

1867.

VICTORIA.

REPORT

OF THE

GENERAL SUPERINTENDENT

OF

ELECTRIC TELEGRAPH

ON THE

Advancement and Condition of his Department

FOR THE YEAR ENDING 31st DECEMBER,

1866;

WITH FIVE APPENDICES AND A CHART.

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY HIS EXCELLENCY'S COMMAND.

By Authority:

JOHN FERRES, GOVERNMENT PRINTER, MELBOURNE.

REPORT.

ELECTRIC TELEGRAPH DEPARTMENT

(Office of the General Superintendent),

Melbourne, 31st January, 1867.

SIR,

I have the honor to submit for your information the following Report on the condition of the Department under my supervision for the year ending 31st December, 1866 :—

EXTENSION OF LINES, ETC.

The extensions contemplated at the date of my previous Annual Report, viz. :—

1. Beechworth to Bright (Morse's Creek),
2. Sandhurst to Heathcote,
3. Casterton to Western Boundary (*en route* to Penola),
4. Smythesdale to Scarsdale and Linton's,

are, with the exception of the Casterton line, now under contract and in progress of erection. The extension to Linton's has just been completed and tested.

The remaining two lines will probably be completed early in the present year.

The lowest tender for the line from Casterton to the South Australian boundary, *en route* to Penola, having been in excess of the amount provided by Parliament, the work has been postponed until this year, in accordance with your instructions.

A further vote of £350 will be necessary to meet the expenditure; but I feel assured that the greatly increased facilities certain to be attained by the provision of a double means of communication with Mount Gambier and South Australia, through the line *viâ* Penola, will more than compensate for the additional outlay.

The only extension of communication proposed to be carried out during 1867 is that from Sale to Bairnsdale, in the Gipps Land district. I had hoped that the line to connect Swan Hill and Euston, recommended in my previous reports, might have been carried out within the present year, but the necessary provision is for the present held over. The necessity for this extension will become perhaps more obvious after the direct line from Sydney to Adelaide, *viâ* Hay, Deniliquin, Balranald, Euston, and Wentworth, may have been completed, but there can be little question as to the utility of such a connection on the ground of increased facilities for intercolonial communication alone, independently of its value to settlers and persons engaged in trade on the Murray river. I therefore trust that the subject may receive favorable consideration at an early day.

WORKING OF LINES.

The insulation and electrical capabilities of the various lines continue satisfactory, but the number and duration of interruptions during the past year have been unusually great. (*Vide* Return, Appendix A.)

It will be perceived that the serious interruptions have been confined almost exclusively to two sections of the lines, viz., Melbourne and Sale, and between Jamieson and Wood's Point. The present character of the country through which, for a considerable distance, these lines pass, is such, that occasional interruptions must be anticipated for at least some years to come; but as the existing bush tracks give place to regularly cleared and formed roads, much of the inconvenience now experienced will be removed.

A serious and perplexing source of annoyance in the working of several lines, through the destruction of the insulators by idle or wilful persons, is, I regret to say, still present, but such measures are being pursued through the agency of the police force as may, I trust, tend to abate the ill effects arising from this cause. It does not appear in any case that communication on the lines has been actually interrupted designedly, but the thoughtless acts of the persons before referred to have been too frequently productive of

delays, and imperfection in working the instruments, occasioned, of course, through loss in the insulating medium, felt chiefly during wet weather.

It appears that, in another colony, similar destruction of property prevails. Mr. Todd, the Superintendent of Telegraphs in South Australia, in his report for 1865, alludes to the subject in the following terms :—

“ We still suffer very serious inconvenience from persons wantonly destroying our insulators, but, I trust, the steps recently taken will lessen this great evil. A reward of twenty-five pounds has been offered, and the attention of the public has been drawn to the matter by the press, whose efforts to aid me in suppressing acts which are not only a disgrace to a civilized community, but seriously endanger the lives of persons travelling on our high roads, besides impeding the working of the telegraph, I would here gratefully acknowledge. The renewal of insulation on lines exposed to this wholesale system of destruction forms, I need hardly tell you, a considerable item in our expenditure for repairs.”

The localities mentioned in my last Report, viz., Barwon Bridge, near Geelong, to Winchelsea, Allansford to Warrnambool, Belfast, and Yambuck, including distances altogether of fully sixty miles, where the extent of damage done is greatly above the usual average, continue to merit the same character. Notices, offering twenty-five pounds reward for the apprehension and conviction of the offenders, have been liberally distributed and posted along the lines passing through the places above stated, but up to the present period no arrest has been made.

