Public Works (1899) Department.

RAILWAY BRANCH.

G.O., No. 506-T. dy

DATED 18th May 1899.

[Despatch Abstract.]

Reports by Heads of Depts. to dy

ordered that Six Copies of the ——

the half-year ended the 31/12/98. be

forwarded to the Govt. of India.

Forwarded

Indexed.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

MADRAS R.

ENT AND MANAGE CE,

Madras, 28th March 1899

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The Agent and ger.
M. R. C

From Forwarding copies The ting Engineer for Railways.
of ck Auditor's Rete Madras.
in M R Cap & Rev 5

Sir,

In continuation of my letter No. 11545/315 dated 23rd March 1898, I have the honour to forward herewith 32 copies of each of the Reports of the undermentioned Heads of Departments for the half year ending 31st December 1898.

The Chief Engineer.
" Loco: Superintendent.
" Ag: Telegraph Engineer.
" Medical Officer.

Copies of other Reports will follow shortly.

I have the honour to be,
Sir,
Your most obedient Servt

Agent & Ma.

MADRAS RAILWAY COMPANY,
LOCOMOTIVE SUPERINTENDENT'S OFFICE,
Perambur Works, 22nd March 1899.

L. S. MOSS ESQ.,
Agent and Manager,
Madras Railway.

SIR,

1. I have the honour to submit my report upon the working of the Locomotive, and Carriage and Wagon Departments, for the half-year ending 31st December 1898.

2. A tabular statement is attached, shewing the expenditure in detail, under each of the several sub-heads of account, as compared with similar figures for the previous and corresponding periods, the general totals as shewn in this statement being as follows:—

Half-year ending.	Mileage.	Total cost of Department including all charges.			Total cost per mile.		
		Rs.	As.	P.	Rs.	As.	P.
December 1897	1,616,892	13,90,471	5	7	0	13	9·11
June 1898	1,551,560	11,87,290	3	5	0	12	2·92
December 1898	1,559,578	12,90,399	14	6	0	13	2·86

3. From a comparison of the figures, the final results of the half-years' working will be found to be—

	Half-year ending 31st December 1898 compared with:—	
	Preceding half-year.	Corresponding half-year.
	Per cent.	Per cent.
Miles run	Increase 0·52	Decrease 3·54
Total cost of Department, including working and repairs of engines, and vehicles, together with loss by exchange, carriage of Revenue Stores, &c.	Increase 8·68	Decrease 7·20
Total cost as above, per mile	Increase 8·13	Decrease 3·79.

which, bearing all the facts in mind, may be said to be fairly satisfactory.

4. A reduction in the mileage worked of 57,314 miles has occurred, and although a corresponding decline in the gross cost of working must necessarily therefore be looked for, there are certain fixed, and non-fluctuating, charges which cannot follow fluctuations in mileage, the effect of which is ordinarily, and as they are distributed over a shorter mileage, to bring about a correspondingly higher gross mileage rate.

5. It is satisfactory therefore to note that, in the half-year in question, the contrary has resulted, and that the gross cost per mile of working has, as a matter of fact, decreased to a greater degree, than has the total mileage run, or rather the total work done, the figures being—

Gross cost of working per mile ... ... Decrease 3·79 per cent.
Mileage run ... ... Decrease 3·54 per cent.

Locomotive Engines: Running.

6. In wages and salaries a reduction is seen under each head, the wages of Drivers and Firemen having fallen by 4·6 per cent., while the total wages of the Running Staff is 3·9 per cent. less than during the corresponding half year.

7. In Fuel there is, I am sorry to say, an increase more or less all round, and this increase may be attributed to several causes.

8. With regard to the Coal, the increase in total consumption per mile amounts to ·68 lbs. the cost being enhanced by pies ·58, and in explanation of this, I would refer to the unfortunate fire that broke out in the coal stacks at Raichur in May 1898.

9. As is recorded in correspondence, a total quantity of 822 tons of coal was destroyed in this fire, the value of this having been written off against the Fire Insurance Fund. You will however probably remember, I mentioned at the Official Meeting in July, when the matter was discussed, that considerable damage had also been done to the rest of the coal in the stacks, which had been on fire, and from the consumption sheets of the Engines which had been using the burnt, or rather scorched, coal, I estimated that it had deteriorated by probably 15 per cent. (Subsequent experience shewed that the more correct figure was probably 30 per cent.)

10. I suggested that a further debit should be passed to the Fire Insurance Fund on .s account, but it was held that this could not be done, and the coal has therefore been used up as it was, and without allowance.

11. Undamaged coal was issued to all Mail train Engines, the damaged coal being used entirely on the Goods, and Mixed trains. The total quantity so scorched was about 1,855 tons, and as the greater part of this was issued during the half year under reference, this fact will more than account for the increase in the total consumption per mile, appearing in the statement. The increase in the cost, is of course due to the increase in the quantity burnt.

12. There still remained at the close of the half-year, a balance of about 680 tons of the burnt coal which had not then been used, but which is still being issued to all Goods and Mixed trains on the Division. Owing however to the cancelment of the second Mixed train, between Gooty and Raichur, the number of Engines using this coal is reduced, and the coal is therefore lasting longer, but I am hoping that, in any case, before the windy season begins, it will all be gone; if not, arrangements will have to be made to eke it out with a larger proportion of good coal.

13. The increase, both in quantity burnt, and cost per mile, under wood is somewhat larger, and in explanation of this I would cite, in the first place, the following figures :—

———		Half-year ending December 1898.	Half-year ending December 1897.	Increase per cent.
Total number of vehicles in a Goods train.	Tons.	28·44	27·40	3·80
Average load of a loaded Goods vehicle.	„	6·15	6·07	1·32
Average weight of a Goods train.	„	373·03	367·12	1·61

from which it will be observed, that an appreciable increase in the weight of the trains handled has to be allowed for, and since the greater part of this extra loading has, it is understood, been upon the heavy coal trains working over the Ghaut, and Jalarpet and Bangalore Division, where wood is exclusively used, the effect is naturally felt upon the wood mileage consumption.

14. An immense amount of trouble has been experienced for many months past, in regard to the wood supply, both at Jalarpet, and on the Western Coast.

15. On the Jalarpet District, partly due to the plague, and partly to other reasons, there has been the greatest difficulty in keeping up the supplies, and for months we have been living, so to speak, entirely from hand to mouth. On two or three occasions, the stocks ran down to under a fortnight's consumption, and it was only by taking the most vigorous, and prompt action with the Contractors, that I succeeded in staving off a wood famine.

16. The result of course has been that, not only have we been obliged, in order to keep things going, to accept inferior wood, which had the stocks been larger would have been rejected, but the wood that has come in has perforce had to be burnt green and wet, and as a consequence, in order to maintain steam, the Engines have had to be "flogged," which in its turn has meant considerable waste of fuel.

17. On the West Coast again, due in some measure to the abnormally heavy monsoon, and also to the extension in the use of wood fuel, in Mills and other Factories, which have been established in the Coimbatore and Palghat Districts, and to which reference has been made in previous reports, the supplies have been falling off continually.

18. The Contractors have over and over again demanded increases in their rates, and as the Government Forest Department have never been able to help us, in the matter of the wood supplies in Malabar, it has been a difficult matter to stand against the demands made.

19. Practically the whole of our supplies, on this District, are drawn from the jungles between Podanur and a little west of Olavakkot, and we have never been able to get wood, in any quantity, although several attempts to do this have been from time to time made, on the West Coast itself.

20. In December 1897 I succeeded in getting an offer for a large quantity of wood fuel, which was to be delivered by the back water at Kadalundi, and Ferok, and I hoped by this that I had succeeded in at last tapping a fresh source of supply. Unfortunately however, after a few months working, the quality of the back water wood became so bad, that a very large quantity of it had to be rejected, and the final outcome was that in the new contracts, which were entered into in December 1898, increased rates have had to be given. The new contracts are now working fairly well, and, although the wood, now coming in, is costing more, it is of first rate quality.

21. Although, upon the western half of the S. W. Line, wood fuel will probably, for some years to come, still continue to be used, the opening of the Bezwada-Madras Railway has rendered it possible to bring coal into Madras at a rate, which will enable it to finally oust wood elsewhere. Under the existing arrangements with the Government Forest Department, and with the Native Wood Contractors, we shall have to continue the use of wood on a part of the Jalarpet Division for some few months still, but I am arranging to introduce Singareni coal entirely, on the Arkonam-Nundalur District at once, and will also, so soon as the necessary alterations can be made in the engines, and stocks of coal can be worked up, substitute coal for wood between Jalarpet and Bangalore.

22. A series of trials was conducted during January and February last, to arrive at the relative value, of sea-borne coal from the Gourangdhi Field, and rail-borne Singareni coal, delivered over the B. M. Railway direct from the Mines.

23. The result of these trials is reported in my letter No. B. 2718/210 dated 1st March 1899, to your address, and they seem to shew that the quality of the two fuels is, for locomotive purposes, as nearly as possible similar.

24. It is hoped that the outcome of the new coal contract which has now been entered into, will be a very considerable reduction in the fuel bill in future half years.

25. Under Oil, Tallow, and Waste a slight increase occurs, which is fully accounted for by the still abnormally high price of castor oil.

26. So far as possible, mineral oils of different kinds have been substituted for castor oil, but it seems to be a very difficult thing to ensure that the supplies of these mineral oils shall be of an equable quality.

27. The Vacuum Oil Company, who have a practical monopoly of, at any rate, the Indian Mineral Oil Market, introduces from time to time, with a more or less loud flourish of trumpets, new brands of oil, each and all of which is, when produced, said to be superior to all its predecessors, but, so far as my own experience goes, they all seem to suffer from the same complaint, and each and all sooner or later merges into a more or less, generally a good deal more, unsatisfactory lubricant.

28. Our present brand of Mineral Oil is known as Crank Case Oil, and, as being now delivered, is better than the later shipments of Engine Axle Oil, which it succeeded.

29. So long as Castor Oil maintains its present very high market price, the use of a cheaper oil, for wagon and other stock so far as possible, is compulsory, but there is absolutely no question but that if Castor Oil could only be obtained at a fair price, it is infinitely superior for use in this country to any other oil, whether vegetable, or mineral.

Locomotive Engines: Repairs.

30. A saving in Wages, amounting to Rs. 10,509, is found under this head, and, although the total cost of repairs is Rs. 6,447 greater, than the expenditure for the corresponding half-year, the excess is entirely in Materials.

31. During the half-year, 30 engines passed through the Shops, as compared with 31 during the second half of 1897. It had been hoped that two of the new K. $C._2^?$ engines which are under order, would have arrived in India in time to have allowed of their being charged off, during the half-year, but owing to a question that had arisen, as to certain alterations which were thought advisable in the design, their construction was delayed, and the engines have not yet been received.

32. It was found necessary to issue from Stores a larger quantity of material than usual, the following being the chief items:—

	Rs.
Four new locomotive boilers	31,998
Boiler plates, iron and copper	11,135
Boiler tubes, chiefly copper, to replace red metal tubes in the K. $C._2$ and other engines.	45,162
Engine tyres	10,327

33. The necessity for replacing the red metal tubes with tubes of other material, has formed the subject of correspondence, and, until the whole of these are replaced, I fear a somewhat heavy expenditure under this head must be looked for. The new boilers, and the remainder of the boiler material, have been issued to the older engines, of cheifly the K. A. and K. $B._2$ Classes, many of which having now been running since 1877, must be expected to require heavy repairs.

34. The total expenditure upon Engines, Repairs, and Running is, it will be seen, Rs. 1,917 less than the amount for the corresponding term.

Carriages and Wagons: Running.

35. Special remark does not seem to be necessary under this head, although it is noted that there is a reduction under both Material and Wages, the cost per mile, during the half-year, being less by 5·77 per cent. than that during the half-year with which comparison is being made.

Carriages and Wagons: Repairs.

36. 2,620 vehicles were dealt with in the shops during the half-year, as compared with 3,017, which passed through during the second half of the previous year.

37. The last 12 of the Wooden Covered Goods Wagons, and one Low-Sided Wagon, were built, at the cost of Revenue, and the first of the three 58-feet bogie carriages, being built at the cost of Capital, was further completed, and handed over for use on the S. W. Line Mails between Madras and Bangalore.

38. The remaining two carriages are well in hand, and one of them at any rate will, I anticipate, be finished in time for the Easter traffic. The one Carriage that is running is, I believe, much appreciated by the travelling public, many of whom, as it runs of course on alternate days only, time their journeys so as to travel in it, in preference to the ordinary four-wheeled Carriages.

39. Sanction was given for the construction of 46 third class carriages, for which the Traffic Department had applied, as well as for the renewal of some 20 of the Engineering Department Ballast Wagons, in the form of Rail Trucks; but, owing to the proposition that has been put forward by the Consulting Engineer, with regard to the conversion of the gauge of the West Coast District, work upon both these sanctions has been postponed, and it was fortunate therefore that the construction of the Carriage Stock for the B. M. Railway so fitted in, as to have allowed of the utilization of the Carriage Building Shops upon it.

40. Had this not been so, it would have been necessary to temporarily largely reduce hands, pending the settlement of the West Coast Conversion question, and this I should have been most loth to do, since experienced Carriage builders cannot be picked up when wanted, and the body of men whom we have trained from their boyhood in the Workshops, if once dispersed, could probably never have been got together again.

41. The total amount spent under Carriages and Wagons Repairs is Rs. 64,298 less than that for the corresponding half-year, and, since the renewal of the whole of the old 8-ton wagon stock has now been completed, the expenditure under this head is not likely to again vary much.

Staff.

42. Mr. Pilkington, the Deputy Loco. Superintendent, was granted 3 months' privilege leave, from July 1898.

43. Mr. H. J. Stanley, 1st Assistant Loco. Superintendent, was granted furlough for 16 months, and left for England on the 3rd November 1898.

44. Mr. E. Outon, Lathe Shop Foreman, who, as recorded in my last half-year's report, was granted 6 months' leave, returned to duty on the 21st October 1898.

45. Covenanted Drivers Howard, and Malthouse, who were engaged by the Board on agreements for 3 years, arrived in India, and reported themselves for duty on the 5th December last.

46. Mr. O. Horrocks, who had been in the Company's service since August 1864, resigned his appointment at the close of the year. Mr. Horrocks was granted leave for two months during November and December and finally made over charge, and retired, on the 31st December 1898. In consideration of his long and faithful service, a special recommendation has been submitted in his behalf, for a gratuity of 12 months' pay of which, as advised, the Board have been good enough to approve.

I have the honour to be,

Sir,

Your most obedient servant,

C. E. PHIPPS,

Locomotive Superintendent.

MADRAS RAILWAY.

Abstract of Expenditure for working and maintaining Locomotive Engines, Carriages and Wagons for the Half-year ending 31st December 1898.

LOCOMOTIVE DEPARTMENT.

LOCOMOTIVE ENGINES—Running.

Half-year ending	Total Engine Miles worked.	Wages and Salaries. Drivers and Firemen.			Cleaners, Water and Fuel Coolies.			Total.			Cost per Mile.			Coal and Patent Fuel. Total Consumption. Quantity.	Cost.			Per Mile. Quantity	Cost.			Firewood. Total Consumption. Quantity.	Cost.			Per Mile. Quantity	Cost.			Average Cost per Mile of Coal, Patent Fuel and Firewood.			Oil, Tallow, Waste, &c. Actual Cost.			Cost per Mile.			Total Cost.			Cost per Mile.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Cwts.	Rs.	A.	P.	Lbs.	Rs.	A.	P.	Lbs.	Rs.	A.	P.	Lbs.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Dec. 1897 ...	1,616,892	1,48,726	0	7	41,628	6	10	1,90,354	7	5	0	1	10·60	368,566½	2,54,073	8	9	49·59	0	4	10·60	100,631,750	2,13,842	7	6	128·29	0	4	4·34	0	4	7·56	32,981	11	1	0	0	3·92	6,91,252	2	9	0	6	10·08
June 1898 ...	1,551,560	1,43,660	0	2	41,155	0	8	1,84,815	0	10	0	1	10·87	362,375½	2,44,618	5	0	49·26	0	4	8·99	92,202,525	1,95,930	5	10	126·72	0	4	3·70	0	4	6·52	36,842	11	4	0	0	4·56	6,62,206	7	0	0	6	9·95
Dec. 1898 ...	1,559,578	1,41,943	10	1	41,065	7	8	1,83,009	1	9	0	1	10·53	379,972	2,60,909	3	5	50·27	0	4	11·18	99,812,950	2,12,102	8	3	139·99	0	4	9·11	0	4	10·23	34,380	7	10	0	0	4·23	6,90,401	5	3	0	7	0·99

LOCOMOTIVE ENGINES—Repairs.

Half-year ending	Total Engine Miles worked.	Cost of Material.			Wages of Workmen.			Total Cost.			Cost per Mile.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Dec. 1897 ...	1,616,892	1,28,546	0	1	1,38,035	5	10	2,66,581	5	11	0	2	7·66
		74,302	3	5				2,12,337	9	3	0	2	6·21
June 1898 ...	1,551,560	74,672	5	5	1,21,287	5	5	1,95,959	10	10	0	2	0·25
Dec. 1898 ...	1,559,578	1,45,501	1	4	1,27,526	14	8	2,73,028	0	0	0	2	9·61

LOCOMOTIVE ENGINES—Gross Cost of Running and Repairs.

Running, Total Cost.			Repairs, Total Cost.			Proportion of Supervision and Office Expenses.			Total Cost.			Deduct for K. G. F. Ry., Madras-Ennur Ry. and Fire Insurance Fund.			Nett Total.			Cost per Mile.		
Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
6,91,252	2	9	2,66,581	5	11	66,341	9	2	10,24,175	1	10	27,534	0	7	**9,96,641**	**1**	**3**	**0**	**9**	**10·35**
			2,12,337	9	3				9,69,931	5	2				**9,42,397**	**4**	**7**	**0**	**9**	**9·91**
6,62,206	7	0	1,95,959	10	10	71,008	15	2	9,29,175	1	0	22,846	14	8	**9,06,328**	**2**	**4**	**0**	**9**	**4·15**
6,90,401	5	3	2,73,028	0	0	71,875	7	7	10,35,304	12	10	40,580	8	0	**9,94,724**	**4**	**10**	**0**	**10**	**2·46**

Figures in red show actual expenses after deducting value of two locomotive engines replaced at cost of Revenue in the corresponding half-year.

CARRIAGE AND WAGON DEPARTMENT.

CARRIAGES AND WAGONS—Running.

Half-year ending	Total Engine Miles worked.	Cost of Material.			Wages of Workmen.			Total Cost.			Cost per Mile.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
...	1,616,892	17,885	10	3	,102	C	5	37,987	10	8	0	0	4·51
...98 ...	1,551,560	17,482	4	4	20,248	5	2	37,730	9	6	0	0	4·67
Dec. 1898 ...	1,559,578	14,831	1	10	19,756	12	10	34,587	14	8	0	0	4·25

CARRIAGES AND WAGONS—Repairs.

Cost of Material.			Wages of Workmen.			Total Cost.			Cost per Mile.		
Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
1,38,299	14	8	97,716	2	6	2,36,016	1	2	0	2	4·03
88,986	8	3	73,685	13	0	1,62,672	5	3	0	1	8·13
96,052	2	2	75,665	13	4	1,71,717	15	6	0	1	9·14

CARRIAGES AND WAGONS—Gross Cost of Running and Repairs.

Running, Total Cost.			Repairs, Total Cost.			Proportion of Supervision and Office Expenses.			Total.			Deduct for K. G. F. Ry., Madras-Ennur Ry. and Fire Insurance Fund.			Nett Total.			Cost per Mile.		
Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
37,987	10	8	2,36,016	1	2	19,816	5	7	2,93,820	1	5	8,061	3	7	**2,85,758**	**13**	**10**	**0**	**2**	**9·93**
37,730	9	6	1,62,672	5	3	22,423	14	0	2,22,826	12	9	5,405	8	4	**2,17,421**	**4**	**5**	**0**	**2**	**2·91**
34,587	14	8	1,71,717	15	6	17,968	13	11	2,24,274	12	1	6,215	4	10	**2,18,059**	**7**	**3**	**0**	**2**	**2·84**

SUMMARY—*Total Gross Cost of Working the Locomotive and Carriage and Wagon Department.*

Half-year ending	Locomotives, Total Cost.			Carriages & Wagons, Total Cost.			Total Cost.			Cost per Mile.			Loss by Exchange and Carriage of Revenue Stores.			Final Total Cost of Working.			Final Total Cost per Mile.		
	Rs.	A.	P	Rs.	A.	P	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.		P.
December 1897	9,96,641	1	3	2,85,758	13	10	12,82,399	15	1	0	12	8·28	1,08,071	6	6	**13,90,471**	**5**	**7**	**0**		**·11**
	9,42,397	4	7				12,28,156	2	5		12	1·84	87,281	2	6	13,15,437	4	11	0		0·20
June 1898	9,06,328	2	4	2,17,421	4	5	11,23,749	6	9	0	11	7·06	63,540	12	8	**11,87,290**	**3**	**5**	**0**	**12**	**2·92**
December 1898	9,94,724	4	10	2,18,059	7		12,12,782	12		0	12	·30	77,616	2	5	**12,90,399**	**14**	**6**	**0**	**13**	**2·86**

PERAMBUR WORKS,
22nd March 1899.

C. E. PHIPS

Loco

PERAMBUR WORKS

22nd March 1899.

No. 8806/615.

MADRAS RAILWAY COMPANY,
TELEGRAPH ENGINEER'S OFFICE,
ARKONAM, 24*th February* 1899.

THE AGENT AND MANAGER,
Madras Railway.

DEAR SIR,

REPORT FOR THE HALF-YEAR ENDING 31st DECEMBER 1898.

I beg to submit my report for the half-year ending 31st December 1898.

OFFICES AND FITTINGS.

Telegraph instruments, fittings, &c., were shifted and refixed at the following stations in consequence of alterations to station buildings by the Engineering Department:—

Ambattur.
Oorgaum.
Tirur.
Koduru.
Razampeta.

Needle and block instruments were fixed at the undermentioned stations on the Nilgiri Mountain Railway and brought into use on the 1st October 1898:—

Mettupalaiyam.
Kullar.
Adderley.
Hill Grove.
Runnymede.
Coonoor.

The block instruments and the telephones were transferred from the wooden bunk into the new block cabin at Rayapuram.

Tangal Station on the Ennur Line was closed and the needle instrument there transferred to Korukkupett, which was re-opened.

ELECTRIC STARTING SEMAPHORES.

The Electric Starting Semaphores at the undermentioned stations were renewed:—

South-West Line.

Arcot	...	Down.
Tiruvallam	...	Up.
Lakkiti	...	Down.
Ottapalam	...	Down.

North-West Line.

Kamalapuram	...	Down.
Rayalcheru	...	Up.
Tungabhadra	...	Down.

The levers of the undermentioned Electric Starting Semaphores were shifted into new pits owing to alterations of station buildings:—

Erode Down.
Olavakkot Up.

The terminal post of the Up Electric Semaphore at Ferok was renewed.

Comparative statement of percentage of semaphore failures for the half-year ending 31st December 1898.

—	Half-year ending 31st December 1897.	Half-year ending 31st December 1898.
Total number of semaphore operations (not including those for ballast and locomotive wood trains)	154,364	146,907
Number of failures—		
(*a*) Due to Station Staff	89	55
(*b*) Due to faults in apparatus caused by lightning and interference without Inspector's knowledge ...	36	41
(*c*) Due to faults in apparatus	98	99
Total ...	223	195
Percentage of failures to number of operations	0·14	0·13

LINE WORK.

