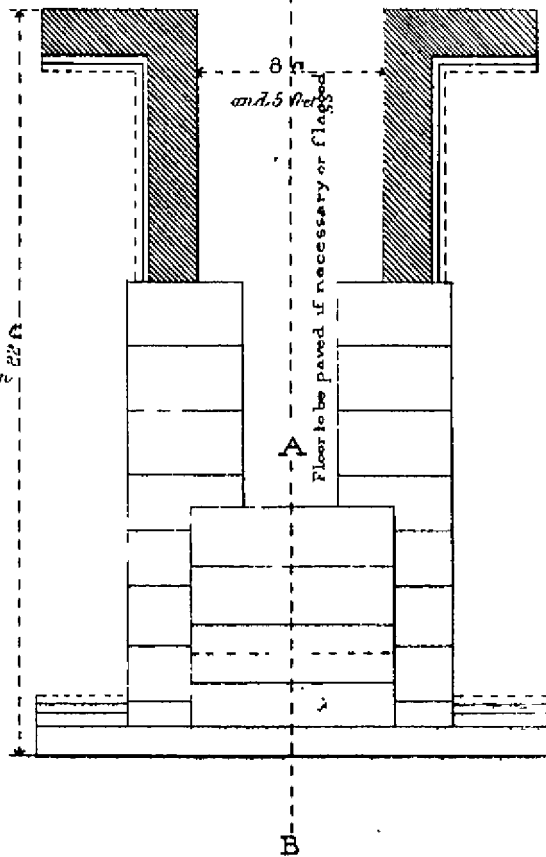
5 & 8 feet spans

Elevation

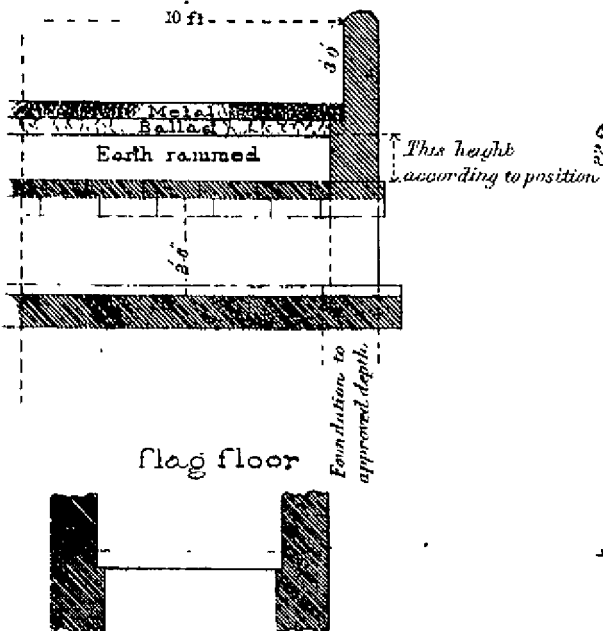
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Plan

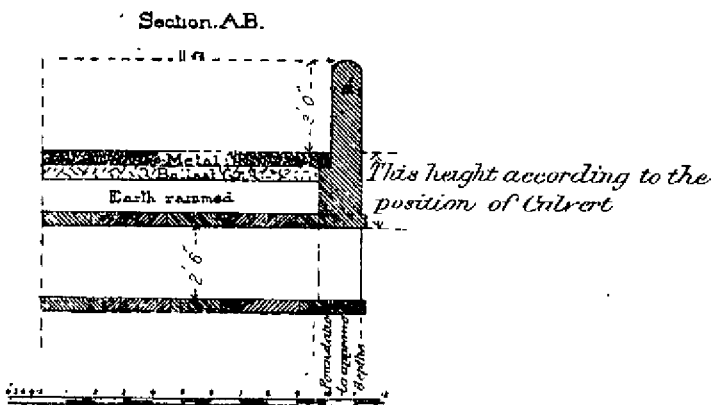
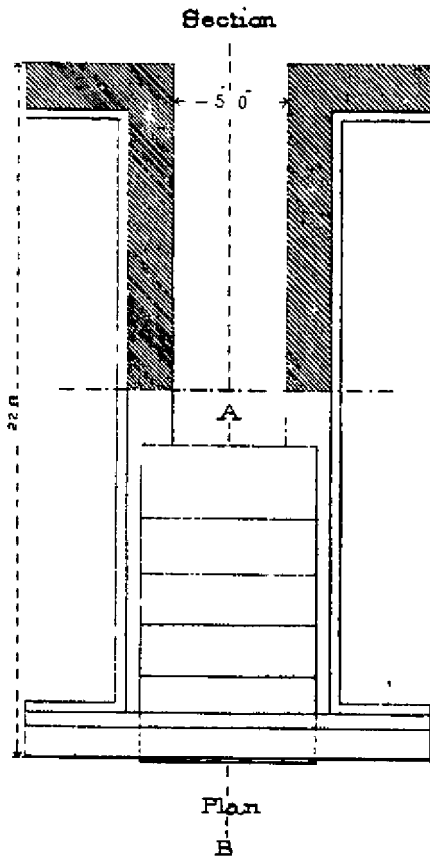
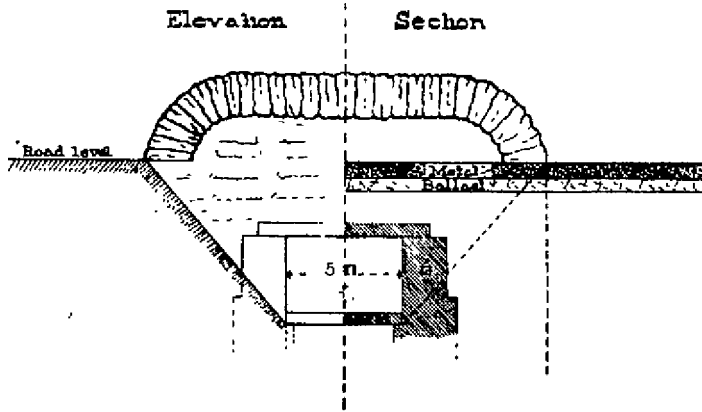


Section A.B.



Stone Culverts

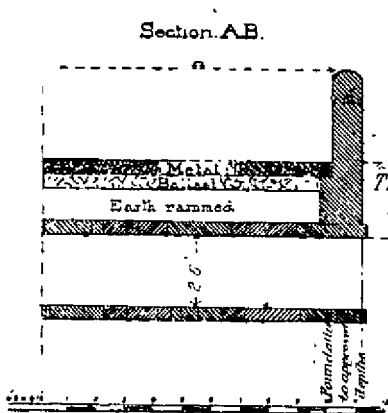
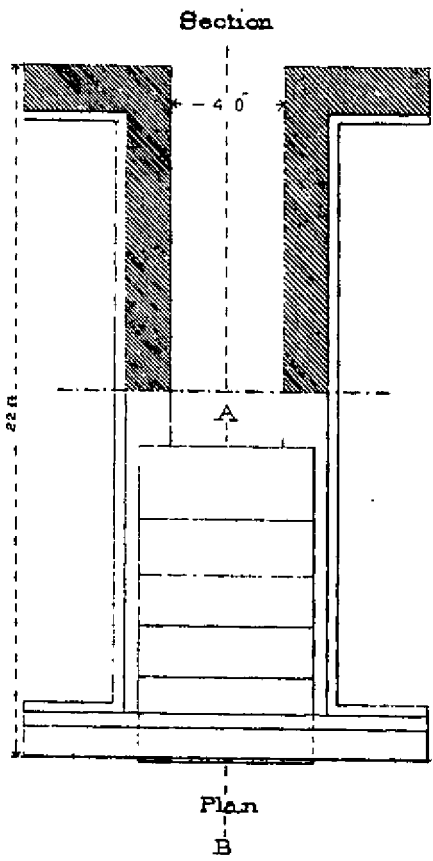
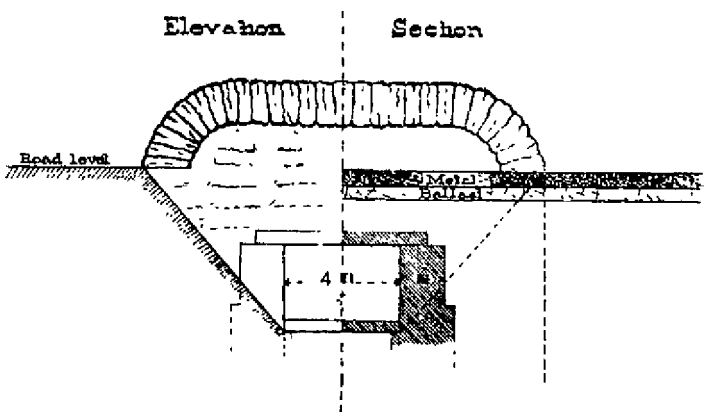
Five feet Span.



(Sig. 233)

Stone Culverts

Four feet Span.



1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

COMMON AT GULGONG.

(PROCLAMATION OF.)

Ordered by the Legislative Assembly to be printed, 30 July, 1875.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 15 June, 1875, That there be laid upon the Table of this House,—

“Copies of all Letters, Petitions, and other Papers, in reference to the
“proclamation of a Common at Gulgong.”

(Mr. Buchanan.)

SCHEDULE.

NO.	PAGE.
1. Letter from G. D. Lang, Esq., Gulgong, to J. G. O'Connor, Esq., M.L.A., enclosing Petition to the Honorable the Minister for Lands, praying for a suitable block of land to be reserved and dedicated for Commonage purposes for the town of Gulgong (with Minute thereon). 18 November, 1873	2
2. Letter from J. G. O'Connor, Esq., M.L.A., to Minister for Lands, enclosing Petition on same subject (with Minutes thereon). 15 December, 1873	2
3. Memo. from Mr. Gold Commissioner Johnson to Mr. Gold Commissioner Browne, asking him to indicate the situation and extent of the area required for the Commonage. 18 January, 1874	3
4. Letter from Mr. Warden Browne to Under Secretary for Lands, reporting in reference to a Common for the use of stock at Gulgong, and enclosing plan and description (with Minute thereon). 23 June, 1874	3
5. Letter from Under Secretary for Lands to Mr. Warden Browne, asking for his report above referred to (with Minute thereon). 26 June, 1874	4
6. Letter from Mr. Acting District Surveyor Bolton to Surveyor General, reporting on proposed Common at Gulgong (with sketch enclosed). 30 September, 1874	4
7. Memo. of the Surveyor General (with tracing enclosed). 21 October, 1874	4
8. Minute of Executive Council, approving of 21 square miles at Gulgong for temporary Commonage (with Minutes thereon). 22 February, 1875	4
9. Government Gazette Notice—Temporary Commonage, Gulgong. 31 March, 1875	5
10. Government Gazette Notice—Commoners' Boundaries. 31 March, 1875	5
11. Under Secretary for Lands to Land Agent, Mudgee, forwarding tracing. 11 May, 1875	6
12. Under Secretary for Lands to Mr. J. G. O'Connor, in reply to No. 2. 22 May, 1875	6
13. Letter from Mr. S. Samper (Honorary Secretary to the Gulgong Progress Committee) to R. H. M. Forster, Esq., M.L.A., protesting against the area proclaimed as a Commonage (with Minutes thereon). 26 May, 1875	6
14. Same to D. Buchanan, Esq., M.L.A., to same effect. 26 May, 1875	6
15. Telegram from the Secretary of the Gulgong Progress Committee to D. Buchanan, Esq., M.L.A., with respect to above (with Minutes thereon). 1 June, 1875	7
16. Under Secretary for Lands to R. H. M. Forster, Esq., M.L.A., informing him that the area would be reduced. 7 June, 1875	7
17. Same to D. Buchanan, Esq., M.L.A., to same effect. 7 June, 1875	7
18. Minute of Executive Council, approving of the area in question being withdrawn (with Minute thereon). 7 June, 1875	7
19. Letter from Mr. S. Samper to Minister for Lands, relative to the reduction of the said area. 9 June, 1875	7
20. Government Gazette Notice—Withdrawal of land from temporary Common at Gulgong. 15 June, 1875	8
21. Under Secretary for Lands to Mr. S. Samper, in reply to No. 19. 24 June, 1875	8

COMMON AT GULGONG.

No. 1.

G. D. LANG, Esq., to J. G. O'CONNOR, Esq., M.L.A.

Gulgong Evening Argus,
18 November, 1873.

MY DEAR SIR,

Herewith I beg to hand you a petition, addressed to the Honorable the Minister for Lands, for the reservation of a block of land for Commonage purposes, for the town of Gulgong. This is very much wanted here, and the site indicated would suit admirably, as there is no gold on it; and it is in the immediate neighbourhood of the town, though quite out of the way of it. I shall have another petition to send, either along with this one or by the next post, addressed to the Honorable the Colonial Secretary. I tried to obtain a copy of the paper for which you sent to Zimmer, but was unsuccessful, for neither here nor at the Home Rule is there a copy to be had. I am kept with my hands full; for what with petitions, meetings, leaders, locals, reporting, and proof sheets, my hands are full. I was on the sick list for about a fortnight, and could just manage to get through my work; but I am all right again.

With best wishes, believe me yours faithfully,—

GEORGE D. LANG.

Referred for the consideration of Mr. Surveyor Bolton.—R. D. FITZGERALD, B.C., 9 Dec., /73.

[Enclosure to No. 1.]

Presented by Mr. O'Connor, M.P.

To the Honorable the Minister for Lands, the Petition of the undersigned Freeholders, Householders, and others, resident in the town of Gulgong and its vicinity,—

HUMBLY SHOWN:—

That there is no place set apart in the neighbourhood of the town of Gulgong where the residents or teamsters or strangers arriving from a distance may depasture their cattle and horses without danger of losing them or having them impounded.

That the reservation by the Government of an area of from four to five hundred acres, or of such an area as to the Honorable the Minister for Lands may seem adequate for the purposes of a Town Common, would be a boon of inestimable value to the townspeople.

That there is a conveniently situated block of ground well suited for a Common in the immediate neighbourhood of the town, and yet so far removed that it is never likely to be required for building purposes, between the large hill at the back of the pound yards and Lyons' paddock, which your petitioners would beg most respectfully to suggest might most advantageously be appropriated for the purposes of a Town Common.

That this block of land has been diligently prospected by different parties of miners for gold without the shadow of success, that it is the general belief that no gold in payable quantities if at all exists in this block, and that its reservation for Commonage purposes would in no way interfere with the operations of the miners.

Your Petitioners therefore humbly pray that the Honorable the Minister for Lands may be pleased to take the premises into favourable consideration, and that this or some other suitable block of land may be reserved and dedicated in the manner suggested by your Petitioners.

And your Petitioners, as in duty bound, will ever pray.

WILLIAM EWINGTON, J.P.
CHARLES ZIMMLER,
and 86 others.

No. 2.

J. G. O'CONNOR, Esq., M.L.A., to THE MINISTER FOR LANDS.

York-street, Sydney,
15 December, 1873.

SIR,

Will you please take the prayer of the petitioners (sent herewith) into your consideration. The dedication of a piece of land as a Common would be a great boon to the miners in the district.

Your obedient servant,
J. G. O'CONNOR.

May probably be referred for the consideration of the Gold Commissioner, upon conference with the Acting District Surveyor, Bathurst.

The Gold Commissioner, Western District, accordingly.—B.C., 16th Jan., 1874. T.H.J. for U.S.

[Enclosure

3

[*Enclosure to No. 2.*]

Mr. O. Goodman to J. G. O'Connor, Esq., M.L.A.

Gulgong, December, 1873.

Sir,

I beg to enclose you a petition, which you will greatly oblige me by presenting to the Honorable the Minister for Lands, for the purpose of having the sheep at present grazed on the Gold Fields removed; they are the property of—

Mr. Rouse, around Gulgong,
Mr. Blackman, around Home Rule,
Mr. Lowe, around Canadian,

eating up, as you may easily imagine, the pastures that the gold-miner's cows, goats, and horses ought to benefit by. The petition is faithfully signed, and, should the course we have pursued not be correct to get rid of this nuisance, you will greatly oblige by intimating the correct one. Trusting you will interest yourself in this, to us, important matter,—

I remain, &c.,
OWEN GOODMAN.

[*Sub-enclosure to Enclosure to No. 2.*]

To the Honorable the Minister for Lands.

Gulgong, December, 1873.

The Petition of the undersigned Gold-miners and others, on the Gulgong Gold Field,—
Humbly sheweth:—

That the sheep grazing on the Crown Lands of this Gold Field are detrimental to the welfare of the inhabitants of this important district, totally destroying the grass which is required for the sustenance of the cows, horses, &c., the property of the gold-miner and others connected with the Gold Fields.

We therefore respectfully submit that you will immediately cause them to be removed, and declare a radius of say (5) five miles or so a Commonage for the express use of the aforesaid cattle, horses, &c., and not as at present for the squatter's sheep. And your Petitioners, as in duty bound, will ever pray.

[*Here follow 840 signatures.*]

No. 3.

MEMO. from MR. GOLD COMMISSIONER JOHNSON to MR. GOLD COMMISSIONER BROWNE.

FOR the report of Mr. Gold Commissioner Browne at his earliest convenience, who, if he considers the proclamation of a Commonage necessary, will be kind enough to indicate, as nearly as possible, the situation and extent of the area required for that purpose.

WHITTINGDALE JOHNSON.

B.C., 18th January, 1874.

No. 4.

MR. WARDEN BROWNE to THE UNDER SECRETARY FOR LANDS.

Gulgong, 23 June, 1874.

SIR,

I have the honor to enclose a petition from certain inhabitants of the town and neighbourhood of Gulgong with reference to a Common for the use of stock, and I beg to transmit a plan* and description of proposed reserve, which will, in my opinion, be sufficient for the purpose.

I have the honor to state that I am not aware that the neighbouring squatters have been in the habit of grazing their sheep upon the Gold Field to the injury of the miner's stock, which in the season of unexampled abundance of pasture cannot have suffered in that respect.

I have, &c.,
T. A. BROWNE,
Warden.

The population of Gulgong is somewhere about 8,000 persons. The recommendation for Commonage by Mr. Warden Browne is that 500 acres only, but that recommendation does not appear to have passed through Mr. Warden Johnson. 500 acres for a Common is too little. This may probably go for consideration of Mr. Acting District Surveyor Bolton, who may confer with Mr. Johnson on the matter should he consider it desirable.

16th July, 1874.

R. D. FITZGERALD,
(For Surveyor General).

[*Enclosure B to No. 4.*]*Description of proposed Town Common for the Village of Gulgong, containing about 500 acres.*

Gulgong, 1 July, 1874.

Commencing at a point marked A on plan, being 1 chain north, the north-west corner of Elijah Lyons' 40 acres c. p.; and bounded thence by a line bearing west about 38 chains; and thence by a line bearing north about 62 chains and 50 links; and thence by a line bearing east about 80 chains and 96 links; and thence by a line bearing south about 62 chains and 50 links; and thence by a line bearing west about 42 chains and 96 links, to the point of commencement.

SAMUEL A. McNEALE,
Surveyor.

No. 5.

THE UNDER SECRETARY FOR LANDS TO MR. WARDEN BROWNE.

Department of Lands,
Sydney, 26 June, 1874.

SIR,

See sub-enclo-
sure to No. 2.

I am directed to inform you that a communication has been received from Mr. Warden Johnson, intimating that the Petition for a Common at Gulgong forwarded to you on the 14th January last had not yet been returned, and I am directed to request that you will return the same with your report thereon to this department at your earliest convenience.

I have, &c.,
W. W. STEPHEN.

See enclosures A
and B to No. 4.

Report, with plan and description of Common enclosed. Posted 3rd July, 1874.—T. A. BROWNE,
Warden.
B.C., 4/7/74, Gulgong.

No. 6.

MR. ACTING DISTRICT-SURVEYOR BOLTON TO THE SURVEYOR GENERAL.

District Surveyor's Office,
Orange, 30 September, 1874.

SIR,

See No. 4.

See Enclosures A
and B to No. 4.

* Appendix B.

I do myself the honor to acknowledge the receipt of your B.C., 16th July, 1874, in reference to the proposed Common at Gulgong, county of Phillip, and in reply to inform you that I have visited the locality, and am of opinion that the area indicated by the sketch and description accompanying the application is not large enough; I would therefore recommend the land shown on my sketch* herewith be substituted for it. I would draw attention to the fact that the Gold Field reserve will serve as a temporary Common while there is a large digging population at Gulgong; and in the event of the greater portion of the population leaving, the Common suggested by me should meet the demands of the remaining inhabitants. I have conferred with Mr. Warden Browne, who coincides with my views.

I have, &c.,
C. F. BOLTON,
A. D.S.

No. 7.

MEMO. OF THE SURVEYOR GENERAL.

The area proposed to be substituted for Commonage, in lieu of the 500 acres proposed by Mr. Warden Browne is about 1,920 acres. The total unalienated land within the Gulgong Gold Field, exclusive of the town of Gulgong, is about 52 square miles, of which about 20 square miles is under pre-lease to Rouse, Cox, and Lowe, and others; but in the immediate vicinity of Gulgong, as per tracing,* edges green, the vacant Crown Lands, excluding R. Rouse's pre-leases of 640 acres, 750 acres, 700 acres, and 960 acres, on Wialdra and Coogal Creeks, is about 21 square miles. The population of Gulgong is not given even approximately by the District Surveyor, but I presume is somewhere about five to six thousand persons, excluding children. For the present it would appear by the Acting District-Surveyor's report undesirable to permanently dedicate any land for Commonage. It is therefore submitted that the vacant Crown Land, including about 21 square miles, be devoted for temporary Commonage until required for sale, and placed in trust for householders and freeholders within its boundaries as shown by tracing.

R. D. FITZGERALD,
(For Surveyor General).
B.C., 21 October, 1874.

UNDER SECRETARY FOR LANDS.

For approval, 15 December. Approved.—J.S.F., 29/12/74.

No. 8.

MINUTE PAPER FOR THE EXECUTIVE COUNCIL.

Department of Lands,
Sydney, 22 February, 1875.

Temporary Common at Gulgong.

See No. 9. It is recommended to His Excellency the Governor and the Executive Council that the within described portion of land, containing 21 square miles, and situated at Gulgong, in the county of Phillip, be set apart for Commonage purposes under clause 29 of the "Crown Lands Occupation Act of 1861."

See No. 10. It is also recommended to His Excellency and the Council that the boundaries, of which a description is enclosed, shall be those the freeholders and householders within which shall have the use of the temporary Commonage of Gulgong, subject to the reservations provided by clause 63 of the Regulations under the Alienation Act, and clause 113 of the Regulations under the Occupation Act.

THOS. GARRETT.

Approved.—H.R., 1/3/75.

The Executive Council advise that the portion of land herein described at Gulgong be set apart for Commonage purposes, in terms of the Act herein specified; also that the boundaries herein set forth be those within which freeholders and householders should have the use of the same.—ALEX. C. BUDGE,
Clerk of the Council.

Min. 75/12, 1/3/75. Confirmed, 8/3/75.

Mr. Ellis,—A tracing is enclosed showing the boundaries of the temporary Common at Gulgong, notified the 31st March, 1875, for the information of the Land Agent at Mudgee.—G. LEWIS, for the Surveyor General. Under Secretary for Lands.—B.C., 29th April, 1875.

Mr. Ellis,—Applicants should be informed and invited to nominate trustees, that regulations may be submitted for the management of the Common.—G. LEWIS.

No. 9.

GOVERNMENT GAZETTE NOTICE.—TEMPORARY COMMONAGE. GULGONG.

Department of Lands,
Sydney, 31 March, 1875.

His Excellency the Governor, with the advice of the Executive Council, directs it to be notified, that in pursuance of the provisions contained in the Regulations under the "Crown Lands Occupation Act of 1861," the land described hereunder shall be devoted to temporary Commonage.

THOMAS GARRETT.