Notwithstanding the difficulties already alluded to, the lines have continued to work on the whole satisfactorily, and on no occasion during the past year has any interruption occurred to the regular monthly transmission of the European news by the Royal Mail Steamers *viâ* King George's Sound and Adelaide.

The return (Appendix B) furnishes detailed information respecting the transmission of the mail news reports over the intercolonial section of our lines, and shows an improvement on a similar return for the previous year.

The completion of the direct Sydney and Adelaide line, *viâ* Wentworth, Euston, and Deniliquin, will, of course, materially lessen the extent of correspondence now conducted by the coast route through Victoria; but I do not think that much, if any, loss will accrue to this Department in consequence of such a change in the channel of communication. The additional telegraph offices to be opened through the new line are certain to increase the correspondence with Victorian offices along the Murray, and, to some extent, with Melbourne; I am, therefore, inclined to think that these considerations, coupled with the facilities for increased correspondence on the southern lines, through the relief afforded by the absence of the New South Wales and South Australian business on the intercolonial section, afford reasonable ground for the belief that the existence of the direct Sydney and Adelaide line will not materially affect the amount of revenue now derivable from the intercolonial business passing *viâ* Melbourne.

The opening of the direct interior line will also remove, almost entirely, the inconvenience so long experienced by the news agents and press reporters, in forwarding extended reports of European news from Adelaide, by allowing the time formerly consumed in transmitting the reports for Sydney, &c., to be in future devoted to the transmission of similar reports for Victoria, with greater promptness than has hitherto been attainable.

As an evidence of progress in this direction, I may, perhaps, mention that an order for two of Messrs. Siemens and Halske's patent rapid-writing type instruments has been already forwarded through the contractors here (Messrs. Oppenheimer and Company); but as a question has subsequently arisen respecting the increased cost of the instruments, above the amount named in the order (£60 each), some time may elapse ere they are despatched from England. Further advices on the subject are, however, shortly expected, and I shall then lose no time in again bringing the subject under notice. These instruments are stated to be capable, under ordinary circumstances, of transmitting from sixty to seventy words per minute on a circuit of 300 miles. Similar instruments have, I am informed, been ordered by the departments in New South Wales and South Australia.

The transmission is effected by means of metal types cut to represent each letter, the points of connection being the projections on the edges of the types, and the rapidity

of transmission depending on the speed with which the lines of type are driven through the connecting slides.

The reception and transcribing of the messages are effected in the ordinary manner, but, of course, at a highly increased rate of speed, and the process of transcribing must be performed by several clerks, in order to secure the value of the increased rapidity in transmission.

You have been already informed that one of Professor Wheatstone's patent rapid-writing instruments has been ordered by the Honorable the Treasurer during his recent visit to England. I am, to some extent, acquainted with the construction of the instrument, and hope to be able to adapt it to our requirements with some slight modification. The application of the transmitting medium is different to the instrument of Messrs. Siemens and Halske, but the results are much the same.

In working either apparatus it is essentially necessary that the line should be in the best possible state of electric conductivity and insulation; atmospheric disturbances, or other exciting cause, would militate much more against successful transmission than under ordinary circumstances. It must also be borne in mind that, in using the rapid-writing instruments, the staff of operators at each terminal of the line will require to be largely augmented: the one for preparing the type or other transmitting material, the other for effecting the task of transcribing the matter, as received from the recording instrument.

The extent of large repairs, renewing poles, &c., required on the lines generally during 1866 has been below the average; but, during the present and ensuing year, a considerable amount of repairs will be necessary on the section between Melbourne and Geelong, through renewal of poles, much of the existing materials having been in position for a period of from ten to twelve years. For this work I purpose to employ sawn poles of the timber known as Western Australia (or Swan River) mahogany (*Eucalyptus mahogani*), provided that the price may not be out of proportion to the cost of sawn red gum.

Poles of the Swan River mahogany have long been used on lines in South Australia with excellent results, and as the expense there has not been much in excess of the cost of ordinary colonial timber of the best quality, I consider that the supply required may be obtained on equally favorable terms. I believe that poles of Swan River mahogany, properly prepared, would last for nearly, if not quite, twenty years. Specimens of the wood, taken from old wharf piles, are on exhibition at the University Museum, stated, on responsible authority, to have been exposed to the action of the elements for a period of twenty years, and little or no signs of decay are perceptible.