Telegraph alignments at the undermentioned stations were altered :—

Buddireddipatti.
Mettupalaiyam.
Nandalur.

The office standard at Bangalore City was shifted and cross-over wires were altered to enable the Engineering Department to erect covering over the passenger platform at that station.

A telegraph post was erected and wires raised at Mulanur in order to prevent the water coolies interfering with them.

Telegraph rail posts at $\frac{25}{9,10\&11}$ near Trivellore were lengthened and wires raised to enable the Engineering Department to extend ballast siding.

Telegraph posts $\frac{257}{4\text{ to }8}$ were shifted to enable the Engineering Department to carry out the alteration to locomotive sidings at Gooty.

Insulators on No. 2 needle circuit were renewed between Salem and Podanur.

Time signal wires which were led to the old telegraph workshops were dismantled and new wires erected from 43/3 mile to the new telegraph workshops at Arkonam.

The following telegraph posts were renewed :—

South-West Line, $\frac{336}{3}$, $\frac{348}{14}$, $\frac{365}{13}$, & $\frac{387}{1}$.

Nilgiri Branch, $\frac{306}{2}$ & $\frac{310}{20}$.

Lakkiti Station yard, 1 post.

North-West Line, $\frac{110}{8}$, $\frac{167}{1}$, $\frac{168}{1\&13}$, $\frac{169}{1\text{-}4\&11}$, $\frac{173}{10}$, $\frac{176}{8\&9}$, $\frac{178}{4}$, $\frac{179}{3\&10}$, $\frac{183}{4\&5}$, $\frac{191}{4\&15}$, $\frac{193}{18}$, $\frac{194}{4}$, $\frac{196}{7}$, $\frac{198}{15}$, $\frac{202}{11}$, $\frac{204}{10\&12}$, $\frac{205}{9}$, $\frac{207}{7\&12}$ & $\frac{227}{5\&11}$.

LIGHTNING CONDUCTORS.

A lightning conductor with finial was erected on the Locomotive Foreman's bungalow at Nandalur.

BELL CIRCUIT.

The gate bell fixed in the station bunk was shifted to the adjacent Gateman's bunk at Veyasarpaudy.

The following are comparative statements of interruptions on the telegraph and block circuits :—

INTERRUPTIONS ON TELEGRAPH LINES.

—	Interruptions caused by the neglect and carelessness of Signallers.	Accidental interruptions.	Total.
Half-year ending 31st December 1898 ...	8	39	47
Half-year ending 31st December 1897 ...	1	48	49

Of the accidental interruptions—

14 were due to instrumental faults.
12 „ „ to line faults.
8 „ „ to unknown causes.
3 „ „ to weak signals.
2 „ „ to battery faults.

INTERRUPTIONS OF BLOCK SECTIONS.

—	Miles open.	No. of Circuits.	Interruptions caused by the neglect and carelessness of Signallers.	Accidental interruptions.	Total.
Half-year ending 31st December 1898...	874½	131	17	82	99
Half-year ending 31st December 1897...	857½	126	12	66	78

Of the accidental interruptions—

35 were due to instrumental faults.
13 „ „ to line faults.
4 „ „ to battery faults.
30 „ „ to lightning.

INTERCOMMUNICATION.

The undermentioned vehicles were fitted with electrical intercommunication appliances at Perambur Works :—

—	Vehicles newly fitted.	Vehicles refitted.
Bogie composite	1	...
Covered goods	12	6
Third-class carriages	...	34
First-class carriages	...	7
Engines	...	12
Second-class carriages	...	2
Brake vans	...	5
Baggage vans	...	3
Horse boxes	...	19
Ballast wagon	...	1
Carriage trucks	...	6
Tank wagon	...	1
Post office vans	...	4
Bogie engine	...	1

Statement showing the working of electrical intercommunication in trains.

—	Half-year ending 31st December 1897.	Half-year ending 31st December 1898.
Total mileage of fitted trains	1,278,243	1,265,172
Mileage of fitted trains with complete communication ...	1,272,915	1,256,951
Percentage of interruption	0·41	0·65

List of cases in which electrical intercommunication was used and trains stopped during the half-year.

Date.		Particulars taken from the Guard's Journals.
1898.		*Fire.*
August	17	The 4-45 o'clock train was stopped near Kulipalaiyam Station to extinguish fire on O. G. 271.
September	13	The 4-45 o'clock train was stopped at $\frac{259}{18}$ mile to extinguish fire on C. G. 116.
December	5	The 18-15 o'clock mail train was stopped at $\frac{213}{18}$ mile to extinguish fire on A. 24.
		Safety of Passengers and Public Property.
July	7	The 20-0 o'clock train was stopped at Avadi immediately after being put in motion, in consequence of the Gateman opening the door of a third-class brake van and trying to push in two third-class passengers while the train was in motion.
August	25	The 9-0 o'clock train was stopped at 193rd mile owing to a large bundle of wool having dropped from O. G. 865.
September	21	The 18-30 o'clock mail train was stopped at Jalarpet west points to detect a passenger who jumped into brake van while the train was in motion.
,,	29	The 18-30 o'clock mail train was stopped near Erode to detect three passengers who jumped into train while the train was in motion.
October	19	The 12-45 o'clock train was stopped at Bisanattam after being started to pick up the Collector on Plague Duty, who could not catch the train in time.
November	5	The 13-43 o'clock train was stopped after starting from Mulanur owing to another train having been sighted in the opposite direction.

ELECTRIC CLOCKS.

Statement showing the working of the electric clocks during the half-year.

—		1898. July.	August.	September.	October.	November.	December.	Mean of six months.
Clock failures.	Caused through circumstances beyond Signaller's control. per cent.	0·00	0·19	0·78	1·52	0·39	0·00	0·48
	Caused through the negligence of Signallers. ,,	0·76	0·00	1·18	1·14	0·57	0·76	0·90
Clock errors 2 minutes and over ... ,,		0·19	0·00	0·39	0·00	0·00	0·00	0·10
Do. under 2 minutes but 1 minute and over. ,,		0·00	0·00	0·00	0·00	0·00	0·00	0·00
Do. under 1 minute ... ,,		99·05	99·81	97·65	97·34	98·04	98·86	98·46
Clock stopped ... ... ,,		0·00	0·00	0·00	0·00	0·00	0·38	0·06
		100·00	100·00	100·00	100·00	100·00	100·00	100·00

Appended is a statement showing the total cost of maintenance of the Electric Telegraph during the half-year under report.

Yours faithfully,

JOHN B. DUNCAN,

Ag. Telegraph Engineer.

No. 301.

MADRAS RAILWAY COMPANY,
MEDICAL OFFICER'S OFFICE,
RAYAPURAM, *3rd March* 1899.

To

THE AGENT AND MANAGER.
Madras Railway.

SIR,

I have the honor to forward you my report on the health of the Company's employés and on the conservancy of stations on both lines for the half-year ending 31st December 1898.

2. 3,003 admission sick certificates were granted during the half-year, as against 5,794 issued in the corresponding half of last year. I must explain that it was formerly the practice for some Apothecaries to include in their returns the cases of out-patients, *i.e.*, those receiving medicine while remaining at duty, but such cases are not now included in my half-yearly report, and that circumstance partly accounts for the large diminution of 2,791 in the cases treated during the half-year under review, compared with last year.

3. *Mortality.*—The number of deaths amongst the Company's employés during the half-year reported to me is 27, and this number includes only those who were being treated by the Company's staff at the time of their decease. No doubt there are others, mostly of the menial class, who go away in serious sickness to their villages to be among their relations, some of whom are never again seen or heard of, and no record can be obtained of the mortality amongst that class. The causes of death were various, the chief one being cholera of which there were six cases. There appear to me to be two noteworthy points in the mortality list *viz.*, no case of mortality from small-pox and only one from malarial fever. There were no less than 1,265 admissions for malarial fever during the half-year, with only one death, and considering that it is malarial fever that contributes so heavily to swell the death roll of Indian towns and villages, it is some satisfaction to me to be able to draw your attention to the solitary instance of mortality, out of 1,265 cases, on the Company's line, and to suggest that this happy record is largely owing to the skill and devotion to patients, which the Apothecary staff exercise in the conduct of their cases. The other circumstance to which I invite your kind notice is the absence of any mortality from small-pox during the half-year, and it has been my privilege, for several successive half-years, to record the same pleasing event. The number of cases of small-pox during each half-year is always small, and the cases are invariably of a benign type, and these circumstances are no doubt to be attributed to the strict manner in which the Company insists that every employé in their service, and every woman and child living on their premises, shall be vaccinated against small-pox. Employés to their credit recognise the beneficent character of the Company's vaccination rules, and not one of those misguided persons called "conscientious objectors," so numerous in some enlightened English towns, are to be found on the Madras Railway.

4. *Cholera.*—There have been thirteen cases of cholera amongst employés during the half-year, five of them at Renigunta, the only town on the line where the disease may be said to have been epidemic. The remaining eight cases were scattered over the line, each one at a different station.

5. *Plague.*—This epidemic had been raging in Bombay, and on the Great Indian Peninsula and Southern Mahratta Railways, for about two years before it invaded any station on the Madras Railway. Unhappily it appeared at Bangalore City Station, obviously imported from

some station on the Southern Mahratta Railway, in the beginning of September 1898. Several employés and members of their families were attacked, both at the Bangalore City and Cantonment Stations, but beyond these few instances no case of plague has occurred at any other station on the Railway. It has only as yet touched the fringe of the Company's system, and it is to be hoped that the active disinfecting measures which the Company's Apothecaries in the infected area are carrying out will prevent any further invasion of Railway premises. Employés on the Bangalore Branch came forward eagerly to be inoculated against plague when the disease was threatening their stations, but at other stations, remote from the infected district, the staff, for various reasons, put off the operation. If the epidemic unfortunately reaches their doors, they, in their turn, will, I am sure, immediately apply for the undoubted benefits of inoculation. I obtained some statistics a few weeks ago at Malur, a village on the Bangalore Branch of the Railway, which show its unquestionable efficacy against plague, and I think they are worth recording. They correspond, I may say, with statistics obtained as to the efficacy of inoculation from all other districts where the operation is practised, and they are perfectly reliable and accurate.

Malur population	3,180
Persons inoculated	377
Do. uninoculated	2,803
Attacks among inoculated	4 = 1·06%
Do. uninoculated	228 = 8%

If the inoculated had been attacked at the same rate as the uninoculated, 30 should have been seized, but only 4 were.

Of the 4 inoculated persons attacked none died, all recovered.

Of the 228 uninoculated attacked 198 died = 87%.

If the inoculated had died at the same rate as the uninoculated, 3½ of them should have died, but they all recovered.

6. *Quarantine.*—It was found necessary during the half-year to place 18 persons in quarantine at an expenditure in wages of Rs. 148-13-10, on account of the appearance of small-pox in their houses, and one person through plague having appeared in his home, the latter drawing Rs. 19-13-0.

7. *Staff.*—The medical and conservancy staff have, as a rule, acquitted themselves in the discharge of their duties to my complete satisfaction.

8. I have inspected all the dispensaries and conservancy arrangements on the line and found the same in good order.

I have the honor to be,

Sir,

Your most obedient servant,

J. CURRIE,
Medical Officer,
Madras Railway.

Comparative statement of cases treated during the half-years ending 31st December 1897 and 31st December 1898.

Date.	Small-pox.	Measles.	Influenza.	Plague.	Simple Fever.	Malarial Fever.	Remittent Fever.	Cholera.	Choleraic Diarrhœa.	Dysentery.	Diarrhœa.	Accidents and other diseases.	Total Treated.
1897.													
July	1	...	...	...	22	226	3	2	...	33	57	514	858
August	...	..	...	...	26	296	...	5	...	44	77	503	951
September	...	...	...	...	47	373	2	9	...	52	69	478	1,030
October	...	...	...	...	38	455	...	3	...	38	44	514	1,092
November	...	...	...	...	33	403	...	1	...	36	47	479	999
December	1	..	...	...	34	327	2	...	...	20	30	450	864
Grand Total ...	2	...	...	...	200	2,080	7	20	...	223	324	2,938	5,794
1898.													
July	...	1	5	...	9	191	1	1	...	24	39	178	449
August	...	...	4	...	24	233	...	2	...	36	41	244	584
September	2	...	3	..	21	214	1	2	...	24	25	172	464
October	2	...	2	...	22	217	1	1	...	21	23	204	493
November	1	...	5	4	14	219	...	4	...	28	23	269	567
December	...	...	2	...	13	191	...	3	...	18	30	189	446
Grand Total ...	5	1	21	4	103	1,265	3	13	...	151	181	1,256	3,003

Return of vaccination for the half-year ending 31st December 1898.

No. vaccinated.	Traffic Department. Sex.				Locomotive Department. Sex.				Engineer Department. Sex.			
			Children.				Children.				Children.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
770	1	...	44	...	1	1	...	...	708	15	...	...

(No. II.)

No. 11545
386

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

Madras, 11th April 1899.

1891
13.4.99

From



The Agent and Manager.
M. & C.

To

The Consulting Engineer for Railways.
Madras.

Sir,

In continuation of my letter No. 11545/337 dated 28th March 1899. I have the honour to forward herewith 32 copies each of my Report and that of the Traffic Manager for the half year ending 31st December 1898.

Copies of the Report of the Commandant, Madras Railway Volunteers will follow.

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

for Agent & Manager.

Enclo:
32 copies of A+M's report +
32 — of T. M's report
(with 10 Enclos)

MADRAS RAILWAY.

From

The Agent and Manager.

To

The Consulting Engineer

for Railways.

Dated 188

Recd.

No.

No. 2406.

MADRAS RAILWAY COMPANY,
MADRAS, *6th April* 1899.

To

JULIAN BYRNE, ESQ.,
Secretary,
Madras Railway Company,
LONDON.

SIR,

I have the honor to submit, for the information of the Directors, the following summary of the operations of the Company for the half-year ended 31st December 1898. The detailed reports by the Heads of Departments were sent to you on the undermentioned dates :—

The Chief Engineer	... 23rd March 1899.	The Loco. Supt.	... 30th March 1899.
„ Chief Auditor	... „ „ „	„ Ag. Telegraph Engr.	„ „ „
„ Medical Officer	... 30th „ „	„ Traffic Manager	... 6th April „

2. The **Financial** results of the last two years are shown in the annexed table :—

Half-year ended	Gross earnings.	Total expenditure.	Net revenue.	Working expenses per cent.	Receipts per mile per week.	Half-yearly dividend.
	Rs.	Rs.	Rs.			
1897, June ...	57,89,562	26,99,926	30,89,636	46·63	265·61	2·56
„ December ...	56,75,752	27,63,201	29,12,551	48·68	260·77	2·41
Total ...	1,14,65,314	54,63,127	60,02,187	47·65	263·19	4·97
1898, June ...	56,34,736	24,77,847	31,56,889	43·97	258·61	2·62
„ December ...	50,85,747	27,40,731	23,45,016	53·89	233·26	1·92
Total ...	1,07,20,483	52,18,578	55,01,905	48·68	245·94	4·54

The decrease in gross earnings for December 1898, as compared with the earnings for the corresponding half-year of 1897, amounts to Rs. 5,90,005 and the decrease in working expenses to Rs. 22,470. The net revenue shows a decrease of Rs. 5,67,535, equivalent to 19·49 per cent.

3. During the half-year 1,270,984 train miles were run as against 1,318,652 during the corresponding period. 3,636,128 passengers and 581,312 tons of goods were carried as against 4,918,869 passengers and 613,550 tons of goods.

4. The result of the half-year's working is a dividend at the rate of £3-17-0 per cent. per annum on the capital bearing interest. Loss by exchange amounts for the half-year to Rs. 1,72,337, or Rs. 19,414 more than during the corresponding half-year.

5. The number of **passengers** (excluding troops and police) carried in each class and the gross receipts therefrom, during the second halves of the last four years, are shown in the following table :—

Half-year ended	First Class.		Second Class.		Third Class.		Total.	
	No. carried.	Money earned.	No. carried.	Money earned.	No. carried.	Money earned.	No. carried.	Money earned.
		Rs.		Rs.		Rs.		Rs.
31st December 1895	11,538	1,07,505	47,034	1,06,013	4,327,774	17,36,777	4,386,346	19,50,295
Do. 1896	12,273	92,263	42,830	1,01,940	4,727,779	16,99,951	4,782,882	18,94,154
Do. 1897	11,189	83,571	45,403	98,665	4,821,593	16,63,222	4,878,185	18,45,458
Do. 1898	9,978	88,358	39,008	95,981	3,554,861	12,39,576	3,603,847	14,23,915

There is a decrease in the number of first-class passengers carried, as compared with the corresponding half-year of 1,211, or very nearly 11 per cent., and in the money earned there is an increase of Rs. 4,787, or 5·7 per cent.

There is a decrease in the number of second-class passengers carried of 6,395, or 14 per cent., and in the money earned there is a decrease of Rs. 2,684, or 2·7 per cent.

There is a decrease in the number of third-class passengers carried of 1,266,732, or nearly 27 per cent., and in the money earned there is a decrease of Rs. 4,23,646, or over 25 per cent.

The large falling off in the passenger traffic is entirely due to plague and plague restrictions.

Additional plague examining stations have been opened since the June half-year closed, and as plague broke out very seriously at Bangalore during the half-year, the measures adopted by Government to check the disease have had a far-reaching effect as will be seen from the Traffic Manager's table showing the percentage of passengers travelling over the several districts of the line.

The disease while breaking out spasmodically in places seems to move slowly but steadily to the south and the east, and it seems quite impossible to say where the disease will extend, or when we may expect to get rid of its influence.

6. The progress of the **goods traffic** during the same four half-years was—

Half-year ended	Goods traffic exclusive of Madras Railway material and revenue stores.	Government stores and Foreign Railway material.	For the public.		Average receipt per ton lifted.
			Weight.	Receipts.	
	Rs.	Rs.	Tons.	Rs.	Rs.
31st Dec. 1895 ..	29,63,744	39,010	430,313	29,24,734	6·87
Do. 1896 ...	29,67,907	74,087	441,688	28,92,920	6·55
Do. 1897 ...	31,96,980	37,260	501,005	31,59,720	6·30
Do. 1898 ..	31,02,852	46,171	467,389	30,56,681	6·54

The total tonnage carried over the Railway during the past half-year, exclusive of Railway materials for construction and revenue stores, was 471,761 tons as against 509,286 tons during the corresponding period, while the receipts were Rs. 31,02,852, and Rs. 31,96,980, respectively.

I alluded in my summary for the June half-year to the falling off in the grain traffic owing to the cessation of the famine of 1897, and a reference to the figures included in the Traffic Manager's report for December will show that we had again during the past half-year to compare with heavy movements of grain carried during the closing months of 1897 to the north.

The movement of wet skins was checked during the half-year by plague precautions, but the increased tonnage of coal, timber, salt, oil and oil-seeds helped us to show a better result than we at one time anticipated.

I do not propose to follow the Traffic Manager in the remarks he has submitted with his report on the acute stage of competition for southern traffic and the compulsory reduction of rates brought about by the opening of the Marmugoa Sea route and the withdrawal of the Southern Mahratta Railway from what was known as the shortest route agreement.

The whole question is in the hands of the several Boards, and I purposely refrain from adding remarks which might possibly make the position of my Directors more difficult.

7. The **maintenance charge** per mile, compared with the three previous half-years, is as follows :—

Half-year.	Ordinary.	Extra.	Total.
	Rs.	Rs.	Rs.
1897, June	562	48	610
„ December... ...	587	33	620
1898, June	484	49	533
„ December... ...	670	24	694

Compared with December 1897, the *ordinary* expenditure for the past half-year shows an increase of Rs. 83 a mile, while the *extraordinary* expenditure shows a decrease of Rs. 9 per mile. A sum of Rs. 14,621, it will be noticed, was charged to revenue on account of covering portions of the line with broken stone.

The Chief Engineer draws special attention to the protective works that have been in hand along the foreshore opposite to our Rayapuram Terminus for some months past. These works are now so far advanced that the safety of the main offices may be said to be secured.

Weak bridges are having attention, and the statement given on page 2 of the Chief Engineer's Report will show that the work connected with the partial renewing and strengthening of various bridges is well in hand.

The special attention of the Board is directed to Mr. Stoney's remarks on the Nilgiri Railway printed on page 7 of his Report. Detailed reports have from time to time been sent home, but the magnitude of the work to be grappled with can best be realised by a perusal of Mr. Stoney's pithy summary.

8. The total cost of the **Locomotive Department** during the last four half-years has been as under:—

Half-year.	Total mileage.	Total cost including all charges.	Total cost per mile run.		
		Rs.	Rs.	A.	P.
1897, June	1,535,936	13,28,234	0	13	10·04
„ December	1,616,892	13,90,471	0	13	9·11
1898, June	1,551,560	11,87,290	0	12	2·92
„ December	1,559,578	12,90,400	0	13	2·86

Compared with the corresponding period of 1897, the expenses of the Locomotive Department may be stated as follows:—

Locomotive	Running	decrease	Rs. 851.
„	Repairs and renewals	increase	„ 6,442.
Carriage and Wagon	Running	decrease	„ 3,400.
„	Repairs and Renewals	„	„ 64,298.

The decrease in the mileage worked of some 57,314 miles is reported, and of roughly a lakh of rupees in the total cost of working the Department. The tendency is for coal, as its cost becomes lower, to push wood for locomotive purposes out of the market, and the effect of the new contract which has been entered into from the 1st of April 1899, will doubtless be to show a further decrease in the cost of fuel burnt. Mr. Phipps on page 3 of his report submits a full statement of his difficulties with the wood contractors.

Owing to plague and plague restrictions the passenger trains on several sections of the line are not so heavily loaded as formerly, but unfortunately the coal bill is but little affected by the loss of three or four carriages on light passenger trains.

As explained by the Locomotive Superintendent, the heavy renewals of passenger and goods stock upon which we have been engaged for many years, are now practically ended.

It is understood that the Calicut-Cannanore Line is to be proceeded with as a standard gauge railway; and this being so, the extra stock sanctioned for the open line and for the new extension and held back for a settlement of the gauge question will now be proceeded with.

During the half-year 2,620 vehicles were repaired and none renewed as against 3,017 and 46, respectively, during the corresponding half-year.

9. The **Electric telegraph** wires, block, needle and Morse instruments, electric starting semaphores and intercommunication in trains were maintained satisfactorily during the half-year. Thirteen engines and 101 vehicles were fitted or re-fitted with electrical intercommunication appliances during the half-year.

10. The **Medical Officer** reports that there was a decrease of 2,791 in the number of employés, to whom it was found necessary to grant sick certificates. There were in all during the half-year 3,003 cases of sickness dealt with against a total of 5,794 cases for the corresponding half-year; but, as the Medical Officer explains in para. 2 of his report, out-patients are not now recorded in the official returns. There were 13 cases of cholera, of which 6 proved fatal, and 5 and 4 non-fatal cases of small-pox and plague respectively. The Medical Officer's remarks on plague cases and the result of inoculation will be read with interest. There were in all 27 deaths reported by the Apothecaries.

11. Colonel C. E. Phipps, Commandant, has been unable up to date to send me his report upon the **Madras Railway Volunteers** for the past year, but I may state

that the regiment was successful in winning the Bangalore Cup, the chief prize of the South of India Rifle Association, at the meeting held at Bangalore in September.

12. **Railway schools** were maintained at eight of the important stations on the line. The total number of children on the register at 31st December was 403 and the average attendance 341. The cost to the Company of maintaining these schools during the period under review was Rs. 6,066.