County of Phillip, parishes of Guntawang and Gulgong, 21 square miles. The Crown Lands within the following boundaries: Commencing on Wialdra Creek, at the north-west corner of R. Rouse's 1,200 acres; and bounded thence on part of the west and north by that creek upwards to the south-west corner of E. Rouse's portion 9 of 65 acres; thence by the south and part of the east boundaries of that portion easterly and northerly to the south-west corner of E. Rouse's portion 10 of 43 acres; thence by the south and the east boundaries of that portion easterly and northerly to Wialdra Creek, and thence by Wialdra Creek upwards to R. Rouse's 1,081 acres; thence by the west and south boundaries of that land southerly and easterly to its south-east corner; thence by part of the east boundary of that 1,081 acres, bearing north about 80 chains to land under pre-emptive lease to R. Rouse; thence by a line east 277 chains, dividing it from that lessee's land; on the east by a line south, dividing it from land under pre-emptive lease to R. Rouse, to the north-west corner of portion 32; thence by the west and south boundaries of that portion southerly and easterly to its south-east corner, and thence by the road south-easterly to R. Rouse's 851 acres; thence by the part of the west boundary of that land southerly about 66 chains to the south-west corner of that land; thence by the western boundary of R. Rouse's 1,118 acres southerly and the south boundary of that land easterly to the north-west corner of A. J. Liddington's 640 acres; thence by part of the west boundary of that land southerly to G. Stott's 320 acres, portion 4-2; thence on the south by the north and part of the west boundaries of that portion westerly and southerly to the north-east corner of E. Stott's portion 4-3; thence by the north boundaries of that portion and J. Smith's portion 19 westerly to its north-western corner; thence by the west boundaries of that portion and G. Clarke's portion 20 and its southerly prolongation to the north boundary of J. Egan's portion 24; thence by parts of the north and the west boundaries of that portion and the north part of the west boundary of portion 25 westerly and southerly to the boundary dividing the parishes of Wilbertree and Gulgong; thence by that boundary bearing west to the east boundary of R. Lamrock's conditional purchase, portion 50; thence by the eastern and northern boundaries of that portion northerly and north-westerly and part of the north boundary of portion 49 westerly to the south-east corner of portion 27; thence by the east boundary of that portion northerly to its north-east corner; thence by the north boundaries of portions 27, 17, 18, westerly to the north-west corner of portion 18; thence by part of the west boundary of that portion southerly to a point east from the north-east corner of portion 34; thence by a line west to that corner and by the north boundary of that portion westerly to the east boundary of J. Smith's conditional purchase, portion 44; thence by the east and north boundaries of that portion northerly and westerly and the north boundary of portion 47 westerly to its north-west corner; thence again on the west and on the south by the road to Gulgong, passing along the eastern boundary of R. Rouse's 4,000 acres northerly to the north-east corner of that land, and thence by a line crossing that road to that corner, and by part of the north boundary of that land westerly to the south-east corner of R. Rouse's 1,200 acres; thence by the east and north boundaries of that land northerly and westerly to Wialdra Creek, at the point of commencement. But exclusively of the village of Gulgong, as shown on the map of that village at the Surveyor General's Office.

No. 10.

GOVERNMENT GAZETTE NOTICE.—COMMONERS' BOUNDARIES, GULGONG.

Department of Lands,
Sydney, 31 March, 1875.

His Excellency the Governor, with the advice of the Executive Council, directs it to be notified, that all freeholders and householders within the undermentioned boundaries will be entitled to the use of the permanent and temporary Commonage at Gulgong.

THOMAS GARRETT.

County of Phillip, parishes of Guntawang and Gulgong: Commencing on Wialdra Creek, at the north-west corner of R. Rouse's 1,200 acres; and bounded thence on part of the west and north by that creek upwards, to the south-west corner of E. Rouse's portion 9, 765 acres; thence by the south and part of the east boundary of that portion easterly and northerly to the south-west corner of E. Rouse's portion 10, of 43 acres; thence by the south and the east boundaries of that portion easterly and northerly to Wialdra Creek; and thence by Wialdra Creek upwards, to R. Rouse's 1,081 acres; thence by the west and the south boundaries of that land southerly and easterly to its south-east corner; thence by part of the east boundary of that 1,081 acres bearing north about 80 chains to land under pre-emptive lease to R. Rouse; thence by a line east 277 chains, dividing it from that leased land; on the east by a line south, dividing it from land under pre-emptive lease to R. Rouse, to the north-west corner of portion 32; thence by the west and south boundaries of that portion southerly and easterly to its south-east corner; and thence by the road south-easterly to R. Rouse's 851 acres; thence by part of the west boundary of that land southerly, about 66 chains to the south-west corner of that land; thence by the western boundary of R. Rouse's 1,118 acres southerly, and the south boundary of that land easterly to the north-west corner of A. J. Liddington's 640 acres; thence by part of the west boundary of that land southerly to G. Stott's 320 acres, portion 4 over 2; thence on the south by the north and part of the west boundaries of that portion westerly and southerly to the north-east boundary of E. Stott's portion 4 over 3; thence by the north boundaries of that portion and J. Smith's portion 19 westerly to its north-west corner; thence by the west boundaries of that portion and G. Clarke's portion 20 and its southerly prolongation to the north boundary

boundary of J. Egan's portion 24; thence by part of the west boundary of portion 25 westerly and southerly to the boundary dividing the parishes of Wilbertree and Gulgong; thence by that boundary bearing west to the eastern boundary of R. Lamrock's conditional purchase, portion 50; thence by the eastern and northern boundaries of that portion northerly and north-westerly, and part of the north boundary of portion 49, westerly to the south-east corner of portion 27; thence by the east boundary of that portion northerly to its north-east corner; thence by the north boundaries of portions 27, 17, 18, westerly to the north-west corner of portion 18; thence by part of the west boundaries of that portion southerly to a point east from the north-east corner of portion 34; thence by a line west to that corner and by the north boundary of that portion westerly to the east boundary of J. Smith's conditional purchase, portion 44; thence by the east and north boundaries of that portion northerly and westerly, and the north boundary of portion 47 westerly to its north-west corner; thence again on the west and on the south by the road to Gulgong, passing along the east boundary of R. Rouse's 4,000 acres northerly to the north-east corner of that land; and thence by a line crossing that road to that corner, and by part of the north boundary of that land westerly to the south-east corner of R. Rouse's 1,200 acres; thence by the east and north boundaries of that land northerly and westerly to Wialdra Creek, at the point of commencement.

No. 11.

THE UNDER SECRETARY FOR LANDS TO THE LAND AGENT, MUDGEE.

Department of Lands,

Sydney, 11 May, 1875.

SIR,

I am directed to transmit herewith for your information, a tracing showing by a green edging a portion of land containing 21 square miles at Gulgong, in the county of Phillip, which by notice in the Government Gazette of the 31st March last, has been set apart for temporary Commonage.

I have, &c.,

CHARLES OLIVER,

(For the Under Secretary).

See No. 7.

See No. 9.

No. 12.

THE UNDER SECRETARY FOR LANDS TO MR. J. G. O'CONNOR.

Department of Lands,

Sydney, 22 May, 1875.

SIR,

Referring to your letter of the 15th December, 1873, relative to a petition from the residents of Gulgong praying for the reservation of a temporary Common at that place, I am directed to invite your attention to a notice which appeared in the Government Gazette of the 31st March last, from which you will perceive that the prayer of the petitioners has been complied with.

Trustees should now be nominated according to the provisions of the Commons Regulation Act of 1873.

I have, &c.,

W. W. STEPHEN.

No. 2.

Nos. 9 and 10.

No. 13.

MR. S. SAMPER TO R. H. M. FORSTER, Esq., M.L.A.

Gulgong Progress Committee Rooms,
26 May, 1875.

SIR,

I have the honor to inform you that a very large meeting of the Progress Committee was held last evening, when it was moved by Mr. Henry Tebbutt, seconded by Mr. J. F. Plunkett, and carried unanimously,—That this meeting protests against the action of the Honorable the Minister of Lands in causing 21 square miles of the richest agricultural lands around Gulgong being proclaimed a Common, thus preventing its use for agricultural purposes.

That Mr. Buchanan, the Member of the Western Gold Fields, be requested to wait on the Minister to ask him to revoke the proclamations and cause the above lands to be thrown open at once for conditional purchase.

That the Secretary be directed to correspond with Mr. Buchanan on the subject, and also forward him a copy of this resolution.

It was further directed that the names of R. H. M. Forster and S. S. Goold, Esqs., M.L.A.'s, be added to the motion.

I am, &c.,

S. SAMPER,

Honorary Secretary.

Urgent. Let the temporary Common be reduced to the area recommended and shown on the plan by Mr. Bolton. Inform Mr. Buchanan and Mr. R. Forster, M.P.'s, at once.—T.G., 2/6/75.

Mr. Ellis. Urgent. Submitted for the consideration of the Honorable the Minister for Lands as directed. That the defined area, containing about 18 square miles, be withdrawn from the temporary Common at Gulgong, in accordance with memo. on 75/3,920 Mis.—R. B. FITZGERALD (for Surveyor General). Under Secretary for Lands.—B.C., 5 June, /75.

No. 14.

MR. S. SAMPER TO D. BUCHANAN, Esq., M.L.A.

Gulgong Progress Committee Rooms,
Gulgong, 26 May, 1875.

SIR,

I have the honor to inform you that a very large meeting of the Progress Committee was held last evening, when it was moved by Mr. Henry Tebbutt, seconded by Mr. J. F. Plunkett, and carried unanimously,—That this meeting protests against the action of the Honorable the Minister of Lands in causing 21 square miles of the richest agricultural land around Gulgong being proclaimed as a Common, thus preventing its use for agricultural purposes.

That

That Mr. Buchanan, the Member of the Western Gold Fields, be requested to wait on the Minister to ask him to revoke the proclamations and cause the above lands to be thrown open at once for conditional purchase. That the Secretary be directed to correspond with Mr. Buchanan on the subject, and also forward him a copy of this resolution. At the suggestion of Mr. Plunkett the following clause was also added:—

“And that Mr. Buchanan be requested to ask in his place in Parliament by what advice or suggestion the Common was proclaimed.”

It was then moved by Mr. Dennis, seconded by Mr. Macdonald,—That the names of Mr. R. M. Forster and Mr. S. S. Goold, M.L.A.'s, be added to Mr. Tebbutt's resolution,—carried. In accordance with the above resolution, I now do myself the honor to address you.

I have, &c.,
S. SAMPER,
Honorary Secretary, G.P. Committee.

No. 15.

TELEGRAM from THE SECRETARY OF THE GULGONG PROGRESS COMMITTEE to D. BUCHANAN, Esq., M.L.A.
1 June, 1875.

THE people applied through J. G. O'Connor three years ago for about 400 acres in one spot for Town Common, but never for such absurd area gazetted.

Handed to me by D. Buchanan, M.P.—T.G., 2/6/75.

Let me see the whole of the papers in this case, together with the letter handed in by Mr. Buchanan yesterday.—T.G., 2/6/75.

No. 16.

THE UNDER SECRETARY FOR LANDS to R. H. M. FORSTER, Esq., M.L.A.
Department of Lands,
Sydney, 7 June, 1875.

SIR,

With reference to your personal representation to the Minister for Lands relative to the temporary Common recently proclaimed at Gulgong, I am directed to inform you that the Minister has determined to reduce the area of it to about 1,920 acres.

I have, &c.,
W. W. STEPHEN.

No. 17.

THE UNDER SECRETARY FOR LANDS to D. BUCHANAN, Esq., M.L.A.
Department of Lands,
Sydney, 7 June, 1875.

SIR,

With reference to your personal representation to the Minister for Lands relative to the temporary Common recently proclaimed at Gulgong, I am directed to inform you that the Minister has determined to reduce the area of it to about 1,920 acres.

I have, &c.,
W. W. STEPHEN.

No. 18.

MINUTE FOR THE EXECUTIVE COUNCIL.
Department of Lands,
Sydney, 7 June, 1875.

Withdrawal from Temporary Common.

It is recommended to His Excellency the Governor and the Executive Council that the within described See No. 20. portion of land situated in the parish of Guntawang, containing about 18 square miles, be withdrawn from the temporary Commonage at Gulgong.

THOS. GARRETT.

Approved.—H.R., 8/6/75.

THE Executive Council advise that the area of land herein described be withdrawn from the temporary Commonage at Gulgong for the purpose herein specified.

ALEX. C. BUDGE,
Clerk of the Council.

Min. 75/28, 8/6/75. Confirmed, 14/6/75.

No. 19.

MR. S. SAMPER to THE MINISTER FOR LANDS.
Gulgong, 9 June, 1875.

SIR,

I have the honor to transmit to you the following resolution as passed by the Gulgong Progress Committee at their last meeting, on the 8th instant, namely:—“That the Hon. Secretary be instructed to write to the Honorable the Minister for Lands, asking him to withdraw from reserve all the land proclaimed as a Common and published in Government Gazette of the 31st March last, excepting 480 acres asked for in a petition presented by Mr. J. G. O'Connor in 1873.

The proclamation of such a large Common has quite surprised the inhabitants of Gulgong, as they never petitioned for such a large area, and it is generally felt that the area of 480 acres, as petitioned for in 1873, is sufficiently large for all purposes.

I have, &c.,
S. SAMPER,
Honorary Secretary, Gulgong Progress Committee.

May be informed of reduction of area.

No. 20.

GOVERNMENT GAZETTE NOTICE—WITHDRAWAL OF LAND FROM TEMPORARY COMMON AT GULGONG.

Department of Lands,
Sydney, 15 June, 1875.

Hrs Excellency the Governor, with the advice of the Executive Council, directs it to be notified that the portion of land hereafter described has been withdrawn from the temporary Commonage at Gulgong.

THOMAS GARRETT.

County of Phillip, parishes of Guntawang and Gulgong, about 18 square miles: Commencing on Wialdra Creek at the north-west corner of R. Rouse's 1,200 acres; and bounded thence on part of the west and north by that creek upwards to the south-west corner of E. Rouse's portion 9 of 65 acres; thence by the south and part of the east boundaries of that portion easterly and northerly to the south-west corner of E. Rouse's portion 10 of 43 acres; thence by the south and east boundaries of that portion easterly and northerly to Wialdra Creek; and thence by Wialdra Creek upwards to R. Rouse's 1,081 acres; thence by the west and south boundaries of that land southerly and easterly to its south-east corner; thence by part of the east boundary of that 1,081 acres bearing north about 80 chains to land under pre-emptive lease to R. Rouse; thence by a line east 277 chains dividing it from that lessee's land; on the east by a line south dividing it from land under pre-emptive lease to R. Rouse to a point due west from the north-west corner of portion 32; thence by a line bearing east to that corner; thence by the west and south boundaries of that portion southerly and easterly to its south-east corner; and thence by the road south-easterly to R. Rouse's 851 acres; thence by part of the west boundary of that land southerly about 66 chains to the south-west corner of that land; thence by the western boundary of R. Rouse's 1,118 acres southerly and the south boundary of that land easterly to the north-west corner of A. J. Liddington's 610 acres; thence by part of the west boundary of that land southerly to G. Stott's 320 acres portion 4 over 2; thence on the south by the north and part of the west boundaries of that portion westerly and southerly to the north-east corner of E. Stott's portion 4 over 3; thence by the north boundaries of that portion and J. Smith's portion 19 westerly to its north-west corner; thence by the west boundaries of that portion and G. Clarke's portion 20 and its southerly prolongation to the north boundary of J. Egan's portion 24; thence by parts of the north and the west boundaries of that portion and the north and part of the west boundary of portion 25 westerly and southerly to the boundary dividing the parishes of Wilbortree and Gulgong; thence by that boundary bearing west to the east boundary of R. Lamroek's conditional purchase portion 50; thence by the eastern and northern boundaries of that portion northerly and north-westerly and part of the northern boundary of portion 49 westerly to the south-east corner of portion 27; thence by the east boundary of that portion northerly to its north-east corner; thence by the north boundaries of portions 27, 17, and 18, westerly to the north-west corner of portion 18; thence by part of the west boundary of that portion southerly to a point east from the north-east corner of portion 34; thence by a line west to that corner and by the north boundary of that portion westerly to the east boundary of J. Smith's conditional purchase portion 44; thence by part of the east and north boundaries of that portion northerly and westerly and the north boundary of portion 47 to its north-west corner; thence again on the west by the road to Gulgong northerly passing along part of the eastern boundary of R. Rouse's 4,000 acres, Guntawang, to the north-west corner of R. Rouse's portion 6 over 31 of 25 acres 1 rood; thence by a line partly forming the north boundary of that portion and R. Rouse's portion 6 over 30 of 40 acres and its easterly continuation about 105 chains to a point due south from the south-east corner of E. Lyons' conditional purchase portion 36 of 40 acres; thence by the south-west boundary of that portion north-westerly to its south-west corner; thence by part of the west boundary of portion 36 bearing north to the south-east corner of portion 31 E. Lyons' 40 acres; thence by the south, the west, the north, and part of the east boundaries of that portion bearing west, north, east, and south, to the north-east corner of portion 36 aforesaid; thence by the north boundary of that portion bearing east to its north-east corner; thence by a line bearing north about 100 chains to a point due east from the south-east corner of portion 37; thence by a line partly forming the south boundary of portion 37 about 90 chains; thence by a line bearing south 43 chains; thence by a line bearing west 22 chains; thence by a line bearing south 60 chains; thence by a line south-easterly to the north-east corner of R. Rouse's 4,000 acres, Guntawang, by part of the north boundary of that land westerly to the south-east corner of R. Rouse's 1,200 acres; thence by the east and the north boundaries of that land northerly and westerly to Wialdra Creek at the point of commencement.

No. 21.

THE UNDER SECRETARY FOR LANDS TO MR. S. SAMPER.

Department of Lands,
Sydney, 24 June, 1875.

SIR,

No. 19.

Referring to your letter of the 9th instant, relative to the reduction of the area of the temporary Common at Gulgong, I am directed to inform you that 18 square miles were withdrawn from it by notice published in the Government Gazette of the 15th instant.

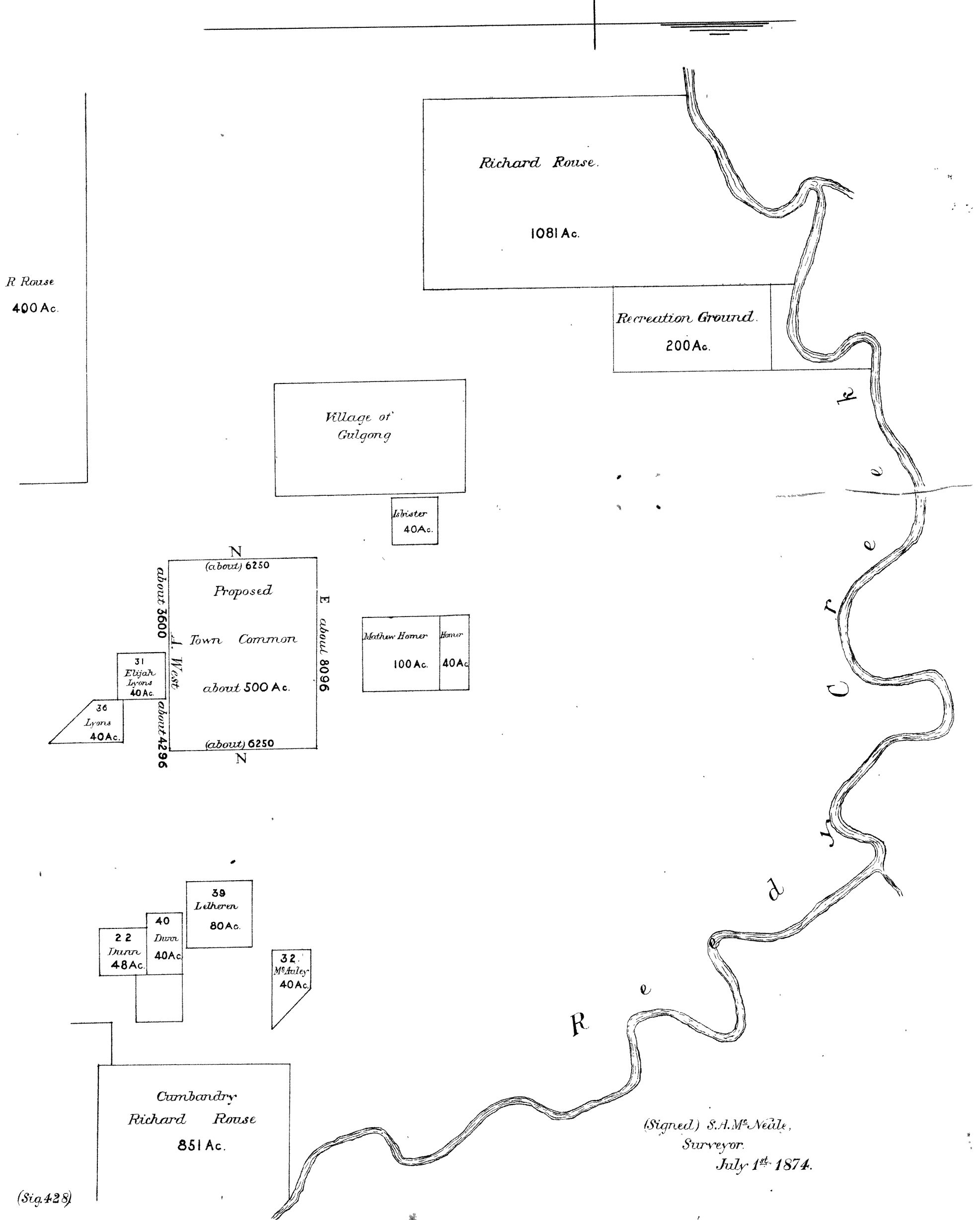
I have, &c.,
LINDSAY G. THOMPSON,
(For the Under Secretary).

[Three plans.]

TRACING OF DESIGN SHEWING

POSITION OF PROPOSED COMMON
for the Village of Culgong, containing about 500 acres

Scale 40 Chains to an inch.



(Signed) S.A.M^{rs} Neale,
Surveyor.
July 1st 1874.

Enclosure to No. 6.

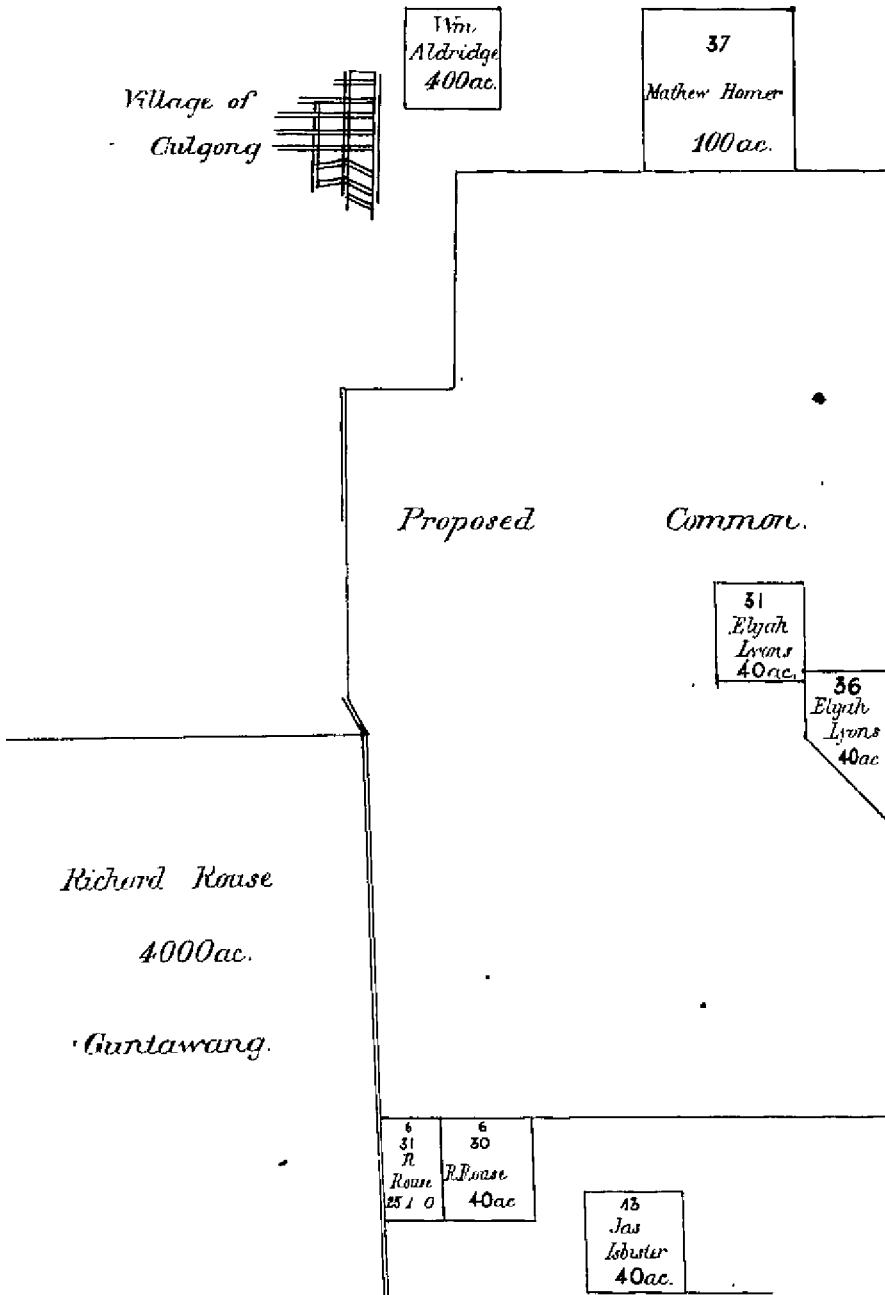
(COPY)

Appendix B.

TRACING FROM SKETCH

SHEWING THE PROPOSED COMMON AT CULGONG,
COUNTY OF PHILLIP.

Scale-40chains to an inch.



Transmitted with my letter of 30th
September, 1874, N^o 112.
(Signed) C.F. Bolton.
A.D. S.

(Sig 428)

(Copy.)

Tracing

of the Northern portion of Gulgong Gold Field
Showing by line ---- the proposed Temporary
Commonage for Gulgong

Scale 40 chains to 1 inch.