I have for some time had in contemplation a design for a compound pole or standard of wood and iron, for supporting telegraph wires, arranged in the form of a wooden pole of nineteen feet in length, fitted within an iron socket or step six feet in length, secured to either a stone or wood base embedded in the earth; but the cost of such a provision, even in the cheapest form consistent with stability, has deterred me from making any specific recommendation on the subject. Our ordinary hardwood poles last from eight to twelve years. Good iron standards are estimated to last only about twenty years, but the cost of the latter would be fully three times that of wooden poles; so that, after allowing for the interest on the primary outlay, additional cost of labor in erection, &c., the difference is at present in favor of the wooden pole.

It is, of course, desirable that the most permanent form of pole should be adopted, but the consideration of comparative cost is an element not to be overlooked in a question of this character.

On most of the interior lines, where only one or two wires are necessary, the wooden pole will, for many years to come, prove the most economical; but, on some of the main lines radiating from the metropolis, where the number of wires is greatly increased (the Melbourne, Williamstown, and Geelong sections, for example, numbering, respectively, nine and eight wires), it is necessary that the poles should be of the most permanent description, having due regard to the cost of the work. I am, therefore, inclined to

consider that poles of the timber before mentioned (Swan River mahogany) would, on the whole, prove most advantageous.

An effort was made in 1855, when the Geelong line was under construction, to obtain a supply of poles for that work of the New Zealand timber known as Totara (*Totara Podocarpus*), a wood said to be of a more durable quality than any other description of colonial growth; but, owing to a difficulty in obtaining the requisite quantity, the contractor was obliged to abandon his engagement, and the endeavor was not again renewed.

Examples of this particular timber, in the form of native canoes, over sixty years old, and still perfectly free from decay, have been well authenticated.

The extensive alterations recently effected on the section of line between Jamieson and Wood's Point have increased the stability of that work; the number of angles has been greatly reduced, and the risk of frequent interruptions, through falling trees, considerably lessened. The interruptions to communication on that line during 1866 amounted to no less than sixteen days and (in broken periods) thirty-one hours—occasioning not only a serious loss of revenue to the Department, but much inconvenience to the public. A portion of the alterations necessary still require to be carried out, but so soon as the sums set down for the requisite expenditure may have been rendered available, I propose to have the work completed immediately.

The interruptions to communication on the Melbourne and Sale section of the Gipps Land line, during the past year, have been of too frequent occurrence and extended in duration (nine days and five hours); but, should I be enabled to effect some additional clearing along a portion of the route between the Bunyip river and Shady Creek before the winter rains set in, I hope to secure a better result for the present year.

Arrangements have been made, under your previous instructions, for opening an office at Rosedale, a convenience which is likely, I think, to receive a fair amount of support through the traffic to Stringer's Creek gold-fields and other localities in the vicinity.

Communication with Rosedale can be opened immediately the expenditure provided for the purpose on the Estimates for 1867 may be available.

COMPLAINTS OF ERRORS, DELAYS, ETC.

Under this head there appears to have been twenty-five entries of official complaints recorded during the past year, relating to the general business of the Department, being two in excess of 1865, and one less than in 1864.

In five instances of complaint the fault was not found to be with the Department, and in the remaining twenty the officers to whom omission or negligence was traced were dealt with under the penalty clauses of the Civil Service Act. In one case dismissal was awarded for neglect of duty.

The mean of three years' records shows that these complaints have averaged about two per month, a result which, considering the extent and peculiar nature of the service, cannot I think be considered as unsatisfactory.

The number of telegrams transmitted during the year amounts to 277,787, containing, at a moderate estimate, more than 4,000,000 words, and fully 20,000,000 letters. Now as these telegrams have each been transmitted and transcribed letter by letter, timed, numbered, recorded in books, despatched for delivery, and duly accounted for through every stage of their progress, from the hand of the sender to that of the receiver; and as, in this process, the total number of telegrams mentioned must necessarily have passed through the hands of about one hundred and seventy (170) persons, it will, I think, be admitted that the number of complaints received is infinitesimally small, when contrasted with the great variety of conditions under which errors might reasonably be expected to occur even with the most expert and experienced telegraphist; these officers are, in fact, more exposed to the liability of error than are the less expert, as the former are usually entrusted with the most important work, and placed at the lines or instruments where the business is heaviest.

YEAR 1866.

EXPENDITURE UNDER THE CONTROL OF THE PUBLIC WORKS DEPARTMENT.

Total expenditure for lines, stations, &c., as per previous statement, up to 31st December, 1865	£	s. d.	£	s. d.
...	...	...	248,996	5 11
EXPENDITURE DURING 1866.				
Main extension of lines	4,324	5 10		
New buildings, and repairs to existing buildings	3,455	10 0		
Fittings and furniture	175	5 6		
			7,955	1 4
CURRENT EXPENDITURE DURING 1866.				
Rent of chief office	812	0 0		
Rent of temporary offices	204	17 11		
			256,951	7 3
			1,016	17 11

YEAR 1866.