13. The Company's contribution to the **Provident Institution** amounted for the half-year to Rs. 19,792-2-4, and this sum will be found entered in Abstract G of the Capital and Revenue Accounts. The total amount at credit of the institution at the end of the year was Rs. 9,22,865-11-3. When the revised rules, accepted by the Board, have been sanctioned by the Government of India, an additional contribution of Rs. 40,385 will be made to the fund, and this amount will be found entered in the Net Revenue Account.

14. **Lines worked by the Company—**

Net earnings of

1. The Mysore State Kolar Gold Fields Railway are for the half-year Rs. 28,212-9-11, equal to a return of 7 per cent. upon the Capital outlay.

Net earnings of

2. The Madras-Ennur Section of the Bezwada-Madras Railway for the half-year are Rs. 5,490-10-9, equal to a return of 1·83 per cent. per annum on the total Capital outlay.

NEW PROJECTS.

The **Arcot-Ranipet** Branch is ready to be opened, and we are only now waiting for Government sanction to place the branch at the disposal of the public.

The estimate for re-aligning and improving the **Kolar Gold Fields Railway** has been sanctioned and the work connected with it will be taken in hand without delay.

The **Beach Line Extension** will be vigorously proceeded with as soon as the plans have been sanctioned by the Madras Municipality. All works within municipal limits require the approval of the President of the Municipality, and that officer's sanction is awaited before we cross the main public road near Rayapuram and remove or extend various drains and man-holes connected with the Madras drainage system.

The survey of the **Shoranur-Cochin Railway** is practically completed, and if the Rajah of Cochin decides that the work of construction of the branch is to be carried out by the Madras Railway, the necessary staff will be posted without delay.

15. The following movements in the **Company's Staff** in India during the half-year are recorded:—

Mr H. C. West, Chief Engineer, retired from the Company's service on the 3rd October 1898.

Mr. E. W. Stoney, District Engineer, returned from furlough leave and assumed charge of the office of Chief Engineer on the 3rd October 1898.

Mr. H. J. Stanley, Assistant Loco. Superintendent, proceeded on sixteen months' furlough leave on the 3rd November 1898.

Loco. Foreman O. Horrocks retired from the Company's service on the 31st December 1898.

Latheshop Foreman E. Outon returned from leave and resumed charge of his duties on the 24th October 1898.

Covenanted Engine Drivers Howard and Malthouse arrived and reported themselves for duty on the 5th December 1898.

Mr. G. Wallington, Assistant Traffic Manager, proceeded home on twelve months' furlough leave on the 27th July 1898.

I have the honor to be,

Sir,

Your most obedient servant,

LOUIS S. MOSS,

Agent and Manager.

MADRAS RAILWAY COMPANY,

TRAFFIC MANAGER'S OFFICE,

MADRAS, 1*st April* 1899.

To

THE AGENT AND MANAGER,

Madras Railway Company,

RAYAPURAM.

SIR,

I have the honor to submit my report upon the traffic of the Madras Railway for the half-year ending 31st December 1898.

2. OPEN MILEAGE.—The open mileage (including the Kolar Gold Fields and Madras-Ennur Railways worked by the Madras Railway Company) on the 31st December 1898 was the same as on the 30th June 1898, viz., 859 miles.

3. TRAIN SERVICE.—A revised train service was introduced on the 16th November 1898.

Down Trains—S. W. Line.

No. 75 a new Local Passenger train leaves Madras at 5-45 for Trivellore.

No. 111 Local Passenger train leaves Madras at 17-35 instead of 17-30 and is cancelled from Trivellore to Arkonam.

No. 31 Mixed train leaves Salem at 18-40 instead of 19-0.

No. 87 Mail train leaves Madras at 18-15 instead of 18-30, Mettupalaiyam arrival 9-24 instead of 9-40 and Calicut 14-9 instead of 14-22.

No. 83 Mixed train leaves Arkonam at 4-50 instead of 5-0, Jalarpet arrival 11-50 instead of 12-15.

No. 17 Mixed train leaves Madras at 5-0 instead of 4-45 and arrives at Coimbatore 18-47 instead of 18-17.

No. 73 Mixed train leaves Madras at 19-0 instead of 18-0 and arrives at Katpadi 1-55 instead of 20-45.

No. 121 Mixed train leaves Podanur at 18-45-instead of 18-30 and arrives at Olavakkot at 21-5 instead of 20-48.

Up Trains—S. W. Line.

No. 206 a new Local Passenger train leaves Trivellore at 7-20 for Madras.

No. 172 Local Passenger train is cancelled from Arkonam to Trivellore and leaves Trivellore at 19-40 instead of 20-50 and arrives at Madras 21-0 instead of 22-5.

No. 102 Mixed train leaves Mettupalaiyam at 20-25 instead of 21-25 and arrives at Madras 18-45 instead of 19-0.

No. 30 Mixed train leaves Coimbatore at 5-20 instead of 5-40 and arrives at Arkonam 11-30 instead of 11-42 and is cancelled beyond Arkonam.

No. 42 Mail train leaves Calicut at 9-40 instead of 9-15 and arrives at Madras 7-0 instead of 6-30.

No. 132 Mixed train leaves Calicut at 12-20 instead of at 12-30 and arrives at Podanur at 22-10 instead of 22-11.

No. 8 Mixed train leaves Jalarpet at 8-0 as before and is extended to Madras where it arrives at 20-45.

Down Trains—Bangalore Branch.

No. 149 Mixed train leaves Jalarpet at 14-30 as before but does not run beyond Bowringpet.

No. 151 Mixed train leaving Bangalore Cant. at 6-0 is cancelled.

Up Trains—Bangalore Branch.

No. 50 Mixed train leaves Bangalore City at 12-45 as before but does not run beyond Bowringpet.

Down Trains—N. W. Line.

No. 37 Passenger train leaves Madras at 9-0 as before and arrives at Gooty at 4-4 instead of 4-26.

No. 39 Mixed train leaves Madras at 13-30 instead of 18-40 and arrives at Riachur at 1-15 instead of 5-45.

No. 181 Mixed train leaves Arkonam at 9-10 instead of 9-15 and arrives at Renigunta at 12-24 instead of 12-30.

No. 81 Mail train leaves Madras at 18-45 instead of 20-45 and arrives at Raichur as before stopping at 14 additional stations.

Up Trains—N. W. Line.

No. 14 Mail train leaves Raichur at 15-0 as before and arrives at Madras at 6-15 instead of 5-45.

No. 32 Mixed train leaves Gooty at 21-10 instead of 20-42 and arrives at Madras at 15-20 instead of 16-0.

No. 4 Mixed train leaves Raichur at 0-5 instead of 0-45 and arrives at Arkonam at 3-20 instead of 3-35.

No. 28 Mixed train leaves Arkonam at 7-0 instead of 6-50 and arrives at Madras at 9-25 as before.

Rayapuram, Palghat and Nilgiri Branches.

Rayapuram, Palghat and Nilgiri Branch trains have been re-timed to connect with the altered main line trains.

Down Trains—Madras-Ennur Railway.

No. 195 Mixed train leaves Rayapuram at 18-5 instead of 18-0 and arrives at Ennur at 18-47 instead of 18-45.

4. FARES AND RATES.—The **PASSENGER FARES** were not altered during the half-year ending 31st December 1898. They are shown below :—

First class	... ...	12 pies.
Second class	... ...	6 „
Third class	Mail	2½ „
	Other trains	2 „

The following changes in the **GOODS RATES** were made during the half-year :—

JULY.

Commodities.	Conditions.	Rates per md. per mile.	Alterations.	Rates per md. per mile.	Remarks.
Wool, Loose ...	In wagon loads of 81 mds.	0·666 pie.	In wagon loads from Bangalore to *via* Itarsi for Traffic to Cawnpore, Agra and *via*.	0·333 pie.	To create new traffic.

AUGUST.

Commodities.	Conditions.	Rates per md. per mile.	Alterations.	Rates per md. per mile.	Remarks.
Chillies, Dry ...	In wagon loads Madras to Bombay at O. R.	4 annas per wagon per mile.	In wagon loads between Madras and Bombay.	3 annas per wagon per mile.	In competition with sea traffic.
Flour ...	O.R. ...	0·370 pie. ...	In wagon loads of (270 mds.) at O. R. between Bombay and Madras.	0·132 pie.	Do.
Grain and Seeds...	In wagon loads of (270 to 324 mds.) at O.R.	0·200 pie.	In wagon loads of 270 to 324 mds. at O. R. from *via* Raichur to Bangalore for traffic from G.I.P. and connected Railways.	0·128 pie.	Equalization of rates.
Horns ...	At O.R. from Madras to Bombay.	0·296 pie.	Between Madras & Bombay.	0·180 pie.	In competition with see traffic.
Oats ...	In wagon loads of 8 tons at O.R. for distances of 350 miles and over.	0·204 pie.	*Via* Raichur to Bangalore for traffic from Poona.	0·131 pie.	Equalization of rates.
Twist ...	From Bombay to Madras.	0·353 pie.	Between Bombay & Madras.	0·262 pie.	In competition with see traffic.

DECEMBER.

Cotton, Pressed to 25 lb. and over.	From Devangiri to to Madras *via* Bangalore City.	0·592 pie.	Cotton pressed to over 25 lb.	0·356 pie.	To Equalise with the longer route.
Grain and Seeds, Common.	In wagon loads of 270 to 324 mds at O.R. between *via* Raichur and Bangalore.	0·128 pie.	For traffic from I. M. Ry. Stations *via* Raichur.	0·118 pie.	Equalization with the rate *via* Guntakul.
Cotton, Loose in Borahs.	At O. R. in wagon loads of 90 mds. from Raichur to Guntakul.	1·111 pie.	At O. R. wagon loads of 90 mds. from Raichur to Guntakal.	0·888 pie.	To bring down loose cotton to Guntakal to be pressed there and rebooked.

The rates here given do not include the many rapid and temporary changes which have taken place in consequence of the Marmagoa dispute, as the commodities and rate lists which would have to be included to make them intelligible, even to a Traffic Officer, would necessitate an appendix.

5. TRAFFIC TRAIN MILES.—The traffic train mileage for the December half-years of 1897 and 1898 is shown in the following table :—

Allocation.	Description of train.	December 1897. Madras Railway.	K. G. F. Railway.	Madras-Ennur Railway.	Total.	December 1898. Madras Railway.	K. G. F. Railway.	Madras-Ennur Railway.	Total.
		Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Coaching...	Mail	322,736	...	...	322,736	322,736	...	...	322,736
	Passenger	169,698	...	...	169,698	170,866	...	...	170,866
	Special	1,570	...	...	1,570	3,995	...	64	4,059
	Troops	6,490	...	...	6,490	1,799	...	...	1,799
Mixed ...	Ordinary	616,020	14,750	12,000	642,770	573,657	14,720	12,000	600,377
Goods ...	Ordinary	46,943	...	1,607	48,550	47,839	...	...	47,839
	Extra	92,914	4,214	...	97,128	94,534	4,674	...	99,208
	Ballast trains for construction.	...	...	...	...	459	...	...	459
	Light engines ...	36,795	360	76	37,231	26,863	530	...	27,393
	Maintenance ...	8,991	...	974	9,965	10,892	...	...	10,892
	Fuel	16,495	...	...	16,495	17,344	...	...	17,344
	Total ...	1,318,652	19,324	14,657	1,352,633	1,270,984	19,924	12,064	1,302,972

Excluding maintenance and fuel mileage the total train mileage of the Madras Railway was 1,242,748 against 1,293,166 for the corresponding period of 1897 or a decrease of 50,418 miles, equivalent to 3·90 per cent.

Taking the figures as shown in the Capital and Revenue accounts where Mixed and Light Engine mileage is divided between the Coaching and Goods traffic, a decrease of 28,311

occurs in Coaching and 22,107 in Goods train mileage on the Madras Railway, a decrease of 1,428 in Coaching and an increase of 2,028 in Goods on the K. G. F. S. Railway, and an increase of 852 in Coaching and a decrease of 2,471 in Goods on the Madras-Ennur Railway.

6. GROSS AND NET TRAFFIC FOR YEARS 1889 to 1898.—The following table is designed to show the gross traffic receipts, total expenses, net receipts, number of passengers, tonnage of goods, traffic expenses, and percentage of traffic expenses on gross receipts, for 10 years ending 31st Dec. 1898.

Years.	Gross Receipts.	Total Expenses.	Net Receipts.	No. of Passengers carried including Troops and Police.	Tons of Goods carried including Railway Material and Revenue Stores.	Expenses of Traffic Department.	Percentage of Traffic Expense on Gross Receipts.
	Rs.	Rs.	Rs.	No.	No.	Rs.	Rs.
1889 ...	91,10,895	53,72,473	37,38,422	8,528,953	1,097,441	7,99,976	8·7
1890 ...	95,06,134	49,84,654	45,21,480	8,433,081	1,193,415	8,20,687	8·6
1891 ...	93,44,688	54,38,158	39,06,530	8,240,222½	1,177,910	8,54,582	10·9
1892 ...	96,24,670	53,32,537	42,92,133	8,889,950	1,118,857	8,43,744	8·8
1893 ...	1,05,05,036	50,83,294	54,21,742	9,826,256	1,156,894	8,99,985	8·6
1894 ...	1,03,21,012	53,73,150	49,47,862	10,160,062½	1,076,542	8,69,955	8·4
1895 ...	1,12,08,407	53,29,676	58,78,731	8,983,791	1,129,221	8,31,875	7·4
1896 ...	1,08,80,251	54,94,961	53,85,290	9,723,265	1,117,213	8,61,827	7·9
1897 ...	1,14,65,314	54,63,126	60,02,188	10,073,753½	1,239,848	8,25,838	7·2
1898 ...	1,07,20,483	52,18,578	55,01,905	8,331,703	1,166,416	8,49,896	7·9

7. GROSS AND NET EARNINGS.—Compared with the corresponding period of 1897 the earnings from all sources for the half-year ended December 1898 were Rs. 50,85,747 against Rs. 56,75,752 or a decrease of Rs. 5,90,005 equivalent to 10·40 per cent.

The net earnings were Rs. 23,45,016 against Rs. 29,12,551 or 46·11 per cent. of Revenue.

The working expenses were Rs. 27,40,731 against Rs. 27,63,200 or 53·89 per cent. of Revenue.

The average receipts per train mile were Rs. 4·00 against Rs. 4·30 in consequence of light trains owing to plague.

8. The increases and decreases in the gross earnings are shown in the following table :—

Heads.	Earnings.		Increase.	Decrease.	Net decrease.
	Half-year ending Dec. 1897.	Half-year ending Dec. 1898.			
	Rs.	Rs.	Rs.	Rs.	Rs.
Passengers	18,45,458	14,23,915	...	4,21,543	
Troops and Police ...	78,222	61,544	...	16,678	
Passengers' luggage ...	86,995	66,226	...	20,769	
Parcels	1,69,623	1,49,232	...	20,391	
Parcels (Revenue) ...	3,370	3,178	...	192	
Horses, carriages and dogs.	37,901	34,520	...	3,381	
Special trains	366	2,570	2,204	...	
Goods	31,96,980	31,02,852	...	94,128	
Goods (Revenue) ...	64,929	86,966	22,037	...	
Railway material ...	871	5,423	4,552	...	
Live stock	19,588	12,370	...	7,218	
Rents and demurrage ...	7,025	6,862	...	163	
Miscellaneous	5,015	5,755	740	...	
Haulage of postal vans ...	24,917	24,470	...	447	
Sundries	1,24,723	91,277	...	33,446	
Telegraph	9,769	8,587	...	1,182	
Total ...	56,75,752	50,85,747	29,533	6,19,538	5,90,005

9. The net decrease in the working expenses is explained as follows :—

Heads.	Expenditure.		Increase.	Decrease.	Net decrease.
	Dec. 1897.	Dec. 1898.			
	Rs.	Rs.	Rs.	Rs.	Rs.
Permanent way	6,27,504	7,03,741	76,237	...	
Locomotive	10,79,084	10,55,342	...	23,742	
Repairs to carriages and wagons.	3,11,387	2,35,058	...	76,329	
Traffic	4,21,155	4,29,914	8,759	...	
General charges	2,82,841	2,72,281	...	10,560	
Special and miscellaneous ...	41,229	44,395	3,166	...	
Total ...	27,63,200	27,40,731	88,162	1,10,631	22,469

10. PASSENGER TRAFFIC.—The receipts from passengers (exclusive of troops and police) were Rs. 14,23,914 against Rs. 18,45,459 or a decrease of Rs. 4,21,545 equivalent to 22·84 per cent. The lowest class contributed in money 87·05 per cent. against 90·12 per cent. and in number 98·64 per cent. against 98·84 per cent.

11. The receipts from each class of passengers are shown in the following table :—

Half-years ending	First class.	Second class.	Third class.	Total.
	Rs.	Rs.	Rs.	Rs.
31st Dec. 1898	88,357	95,981	12,39,576	14,23,914
Do. 1897	83,571	98,665	16,63,223	18,45,459
Increase in 1898	4,786	...	...	...
Decrease in 1898	...	2,684	4,23,647	4,21,545
Increase per cent.	5·73	...	...	...
Decrease do.	...	2·72	25·47	22·84

12. The numbers carried in each class were :—

Half-years ending	First class.	Second class.	Third class.	Total.
	No.	No.	No.	No.
31st Dec. 1898	9,978	39,008	3,554,861½	3,603,847½
Do. 1897	11,189	45,403	4,821,593	4,878,185
Increase in 1898	...	...	...	...
Decrease in 1898	1,211	6,395	1,266,731½	1,274,337½
Increase per cent.	...	...	...	...
Decrease do.	10·82	14·08	26·27	26·12

13. The percentage of numbers and average mileage of each class were as follows :—

Periods.	Percentage of numbers.			Average mileage.		
	First class.	Second class.	Third class.	First class.	Second class.	Third class.
Half-year ending 31st Dec. 1898.	0·28	1·08	98·64	*149	95	32
Do. do. 1897.	0·23	0·93	98·84	155	110	32

* What would seem to be an consistency in the decreased average mileage of 1st class passengers is due to decrease of Rs. 2,139-6-6 in 1st class periodical ticket receipts, and to the manner in which, under Government orders a periodical ticket-holder is counted as 40 single journey passengers.

14. The average fare paid by each class of passenger was :—

Period.	First class.	Second class.	Third class.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Half-year ending 31st December 1898	8 13 9	2 7 4	0 5 7
Do. do. 1897	7 7 6	2 2 9	0 5 6

15. The following statement shows numbers of and receipts from Troops and Police for the two half years :—

Half-years.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
31st Dec. 1898 ...	521	5,859	4,604½	18,306	27,155	37,379	32,280½	61,544
Do. 1897 ...	594	5,458	6,102½	28,216	33,988	44,549	40,684½	78,223
Increase in 1898 ...	...	401	...	...	...	...	...	...
Decrease in 1898 ...	73	...	1,498	9,910	6,833	7,170	8,404	16,679
Increase per cent. ...	...	7·35	...	...	...	...	...	...
Decrease per cent. ...	12·29	...	24·55	35·12	20·10	16·09	20·66	21·32

16. In the first class passenger traffic there was a decrease of 10·82 per cent. in number and an increase of 5·73 per cent. in money. In the 2nd class there was a decrease of 14·08 per cent. in number and 2·72 per cent. in money. In the 3rd class there was a decrease of 26·27 per cent. in number and 25·47 per cent. in money. The average sum paid by a third class passenger by *all* trains was annas 5-7 against annas 5-6. The average value by *Mail* trains was annas 11-8 against annas 11-10 The percentage of numbers carried by the *Mail* trains was 18 against 17 and by *other* trains 82 against 83.

It is difficult to explain the increase in 1st class passenger receipts, unless it is due to Periodcal ticket-holders, (whose tickets were not renewed owing to plague in Bangalore) being compelled to travel a larger number of times than they anticipated, giving the Railway more revenue from single fares than would have accrued from the Periodical tickets.

The decreases in 2nd and 3rd class passenger traffic were both due to plague, and plague restrictions, particularly the latter, but although it is very discouraging to see passengers frightened away from the Railway, and to receive the weekly returns shewing a regular decrease in revenue while additional labour and anxiety are imposed upon the Railway Staff, and while, instead of a corresponding reduction in Staff the reverse is demanded by the circumstances of the case, still the only reasonable course open to Government seems clearly to be that which is being followed.

17. The Return fare and Festival traffic is shewn in the following table :—

Half-years ending.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
31st Dec. 1898..	724	2,431	9,052	3,879	194,971	9,034	204,747	15,344
Do. 1897...	2,556	3,785	14,193	6,142	225,208	11,488	241,957	21,415
Increase in 1898...	...	...	...	...	...	...	...	...
Decrease in 1898...	1,832	1,354	5,141	2,263	30,237	2,454	37,210	6,071

18. The number of 3rd class passengers booked by all trains on different sections of the line, in the second half-years of 1897 and 1898, is shown in the following table :—

Between	Half-year ending Dec.		Increase per cent.	Decrease per cent.
	1897.	*1898.		
Madras to Jalarpet	1,630,493	1,247,801	...	23·47
Tirupattur to Podanur	664,286	486,138	...	26·82
Bangalore Branch	544,072	320,624	...	41·07
Nilgiri Branch	272,333	195,030	...	28·39
Madukarai to Calicut	575,631	481,245	...	16·39
Tiruttani to Cuddapah	463,738	333,404	...	28·11
Krishnapuram to Raichur	445,834	222,302	...	50·14
Ex-Great Indian Peninsula, Southern Mahratta, South Indian, Kolar Gold Fields and Madras-Ennur Railways	...	73,347	...	...
Total ...	4,596,387	3,359,891	...	26·90

*As the Audit Department have discontinued the compilation of sectional figures, it is impossible to do more than give approximate figures in this form; but, although the present percentage comparisons are vitiated, the figures will be useful for corresponding periods at a later date.

19. The heavy percentages of decrease in the 3rd class passenger traffic, as shewn in para. 18, although general, do not hide the two Madras Railway Districts in which the most serious epidemics have existed, *viz.*, in the Bangalore and Krishnapuram to Raichur Districts where the approximate decreases appear as 41·07 and 50·14, respectively.

20. PARCELS.—Compared with the corresponding period of 1897 there was a decrease of 1·53 per cent. in number, and of 12·02 per cent. in money. The average receipt per parcel was Rs. 0·76 against Rs. 0·85. The decrease both in the number and receipts from local parcels traffic is partly due to the introduction of conference rates under the mileage system which has led to a proportion of the parcels being sent as Goods, and a further decrease is attributed to the plague.

21. The following table shows the number and revenue derived from parcels for the December half-years of the last ten years :—

Half-years ending December.	Number.		Receipts.		Total.	
	Local.	Foreign.	Local.	Foreign.	Number.	Receipts.
	No.	No.	Rs.	Rs.	No.	Rs.
1889	75,506	51,251	78,504	43,548	126,757	1,22,052
1890	78,803	54,935	76,235	46,952	133,738	1,23,187
1891	69,218	50,688	74,587	44,056	119,906	1,18,643
1892	78,515	55,926	84,815	49,280	134,441	1,34,095
1893	93,638	62,524	99,415	50,007	156,162	1,49,422
1894	108,140	75,382	1,10,192	56,864	183,522	1,67,056
1895	91,015	84,720	85,755	62,170	175,735	1,47,925
1896	89,228	92,931	82,027	62,493	182,159	1,44,520
1897	96,760	103,844	94,659	74,963	200,604	1,69,622
1898	70,375	127,165	70,827	78,405	197,540	1,49,232

22. GOODS TRAFFIC.—Compared with the corresponding period of 1897, the receipts from Goods Traffic (exclusive of Railway Material and Revenue Stores) were Rs. 31,02,852 against Rs. 31,96,980,or a decrease of 2·94 per cent., the tonnage being 471,761 against 509,286 or a decrease of 7·37 per cent. The average sum earned per ton carried was Rs. 6·58 against Rs. 6·28 and the average sum per ton per mile was 8·41 pies against 8·36 pies. The fluctuations in the commodities which contributed to this result are shown in para 25.