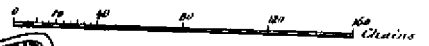
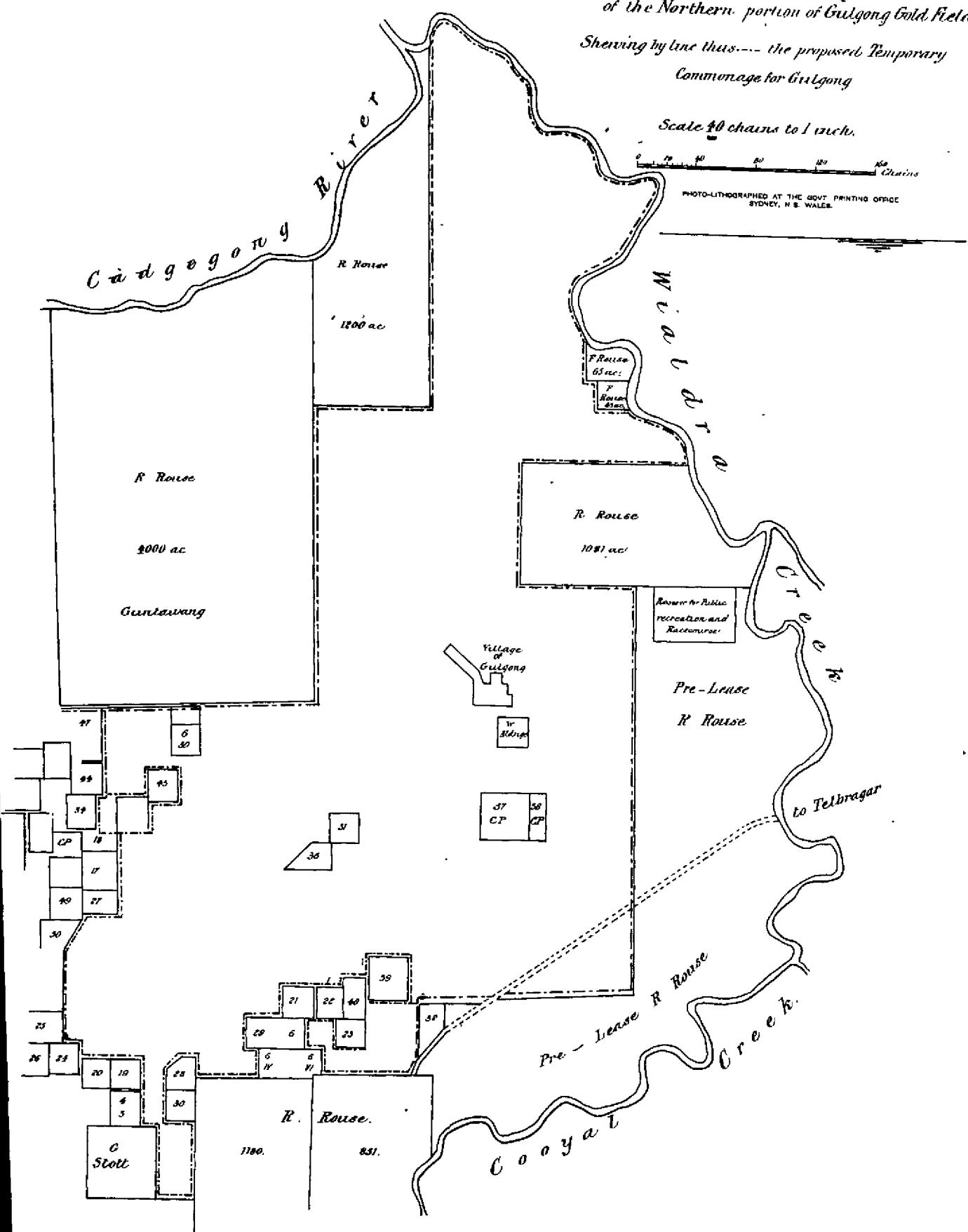


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE
SYDNEY, N. S. WALES.



(Sig 428.)

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

FLOOD RELIEF.

(AMOUNTS CONTRIBUTED BY GOVERNMENT, FOR YEAR ENDING APRIL, 1875.)

Ordered by the Legislative Assembly to be printed, 24 June, 1875.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 18th May, 1875, That there be laid upon the Table of this House,—

“A Return showing the amount contributed by the Government to West Maitland, East Maitland, Morpeth, and Raymond Terrace,* for relief of distress caused by Floods; showing the amount given to each place, for the year ending April, 1875.”

(Mr. Scholey.)

* The accompanying Return shows also the amounts paid at the Paterson, Macleay, Bellinger, and Nambuccra.

RETURN showing the amount contributed by the Government to West Maitland, East Maitland, Morpeth, and Raymond Terrace, for relief of distress caused by Floods, showing the amount given to each place, for the year ending April, 1875; also, for the Paterson, Macleay, Bellinger, and Nambuccra.

	£	s.	d.
West Maitland	548	7	0
East Maitland	139	15	0
Morpeth	31	6	4
Raymond Terrace	187	4	11
Paterson	27	19	4
Macleay	160	16	11
Bellinger	9	3	0
Nambuccra... ..	14	10	4
Total	£ 1,119	2	10

EDMUND FOSBERY,
Inspector General of Police.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

STORAGE OF GUNPOWDER.
(QUANTITIES, &c)

Ordered by the Legislative Assembly to be printed, 12 July, 1875.

RETURN to an *Order* of the Legislative Assembly of New South Wales, dated 14 April, 1875, That there be laid upon the Table of this House,—

“ A Return showing,—(1) The quantity of Gunpowder or other explosive material in the various Magazines in the Colony ; (2) The places where stored ; (3) The total quantity held by private individuals and by the Government, up to the 30th June, 1875.”

(*Mr. Dibbs.*)

RETURN showing,—(1) The quantity of Gunpowder or other explosive material in the various Magazines in the Colony ; (2) The places where stored ; (3) The total quantity held by private individuals and by the Government, up to the 30th June, 1875.

1.

Quantity of Gunpowder or other explosive materials.

						Tons	cwts.	qrs.	lbs.
Goat Island—Gunpowder	...	...	...	...	...	146	0	2	21
Lithofracteur	...	...	...	...	...	4	3	1	26
Gun-cotton	...	...	...	...	...	0	8	1	1
Spectacle Island—Gunpowder	...	...	...	...	...	108	17	0	7
Newcastle—do.	...	...	...	...	...	10	10	0	0
Gulgong—do.	...	...	...	...	...	0	1	0	0
TOTAL	...	...	...	...	Tons	270	0	1	27

2.

Places where stored.

(Shown above.)

3.

Total quantities held by private individuals and by the Government.

						Tons	cwts.	qrs.	lbs.
Private individuals	...	...	...	...	...	61	11	2	7
The Government—Imperial	...	...	...	...	...	60	2	3	12
Colonial	...	...	...	...	...	148	6	0	8
TOTAL	...	...	...	...	Tons	270	0	1	27

Ordnance Store Department,
12th July, 1875.

For the Ordnance Storekeeper,
J. THO. BLANCHARD,
A.O.S.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

DOGS.

(PETITION RESPECTING DEPREDACTIONS OF—SHEEPOWNERS OF MURRURUNDI.)

Ordered by the Legislative Assembly to be printed, 25 June, 1875.

To the Honorable the Parliament of New South Wales at this time assembled.

The Petition of the undersigned sheepowners and others residing in the district of Murrurundi,—
HUMBLY SHOWETH:—

That your Petitioners beg leave most respectfully to bring under the notice of your Honorable House that we suffer great loss and damage in the destruction of our sheep by reason of the large numbers of domestic dogs roaming about the country, apparently without owners or control. The loss and damage we complain of is daily increasing and becoming more serious, as our estates or runs are being more enclosed, and the sheep running in paddocks without the attendance of shepherds, and it has now become a question with us as to whether we shall not again be compelled to employ shepherds even in paddocks.

We therefore humbly pray that your Honorable House will be pleased to take such steps to remedy the evil complained of as may appear best.

And, as in duty bound, we will ever pray.

[Here follow 24 signatures.]

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REAL PROPERTY ACT.
(RETURNS RESPECTING.)

Ordered by the Legislative Assembly to be printed, 11 May, 1875.

RETURN showing,—

- 1st. How many applications to bring properties under Torrens' Act remained unexamined when the last two appointments of Examiners of Titles were made.
- 2nd. How many applications have been received since, and
- 3rd. How many Titles have been examined, passed, deferred, or refused since.

1st.	2nd.	3rd.			
		Examined.	Passed.	Deferred.	Refused.
116	204	276	197	10	2

Colonial Secretary's Office,
10 May, 1875.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

INNKEEPERS' LIABILITY BILL.

(PETITION OF THE LICENSED VICTUALLERS' ASSOCIATION.)

Ordered by the Legislative Assembly to be printed, 2 June, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the Licensed Victuallers' Association of New South Wales,—

HUMBLY SHOWETH :—

That your Petitioners view with alarm the proposal to make an innkeeper liable for the goods of his guest or lodger to the amount of thirty pounds (£30), such goods not being placed in the custody or safe keeping of such innkeeper. Your Petitioners humbly submit that an innkeeper should only be made liable for such goods as are given into his custody. Your Petitioners would also urge that the clause compelling an innkeeper to provide a sealed box for the safe keeping of property would entail in many cases a large and unnecessary expense, inasmuch as all innkeepers would for their own protection provide some place of safety for such property as they were responsible for. Your Petitioners are of opinion that making an innkeeper responsible for property not placed in his charge would lay him open to fraudulent claims as are often even now-a-days made in our Law Courts.

Your Petitioners therefore humbly pray your Honorable House to consider these matters and restrain from imposing still greater restrictions upon a class of tradesmen who contribute so largely to the revenue of the Colony.

And your Petitioners, as in duty bound, will ever pray.

Signed for the Licensed Victuallers' Association of New South Wales,—

J. B. OLLIFFE,
 "Royal Hyde Park Hotel," Sydney,
 President.

E. LEWIS SCOTT,
 30, Botany-street,
 General Secretary.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

INNKEEPERS' LIABILITY BILL.

(PETITION OF LICENSED VICTUALLERS' ASSOCIATION.)

Ordered by the Legislative Assembly to be printed, 21 June, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the Licensed Victuallers' Association of New South Wales,—

HUMBLY SHOWETH :—

That your Petitioners feel that the passing of the Innkeepers' Liability Bill now before your Honorable House in its present state would be unjust to the Licensed Victuallers of the Colony.

Your Petitioners humbly urge that an innkeeper should not be held liable in law for any goods not given into his charge by the owner. Cases of gross fraud have occurred through this matter having been left so indefinite.

Your Petitioners humbly submit that to compel an innkeeper to provide a sealed box for each guest or lodger would entail great expense, as in the case of a large hotel where many lodgers having valuables are staying.

Your Petitioners therefore humbly pray your Honorable House not to allow the Bill to become law in its present form, but to cause its re-committal with the view to insert the provisions as set out in this their Petition.

And your Petitioners, as in duty bound, will ever pray.

Signed on behalf of the Licensed Victuallers' Association of New South Wales,—

J. B. OLIFFE,
President,
Elizabeth-street.

E. LEWIS SCOTT,
General Secretary,
30 Botany-street.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

SALE OF COLONIAL WINES REGULATION ACT.

(PETITION—VINEGROWERS OF MAITLAND AND PATERSON.)

Ordered by the Legislative Assembly to be printed, 14 April, 1875.

To the Honorable the House of Assembly, in Parliament assembled.

The humble Petition of the Vinegrowers and others residing in the Districts of Maitland and Paterson and the neighbouring Districts, interested in the production, sale, and consumption of Colonial Wines,—

RESPECTFULLY SHOWETH :—

That your Petitioners have observed with regret that a Bill has been introduced into your Honorable House for the repeal of the Sale of Colonial Wines Regulation Act.

That while your Petitioners are prepared to acknowledge that abuses have occurred in the working of the said Act, they are decidedly of opinion that, instead of its being totally repealed, it ought to be amended, and that an inquiry into the amendments which are called for could be held with advantage to the public interests by your Honorable House.

Your Petitioners, therefore, humbly pray that your Honorable House will take the premises into its consideration, and grant such relief as it may in its wisdom think expedient.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 600 signatures.]

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

SALE OF COLONIAL WINE REGULATION ACT.

(PETITION OF VINE-GROWERS OF THE CLARENCE.)

Ordered by the Legislative Assembly to be printed, 6 May, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned, the Vine-growers and others residing in the District of Grafton, interested in the production, sale, and consumption of Colonial Wine,—

RESPECTFULLY SHOWETH :—

That your Petitioners have observed, with regret, that a Bill has been introduced into your Honorable House for the repeal of the Sale of Colonial Wines Regulation Act.

That, while your Petitioners are prepared to acknowledge that abuses have occurred in the working of the said Act, they are decidedly of opinion that instead of its being totally repealed it ought to be amended, and that an inquiry into the amendments which are called for could be held with advantage by your Honorable House.

Your Petitioners therefore humbly pray that your Honorable House will take the premises into consideration and grant such relief as it may in its wisdom think expedient.

And your Petitioners, as in duty bound, will ever pray.

[*Here follow 208 signatures.*]

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

VINEYARDS OF NEW SOUTH WALES.
(STATISTICS.)

Ordered by the Legislative Assembly to be printed, 22 June, 1875.

RETURN to an *Order* made by the Honorable the Legislative Assembly, dated 27 April, 1875, That there be laid upon the Table of this House, a Return showing,—

- “ (1.) The number of vineyards in the Colony of New South Wales; their size in acres, where situated, with the names of the owners.
- “ (2.) The number of vineyards having a licensed still, the size of the still, the names of the owners, and where situated.
- “ (3.) The number of gallons of wine produced from each vineyard per acre, in each year, from 1869 to 1875.
- “ (4.) The quantity of proof gallons of brandy distilled on each vineyard having a licensed still, in each year, from 1869 to 1875.
- “ (5.) The number of gallons of wine fortified with brandy, in each year, from 1869 to 1875, by each vigneron.
- “ (6.) The number of proof gallons of brandy used on each vineyard in fortifying the wine, in each year, from 1869 to 1875.
- “ (7.) The number of proof gallons of brandy distilled on the vineyards and used by the vignerons for home consumption, as allowed by the Act 13 Vic. No. 27, sec. 19.
- “ (8.) The quantity of proof gallons of brandy now held by each vigneron having a licensed still.
- “ (9.) The natural developed spirit strength of the wine previous to being fortified with brandy.
- “ (10.) The spirit strength of the wine after being fortified with brandy.
- “ (11.) The percentage of alcohol permitted to wine-makers, in fortifying their wines, by the present Distillation Act, 13 Vic. No. 27, sec. 20.”

(*Mr. Macintosh.*)

SCHEDULE OF RETURNS.

No. 1.

Number of Vineyards in New South Wales.	Size respectively.	Location.	Name of Owner.
873	See Return.	See Return.	See Return.

No. 2.

Number of Vineyards having a licensed Still.	Size of Still.	Name of Owner.	Where situated.
67	25 to 50 gallons.	See Return.	See Return.

No. 3.

Number of gallons of Wine produced in each year from 1839 to 1874, as shown by Statistical Registers.

No. 4.

Number of proof gallons of Brandy distilled on each Vineyard having a licensed Still.

1869 and 1870.	1871.	1872.	1873.	1874.
4,192	2,466	1,787	2,009	2,276

No. 5.

Nos. 6 and 7.

Number of gallons of Brandy used on each Vineyard for fortifying and for home consumption.

1869 and 1870	1871.	1872.	1873.	1874.	Total.
1,831	2,049	2,244	1,992	1,991	10,167

No. 8.

Quantity of Brandy in liquid and proof gallons held by each Vignerons having a licensed Still on 31st December, 1874.

Liquid.	Proof.
Total ... 1,425	Total ... 1,299

No. 9.

No. 10.

No. 11.

The percentage of Alcohol permitted to Wine-makers, in fortifying their Wines, by the present Distillation Act,
13th Vic, No. 27.

25 per cent. of specific gravity, '825 at 60° Fahrenheit.

H. L., C.I.D.

VINEYARDS OF NEW SOUTH WALES.

No. 1.

RETURN showing the number of Vineyards in the Colony of New South Wales; their size in acres; where situated; with the names of the owners.

No. of Vineyard.	Size in Acres.	Place and District where situated.	Name of Owner.	No. of Vineyard.	Size in Acres.	Place and District where situated.	Name of Owner.
Maitland.				Maitland—contd.			
1	2	Stanhope.....	Bendick J. C.	76	6	Harper's Hill.....	Ryan M.
2	10	Cessnock.....	Bonifler H. J.	77	3	do.....	Reeves W.
3	3	Cowhill paddock.....	Brown W.	78	2	Cessnock.....	Ryder G. W.
4	18	Hinton.....	Armburster L.	79	8	Pokolbin.....	Rudd Jas.
5	5	Phoenix Park.....	Butler P.	80	3	Oswald.....	Sneesby J.
6	4	Dunmore.....	Brady J.	81	2	Rothbury.....	Stuckey R.
7	5	West Maitland.....	Brewer J.	82	5	Hinton.....	Stubbs R.
8	1	do.....	Bowden J.	83	9	do.....	Smith J. A.
9	1	do.....	Bowden J.	84	2	West Maitland.....	Saunders J. M.
10	9	Oswald.....	Boland T. C.	85	1	do.....	Solling C. T.
11	5	Windermere.....	Bellamy R.	86	1	Paterson.....	Tranter R.
12	4	Allandale.....	Boland J.	87	8	Pokolbin.....	Tyrrrell E.
13	6	Knockfin.....	Burgess W.	88	10	Harper's Hill.....	Taylor W.
14	12	Sorell.....	Bowson A.	89	32	Gosforth.....	Vile W.
15	15	Eelali.....	Bombach A.	90	63	Dalwood.....	Wyndham J.
16	10	Black Creek.....	Campbell G.	91	24	Fernhill.....	Wyndham G.
17	15	Windermere.....	Capp C.	92	4	Pokolbin.....	Wilkinson Jno.
18	4	Luskintyre.....	Connolly M.	93-4	10	do.....	Wilkinson C. II. & F. A.
19	7	Knockfin.....	Cavanagh B.				
20	1	Lockinvar.....	Chick W.	95	8	Bishop's Bridge.....	Whittan F.
21	4	do.....	Calinan F.	96	12	Bolwarra.....	Walsh M.
22	2	Pokolbin.....	Carroll R.	97	13	Dunmore.....	Winegardiner.
23	5	Rothbury.....	Chick J. & G.				
24	2	do.....	Cran G.		793		
25	18	Lockinvar.....	Clift J.			Patrick's Plains.	
26	18	Luskintyre.....	Christian M.				
27	2	Oswald.....	Cooper T.	98	8	Maryville.....	Alford J.
28	7	Hinton.....	Christian W. M.	99	2	Bowman's Creek.....	Bab C.
29	1	West Maitland.....	Carter D.	100	2	Mitchell's Flat.....	Ballantyno G.
30	16	Branxton.....	Drinan T.	101	6	Kelso.....	Barelay T.
31	11	Gosforth.....	Drinan M.	102	4	Archerfield.....	Bowman Mrs.
32	1	Ultradurra.....	Doyle J. W.	103	11½	Whittingham.....	Brossi Jacob
33-4	35	Kaloudah.....	Doyle J. F.	104	1	Glendon Brook.....	Buyman C.
35	1	Luskintyre.....	Doyle J.	105	3	Belford.....	Deitz F.
36	3	Windermere.....	Davis F. C.	106	2	do.....	Dries A.
37	7	Maryvale.....	Doran P.	107	3	do.....	Dries W.
38	5	Lockinvar.....	Drinan J.	108	1	First Creek.....	Durham T.
39	2	Oswald.....	Ferrier P.	109	7	Lairmount.....	Fawcner D.
40	2	Pokolbin.....	Froude W.	110	10	Hannahton.....	Heine C.
41	9	Dagworth.....	Flemming P.	111	7	Great Lodge.....	Holden R.
42	2	Stockinton.....	Field E.	112	13	Glendon.....	Horidon H.
43	5	Raworth.....	Egan C.	113	2	Belford.....	Hunt J.
44	47	Mount Huntley.....	Eckford J.	114	3	do.....	Keindlein J.
45	5	Lockinvar.....	Green P.	115	24	Kirkton.....	Killman J.
46	2	do.....	Greedy J.	116	4	First Creek.....	Crame C.
47	15	Melville.....	Hutchins D.	117	3	Jerry's Plains.....	Krust C.
48	2	Lockinvar.....	Humphries J.	118	3	New Breugh.....	M'Donald M.
49	34	Wilderness.....	Holmes J. B.	119	8	Kelso.....	M'Dougall A.
50	2	Lockinvar.....	Heighney P.	120	15	Whittingham.....	M'Kenzie J.
51	4	Oswald.....	Hannan W.	121	17	Corinda.....	Miller B.
52	1	Harper's Hill.....	Hawkins J.	122	40	Greenwood.....	Moore J.
53	2	Cessnock.....	Jngle F.	123	6	Elderslie.....	Moore J.
54	15	Pokolbin.....	Kilman C.	124	3	Dry Creek.....	Moss C.
55	2	do.....	King C.	125	35	Bebeah.....	Munro A.
56	20	Dalgotty.....	King J.	126	2	Campell's Creek.....	Koller J.
57	5	Allandale.....	Kiam F.	127	2	Dry Creek.....	Saddler P.
58	12	Melville.....	Knipe A.	128	2	Belford.....	Scholtz H.
59	13	Bishop's Bridge.....	Cline J.	129	1	Little Plains.....	Woollard J.
60	1	Oswald.....	Lambert J.	130	1	Glendon Brook.....	Wachor W.
61	2	do.....	Lambert C.				
62	2	Pokolbin.....	Love P.		251½		
63	3	Sawyer's Gully.....	Lipscomb W.			Muswellbrook.	
64	5	Gosforth.....	Murphy J.				
65	9	Lockinvar.....	Morris J.	131	1	Goulburn River.....	Graham A.
66	12	Glencuna.....	M'Donald G. P.	132	5	do.....	Gegler J.
67	4	Lockinvar.....	Markham P.	133	3	do.....	Folp W.
68	3	Rothbury.....	Matthews W.	134	34	Grant's Creek.....	Modenger H.
69	10	Lorn.....	M'Dougall O. W.	135	7	Merton.....	White E.
70	4	Windermere.....	Neckm J.	136	4	Piercesfield.....	Bellew M. A.
71	3	Dalsford.....	Putter M.	137	2	Pickering.....	Bell A.
72	2	Cessnock.....	Pickton J.	138	2½	Grant's Creek.....	Norford E.
73	14	Mid Lorn.....	Pulver R.	139	3	Denman.....	Nagle J.
74	5	Hinton.....	Quinn A.	140	4	Ellislie.....	Brown J.
75	12	Branxton.....	Russell A.	141	2	Apple-pie Flat.....	Buxter W.