THE DEPARTMENT OF RAILWAYS IN ACCOUNT WITH THE DEPARTMENT OF ELECTRIC TELEGRAPH.

<i>Dr.</i>	£	s. d.	<i>Cr.</i>	£	s. d.
To value of stores, stationery, acids, &c., supplied to Railway telegraph offices	66	10 2	By cash revenue collected for the transmission of private telegrams	566	13 7
To proportionate cost of maintenance of Railway Telegraph Line	248	7 2	By Balance carried down in favor of Electric Telegraph Department	16	19 7
To salary of an operator for Railway Telegraph Circuit at Melbourne station	180	0 0			
To salary of messenger at Woodend	49	13 4			
To moiety of salary of messenger at Williamstown	39	2 6			
	£583	13 2		£583	13 2
To Balance brought down in favor of Electric Telegraph Department	£16	19 7			

To nominal value of charges on telegrams for Railway service transmitted from the several Railway telegraph offices ... } £3,506 12 3

NOTE.—The Railway Department has not been charged with the services of operators employed in connection with the Railway Telegraph Circuit at Geelong, Ballarat, and Sandhurst.

COMPARISON WITH BUSINESS OF PREVIOUS YEAR.

	£	s. d.
1866. Cash collections (within the colony)	35,285	9 1
1865. Cash collections (within the colony)	34,770	2 10
In favor of 1866	515	6 3
1865. Cash collections (intercolonial account)	£997	14 6
1866. Cash collections (intercolonial account)	893	8 3
In favor of 1865	104	6 3
Total increase in favor of 1866	£411	0 0
1866. Number of private messages	214,281	
1865. Number of private messages	210,777	
In favor of 1866	3,504	
1865. Number of Government telegrams	68,946	
1866. Number of Government telegrams	63,506	
Decrease in 1866	5,440	

The apparent decrease in the number of telegrams transmitted on the Government service during 1866, as compared with 1865, is chiefly accounted for by the fact that the Railway Department had occasion to send 5,275 telegrams less in 1866 than in 1865, which reduces the actual decrease in Government messages to the small number of 165, while the number of private telegrams shows an increase of 3,504 in favor of 1866.

The financial condition of the Department, as between cash receipts and expenditure, for the year, stands as follows:—

	£	s.	d.
Cash expenditure, under all heads	38,473	2	10
Cash revenue, from all sources	36,178	17	4
Apparent deficiency	£2,294	5	6

But, taken with the saving effected on the votes for Post Office establishments, the case stands as below:—

	£	s.	d.
Saving through the performance of Postmasters' duties by managers of electric telegraph offices	2,530	5	3
Apparent deficit in telegraph collections, as between revenue and expenditure ...	2,294	5	6
Balance in favor of Electric Telegraph Department, or actual gain to the service	£235	19	9

This, it must be borne in mind, is without bringing into account the charges for the transmission of telegrams on the Government service (irrespective of Railway telegrams), as detailed by the following statement:—

RETURN SHOWING THE AMOUNTS ACTUALLY CHARGEABLE TO EACH GOVERNMENT DEPARTMENT FOR TELEGRAMS TRANSMITTED DURING THE YEAR ENDING 31ST DECEMBER, 1866.

DEPARTMENTS UNDER CHIEF SECRETARY.	£	s.	d.		£	s.	d.
Legislative Assembly	1	15	7	TREASURER—continued.			
Chief Secretary's Office	108	11	5	Government Printer	2	8	1
Registrar-General	11	11	3	Volunteers	138	3	0
Goals	3	6	7	Military	1	8	2
H.M.C.S. Victoria	7	1	5	Chief Engineers	1	6	8
Chief Medical Officer	34	5	9	Total	256	7	6
Lunatic Asylum	1	16	7	DEPARTMENTS UNDER COMMISSIONER			
Police	4,559	5	3	OF LANDS AND SURVEY.			
Magnetic Survey	2	13	0	Crown Lands	908	9	4
Botanical Gardens	0	2	0	Geological Survey	31	0	1
Audit	7	1	7	Total	939	9	5
Educational	36	10	6	DEPARTMENT OF PUBLIC WORKS.			
Electoral	59	13	7	Public Works	186	5	11
Total	4,833	13	6	DEPARTMENTS UNDER COMMISSIONER			
DEPARTMENTS UNDER ATTORNEY-GENERAL.				OF TRADE AND CUSTOMS.			
Judges	9	6	7	Customs	298	10	9
Law Officers of the Crown	107	15	2	Distilleries	4	18	7
Prothonotary	4	15	9	Immigration	38	16	2
Chief Commissioner of Insolvencies ...	0	6	8	Total	342	5	6
Master in Equity	0	1	6	DEPARTMENT OF POST OFFICE.			
Sheriff	109	10	11	Post Office	182	4	8
Total	231	16	7	DEPARTMENT OF MINES.			
DEPARTMENTS UNDER MINISTER OF JUSTICE.				Mines	220	18	0
County and other Courts	88	8	1	DEPARTMENTS UNDER COMMISSIONER			
Police Magistrates	81	14	1	OF RAILWAYS AND ROADS.			
Coroners	22	0	0	Railways	3,506	12	3
Total	192	2	2	Roads	58	0	6
DEPARTMENTS UNDER TREASURER.				Total	3,564	12	9
Treasury	110	9	8				
Stores and Transport	2	11	11				