23. The following table is designed to show the weight and revenue of the public goods traffic for the last ten years :—

Years.	Goods traffic exclusive of Madras Railway material and Revenue stores.	Government stores and Foreign Railway material.	For the Public.	
			Weight.	Receipts.
	Rs.	Rs.	Tons.	Rs.
1889	49,78,001	2,13,405	763,428	47,64,596
1890	51,37,890	2,35,771	830,527	49,02,119
1891	53,11,395	2,34,601	840,032	50,76,794
1892	54,68,885	1,07,988	795,128	53,60,897
1893	61,18,911	78,837	878,194	60,40,074
1894	58,10,094	86,071	815,834	57,24,023
1895	60,81,879	77,109	861,067	60,04,770
1896	59,01,797	1,11,687	865,497	57,90,110
1897	64,93,499	84,423	999,413	64,09,076
1898	62,76,681	87,725	947,197	61,88,956

24. Statement showing earnings from and tonnage of goods traffic for the December half-years of 1897 and 1898 :—

Details.	Half-year ending Dec. 1897.	Half-year ending Dec. 1898.
Receipts from goods ... ... Rs.	31,96,980	31,02,852
Tonnage of goods ... ... Tons	509,286	471,761
Average receipt, per ton carried ... ... Rs.	6·28	6·58
Do. per ton per mile ... ... Pies	8·36	8·41

25. The increase and decrease in each important commodity composing the goods traffic for half-year ending 31st December 1898 is detailed in the following statement :—

Description.	Increase.		Description.	Decrease.	
	Tons.	Rs.		Tons.	Rs.
Coal and Coke	33,444	1,29,465	Cotton, Manufactured ...	1,252	16,847
Cotton, Unmanufactured..	5,505	55,685	Dyes and Tans	3,358	21,524
Drugs and Chemicals ...	345	4,856	Grain and Pulse	33,861	1,01,878
Oils	405	17,685	Hides and Skins... ...	6,789	96,628
Oil Seeds	...	13,476	Jute	1,116	10,647
Railway Plant and Rolling Stock.	...	6,164	Liquors	952	5,958
			Metals	4,507	36,365
Salt	1,165	10,977	Oil Seeds	1,868	...
Sugar	5,470	12,845	Paper and Paste Board ...	76	1,578
Tea	31	1,249	Provisions	2,623	3,926
Wool, Raw	74	1,400	Railway Plant and Rolling Stock.	3,985	...
Commodities which yielded a total revenue of less than Rs. 1,000 each during the half-year.	63	529	Spices	1,320	4,069
			Stone and Lime	9,089	1,339
			Timber	5,798	9,856
			Tobacco	787	2,032
			All others Articles of Merchandise.	6,565	25,011
By Decrease	37,525	94,128	Commodities which yielded a total revenue of less than Rs. 1,000 each during the half-year.	81	801
Total ...	84,027	3,48,459	Total ...	84,027	3,48,459

26. The total quantity of Grain carried over the whole system was 92,673 tons, yielding a receipt of Rs. 6,56,708 against 126,534 tons and a receipt of Rs. 7,58,586 or a decrease of 26·76 per cent. in weight and of 13·43 per cent. in money. The average receipt per ton carried was Rs. 7·09 against Rs. 5·99.

A reference to para. 25 will shew an approximate decrease of two lakhs of rupees in grain and skins. The decrease in the revenue from skins was undoubtedly due to plague, and there is evidence that, owing to plague and plague restrictions, local stocks of grain were used in the place of grain ordinarily imported from other Districts. The fortunate increases in our coal and cotton traffic, however, largely helped to balance these decreases.

27. The following table is designed to show the tonnage of Grain *sent* from and *received* at each district during the half-years ending 31st December 1897 and 1898 :—

Districts.	1897.				1898.			
	Sent from		Received in		Sent from		Received in	
	Tons.	Percentage of tons.	Tons.	Percentage of tons.	Tons.	Percentage of tons.	Tons.	Percentage of tons.
Madras	7,022	5·55	11,055	8·74	12,741	13·75	13,304	14·36
North Arcot ...	20,714	16·37	6,954	5·50	10,190	11·00	10,405	11·23
Salem	18,244	14·42	4,084	3·23	5,975	6·45	16,009	17·28
Coimbatore	15,458	12·22	11,244	8·88	1,066	1·15	19,419	20·95
Malabar	8,263	6·53	23,964	18·94	6,041	6·52	5,512	5·95
Cuddapah	2,766	2·18	5,334	4·21	2,059	2·22	2,467	2·66
Bellary	11,017	8·71	15,936	12·59	21,115	22·78	2,687	2·90
South Indian Railway...	9,386	7·42	2,526	2·00	2,558	2·76	5,118	5·52
Great Indian Peninsula Railway.	1,259	0·99	15,942	12·60	15,103	16·30	175	0·19
Mysore Dominions ...	14,366	11·35	10,703	8·46	7,560	8·16	8,769	9·46
Intra	18,039	14·26	18,792	14·85	8,265	8·91	8,808	9·50
Total ...	126,534	100·00	126,534	100·00	92,673	100·00	92,673	100·00

28. The following table shows the tonnage of Grain brought into Madras during the two periods by Sea, by Buckingham Canal, and by the Madras Railway :—

Means of Transport.	1897.	1898.
	Tons.	Tons.
Sea	12,930	33,628
Buckingham Canal	11,207	25,416
Madras Railway	10,600	13,159
Total ...	34,737	72,203

29. The Cotton was contributed by the following Railways and Local stations :—

Stations.	Half-year ending 31st Dec. 1897.			Half-year ending 31st Dec. 1898.		
	Pressed.	Loose.	Total.	Pressed.	Loose.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Southern Mahratta Railway ...	231	2	233	2,590	2	2,592
Adoni	693	150	843	2,183	180	2,363
Raichur	118	22	140	761	48	809
Tadpatri	173	19	192	385	...	385
Guntakal	...	...	...	988	5	993
Yerraguntla	261	1	262	270	10	280
Krishnapuram	19	...	19	...	...	...
Muddanuru	...	...	...	...	...	...
Great Indian Peninsula Railway...	55	52	107	...	24	24
Mysore State Railway	112	...	112	392	...	392
Tiruppur	1,135	54	1,189	912	...	912
Coimbatore...	94	21	115	60	26	86
Somanur	472	...	472	187	4	191
Singanallur	17	...	17	79	...	79
Erode	138	29	167	134	18	152
Sankaridrug	...	...	...	...	...	...
Minor Stations	18	27	45	4	156	160
Total ...	3,536	377	3,913	8,945	473	9,418

30. And was distributed as follows :—

Stations.	Half-year ending 31st Dec. 1897.			Half-year ending 31st Dec. 1898.		
	Pressed.	Loose.	Total.	Pressed.	Loose.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Madras	2,660	20	2,680	7,787	15	7,802
Tadpatri	...	2	2	...	...	...
Adoni	...	58	58	...	47	47
Raichur	...	...	...	26	...	26
Malabar	388	81	469	272	...	272
Guntakal	...	111	111	73	201	274
Southern Mahratta Railway ...	98	23	121	37	1	38
Great Indian Peninsula Railway...	52	30	82	696	...	696
South Indian Railway	13	13	26	31	32	63
Coimbatore District	...	10	10	14	29	43
Bangalore	321	28	349	7	23	30
Minor Stations	4	1	5	2	125	127
Total ...	3,536	377	3,913	8,945	473	9,418

31. The condition in which the Cotton was carried is shown in the following table :—

Condition.	December 1897.		December 1898.	
	Tons.	Rs.	Tons.	Rs.
Loose	377	5,585	473	3,973
Full pressed	3,536	53,507	8,945	1,10,804
Total ...	3,913	59,092	9,418	1,14,777

32. The following table shows the quantity of Cotton brought into Madras during the two half-years under comparison :—

Districts.	1897.	1898.
	Tons.	Tons.
Coimbatore and Salem	1,254	1,078
Bangalore City	...	7
North-West Line	1,028	3,748
Southern Mahratta Railway...	343	2,969
Great Indian Peninsula Railway	55	...
Total ...	2,680	7,802

33. Tonnage of Cotton delivered by Railway and the tonnage exported from Madras during the last and corresponding half-years :—

Periods.	Delivered by Railway at Madras.	Exported at Madras.
	Tons.	Tons.
Half-year ending December 1897	2,680	1,648
Do. do. 1898	7,802	5,590

34. The following statement shows the Cotton traffic during the December half of the last ten years :—

Half-years ending.	Pressed.	Loose.	Total.		Average Receipts per ton carried.
			Weight.	Receipts.	
	Tons.	Tons.	Tons.	Rs.	Rs.
December 1889	10,050	3,123	13,173	1,66,786	$12\frac{1}{2}$
Do. 1890	12,857	4,054	16,911	2,14,792	$12\frac{1}{16}$
Do. 1891	9,635	2,632	12,267	1,51,268	$12\frac{1}{8}$
Do. 1892	5,343	2,118	7,461	1,10,056	$14\frac{3}{4}$
Do. 1893	11,792	3,814	15,606	2,16,645	$13\frac{3}{4}$
Do. 1894	8,420	2,375	10,795	1,56,986	$14\frac{3}{5}$
Do. 1895	8,245	1,562	9,807	1,38,341	$14\frac{1}{5}$
Do. 1896	8,621	1,611	10,232	1,37,714	$13\frac{1}{2}$
Do. 1897	3,536	377	3,913	59,092	$15\frac{1}{10}$
Do. 1898	8,945	473	9,418	1,14,777	$12\frac{1}{5}$

35. The following figures show the Ground-nut traffic during the last ten half-years :—

Periods.	Total Weight.	Total Receipts.
	Tons.	Rs.
Half-year ending 30th June 1894	7,476	26,997
Do. 31st December 1894	3,378	15,101
Do. 30th June 1895	5,769	17,772
Do. 31st December 1895	2,326	7,576
Do. 30th June 1896	5,765	19,055
Do. 31st December 1896	2,401	6,418
Do. 30th June 1897	2,245	7,744
Do. 31st December 1897	2,184	7,915
Do. 30th June 1898	2,790	7,513
Do. 31st December 1898	1,182	3,927

36. Tonnage of Salt carried out of Madras to the various districts during the half-years ending 31st December 1897 and 1898:—

Districts.	1897.		1898.	
	Tons.	Tons.	Tons.	Tons.
Between Madras, Arkonam and Conjeveram ...	...	1,587	...	2,366
Cuddapah	59		35	
Other Stations on North-West Line ...	2,581		2,885	
		2,640		2,920
Arcot and Katpadi	...	2,693	...	3,004
Between Gudiyattam and Vaniyambadi ...	...	1,320	...	1,499
Bangalore	365		307	
Other Stations on Bangalore Branch ...	1,047		1,444	
		1,412		1,751
Salem	258		114	
Other Stations in Salem District ...	2,729		3,091	
		2,987		3,205
Erode, Tiruppur and Coimbatore ...	...	3,546	...	3,549
Southern Mahratta Railway	...	108	...	95
South Indian Railway	...	276	...	401
Kolar Gold Fields State Railway ...	...	...	...	8
Total ...	...	16,569	...	18,798

37. The following statement shows the Salt carried from certain South West line stations, and the districts to which it was sent:—

Stations.	Half-year ending 31st Dec. 1897.		Half-year ending 31st Dec. 1898.	
	Sent from	Received at	Sent from	Received at
	Tons.	Tons.	Tons.	Tons.
Calicut	5,828	...	5,531	...
Ferok	1,182	...	807	...
Kallayi	143	...	51	...
Tirur	1,227	...	1,429	...
Erode	87	...	60	...
Coimbatore	16	...	24	...
Palghat	...	...	2	...
Salem	12	...	...	...
Vencatachellum	981	...	815	...
Nellore	614	...	251	...
North Arcot District	...	142	...	66
Salem District	...	2,730	...	2,768
Coimbatore District	...	3,043	...	3,074
Malabar District	...	2,594	...	2,025
Cuddapah District	...	1,435	...	1,000
Bellary District	...	18	...	...
Mysore Dominions	...	128	...	37
Total ...	10,090	10,090	8,970	8,970

38. The total quantity of Salt carried over the whole system was 29,327 tons yielding a revenue of Rs. 1,61,526 against 28,162 tons with the revenue of Rs. 1,50,549 in money. The sum earned per ton hauled was Rs. 5·5 against 5·3. The exports from Madras amounted to 18,798 tons or 64 per cent. of the traffic carried.

39. The following table shows the Salt traffic carried out of Madras in each year for the five years ending 31st December 1898:—

Districts.	1894.	1895.	1896.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.
Between Madras and Conjeveram ...	1,963	1,696	1,333	2,244	4,947
Cuddapah	1,497	1,143	340	119	127
Other Stations on North-West Line ...	6,402	5,443	3,986	4,846	5,341
Arcot and Katpadi	6,146	5,043	4,614	5,014	5,907
Gudiyattam and Vaniyambadi	3,294	3,081	2,437	2,562	3,056
Bangalore	2,281	1,511	556	488	402
Mysore State Railway	24	30	10	...	...
Other Stations on Bangalore Branch ...	1,707	1,748	1,463	1,980	2,352
Salem	823	149	260	306	126
Other Stations in Salem District ...	5,026	4,621	3,274	4,559	5,560
Erode, Tiruppur and Coimbatore ...	7,897	5,812	4,287	5,852	6,529
Malabar	10	...	...	...	...
Great Indian Peninsula Railway ...	5	70	...	...	...
Southern Mahratta Railway	1,004	428	231	159	342
South Indian Railway	700	858	674	629	785
Kolar Gold Fields State Railway ...	...	...	...	2	8
Total ...	38,779	31,638	23,465	28,760	35,482

40. Approximate Statement of traffic to the Gold Mines for the two half-years ending December 1897 and 1898.

Staples.	Half-year ending Dec. 1897.						Half-year ending Dec. 1898.					
	Total traffic at Bisanattam, Kamasamudram and Bowringpet.		Total traffic at Stations on the K. G. F. S. Ry.		Total.		Total traffic at Bisanattam, Kamasamudram and Bowringpet.		Total traffic at Stations on the K. G. F. S. Ry.		Total.	
	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.
Coal and Coke	4,400	17,191	60,133	2,55,356	64,533	2,72,547	1,363	6,013	88,493	3,80,310	89,856	3,86,323
Timber	9,003	24,399	6,682	58,543	15,685	82,942	768	6,018	9,613	87,791	10,381	93,809
Firewood	5,429	5,359	13,027	17,652	18,456	23,011	6,035	7,125	11,415	12,246	17,450	19,371
Machinery	242	2,680	2,336	34,026	2,578	36,706	653	301	1,849	25,412	2,502	25,713
Unclassified Articles... ...	2,498	28,487	8,431	52,231	10,929	80,718	7,252	51,541	9,214	60,644	16,466	1,12,185
Total ...	21,572	78,116	90,609	4,17,808	112181	4,95,924	16,071	70,998	120,584	5,66,403	136,655	6,37,401

41. A brief explanation of the variations in the commodities referred to in para. 25 is given below:—

		From		To
Coal and Coke—Increase.	Larger despatches of Coal and Coke.	of Rayapuram	...	K. G. F. S. Ry.
		Madras	...	Mettupalaiyam.
		Do.	...	Madras-Ennur Ry.
Cotton, Unmanufactured —Increase.	Larger despatches of Cotton Pressed.	of Guntakal	...	G. I. P. Railway.
		Adoni	...	Madras.
		Raichur	...	Do.
		S. M. Railway	...	Do.

		From		To
Drugs and Chemicals— Increase...	Larger despatches of Chinchona Bark.	Bowringpet	...	Madras.
		S. M. Railway	...	Coimbatore District.
	Larger despatches of Other Drugs and Chemicals.	Madras	...	Salem District.
		Do.	...	Coimbatore District.
		Do	...	Bangalore Branch.
		Do.	...	S. M. Railway.
		S. M. Railway	...	Madras.
		Do.	...	Coimbatore District.
Oils—Increase ...	Larger despatches of Kerosine Oil.	Rayapuram	...	Bangalore Branch.
		Do.	...	G. I. P. Railway.
		Tirur	...	Coimbatore District.
		Do.	...	Malabar District.
		G. I. P. Railway	...	Madras.
		Do.	..	Bangalore City.
	Larger despatches of Cocoanut Oil.	Shoranore	...	Malabar District.
		Malabar District	...	Bangalore Branch.
		Do.	...	S. M. Railway.
Sugar—Increase ...	Larger despatches of Refined Sugar.	Arcot	...	Madras.
		Bowringpet	...	Do.
		Do.	...	North Arcot District.
		Do.	...	S. M. Railway.
	Larger despatches of Unrefined Sugar.	Tiruppur	...	Malabar District.
		Do.	...	Bellary District.
		Do.	...	S. M. Railway.
		S. I. Railway	...	North Arcot District.
		S M. do.	...	Bellary District.
		Do.	...	Raichur.
Tea—Increase ...	Larger despatches of Tea, Indian.	Madras	...	Bangalore.
		Coimbatore District.		Madras.
		Do.	...	Malabar District.
		Do.	...	G. I. P. Railway.
Wool, Raw—Increase ...	Larger despatches of Wool, Raw.	Madras	...	Bangalore.
		Adoni	...	Do.
		Do.	...	G. I. P. Railway
Cotton, Manufactured— Decrease.	Smaller despatches of Twist and Yarn (European).	Madras	...	Salem District.
		Bangalore City	...	Madras,
		Do.	...	Coimbatore.
		G. I. P. Railway	...	Madras.
		Do.	...	Bellary District.
	Smaller despatches of Twist and Yarn (Indian.)	Madras	...	North Arcot District.
		Do.	...	Bellary District.
		S. M. Railway	...	Do.
	Smaller despatches of Piece Goods (European.)	Madras	...	Bangalore Branch.
		Do.	...	G. I. P. Railway.
		G. I. P. Railway	...	Madras.
	Smaller despatches of Piece Goods (Indian).	Salem	...	Coimbatore District.
		Do.	...	S. M. Railway.
		Coimbatore	...	Malabar District.
Dyes and Tans—Decrease.	Smaller despatches of Myrabolams.	Madras	...	North Arcot District.
		Do.	...	G. I. P. Railway.
		Bangalore City	...	Madras.
		Salem	...	Do.
		Do.	...	S. I. Railway.
	Smaller despatches of Other Dyes and Tans.	Madras	...	North Arcot District.
		Bangalore	...	Madras.
		Do.	...	Salem District.
		Do.	...	Coimbatore District.
		Do.	...	S. I. Railway.
		Vaniyambadi	...	Madras.
		Do.	...	North Arcot District.
		Do.	...	Coimbatore District.
		G. I. P. Railway	...	Madras.

		From		To
Grain and Pulse— Decrease.	Smaller despatches of Wheat.	S. M. Railway	...	Raichur.
		Do.	...	Bellary District.
	Smaller despatches of Rice in the Husk, (Paddy.)	Madras.	...	Coimbatore District.
		Morappur	...	Do.
		Palghat	...	Malabar District.
		S. I. Railway	...	North Arcot District.
		Do.	...	Coimbatore District.
	Smaller despatches of Rice, not in the Husk.	Arcot	...	Malabar District.
		Katpadi	...	Do.
		Do.	...	Bangalore Branch.
		Jalarpet	...	Do.
		Tirupattur	...	Do.
		Do.	...	Malabar District.
		Salem District	...	Coimbatore.
		Do.	...	Malabar District.
		S. M. Railway	...	Bellary District.
		S. I. do.	...	Malabar District.
	Smaller despatches of Jawar and Bajra (Cholum and Cumbu).	Salem	...	Bellary District.
		Do.	...	G. I. P. Railway.
		Tiruppur	...	Salem.
		Do.	...	G. I. P. Railway.
		Do.	...	S. M. Railway.
		S. M. Railway	...	Salem District.
		Do.	...	Bellary District.
	Smaller despatches of Gram and Pulse.	Salem District	...	Madras.
		Do.	...	Bangalore Branch.
		Do.	...	S. I. Railway.
		Do.	...	G. I. P. Railway.
		Coimbatore District		Madras.
		Do.	...	Malabar District.
		Do.	...	S. M. Railway.
		Do.	...	G. I. P. Railway.
Hides and Skins— Decrease...	Smaller despatches of Cattle Hides, Dressed or Tanned.	Arcot	...	Madras.
		Vaniyambadi	..	Do.
		Coimbatore	...	Do.
		Do.	...	Malabar District.
	Smaller despatches of Cattle Hides, Raw.	Madras	...	North Arcot District.
		G. I. P. Railway	...	Madras.
		S. M. do.	...	North Arcot District.
		Do.	...	Madras.
	Smaller despatches of Sheep Skins, Dressed or Tanned.	Mailpatti	...	Madras.
		Bangalore	...	Do.
		G. I. P. Railway	...	Do.
Jute - Decrease ...	Smaller despatches of Jute, Raw.	S. M. Railway	...	Madras.
		Do.	...	Raichur.
		Coimbatore District		S. I. Railway.
	Smaller despatches of Gunny Bags and Cloth.	Madras	...	North Arcot District.
		Do.	...	Bangalore Branch.
		Do.	...	S. M. Railway.
		S. M. Railway	...	Katpadi.
		Do.	...	Coimbatore District.
Liquors—Decrease ...	Smaller despatches of Beer.	Mettupalaiyam	...	Madras.
		Do	...	Bangalore Branch.
	Smaller despatches of Spirits.	Arcot	...	Madras.
		Do.	...	Cuddapah District.
		Do.	...	Bellary District.
		Do.	...	S. I. Railway
		S. M. Railway	...	Bellary District.
	Smaller despatches of Wines.	Madras	...	Mettupalaiyam.
		Do.	...	Bangalore.
Metals—Decrease ...	Smaller despatches of Copper, Unwrought.	Madras	...	Coimbatore District.
	Smaller despatches of Brass, Unwrought.	Madras	...	Katpadi.
		Do.	...	Salem District.
		Do.	...	Coimbatore District.
	Smaller despatches of Copper, Wrought.	Coimbatore	...	Salem.
		Do.	...	Tiruppur.
	Smaller despatches of Brass, Wrought.	North Arcot District		S. I. Railway.
		Do.	...	Bangalore Branch.
		Coimbatore	...	Malabar District.
		Do.	...	S. M. Railway.