No. of Vineyard.	Size in Acres.	Place and District where situated.	Name of Owner.	No. of Vineyard.	Size in Acres.	Place and District where situated.	Name of Owner.
Muswellbrook—contd.				Murrurundi.			
142	1½	Goulburn River	Leeming J.	216	4	Peckham	Wright P. W.
143	13	Mount Pleasant	Brecht C.	217	4	Murrurundi	Brodie A.
144	4	Bengalla	Keyes J. H.	218	6	Blandford	Hartman P.
				219	1	do	Hartman J.
	55½			220	1	do	Annard E.
Scone.				Manning River.			
					16		
145	3	Park	Leader W.				
146	10	Thornhwaite	Finlay G. B.	221	4	Kimbriki	Richardson.
147	8	Boreoblane	Evoret E.	222	1	Tinonco	Denn H.
148	2	Turonville	Cook Thos.	223	3	Oxley I.	Wolfe J.
149	3	Dartbrook	Hall H. H.	224	4	do	Schmitzer G.
				225	1	do	Schmitzer J.
	26			226	1	do	Cluss C.
Paterson.				Tamworth.			
					14		
150	40	Lewinsbrook	Park R.				
151	10	Cuirgurie	Boydell W. B.				
152	10	Camyrallyn	Boydell J. W.	227	3	Tamworth	Zartman C.
153	2	do	Gothel J.	228	2	Ironbark	Spencer W. L.
154	15	Clevedon	M'Cormick J.				
155	31	Cawarra	Landeman A. H.				
156	20	Onindinera	Glennie J.		5		
157	3	Penzhurst	Holden & Son				
158	8	Colston	Brown H. H.				
159	2	Kelburne	Jones E.	229	20	Abingdon	
160	3	Dunvegan	Stear S.	230	2	Clerkness	
161	5	Knowendale	Ernst G.	231	5	Beverly	
162	1	Whitfield	Smith J.	232	2	Orchardfield	
163	1	Trevallyn	Goslin J.				
164	3	Glenthorne	Gray M.		29		
165	3	Clifton	Kelly D.				
166	1	do	Brooker G.				
167	1	Howe's Valley	Lawrence H.	233	25	Bukkulla	Wyndham Bros.
168	1	Lowstock	Lawrence J.	234	2	do	Wyndham H.
169	10	Mowbray	Frankland G.	235	3	do	Sertz J.
170	10	Campsie	Dagleish J.	236	3	do	Mephem E.
171	7	Mount Ararat	Borham T.	237	21	Inverell	Ross C.
172	5	High Park	Boyce J.	238	3	do	Cunningham E.
173	6	Vacey	Cory G.	239	7	do	Richards A.
174	7	Dunolland	Reynolds F.	240	3	Swan Vale	Williamson J.
175	5	Lennoxton	North J.	241	5	Ashford	Slack J.
176	5	do	Ferris H.				
177	7	Mount Ararat	Kneadler J. G.		72		
	222						
Port Macquarie.				Narrabri.			
				242	½	Narrabri	
178	3	Hislack	Knauer J. G.	243	1	do	
179	1	Warrington	Gresbach A.	244	1	do	
180	3	Belgrave	Rudder A.	245	2	do	
181	½	W. Kempsey	Verge S.		4½		
182	1½	Nambuccia	Unterhainer A.				
183	1½	Port Macquarie	Kingsford E.				
184	1	Tacking Point	Strutt S.	246	1	Grafton	Stephen A.
185	1½	Glebe	Condon J.	247	1½	do	Fink H.
186	1	do	Rosenbeam W.	248	½	do	Starr T.
187	2	do	Butler J.	249	¼	do	Jackschon J. G.
188	3	do	Stander L.	250	¼	do	Shonbein G.
189	3	do	Schweicker Geo	251	¼	do	Beulier J.
190	2	do	Hoare Hy.	252	¼	do	Bender P.
191	½	do	Blair J.	253	1	do	Schaffer H.
192	6	Tacking Point	Cunning T.	254	¼	do	Jordan J. P.
193	6	Woodgrove	Plate T.	255	¼	do	Zeitsch I.
194	3	Fernhull	Fern J. J.	256	¼	do	Klirndeinst C.
195	5	Douglas Vale	Francis Geo.	257	1	do	Schaupp J.
196	1	Chilton	Gaul T.	258	½	do	Smidth J. O.
197	½	do	Widdison S.	259	½	do	Geizer J.
198	4	do	Duffy J. J.	260	2½	do	Klauss V.
199	2	Glen Rose	Webber F.	261	2	do	Hoffmann P.
200	2	Hamilton	Young I. H.	262	3	do	Krazer M.
201	1½	Fernbank	Bourne J.	263	1	do	Smith J.
202	5	do	Redgate J.	264	5	do	Lollbach J.
203	3	Ashburner's Hill	Maher T.	265	2	do	Bender J.
204	2	Thrumster	Palmer T. W.	266	½	do	Weinderlich J.
205	3½	Lake Innis	Kemp C. C.	267	1½	do	Seebinck P.
206	2	Lanthong	Browning T.	268	1½	do	Kratz H.
207	1	Rawden I	DeLaforce W.	269	2	do	Klauss L.
208	3	Glebe	Gaul F.	270	1½	do	Kampenich L.
209	2	Raccourso	Yates W. T.	271	¼	do	Lacy J.
210	3	Glengarry	M'Carthy I. F.	272	2	do	Mizer J.
211	½	Wilson R.	Hill W.	273	9	do	Laycock M.
212	2	Gogo	M'Kay A.	274	25	do	Campbell W. B.
213	½	do	M'Ivor J.	275	1	do	Sampson E. P.
214	3	Aston	Mort T. S.	276	4½	do	Haldt G.
215	3	Wilson R.	Peterkin T.	277	1	do	Crebit W.
	89				73½		

No. of Vineyard.	Size in Acres.	Place and District where situated.	Name of Owner.	No of Vineyards	Size in Acres.	Place and District where situated.	Name of Owner.
Parramatta.							
278	1½	Ryde	Baily G.	363	1	Hunter's Hill.....	Hadsworth C.
279	1	do	Ray S.	364	1½	do	Cowell W.
280	1	do	Levell G.	365	1½	Ryde	Shepherd R.
281	½	do	Jurd J.		231½		
282	2	do	Small John.				
283	½	do	Small A.				
284	1	do	Smith W.	366	3	Varraville.....	Cheeko A.
285	½	do	Smith T.	367	7	Fairfield	Smart T. W.
286	1	do	Gallard F.	368	8	Smithfield	Watt J.
287	½	do	Small T.	369	10	Bernera	Edwards B.
288	1	do	Watts H.	370	½	Bankstown	Stacey J.
289	8	Villa Maria	Juley C.	371	2	do	Liebenitrit P.
290	1	Ryde	Short M.	372	2	Fairfield	Bellinger J.
291	2	do	Blaxland J.	373	2½	do	Zions H.
292	1	Field of Mars.....	Edwards J.	374	2	Bull's Hill	Bonnar D.
293	1	do	Fox M.				
294	½	do	Adamson G.		37		
295	1	Subiaco	Polding —				
296	1	Field of Mars.....	Mills J.				
297	25	Ryde	Brereton L. G.	375	3	Luddenham	Anshan F.
298	2	Toongabbee	Clippert J.	376	1	do	Anshan F., junr.
299	1	Baulkham Hills.....	Ireland M.	377	2	Regentville.....	Blatman C.
300	2	Seven Hills.....	Bearce M.	378	2½	Mount Druitt.....	Baxter W.
301	1	do	Pearce M.	379	10	Fern Hill	Cox E. K.
302	1	Toongabbee.....	Duncan E.	380	10	Camsley Hill	Dengate E.
303	3	do	Bolinger J. J.	381	1	Collyton	Emmett W.
304	2	Seven Hills.....	Howard D.	382	6	Luddenham	Hilgar W.
305	2	Toongabbee	Hamer C.	383	5	Eaton Farm	Raton P.
306	10	Pennant Hills.....	Bemington M.	384	8	Bringelly	Liddington A.
307	2	do	Frank S.	385	1	Luddenham	Laughton G.
308	½	Ryde	Taylor J.	386	3	Dunheved	Lethbridge J. K.
309	2	do	O'Brien M.	387	5	Luddenham	Mulhall W.
310	2	do	Kernehan J.	388	38	Munchinburra.....	M'Kay C.
311	¼	do	Bowden J. K.	389	2	Frogmore	Mirz C.
312	1½	do	Lindsay A.	390	1	Cecal's Hills	M'Minn J.
313	1	do	Cress P.	391	9	Mount Druitt.....	Meacher T.
314	4	do	Hay M.	392	2½	Craubrook	M'Carthy J.
315	1	Gladesville	Reeves J.	393	2½	Luddenham	Petith F.
316	½	Eastwood	Terry E.	394	1	do	Rarle M. J.
317	2	Ryde	Hicks J.	395	8	Clydesdale	Smith W. K.
318	2	do	Bearne G.	396	17	Winburn.....	Willshire A. F.
319	2	do	Multhy J.	397	10	Horsley	Weston B.
320	8	do	Allen R.				
321	2	do	Schweickert J.		148½		
322	1	do	Borthwick J.				
323	½	do	Bishop W.				
324	1	do	Wells A.	398	20	Eschol Park	Fowler W.
325	2	do	Stephens B.	399	10	Campbelltown	Fowler Geo.
326	1	do	Woodcock J.				
327	3	do	Paul Benson		30		
328	1	do	Benson J.				
329	2	do	Jackson W.				
330	1	do	Weicks R.	400	1	Windsor Road	Schofield J.
331	1	do	Best Geo.	401	5½	do	O'Verrier J.
332	3	do	Zartman M.	402	6	Riverstone	M'Jonkagh A.
333	½	do	Jupp J.	403	4	Eastern C.	Schofield J.
334	1	do	Junks W.	404	6	do	Myers G.
335	2½	do	Weicks G.	405	2	do	Dunn J.
336	6	do	Kirwood N.	406	4	do	Stahl J.
337	½	do	Forz G.	407	2½	Little Dural	Gibbs C.
338	5	Baulkham Hills	M'Dougall A. L.	408	1	Eastern C.	Schofield J.
339	¾	Dural	Hunt T. G.	409	4	Blacktown Road	Hall J.
340	6	Dog-trap Road	Lackey J.	410	1½	Mulgrave.....	Gow J.
341	3	do	Stenson W.	411	4	Richmond Vale	Powell E.
342	3	Woodville	Casper D.	412	1½	Kurrajong	Wesly W.
343	3	Sherwood	Crook S.	413	2	do	Clark Jas.
344	4	Prospect	Wilton T.	414	4	do	Lamrock J.
345	5	Sherwood	Abbott A.	415	2	do	Newcombe H.
346	2	do	Steiner W.				
347	2	do	King W.		51		
348	2	do	Carson J.				
349	5	Greystanes	Lamb W.				
350	7	Dog-trap Road	Wethorell J.	416	49	Camden Park	Macarthur W., Kt.
351	10	Orchardleigh	Whitaker J.	417	2	Elderslie	M'Mahon J.
352	10	do	Whitaker H.	418	2½	do	Fuchs P.
353	5	Central Farm	Stein J.	419	6	do	Capenter H.
354	2	do	Stumpff J.	420	1½	do	Buckhausen J.
355	2	Toongabbee.....	Power R.	421	4½	do	Napier J.
356	7	Prospect C.	Hamilton J.	422	2	do	Norris D.
357	6	Lano Cove	Cox J.	423	2½	do	Beiger A.
358	1½	Gladesville	Wilson G.	424	6	Narellan	Channel W.
359	1	do	Coxsedge J.	425	1½	do	Wheatly W. A.
360	½	do	Kilan W.	426	4½	Camperdown	Martin E. G.
361	2	do	Moore R.	427	2	Elsderlie	Stein A.
362	1	do	Mackinson C. Z.	428	2½	Glenmore	Moore R.
				429	5	Elderslie Park	Stein J.
				430	26½	Maryland	Barker T.
Parramatta—contd.							
Liverpool.							
Penrith.							
Campbelltown.							
Windsor.							
Camden.							

No. of Vineyard	Size in Acres.	Place and District where situated.	Name of Owner.	No. of Vineyard.	Size in Acres.	Place and District where situated.	Name of Owner.
Camden—contd.				Goulburn—contd.			
431	5	Gladeswood	Chisholm J. K.	485	$\frac{1}{2}$	Mummell	Noseworthy W.
432	3	Macquarie Ground	Hardy J.	486	$\frac{1}{2}$	Bishopthorpe	Bishop of Goulburn.
433	6	Wiranahoe	Robison H.	487	2	Stewart's Garden	Grunsell Thos.
434	4	Kirkham	Robison H.	488	$\frac{1}{4}$	Ifield	Cadwell D.
435	2	Rowlow Hill	Monck L.	489	$\frac{1}{4}$	do	Pedley H.
436	2	Cawdor	Doust J.				
437	2	Brownlow Hill	Cummins J.		21 $\frac{1}{2}$		
438	3	Molesuncin	Moore K.			Yass.	
	115			490	7	Hardwick	Remington A.
Pieteron.				491	7 $\frac{1}{2}$	Ballinglass	Reynolds G.
439	13	F. Bargo	Jenkins R. L.	492	5	Curway	Medway W.
440	2	Upper Pieteron	Larkins T.	493	3	Byalla	Gray J. E.
441	2	E. Bargo	Wonson W.	494	4	Jerrawa	Starr T.
442	6	Pieteron	Coull W.	495	2	Gunning	Osiff E.
443	10	do	Fieldhouse W.	496	1 $\frac{1}{2}$	do	Young Valentino
444	8	Oakes	Lather M.	497	4	Fish River	Newman J.
445	3	do	Weld J.	498	2	Bendenine	Pegram D.
446	1	Upper Pieteron	Manh A.	499	2	Fish River	Preston J. J.
447	9	do	Scott W.		38		
448	2	do	Larkins W.			Young.	
449	16	do	Whitfield W.	500	17	Three-mile	Jaspriza N.
	72			501	1	Young	Beaus H.
Berrima.				502	$\frac{1}{4}$	do	O'Brien M.
450	2	Mt. Pleasant	Metz R.	503	3	do	Coleman T.
451	1	do	Shepherd J.	504	1	do	Schmidt J.
452	2	Mendamer	Fogt J.	505	3	do	Temple C.
453	1	Kanguloon	Beuer C.	506	1	do	West W.
	6			507	2	Wombat	Solomon M.
				508	2	Stony Creek	Leghman C.
Wollongong.					30 $\frac{1}{4}$		
454	5	Garden H.	Wollard H. W.	509	3	Burnt Hut	Mansfield A.
Kiama.				510	2	Tuena	Cartwright W.
455	4	Jamberoo	Schriber A.	511	1	Bigga	M'Guinness S.
456	2	Broughton	Host J.		6		
	6			512	1	Moruya	Boot E.
Shoalhaven.				513	2	do	Zeigler H.
457	3	Nowra	Rehardt M.	514	1	do	Caswell W. M.
458	6	Berung	De Mestre A.	515	1	do	Graham M.
459	6	Burrill	King J.	516	1	do	Simpson M.
	15			517	2	do	Hicks W.
				518	6	do	
Araluen.					14		
460	5 $\frac{1}{2}$	Burketown	Hogan J.	519	40	Lake Albert	M'Leay W.
461	3	Araluen	O Dwyer F.	520	5	Gregadoo	Nixon J.
462	2	Newtown	Weiber P.	521	4 $\frac{1}{2}$	Pomengalana	Steiner —
463	2	do	Perewitch J.	522	4	Juneo Road	Beattie H.
464	2	do	Delponti F.	523	26	Kyambu	Smith J.
465	9	do	Salva F.	524	4	Buckimbong	Jenkins F.
466	9	Crown Flat	Blatchford J. H.	525	2	Wagga Wagga	Pulver R.
467	4	Back Creek	Bruce W.	526	2	Hillside	Williams W.
	36 $\frac{1}{2}$			527	7	Rock Cottage	Vincent B.
Burrowa.					94 $\frac{1}{2}$		
468	6	Burrowa	Pett W. B.	528	5	Gilmore	Downing T.
469	4	do	Weifart C.	529	3	do	Downing J.
	10			530	4	Gadara	Forrestier J.
Wellington.				531	3	Gilmore	Koron J.
470	4	Wellington	Gardiner.	532	3	Mondongo	Smiles J.
471	1	do	Rygate R.	533	$\frac{1}{2}$	Gadara	Wild C.
472	2	do	Colcavy.		18 $\frac{1}{2}$		
473	1	do	Boehme.			Gundagai.	
474	3	do	Simpson.	534	2	Adelong Creek	Neave J.
475	3	do	Marsh.	535	3	do	Smith G.
476	4	do	Schons.	536	1	Jones Creek	Corbett J.
	18			537	3	Wadgegalong	Fring J.
Goulburn.				538	1	Nangus	Jenkins J.
477	4 $\frac{1}{2}$	Norwood	Alexander L. M.	539	1	Gundagai	Bauer H.
478	1 $\frac{1}{2}$	Harlo Gap	Skidmore W.	540	3	Coolac	Dominick G.
479	3	Forest Lodge	Hume J.	541	1	Spring Flat	Morano F.
480	3	Harlo	Kelly J.	542	1	Gundagai South	Heckner M.
481	2 $\frac{1}{2}$	Middle Forest	Miller F.	543	1	Native Dog Creek	Bushelle J.
482	1 $\frac{1}{2}$	Marble Hill	M'Shane J.	544	6	Adelong Creek	Peet P.
483	1	Wallogorang	Chisholm J.		23		
484	$\frac{1}{2}$	Winderadeen	Chisholm A.				

No. of Vineyard.	Size in Acres.	Place and District where situated.	Name of Owner.	No. of Vineyard	Size in Acres.	Place and District where situated.	Name of Owner.
Deniliquin.				Albury—contd.			
545	¼	Zara	Officer W.	626	2¼	Albury	Dick J.
546	2½	Togomen	M'Leay G.	627	¾	do	Lampport W.
547	¼	Uratia	do	628	½	do	Heath A.
548	¼	Demulemin	Orniston A.	629	7	do	Phillipi H.
549	1	Toomudgerce	Middlemiss.	630	8½	do	Gerig F.
550	1	Bclublah	Jennings P. A.	631	2	do	M'Donald H.
551	3	Moama	Burton H.	632	½	do	Noble M.
552	3	do	Waters R.	633	½	do	Framfelder S.
553	1¼	do	Harvey F.	634	1	do	Smith J.
	13			635	1	Dight's Hill	Green T.
Wentworth.				636	9	Black Range	Landcaster J.
554	2	Wentworth	Holding W.	637	1	Albury	Ortlipp P.
555	1	do	Montague E.	638	1	Splitter's Creek	Weisz F.
	3			639	1	Hawke's View	Mitchell J.
Albury.				640	1½	Bowna	Chant A.
556	1	Albury	Bevis D.	641	1	8-mile Creek	Schneider J.
557	3	do	Ran J.	642	1	Bungyonna	Bloom J.
558	4	do	Jones E.	643	2	Zundera	Hilstey J.
559	1	do	Brown J.	644	1	do	Raschk F.
560	2	do	Zeiler J.	645	2	do	Morton C.
561	1½	do	Framfelder C.	646	1	Dead Horse Creek	Driscoll D.
562	1½	do	Kolb V.	647	1½	do	Cleary T.
563	1½	do	Miller P.	648	1	do	Cleary T.
564	1½	do	Kolb V.	649	4	Rd. Waterhole	Wright S.
565	1	do	Eck P.	650	2	do	Petrie K.
566	½	do	Deal D.	651	1	Gum Swamp	M'Namara D.
567	1	do	Eisenhamer J.	652	½	Geroggerly	Marylesdorff C.
568	140	do	Fallon J. P.	653	1	do	Heppner D.
569	2	do	Mortozen M.	654	3	do	Gregson R.
570	2	do	Carroll E.	655	3	Sandy Creek	Hindes T.
571	½	do	Jackson W.	656	1	do	Perryman J.
572	¼	do	M'Eachern D.	657	2	do	Jennings W.
573	¼	do	Georg S.	658	1	do	Hadrell G.
574	2	do	Getlack G.	659	1	do	Bourne H.
575	2	do	Framfelder O.	660	1	Newtown.....	Dick F.
576	1	do	Herman G.	661	1	do	Dick J.
577	1½	do	Capler W.	662	32	Seven-mile Creek	Bealt J.
578	1	do	Myrtle P.	663	6	Rockdale	Heriot A.
579	1½	do	Gabee H.	664	½	Albury	Mitch O.
580	1	do	Knoble J.	665	9	Enfield	Knowles R.
581	1¼	do	Weidner G.	666	10	Maryvale	M'Meachen P.
582	¼	do	Reimer Z.	667	½	Seven-mile Creek	Corbett A.
583	5¼	do	Wittler J. J.	668	6	do	Hill A.
584	1¼	do	Bell G.	669	2	Newtown.....	Ellrh P.
585	6	do	Howard R.	670	½	do	Kilm M.
586	2	do	Harlgen M.	671	2	do	Strauss W.
587	2½	do	Reis G.	672	5	Thurgoona	Weissel G.
588	2	do	Ran J.	673	6	Seven-mile Creek	Woodlands W.
589	2	do	Costen G.	674	½	do	Schneider J.
590	½	do	Charles E.	675	4	Eight mile Creek	Miller A.
591	9	do	Fleming G.	676	2	Nine-mile Creek	Hall C.
592	2½	do	Wurtzellen C.	677	1	Eight-mile Creek	Allen G.
593	¼	do	Dullinger C.	678	8	Nine-mile Creek	Bell J.
594	¼	do	Schubach J.	679	20	Eight-mile Creek	Hay J.
595	1	do	Helm P.	680	2	Happy Valley.....	Herzog C.
596	1	do	Wilcox R.	681	½	Comberooona	Hore T.
597	2	do	Mann J.	682	½	do	Hore A.
598	4	do	Eisenhart H.	683	1	Wagna	Vincent B.
599	1	do	Poole M.	684	½	do	Richardson W.
600	1	do	Wood J.	685	1	do	Gan J.
601	2	do	Field T.	686	½	Coomberooona	Crimen J.
602	1	do	Cress A.	687	½	do	M'Pherson D.
603	1	do	Reis H.	688	½	Mullengandera	Mulavey P.
604	1	do	Kelly E.	689	1	do	Plunkett J.
605	12	do	Huon W.	690	1½	do	Coleman Jno.
606	1	do	Young J.	691	½	Albury.....	Mulavey P.
607	1	do	Saunders F.	692	½	Mullengandera	Devine P.
608	7	do	Schubach E.	693	1	Newtown.....	Jacob F.
609	2	do	Framfelder J.	694	30	Valverde	Phelps R. L.
610	2	do	Popp J.	695	½	Wyndham	Devine E.
611	1	do	Brum M.	696	½	Bowna	Goodfellow W.
612	2	do	Piesler M.	697	4	do	Bentou F.
613	5	do	Stassin G.	698	1½	do	Gibson A.
614	5	do	Adams G.	699	3	Walbandrie	Dunn M. P.
615	1	do	Hargrave W.	700	¼	do	Hall J.
616	1	do	Dick P.	701	1	do	Hanerell F.
617	1	do	Dick J.	702	2	do	Kelms G.
618	½	do	Eppel R.	703	1½	do	Kelmke F.
619	2¼	do	Wenlands W.	704	3	do	Loug J.
620	1¼	do	Hudson T.	705	1½	do	Mate H. T.
621	½	do	Zoeller R.	706	2½	do	Miller B.
622	2½	do	Framfelder C.	707	9	do	Bittz A.
623	2	do	Framfelder J.	708	2	do	Redman J.
624	4	do	O'Keefe D.	709	1	do	Schwartz P.
625	2	do	O'Keefe J.	710	1	do	Seiler E.
				711	4	do	Terleh G.
				712	½	do	Wanke M.
				713	¼	do	Whitaker J.

No. of Vineyard.	Size in Acres.	Place and District where situated.	Name of Owner.	No. of Vineyard.	Size in Acres.	Place and District where situated.	Name of Owner.
Albury—contd.				Albury—contd.			
714	1	Walbundrie	Zeppie G.	802	2	Mundawadera.....	Edgill C.
715	1	Ten-mile Creek	M'Laurin J.	803	6½	Bungowana.....	Cullen J.
716	2	do	Harrington T.	804	2	do	Dight J.
717	1½	Mullengandera	Galbraith W.	805	1½	Mayfield	Edwards W.
718	2	Albury.....	Dean E.	806	12	Mulwalla	Goodwin J.
719	2	Mull'engandera	Gill M.	807	1	Maraket	Holborrow J.
720	1½	Ten-mile Creek	Parker R.	808	4½	Copabello	Strachan J.
721	12	Corowa	Knight J.	809	1½	Gundagai	Robinson J.
722	27	do	M'Innes R.	810	2	Adelong	Jerrup W.
723	8½	do	Underwood H.	811	1	do	Kirkpatrick J.
724	9	do	Anderson A.	812	1	do	Prouse J.
725	1½	do	Sanger J.	813	4	Jugiong	Roche L.
726	2	do	Lawrence W.	814	2	Gundagai	Shehan M.
727	10	do	Willis G.	815	3	do	Moran F.
728	15	do	Gallagher A.	816	3	Adelong	Britt R.
729	5½	do	Green O.	817	½	do	Beezling J.
730	8	do	Maize A.	818	1	do	Schindler J.
731	6	do	Gallagher D.	819	2	do	Remina J.
732	5	do	Brown D.	820	1	do	Smith A.
733	4	do	Dye J.	821	½	do	Anderson A.
734	6	do	Rowe M.	822	2	Mount Adelaide.....	Staphens P.
735	3	do	Stawell M.	823	2	Wagga Wagga	Heath T.
736	1	do	Dicker T.	824	2	do	Muller C.
737	3	do	Smith H.	825	1	do	Power M.
738	1	do	Barns S.	826	3	Albury	Annison J.
739	1	do	Ferritt C.	827	3	do	Nixon C.
740	1	do	Langham H.	828	2½	do	Hale J.
741	5	do	Slade W.	829	2	do	Cummings G. W.
742	8	do	Thompson W.	830	1	do	Devlin M.
743	6	do	Kuschart H.				
744	30	do	Myer S.		1142½		
745	7	do	Whitehead O.				
746	6	do	Bowe R.	831	¾	Pipe-clay.....	Schute S.
747	5	do	Eyfe J.	832	4	do	Kurtz A.
748	3	do	Irving J.	833	2	do	Kurtz C.
749	22	do	Lentott S.	834	¾	do	Gertz J.
750	15	do	Brown A.	835	½	do	Strike E.
751	6	do	Armour J.	836	1½	do	Rhineberger V.
752	6	do	Roe J.	837	½	do	Worth G.
753	6	do	Buchanan J.	838	4	do	Worth J.
754	4	do	Taylor C.	839	5	do	Reid A.
755	5	do	Green W.	840	10	do	Buckholtz F.
756	1	do	Gibson M.	841	½	do	Miller J.
757	2	do	Keswyn J.	842	1	Ashburn	Leo J.
758	1	do	Norman J.	843	1½	Enfield	Knox J.
759	11	do	Sweeting H.	844	5	Redbank	Burgess W.
760	2	do	Sweeting F. J.	845	½	Mudgee	Kensel C.
761	1½	do	Doyle L.	846	½	Redbank	Conrad Jno.
762	27	do	Sanger E.	847	½	Mudgee	Stahl J.
763	22	do	Connallise J.	848	2	Mudgee Creek	Hayes J.
764	18	do	Brown R.	849	1½	Enfield	Crossing J.
765	50	Howlong	Roid D.				
766	3	do	Wyse H.		41½		
767	3	do	Wyse J.				
768	13	do	Wyse W.				
769	2	do	Whitaker T.	850	2	Bathurst	Macintosh J. N.
770	2	Morewatha	Johnson J.	851	½	do	Oakes R.
771	1	do	Everett.	852	15	do	Coombes E.
772	7	Morebringer	Lesler J.	853	5½	do	Suttor W. H.
773	1	Howlong	Ryan T.	854	5½	do	Richards J. B.
774	2	do	Foley D.	855	3½	do	Hawkins T. J.
775	3	do	Doman J.				
776	3	Morewatha	Musclow A.		32		
777	3	do	Keene J.				
778	3	do	Vile J.	856	3	Cardington.....	M'Nevin J.
779	3½	Quat Quatta	Smith W.	857	1½	Godolphin	Glasson R.
780	1	Morewatha	Thompson W.	858	1	Pendarvis	Hawke G.
781	1½	Jindera	Westontorf C.	859	1	Rosedale	Dale W.
782	1	do	Myer A.	860	1	Orange	M'Kay G.
783	1	do	Driscoll D.	861	½	Ophir	Slater G.
784	1	Dam Creek.....	Ridley W.				
785	2	do	Shipard.		8		
786	1	Bungowana.....	Crocker F.				
787	5	do	Kraus J.	862	30	Ulomogo	Serissier J. E.
788	1	do	Santell J.	863	20	Elong Elong	Yeo George
789	1	do	Proctor T.	864	5	Terrabella	M'Kilop D.
790	1	do	Chambers J.	865	2	Old Dubbo	Roth J. G.
791	6	do	Bradshaw J.	866	1	Talbragar	Buckley J.
792	10	do	Darby J.	867	½	Eschol	Luddell J.
793	1	do	Ellis W.	868	½	Dundollimal	Beard T.
794	3	Morewatha	Bellon D.	869	¾	Bartemore	Smith G.
795	2	do	Kellon J.	870	4	West Dubbo	Kertz F.
796	1½	do	Poppies R.	871	1	Bushy Park	Barry M.
797	5	do	Kellon W.	872	1	Woodhurst.....	Delhunty.
798	1	do	Whiteman A.	873	1	Bunglegumby.....	Campbell M. I.
799	9	do	Bunell Bros.				
800	4	do	Peard R.				
801	1	Howlong.....	Kelm J.		66½		

RECAPITULATION.