RECAPITULATION.

Departments under—	£	s.	d.	Departments under—	£	s.	d.
Chief Secretary	4,833	13	6	Postmaster General	182	4	8
Attorney-General	231	16	7	Minister of Mines	220	18	0
Minister of Justice	192	2	2	Commissioner of Railways and Roads ...	3,564	12	9
Treasurer	236	7	6	Miscellaneous, including free transmission of shipping intelligence to fifteen (15) stations ..	1,350	0	0
Commissioner of Lands and Survey ...	939	9	5	Total	12,869	16	0
Commissioner of Public Works	186	5	11				
Commissioner of Trade and Customs ...	342	5	6				

Electric Telegraph Department,
General Superintendent's Office,
Melbourne, 31st January, 1867.

SAML. W. MCGOWAN,
General Superintendent of Electric Telegraph.

Which has been taken from the records kept at this office, in accordance with your previous instructions.

If the charges for Government telegrams, excluding telegrams on Railway service, are carried to account, the balance sheet will show the following result:—

	£	s.	d.
Gross revenue for the year 1866	45,572	1	1
Gross expenditure for the year 1866	38,473	2	10
Balance in favor of Department	<u>£7,098</u>	<u>18</u>	<u>3</u>

This amount, £7,098 18s. 3d., carried to the credit of interest on permanent outlay, would show nearly three per cent. on the total of that expenditure, £256,951 7s. 3d.

As a large proportion of the balances annually placed to the credit of the Railways, the Water Works, and Penal Departments, are obtained in precisely the same manner, I feel that I am doing no more than justice to my own branch of the service in adopting a similar course with regard to this Department. In several previous annual reports I have strongly advocated the adoption of the practice so long pursued by the Telegraph Departments in other colonies, of requiring cash payments (or at least a cash result to be recorded), on account of *all* telegrams transmitted (whether private or on Her Majesty's Service); and, until the same rule be introduced in Victoria, I feel that the practical results of the service in this colony, as between receipts and expenditure, can never be satisfactorily determined.

In bringing to account annually the revenue returns in the case of the Railways, the Yan Yean Water Supply, the Penal, and some other Departments, the amounts received from the several branches of the public service on account of services rendered to the general Government of the colony, are credited under the head of cash revenue. I therefore consider that I am proposing only a most reasonable course in recommending that the same privilege should be accorded to the branch of the service under my direction, in order that the true position of the Department may be ascertained. Assuming that such a practice were at present authorised, the results would be represented as follows, viz:—

YEAR 1866.				£	s.	d.
Total revenue, from all sources ... ..	...	...	...	45,572	1	1
Total expenditure for same period, under all heads ... ..	...	...	...	38,473	2	10
Profit ... ..	...	...	...	<u>£7,098</u>	<u>18</u>	<u>3</u>

This return, besides showing that the Department is capable of being even more than self-supporting, would indicate an amount creditable to interest on outlay at the rate of a fraction under three per cent.; or, allowing the savings on votes for the Post Office establishment, secured by the performance of Postmasters' duties by the Electric Telegraph officers throughout the colony, the statement would be as follows:—

ELECTRIC TELEGRAPH DEPARTMENT, 1866.

Permanent expenditure	£256,951	7	3
Gross annual revenue	£	s.	d.
Gross annual revenue	45,572	1	1
Savings on votes for Post Office Department	2,580	4	5
Total	48,102	5	6
Gross annual expenditure	38,473	2	10
Profit	<u>£9,629</u>	<u>2</u>	<u>8</u>

Or nearly three and three-quarters per cent. (3.75) on the total amount of outlay, £256,951 7s. 3d. But, as a large proportion of this latter sum is made up from annual permanent outlay at a period (some ten years back) when every item of expenditure

should certainly be estimated in the ratio of at least 4 to 3, as compared with 1866, a proportionate amount should be written off to the debit of profit and loss, as depreciation in value of materials, &c.; thus bringing the actual expenditure on account of investment to the sum of £192,713 10s. 6d., on which the returns of profit and savings for 1866 would show a result of nearly five per cent.