		From		To
Metals—Decrease (*contd.*)	Smaller despatches of Cast Iron and Steel.	Madras	...	Mettupalaiyam.
		Do.	...	Bangalore Branch.
		Do.	...	S. M. Railway.
		K. G. F. S. Railway		Madras.
	Smaller despatches of Unwrought Iron and Steel.	S. M. Railway	...	Do.
		Do.	...	Gooty.
		Bangalore Branch	...	Madras.
		Do.	...	K. G. F. S. Railway.
	Smaller despatches of Wrought Iron and Steel.	Madras	...	Bangalore Branch.
		Do.	...	K. G. F. S. Railway.
		Rayapuram	...	Madras-Ennur Ry.
	Smaller despatches of Manufactured Iron and Steel.	Madras	...	Bangalore.
		Do.	...	S. M. Railway.
		Rayapuram	...	Mettupalaiyam.
		Do.	...	K. G. F. S. Railway
	Smaller despatches of Other Metals.	Madras	...	Coimbatore District.
		Malabar District	...	Do.
Oil Seeds—Decrease ...	Smaller despatches of Til or Gingelli seeds.	Tiruppur	...	Madras.
		Do.	...	Malabar District.
		S. M. Railway	...	Madras.
		Do.	...	Erode.
		Do.	...	Malabar District.
		G. I. P. Railway	...	Madras.
		Do.	...	North Arcot District.
	Smaller despatches of Earthnuts (Ground-nut seeds).	Tiruttani	...	Madras.
		Do.	...	S. I. Railway.
		Nagari	...	Do.
	Smaller despatches of Castor seeds.	Salem District	...	Madras.
		Do.	...	Coimbatore District.
		Do.	...	Bellary District
		Coimbatore District.		Madras.
		Do.	...	Sankaridrug.
Paper and Paste Board—Decrease ...	Smaller despatches of Paper and Paste Board.	Madras	...	Bangalore Branch.
		G. I. P. Railway	...	Madras.
		Do.	...	Mettupalaiyam.
Provisions—Decrease ...	Smaller despatches of Dried Fruits and Nuts.	Vaniyambadi	...	Madras.
		Do.	...	Adoni.
		Do.	...	Raichur.
		Malabar District	...	Adoni.
	Smaller despatches of Other Provisions.	Madras	...	Bangalore Branch.
		Tiruppur	...	Madras.
		Do.	...	Malabar District.
		Do.	...	S. I. Railway.
		Mettupalaiyam	...	Madras.
		Do.	...	Coimbatore District.
		Do.	...	S. I. Railway.
		Ferok	...	S. M. Railway.
		Do.	...	Bangalore Branch.
		S. M. Railway	...	Madras.
		Do.	...	Bellary District.
Railway Plant and Rolling Stock—Decrease.	Smaller despatches of Steel Rails and fish plates.	Rayapuram	...	Madras-Ennur Ry.
Spices—Decrease ...	Smaller despatches of Betel Nuts.	Madras	...	North Arcot District.
		Do.	...	S. I. Railway.
		S. M. Railway	...	Madras.
		Do.	...	Cuddapah District.
		Do.	...	Bellary District.
	Smaller despatches of Chillies.	Madras	...	North Arcot District.
		S. M. Railway	...	Madras.
		Do.	...	Cuddapah District.
		Do.	...	Bellary District.
		Bangalore Branch	...	North Arcot District.
		Do.	...	S. I. Railway.
	Smaller despatches of Other Spices.	North Arcot District		Salem District.
		Do.	...	Bangalore Branch.
		Cuddapah District	...	Madras.
		Do.	...	S. I. Railway.
		Do.	...	G. I. P. Railway.

		From		To
Stone and Lime—Decrease ...	Smaller despatches of Stone and Lime.	Rayapuram	...	Madras-Ennur Ry.
		Ambattur	...	Madras.
		Avadi	...	Do.
		Do.	...	Madras-Ennur Ry.
		Tirupattur	...	K. G. F. S. Railway.
		Do.	...	Bangalore Branch.
Timber—Decrease ...	Smaller despatches of Timber.	Madras	..	Bangalore Branch.
		Do.	...	K. G. F. S. Railway.
		Puttur	...	Madras.
		Renigunta	...	Do.
		Mullanur	...	Kamasamudram.
		Devankundi	...	K. G. F. S. Railway.
		Malur	...	Do.
		Palghat	...	S. I. Railway.
		Do.	...	Salem
Tobacco—Decrease ...	Smaller despatches of Unmanufactured Tobacco.	Coimbatore	...	Malabar District.
		Razampeta	...	Madras.
		S. M. Railway	...	Do.
		Do.	...	Bellary District.
		Do.	...	Bangalore Branch.
	Smaller despatches of Manufactured Tobacco, Cigars.	Coimbatore	...	Madras.
		Do.	...	Bangalore Branch.
		S. I. Railway	...	Do.
All other Articles of Merchandise—Decrease.	Smaller despatches of All Other Articles of Merchandise.	Madras	...	K. G. F. S. Railway.
		Bowringpet	...	Bangalore Branch.
		Bangalore	...	Madras.
		Do.	...	K. G. F. S. Railway.
		Sankaridrug	...	S. I. Railway.
		Palghat	...	K. G. F. S. Railway.
		Do.	...	Coimbatore.
		Do.	...	Bangalore Branch.
		Calicut	...	Coimbatore.

42. The interchange of the principal commodities with Foreign Railways during the two half-years under review, was as follows:—

Commodities.	1897.		1898.	
	Tons.	Rs.	Tons.	Rs.
Coal and Coke	57,278	2,20,734	90,538	3,51,257
Cotton, unmanufactured	731	8,383	3,887	33,139
Do. manufactured	3,680	44,416	3,886	46,009
Dyes and Tans	6,929	58,053	5,501	46,383
Grain and Pulse	57,294	3,19,336	43,171	2,90,050
Hides and Skins	12,689	1,66,328	7,194	89,442
Liquors	1,888	18,016	1,443	16,683
Metals	3,811	37,377	2,452	29,798
Oils	2,957	26,573	3,279	36,376
Oil Seeds	10,074	52,871	9,677	68,713
Provisions	10,204	71,464	9,227	72,158
Railway Plant and Rolling Stock..	7,380	1,931	2,173	6,167
Salt	2,651	9,946	2,716	16,731
Spices	4,911	47,934	3,357	38,039
Sugar	8,827	40,977	13,528	48,756
Timber	23,985	97,684	24,040	1,11,336
Tobacco	2,056	18,760	1,948	19,503
All other Articles of Merchandise.	13,187	1,47,807	13,204	1,57,763
Total ...	230,532	13,88,590	241,221	14,78,303

43. ABSTRACT OF COMMODITIES.—A detailed statement of the principal commodities carried during the half-year under review will be found printed on pages 20, 21 and 22 of the Capital and Revenue Accounts prepared by the Chief Auditor for the half-year ending December 1898.

44. WORKING EXPENSES.—The net Increase of Rs. 8,759 in the working expenses of the Traffic Department is shewn in detail in Statement No. 20 of the Appendix. It is more than covered by Mr. Byron's gratuity, Rs. 7,000, and increased loss by exchange, Rs. 3,734.

45. GENERAL.—The competitive trouble is again with us, having made its re-appearance in September, 1898 (as explained in para. 19 of a Madras Railway note on the Marmagoa question) but in a much more serious form than previously.

(*a*). The four Railways concerned have had both collective and independent agreements since the development of the competing lines in Southern India, but none of these agreements can possess any permanent stability in the absence of a principle which would prevent unnecessary and unreasonable competition between Indian Railways. If either Railway withdraws from such an agreement a rates-war may be said to be immininent at any time, because the action of Railways concerned then depends entirely upon individual views of what is, or is not, fair and reasonable competition instead of upon a fixed principle. The only known solution of this difficulty which has stood the test of time is the English Railway Clearing House principle advocated in Government of India Order No. 1446. R. T, dated 12th December, 1887 (vide paras 4 and 30 of the note sent to the Board on the Marmagoa question).

(*b*). The revenue of the Madras Railway during the half-year under review was practically unaffected by the competition which took place in December. This competition was dealt with in para. 22 of the Marmagoa note. But an additional complication has since presented itself, the Southern Mahratta Railway having refused to forward traffic from their Stations to Madras by the Madras Railway routes *via* Guntakal or *via* Bangalore, even when so consigned by the senders. This position has been taken up openly by the Southern Mahratta Railway with European as well as Native* senders, and is believed to be without parallel in the history of either English or Indian Railways, at least during the last 25 years. In England it would certainly be illegal. The Government Solicitor, Madras, states that, in his opinion, it is also illegal in India unless the sender accepts a receipt note indicating the route by which the traffic is to be compulsorily diverted instead of the route shewn on the forwarding note. In England such receipt notes are not issued by Railways. In India they are absolutely necessary though it is self-evident that their introduction was not intended to permit any Railway to evade the spirit if not the letter, of the law by forcibly diverting traffic from a route by which the sender desired it to be forwarded. If the Madras and other Railways concerned decided to follow the example set by the Southern Mahratta Railway it is difficult to see where the matter would end. The Agent and Manager has requested the Madras Government to refer this new feature to the Government of India.

*See paras 4 and 29 of the Madras Railway note on the Marmagoa question.

(*c*) In addition to the policy just described the Southern Mahratta Railway have now quoted in conpetition with the Great Indian Peninsula, Madras and South Indian Railways the lowest rates which, under their contract, they are permitted to quote as follows:—

All special Class Goods.	For all other Class Goods 1 to 5, inclusive.
$\frac{1}{10}$ pie per maund, per mile	$\frac{1}{6}$ pie per maund, per mile

without restriction as to loading, and the rates by the broad-gauge route, as well as for through traffic over the South Indian Railway have been correspondingly reduced, except where it has been possible to balance Southern Mahratta Railway, reductions by defensive increases, a course which both the Great Indian Peninsula and Madras Railway, have been

compelled to adopt to minimise, as far as possible, any loss in revenue from Goods traffic, which may be expected to take place during the first half of 1899. As an illustration of this the cotton rates from Adoni may be taken both with Bombay and with Madras :—

(1) Existing through rate per maund for full-pressed cotton, Adoni to Bombay, *via* Raichur.			(2) Proposed through rate as under (1) notified by Southern Mahratta Railway *via* Guntakul and Marmagoa.			(3) Through rate as under (1) as increased *via* Guntakul and Marmagoa by Madras Railway defensive revision.	
	Miles.			Miles.			Revision.
M. Ry.	43	Rs. 0 3 8	M. Ry.	32	Rs. 0 2 11		Rs. 0 5 8
G. I. P. Ry.	443	„ 0 12 2	S. M. Ry.	235	„ 0 3 3		„ 0 3 3
			W. I. P. Ry.	51	„ 0 0 9		„ 0 0 9
		Rs. 0 15 10*	B.I.S.N.Co.	253	„ 0 1 0		„ 0 1 0
					Rs. 0 7 11		Rs. 0 10 8*

* The *via* Raichur rate will be reduced to Annas 10·8 per maund.

(1) Do. per maund per mile.		(2)		(3)	
M. Ry.	0·926 pie.	M. Ry.	0·926		2·000 pies.
G. I. P. Ry.	0·330 „	S. M. Ry.	0·166		0·166 pie.
		W. I. P. Ry.	0·176		0·176 „
		B. I. S. N. Co.	0·047		0·047 „

Immediately Madras merchants hear of these reductions in the Bombay rates they will expect the same rates per maund per mile as *via* Raichur to be applied to Madras and the Bombay shipping freights being lower than from Madras it seems probable this concession will have to be made to prevent all the cotton from going to Bombay. The through rate from Adoni to Madras will then stand at Rs. 0—6—8 per maund instead of Rs. 0—8—6, as at present. The action of the Southern Mahratta Railway in these matters scarcely seems to accord with the idea of a truce which it was understood had been temporarily arranged between the Great Indian Peninsula and Southern Mahratta Railway Boards.

(*d*) A self inflicted loss which is also being imposed upon the Southern Mahratta Railway on traffic from Southern Mahratta Railway Stations to Madras is also difficult to understand though its object may perhaps be clear to Government Officers. The compulsory diversion of traffic for Madras *via* the Dharmavaram route referred to in para. (*b*) gives the Southern Mahratta Railway considerably less revenue than if it travelled by the shorter routes *via* Guntakal or *via* Bangalore as follows :—

		S. M. Ry. proportion.	
	Miles	Through rates per Maund for Grain.	Per Maund per Mile.
Mysore to Madras.			
Via Bangalore	86	Rs. 0 2 11	0·333 pie
Via Dharmavaram	197	„ 0 1 9	0·104 „
Paschamvahini to Madras.			
Via Bangalore	78	Rs. 0 2 8	0·333 pie
Via Dharmavaram	189	„ 0 1 7	0·101 „
Hospet to Madras.			
Via Guntakal	71	Rs. 0 2 6	0·333 pie
Via Dharmavaram	134	„ 0 1 4	0·119 „
Bellary to Madras.			
Via Guntakal	31	Rs. 0 1 4	0·333 pie
Via Dharmavaram	94	„ 0 0 9	0·100 „

If, therefore, the average loss to the Southern Mahratta Railway in revenue is say one anna per maund and if it is correctly reported that 40 wagons per day have been diverted to the Dharmavaram route for 48 days at an average of 108 maunds or 4 tons per wagon, there would be a loss of Rs. 12,960. That the Southern Mahratta Railway staff have received direct instructions to send traffic *viâ* Dharmavaram at the lower proportions is clear from their Circular No. R 13, dated 10th March 1899, a copy of which reached me, apparently from Dharwar, and 15 copies of which are sent herewith. In the majority of cases the rate obtained by the Southern Mahratta and South Indian Railways for carrying this diverted traffic *viâ* Dharmavaram is $\frac{1}{16}$th of a pie per maund per mile, whereas by the shorter routes the Southern Mahratta Railway would obtain normal rates.

(*e*) If the Boards of the Great Indian Peninsula, Southern Mahratta, South Indian and Madras Railways could agree that pending a final settlement of the question there shall be no lower rates either through or by re-booking than those in force by the shortest route between any forwarding and receiving station or place, on either of the four Railways (except that the *viâ*, Marmagoa through or local rates, to or from Southern Mahratta Railway Stations only, with shipping and all other charges included shall be fixed at, say, 4 pies per maund less than the all rail route or such other sum as the Southern Mahratta and Great Indian Peninsula Boards could agree to as a temporary measure equal class and other conditions to apply) the truce could be fairly and satisfactorily applied until controversial points had been disposed of subsequently. The present temporary arrangement is all in favor of the Southern Mahratta Railway.

NILGIRI MOUNTAIN RAILWAY.—The Nilgiri Mountain Railway was worked experimentally for Goods traffic from 1st until 28th October, with results which have already been communicated to the Board.

46. APPENDICES.—

The undermentioned statements are enclosed :—

1. Coaching traffic Receipts in each month.
2. Goods do. do.
3. Comparison of Coaching Receipts for 1897 and 1898.
4. Do. Goods do. do.
5. Average Receipts per mile open and per mile run during 1897 and 1898.
6. Expenditure table for 1897 and 1898.
7. Percentage of Working Expenses for 1897 and 1898.
8. Do. Revenue do. do.
9. Passenger traffic exclusive of return fares and soldiers for 1898.
10. Average Receipts per mile open do. do.
11. Passenger traffic inclusive of return fares but exclusive of soldiers for 1898.
12. Average Receipts per mile open do. do.
13. Return fare traffic for 1898.
14. Comparison of Passenger traffic inclusive of return fares but exclusive of soldiers for 1897 and 1898.
15. Comparison of Passenger traffic exclusive of return fares and soldiers for 1897 and 1898.
16. Comparison of Return fare traffic for 1897 and 1898.
17. Parcels, Treasure and Passengers' luggage for 1897 and 1898.
18. Gross Earnings and Tonnage of Goods traffic.
19. Comparison of Goods traffic for 1897 and 1898.
20. Comparative statement of Traffic Expenses for 1897 and 1898.
21. Table of Coaching traffic in and out at stations for 1897 and 1898.
22. Table of Goods do. do. do. do.

I have the honor to be,
Sir,
Your most obedient servant,
(Signed) F. W. READ,
Traffic Manager.

APPENDIX

TO

TRAFFIC MANAGER'S HALF-YEARLY REPORT FOR 31st December 1898.

1. *Coaching Traffic receipts in each month for the half-year ending 31st December 1898.*

Months.	Passengers.		Passengers' luggage.		Carriages, horses and dogs.		Parcels.		Special trains.	Miscellaneous.	Haulage of Post Office vehicles.	Total.
	Passengers and season tickets.	Troops and Police.	Ordinary.	Military.	Ordinary.	Military.	Ordinary.	Revenue.				
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
July	2,99,092	6,495	9,110	463	4,701	263	27,469	637	...	763	4,077	3,53,070
August	2,94,007	9,127	9,749	918	4,933	543	30,079	579	...	313	4,064	3,54,312
September	2,22,076	11,515	7,727	863	4,610	420	20,948	512	1,080	70	4,058	2,73,884
October	1,98,672	9,453	9,430	1,787	8,806	354	22,718	512	210	14	4,080	2,56,036
November	1,89,014	13,189	12,231	2,057	4,194	591	21,670	470	1,080	126	4,064	2,48,636
December	2,21,054	11,815	9,360	2,526	3,807	1,298	26,348	468	200	134	4,127	2,81,137
Total...	14,23,915	61,544	57,607	8,619	31,051	3,469	1,49,232	3,178	2,570	1,420	24,470	17,67,075

2. *Goods Traffic receipts in each month for the half-year ending 31st December 1898.*

Months.	Merchandise and military stores and coal for the public.	Railway materials for construction.	Revenue stores.	Live stock.		Rents and demurrage.	Miscellaneous.	Total.
				Ordinary.	Military.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
July	5,78,819	600	9,547	949	...	1,277	809	5,92,001
August	5,48,081	912	21,251	1,397	61	1,041	1,075	5,73,818
September	4,88,482	1,125	13,997	1,870	52	882	662	5,07,070
October	4,84,142	2,083	15,681	1,954	551	1,090	461	5,05,962
November	4,77,050	352	20,956	2,300	232	945	802	5,02,637
December	5,26,278	351	5,534	1,981	1,023	1,627	526	5,37,320
Total ...	31,02,852	5,423	86,966	10,451	1,919	6,862	4,335	32,18,808

3. *Comparison of the Coaching traffic for the half-years ending December 1897 and June and December 1898.*

Half-years.	Passengers.		Passengers' luggage.		Carriages, horses and dogs.		Parcels.		Special trains.	Miscellaneous.	Haulage of Post Office vehicles.	Total.
	Passengers and season tickets.	Troops and Police.	Ordinary.	Military.	Ordinary.	Military.	Ordinary.	Revenue.				
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
December 1897 ...	18,45,458	78,222	62,788	24,207	33,467	4,434	1,69,623	3,370	366	971	24,917	22,47,823
June 1898 ...	18,39,135	84,765	70,428	19,870	41,560	5,289	1,56,591	2,992	...	1,002	24,434	22,46,066
December 1898 ...	14,23,915	61,544	57,607	8,619	31,051	3,469	1,49,232	3,178	2,570	1,420	24,470	17,67,075

4. *Comparison of the Goods traffic for the half-years ending December 1897 and June and December 1898.*

Half-years.	Merchandise and military stores and coal for the public.	Railway material for construction.	Revenue stores.	Live stock.				Rents and demurrage.	Miscellaneous.	Total.
				Ordinary.		Military.				
				Horses.	Other live stock.	Horses.	Other live stock.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
December 1897...	31,96,980	871	64,929	3,359	6,543	9,686	...	7,025	4,044	32,93,437
June 1898...	31,73,829	3,903	67,883	2,162	6,350	8,618	...	6,190	3,531	32,72,466
December 1898...	31,02,852	5,423	86,966	3,684	6,767	1,919	...	6,862	4,335	32,18,808

5. *Average receipt per "mile open" and per "mile run" for the same periods.*

Period.	Per mile open.	Per mile run.
	Rs.	Rs.
Half-year ending December 1897	6,756·85	4·30
Do. do. June 1898	6,708·02	4·45
Do. do. December 1898	6,054·46	4·00

6. *Table of expenditure for the half-years ending December 1897 and June and December 1898.*

Period.	Permanent way.	Locomotive.	Repairs to carriages and wagons.	Traffic.	General charges.	Special and miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Half-year ending December 1897...	6,27,504	10,79,084	3,11,387	4,21,155	2,82,841	41,229	27,63,200
Do. do. June 1898...	5,41,515	9,57,248	2,30,042	4,19,982	2,86,478	42,582	24,77,847
Do. do. December 1898...	7,03,741	10,55,342	2,35,058	4,20,914	2,72,281	44,395	27,40,731

7. *Percentage of working expenses for the same periods.*

Period.	Permanent way.	Locomotive.	Repairs to carriages and wagons.	Traffic.	General charges.	Special and miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Half-year ending December 1897...	22·71	39·05	11·27	15·24	10·24	1·49	100·00
Do. do. June 1898...	21·86	38·63	9·28	16·95	11·56	1·72	100·00
Do. do. December 1898...	25·68	38·50	8·58	15·69	9·93	1·62	100·00

8. *Percentage of revenue for the same periods.*

Period.	Permanent way.	Locomotive.	Repairs to carriages and wagons.	Traffic.	General charges.	Special and miscellaneous.	Profits.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Half-year ending Dec. 1897...	11·05	19·01	5·49	7·42	4·98	0·73	51·32	100·00
Do. do. June 1898...	9·61	16·99	4·08	7·45	5·08	0·76	56·03	100·00
Do. do. Dec. 1898...	13·84	20·75	4·62	8·45	5·36	0·87	46·11	100·00

9. *Passenger traffic, exclusive of return fares and soldiers, in each month for the half-year ending December 1898.*

Months.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
July	1,456½	13,556	5,265½	16,792	701,354	2,66,008	708,076	2,96,356
August	1,473½	12,510	4,700½	13,384	714,971	2,64,270	721,145	2,90,164
September	1,413	12,105	4,837	13,885	530,238½	1,93,672	536,488½	2,19,662
October	1,655	15,410	5,035½	15,136	457,348	1,65,969	464,038½	1,96,515
November	1,425	14,216	4,292	13,704	461,752½	1,59,496	467,469½	1,87,416
December	1,831	18,127	5,825½	19,201	494,226½	1,81,128	501,883	2,18,456
Total ...	9,254	85,924	29,956	92,102	3,359,890½	12,30,543	3,399,100½	14,08,569

10. *Average of passenger traffic, exclusive of return fares and soldiers, for the half-year ending December 1898.*

	Average miles open.	First class.	Second class.	Third class.	Total.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Average receipt per mile open	840	102 4 7	109 10 4	1,464 14 11	1,676 13 10
Average percentage of numbers	...	0·27	0·88	98·85	100·00
Average mileage of passengers	...	149	98	33	...
Average percentage of receipts	...	6·10	6·54	87·36	100·00

11. *Passenger traffic in each month, inclusive of return fares, but exclusive of soldiers for the half-year ending December 1898.*

Months.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
July	1,668½	13,835	6,904½	17,531	746,038	2,67,726	754,611	2,99,092
August	1,646½	12,794	6,354½	14,319	739,666	2,66,894	747,667	2,94,007
September	1,551	12,360	6,568	14,649	543,887½	1,95,067	552,006½	2,22,076
October	1,683	15,663	6,491½	15,590	523,642	1,67,419	531,816½	1,98,672
November	1,533	14,609	5,315	14,077	480,072½	1,60,328	486,920½	1,89,014
December	1,896	19,096	7,374½	19,815	521,555½	1,82,142	530,826	2,21,053
Total ...	9,978	88,357	39,008	95,981	3,554,861½	12,39,576	3,603,847½	14,23,914

12. *Average of passenger traffic, inclusive of return fares, but exclusive of soldiers, for th half-year ending December* 1898.

	Miles open.	First class.	Second class.	Third class.	Total.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Average receipt per mile open	840	105 3 0	114 4 2	1,475 11 0	1,695 2 2
Average percentage of numbers	...	0·28	1·08	98·64	100·00
Average mileage of passengers	...	149	95	32	...
Average percentage of receipts	...	6·21	6·74	87·05	100·00

13. *Return fare traffic for the half-year ending 31st December* 1898.