District.	Acreage.	Number.	District.	Acreage.	Number.
Maitland	793	97	Kiama	6	2
Patrick's Plains	251½	133	Shoalhaven	15	3
Muswellbrook	55½	14	Araluen	36½	8
Scone	26	5	Burrowa	10	2
Paterson	222	28	Wellington	18	7
Port Macquarie	89	38	Goulburn	21½	13
Murrumbidgee	16	5	Yass	38	10
Manning River	14	6	Young	30½	9
Tamworth	5	2	Tucua	6	3
Armidale	29	4	Moruya	14	7
Inverell	72	9	Wagga Wagga	94½	9
Narrabri	4½	4	Tumut	18½	6
Grafton	73½	32	Gundagai	23	11
Parramatta	231½	88	Deniliquin	13	9
Liverpool	37	9	Wentworth	3	2
Penrith	148½	23	Albury	1,142½	275
Campbelltown	30	2	Mudgee	41½	19
Windsor	51	16	Bathurst	32	6
Camden	145	23	Orange	8	6
Picton	52	11	Dubbo	66½	12
Berrima	6	4			
Wollongong	5	1		4,015½	873

HENRY LUMSDAINE,
Chief Inspector of Distilleries.

No. 2.

RETURN showing the Number of Vineyards having a licensed Still, the Size of the Still, the Names of the Owners, and where situated, 1874.

No.	Size of Still.	Name of Owner.	Where situated.	No.	Size of Still.	Name of Owner.	Where situated.
1	From twenty-five gallons upwards; none exceeding fifty gallons.	Auschan F.	Penrith.	35	From twenty-five gallons upwards; none exceeding fifty gallons.	Macarthur W. Kut.	Camden.
2		Brecht C.	Denman.	36		M'Nevin J.	Molong.
3		Burker T.	Maryland.	37		Munro A.	Singleton.
4		Blatchford J. H.	Araluen.	38		Nixon J.	Wagga Wagga.
5		Barelay T.	Singleton.	39		Pearce E.	Blacktown.
6		Baxter W.	Penrith.	40		Powell E.	Richmond.
7		Buekholtz F.	Mudgee.	41		Power R.	Parramatta.
8		Christian M. S.	Lockinvar.	42		Phelps E. L.	Albury.
9		Carpenter H.	Camden.	43		Perth F.	Penrith.
10		Carmichael G.	Raymond T.	44		Reith A.	Mudgee.
11		Cox J.	Ryde.	45		Reis G.	Albury.
12		Cox E. K.	Mulgoa.	46		Sands J.	Gunning.
13		Davis A.	Tumut.	47		Stem A.	Narellan.
14		Doust J.	Camden.	48		Stumpff	Prospect.
15		Eisenhardt	Albury.	49		Stein Jno.	do.
16		Fuchs P.	Camden.	50		Smith J.	Wagga Wagga.
17		Fowler W.	Campbelltown.	51		Stein Jas.	Narellan.
18		Fallon J. T.	Albury.	52		Salvia F.	Araluen.
19		Franson J.	Hunter's Hill.	53		Schubach S.	Albury.
20		Gray J. W.	Gunning.	54		Schofield J.	Windsor.
21		Jaspriza N.	Young.	55		Sanger E.	Corowa.
22		Jenkins F.	Buckenbong.	56		Schons W.	Burrandong.
23		Jenkins R. L.	Penrith.	57		Teer P.	Tumut.
24		Hamilten J.	Liverpool.	58		Vincent E.	Wagga Wagga.
25		Howard R.	Albury.	59		Woollard M.	Wollongong.
26		Klaus V.	Grafton.	60		Whitaker H.	Orchardleigh.
27		Keys J. H.	Muswellbrook.	61		Weismantel R.	Stroud.
28		Moore J.	Singleton.	62		Weick C.	Warraldia.
29		Macleay W.	Wagga Wagga.	63		Wyse J.	Albury.
30		Martens J.	Adelong.	64		Wilshire A. F.	Mulgoa.
31		Medway W.	Yass.	65		Weston B.	Liverpool.
32		Mencher T.	Penrith.	66		Wanson W.	Camden.
33		M'Kay C.	do.	67		Wyndeyer J.	Raymond T.
34		M'Carthy J.	do.				

HENRY LUMSDAINE,
C. I. D.

RETURN showing the Number of Gallons of Wine produced in each year from 1869 to 1874, as shown by the Statistical Registers of New South Wales.

	1869.		1870.		1871.		1872.		1873.	
	Acres.	Gallons.	Acres.	Gallons.	Acres.	Gallons.	Acres.	Gallons.	Acres.	Gallons.
Argyle.....	1	350	13	160	3	100	2	120	1	180
Bathurst.....	...	.....	8	1,550	...	.....	13	300	...	.....
Bligh.....	...	.....	2	630	2	.....	2	600	4	1,600
Brisbane.....	56½	9,250	39½	9,016	55	11,690	56	10,850	49	14,560
Camden.....	74	15,980	48	3,480	66	3,204	64	1,188	65	5,325
Cook.....	...	.....	...	.....	...	.....	...	.....	3	100
Cumberland.....	256½	43,830	281	24,098	274	21,384	257	40,072	300	37,126
Durham.....	267	71,254	313	30,091	306	39,060	336	58,225	402	70,762
Georgiana.....	3	1,000	...	.....	...	.....	...	.....	...	.....
Gloucester.....	106	13,800	97	5,560	122	10,797	97	12,688	113	15,318
Hunter.....	29	4,570	32	1,928	16	1,300	25	8,800	22	3,050
King.....	36	6,000	39	10,370	33	4,647	14	1,770	28	2,040
Macquarie.....	43	8,470	47	6,636	61	9,410	77	13,540	89	17,200
Murray.....	20	4,000	...	.....	...	.....	...	.....	...	.....
Northumberland.....	516	122,810	536	75,447	509	105,993	494	86,556	632	158,208
Phillip.....	8	2,000	12	1,750	26	1,900	...	.....	18	1,200
Roxburgh.....	2	56	41	4,160	31	1,700	14	1,484	24	1,500
St. Vincent.....	25	1,720	36	1,580	37	1,340	37	1,930	28	3,200
Wellington.....	2	500	18	1,362	4	1,112	14	3,000	26	5,300
Bligh.....	...	.....	54	.....	41	15,035	50	1,600	52	17,000
Clarence.....	110	28,400	48	4,151	43	4,700	36	2,842	47	1,190
Darling.....	...	.....	5	50	...	.....	½	60	1	200
Gwydir.....	...	.....	5	1,000	7	300	5	1,252	6	1,240
Lachlan.....	22	2,048	36	3,406	39	2,405	39	3,510	46	1,610
Liverpool Plains.....	11	2,520	13	796	8	2,196	15	1,730	18	1,296
Monaro.....	1	200	6	250	13	560	5	150	2	.....
Murrumbidgee.....	398	111,123	584	145,158	696	160,888	843	187,428	1,121	207,140
Macleay.....	4	670	3	60	11	1,400	0	335	7	360
New England.....	42	9,770	42	8,055	51	10,860	50	10,300	60	4,880
Wellington.....	...	.....	13	1,430	10	1,340	10	1,120	14	4,400
	2,038	460,321	2,367	342,674	2,461½	413,321	2,564	451,450	3,178	575,985

H. LUMSDAINE,
C. I. D.

RETURN showing the quantity in proof Gallons of Brandy distilled on each Vineyard having a licensed Still, in each year from 1869 to 1874.

Name of Vignerons.	1869 & 1870.	1871.	1872.	1873.	1874.	Name of Vignerons.	1869 & 1870.	1871.	1872.	1873.	1874.
	Proof gallons	Proof gallons	Proof gallons	Proof gallons	Proof gallons		Proof gallons	Proof gallons	Proof gallons	Proof gallons	Proof gallons
Adams Geo.....	30	74	...	...	...	Franson J. B.....	...	...	...	...	...
Anshaw F.....	35	15	13	26	25	Fieldhouse W.....	20	...	...	...	...
Brecht C.....	30	25	25	70	40	Dabb J.....	12	...	...	...	...
Barker T.....	40	165	...	98	164	Gray J. W.....	...	54	22	...	...
Blatchford J. H.....	...	...	...	...	50	Glennie J.....	60	60	31	...	...
Barclay T.....	...	...	...	30	60	Graham R. D.....	20	...	...	...	...
Baxter W.....	20	15	10	20	10	Gehrig F.....	60	45	40	39	56
Buckholtz W.....	...	...	...	...	10	Hook I.....	25	...	...	...	...
Burgess W.....	35	12	13	15	...	Ireland I. M.....	214	23	140	...	...
Bowman G.....	50	26	...	...	...	Hamilton J.....	30	11	8	...	...
Braum E.....	...	12	...	...	...	Howard R.....	52	69	...	24	30
Bruce W.....	...	...	50	...	...	Jaspriza N.....	...	...	...	...	50
Barclay T.....	...	...	...	...	...	Jenkins F.....	...	...	15	...	40
Christian M.....	...	...	...	...	...	Jenkins R. L.....	66	40	...	45	35
Cheeke A.....	25	20	...	...	...	Keys J.....	...	52	100	...	30
Carmichael G.....	115	...	...	...	66	Klaus V.....	...	5	9	...	...
Cox Jos.....	...	13	6	...	8	Knauer J.....	1½	6	16	24	15½
Cox E. K.....	63	6	18	22	25	Luther F.....	54	...	...	...	...
Calinon P.....	45	25	...	...	...	Lindeman H. J.....	78	24	...	...	...
Carpenter H.....	21	...	...	...	...	Lollbach J.....	...	21	...	...	10
Davis A.....	...	...	...	...	...	Moore J.....	95	65	71	...	25
Doust J.....	...	...	...	...	...	Martens J.....	...	...	30	...	35
Doyle J. F. & J.....	52	107	...	...	...	Medway W.....	123	139	67	...	75
DeMestre A.....	...	16	...	...	...	Meacher J.....	...	...	...	...	...
Downing T.....	...	...	...	11	20	M'Leay W.....	...	...	32	...	56
Eisenhardt H.....	50	88	32	...	...	M'Kay C.....	83	100	48	60	50
Evans J.....	18	...	...	...	...	M'Carthy J.....	45	...	...	...	...
Everett E.....	...	20	...	...	...	Macarthur W., Knt.....	440	...	...	...	...
Fuchs P.....	23	...	...	18	15	M'Nevin N.....	...	...	15	26	...
Fowler W.....	133	23	45	82	115	Mumro A.....	135	...	31	145	146
Fallon J. T.....	226	25	280	227	251	Monck L.....	32	...	...	...	...

No. 4—continued.

Name of Vigneron.	1869 & 1870.	1871.	1872.	1873.	1874.	Name of Vigneron.	1869 & 1870.	1871.	1872.	1873.	1874.
Martin E. G.	12	...	...	7	...	Schubach E.	28	46	22	13	...
M'Gillvery A.	119	64	48	...	...	Schofield J.	46	20	6	19	25
Mealy J.	59	...	...	...	...	Sanger E.	159	80	105	88	52
Metz R.	...	33	13	70	6	Schons W.	...	33	40	43	...
Nixon J.	136	...	...	...	...	Smith G. T.	10	20	15	...	...
Oxley J.	46	...	...	...	...	Spencer G. L.	...	8	4	25	15
Pearce E.	...	...	...	...	25	Smith W. K.	...	...	25	50	...
Powell E.	60	16	12	44	8	Smart T. W.	...	15	...	...	...
Pulver R.	22	...	11	...	...	Stein Anton	12	...	...	...	18
Power R.	...	...	...	10	14	Teer P.	...	130	32	...	78
Phelps R. L.	...	...	...	...	100	Tittler T.	2	...	...	...	...
Petith F.	15	14	8	22	18	Thorn J.	7	...	...	...	6
Reith A.	...	...	...	...	2	Tunks C.	...	21	...	...	...
Reis G.	60	80	47	58	73	Vincent E.	105	...	...	...	...
Remington R. F.	126	27	28	...	...	Woolard M.	24	21	10	3	...
Reynolds G.	231	162	36	275	...	Whitaker H.	23	15	12	...	10
Ran H.	40	54	38	...	...	Weismantel R.	...	...	...	53	21
Robison H.	...	...	...	12	...	Weick C.	...	...	...	...	60
Richards J. B.	...	...	...	...	75	Wyse J.	28	44	8	21	24
Sands W.	...	...	...	...	...	Wilshire A. F.	127	65	70	109	116
Stein A.	54	9	...	...	10	Weston B.	...	35	8	21	10
Stein Jacob	60	10	5	10	...	Wauson W.	25	...	...	...	10
Stein Jno.	65	18	...	20	20	Windeyer J.	394	...	...	...	...
Stumpf J.	...	10	10	44	15	Weingartner F.	20	...	...	...	...
Smith J.	124	...	...	...	...		
Salvia F.	45	25	7	10	...						
							4,912	2,466	1,787	2,009	2,363

HENRY LUMSDAINE,
C. I. D.

Nos. 6 and 7.

RETURN showing the number of Gallons of Brandy used in each Vineyard for fortifying and for home consumption, from 1869 to 1875.

Name of Vigneron.	District.	1869 & 1870.	1871.	1872.	1873.	1874.	Name of Vigneron.	District.	1869 & 1870.	1871.	1872.	1873.	1874.
Adams G.	Albury	15	25	35	35	...	Lindemann H.	Gresford	...	12	...	55	2
Anshaw F.	Penrith	10	20	15	19	15	J.						
Brecht C.	Denman	...	3	...	30	35	Lollbach J.	Grafton	...	10	10	...	10
Barker T.	Maryland	30	68	40	90	150	Moore J.	Singleton	28	30	30	36	40
Barclay T.	Singleton	...	...	...	21	45	Martens J.	Adelong	...	...	...	20	35
Baxter W.	Penrith	3½	17	18½	8	9	Medway W.	Yass	98½	134	50	...	75
Burgess W.	Mudgee	31	16	11½	15½	...	M'Leay W.	Wagga Wagga	...	...	20	10	...
Bowman G.	Archerfield	5	...	...	...	...	M'Kay C.	Minchinbury	6	56	106	14	49
Braum E.	Liverpool	...	10	...	...	...	M'Carthy J.	Cranebrook	9	15	...	...	...
Bruce W.	Araluen	...	...	...	47	...	Macarthur W.	Camden Park	250	...	50	...	50
Cheeko A.	Varrowville	10	12	30	10	...	Knt.						
Carmichael G.	Porphyry Pt.	...	...	45	13	15	M'Nevin N.	Molong	...	...	15	10	...
Cox J.	Ryde	...	3	9	3	15	Muuro A.	Singleton	69	23	36	70	80
Cox E. K.	Mulgoa	5	7	36	20	18	Monch L.	Camden	15	15	...	...	...
Calinon P.	Penrith	10	40	...	...	...	Martin E. G.	do	12	...	...	4	...
Carpenter H.	Camden	...	21	38	...	...	M'Gillvery A.	Tumut	27	42	10	...	...
Doyle J. F. & J.	Kaludah	17	16	21	11	25	Mealy J.	Grafton	25	...	...	...	...
DeMestre A.	Shoalhaven	...	16	...	...	...	Metz R.	Berrima	...	13	2	12	24
Downing T.	Tumut	...	...	...	150	20	Nixon J.	Wagga Wagga	30	30	...	...	...
Eisenhardt H.	Albury	30	30	70	45	...	Oxley J.	Kirkham	31	...	...	...	...
Evans J.	Penrith	15	...	...	...	...	Powell E.	Richmond Vale	10	10	6	12	51
Everett E.	Scone	...	19	...	...	...	Pulver R.	Morpeth	18	10	23	...	...
Fuchs P.	Camden	...	...	...	2	16	Power R.	Parramatta	...	...	...	8	22
Fowler W.	Campbelltown	51	42	22	22	93	Petith F.	Penrith	1	17	12	10	21
Fallon J. T.	Albury	...	88	352	217	251	Reis G.	Albury	25	35	8	129	95
Fieldhouse W.	Picton	16	...	...	...	...	Remington R.	Yass	50	40	28	43	43
Dabb J.	Ryde	...	2	10	...	...	Reynolds G.	Gunning	165	5	160	80	...
Gray J. W.	Gunning	...	52	22	...	...	Ran H.	Albury	10	35	61	30	...
Glennis J.	Gresford	...	10	20	20	21	Stein A.	Narellan	53	54	17½	24	10
Graham R. D.	Penrith	2	...	...	...	...	Stein J.	Prospect	45	9½	5½	10	...
Gehrig F.	Albury	15	45	36	8	69	Stein Jno.	Narellan	52	30	58	8	22
Hook J.	Dingadee	...	28	...	...	...	Stumpf J.	Prospect	...	6	5	20	20
Ireland I. M.	Scamah	155	15	109	...	15	Salvia F.	Wagga Wagga	...	124	10	4	16
Hamilton J.	Liverpool	15	10	8	15	...	Schubach E.	Albury	10	15	57	35	...
Howard R.	Albury	15	60	20	...	40	Schofield J.	Windsor	36	16	56	19	25
Jenkins F.	Buckinbong	...	...	...	15	40	Sanger E.	Corowa	90	60	65	134	20
Jenkins R. L.	Nepean Towers	8	48	36	20	11	Schons W.	Burrandong	...	...	21	115	...
Keys J.	Bengalla	...	7	50	20	40	Smith G. T.	Prospect	12	15	8	...	...
Klaus V.	Grafton	...	2	9½	...	15	Smith W. K.	Barraba	12	5	3	25	17
Knauer J.	Fraderickton	1½	3	14	29	13½							
Luther F.	Picton	53	32	4	...	...					

Nos. 6 and 7—continued.

Name of Vignerou.	District.	1869 & 1870.	1871.	1872.	1873.	1874.	Name of Vignerou.	District.	1869 & 1870.	1871.	1872.	1873.	1874.
Smart T. W.	Fairfield	...	2	...	...	...	Willshire A. F.	Mulgoa	...	53	53	43	88
Teer P.	Tumut	...	48	10	20	63	Weston B.	Liverpool	...	12	12½	15	29
Tittler T.	Wollongong	2	...	...	...	...	Wanson W.	Camden	7	10	18	...	6
Thorn J.	Irrawang	...	6	...	...	...	Windeyer J.	Raymond Terrace.	18	162	14	...	30
Tunks C.	Parramatta	13	...	2½	...	...	Weingartner F.	Dunmore	9	16	...	...	...
Vincent E.	Wagga Wagga	...	40	...	...	...	Willbow T.	Richmond	35	...	...	...	...
Woollard M.	Wollongong	25	7½	3½	...	...					
Whitaker H.	Orchardleigh	10	20	3	19	6							
Weismantel R.	Stroud	...	...	...	39	33½			1891½	2049	2244½	1992½	1991
Wyse J.	Albury	28	16	34	3	37							

HENRY LUMSDAINE,
C. I. D.

No. 8.

RETURN showing the quantity of Brandy in liquid and proof Gallons now held by each Vignerou having a licensed Still, as per Returns to 31st December, 1874.

Name of Vignerou.	Where situated.	Liquid Gallons, strength not given.	Proof Gallons.	Name of Vignerou.	Where situated.	Liquid Gallons, strength not given.	Proof Gallons.
Anshaw F.	Penrith	28	...	McKay C.	Minchinbury	47	...
Brecht C.	Denman	42	...	Macarthur Sr W.	Camden Park	650	...
Baxter T.	Penrith	15	...	Pearce E. H.	Seven Hills	...	5
Barker T.	Maryland	180	...	Phelps R. L.	Albury	...	140
Blatford J. H.	Araluen	...	50	Petith R.	Penrith	15	...
Cox Jos	Ryde	...	6	Powell E.	Richmond Vale	...	1
Cox E. K.	Mulgoa	19	...	Reis G.	Albury	...	38
Checko A.	Varrowville	60	...	Robison H.	Camden	12	...
Doyle J. & F.	Kaloudah	...	85	Stein Jno.	Prospect	10	...
Fowler W.	Eschol Park	...	141	Stumpff R.	do	...	21
Fuchs P.	Camden	15	...	Spencer G. L.	Barraba	2	...
Gehrig F.	Albury	...	23	Sanger R.	Corowa	...	125
Gleunie J.	Orindinna	...	3	Smith J.	Wagga Wagga	...	40
Hamilton J.	Liverpool	...	80	Teer P.	Tumut	...	28
Howard R.	Albury	...	12	Thorn J.	Irrawang	...	6
Knaner J. G.	Frederickton	2	...	Weick C.	Warialda	...	114
Keys J. H.	Bengalla	45	...	Windeyer J.	Raymond Terrace	...	148
Jenkins R. L.	Nepean Towers	36	...	Wyse J.	Albury	7	...
Metz R.	Berrima	...	60	Whitaker J.	Orchardleigh	...	11
Munro A.	Singleton	...	10	Wanson W.	Camden	12	...
Martens J.	Adelong	...	72	Weston B.	Liverpool	7	...
Medway W.	Yass	...	22	Willshire A. F.	Mulgoa	221	...
McLeay W.	Wagga Wagga	...	58				
						1,425	1,299

HENRY LUMSDAINE,
C. I. D.

No. 11.

RETURN showing the percentage of Alcohol permitted to Wine-makers, in fortifying their Wines, by the present Distillation Act, 13th Victoria No. 27.

Twenty-five (25) per cent. of Alcohol of specific gravity '825 at 60° temperature.

H. LUMSDAINE,
C. I. D.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

JOHN MELLY.

(PETITION OF.)

Ordered by the Legislative Assembly to be printed, 16 June, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of John Melly, of Waterloo, in the Colony of New South Wales, Soap and Candle Manufacturer,—

SHOWETH :—

That your Petitioner, in the year one thousand eight hundred and forty-eight, commenced business as a Soap and Candle Manufacturer, in Parramatta-street, in the city of Sydney, until the year one thousand eight hundred and sixty, when, in consequence of the passing of the Act 14 Victoria number 30, he was compelled to remove his business outside the boundaries of the said city.

That your Petitioner, in the year one thousand eight hundred and sixty, removed his business, and erected premises on a piece of land between the city of Sydney and the borough of the Glebe, known as "No man's land."

That your Petitioner carried on business at the last-mentioned place until June, one thousand eight hundred and seventy-three, when, in consequence of the passing of an Act of the Legislature, 33 Victoria number 9, known as the "Boundaries of the City of Sydney Extension Act," extending the boundaries of the city of Sydney so as to include the land known as "No man's land," your Petitioner's premises were brought within the city of Sydney, and he became liable to the provisions of the Act 14 Victoria number 30.

That in or about the month of March, one thousand eight hundred and seventy-three, a charge was preferred against your Petitioner at the Central Police Court, Sydney, by the Inspector of Nuisances, for carrying on business as a Soap-boiler within the city of Sydney, under the fifth section of the Act 14 Victoria number 30, when your Petitioner was fined for such offence the sum of forty shillings.

That your Petitioner appealed against the conviction to the Supreme Court, which Court upheld the decision of the Magistrates. That in consequence of this decision your Petitioner was compelled to again remove his business and was put to great loss and expense, and suffered damage to the amount of six hundred pounds, through the passing of the said Act 33 Victoria number 9.

That your Petitioner has been compelled to pull down his premises, to remove his plant, and to erect new buildings in the borough of Alexandria, at considerable expense.