STATEMENT SHOWING THE ESTIMATED SAVING TO THE POST OFFICE DEPARTMENT BY THE COMBINATION OF THE POST AND TELEGRAPH DUTIES AT THE UNDERMENTIONED STATIONS FOR THE YEAR ENDING 31st DECEMBER, 1866.

Name of Office.	Allowance formerly made of Expenditure incurred annually by Post Office Department for Salaries and Wages previous to the offices being combined.	Annual Expenditure now borne by the Post Office Department.	Estimated Saving.	Estimated Loss.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Ararat	497 14 0	165 6 6	332 7 6	...
Avoca	100 0 0	166 19 6	...	66 19 6
Belfast	300 0 0	101 13 0	198 7 0	...
Belvoir	30 0 0	16 7 0	13 13 0	...
Benalla	40 0 0	46 16 0	...	6 16 0
Bunayong	100 0 0	1 17 6	98 2 6	...
Camperdown	50 0 0	25 0 0	25 0 0	...
Carisbrook	60 0 0	4 8 9	55 11 3	...
Casterton*	60 0 0	30 0 0	30 0 0	...
Chiltern	100 0 0	79 12 0	20 8 0	...
Clunes	100 0 0	88 13 0	11 7 0	...
Colac	60 0 0	41 14 6	18 5 6	...
Creswick	300 0 0	175 4 0	124 16 0	...
Daylesford	50 0 0	284 7 0	...	294 7 0
Dunolly	350 0 0	95 15 0	253 5 0	...
Echuca	50 0 0	178 13 0	...	128 13 0
Gisborne	80 0 0	20 0 0	60 0 0	...
Hamilton	350 0 0	245 7 6	104 12 6	...
Heathcote	425 0 0	204 0 4	220 19 8	...
Hexham	20 0 0	...	20 0 0	...
Inglewood	457 0 0	106 19 0	350 1 0	...
Jamieson †	201 17 6	252 13 6	151 1 6	...
Kerang	30 0 0	45 0 0	...	15 0 0
Kilmore	433 9 0	270 9 10	162 19 2	...
Kyneton	350 0 0	348 12 2	1 7 10	...
Longwood	20 0 0	45 2 3	...	25 2 3
Maldon	100 0 0	163 0 0	...	63 0 0
Maldenbury	110 0 0	30 0 0	80 0 0	...
Maryborough ‡	299 4 11	212 1 4	87 3 7	...
Moonambel	70 0 0	20 0 0	50 0 0	...
Mortlake	60 0 0	50 0 0	10 0 0	...
Mornington	40 0 0	65 0 0	...	25 0 0
Newstead	40 0 0	35 0 0	5 0 0	...
Port Albert	110 0 0	30 0 0	80 0 0	...
Portland	300 0 0	167 5 1	132 14 11	...
Raglan	50 0 0	126 15 10	...	76 15 10
Redbank	50 0 0	20 0 0	30 0 0	...
Rutherglen	60 0 0	1 12 0	58 8 0	...
Sale	110 0 0	128 5 0	...	18 5 0
Sandridge	50 0 0	77 5 0	...	27 5 0
Seymour §	70 0 0	30 0 0	40 0 0	...
Smythesdale	160 0 0	140 5 6	19 14 6	...
Stawell	300 0 0	35 8 11	264 11 1	...
Streatham	40 0 0	25 0 0	15 0 0	...
Swan Hill	60 0 0	46 16 0	13 4 0	...
Talbot	200 0 0	339 17 0	...	139 17 0
Tarnslee	100 0 0	30 0 0	70 0 0	...
Tarnagulla	60 0 0	78 5 0	...	18 5 0
Wahgunyah	40 0 0	...	40 0 0	...
Wangaratta	60 0 0	49 19 9	10 0 3	...
Warrnambool	300 0 0	265 3 0	34 17 0	...
Wood's Point	385 3 11	362 10 10	22 13 1	...
Yackandandah	60 0 0	...	60 0 0	...
	7,899 9 4	5,571 1 7	3,375 10 10	845 5 7

* Combined since 1st July.

† Expenses (£201 17s. 6d.) for first six months only.

‡ Combined since 1st July.