Months.	Periodical tickets.								Return tickets.							
	First class.		Second class.		Third class.		Total.		First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
July ...	200	122	1,600	473	39,800	490	41,600	1,085	12	157	39	266	4,884	1,228	4,935	1,651
August ...	160	181	1,600	611	14,880	215	16,640	1,007	13	102	54	325	9,815	2,409	9,882	2,836
September ...	120	121	1,640	348	9,720	189	11,480	653	18	134	91	420	3,929	1,206	4,038	1,760
October ...	...	...	1,400	174	63,160	713	64,560	887	28	253	56	281	3,134	737	3,218	1,271
November ...	80	120	1,000	195	16,040	242	17,120	557	28	273	23	178	2,280	590	2,331	1,041
December ...	...	...	1,480	222	25,000	395	26,480	617	65	968	69	391	2,329	620	2,463	1,979
Total ...	560	544	8,720	2018	168,600	2244	177,880	4,806	164	1887	332	1861	26,371	6,790	26,867	10,538

14. *Comparison of the passenger traffic, inclusive of return fares, but exclusive of soldiers, for the half-years ending December* 1897 *and June and December* 1898.

Half-years.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
Half-year ending December 1897	11,189	83,571	45,403	98,665	4,821,593	16,63,223	4,878,185	18,45,459
Do. do. June 1898	10,497	98,449	46,722½	1,08,078	4,600,357½	16,32,616	4,657,577	18,39,134
Do. do. December 1898	9,978	88,357	39,008	95,981	3,554,861½	12,39,576	3,603,847½	14,23,914

15. *Comparison of the passenger traffic, exclusive of return fares and soldiers, for the half-years ending December* 1897 *and June and December* 1898.

Period.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
December 1897	8,633	79,789	31,210	92,522	4,596,885	16,51,731	4,636,228	18,24,042
June 1898	9,406	94,359	32,388½	1,02,443	4,356,445½	16,16,592	4,398,240	18,13,394
December 1898	9,254	85,924	29,956	92,102	3,359,890½	12,30,543	3,399,100½	14,08,569

16. *Comparison of the return fare traffic for the half-years ending December* 1897 *and June and December* 1898.

Period.		First class.		Second class.		Third class.		Total.	
		No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
Half-year ending Dec. 1897.	Trivellore ...	...	...	...	...	9,087	2,249	9,087	2,249
	Other excursions ...	2,556	3,785	14,193	6,142	216,121	9,239	232,870	19,166
Half-year ending June 1898.	Trivellore ...	...	...	...	...	26,767	6,471	26,767	6,471
	Other excursions ...	1,091	4,030	14,334	5,635	217,145	9,554	232,570	19,269
Half-year ending Dec. 1898.	Trivellore ...	...	...	...	...	11,465	2,766	11,465	2,766
	Other excursions ...	724	2,431	9,052	3,879	183,506	6,268	193,282	12,578

17. *Parcels, treasure and passenger's luggage for the half-years ending December* 1897 *and June and December* 1898.

Period.	Parcels.			Luggage.				
				Ordinary.		Military.		
	No.	Rs.	Revenue parcels.	Public.	Treasure.	By ordinary trains.	By troop trains.	Total.
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
December 1897	200,604	1,69,622	3,370	36,331	26,457	5,351	18,856	86,995
June 1898	233,188	1,56,591	2,992	39,211	31,217	5,695	14,175	90,298
December 1898	197,540	1,49,232	3,179	32,790	24,817	6,248	2,371	66,226

18. *Gross earnings and tonnage of goods, exclusive of Railway materials and Revenue stores, for the half-year ending 31st December* 1898.

Months.	Tons.	Rupees.
July	88,180	5,78,819
August	81,860	5,48,081
September	72,499	4,88,482
October	72,440	4,84,142
November	74,520	4,77,050
December	82,262	5,26,278
Total ...	471,761	31,02,852

19. *Comparison of the goods traffic, exclusive of Railway materials and Revenue stores, for the half-years ending December* 1897 *and June and December* 1898.

Period.	Tons.	Rupees.
Half-year ending December 1897	509,286	31,96,980
Do. do. June 1898	481,380	31,73,829
Do. do. December 1898	471,761	31,02,852

20. *Comparative statement of the traffic expenses for the half-years ending December* 1897 *and June and December* 1898.

Period.	Traffic Manager and Assistants.	Office establishment.	Travelling allowances.	Contingencies.	Station Masters, Clerks and Porters.	Guards and Assistant Guards and Overtime allowances.	Fire, lights, water and general stores.	Wagon covers & ropes.	Office and station fittings and furniture.	Clothing of Guards and Porters.	Printing, stationery and tickets.	Miscellaneous.	Traffic expenses at joint stations.	Loss on exchange.	Carriage of revenue stores.	Charges for delivery and collection of goods.	Deduct Cost of Working K. G. F. S. and Madras Enmr Railways.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1897 Dec.	44,355	23,749	3,660	438	1,98,524	61,972	36,913	2,449	1,514	5,951	36,732	2,728	7,684	2,154	1,765	943	10,376	4,21,155
1898 June	43,015	24,190	4,470	572	1,96,829	62,094	38,008	2,319	511	6,050	36,315	2,974	6,473	3,533	1,165	1,334	9,870	,19,982
1898 Dec.	48,997	777	3,494	415	1,94,504	60,800	38,128	6,196	460	5,431	38,541	2,641	8,345	5,888	1,324	1,464	11,491	4,29,914

MADRAS RAILWAY,
TRAFFIC MANAGER'S OFFICE,
Madras, 1st April 1899.

(Signed) F. W. READ
Traffic Manager.

21. *The following Table shows the Coaching Traffic in and out of the following Stations on the Madras Railway for the half-years ending 31st December 1897 and 1898.*

These figures are compiled from the Chief Auditor's Return T. A. No. 44, the actual Number of Passengers and Coaching Receipts being extracted.

STATIONS.	Number of Passengers.						Coaching Receipts.					
	1897.			1898.			1897.			1898.		
	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.
	No.	No.	No.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras	334,478	304,427	638,905	259,513	246,579	506,092	3,46,078	3,37,624	6,83,702	3,01,041	2,77,765	5,78,806
Rayapuram...	99,637	108,004	207,641	81,757	90,258	172,015	4,412	14,161	18,573	3,697	11,259	14,956
Veyasarpaudy	5,793	7,468	13,261	4,496	6,228	10,724	140	575	715	113	241	354
Washermenpet Junction	109,243	118,918	228,161	100,652	112,543	213,195	7,452	16,183	23,635	6,021	13,493	19,514
Perambur	185,752	206,197	391,949	166,980	176,662	343,642	8,118	19,024	27,142	5,625	14,935	20,560
Villivakkam	43,500	45,791	89,291	31,933	32,228	64,161	2,635	3,142	5,777	2,232	2,490	4,722
Ambattur	19,336	18,488	37,824	13,809	12,340	26,149	1,689	1,722	3,411	1,288	1,201	2,489
Avadi	65,021	65,422	130,443	52,352	50,871	103,223	9,976	10,711	20,687	8,329	8,698	17,027
Tinnanur	39,580	39,518	79,098	27,016	26,271	53,287	5,709	5,910	11,619	4,264	4,240	8,504
Sevvapet Road	17,879	18,209	36,088	14,048	14,150	28,198	2,849	2,922	5,771	2,303	2,298	4,601
Trivellore	96,418	86,222	182,640	83,035	67,815	150,850	23,672	20,282	43,954	21,159	16,760	37,919
Kadambattur	25,074	26,554	51,628	19,374	20,301	39,675	4,339	4,719	9,058	3,519	3,737	7,256
Manur	12,878	13,647	26,525	8,863	9,360	18,223	1,770	2,049	3,819	1,264	1,499	2,763
Chinnamapet	12,998	12,937	25,935	10,829	10,499	21,328	2,533	2,568	5,101	2,333	2,224	4,557
Mosur	5,668	6,041	11,709	4,488	4,677	9,165	819	1,029	1,848	672	782	1,454
Arkonam Junction...	152,037	150,858	302,895	96,443	98,918	195,361	61,069	60,423	1,21,492	45,590	41,810	87,400
Tiruttani	78,367	63,092	141,459	64,128	49,485	113,613	14,907	11,062	25,969	15,072	10,931	26,003
Ponpadi	9,643	9,687	19,330	6,497	7,371	13,868	786	918	1,704	678	919	1,597
Nagari	36,847	36,708	73,555	30,856	31,425	62,281	6,450	6,613	13,063	6,146	6,495	12,641
Vepagunta	7,130	8,064	15,194	5,303	6,148	11,451	983	1,266	2,249	772	1,014	1,786
Puttur	37,588	39,736	77,324	32,610	32,783	65,393	6,896	7,691	14,587	6,456	6,836	13,292
Taduku	1,033	1,513	2,546	2,005	2,266	4,271	101	184	285	299	357	656
Pudi	22,258	22,975	45,233	17,529	18,143	35,672	3,711	4,194	7,905	3,012	3,406	6,418
Renigunta Junction	72,224	72,589	144,813	49,450	46,682	96,132	45,136	45,722	90,858	26,826	24,726	51,552
Mamanduru	2,857	2,949	5,806	1,666	1,706	3,372	328	432	760	195	257	452
Peddapadu	6,462	6,590	13,052	4,339	4,177	8,516	1,346	1,393	2,739	931	969	1,900
Koduru	17,193	17,575	34,768	12,701	12,707	25,408	4,906	5,609	10,515	3,755	3,877	7,632
Urampadu	8,635	9,052	17,687	7,706	7,966	15,672	1,477	1,788	3,265	1,410	2,259	3,669
Reddipalli	13,579	14,988	28,567	10,230	10,697	20,927	2,862	3,822	6,684	2,244	2,727	4,971
Razampeta	28,997	27,592	56,589	22,769	22,691	45,460	7,892	7,438	15,330	6,476	6,585	13,061
Nandalur	22,900	22,231	45,131	22,678	21,897	44,575	5,402	5,341	10,743	5,622	5,522	11,144
Vontimitta	18,739	18,350	37,089	15,794	15,799	31,593	4,017	5,425	9,442	3,433	4,281	7,714
Siddhavattam	1,835	1,946	3,781	1,340	1,580	2,920	382	269	651	162	215	377
Cuddapah	55,921	56,813	112,734	41,987	42,846	84,833	31,235	29,309	60,544	22,224	22,361	44,585
Krishnapuram	10,030	9,974	20,004	10,100	9,127	19,227	1,617	2,122	3,739	1,941	1,777	3,718
Gangayapalli	9,834	9,194	19,028	6,794	6,613	13,407	1,044	1,222	2,266	908	981	1,889
Kamalapuram	18,496	18,751	37,247	14,072	14,555	28,627	3,837	4,074	7,911	3,058	3,492	6,550
Yerragudipadu	4,974	4,962	9,936	3,617	3,699	7,316	705	825	1,530	514	614	1,128
Yerraguntla	20,848	19,591	40,439	17,882	16,749	34,631	9,498	10,732	20,230	8,197	12,077	20,274
Kalamala	4,090	3,728	7,818	3,742	3,609	7,351	772	808	1,580	771	937	1,708
Muddanuru	15,324	15,711	31,035	11,099	11,320	22,419	5,784	5,656	11,440	4,399	4,275	8,674
Mangapatnam	3,576	3,566	7,142	2,315	2,518	4,833	633	730	1,363	477	567	1,044
Kondapuram	9,402	9,321	18,723	6,230	6,246	12,476	2,954	2,988	5,942	2,200	2,255	4,455
Regadipalli	4,298	4,396	8,694	2,603	2,687	5,290	888	1,021	1,909	583	687	1,270
Vanganur	4,331	4,413	8,744	3,072	2,614	5,686	1,080	1,162	2,242	839	744	1,583
Tadpatri	27,339	28,031	55,370	17,999	17,834	35,833	10,177	10,143	20,320	7,278	6,891	14,169
Penneru	11,395	11,092	22,487	6,001	5,495	11,496	1,642	1,750	3,392	1,126	1,074	2,200
Rayalcheruvu	13,499	13,727	27,226	8,059	7,916	15,975	3,079	3,097	6,176	2,016	2,000	4,016
Jakkalacheruvu	3,227	3,045	6,272	1,980	1,969	3,949	540	546	1,086	421	420	841
Gooty	35,237	34,504	69,741	26,506	25,817	52,323	11,316	13,638	24,954	14,888	12,457	27,345
Patakottacheru	4,464	4,564	9,028	1,716	1,680	3,396	496	551	1,047	268	348	616
Timmancherla	9,368	10,390	19,758	4,462	4,835	9,297	2,005	2,298	4,303	1,158	1,277	2,435
Guntakal Junction...	34,636	30,648	65,284	14,970	12,899	27,869	29,641	25,838	55,479	14,687	11,936	26,623
Nancherla	3,450	3,470	6,920	2,128	2,260	4,388	912	846	1,758	627	683	1,310
Molagavalli	3,834	3,789	7,623	2,267	2,100	4,367	605	736	1,341	460	421	881
Aspari	8,125	7,763	15,888	2,761	22,55	5,016	1,539	1,584	3,123	560	514	1,074
Nagarur	5,794	5,058	10,852	1,278	954	2,232	612	652	1,264	205	181	386
Adoni	50,298	52,426	102,724	27,348	29,129	56,477	19,018	17,105	36,123	13,225	12,013	25,238
Kupgal	12,039	11,215	23,254	4,364	3,200	7,564	1,514	1,645	3,159	689	587	1,276
Kosgi	17,808	17,571	35,379	8,373	9,023	17,396	3,219	3,480	6,699	1,784	2,274	4,058
Tungabhadra	13,142	13,771	26,913	3,258	4,952	8,210	2,968	2,736	5,704	1,520	2,612	4,162
Matmari	14,163	14,535	28,698	4,218	2,514	6,732	1,876	2,056	3,932	741	397	1,138
Raichur Junction	25,479	24,162	49,641	11,934	11,644	23,578	28,694	25,199	53,893	18,024	18,756	36,780
Munnal	15,330	16,786	32,116	13,034	12,666	25,700	2,209	3,034	5,243	2,498	2,609	5,107
Sholinghur	29,448	29,714	59,162	24,648	24,141	48,789	8,382	7,950	16,332	7,954	7,465	15,419
Thalangai...	2,993	3,838	6,831	2,352	3,147	5,499	289	474	763	256	464	720
Arcot	77,244	75,615	152,859	63,557	60,459	124,016	31,204	30,910	62,114	27,541	25,006	52,547
Ponnai Road	5,333	7,355	12,688	4,708	5,961	10,669	459	936	1,395	459	924	1,383
Tiruvallam	17,916	19,694	37,610	13,002	13,568	26,570	5,625	6,685	12,310	4,321	4,378	8,699
Katpadi Junction	154,716	141,377	296,093	107,075	99,102	206,177	83,433	75,380	158 813	57,310	52,464	109,774
Latteri	5,872	8,245	14,117	4,401	5,688	10,089	519	912	1,431	454	731	1,185
Virinchipuram	19,202	20,467	39,669	12,188	12,868	25,056	4,354	5,520	9,874	3,381	3,574	6,955
Kavanur *	...	...	...	3,176	3,848	7,024	...	...	...	368	673	1,041
Gudiyattam	60,667	57,620	118,287	44,199	41,534	85,733	16,280	16,915	33,195	13,062	12,848	25,910
Vallathoor...	15,062	13,758	28,820	11,038	9,902	20,940	2,456	2,867	5,323	1,884	2,042	3,926
Mailpatti	27,054	30,920	57,974	18,831	21,457	40,288	7,136	7,640	14,776	4,991	5,092	10,083
Ambur	59,876	62,628	122,504	42,239	43,609	85,848	14,938	18,852	33,790	11,149	16,775	27,924
Vinnamangalam	5,014	6,800	11,814	3,508	4,354	7,862	517	1,129	1,646	389	749	1,138
Vaniyambadi	74,263	73,487	147,750	48,691	48,591	97,282	20,926	20,203	41,129	16,013	15,402	31,405

* Opened 5th May 1898.

The following Table shows the Coaching Traffic in and out of the following Stations on the Madras Railway for the half-years ending 31st December 1897 and 1898—continued.

STATIONS.	Number of Passengers.						Coaching Receipts.					
	1897.			1898.			1897.			1898.		
	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.
	No.	No.	No.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Kettandapatti	8,102	9,314	17,416	5,342	5,968	11,310	690	1,185	1,875	681	942	1,623
Jalarpet Junction	90,436	86,279	176,715	48,196	46,991	95,187	30,867	31,283	62,150	18,297	18,880	37,177
Patchur	14,662	16,777	31,439	10,002	9,373	19,375	2,904	4,457	7,361	2,441	2,363	4,804
Mulanur	7,602	7,411	15,013	3,653	3,824	7,477	785	921	1,706	465	528	993
Kuppam	36,101	36,455	72,556	22,264	22,875	45,139	9,560	9,237	18,796	6,705	6,595	13,300
Gudupalli	9,921	11,923	21,844	5,327	6,526	11,853	1,239	2,197	3,437	709	1,238	1,947
Bisanattam	14,879	14,562	29,441	13,094	10,994	24,088	4,927	5,541	10,468	4,759	4,556	9,315
Kamasamudram	18,699	18,153	36,852	14,136	12,525	26,661	3,991	3,198	7,189	4,142	2,876	7,018
Bowringpet Junction	81,944	73,623	155,567	47,310	45,204	92,514	44,446	33,165	77,611	28,478	22,735	51,213
Tyakal	20,667	21,073	41,740	12,884	11,507	24,396	2,775	3,103	5,878	1,732	1,861	3,593
Malur	35,630	34,389	70,019	17,295	16,789	34,084	12,663	12,676	25,339	7,233	8,468	15,701
Devankundi	16,413	16,435	32,848	7,412	8,407	15,819	2,573	2,669	5,242	1,297	1,545	2,842
Whitefield	34,491	31,358	65,849	14,705	13,241	27,946	6,011	5,494	11,505	2,967	2,769	5,736
Krishnarajapuram	16,865	19,986	36,851	7,677	7,955	15,632	2,617	3,285	5,902	1,547	1,423	2,970
Bangalore Cantonment	152,886	93,572	246,458	68,873	50,831	119,704	1,64,714	1,37,375	3,02,089	90,667	78,906	1,69,573
Do. City Junction	28,992	71,691	100,683	15,839	38,704	54,543	28,118	52,311	80,429	15,527	39,289	54,816
Bangalore Pettah	...	15,075	15,075	...	4,769	4,769	32	13,287	13,319	11	4,118	4,129
Tirupattur	77,336	74,509	151,845	52,374	50,256	102,630	28,847	26,810	55,657	20,565	19,648	40,213
Kagankarai	11,033	12,096	23,129	6,258	6,939	13,197	1,579	2,050	3,629	1,051	1,351	2,402
Samalpatti	16,381	16,800	33,181	11,095	10,557	21,652	4,860	5,270	10,130	3,332	3,210	6,542
Kallavi	10,148	10,889	21,037	6,856	7,124	13,980	1,916	2,435	4,351	1,435	1,600	3,035
Morappur	25,958	25,506	51,464	17,601	16,687	34,288	10,380	10,192	20,572	7,264	6,465	13,729
Buddireddippatti	8,059	7,618	15,677	5,152	50,16	10,168	2,176	2,245	4,421	1,431	1,546	2,977
Mallapuram	13,151	13,582	26,733	8,695	9,632	18,327	4,206	4,229	8,435	2,962	3,148	6,110
Lokur	1,873	1,664	3,537	1,589	1,126	2,715	213	256	469	187	212	399
Kadiampatti	9,489	10,213	19,702	6,514	7,321	13,835	1,890	2,178	4,068	1,368	1,516	2,884
Thinnappatti	13,675	12,546	26,221	7,263	6,644	13,907	1,743	1,787	3,530	1,178	1,165	2,343
Salem	92,835	91,763	184,598	63,117	62,871	125,988	58,655	59,709	1,18,364	44,482	48,158	92,640
Ariyanur	6,653	9,075	15,728	4,359	5,650	10,009	916	1,455	2,371	823	1,199	2,022
McDonald's Choultry	16,441	17,648	34,089	12,243	12,472	24,715	3,209	4,028	7,237	2,556	2,778	5,334
Sankaridrug	31,297	29,735	61,032	23,109	21,716	44,825	7,634	7,697	15,331	5,582	51,56	10,738
Anangur	7,972	7,108	15,080	5,393	5,134	10,527	662	722	1,384	512	531	1,043
Cauvery	7,908	9,150	17,058	5,650	6,141	11,791	737	1,115	1,852	650	906	1,556
Erode	106,652	104,633	211,285	77,322	75,259	152,581	60,851	55,829	1,16,680	43,325	39,780	83,105
Totiapalaiyam	2,286	2,803	5,089	1,972	2,435	4,407	191	277	468	197	303	500
Perundurai...	23,404	19,789	43,193	16,925	14,043	30,968	4,766	4,255	9,021	3,877	3,152	7,029
Ingur	5,175	6,499	11,674	5,477	6,230	11,707	935	1,564	2,499	1,234	1,640	2,877
Viziamangalam	7,506	8,158	15,664	5,377	6,081	11,458	1,636	1,835	3,471	1,144	1,362	2,506
Uttukuli	15,926	16,251	32,177	13,154	13,079	26,233	4,251	4,573	8,824	3,749	3,918	7,667
Kulipalaiyam	2,485	3,142	5,627	2,039	2,643	4,682	351	603	954	381	528	909
Tiruppur	42,137	43,398	85,535	3,2562	33,222	65,784	18,933	19,391	38,324	13,332	13,089	26,421
Dharapuram Out Agency* ...	...	...	...	...	...	...	...	...	...	...	...	..
Mangalam	20,516	19,660	40,176	16,920	16,497	33,417	5,646	5,590	11,236	4,659	4,705	9,364
Somanur	12,670	13,266	25,936	10,143	10,423	20,566	2,737	3,157	5,894	2,456	2,451	4,907
Sulur	15,041	15,577	30,618	11,872	11,739	23,611	3,400	3,704	7,104	2,762	2,673	5,435
Singanallur	12,362	12,261	24,623	11,252	8,845	20,097	2,773	2,618	5,391	2,597	1,967	4,564
Podanur Junction	78,192	76,565	154,757	62,653	62,601	125,254	19,818	24,651	44,469	15,388	15,826	31,214
Coimbatore...	143,309	135,979	279,288	112,298	110,164	222,462	59,094	53,806	1,12,900	48,206	46,689	94,895
Tudiyalur	15,969	16,311	32,280	12,322	12,441	24,763	2,122	2,314	4,436	1,890	1,965	3,855
Periyanayakkanpalayam	10,863	12,151	23,014	8,216	9,447	17,663	1,302	1,697	2,999	1,022	1,229	2,251
Karaimadai...	19,834	18,249	38,083	15,772	13,569	29,341	2,951	3,106	6,057	2,346	2,193	4,539
Mettupalaiyam	62,452	70,623	133,080	50,215	58,209	108,424	53,277	84,546	1,37,823	49,612	77,820	1,27,432
Madukarai	6,707	9,330	16,037	7,204	6,898	14,102	1,470	1,733	3,203	1,868	1,867	3,735
Walayar	5,187	6,096	11,283	3,827	4,473	8,300	983	1,165	2,148	816	934	1,750
Kanyikod	11,048	11,883	22,931	9,946	9,080	19,926	3,084	3,582	6,656	2,792	2,837	5,629
Olavakkot Junction	45,864	50,017	95,881	35,966	39,812	75,778	17,959	20,933	38,892	13,891	15,529	29,420
Palghat	46,213	37,894	84,107	42,680	34,674	77,354	28,256	22,881	51,137	24,954	19,716	44,670
Parli	9,769	11,695	21,464	10,278	11,895	22,173	2,693	3,418	6,111	2,675	2,979	5,654
Maukarai	10,761	11,908	22,669	12,379	13,049	25,428	4,032	4,307	8,339	4,497	4,614	9,111
Lakkiti	16,430	18,781	35,211	15,581	16,266	31,847	4,529	5,275	9,804	4,191	4,538	87,29
Ottappalam...	26,937	25,393	52,330	26,354	2,5875	52,229	7,461	7,695	15,156	6,852	6,960	13,812
Shoranur	33,057	32,448	65,505	29,071	29,364	58,434	22,193	20,143	42,336	21,422	23,991	45,413
Pattambi	26,125	24,950	51,075	24,140	22,687	46,827	12,016	17,365	29,381	11,911	13,485	25,396
Pallipuram	9,135	9,371	18,506	8,542	8,607	17,149	2,220	2,324	4,544	2,048	2,186	4,234
Kuttippuram	9,352	9,529	18,881	8,805	9,100	17,905	2,633	2,655	5,288	2,452	2,607	5,059
Edakkolam	13,600	15,279	28,879	12,190	13,286	25,476	3,901	4,505	8,406	3,614	4,060	76,74
Tirur	41,369	40,518	81,887	38,428	36,531	74,959	12,292	17,356	29,648	12,165	14,101	26,266
Tanore	23,960	24,996	48,956	19,310	19,449	38,759	3,663	8,530	12,193	3,055	3,966	70,21
Parpanangadi	45,413	46,446	91,859	37,489	36,539	74,028	6,309	7,477	13,786	5,816	6,196	12,012
Kadalundi	12,661	13,024	25,685	9,318	9,839	19,157	1,140	1,312	2,452	951	1,214	2,165
Ferok	45,072	45,809	90,881	40,476	41,680	82,156	4,797	5,320	10,117	5,073	5,377	10,450
Kallayi	23,633	32,095	55,728	30,202	33,303	63,505	4,817	7,468	12,285	5,584	7,912	13,496
Calicut	92,696	81,278	173,974	71,343	70,028	141,371	59,212	54,285	1,13,497	50,429	45,653	96,082
Southern Mahratta Railway ...	35,132	41,702	76,834	28,954	33,739	62,693	79,196	75,215	1,54,411	69,472	68,651	1,38,123
Great Indian Peninsula Railway...	19,370	13,497	32,867	14,397	12,578	26,975	1,60,707	72,042	2,32,749	1,28,906	74,961	2,03,867
South Indian Railway	57,007	79,906	136,913	54,787	70,614	125,401	78,980	91,920	1,70,900	73,092	77,911	1,51,003
Kolar Gold Fields State Railway...	54,499	56,357	110,856	31,784	34,811	66,595	43,595	59,082	1,02,677	30,062	47,701	77,763
Madras-Ennur Railway	26,644	22,585	49,229	21,970	19,233	41,203	511	454	965	478	480	958

N.B.—This statement is intended to shew the relative importance of each station on the Madras Railway, but the actual total receipts for any particular section of the railway cannot be obtained from it.