Your Petitioner therefore humbly prays that your Honorable House will take his case into consideration, and that he may be afforded such relief as to your Honorable House shall seem meet.

And your Petitioner, as in duty bound, will ever pray.

JOHN MELLY.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

ON THE

ALL SAINTS PARSONAGE BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

AND

MINUTES OF EVIDENCE.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
13 *April*, 1875.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1875.

1875.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES NO. 15. FRIDAY, 2 APRIL, 1875.

4. ALL SAINTS PARSONAGE BILL ("Formal" Motion):—Mr. W. C. Browne moved, pursuant to Notice,—
- (1.) That the All Saints Parsonage Bill be referred to a Select Committee for consideration and report.
- (2.) That such Committee consist of Mr. Burns, Mr. Stuart, Mr. Farnell, Mr. Nelson, Mr. Teece, Mr. Jacob, Mr. Scholey, Mr. Montague, and the Mover.
- Question put and passed.

VOTES NO. 20. TUESDAY, 13 APRIL, 1875.

4. ALL SAINTS PARSONAGE BILL:—Mr. W. C. Browne, as Chairman, brought up the Report from, and laid upon the Table the Minutes of the Proceedings of, and of Evidence taken before, the Select Committee for whose consideration and report this Bill was referred, on 2nd April, 1875.
- Ordered to be printed.

* * * * *

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1875.

ALL SAINTS PARSONAGE BILL.

REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, to whom was referred for consideration and report, on 2nd April, 1875,—“*All Saints Parsonage Bill*,”—beg to report to your Honorable House,—

That they have examined the witness named in the margin* (whose *Could A. J., Esq. evidence will be found appended hereto); and that the Preamble having been satisfactorily proved to your Committee, they proceeded to consider the several clauses of the Bill, in which it was deemed necessary to make certain Amendments.

Your Committee now beg to lay before your Honorable House the Bill with certain Amendments.

WILLIAM CHARLES BROWNE,
Chairman.

*No. 3 Committee Room,
Sydney, 9th April, 1875.*

PROCEEDINGS OF THE COMMITTEE.

THURSDAY, 8 APRIL, 1875.

MEMBERS PRESENT:—

Mr. W. C. Browne,	|	Mr. Farnell,
Mr. Jacob,	|	Mr. Scholey,
Mr. Stuart,	|	Mr. Montague.

Mr. W. C. Browne called to the Chair.

Entry from Votes and Proceedings appointing the Committee, *read* by the Clerk.Printed copies of the Bill *referred*, and original Petition to introduce the same, before the Committee.

Committee deliberated.

[Adjourned to To-morrow, at half-past *Two* o'clock.]

FRIDAY, 9 APRIL, 1875.

MEMBERS PRESENT:—

Mr. W. C. Browne in the Chair.

Mr. Farnell,	|	Mr. Scholey,
Mr. Montague,	|	Mr. Jacob,
Mr. Stuart.		

Present,—Albert John Gould, Esq., (*Solicitor for the Bill*.)

A. J. Gould, Esq., examined.

Witness produced Deed of Conveyance of certain lands from Benjamin Singleton and wife, to the Bishop of Australia.

Room cleared.

Preamble considered.

Question,—“That this Preamble stand part of the Bill,”—put and passed.

Solicitor called in and informed.

Clauses 1 and 2 *read* and *agreed to*.Clause 3 *read*, *amended*,* and *agreed to*.Clauses 4 and 5 *read* and *agreed to*.Schedule *read*, *amended*,† and *agreed to*.

Chairman to report the Bill with Amendments to the House.

*See Schedule of Amendments.

†See Schedule of Amendments.

SCHEDULE OF AMENDMENTS.

Page 2, clause 3, lines 53 and 54. *Omit* “for any period not exceeding three years.”
 Page 3, Schedule. *Omit* “acres or thereabouts.” *Insert* “two acres one rood and twenty-four perches more or less.”

WITNESS.

Gould, A. J., Esq.

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1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

ALL SAINTS PARSONAGE BILL.

FRIDAY, 9 APRIL, 1875.

Present:—

MR. W. C. BROWNE,
MR. FARNELL,
MR. JACOB,

MR. MONTAGUE,
MR. SCHOLEY,
MR. STUART.

W. C. BROWNE, Esq., IN THE CHAIR.

Albert John Gould, Esq., Solicitor for the Bill, examined:—

1. *Chairman.*] You are Solicitor for the Bill now before this Committee? I am.
2. The land referred to in the Bill was originally a grant from Benjamin and Mary Singleton to the Bishop of Australia and his successors, upon trust, for the erection of a church and parsonage for the Church of England, and also for use as a burial-ground and glebe for the clergyman? It is a conveyance by lease and release from Benjamin Singleton and wife to the Bishop of Australia, for the purposes mentioned.
3. A dwelling-house for the clergyman has already been erected upon this site? It has.
4. But it is now considered expedient to erect a more commodious parsonage in a more suitable locality in the town of Singleton? It is.
5. You consider it expedient to sell the site of the present parsonage, and to apply the proceeds arising from the sale in the erection of another parsonage in a more suitable locality? I do.
6. The usual notices of the intention to apply for this Bill have been inserted in the Government Gazette and various newspapers? They have.
7. Do you wish to state anything else? I produce the conveyance by lease and release, dated 15th January, 1842, from Benjamin Singleton and wife to the Bishop of Australia, of the land it is now desired to sell. (*Deed produced.*)
8. *Mr. Farnell.*] Who was the Bishop of Australia at that time? The Right Reverend William Grant Broughton, D.D.
9. Upon whom does that trust devolve at the present time? It would devolve upon the Bishop of Newcastle, as it is within the diocese of Newcastle, but the letters patent do not vest the fee simple in the Bishop of Newcastle, as they should have done, and as we desire to do by the present Act.
10. I presume it would not be vested in the Metropolitan Bishop—Bishop Barker? No.
11. Do you propose by this Bill to transfer the trust vested in the Bishop of Australia at that time to the Bishop of Newcastle? No; we propose to vest the fee simple of the land in the Bishop of Newcastle, and to give him power to sell the land and to hold or apply the money for certain other trusts, stated in the fourth clause of the Bill. At the present moment the Bishop of Newcastle is looked upon as the trustee of the land for the trusts mentioned in the deed I have produced, though the fee simple has not been actually vested in him by law. It may be as well to mention, with regard to these trusts, that the land has been used for a site for a parsonage for the Church of England clergyman at Singleton, but it has never been made use of for the erection of a church or chapel, or for a burial-ground, there being other lands which have been used for those purposes. It has been solely used for a parsonage. We have fifty acres of land a short distance from the town, part of which has been used as a burial-ground, and the church has already been built on another section of land in the town, on which we now propose to build also a new parsonage.
12. Instead of using this land for a church or chapel, you wish to take power under this Bill to use it for some other purpose? To sell the land and apply the proceeds in the erection of a parsonage on part of the land on which the church now stands.

A. J. Gould,
Esq.
April, 1875.

- A. J. Gould, Esq.
9 April, 1875.
13. How far is the church from the present parsonage? About 300 yards.
14. *Chairman.*] The parsonage building has become so dilapidated that it is necessary to build a new one at once? Yes; the building is very dilapidated and very small, and not so conveniently situated as the proposed site.
15. *Mr. Scholey.*] Have all parties concerned had notice of your intention to sell this land? The matter has been brought before the members of the Church at two or three meetings of the parishioners, and they have all concurred in selling this property and appropriating the money to the building of a new parsonage. The Bishop of Newcastle, of course, is the person applying for permission, but it is done with the sanction of the churchwardens and parishioners.
16. There has been no want of publicity? No; it has been duly published, and there is no objection from any one.
17. *Mr. Farnell.*] The preamble refers to the Act of William the Fourth;—has not an Act been passed subsequent to that, vesting the Church property—an Act that arose out of the establishment of the Synod? I am aware that an Act has been passed authorizing the different dioceses to form Synods for the internal management of the affairs of the Church.
18. Did not that Act in some way deal with the property of the Church? I do not think so; I do not think it would affect this matter.
19. Who is the Bishop of the Diocese of Newcastle? The Right Reverend William Tyrrell, D.D.
20. Called Lord Bishop of Newcastle? Yes.
21. Are the trusts contained in the deed produced correctly recited in the preamble of this Bill? They are. I produce also the Government Gazette of 26th January, 1848, containing the letters patent appointing the Bishop of Newcastle, and mentioning the see.
22. What is the area of the land it is proposed to sell? A little under two acres and a half; to speak correctly, two acres and two-fifths. I produce a plan of the town of Singleton, showing the land we desire to sell, marked A in pencil.
23. There are several lots, are there not? There are, as originally subdivided.
24. Are those the lots referred to in the Bill? They are, although on this map they are not shown. This map was prepared after the land was sold. The original map of the town of Singleton, showing the different lots by their numbers, has been unfortunately mislaid to-day; but the land marked A on the plan produced is identically the same as that mentioned in the schedule, and conveyed by the deed produced from Benjamin Singleton and wife to the Bishop of Australia.
25. What is the value of this land? From £400 to £500.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

ON THE

DUBBO PRESBYTERIAN MANSE TRUSTEES BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

AND

MINUTES OF EVIDENCE.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,29 *April*, 1875.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1875.

1875.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES NO. 29. TUESDAY, 27 APRIL, 1875.

12. DUBBO PRESBYTERIAN MANSE TRUSTEES BILL (*"Formal" Motion*):—Mr. Pilcher moved, pursuant to Notice,—
- (1.) That the Dubbo Presbyterian Manse Trustees Bill be referred to a Select Committee for consideration and report.
- (2.) That such Committee consist of Mr. F. B. Suttor, Mr. Hay, Mr. Davies, Mr. Macintosh, Mr. Burns, Mr. Stuart, Mr. Charles, Mr. H. C. Dangar, Mr. Meyer, and the Mover.
- Question put and passed.
-

VOTES NO. 30. THURSDAY, 29 APRIL, 1875.

4. DUBBO PRESBYTERIAN MANSE TRUSTEES BILL:—Mr. Pilcher, as Chairman, brought up the Report from, and laid upon the Table the Minutes of Proceedings of, and of Evidence taken before, the Select Committee for whose consideration and report this Bill was referred, on 27th April, 1875.
- Ordered to be printed.
- * * * * *
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1875.

DUBBO PRESBYTERIAN MANSE TRUSTEES BILL.

REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred, on 27th April, 1875, the *Dubbo Presbyterian Manse Trustees Bill*, beg to report to your Honorable House:—

That they have examined the witnesses named in the margin* (whose evidence will be found appended hereto), and that the Preamble, as *verbally* amended, having been satisfactorily proved to your Committee, they carefully considered the several clauses of the Bill, in which it was not deemed necessary to make any Amendment.

Your Committee now beg to lay before your Honorable House the Bill, with an amended Title and Preamble.

CHAS. E. PILCHER,
Chairman.

No. 3 Committee Room,
Sydney, 29th April, 1875.

PROCEEDINGS OF THE COMMITTEE.

THURSDAY, 29 APRIL, 1875.

MEMBERS PRESENT:—

Mr. Pilcher,	|	Mr. Macintosh,
Mr. F. B. Suttor,	|	Mr. Stuart.

Mr. Pilcher called to the Chair.

Entry from Votes and Proceedings, appointing the Committee, *read* by the Clerk.

Printed copies of the Bill *referred*, and original Petition to introduce the same, before the Committee.

Present:—Craven Hyde Fitzhardinge, Esq. (*Solicitor for the Bill*).

Craven Hyde Fitzhardinge, Esq., examined.

Witness produced letter from the Promoters of the Bill appointing him their Solicitor; also Deed of Settlement referred to in the Preamble.

Thomas Alexander Thompson, Esq. (*one of the Promoters of the Bill*), called in and examined.

Room cleared.

Preamble considered and *amended*.*

Question,—“That this Preamble stand part of the Bill,”—put and passed.

Solicitor called in and informed.

Clauses 1 and 2 *read* and *agreed to*.

Title *read, amended,†* and *agreed to*.

Chairman to report Bill with amended Title and Preamble to the House.

* See Schedule of Amendments.

† See Schedule of Amendments.

SCHEDULE OF AMENDMENTS.

Page 1, Title. *Omit* “intituled an Act”; also “James Holmes Thomas Baird John Cassels Ryrie and Thomas Alexander Thompson and James Osborne Esquires and other,” and also “a Trustee.”

Page 2, Preamble, line 2, insert “Saint Andrew’s” after “as.”

LIST OF WITNESSES.

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1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

DUBBO PRESBYTERIAN MANSE TRUSTEES BILL.

THURSDAY, 29 APRIL, 1875.

Present:—

MR. MACINTOSH,
MR. PILCHER,

MR. STUART,
MR. F. B. SUTTON.

CHAS. E. PILCHER, Esq., IN THE CHAIR.

Mr. Craven Hyde Fitzhardinge examined:—

1. *Chairman.*] You are Attorney for the Trustees of the land named in this Bill? Yes, I hold an appointment from them.
2. Do you produce it? I do. It is signed by the Trustees. (*Produced.*)
3. Do you produce the deed mentioned in the preamble of the Bill? I do. (*Deed produced.*)
4. The preamble correctly recites that deed? It does.
5. Do you know where the piece of land granted by the deed is situated? I do; in Macquarie-street, Dubbo.
6. Is that the principal street? Yes, the main thoroughfare.
7. How is it situated with reference to other buildings? At the rear of it there is a second-rate hotel—the Commercial Hotel; on the south side there is a smith's forge in constant work; on the north side a second-rate storekeeper's shop; and in front, directly opposite, across the street, a steam saw-mill and a flour-mill in constant work. The allotment is situated in the centre of the town.
8. Where is the Presbyterian church situated? On the top of a hill, perhaps a quarter of a mile from the allotment it is proposed to sell.
9. Is this allotment, in your opinion, suitable for a clergyman's residence? The land is, but the position is not; it is unsuitable, because it is in the main thoroughfare of the town, and in the midst of the principal business places. A solicitor has his office a little further down, and he is removing because he is interrupted by the noise of the saw-mill, which is going almost night and day.
10. What is the extent of this piece of land? Half an acre.
11. Do you know what the land is that the Trustees propose to purchase? I do not. Mr. Thompson, one of the Trustees, will be able to give information as to that. I can give an opinion as to the value of land in Dubbo. Land nearer the church is selling for about £20 or £30 the half-acre.
12. *Mr. Stuart.*] What is the value of the half-acre it is proposed to sell? I should say from £300 to £350. I may mention that it is almost the only piece of vacant land in the main street now.
13. *Mr. Macintosh.*] Do the Trustees intend to expend the value of this allotment in other land? In the purchase of other land and in building a manse. I think in a convenient place they could get 2 acres for about £50 or £70 an acre, and they would spend the remainder in building a manse. It is proposed to buy a larger piece of land. The Presbyterian minister there has several horses, having to visit a large district, and it would be convenient for him to have more room.
14. Has it become locally known that this Bill was to be applied for? Yes; it has been advertised four times in the local paper.
15. Is there any opposition? No.
16. Do you believe it would be advantageous for the district and the church in particular that Parliament should pass this Bill? Decidedly advantageous to the town and district, and also to the church.

Mr. C. H.
Fitzhardinge.
29 April, 1875.

- Mr. C. H. Fitzhardinge.
29 April, 1875.
17. *Mr. F. B. Suttor.*] This half-acre is not sufficient ground for the use of the clergyman? Decidedly not.
18. *Chairman.*] Dubbo is a very thriving town—progressing? Yes.
19. The land you speak of as being now worth £30 an acre would in a few years probably be worth double that? Yes.
20. Is the church in a convenient situation? Yes, very convenient. It is near the centre of the town, but out of the business part, and on a slight rise.
21. Is the church a good building? It is not completed yet, but it is a very good building of white sandstone—one of the best buildings in the town.
22. A permanent building? Yes.
23. *Mr. Macintosh.*] There is no probability of the district requiring the church to be shifted nearer the population? No; they could not get a better site than they have now.
24. *Mr. Stuart.*] I see by the preamble of the Bill that this church is in connection with the General Assembly of the Presbyterian Church of New South Wales. Has this matter been before the General Assembly? I am instructed that it has; but on that point Mr. Thompson can speak more definitely than I can.
25. *Mr. Macintosh.*] Are you aware whether the General Assembly have given their consent to this proceeding? I have been informed so by the clergyman, and I put a clause in the petition to that effect, but it was erased as being unnecessary by counsel who settled the draft.
26. *Mr. Stuart.*] Is it not a necessary part of the discipline of the Presbyterian Church that the sanction of the General Assembly should be obtained before applying to Parliament in a matter of this kind? I believe it is.
27. To whom was the land originally granted? I think to the Trustees.

Mr. Thomas Alexander Thompson examined:—

- Mr. T. A. Thompson.
29 April, 1875.
28. *Chairman.*] You are one of the Trustees named in the Bill and one of the Petitioners? Yes.
29. You live at Dubbo? Yes.
30. And you know the position of the land granted under the deed just produced? Yes.
31. This matter has been set on foot by yourself and your co-Trustees? Yes.
32. Has that been done with the concurrence of the General Assembly of the Presbyterian Church? The Committee of the congregation in the first place applied to the General Assembly for permission, and the answer was that it was not necessary, because the matter was in the hands of the Trustees, and the Committee then applied to the Trustees.
33. As I understand, the consent of the General Assembly was not refused, but you were informed that that was not necessary so long as the Trustees approved of it? Just so—so long as the Trustees approved and the funds were appropriated to the same purpose for which the land was intended.
34. You have not that communication with you? I have not.
35. The situation of the land it is proposed to sell is in the principal street of Dubbo? Yes, in the main thoroughfare.
36. Is it suitable at all for a clergyman's house? No; it is surrounded on one side with stores, on the other side by a public-house and blacksmith's shop, and across the street there are flour and saw mills.
37. It is very unsuitable then for a residence at all? Very unsuitable.
38. Where is the land you propose purchasing? We propose purchasing an allotment more convenient to the church, and suitable for a private residence.
39. How much land do you propose buying? There is about an acre that we have been in treaty for.
40. What would that cost? I think about £30 or £40.
41. *Mr. Macintosh.*] Could you not obtain more land than that? We could obtain more land, but we think that would be sufficient.
42. What is the value of the allotment you wish to dispose of? I think we could realise something like £400 for it.
43. Do you not think it is hardly equitable to sell £400 worth of freehold land and only re-purchase £30 worth—the remainder of the money to be expended in building? I consider that an acre would be quite sufficient to build a manse upon. It is twice as much as we have now.
44. Would you have any objections to allow the Bill to be amended so far that the land to be purchased should not be less than 2 acres? I think it would be rather difficult to get so much as 2 acres convenient enough to the church; we would have to go too far from the church to get 2 acres.
45. Could you not buy sufficient to afford a small paddock for a horse? The ground there would not be suitable for a run for a horse.
46. It might be got away from the township, perhaps a quarter of a mile? That would take the manse too far from the church.
47. Could not the site for the manse be got in a position convenient to the church, and another paddock some little distance away? That could be obtained easily enough; but it is easy to rent or obtain the use of a paddock.
48. *Mr. Stuart.*] What sum of money do you propose to expend in building a manse? We have not decided yet—no plan has been adopted.
49. *Mr. Macintosh.*] The Presbyterian minister of the district visits other charges, and would require horses? Yes.
50. So that it would be desirable to secure land for the run of his horses? There are paddocks near the town, but horses do not run in them, because there is not sufficient water. It would be easy to rent a paddock.
51. *Mr. F. B. Suttor.*] I suppose your intention is to spend far more on the building of the manse than will be realized from the sale of the piece of land you now have? Yes.
52. *Chairman.*] The property you propose to purchase will, when the manse is built upon it, be of more value than the allotment of land you now have in the town? Yes, it must be.
53. Is not the value of land all round Dubbo something like £10 or £12 an acre? It has brought as much as that anywhere close to the town.
54. I do not mean town land, but just round the town? Yes.

ON THE DUBBO PRESBYTERIAN MANSE TRUSTEES BILL.

7

55. *Mr. Macintosh.*] You believe that to give power to the Trustees of this land to sell would be to the advantage of the Presbyterian body in Dubbo? Yes, I do, very much so.
56. *Chairman.*] Who are the Committee you have spoken of? Members of the church.
57. This matter has been initiated by them? Yes, by the Committee of the congregation.
58. They applied, in the first instance, to the General Assembly, and then to the Trustees, to bring it about? Yes.
59. So that it is the wish of the Presbyterian body there to have this arrangement carried out? Yes.
60. There is no opposition at all? No; it is very much approved by all the members of the congregation.
61. *Chairman.*] In the preamble of the Bill there is a blank for the name of the church—is it known by any name? It is known as Saint Andrew's Presbyterian Church.

Mr. T. A.
Thompson.
29 April, 1875.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CHURCH AND SCHOOL ESTATES FUND.

Ordered by the Legislative Assembly to be printed, 5 August, 1875.

RETURN (*in part*) to an Order of the Honorable the Legislative Assembly of New South Wales, dated 2 June, 1874, That there be laid upon the Table of this House,—

A Return showing,—

- “(1.) The total area of Church and School Lands alienated prior to 31st December, 1873.
- “(2.) The total area of such lands still held under trust at that date.
- “(3.) The total proceeds per year derived from sales and leases of said lands since the year 1862.
- “(4.) The distribution of the said proceeds among the several Religious Denominations, specifying in each case whether for Church or School purposes, from the year 1862 to the 31st December, 1873.
- “(5.) The total area of land granted to each Religious Denomination as sites for Churches, Chapels, Parsonages, Glebes, Schools, or other Denominational purposes, since the passing of the ‘Grants for Public Worship Prohibition Act of 1862,’ down to the 31st December, 1873.
- “(6.) The total sums annually paid out of the Consolidated Revenue Fund for the support of Schools of each Religious Denomination during the same period.
- “(7.) The total sums annually paid out of the same Fund to Clergymen of each Religious Denomination as stipend or allowance for services rendered in the capacity of Chaplain to the Gaols, Asylums, or other Public Institutions, for the same period.
- “(8.) The total sums annually paid from the same Fund to Clergymen of each Denomination as stipend under Schedule C, during the same period.”

(*Mr. Stewart.*)

CHURCH AND SCHOOL ESTATES FUND.

No. 3.

RETURN showing the total proceeds each year derived from Sales and Leases of Church and School Lands, from the year 1862 to 31st December, 1873.

Year	Proceeds of Land sold.			Rents of Land.			Interest on Investments.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1862	1,757	9	8	7,352	15	11				9,110	5	7
1863	2,695	3	6	6,171	11	10				8,866	15	4
1864	6,571	15	6	5,922	12	10				12,494	8	4
1865	1,412	6	9	5,927	7	10				7,339	14	7
1866	3,192	1	3	5,589	12	11	620	0	0	9,401	14	2
1867				5,106	10	8	620	0	0	5,726	10	8
1868				4,582	11	1	620	0	0	5,202	11	1
1869	10,844	9	4	4,483	5	8	620	0	0	15,947	15	0
1870	14,150	1	7	4,537	19	5				18,688	1	0
1871	22,524	8	1	3,590	10	0				26,114	18	1
1872	56,811	18	4	3,246	16	0	1,580	0	0	61,638	14	4
1873	14,488	5	7	4,041	8	1	1,598	15	3	20,128	8	11
Totals.....£	134,447	19	7	60,553	2	3	5,658	15	3	200,659	17	1

NOTE.—The information for the years 1862, 1863, and 1864 was furnished by the Auditor General.

The Treasury, New South Wales,
16th November, 1874.

F. KIRKPATRICK,
Accountant.

No. 4.

RETURN showing the distribution of the Rents of Church and School Lands (and Interest on Investments) among the several Religious Denominations, from the year 1862 to 31st December, 1873.