§ Combined since 11th April.

The advantages gained, through combining the duties of Manager of the Electric Telegraph with those of Postmaster at country stations, are, I think, unquestionable, more particularly where the business of a Money-Order Office and Savings Bank is conducted ;

but, in localities possessing a large population, and where the work of each Department necessitates the individual attention of one superior or managing officer, I do not consider that such a combination can result satisfactorily.

In such a case, one portion or another of the practical working of the two services must necessarily be confided to subordinate and perhaps comparatively inexperienced officers; and, as it is of primary importance, considering the relative positions of both services, that each should be conducted with the utmost possible efficiency, consistent with reasonable economy in expenditure, I submit that it would not be prudent to involve the contingency above mentioned for the sake of attaining what would, at the most, prove merely a nominal saving. The most important stations in the country districts (Geelong, Ballarat, Sandhurst, Castlemaine, and Beechworth) are those at which I consider it would be inadvisable to disturb existing arrangements. The officers at the places named are necessarily among the oldest and most experienced telegraphists in this service, and I need not add that the whole of their time is engrossed with the special duties pertaining to their present appointments, as the amount of telegraph business shown by the tabular returns herewith, as having been performed by them, will sufficiently testify. I am therefore of opinion that the two services at these stations should not be entrusted to the management of one officer.

The savings on votes for salaries and contingencies for 1866, effected by reductions &c., at the various offices, amount to a total of £3,536 11s.

As bearing upon this subject, I may here mention that the principle of guaranteeing the Department to a certain extent against positive loss through non-remunerative offices (so long followed in New South Wales) has already been adopted in one case in this colony.

The office opened at Penshurst during the present month is guaranteed by five responsible residents, under bond to the amount of £130 per annum; thus, the probable revenue is estimated at £120 per annum, and the annual expenditure for maintenance, &c., at £250. The sum guaranteed, or such portion of it as may be called for, is to cover the amount of the difference between actual receipts and actual expenditure on account of the office.

There are many other places where the same course will, no doubt, be followed, should the results in this case prove satisfactory.

It is the practice, I believe, in New South Wales, for a number of permanent residents in any district in the interior requiring telegraphic communication, but where the business would not support a station, to guarantee the Government a stated amount of interest on the primary outlay, in addition to securing the Department against loss in working the line; but our boundaries are not at present sufficiently extended to involve similar conditions in Victoria.

NEW BATTERY.

During the past two years I have been enabled, after testing various experiments, to adopt, at a considerable saving to the Department, a new description of local battery (employed to work the "register").

This form is known as the sulphate of magnesia battery, and has been patented in this colony by the contractors (Messrs. Oppenheimer and Co.). The containing cell is of more than ordinarily large dimensions; the negative and positive elements are copper and zinc, cylindrical in form, and the exciting fluids are—

1. Sulphate of magnesia, in the form of a nearly saturated solution.
2. Sulphate of copper, in broken crystals.

The former surrounding the metals in the containing vessel; the latter, in partial solution, admitted through a perforation at the extremity of a conical glass receiver, placed within the interior cylinder.

The comparative results of the working of the battery may be shown as follows:—

STATEMENT SHOWING COST OF MATERIAL AND LABOR REQUIRED FOR MAINTAINING AND WORKING THREE CELLS OF "SULPHATE OF MAGNESIA LOCAL BATTERY," AS COMPARED WITH THREE CELLS OF "SULPHATE OF COPPER LOCAL BATTERY," FOR TWELVE MONTHS.

Quantity.	Particulars.	Cost.
SULPHATE MAGNESIA BATTERY.		
		£ s. d.
15 lbs.	Sulphate magnesia @ 2½d. per lb.	0 3 1½
12½ "	Ditto copper @ 5d. "	0 5 2½
6 "	Zincs @ 2s. 8d. each	0 16 0
6	Copper cylinders @ 1s. 0d. "	0 6 0
	Require renewing twice in the year, one hour being allowed } ... @ 1s. per hour	0 2 0
	each time }	
	Attention during the year, one hour per week @ 1s. "	2 12 0
		4 4 4
SULPHATE COPPER BATTERY.		
58½ lbs.	Sulphate copper @ 5d. per lb.	1 4 4½
12	Porous cells @ 1s. each	0 12 0
6	Copper cylinders @ 2s. "	0 12 0
18	Zincs @ 1s. 3d. "	1 2 6
	Require renewing every fortnight, one hour being allowed } ... @ 1s. per hour	1 6 0
	each time }	
	Attention during the year, one hour per week @ 1s. "	2 12 0
		7 8 10½
	<i>(Difference in cost (say), £3 4s. 6d. per annum.)</i>	

The economy to the Department through adopting the new battery has amounted to about £250 per annum, and should the results of an experiment I am at present testing in connection with a modified form of the same battery, adapted for use on "main line circuit," prove satisfactory, it is probable that some further saving may be effected.