* Opened 9th March 1898.

22. *The following Table shows the Goods Traffic in and out of the following Stations on the Madras Railway, for the half-years ending 31st December 1897 and 1898, together with the gross traffic receipts.*

These figures are compiled from the Chief Auditor's Returns T. A. No. 44, the Public Merchandise and Railway Materials being included in one total, and maunds converted into tons.

STATIONS.	Tonnage of Goods and Railway Materials.						Goods Receipts.						Gross Receipts, Coaching & Goods, Inwards and Outwards.	
	1897.			1898.			1897.			1898.				
	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras ...	...	...	...	...	...	...	3,213	1,652	4,865	4,459	2,263	6,722	6,88,567	5,85,528
Salt Cotaurs ...	83,855	53,637	137,492	77,418	49,171	126,589	651,292	563,765	12,15,057	6,52,035	5,17,025	11,69,060	12,15,057	11,69,060
Rayapuram ...	1,232	82,941	84,173	2,410	110,301	112,711	1.017	336,170	3,37,187	2,836	5,04,912	5,07,748	3,55,760	5,22,704
Veyasarpaudy ...	...	...	...	...	...	...	...	...	...	...	...	...	715	354
Washermenpet Junc	67	...	67	...	...	...	88	16	104	18	24	42	23,739	19,556
Perambur ...	1,476	146	1,622	1,109	867	1,976	2,369	2,154	4,523	2,599	2,755	5,354	31,665	25,914
Villivakkam ...	11	23	34	47	1	48	91	39	130	85	20	105	5,907	4,827
Ambattur ...	2	7,257	7,259	1	3,353	3,354	8	6,384	6,392	21	1,953	1,974	9,803	4,463
Avadi ...	378	7381	7,759	209	2,121	2,330	2,022	8,260	10,282	1,103	1,308	2,411	30,969	19,438
Tinnanur ...	61	516	577	114	234	348	281	5,629	5,910	263	222	485	17,529	8,989
Sevvapet Road ...	102	64	166	109	24	133	278	381	659	252	105	357	6 430	4,958
Trivellore ...	1,243	888	2,131	986	689	1,675	6233	6,694	12,927	5,094	1,174	6,268	56,881	44,187
Kadambattur ...	278	981	1,259	256	748	1,004	1,011	4,365	5,376	905	1,086	1,991	14,434	9,247
Manur ...	66	282	348	53	188	241	245	514	759	252	330	582	4,578	3,345
Chinnamapet ...	123	1,305	1,428	103	1,247	1,350	418	2,746	3,164	352	2,379	2,731	8,265	7,288
Mosur ...	8	153	161	5	64	69	35	398	433	25	193	218	2,281	1,672
Arkonam Junction..	1,178	2,589	3,767	1,317	2,370	3,687	5,362	11,139	16,501	5,230	6,774	12,004	1,37,993	99,404
Tiruttani ...	1,453	1,829	3,287	1,120	1,335	2,455	7,791	7,271	15,062	6,335	4,257	10,592	41,031	36,595
Ponpadi ...	24	129	153	42	72	114	127	551	678	170	218	388	2,382	1,985
Nagari ...	897	1,818	2,715	975	836	1,811	4,522	7,735	12,257	4,972	3,022	7,994	25,320	20,635
Vepagunta ...	16	189	205	23	79	102	67	965	1,032	98	299	397	3,281	2,183
Puttur ...	562	3,050	3,612	588	1,898	2,486	2,153	10,362	12,515	2,634	6,067	8,701	27,102	21,993
Taduku ...	...	7	7	1	4	5	...	17	17	7	18	25	302	681
Pudi ...	215	1,303	1,518	1,141	737	1,878	740	6,661	7,401	325	2,404	2,729	15,306	9,147
Renigunta Junction	766	3,169	3,935	1,058	2,611	3,669	4,805	11,536	16,341	7,682	9,659	17,341	1,07,199	68,893
Mamanduru ...	1	332	333	8	355	363	5	1,096	1,101	22	1,139	1,161	1,861	1,613
Peddapadu ...	43	1,855	1,898	41	2,270	2,311	144	7,573	7,717	180	8,766	8,946	10,456	10,846
Koduru ...	404	923	1,327	624	490	1,114	1,706	4,355	6,061	3,401	2,826	6,227	16,576	13,859
Urampadu ...	47	377	424	53	300	353	262	2,208	2,470	206	1,532	1,738	5,735	5,467
Reddipalle ...	48	323	371	46	250	296	659	2,063	2,722	291	1,783	2,074	9,406	7,045
Razampeta ...	1,261	1,506	2,767	1,227	1,366	2,593	6,568	10,744	17,312	7,190	1,0737	17,927	32,642	30,988
Nandalur ...	343	154	497	171	178	349	1,112	745	1,857	633	1,609	2,292	12,600	13,436
Voutimitta' ...	110	260	370	53	381	434	571	2,428	2,999	300	3,138	3,438	12,441	11,152
Siddhavattam ...	2	5	7	1	10	11	15	40	55	6	37	43	706	420
Cuddapah	6,800	3,959	10,759	3,617	3,101	6,718	38,868	28,294	67,162	26,100	20,603	46,703	1,27,706	91,288
Krishnapuram ...	466	229	695	167	242	409	2,551	1,845	4,396	898	1,265	2,163	8,135	5,881
Gangayapalli ...	99	186	285	125	200	325	1,054	861	1,915	1,025	1,137	2,162	4,181	4,051
Kamalapuram ...	534	200	734	843	354	1,197	2,718	904	3,622	4,433	2,559	6,992	11,533	13,542
Yerragudipadu ..	32	18	50	27	21	48	125	80	205	134	229	363	1,735	1,491
Yerraguntla ..	2,521	2,998	5,519	1,273	4,410	5,683	14,351	18,047	32,398	9,527	26,826	36,353	52,628	56,627
Kalamala ...	16	16	32	10	59	69	52	142	194	38	414	452	1,774	2,160
Muddanuru... ...	2,425	675	3,100	773	281	1,054	19,397	4,488	23,885	5,936	2,682	8,618	35,325	17,292
Mangapatnam ...	21	73	94	18	79	97	83	439	522	54	682	736	1,885	1,780
Kondapuram ...	601	359	960	87	551	638	4,860	2,704	7,564	430	4,610	5,040	13,506	9,495
Regadipalli ...	...	...	...	4	6	10	...	...	...	16	72	88	1,909	13,58
Vanganur	87	74	161	29	46	75	366	391	757	80	242	322	2,999	1,905
Tadpatri	3,427	1,206	4,633	2,178	1,721	3,899	25,702	8,871	34,573	15,047	15,779	30,826	54,893	44,995
Penneru	168	269	437	18	315	333	659	753	1,412	79	804	883	4,804	3,083
Rayalcheruvu ...	677	249	926	169	121	290	3,764	1,494	5,258	1,018	831	1,849	11,434	5,865
Jakkalacheruvu ...	27	6	33	22	4	26	117	21	138	94	50	144	1,224	985
Gooty	1,805	658	2,463	1,009	713	1,722	10,809	4,023	14,837	7,938	7,744	15,682	39,791	43,027
Patakottacheru ..	45	65	110	2	18	20	130	215	345	17	185	202	1,392	818
Timmancherla ...	574	441	1,015	279	1,258	1,537	5,433	2,741	8,174	2,465	13,726	16,191	12,477	18,626
Guntakal Junction...	490	294	784	926	993	1,919	6,866	1,605	8,471	10,670	5,868	16,538	63,950	43,161
Nancherla	161	84	245	121	564	685	1,355	253	1,608	524	6,139	6,663	3,366	7,973
Molagavalli ..	124	21	145	51	816	867	369	147	516	193	9,242	9,435	1,857	10,316
Aspari	931	125	1,056	21	464	485	11,923	302	12,225	107	5,831	5,938	15,348	7,012
Nagarur	5	3	8	1	34	35	17	6	23	1	488	489	1,287	875
Adoni	11,520	4,305	15,825	5,610	6,148	11,758	69,554	27,635	97,189	33,566	69,431	1,02,997	1,33,312	1,28,235
Kupgal	117	104	221	85	583	668	450	1,632	2,082	201	6,187	6,388	5,241	7,664
Kosgi	942	360	1,302	281	219	500	9,625	2,060	11,685	1,978	1,786	3,764	18,384	7,822
Tungabhadra ...	20	151	171	38	86	124	164	437	601	178	566	744	6,305	4,906
Matmari	61	151	212	25	524	549	178	607	785	103	7,095	7,198	4,717	8,336
Raichur Junction ...	7,067	912	7,979	2,470	9,609	12,079	73,339	10,178	83,517	27,301	1,09,173	1,36,474	1,37,410	1,73,254
Munnal	366	373	739	305	184	489	1,536	1,649	3,185	1,112	725	1,837	8,428	6,944
Sholinghur	546	1,568	2,114	723	2,220	2,943	2,300	5,464	7,764	3,137	4,605	7,742	24,096	23,161
Thalangai ...	...	12	12	3	6	9	3	43	46	18	28	46	809	766
Arcot	14,318	12,492	26,810	26,160	9,232	35,392	59,587	86,985	1,46,572	78,264	54,797	1,33,061	2,08,686	1,85,608
Ponnai Road ...	12	13	25	33	69	102	76	68	144	222	357	5,379	1,539	1,962
Tiruvallam	106	204	310	182	225	407	673	1,147	1,820	1,171	1,350	2,521	14,130	11,220
Katpadi Junction ...	6,615	15,218	21,833	...	6,362	14,094	51,198	1,11,304	1,62,502	52,372	42,952	95,324	3,21,315	2,05,098
Latteri ...	2	9	11	1	12	13	10	83	93	7	97	104	1,524	1,289
Virinchipuram ...	89	68	157	91	76	167	637	465	1,102	832	483	1,315	10,976	8,270
Kavanur* ...	...	...	...	11	42	53	..	...	...	45	335	380	...	1,421
Gudiyattam... ...	2,933	2,228	5,161	3,559	1,792	5,351	17,824	12,907	30,731	24,628	10,186	34,814	63,926	60,724
Vallathoor	138	101	239	180	143	323	962	725	1,687	1,352	905	2,257	7,010	6,183
Mailpatti	1,318	1,392	2,740	1,220	1,365	2,585	6,355	9,398	15,753	5,359	9,555	14,914	30,529	24,997
Ambur	1,714	2,056	3,800	2,481	1,853	4,334	10,899	11,990	22,889	15,768	11,367	27,135	56,679	55,059
Vinnamangalam ...	4	66	70	6	19	25	35	684	719	61	166	227	2,365	1,365
Vaniyambadi ...	4,202	3,246	7,448	4,559	3,584	8,143	26,857	19,281	46,138	28,662	19,598	48,260	87,267	79,675
Kettandapatti ...	25	99	124	31	67	98	92	719	811	125	344	469	2,686	2,092

* Opened 5th May 1898.

The following Table shows the Goods Traffic in and out of the following Stations on the Madras Railway, for the half-years ending, &c.—contd.

STATIONS.	Tonnage of Goods and Railway Materials.						Goods Receipts.						Gross Receipts, Coaching and Goods Inwards and Outwards.	
	1897.			1898.			1897.			1898.				
	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Jalarpet Junction...	370	997	1,367	498	986	1,484	2,149	4,016	6,165	2,665	4,871	7,536	68,315	44,713
Patchur	306	543	849	483	667	1,150	962	1,749	2,711	1,781	2,258	4,039	10,072	8,843
Mulanur	16	1,545	1,561	36	1,353	1,389	47	1,407	1,454	138	1,216	1,354	3,160	2,347
Kuppam	809	2,779	3,588	767	2,131	2,898	4,260	9,539	13,799	4,161	6,899	11,060	32,596	24,360
Gudupalli	7	88	95	10	162	172	66	405	471	62	948	1,010	3,907	2,957
Bisanattam ...	3,790	18	3,808	4,336	31	4,367	5,470	79	5,549	7,090	100	7,190	16,017	16,505
Kamasamudram ...	2,415	475	2,890	2,134	280	2,414	2,064	763	2,827	2,016	1,125	3,141	10,016	10,159
Bowringpet Junc...	15,365	6,343	21,708	9,602	3,646	13,248	70,771	32,975	1,03,746	61,892	18,502	80,394	1,81,357	1,31,607
Tyakal	79	1,604	1,683	72	2,380	2,452	451	4,184	4,635	468	3,898	4,366	10,513	7,959
Malur	569	7,116	7,685	890	4,520	5,410	3,586	22,005	25,591	5,932	13,640	19,572	50,930	35,273
Devankundi ...	107	3,224	3,331	170	2,014	2,184	557	7,182	7,739	1,114	5,523	6,637	12,981	9,479
Whitefield ...	352	8,599	8,951	654	8,415	9,069	3,661	17,582	21,243	5,216	16,320	21,536	32,748	27,272
Krishnarajapuram..	207	1,049	1,256	199	1,448	1,647	1,932	2,392	4,324	2,172	2,237	4,409	10,226	7,379
Bangalore Cant. ...	15,183	4,275	19,458	12,246	3,141	15,387	1,34,310	51,768	1,86,078	1,27,390	39,882	1,67,272	4,88,167	3,36,845
Do. City Junc.	12,748	10,822	23,570	8,849	6,399	15,248	1,24,589	91,307	2,15,896	1,04,635	54,856	1,59,491	2,96,325	2,14,307
Bangalore Pettah...	...	...	...	...	...	...	...	...	...	...	...	...	13,319	4,129
Tirupattur ...	4,118	10,620	14,738	5,389	7,325	12,714	25,657	45,629	71,286	34,892	30,300	65,192	1,26,943	1,05,405
Kagankarai ...	13	122	135	22	34	56	39	819	858	3,113	282	395	4,487	2,797
Samalpatti ...	198	1,006	1,204	251	563	814	1,444	5,724	7,168	1,995	3,288	5,283	17,298	11,825
Kallavi	46	739	785	120	223	343	220	4,729	4,949	620	1,196	1,816	9,300	4,851
Morappur ...	1,442	4,156	5,598	1,925	2,285	4,210	10,792	24,474	35,266	14,643	13,836	28,479	55,838	42,208
Buddireddippatti ...	30	538	568	80	170	250	193	5,190	5,383	473	1,067	1,540	9,804	4,517
Mallapuram ...	116	587	703	107	277	384	647	3,770	4,417	528	1,703	2,231	12,852	8,341
Lokur ...	...	36	36	1	44	45	7	203	210	4	121	125	679	524
Kadiampatti ...	266	569	835	139	545	684	1,889	2,596	4,485	977	2,111	3,088	8,553	5,972
Thinnappatti ...	2	23	25	563	652	1,215	28	38	66	6,018	1,034	7,052	3,596	9,395
Salem	12,088	11,832	23,920	18,440	4,019	22,459	92,694	1,03,438	1,96,132	1,59,325	31,483	1,90,808	3,14,496	2,83,448
Ariyanur	6	130	136	13	119	132	39	1,593	1,632	68	1,656	1,724	4,003	3,746
McDonald's Choultry	525	586	1,111	474	265	739	4,078	4,852	8,930	3,498	2,392	5,890	16,167	11,224
Sankaridrug ...	2,410	3,868	6,278	2,201	2,518	4,719	13,302	17,704	31,006	18,282	10,347	28,629	46,337	39,367
Anangur ..	...	2	2	...	2	2	...	14	14	...	21	21	1,398	1,064
Cauvery	145	862	1,007	47	380	427	702	3,649	4,351	340	1,764	2,104	6,203	3,660
Erode	5,066	4,055	9,121	7,602	2,409	10,011	36,580	38,115	74,695	62,021	22,898	84,919	1,91,375	1,68,024
Totyapalaiyam ...	...	19	19	1	16	17	6	193	199	8	187	195	667	695
Perundurai ...	233	201	434	234	146	380	2,320	1,732	4,052	1,637	1,333	2,970	13,073	9,999
Ingur	...	5	5	1	4	5	2	45	47	3	26	29	2,546	2,906
Viziamangalam ...	3	131	134	4	302	306	31	356	387	29	712	741	3,858	3,247
Uttukuli	441	466	907	327	410	737	1,593	1,836	3,429	2,064	1,849	3,913	12,253	11,580
Kulipalaiyam ...	9	104	113	11	129	140	71	1,040	1,111	71	1,199	1,270	2,065	2,179
Tiruppur	5,934	12,675	18,609	9,141	4,795	13,936	48,949	1,23,918	1,72,867	82,262	48,953	1,31,215	2,11,191	1,57,636
Dharapuram out-Agency*	...	...	...	109	204	313	...	...	...	1,320	2,592	3,912	...	3,912
Mangalam ...	2,467	382	2,849	4,427	373	4,800	16,788	3,119	19,907	40,502	2,469	42,971	31,143	52,335
Somanur	217	712	929	242	327	569	864	9,565	10,429	856	4,315	5,171	16,323	10,078
Sulúr	138	817	955	202	775	977	786	8,548	9,334	1,473	7,109	8,582	16,438	14,017
Singánallúr ...	112	300	412	73	283	356	605	2,239	2,844	749	3,197	3,946	8,235	8,510
Podanur Junction...	2,029	1,037	3,066	647	815	1,462	8,466	8,935	17,401	3,162	5,351	8,513	61,870	39,727
Coimbatore ...	17,249	9,031	26,280	18,490	4,346	22,836	80,563	80,625	1,61,188	1,25,504	34,998	1,60,502	2,74,088	2,55,397
Tudiyalur ...	173	296	469	30	182	212	282	1,199	1,481	104	571	675	5,917	4,530
Periyanayakkanpalayam	1	6	7	1	6	7	6	16	22	7	18	25	3,021	2,276
Karaimadai ...	313	319	632	309	140	449	1,233	2,838	4,071	1,763	764	2,527	10,128	7,066
Mettupalaiyam ...	10,135	4,948	15,083	10,941	4,348	15,289	89,665	47,534	1,37,199	92,131	40,743	1,32,874	7,25,022	2,60,306
Madukarai ...	69	251	320	133	579	712	298	1,347	1,645	580	2,213	2,793	4,848	6,528
Walayar	2	412	414	2	557	559	15	590	605	16	493	509	2,753	2,259
Kanyikod ...	162	4,072	4,234	239	1,214	1,453	1,224	5,936	7,160	1,712	1,935	3,647	13,826	9,276
Olavakkot Junction.	633	4,582	5,215	1,000	4,923	5,923	1,747	21,516	23,263	2,824	21,674	24,498	62,155	53,918
Palghat	8,892	10,973	19,865	7,146	6,695	13,841	52,861	56,652	1,09,513	53,277	45,322	98,599	1,66,650	1,43,269
Parli	348	2,823	3,171	249	1,831	2,080	1,516	8,626	10,142	1,086	6,797	7,883	16,253	13,537
Mankarai ...	209	466	675	270	551	821	781	2,130	2,911	920	3,412	4,332	11,250	13,443
Lakkiti	299	508	807	355	467	822	1,292	2,028	3,320	1,472	1,892	3,364	13,124	12,093
Ottappalam... ...	546	1,125	1,671	508	924	1,432	2,502	6,374	8,876	1,748	4,026	5,774	24,032	19,566
Shoranur ...	3,267	1,715	4,982	1,575	1,739	3,314	14,217	11,299	25,516	11,133	14,328	25,461	67,852	70,874
Pattambi ...	477	806	1,283	314	924	1,238	2,315	6,352	8,667	1,476	7,461	8,937	38,048	34,333
Pallipuram ...	34	112	146	34	72	106	183	981	1,164	132	449	581	5,708	4,815
Kuttippuram ...	351	197	548	219	142	361	1,571	1,642	3,213	1,133	1,294	2,427	8,501	7,486
Edakkolam ...	174	812	986	59	690	749	722	6,266	6,988	252	4,851	5,103	15,394	12,777
Tirur	8,809	6,301	15,110	2,573	6,475	9,048	54,586	39,839	94,425	17,311	40,229	57,540	1,24,073	83,806
Tanore	2,016	2,216	4,232	1,182	1,589	2,771	6,242	21,765	28,007	4,424	18,425	22,849	40,200	29,870
Parpanangadi ...	2,086	1,842	3,928	1,162	1,352	2,514	9,223	14,937	24,160	3,954	11,534	15,488	37,946	27,500
Kadalundi ...	149	448	597	45	239	284	816	2,325	3,141	158	1,233	1,391	5,593	3,556
Ferok	3,265	3,338	6,603	1,836	3,571	5,407	24,041	22,315	46,356	12,798	23,308	36,106	56,473	46,556
Kallayi	1,674	10,509	12,183	1,206	12,703	13,909	7,924	89,036	96,960	4,264	1,08,079	1,12,343	1,09,245	1,25,839
Calicut	20,005	11,991	31,996	8,222	12,292	20,514	1,58,613	90,528	2,49,141	75,837	93,559	1,69,396	3,62,638	2,65,478
S. M. Railway ...	17,231	43,405	60,636	8,887	50,086	58,973	1,68,029	2,23,377	3,91,406	1,14,054	3,91,259	5,05,313	5,45,817	6,43,436
G. I. P. do. ...	26,163	12,307	38,470	9,989	19,986	29,975	2,37,604	1,91,311	4,28,915	1,15,082	2,00,751	3,15,833	6,61,664	5,19,700
S. I. do. ...	23,275	25,153	48,428	22,805	19,498	42,303	1,09,637	1,40,166	2,49,803	1,26,550	81,813	2,08,363	4,20,703	3,59,366
K. G. F. S. Ry. ...	87,131	485	87,616	1,20,321	386	1,20,707	3,68,370	2,479	3,70,849	5,14,958	2,166	5,17,124	4,73,526	5,94,887
Madras-Ennur Ry.	13,566	9,351	22,917	1,906	1,812	3,718	3,617	30,283	33,900	1,532	3,348	4,880	34,864	5,838

* Opened 9th March 1898.