Year	Total Annual Receipts for Rents and Interest on Investments	Expenses of Management and other Charges.					Net Annual Amounts available for Church and School Purposes.	Church Purposes.					School Purposes.	Total.
		Expenses of Management.	Survey of Lands and Repairs to Roads, &c.	Refunds and other Miscellaneous Charges.	Total Charges against Revenue.	Church of England.		Presbyterian Church.	Wesleyan Church.	Roman Catholic Church.	Total.			
1862	7,352 15 11	100 0 0		34 8 9	134 8 9	7,218 7 2	2,694 15 10	525 6 4	289 11 5	1,046 6 10	5,155 19 5	2,062 7 9	7,218 7 2	
1863	6,171 11 10	100 0 0		2 0 0	102 0 0	6,069 11 10	2,265 18 5	441 14 5	243 0 8	1,384 5 10	4,355 8 4	1,734 8 6	6,069 11 10	
1864	5,922 12 10	222 15 6		3 0 0	225 15 6	5,696 17 4	2,126 15 7	414 11 10	228 10 9	1,299 5 8	4,069 3 10	1,627 13 6	5,696 17 4	
1865	5,927 7 10	125 0 0		1 0 0	126 0 0	5,801 7 10	2,165 16 1	422 3 11	232 14 6	1,323 2 6	4,143 17 0	1,657 10 10	5,801 7 10	
1866	6,210 12 11	100 0 0	85 13 6	174 19 2	360 12 8	5,850 0 3	2,183 19 1	425 14 9	234 13 6	1,334 4 3	4,178 11 7	1,671 8 8	5,850 0 3	
1867	5,726 10 8	100 0 0		42 5 0	142 5 0	5,584 6 8	2,084 15 0	406 8 0	221 0 3	1,273 12 3	3,988 15 6	1,595 10 2	5,584 6 8	
1868	5,202 11 1	100 0 0	110 0 0		210 0 0	4,992 11 1	1,863 16 10	363 6 8	200 5 7	1,158 13 1	3,566 2 2	1,425 8 11	4,992 11 1	
1869	5,103 5 8	100 0 0	513 0 1		613 0 1	4,490 5 7	1,676 6 7	326 15 8	180 2 8	1,024 1 11	3,207 0 10	1,282 18 9	4,490 5 7	
1870	4,537 19 6	100 0 0	1,827 9 6	48 1 6	1,975 11 0	2,562 8 5	955 12 9	186 9 7	102 15 6	584 8 2	1,830 6 0	732 2 5	2,562 8 5	
1871	*5,902 19 7	297 11 4			297 11 4	5,605 8 3	2,092 12 9	407 18 9	224 17 4	1,278 8 6	4,003 17 4	1,601 10 11	5,605 8 3	
1872	4,826 16 0	100 0 0	48 0 0	180 14 0	328 14 0	4,498 2 0	1,679 5 0	327 7 1	180 8 10	1,025 17 8	3,212 18 7	1,285 3 5	4,498 2 0	
1873	†5,814 17 4	100 0 0		114 5 9	214 5 9	5,600 11 7	2,090 16 7	407 11 8	224 13 5	1,277 6 7	4,000 8 3	1,600 3 4	5,600 11 7	
	68,700 1 1	1,545 6 10	2,584 3 1	600 14 2	4,730 4 1	163,909 17 0	23,881 10 0	4,635 8 8	2,566 3 5	14,589 12 3	45,692 14 10	18,277 2 2	63,909 17 0	

NOTE.—The information for the years 1862, 1863, and 1864 was supplied by the Auditor General.

* Inclusive of an amount of £2,212 9s. 7d., improperly deducted from the amounts available for distribution in previous years.

† Inclusive of an amount of £174 14s., improperly deducted from the amount available for distribution for the year 1872.

The Treasury, New South Wales,
12th November, 1874.

F. KIRKPATRICK,
Accountant.

3

No. 7.

RETURN showing the total sums annually paid out of the Consolidated Revenue Fund to Clergymen of each Religious Denomination, as stipend or allowance for services rendered in the capacity of Chaplain to the Gaols, Asylums, or other Public Institutions, from the year 1862 to 31st December, 1873.

DENOMINATION.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	Total.
	£	£	£	£	£	£	£	£	£	£	£	£	£
Church of England	365	365	355	365	440	520	595	600	500	495	515	520	5,635
Church of Scotland	100	100	100	100	100	50	50	50	50	50	50	50	850
Roman Catholic Church.....	365	365	365	365	440	495	570	600	500	495	515	520	5,595
TOTAL.....	£ 830	830	820	830	980	1,065	1,215	1,050	1,250	1,040	1,080	1,090	12,080

NOTE.—The information for the years 1862, 1863, and 1864 was furnished by the Auditor General.

The Treasury, New South Wales,
16th November, 1874.

F. KIRKPATRICK,
Accountant.

No. 8.

RETURN showing the total sums annually paid out of the Consolidated Revenue Fund to Clergymen of each Religious Denomination, as stipend, under Schedule C, from the year 1862 to the 31st December, 1873.

Year.	Church of England.	Roman Catholic Church.	Presbyterian Church.	Wesleyan Methodist Church.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1862	15,099 14 8	8,266 13 4	2,877 0 0	1,572 10 6	27,815 18 6
1863	14,960 7 6	8,498 0 1	2,852 0 0	2,495 0 10	28,805 8 5
1864	15,454 0 5	8,033 19 0	2,614 6 8	1,179 7 9	27,281 13 10
1865	14,111 1 2	7,430 10 2	3,089 13 4	1,572 10 4	26,203 15 0
1866	13,977 12 0	7,445 16 8	2,852 0 0	1,572 10 4	25,847 19 0
1867	13,254 17 0	7,275 0 0	2,852 0 0	1,572 10 4	24,954 7 4
1868	12,766 17 3	7,083 6 8	2,846 15 1	1,965 12 11	24,662 11 11
1869	12,370 3 8	6,796 7 5	2,487 6 11	1,572 10 4	23,226 8 4
1870	12,186 9 6	6,583 6 8	2,179 18 4	1,572 10 4	22,522 4 10
1871	10,994 5 0	6,416 13 4	1,942 11 2	1,572 10 0	20,925 19 6
1872	12,186 12 0	6,034 5 11	1,822 11 3	1,484 1 1	21,527 10 3
1873	11,236 9 6	5,804 3 4	1,702 0 0	1,372 10 0	20,115 2 10
Totals	£ 158,528 9 8	85,668 2 7	30,118 2 9	19,504 4 9	293,888 19 9

NOTE.—The information for the years 1862, 1863, and 1864 was furnished by the Auditor General.

The Treasury, New South Wales,
16th November, 1874.

F. KIRKPATRICK,
Accountant.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CONTAGIOUS DISEASES PREVENTION BILL.

(PETITION AGAINST—COMMITTEE OF PRIVILEGES OF THE WESLEYAN METHODIST CHURCH.)

Ordered by the Legislative Assembly to be printed, 29 June, 1875.

To the Honorable the Legislative Assembly of New South Wales.

The Memorial of the Committee of Privileges of the Wesleyan Methodist Church in New South Wales,—

HUMBLY SHOWETH :—

That your Memorialists entertain strong and conscientious objections on social, moral, and religious grounds to the Bill now before your Honorable House, entitled "*A Bill for the prevention of Contagious Diseases.*" Your Memorialists are aware of the various considerations based upon economical and sanitary grounds on which it is sought to justify such legislation as is now proposed, but they are convinced that the advantages anticipated by the advocates of this measure will not be realised, and that any benefits that might possibly accrue from such legislation would be more than counterbalanced by its essentially immoral character and tendency. Your Memorialists have reason to know that in England, where similar legislation has been in force for several years, there has been no diminution of disease, and that on the Continent of Europe, where such legislation has been in existence on a large scale for a lengthened period, the increase of disease and the moral and physical degeneracy that have ensued fully vindicate their convictions. Your Memorialists would refer your Honorable House to the testimony borne by Mr. Stansfield, M.P., in regard to the working of the English Contagious Diseases Acts: "These Acts have been in operation for eight years and the Royal Commissioners had reported that there was no evidence whatever presented to them that any diminution of disease had arisen from the system." Your Memorialists are of opinion that the cruelties necessarily attendant upon the working of such enactments as the one under consideration should lead your Honorable House to hesitate before introducing them to this colony. Founding their views on the principles of New Testament morality, your Memorialists hold that no argument drawn from supposed expediency can justify measures which offer immunity to offenders against the law of God, and thus smooth the path to ruin.

Your Memorialists therefore pray that your Honorable House will not consent to pass the second reading of the said Bill.

And your Memorialists, as in duty bound, will ever pray.

Signed on behalf of the Committee of Privileges of the Wesleyan Methodist Church.

SAMUEL WILKINSON,

President of the Conference.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

CONTAGIOUS DISEASES PREVENTION BILL.

(PETITION AGAINST—ASSOCIATION FOR THE PROMOTION OF MORALITY.)

Ordered by the Legislative Assembly to be printed, 2 July, 1875.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the New South Wales Association for the promotion of Morality,—

RESPECTFULLY SHOWETH:—

1. That your Petitioners are an Association formed for the purpose of promoting Morality in this Colony.

2. That your Petitioners have had under their consideration a Bill now before your Honorable House entitled "A Bill for the Prevention of Contagious Diseases."

3. That your Petitioners regard the proposed Bill as one fraught with serious danger to the morals of the people of this Colony, inasmuch as, should it become law, it will have the effect of affording public sanction to a course of life which has hitherto been regarded as both sinful and criminal, of protecting those who pursue that course of life in their immoral practices, and of creating in the minds of the people at large a conviction that prostitution is both justifiable and expedient.

4. That your Petitioners are informed that a Royal Commission, appointed to inquire into the operation of similar Acts in England, passed in the years 1866-1869, the provisions of which Acts, however, extended on to certain garrison and naval towns, after sitting fifty-four days, examining eighty-five witnesses, and asking twenty thousand questions, amongst other results of this elaborate inquiry reported as follows, viz.:—"That there is no distinct evidence that any diminution of disease among the men of the Army and Navy, which may have taken place, is attributable to a diminution of disease contingent upon the system of periodical examination among the women with whom they have consorted."

5. That your Petitioners would further express their conviction that, whatever may be the supposed sanitary advantages of adopting such regulations as are proposed in the aforesaid Bill, nothing can possibly compensate for the disastrous effects which it must have upon the cause of virtue and good morals, or justify the superseding, upon grounds of human expediency, the principles of Divine Law.

6. That your Petitioners, therefore, pray that your Honorable House will withhold your sanction from the aforesaid Bill.

And your Petitioners will ever pray, &c.

For the Association,

F. SYDNEY,
President.

WILLIAM M. COWPER,
Vice-President.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CONTAGIOUS DISEASES PREVENTION BILL.

(PETITION AGAINST—PRESBYTERY OF SYDNEY.)

Ordered by the Legislative Assembly to be printed, 24 July, 1875, A.M.

To the Honorable the Legislative Assembly, in Parliament assembled.

The Petition of the Presbytery of Sydney,—

HUMBLY SHOWETH :—

That your Petitioners have viewed with alarm the Bill now before your Honorable House for the Prevention of Contagious Diseases.

That your Petitioners, after consideration of said Bill, object to it for the following reasons :—

1. It indirectly encourages prostitution.
2. It is partial and unfair towards fallen woman, and leaves out entirely the other sex, who are equally guilty of immorality, and who, because of vicious indulgence, are liable to contagious disease, and to spread said disease.
3. It is inadequate to prevent the spread of contagious disease, while it promotes indirectly the vice which occasions it.
4. It recognizes a class of persons as voluntarily submitting to examination for the very purpose of prostitution, and thus affords facilities for licentiousness and the corruption of youth.
5. It exposes virtuous women to insult on the part of officers suspecting them.
6. It makes no provision for suppressing the evil of prostitution.

For these reasons, your Petitioners pray your Honorable House not to pass said Bill into law. And your Petitioners will ever pray.

Signed in name and by authority of the Presbytery of Sydney, on this 22nd day of July, 1875,
by me,—

P. F. MACKENZIE, Moderator,
Minister of St. John's Presbyterian Church, Paddington.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PUBLIC VEHICLES REGULATION ACT REPEAL BILL.

(PETITION IN FAVOR OF—MAYOR AND ALDERMEN OF SYDNEY.)

Ordered by the Legislative Assembly to be printed, 6 May, 1875.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in
Parliament assembled.

The humble Petition of the Mayor, Aldermen, and Citizens of the City of Sydney,—

MOST RESPECTFULLY SHOWETH :—

That a Bill is now under the consideration of Parliament, intituled “ *A Bill to repeal an Act intituled ‘ An Act to regulate Vehicles in the City and Suburbs of the Police District of Sydney.’* ”

That your Petitioners believe the working of the present Act for the regulation of Licensed Vehicles has been not only unsatisfactory to the general public, but that the passing of the said Act has deprived your Petitioners of a large amount of revenue to which they conceive they are fairly and equitably entitled.

Your Petitioners therefore humbly pray that the said Bill, now under the consideration of your Honorable House, may be passed into law.

And your Petitioners, as in duty bound, will ever pray.

(L.S.) B. PALMER,
Mayor.

The Common Seal of the Mayor, Aldermen, and Citizens of the City of Sydney, was affixed hereto by Charles Henry Woolcott, Town Clerk, of the City of Sydney, this fourth day of May, A.D. 1875,—

CHAS. H. WOOLCOTT,
Town Clerk.

1875.

NEW SOUTH WALES.

PUBLIC VEHICLES REGULATION ACT OF 1873.

(BY-LAW.)

Presented to Parliament, pursuant to Act 36 Vict. No. 14, sec. 15.

Colonial Secretary's Office,

Sydney, 21st July, 1875.

The following By-law, made by the Metropolitan Transit Commissioners, having been confirmed by His Excellency the Governor, with the advice of the Executive Council, is published in accordance with the provisions of the "Public Vehicles Regulation Act of 1873."

JOHN ROBERTSON.

THE Board of Metropolitan Transit Commissioners, constituted and empowered by the Public Vehicles Regulation Act of 1873, do, by virtue of the power and authority in them vested by the said Act, declare that the following Public Stands, as fixed and declared by Schedule H, under the By-laws now in force for regulating Licensed Vehicles, shall be and the same are hereby repealed.

Market-street, south side, from George to Pitt Streets, for 8 carriages.

Victoria-street, east side, at Upper William Street, for 10 carriages.

And it is hereby declared that the following places are appointed as Public Stands for carriages:—

Market-street, south side, from George to Pitt Streets, first carriage to stand in George-street, north of entrance to "Royal Hotel," for 8 carriages.

Victoria-street, west side, at Upper William Street, first four carriages to stand on the east side of Victoria-street, at William-street, for 20 carriages.

And it is also hereby declared that so much of the Time-tables as relates to the Omnibuses plying to and from Erskine-street, in the City of Sydney and Crescent-street, Newtown—Wynyard-square and Glebe Point—and Fort-street and Glebe,—shall be and the same are hereby repealed, and that the following Time-tables shall be adopted in lieu thereof.

Time-table for Omnibuses plying to and from Erskine-street and Crescent-street, Enmore.

Omnibuses shall start from the north side of Crescent-street, Enmore, for Erskine-street, Sydney:—

From 7.30 a.m. to 8 a.m., every ten minutes.
 „ 8 a.m. to 11 a.m., every five minutes.
 „ 11 a.m. to 4 p.m., every seven minutes.
 „ 4 p.m. to 8 p.m. every five minutes.
 „ 8 p.m. to 10.30 p.m. every ten minutes.

And each omnibus shall perform the journey to and from Crescent-street, Enmore, to Erskine-street, north side, at York-street, in 30 minutes, and the parts of the journey as follows:—

From Crescent-street to Newtown Toll-bar in 6 minutes.
 „ Newtown Toll-bar to Parramatta-street in 5 minutes.
 „ Newtown Road to Railway in 5 minutes.
 „ Railway to Liverpool-street in 5 minutes.
 „ Liverpool-street to Royal Hotel in 5 minutes.
 „ Royal Hotel to Erskine-street in 4 minutes.
 Erskine-street Stand 5 minutes.

From Erskine-street to Royal Hotel in 4 minutes.
 „ Royal Hotel to Liverpool-street in 5 minutes.
 „ Liverpool-street to Railway in 5 minutes.
 „ Railway to Newtown Road in 5 minutes.
 „ Parramatta-street to Newtown Toll-bar in 5 minutes.
 „ Newtown Toll-bar to Crescent-street, Enmore, in 6 minutes.
 „ Crescent-street to Stanmore Road in 5 minutes.

Time-table for Omnibuses plying to and from Wynyard-square and Glebe Point.

Omnibuses shall start from Glebe Point 100 yards from the Bay, for Wynyard-square, York-street, east side—

From 7.40 a.m. to 5 p.m., every ten minutes.
 „ 5 p.m. to 7 p.m., every five minutes.
 „ 7 p.m. to 10.30 p.m., every ten minutes.

And each omnibus shall perform the journey to and from Glebe Point to Wynyard-square in 30 minutes, and the parts of the journey as follows:—

From Glebe Point to Parramatta Road in 11 minutes.
 „ Parramatta Road to Railway in 5 minutes.
 „ Railway to Liverpool-street in 5 minutes.
 „ Liverpool-street to Royal Hotel in 5 minutes.
 „ Royal Hotel to Erskine-street in 4 minutes.
 Wynyard-square stand 5 minutes.

From Wynyard-square to Royal Hotel in 4 minutes.
 „ Royal Hotel to Liverpool-street in 5 minutes.
 „ Liverpool-street to Railway in 5 minutes.
 „ Railway to Glebe Road in 5 minutes.
 „ Parramatta Road to Glebe Point in 11 minutes.

Time-table for Omnibuses plying to and from Glebe and Fort-street, Miller's Point.

Omnibuses shall start from the centre of the Parramatta Road, at the Glebe Point Road, for Fort-street, Miller's Point—

From 7.40 a.m. to 11 p.m. every five minutes.

And each omnibus shall perform the journey to and from the Glebe to Fort-street, Miller's Point, in 30 minutes, and the parts of the journey as follows:—

From Glebe Point Road to Railway in 5 minutes.
 „ Railway to Liverpool-street in 5 minutes.
 „ Liverpool-street to Royal Hotel in 5 minutes.
 „ Royal Hotel to Essex-street in 5 minutes.

From Essex-street to Fort-street in 5 minutes.
 „ Fort-street to Kent-street in 5 minutes.
 „ Kent-street to Lower George Street in 5 minutes.
 „ Fort-street to Essex-street in 5 minutes.
 „ Essex-street to Royal Hotel in 5 minutes.
 „ Royal Hotel to Liverpool-street in 5 minutes.
 „ Liverpool-street to Railway in 5 minutes.
 „ Railway to Glebe Point Road in 5 minutes.

Passed by the Board of Metropolitan Transit Commissioners this seventeenth day of May, in the year of our Lord one thousand eight hundred and seventy-five.

B. PALMER,
 Chairman.

(L.S.) MICL. CHAPMAN,
 Commissioner.

EDMUND FOSBERY,
 Commissioner.

W. J. MERRIMAN,
 Registrar.

1875.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

SHIPPING BUSINESS OF THE AGENT GENERAL.

(TELEGRAMS, &c.)

Ordered by the Legislative Assembly to be printed, 13 April, 1875.

PAPERS laid on the Table in answer to Mr. Buchanan's Questions.

No. 1.

TELEGRAM from THE COLONIAL SECRETARY, SYDNEY, to THE AGENT GENERAL, LONDON, 1st April, 1875.

How is shipping business of your office paid? What is the average cost per ton for management? What was the cost per ton under former arrangements? Who has charge of it, and how long has he had it? How much has he received in all from you, and is he allowed any perquisites from other parties? Have London ships of equal quality ever been rejected in favour of ships at out-ports, notwithstanding willingness to take lower rates?

No. 2.

TELEGRAM from THE SECRETARY TO THE AGENT GENERAL IN LONDON to THE COLONIAL SECRETARY.
Received, 7 April, 1875.

NOTHING paid now for shipping business, except Liverpool shipments, for which (1) Goffey receives 6d. per ton. These shipments unimportant, and will soon cease. Under former arrangement Shipping Clerk received (2) £200 per annum, but since July, 1873, B. F. Lloyd and Company have conducted shipping business, except Liverpool—they received nothing (3) from Agent General, but doubtless get commission from owners; this, however, is a trade allowance—which Government could not obtain, nor could Agent General, either personally or through Shipping Clerk, make such favourable terms as an experienced Shipping Agent, who knows the state of the market generally for dead weight. Agent General advertises at Jerusalem and Lloyd's Rooms, inviting owners to apply direct to him for freight, and Lloyd quotes survey available. Ship for approval of Agent General. London freights have been kept down to 20s., and no ships at or under this rate have ever been rejected. Ships at ports in north have been charter (4) for whole cargoes at average rate of 27s. 6d., but this increase has been compensated by reduced contractors' rates for delivery in north. Chartering absolutely necessary to meet requirements of rail contracts. (See letters to Public Works, 29 June, 30 October, 17 November last.) Chartering has also assisted to keep down ordinary freight, which has been 25s. to 30s. for merchants' iron, when we have been paying 20s. Consider than (5) Lloyd has assisted to carry out our very heavy shipments—sometimes over 4,000 tons in a month—most satisfactorily and economically. Copper (6) still forbidden word, (7) have therefore been unable to submit your telegram to him. Major Roberts could explain history and working of post (8) and present arrangements.

See copies of these letters appended to this paper.

1. Major Roberts says Goffey & Co. are Shipping Agents at Liverpool, and were responsible for the goods.

2. £200.

3. Major Roberts says B. F. Lloyd & Co. obtain tenders from shipowners or charterers, and submit them to Agent General. The goods are shipped to contractors thereof, who do not obtain payment until bills of lading are produced. Major Roberts believes there is no written agreement.

4. Evidently means "chartered."

5. Evidently "that."

6. Doubtless means "Sir Charles Cowper."

7. Evidently means "work."

8. Evidently means "past."

(Letters referred to in preceding Telegram.)

The Agent General to The Secretary for Public Works.

London, 3, Westminster Chambers, S.W.,
29 June, 1874.

Sir,

With reference to telegram dated 6th June, 1874 ("observe specification strictly packing fish-plates"), I have the honor to explain the circumstances under which the deviation presumed to be referred to was made.

The Darlington Iron Company advised seventy tons of fish-plates as ready for shipment last February. A very favourable engagement was made to send them by the "Tethys," at 12s. 6d., provided that they could be shipped *at once*. There was no time to prepare the boxes and pack the fish-plates, and after due consideration, having ascertained that it was most unusual to furnish packing, I sent them in bundles, in order to secure the ship. A reduction of 11s. was made on the contract rate, in consideration of the boxes not being supplied.

In all other shipments of fish-plates the provisions of the specification have been strictly adhered to.

It may be for your consideration, however, whether it is necessary to continue the system of packing. I understand that, as a rule, fish-plates are sent to all parts of the world, tied in bundles and oiled. If boxes were dispensed with, we should save about £1 per ton on the contract rate, besides a reduction on the amount of freight. The state in which the fish-plates shipped by the "Tethys" were received in Sydney will have enabled you to judge of the necessity of packing; and should you think that it may be dispensed with, I will arrange accordingly on receiving your instructions.

I have, &c.,

CHARLES COWPER.

Captain Jopp to The Secretary for Public Works.

3 Westminster Chambers, S.W.,
30 October, 1874.

Sir,

I have the honor to advise the shipment in the chartered ship "Duchess of Argyle," (referred to in telegram to Chief Secretary, dated 24th July last), of 11,077 rails, weighing 2,400 tons 1 cwt. 1 qr., from the Consett Iron Company, for the Yass to Wagga Wagga extension. Five invoices and corresponding bills of lading, together with copy of charter-party and receipt of owners for proportion of freight payable here, are enclosed herewith.

You will observe that the rate of freight is 30s., but that a deduction of 10s. has been made on the Consett Company's rate, consequent on the shipment having been at Newcastle instead of London. This reduces the actual cost, as compared with the average payment of 20s. for ships in London on the berth, to 20s. *plus* about 3s. per ton for the higher rate of insurance for a full cargo of rails,—a comparison which must be regarded as very favourable, considering the additional expenditure which must be anticipated when it becomes necessary to charter.

One-third of the freight, less 5 per cent. for three months, has been paid here, the remaining two-thirds net (£2,400 1s. 3d.) being payable in Sydney, in terms of the charter-party.

We have also now in course of shipment at Sunderland 1,700 tons of Consett rails in the "Arizona," at same freight and same deduction by the Company as for the "Duchess of Argyle"; and at Newcastle we are shipping in the "Ravenstonedale" for Newcastle, New South Wales, 1,400 tons of rails, fish-plates, and fastenings, under the Murrurundi to Tamworth contracts, at the very favourable rate of 25s., and with deductions by the contractors for the rails and fish-plates.

As indicated in Sir Charles Cowper's despatch, No. 160, of 29 June last, it is only by such arrangements as the above that we can hope to meet the heavy shipments which must be negotiated during the next few months.

In engaging freight to Newcastle, New South Wales, it is sometimes necessary to pay rather higher than to Sydney, but in cases where it would be requisite for you, if the materials were sent to Sydney, to send them on to Newcastle, the apparent increase of cost involved by our shipping direct to Newcastle would disappear; and in order to estimate this it would be convenient if we could be informed by telegram, if thought sufficiently important, what is your average rate from Sydney to Newcastle.

I have, &c.,

A. A. JOPP, Captain, R.E.,
(For Agent General.)

Captain Jopp to The Secretary for Public Works.

London, 3 Westminster Chambers, S.W.,
17 November, 1874.

(No. 191.)

Sir,

With reference to your letter, No. 74/4544, of 3rd September last, covering indent for 25 tons double-headed *iron* rails, to be ordered from the Landore Siemens-Steel Company, to replace rails lent to Messrs. Beilby & Scott, of Sydney, I have the honor to enclose copy of letter, dated 30th October, 1874, from the Managing Director of the Landore Company, stating that they cannot quote for iron rails. I also enclose copy of report, dated 4th November, 1874, from Mr. Shields, in consequence of which (having previously ascertained verbally his opinion) I telegraphed on the 3rd November to the Chief Secretary,—“Landore cannot supply iron rails, propose ordering 25 tons steel.”

I have communicated with Messrs. Scott & Archer, and they concur in the arrangement proposed. I will, therefore, order the 25 tons in steel, and as the Landore Siemens Company have also an order for 1,000 tons of steel rails of the same pattern, we shall obtain the 25 tons at the favourable rate of £11.7s. 6d. if shipped at Swansea, and £12 if shipped in London.

I have, &c.,

A. A. JOPP, Captain, R.E.,
(For Agent General.)

D.