PRESENT RATES OF CHARGES.

In the month of September last, I reported on a memorial addressed to you by a number of mining sharebrokers, bank managers, and others in Melbourne and Ballarat, requesting that a reduction should be made in the scale of charges for the transmission of telegrams, or that a rebate of fifty per cent. (50 per cent.) should be allowed to all persons whose payments for telegrams might amount to ten pounds (£10) monthly.

I do not deem it necessary, at present, to make a further or more extended allusion to the subject, except to say that personally I am in favor of the lowest possible charges for telegrams, consistent with the financial prosperity of the Department; but, when the question assumes the form of a certain addition to the already numerous charges on the general revenue of the colony, with the view of attaining, hypothetically, prospective advantages or facilities to a comparatively limited number of its inhabitants (that number being likely to remain almost a fixed ratio for many years to come), I cannot consider that a reduction in the existing scale of charges would be a judicious course.

When introducing the electric telegraph into this country for the first time, in 1853-4, I stated confidently that the service would not become a burden on the State, and since that period I have steadily labored, with, I trust, some measure of success, to maintain this view by actual practice.

I do not advocate that the Department should be looked to as any source of revenue; but I am clearly of opinion that it should be, as nearly as possible, self-supporting. The returns already detailed show that such a result has been attained, and, until the revenue exhibits an appreciable margin in excess of expenditure, I consider that a reduction in the rates should not be contemplated.

I have ascertained, by actual comparison of scales, that the charges for long distances in these colonies are, in every instance, considerably less than in Great Britain and on the Continent of Europe; while, for short distances (with the exception of charges between

London, Liverpool, Manchester, and some other large centres of population), the rates are in many cases little, if any, higher. The lower rates for long distances are attainable here through the lines being in the hands of the Government, instead of, as in Europe, being divided among a number of distinct proprietaries, each requiring a proportionate amount, or toll, for all *through* messages.

The charges for short distances here are necessarily higher, owing to the limited population and the greatly enhanced cost of providing the service; but, while the increased charges have been based on the most equitable consideration of these conditions, care has been taken in every instance to adopt the most liberal course for the convenience and benefit of the general public.

Facilities are afforded throughout this colony for telegraphic communication such as could not possibly be provided by any private telegraphic company; for, if the lines were in private hands, a very considerable number of the smaller and less important stations would certainly be closed, while no material, if indeed any, reduction would be made in the rates of charges. The public would thus be deprived of the advantage it at present enjoys of possessing numerous points where communication has been established, but the expenses of which are covered by the general revenue of the Department. A comparison, as between the charges for telegrams here and in America, could not be instituted on equitable grounds, as in the latter country non-remunerative stations are not maintained, or, if they are, the company owning the line is usually recouped by the inhabitants in the form of a guarantee; the difference in the cost of establishing, maintaining, and working the lines is likewise greatly in favor of that country as compared with similar expenditure here.

The cost of lines is not less than 100 per cent.; instruments, 50 per cent.; chemicals, 100 to 300 per cent.; salaries of operators and workmen, 50 to 100 per cent., higher in this country than in America. It would not, therefore, be fair to contrast the relative rates of charges in the respective countries without also allowing for the differences above mentioned; and, when the latter are allowed for, I consider that the Australian rates will not in any case be pronounced excessive.

The proposition for a rebate, on the basis already indicated, could not be recommended, as I do not consider that such a course is necessary any more than it would be for a postage account, or for an importer having more than an ordinarily large dealings with the Custom-house.

Every person who uses the telegraph derives some direct advantage, either through his business, or for his personal convenience, more than he could attain through any other channel of communication. The facility thus provided should, I think, be accepted as a sufficient return for the amount invested, without requiring that the Department should be subsequently called upon to refund one-half the sum. Such a course, besides entailing other inconveniences, would involve the keeping of a large number of open accounts, to be balanced monthly at the several offices—a contingency not to be lightly considered.

I am not aware that such a practice has ever been introduced by a telegraph company or telegraphic proprietary in any part of the world, and I fail to perceive a reason why it should be necessary here. While making these observations, however, I take leave to state that it will be my earnest desire to recommend for the consideration of Government a reduction in the present rates of charges at the earliest possible date, when it may be apparent that such a step can be adopted with advantage to the revenue of the Department and the convenience of the public.