D. M. Gordon, Esq., to Captain Jopp.
 Landore Siemens-Steel Company (Limited),
 Landore, Swansea, 30 October, 1874.

Dear Sir,

In reply to yours of yesterday, regarding 25 tons of iron rails, I regret that, as we work in steel only, I cannot quote for those required.

Yours, &c.,
 D. M. GORDON,
 Managing Director.

F. W. Shields, Esq., to The Agent General.
 6 Delahay-street, Westminster, S.W.,
 4 November, 1874.
 New South Wales Railways.

Dear Sir,

As requested by Captain Jopp's letter of 2nd instant, I beg to report on letter of 30th ultimo, from Landore Siemens-Steel Co., stating that they are unable to quote for the 25 tons of double-headed iron rails named in the indent enclosed in Mr. Rae's letter dated Sydney, 3rd September, 1874.

As it is quite impracticable to make, at any moderate cost in proportion to the amount of the contract, the preliminary arrangements for rolling so very small a quantity of iron rails, and as it appears that these rails are to be of the same section as the 200 and 800 tons of steel rails now also required from the Landore Co., I would recommend that 25 tons of steel rails instead of iron be obtained from the Landore Siemens Co., in conjunction with the two larger orders to be supplied by them as above mentioned.

I am, &c.,
 F. W. SHIELDS.

1875.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

TRIGONOMETRICAL SURVEY.

(COST AND CALCULATIONS, &c.)

Ordered by the Legislative Assembly to be printed, 21 April, 1875.

RETURN containing information asked for in the Assembly on the 20th April, 1875, by Mr. Bawden, M.L.A., laid on the Table of the House in accordance with the reply given by the Minister for Lands to Mr. Bawden's questions.

TUESDAY, 20 APRIL, 1875.

*Question:—*MR. BAWDEN *to ask* THE SECRETARY FOR LANDS,—

- (1.) What has been the total expenditure, to the 1st January, 1875, in connection with the operations in the Trigonometrical Survey of the Colony?
- (2.) What amount of work has been executed in the measurement of Base-line and Triangulation?
- (3.) What number of Trigonometrical Stations have been completed?
- (4.) What is the probable cost for Skeleton Survey of the Colony, at per acre, including field and office expenses?
- (5.) What is the probable maximum error at per mile?
- (6.) Has the Government taken any steps in verifying the Surveyor's computations of the Base-line, mathematical or otherwise?
- (7.) If so, will the report containing the result of such inquiry be laid upon the Table of this House, and when?

*Question.**Answer.*

No. 1.

"What has been the total expenditure, to the 1st January, 1875, in connection with the operations in the Trigonometrical Survey of the Colony?"

Base-line, Lake George—	£	s.	d.
Under Mr. Smalley	2,500	0	0
Under Surveyor General, since September, 1870	2,384	1	4
Base-line, Pymont	100	19	0
Triangulation.			
General Triangulation of the Colony	3,831	3	2
Triangulation of Sydney Harbour and Environs	716	1	9
	£9,532	5	3

The amount includes preliminary expenses in equipment, horses, plant, and instruments; one instrument alone costing £700.

Question.

"What amount of work has been executed in the measurement of Base-line and Triangulation?"

Answer.

No. 2.

Base-line measured, and towers built.

In pursuance of the Triangulation of the Colony, hills have been cleared and stations selected thereon, commencing on the Victorian boundary at Albury, thence north, crossing the Murrumbidgee, then east by Bowning to Lake George, from Bowning north to the Canobolas (near Orange), thence east to Mount York and Binda. This series, when completed, will end on the coast near Sydney.

From Lake George to Jellore (Nattai), this series will, when completed, terminate at the Sydney Observatory.

From Lake George north to Bathurst, excepting a break on the table-land about Crookwell. In consequence of this difficulty, which could not be overcome without great expenditure, it was determined to adopt the series above referred to, extending from Bowning to the Canobolas; the hills cleared in the broken series will however be available for detail hereafter.

Primary Triangulation of Sydney Harbour and environs completed from Ball's Head to head of Darling Harbour, and downwards to Dobroyd Hill and lower Light House.

Detail Triangulation of the whole Harbour frontage is complete as far as Ball's Head, excepting Darling Point to Shark Point, Glebe Island to A. S. N. Company's Works, Pyrmont, and North Shore, from Kiarabilli Point to Heads, affording a basis for twelve sheets of the large scale maps.

No. 3.

"What number of Trigonometrical Stations have been completed?"

Not more than six 1st class and twelve 3rd class stations can be said to be completed, as the beacons will not be put up till the observation of angles commences, which work has been in abeyance for more than twelve months, awaiting the arrival of the large Theodolite ordered from Europe early in 1873.

Ninety-six hills have been cleared, and sites for stations selected, besides a number partially cleared for sights only.

In Sydney Harbour and environs seventy-three stations and one hundred and thirty intersecctions.

No. 4.

"What is the probable cost for Skeleton Survey of the Colony, at per acre, including field and office expenses?"

Estimated at £227,000, to extend over twenty-seven years, and apply to all parts of the Colony suitable to trigonometrical operations.

No. 5.

"What is the probable maximum error per mile?"

With the 18-inch theodolite, $\frac{1}{2}$ an inch—with the 10 inch theodolite, 1 inch. In detail work with smaller instruments the error should not exceed from 4 to 6 inches per mile, but the amount of accuracy obtainable is simply a question of the time devoted to observing at each station, and this will depend very much upon the climate.

No. 6.

"Has the Government taken any steps in verifying the Surveyor's computations of the Base-line, mathematical or otherwise?"

Yes.

No. 7.

"If so, will the report containing the result of such enquiry be laid upon the Table of this House, and when?"

Copy of Mr. Hawkins' report, with the memo. which led to it, herewith.

A report is expected shortly from the Surveyor General, embracing the whole subject from the commencement of Triangulation in the colony up to the present.

INVESTIGATION OF COMPUTATION OF BASE-LINE.

MEMO. :—The measurement of the base-line at Lake George being now complete, and the computations performed as well as the Surveyors who made the measurement could perform them, it is now suggested that the data upon which these computations are based should be placed in the hands of some person totally independent of the work, and perhaps of the Department also, for the recalculation of the work. I may observe that Mr. Clarke, of the London, Liverpool, and Globe Insurance Company, was employed on a previous occasion to re-compute a portion of the line—afterwards abandoned—and I was much pleased at the care and ability displayed by him; but I would prefer leaving the choice of the person to the Honorable the Minister for Lands. The Government Astronomer is perhaps best qualified, but I would point out that he has been already appointed to the computation of the triangulation; and the same objection would now apply to him as to a member of my Department.

Surveyor General's Office,
16th June, 1874.

P. F. ADAMS.

The Under Secretary for Lands,—I would suggest the name of Mr. Hawkins as computer, provided the Surveyor General has no objection.—J.S.F., 20/6/74. I believe Mr. Hawkins to be thoroughly qualified for the duty.—P.F.A. To be appointed.—J.S.F., 24/6/74.

H. S. HAWKINS, Esq., to THE SECRETARY FOR LANDS.

SIR,

I have carefully checked the calculations made in connection with the base-line at Lake George; and having recomputed the whole on a principle which, in some respects, differs from that applied by the Surveyor General, I have the honor to report that the results agree very closely, since for five of the seven sections they may practically be considered identical, whilst the lengths which I obtain for sections III and VI are respectively about one-seventh of an inch less, and greater than those deduced from the Survey Office calculations; so that, in the whole length of a little more than $5\frac{1}{2}$ miles, the difference between the two results is less than a twenty-fifth part of an inch.

This being premised, I proceed to explain the nature of the difference between the principles adopted by the Surveyor General and myself in applying the data on which the computations are based, and to make the explanation intelligible, I must first briefly describe the process of measurement and the implements used.

The whole line, 29,286 feet in length, was divided into seven sections, of which six, varying in length from 2,132 to 8,938 feet, were measured and re-measured in the opposite direction, whilst the seventh, 570 feet long, was calculated from a short base-line, measured for the purpose. Each of the other sections was subdivided into portions of about 700 feet (the average day's work), which were twice measured with a set of rods, the aggregate length of which is about 30 feet, and the two results were compared.

The very small discrepancies between the lengths thus found constitute what, for the sake of brevity, I shall throughout this report term "errors."

The rods are made of well seasoned pine; and their length can at any time be ascertained with very great precision, by comparing them with a standard iron bar, provided that the coefficient of expansion of the latter for a given change of temperature is known. If, therefore, their variation between any two comparisons were uniform, their exact length at any stage of the measurement would be known, and the only difficulty would be one of a purely mechanical nature.

It is, however, found that their irregularities are so great that in the absence of any known law or rate of their variation recourse must be had to some method of interpolation to obtain their mean lengths during the day.

Accordingly the Surveyor General naturally assumed that the arithmetic mean between the results of two comparisons of the rods with the standard bar must be taken as this mean value, and this I have also adopted wherever two comparisons were made on the same day. This was done throughout four sections; and with such care was the measurement performed by Messrs. Betts and Vessey, that the greatest error is $\frac{1}{15}$ of an inch in 750 feet, or $\frac{1}{11250}$ part of that length, whilst the average error in these sections is not more than one-third of this, a result which I believe has rarely, if ever, been surpassed.

For the six measurements of the other three sections, which were first dealt with, as the necessity of making comparisons at the beginning and end of each day's work had not then been recognized, in only one case was this done throughout, there being in the other five cases but one comparison, either in the morning or the evening; whilst for six lengths none were made on the days when the measurement was performed. In these three sections therefore the errors are proportionately larger than in the other four, and are greatest in the last-named six cases; but even here the greatest is but $\frac{1}{32}$ of an inch in 1,500 feet.

In the hope of diminishing these discrepancies I applied two different kinds of arithmetical interpolation, and afterwards, finding that in every instance which had come under my observation there was an increase in the length of the rods during the day, I collected all the double comparisons made during the measurement of the line, and thus found the daily increase of the set for each month. This was very irregular, and was greatest in March, when it was more than double the average of the other months. From these data I deduced formulae for the approximate corrections for single comparisons, depending in the first instance on the monthly variations, and next, on the daily change of temperature of the rods.

With respect to these four methods, it is only necessary to state that each considerably diminished some of the errors, but increased others; whilst the difference between the extreme values thus obtained for the length of the line was less than one-fifth of an inch—a result which supplies an independent proof of the extreme accuracy of the measurement.

Ultimately

Ultimately I came to the conclusion that as the rods do not vary according to any known law, and exhibit no trace of regularity in their daily or monthly changes, the most legitimate correction for single comparisons must depend on the mean daily increase of the set, as deduced from those double comparisons only which were made during the measurement of the three sections in which it was to be applied.

By tabulating these I obtained '0062202 of an inch for the value of this correction, half of which must be added or subtracted according as the comparison was made in the morning or evening, to obtain the mean lengths during the day, whilst for those days on which no comparison was made the mean of the two nearest values thus found is used.

By the application of this principle to sections II, III, and VI, the sum of all the errors, irrespective of sign and the limit of probable error are diminished in each case—the former, on the average, by about 15 per cent., and the latter by 20 per cent.; so that the lengths thus found are probably nearer the truth than those given by any other method.

The difference of the results found by the Surveyor General and myself is accounted for as follows:—In the measurement of section III the majority of the comparisons were made in the evening; so that the average length of the rods during the day being less than the observed values, the length found from the corrected values is also less, the difference being '144 of an inch; whilst in section VI the length thus found is increased by '135 of an inch, since most of the comparisons were made in the morning. These corrections are nearly equal, numerically, but of opposite signs; so that the length which I obtain for the whole line, or 29236 066 feet, differs from that found by the Surveyor General by so small a quantity that, when expressed in feet, it does not amount to a significant digit in the seventh plan of figures.

Finally, I have calculated the probable limit of error in each section, and find that it is an even chance that in the whole length of 5½ miles there is not an error of three-quarters of an inch; also, that is 13'1, that it does not amount to 2 inches.

The tabulated double comparisons from which the average daily increase of the set of rods is deduced are appended, together with the lengths of the several sections, as calculated by the Surveyor General and myself, with the corresponding limits of error.

I have, &c.,

H. S. HAWKINS, M.A., F.I.A.

Balmain, Oct., 17/74.

Submitted, 5 November. I have perused this paper with very great pleasure. The results are highly satisfactory.—J.S.F., 10/11/74. The Surveyor General.—W.W.S., B.C., 11 Nov., 1874.

AVERAGE DAILY INCREASE OF RODS.

Set differs from 30 feet.

Date.	Morning.	Evening.	Date.	Morning.	Evening.
1873.	Inches.	Inches.	1873.	Inches.	Inches.
16 January	'0094557	'0056868	1 April	'0251632	'0219273
	—	—	2 "	'0315005	'0256786
7 February	'0199982	'0165785	3 "	'0297667	'0306046
	—	—	4 "	'0315923	'0219842
10 March	'0142693	'0103591	5 "	'0308381	'0232797
17 "	'0256812	'0095673	6 "	'0324456	'0242964
19 "	'0276611	'0135349	7 "	'0307447	'0259708
25 "	'0361270	'0213249	8 "	'0392945	'0299990
26 "	'0343063	'0233937	9 "	0317940	'0299107
27 "	'0356972	'0219983	10 "	'0365843	'0318188
28 "	'0401878	'0263848	11 "	'0341360	'0342120
29 "	'0322397	'0245112	19 "	'0363644	'0300189
31 "	'0283205	'0215348	21 "	'0336201	'0369128
			22 "	'0332596	'0360845
Total	2744801	1726090	23 "	'0359814	'0346645
			24 "	'0326276	'0325995
			25 "	'0325995	'0290858
			26 "	'0417584	'0410721
			28 "		
			Total	'6000709	'5401182

Total increase—

Month.	Number of Days.	Inches.
January	1	'0151425
February	1	'0034197
March	9	'018711
April	18	'0599527
	29	'1803860

Average daily increase = '0062202 inches.

MEAN

MEAN LENGTHS OF SECTIONS AND PROBABLE LIMIT OF ERROR.

Section.	Survey Office		Mr. H. S. Hawkins.	
	Length in Feet.	Limit of Error.	Length in Feet.	Limit of Error.
I.	2132.7446	.0042	2132.7446	.0041
II.	5978.5630	.0165	5978.5605	.0141
III.	4866.8625	.0150	4866.8505	.0119
IV.	8938.4158	.0127	8938.4158	.0127
V.	570.9727	.0032	570.9729	.0032
VI.	2494.2144	.0098	2494.2257	.0078
VII.	4304.2964	.0087	4304.2963	.0087
Mean Length	29286.0694	.0701	29286.0663	.0625

Sydney: Thomas Richards, Government Printer.—1875.

128—B

[6d.]

1875.

NEW SOUTH WALES.

VACCINATION.

(REPORT FOR 1874.)

Presented to Parliament by Command.

THE ACTING MEDICAL ADVISER TO THE GOVERNMENT TO THE COLONIAL SECRETARY.

Medical Adviser's Office.

SIR,

I have the honor to forward the Annual Report of Vaccinations performed by the Public Vaccinators of the Colony during the year 1874.

From the Returns appended it appears that 826 children have been vaccinated successfully in the Country Districts under one year of age, 1,581 from one to five years, and 828 from five to ten years.

In Sydney and the Suburbs 492 children have been successfully vaccinated under one year, 827 from one to five years, and 239 from five to ten years. The total numbers of successful vaccinations being,—

For the Country Districts	...	...	...	...	3,274
For Sydney and Suburbs	...	...	...	...	1,558
And for the whole Colony	...	...	...	...	4,832

I have carefully examined the existing statistics of the Colony with the view of ascertaining if possible the proportion of its inhabitants who have not been vaccinated, but am quite unable to arrive at reliable and satisfactory conclusions.

The subject of re-vaccination is one of the highest importance, and I have thought it desirable to append the published remarks in reference to it, recently issued by the "Medical Department of the Privy Council Office."

Considering the important bearing of these questions upon the health of the community, I have to recommend that, when the next Census is taken, inquiries should be made to ascertain how many of the existing population have been vaccinated, and how many re-vaccinated.

Until this has been done, it will be impossible to arrive at definite conclusions upon which alone it is safe to legislate with the view of rendering "public vaccination effective."

The suggestion made by the Medical Adviser to the Government, in his last Report, has been carried out by the Government, through the Agent General in London, and a small supply of vaccine lymph will in future be forwarded from the National Vaccine Institution in addition to the usual supply sent out by every alternate mail.

In the correspondence between the Agent General, Dr. Seaton, of the National Vaccine Institution, and Dr. Marsdon, of the London Small-pox Hospital, the two latter gentlemen strongly urge that medical men should depend as much as possible upon arm to arm vaccination, and in fact "never use preserved lymph when they can help it."

This is most valuable advice, but it necessitates the establishment of larger vaccination districts than at present exist.

I have, &c.,

ALFRED ROBERTS,
Acting Medical Adviser.

APPENDIX.

Medical Department of the Privy Council Office.

RE-VACCINATION.

By vaccination in infancy, if thoroughly well performed and successful, most people are completely insured for their whole life-time against an attack of small-pox; and in the proportionately few cases where the protection is less complete, small-pox, if it be caught, will, in consequence of the vaccination, generally be so mild a disease as not to threaten death or disfigurement. If, however, the vaccination in early life have been but imperfectly performed, or have, from any other cause, been but imperfectly successful, the protection against small-pox is much less satisfactory; neither lasting so long, nor while it lasts, being nearly so complete, as the protection which first-rate vaccination gives. Hitherto, unfortunately, there has always been a very large amount of imperfect vaccination, and in consequence the population always contains very many persons who, though nominally vaccinated, and believing themselves to be protected against small-pox, are really liable to infection, and may in some cases contract as severe forms of small-pox as if they had never been vaccinated. Partly because of the existence of this large number of imperfectly vaccinated persons, and partly because also even the best infantine vaccination sometimes in process of time loses more or less of its effect, it is advisable that all persons who have been vaccinated in infancy should as they approach adult life undergo re-vaccination.

Generally speaking, the best time of life for re-vaccination is about the time when growth is completing itself, say from fifteen to eighteen years of age, and persons in that period of life ought not to delay their re-vaccination till times when there shall be special alarms of small-pox. In proportion, however, as there is prevalence of small-pox in any neighbourhood, or as individuals are from personal circumstances likely to meet cases of infection, the age of fifteen need not be waited for, especially not by young persons whose marks of previous vaccination are unsatisfactory. In circumstances of special danger, every one past childhood, on whom re-vaccination has not before been successfully performed, ought, without delay, to be re-vaccinated. Re-vaccination, once properly and successfully performed, does not appear ever to require repetition. The nurses and other servants of the Small-pox Hospital when they enter the service (unless it is certain that they have already had small-pox) are invariably submitted to vaccination, which, in their case, is generally re-vaccination, and is never afterwards repeated; and so perfect is the protection, that though the nurses live in the closest and most constant attendance on small-pox patients, and though also the other servants are in various ways exposed to special chances of infection, the resident Surgeon of the Hospital, during his thirty-four years of office there, has never known small-pox affect any one of these nurses or servants.

Legal provisions for re-vaccination are made in the 8th section of the Vaccination Act, 1867, and in section IV of the Regulations which the Lords of the Council, under authority of the Act issued in their order of February 18th, 1868.

Under these provisions re-vaccination is now performed by all Public Vaccinators at their respective stations, and so far as is not inconsistent with the more imperative claims for primary vaccination, any person who ought to be re-vaccinated may, on applying to the public station of the District in which he resides, obtain re-vaccination at the public expense.

TABLE A.

COUNTRY DISTRICTS.

RETURN showing the Number of Children Vaccinated by the several Government Vaccinators in the Colony, during the year 1874.

District.	Under 1 year of age.				From 1 to 5 years.				From 5 to 10 years.				Total number of cases.			
	Male.	Female.	Total.	Successful.	Male.	Female.	Total.	Successful.	Male.	Female.	Total.	Successful.	Male.	Female.	Total.	Successful.
Albury	40	41	81	74	60	59	119	108	4	9	13	12	104	109	213	194
Armidale	2	4	6	6	2	3	5	5	6	...	6	6	10	7	17	17
†Armidale	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
†Adelong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bathurst	5	1	6	6	10	5	15	15	1	...	1	1	16	6	22	22
*Bega	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
†Berrima	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
†Binalong and Burrows	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
†Bourke	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bombala	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
†Braidwood	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40
*Camden	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Carcoar	6	3	9	9	10	7	17	17	...	1	1	1	16	11	27	27
Dubbo	1	1	2	2	4	2	6	6	2	...	2	2	7	3	10	10
Deniliquin	18	18	36	35	13	9	22	21	2	2	4	4	33	29	62	60
Dungog	5	11	16	16	6	2	8	8	2	...	2	2	13	13	26	26
†Forbes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gulgong	46	32	78	75	173	166	339	328	232	191	423	411	451	389	840	814
†Goulburn	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Grafton	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Gundagai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Grenfell	6	3	9	9	6	5	11	11	2	2	4	4	14	10	24	24
*Hill End	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Inverell	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kempsey West	2	1	3	2	1	6	7	3	2	1	3	3	5	8	13	8
Kiama	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lambton	38	38	76	71	52	46	98	98	19	13	32	32	109	97	206	201
Mudgee	36	24	60	60	26	23	49	49	3	8	11	8	65	55	120	117
*Molong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Morpeth	23	21	44	44	64	50	114	114	15	13	28	28	102	84	186	186
Maitland	35	32	67	67	81	61	142	142	21	17	38	38	137	110	247	247
Muswellbrook	9	10	19	19	7	10	17	17	5	6	11	11	21	26	47	47
†Moruya	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
†Macdonald River	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newcastle	50	51	101	97	70	57	127	118	23	19	42	38	143	127	270	253
†Narrabri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Orange	8	4	12	11	19	17	36	33	15	9	24	24	42	30	72	68
Oberon	1	1	2	2	11	13	24	24	10	8	18	18	22	22	44	44
†Oxley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Parramatta	...	...	...	...	2	1	3	3	3	1	4	4	5	2	7	7

TABLE A—continued.

District.	Under 1 year of age.				From 1 to 5 years.				From 5 to 10 years.				Total number of cases.			
	Male.	Female.	Total.	Successful.	Male.	Female.	Total.	Successful.	Male.	Female.	Total.	Successful.	Male.	Female.	Total.	Successful.
Parkes.....	4	3	7	7	20	21	41	40	13	11	24	22	37	35	72	69
†Penrith.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
*Port Macquarie.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rockley.....	37	42	79	69	59	46	105	84	19	23	42	31	115	111	226	184
Raymond Terrace.....	7	5	12	9	6	6	12	10	1	5	6	6	14	16	30	25
†Richmond.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
†Rocky Mouth.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Singleton.....	12	6	18	16	8	8	16	14	2	2	4	3	22	16	38	33
*Stroud.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sofala.....	7	5	12	12	9	7	16	16	12	9	21	21	28	21	49	49
*Tenterfield.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tamworth.....	18	18	36	36	67	68	135	135	21	34	55	55	107	120	226	226
†Tumut.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wagga Wagga.....	7	6	13	13	10	14	24	24	..	2	2	2	17	22	39	39
Windsor.....	..	1	1	1	4	10	14	14	1	1	2	2	5	12	17	17
Wollombi.....	1	1	2	2	8	7	15	11	5	1	6	6	14	9	23	19
Wallsend.....	31	20	51	51	43	43	86	86	4	4	8	8	76	67	145	145
*Wollongong.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Walcha.....	1	2	3	3	15	12	27	26	11	14	25	25	27	28	55	54
†Wellington.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
†Ulladulla.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Yass.....	..	2	2	1	1	..	1	1	..	..	..	..	1	2	3	2
*Young.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total.....	456	407	863	825	867	784	1651	1581	456	406	862	828	1779	1597	3376	3274

TABLE B.
SYDNEY AND SUBURBS.

Name of Vaccinator.	Under 1 year of age.				From 1 to 5 years.				From 5 to 10 years.				Total number of cases.			
	Male.	Female.	Total.	Successful.	Male.	Female.	Total.	Successful.	Male.	Female.	Total.	Successful.	Male.	Female.	Total.	Successful.
Egan, Myles.....	76	90	166	155	76	68	144	139	5	10	15	14	157	168	325	308
†Evans, Owen S.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
†Eyffe, Benjamin.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grey, William.....	5	4	9	9	7	6	13	13	2	4	6	6	14	14	28	28
Hogg, William.....	188	172	360	328	372	342	714	675	118	103	221	219	678	617	1295	1222
†Gillhoolley, J. C.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
†Joseph, J. M.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
†Moon, John.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
†Quaise, F. H.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
†Sedgwick, W. G.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
†Ward, R. D.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total.....	269	266	535	492	455	416	871	827	125	117	242	239	849	799	1648	1558

TABLE C.
SUMMARY.

Total in Country Districts.....	456	407	863	825	867	784	1651	1581	456	406	862	828	1779	1597	3376	3274
Total in Sydney and Suburbs.....	269	266	535	492	455	416	871	827	125	117	242	239	849	799	1648	1558
Grand Total.....	725	673	1398	1317	1322	1200	2522	2408	581	523	1104	1067	2628	2396	5024	4832

* Returns made reporting no vaccinations.

† No returns sent in.

Pl.