N. B.—This statement is intended to show the relative importance of each station on the Madras Railway, but the actual total receipts for any particular section of the Railway cannot be obtained from it.

LAWRENCE ASYLUM PRESS.

SOUTHERN MAHRATTA RAILWAY.

Traffic Manager's Office.

CHARWAR, 10th March, 1899.

CIRCULAR LETTER No. R 13.

To

ALL STATION MASTERS,

S. M. RAILWAY.

With reference to para 6 of Rate Circular No. of 20th December 1898, the start are informed that Madras Railway have reduced their rates between Gu and Madras and Bangalore and Madras as shewn in the ... gin(They have still further reduced their rates in ... through booking but these do not come in force till 1st April and you will be duly advised of the change. ... my next Rate Circular). For consignments not in ... loads the ordinary rates apply and there is no inducement in such cases for booking to Madras Railway station and rebooking from there.

In the case however of consignments in wagon loads of 270 to 324 maunds to which the lower rates do apply there is a direct inducement to rebook, and to prevent this the following procedure should be followed in the case of consignments in wagon loads of 270 to 324 maunds

The local rates between the S. M. Railway stations and the Junction and the Junction and Madras should be added together and divided in mileage proportion on the through distance to Madras via Dharmavaram and the S.I. Railway; the proportions thus arrived at being the rates chargeable in local booking (provided of course they do not fall below the minimum chargeable to and from Dharmavaram) for traffic which it is intended to rebook to and from Madras. The consignment should then be booked to Dharmavaram freight being calculated at the rate stated in the preceding sentence. Receipts should then be issued for the consignment as follows:-

(a)

I. For all goods classified in the Special and 1st class including salt, sugar, jaggery, kerosine oil, piece goods grain and seeds at owner's risk in wagon loads of 324 maunds.

Between Salt Cottaurs, Rayapuram and Bangalore annas 2-1 per maund. Between Salt Cottaurs, Rayapuram, Gooty, Timmencherla and Guntakal annas 2-7 per maund.

II. For all goods classified in the 2nd, 3rd, 4th and 5th classes at owner's risk in wagon loads of 324 maunds.

Between Salt Cottaurs, Rayapuram and Bangalore annas 3-4 per maund. Between Salt Cottaurs, Rayapuram, Gooty, Timmencherla and Guntakal annas 4-1 per maund.

(a) For the journey to Dharmavaram. The consignor should be required to endorse and sign his instructions as to rebooking on this, and the receipt should be sent attached to the invoice to Dharmavaram.

(b) For the journey Dharmavaram to Madras a second receipt should be issued on behalf of the S. I. Railway and should be headed Dharmavaram and signed " For Station Master Dharmavaram ". On this receipt, the freight to Dharmavaram should be shewn " Paid on ", and the freight from Dharmavaram to Madras " To pay ", the latter being the difference between the sum of the local rates and the S. M. Railway proportion. Thus, Bellary has 270 maunds of onions to book to Madras.

The sum of the local rates is,

Bellary to Guntakal	-	As.1-4
Guntakal to Madras	-	As.2-7
Total		As.3-11

The total amount of 47 pies divided in mileage proportion on the through distance of 472 miles via Dharmavaram to Madras makes the S. M. and S. I. Railways proportions 9 and 38 pies respectively. As these are not below the minimum chargeable, the consignment should be booked to Dharmavaram the charge over the S. M. Railway being calculated at 9 pies a maund; the charge over the S. I. Railway being calculated at 38 pies a maund.

In the case of consignments thus booked between Dharmavaram and Madras terminals need not be taken into account at all either on the S. M. or S. I. Railway.

At Dharmavaram fresh invoices will be issued for the consignments, the labels will be altered, and the wagons sent on without delay.

If

If these orders are not clearly understood and the station has any traffic to book to Madras, I should be asked for an explanation of the points about which there is doubt.

(Signed) NEVILLE PRIESTLEY.

Traffic Manager.

(No. II.)

No. 11545
4114

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

Madras, 14th April 1899.

PA

CONSULTING ENGINEER FOR RAILWAYS APR 1899 MADRAS

1955 15.4.99

From

The Agent and Manager.
M. R. Co

To

The Consulting Engineer for Railways.
Madras.

Sir,

In continuation of my letter No. 11545/386 dated 11th April 1899, I have the honour to forward herewith 32 copies of the Report by the Commandant, Madras Railway Volunteers, for the Official year ending 31st March 1899.

I have the honour to be,
Sir,
Your most obedient servant.

Agent & Manager.

All Reports sent X 20/4/99

Enclo:
(32 copies)

MADRAS RAILWAY.

From

The Agent and Manager

To

The Consulting Engineer

for Railways

Dated 188

Reed.

No.

MADRAS RAILWAY VOLUNTEERS,

PERAMBUR WORKS,

MADRAS, *4th April* 1899.

From

LIEUT.-COLONEL C. E. PHIPPS, A.D.C.,

Commandant, Madras Railway Volunteers,

To

THE AGENT AND MANAGER,

Madras Railway Company.

SIR,

I have pleasure in reporting, for your own information and for that of the Board of Directors, upon the work and progress of the Madras Railway Volunteers during the official year just closed.

2. The following figures give the customary comparison as to the strength, number of efficients, etc., of the Regiment, and I also enclose the usual statements giving this information in each Company, and also the Roll of Officers :—

———	1897-98.	1898-99.
Greatest strength during the year	1,005	998
Strength at close of the year	952	955
Number of extra-efficients	368	480
„ of efficients	571	441
„ of non-efficients	13	34
Percentage of extra-efficients and efficients to strength	98	96
Number on rolls who have passed Proficiency test	123	126

3. The number of extra-efficients shows a very satisfactory increase, these being 50·26 per cent. of the strength of the Regiment as compared with 38·65 per cent., the result of the last year's work. The number of non-efficients has somewhat increased, although it is at the same time less than was recorded for 1896 and other preceding years, while the total percentage of efficients and extra-efficients to the total strength has fallen by ·02.

4. The Regimental figure of merit works out to 48 as against 44 for last year, which being as it is an improvement in the special direction where it is most important improvement should take place, is a matter for congratulation.

5. It was unfortunately not possible to arrange for a Camp of Exercise during the year since, although the special grant made for this purpose by Government covers the greater part of the expenditure incurred, there are many expenses in connection with the holding of a Camp of Exercise which are not included in this special grant, and which have consequently to be met from Regimental funds, and much as I should have liked to have been able to have held the Camp, I was not of opinion that the funds at my disposal were sufficient to justify my doing so in view of certain other charges which it was anticipated would fall upon them during

the year. The fact that the Camp was not held has probably conduced in some way to the slight increase in the number of the non-efficients.

6. The Head-Quarter Companies were inspected at Perambur on the 14th February by Brigadier-General E. Brooke-Anderson, and the out-station Companies being inspected by Officers detailed from the several commands between the 27th February and 9th March. The reports which have reached me are all very favourable.

7. Two Brigade parades have been attended during the season, at the last of which specially ordered by Brigadier-General T. Cummins, D.S.O., shortly before his departure on leave, I had the honour of commanding the Brigade while the Regiment was commanded for me by Major D. Ross-Johnson.

8. The competition for the "Moss Medal" has not yet been completed, but the keen interest taken in it by all ranks is as great as ever, the more so since Lieut. Heaton, who has now won it for two years, stands well forward in the scores made, and if again successful this year will, under the conditions laid down, win it for good.

9. The Chief Engineer's Challenge Shield, owing to the regretted retirement of Mr. West from the Company's service, has not again been fired for. Great interest was in past years taken in this Inter-company match, and although unfortunately the annual competition for it has now ceased, the Shield will remain as evidence of the great interest always taken by Mr. West in the Railway Regiment, and his ever willing aid in furthering its welfare.

10. An exceedingly handsome Challenge Cup has been presented by Mr. F. J. E. Spring, C.I.E., for competition between teams selected from each of the three Railway Volunteer Regiments which come within the circle of control of the Consulting Engineer to the Madras Government.

11. The conditions of the match are such as to make it an eminently instructive practice in field-firing. Each man in each team is represented at the targets by an earthen pot filled with water, and on each pot being hit, the man bearing the corresponding number in the opposing team is fallen out.

12. The competition took place on the 13th January last at Acharapakam between a team of this Regiment and a team of the South Indian Railway Volunteers, with the result that the Madras Railway Volunteer team were successful in winning the Cup for the year with a list of 25 casualties as against 32, the loss inflicted by them upon their opponents. The conditions of the competition are entirely new, and the match was an exceedingly interesting and instructive one.

13. The Parade grounds, Ranges and Armouries have all been maintained in good order and are complete and meet all requirements.

14. The re-construction of the Jalarpet Range has not yet been commenced as the Revenue Authorities have not yet been able to make over the necessary land. Permission to continue the use of the old Range in its present condition has been extended for another year, and it is hoped that the difficulty with regard to the land will be got over shortly when the much-needed alterations of the Range will be at once commenced.

15. There have been no changes in the Permanent Staff during the year.

16. Lieut. R. B. Ward was awarded the V. D. Medal, which was presented by H. E. the Governor of Madras at a special parade held on the 17th September 1897, and during the year, 5 Volunteers and Non-Commissioned Officers have been granted the Volunteer Long Service Medal.

17. Lieut. W. Ward has been fortunate enough to win the Command Medal for the year 1897-98 awarded by Government to him as the best shot in the Madras Command for the year.

18. It also gives me very much pleasure to record that the Regimental team which attended the Meeting of S. I. R. A. in Bangalore in September last were able to win and bring back to Perambur once more that much-coveted trophy, the Bangalore Cup. From 1885 to 1891, or for 7 years in succession, this Cup was won by the Madras Railway Volunteer team, but until the year now under review, although on several occasions our team has been well up in the scores, the prize has gone elsewhere.

19. The success was the more gratifying since it was the first year in which the team had been armed with the Lee Metford Rifle, and further the new rifles had only been served out to the men for about a fortnight before the meeting.

20. I regret to have to record the resignation of two Officers of standing in the Regiment Major T. Wake and Captain E. R. Ross. Major Wake's resignation was the more to be regretted, since he had only lately been specially promoted to Field rank, and I had hoped to have been able to rely upon him for Field Officers' duty at the Head Quarters parades.

21. The Band has been maintained throughout the year up to full strength and has derived much benefit from the careful instruction it has received from Band Sergeant Taylor.

22. In conclusion I must express my appreciation of the cordial assistance I have at all times received from yourself and from the heads of the several Departments, without which the difficulty of securing general and individual efficiency would be greatly enhanced.

I have the honour to be,

Sir,

Your most obedient Servant,

C. E. PHIPPS, Lieut.-Colonel,

Commandant, Madras Railway Volunteers.

MADRAS RAILWAY VOLUNTEERS.

Roll of Railway Officers showing efficiency, 1898-99.

Rank and Name.		Drills.	Musketry.	Qualification.			Remarks.
				E. E.	E.	N. E.	
Lt.-Col.	Phipps, C. E., A. D. C.	27	(a) 44	1			
,,	Taylor, J. L. ...	19	(a) 35	1			
Major	Ross-Johnson, D. ...	15	(a) 30	1			
Capt.	Chisholm, R. ...	12	(a) 31	1			
,,	Ewing, J. M. ...	12	(a) 33	1			
,,	Pigott, R. E. ...	...	...	...	...	1	On leave.
,,	Pilkington, A. ...	9	(a) 45	1			
,,	Pawley, F. A. ...	11	(a) 16	...	1		
,,	Duncan, J. B. ...	10	102	1			
,,	Greenall, R. ...	10	(a) 30	1			
,,	Corben, A. ...	12	(a) 42	1	...	...	(a) Revolver course.
,,	Stanley, H. J. ...	9	(a) 39	1			
Lieut.	Ward, R. B., V. D. ...	16	(a) 38	1			
,,	Heaton, W. ...	16	140	1			
,,	Currie, J. ...	18	(a) 33	1			
,,	Driver, E. C. V. ...	20	(a) 38	1			
,,	Wright, S. ...	41	(a) 34	1			
,,	Bamford, R. G. ...	14	(a) 38	1			
,,	Davies, J. T. ...	37	128	1			
,,	Ward, W. ...	11	129	1			
2nd ,,	Walters, F. I. ...	13	(a) 44	1			
,,	Gale, A. C. ...	...	114	...	...	1	
,,	Porteous, P. G. ...	14	(a) 41	1			
,,	Francis, A. H. ...	36	(a) 33	1			
,,	Dinwoodie, J. F. ...	34	104	...	1		
,,	Evans, E. C. ...	9	(a) 34	1			
,,	Giles, G. W. ...	18	(a) 93	1			
			Total ...	23	2	2	

PERAMBUR,
4th April 1899.

C. E. PHIPPS, LIEUT.-COLONEL,
Commandant, Madras Railway Volunteers.

MADRAS RAILWAY VOLUNTEERS.

Statement showing the enrolled strength and the number of efficients in each Company on the 31st March 1899.

Company.	Enrolled strength.	Efficients.				Non-efficients.	Head Quarters.
		Officers.	N. C. Officers.	Volunteers.	Total.		
"A" Co:	62	6	9	45	60	2	Perambur Works.
"B" ,,	66	2	7	57	66	...	Do.
"C" ,,	66	3	6	57	66	...	Do.
"D" ,,	60	2	5	53	60	...	Do.
"E" ,,	106	1	9	85	95	11	Do.
"F" ,,	97	5	8	71	84	13	Do.
Cadets.	67	...	5	62	67	...	Do.
"G" Co:	84	2	8	69	79	5	Arkonam.
"H" ,,	83	4	4	74	82	1	Gooty.
"I" ,,	82	1	10	69	80	2	Jalarpet.
"K" ,,	84	2	13	69	84	...	Bangalore
"L" ,,	98	1	12	85	98	...	Podanur.
Total ...	955	29	96	796	921	34	

PERAMBUR,
4th April 1899.

C. E. PHIPPS, LIEUT.-COLONEL,
Commandant, Madras Railway Volunteers.

MADRAS RAILWAY VOLUNTEERS.

Return of Non-Efficients in each Railway Department on the 31st March 1899.

Locomotive Department	1
Traffic Department	21
Engineer's do.	5
Telegraph Engineer's Department	1
Medical Department	0
Audit do.	2
Non-Railway Employés	4
Total	34

MADRAS RAILWAY VOLUNTEERS.

Statement showing the number of Volunteers in each Railway Department on the 31st March 1899.

Locomotive Department	491
Traffic do.	308
Engineer's do.	43
Telegraph Engineers' Department	34
Medical Department	3
Audit do.	11
Non-Railway Employés	65
Total	955

PERAMBUR,
4th April 1899.

C. E. PHIPPS, LIEUT.-COLONEL,
Commandant, Madras Railway Volunteers.

MADRAS RAILWAY.

REPORTS BY HEADS OF DEPARTMENTS FOR THE HALF-YEAR ENDING 31ST DECEMBER 1898.

No. 2406.

MADRAS RAILWAY COMPANY,
MADRAS, *6th April* 1899.

To

JULIAN BYRNE, ESQ.,
Secretary,
Madras Railway Company,
LONDON.

SIR,

I have the honor to submit, for the information of the Directors, the following summary of the operations of the Company for the half-year ended 31st December 1898. The detailed reports by the Heads of Departments were sent to you on the undermentioned dates :—

The Chief Engineer	... 23rd March 1899.	The Loco. Supt.	... 30th March 1899.
„ Chief Auditor	... „ „ „	„ Ag. Telegraph Engr.	„ „ „
„ Medical Officer	... 30th „ „	„ Traffic Manager	... 6th April „

2. The **Financial** results of the last two years are shown in the annexed table :—

Half-year ended	Gross earnings.	Total expenditure.	Net revenue.	Working expenses per cent.	Receipts per mile per week.	Half-yearly dividend.
	Rs.	Rs.	Rs.			
1897, June ...	57,89,562	26,99,926	30,89,636	46·63	265·61	2·56
„ December ...	56,75,752	27,63,201	29,12,551	48·68	260·77	2·41
Total ...	1,14,65,314	54,63,127	60,02,187	47·65	263·19	4·97
1898, June ...	56,34,736	24,77,847	31,56,889	43·97	258·61	2·62
„ December ...	50,85,747	27,40,731	23,45,016	53·89	233·26	1·92
Total ...	1,07,20,483	52,18,578	55,01,905	48·68	245·94	4·54

The decrease in gross earnings for December 1898, as compared with the earnings for the corresponding half-year of 1897, amounts to Rs. 5,90,005 and the decrease in working expenses to Rs. 22,470. The net revenue shows a decrease of Rs. 5,67,535, equivalent to 19·49 per cent.

3. During the half-year 1,270,984 train miles were run as against 1,318,652 during the corresponding period. 3,636,128 passengers and 581,312 tons of goods were carried as against 4,918,869 passengers and 613,550 tons of goods.

4. The result of the half-year's working is a dividend at the rate of £3-17-0 per cent. per annum on the capital bearing interest. Loss by exchange amounts for the half-year to Rs. 1,72,337, or Rs. 19,414 more than during the corresponding half-year.

5. The number of **passengers** (excluding troops and police) carried in each class and the gross receipts therefrom, during the second halves of the last four years, are shown in the following table :—

Half-year ended	First Class.		Second Class.		Third Class.		Total.	
	No. carried.	Money earned.	No. carried.	Money earned.	No. carried.	Money earned.	No. carried.	Money earned.
		Rs.		Rs.		Rs.		Rs.
31st December 1895	11,538	1,07,505	47,034	1,06,013	4,327,774	17,36,777	4,386,346	19,50,295
Do. 1896	12,273	92,263	42,830	1,01,940	4,727,779	16,99,951	4,782,882	18,94,154
Do. 1897	11,189	83,571	45,403	98,665	4,821,593	16,63,222	4,878,185	18,45,458
Do. 1898	9,978	88,358	39,008	95,981	3,554,861	12,39,576	3,603,847	14,23,915

There is a decrease in the number of first-class passengers carried, as compared with the corresponding half-year of 1,211, or very nearly 11 per cent., and in the money earned there is an increase of Rs. 4,787, or 5·7 per cent.

There is a decrease in the number of second-class passengers carried of 6,395, or 14 per cent., and in the money earned there is a decrease of Rs. 2,684, or 2·7 per cent.

There is a decrease in the number of third-class passengers carried of 1,266,732, or nearly 27 per cent., and in the money earned there is a decrease of Rs. 4,23,646, or over 25 per cent.

The large falling off in the passenger traffic is entirely due to plague and plague restrictions.

Additional plague examining stations have been opened since the June half-year closed, and as plague broke out very seriously at Bangalore during the half-year, the measures adopted by Government to check the disease have had a far-reaching effect as will be seen from the Traffic Manager's table showing the percentage of passengers travelling over the several districts of the line.

The disease while breaking out spasmodically in places seems to move slowly but steadily to the south and the east, and it seems quite impossible to say where the disease will extend, or when we may expect to get rid of its influence.

6. The progress of the **goods traffic** during the same four half-years was—

Half-year ended	Goods traffic exclusive of Madras Railway material and revenue stores.	Government stores and Foreign Railway material.	For the public.		Average receipt per ton lifted.
			Weight.	Receipts.	
	Rs.	Rs.	Tons.	Rs.	Rs.
31st Dec. 1895 ..	29,63,744	39,010	430,313	29,24,734	6·87
Do. 1896 ...	29,67,007	74,087	441,688	28,92,920	6·55
Do. 1897 ...	31,96,980	37,260	501,005	31,59,720	6·30
Do. 1898 ..	31,02,852	46,171	467,389	30,56,681	6·54

The total tonnage carried over the Railway during the past half-year, exclusive of Railway materials for construction and revenue stores, was 471,761 tons as against 509,286 tons during the corresponding period, while the receipts were Rs. 31,02,852, and Rs. 31,96,980, respectively.

I alluded in my summary for the June half-year to the falling off in the grain traffic owing to the cessation of the famine of 1897, and a reference to the figures included in the Traffic Manager's report for December will show that we had again during the past half-year to compare with heavy movements of grain carried during the closing months of 1897 to the north.

The movement of wet skins was checked during the half-year by plague precautions, but the increased tonnage of coal, timber, salt, oil and oil-seeds helped us to show a better result than we at one time anticipated.

I do not propose to follow the Traffic Manager in the remarks he has submitted with his report on the acute stage of competition for southern traffic and the compulsory reduction of rates brought about by the opening of the Marmugoa Sea route and the withdrawal of the Southern Mahratta Railway from what was known as the shortest route agreement.

The whole question is in the hands of the several Boards, and I purposely refrain from adding remarks which might possibly make the position of my Directors more difficult.

7. The **maintenance charge** per mile, compared with the three previous half-years, is as follows :—

Half-year.	Ordinary.	Extra.	Total.
	Rs.	Rs.	Rs.
1897, June	562	48	610
„ December... ...	587	33	620
1898, June	484	49	533
„ December... ...	670	24	694

Compared with December 1897, the *ordinary* expenditure for the past half-year shows an increase of Rs. 83 a mile, while the *extraordinary* expenditure shows a decrease of Rs. 9 per mile. A sum of Rs. 14,621, it will be noticed, was charged to revenue on account of covering portions of the line with broken stone.

The Chief Engineer draws special attention to the protective works that have been in hand along the foreshore opposite to our Rayapuram Terminus for some months past. These works are now so far advanced that the safety of the main offices may be said to be secured.

Weak bridges are having attention, and the statement given on page 2 of the Chief Engineer's Report will show that the work connected with the partial renewing and strengthening of various bridges is well in hand.

The special attention of the Board is directed to Mr. Stoney's remarks on the Nilgiri Railway printed on page 7 of his Report. Detailed reports have from time to time been sent home, but the magnitude of the work to be grappled with can best be realised by a perusal of Mr. Stoney's pithy summary.

8. The total cost of the **Locomotive Department** during the last four half-years has been as under:—

Half-year.	Total mileage.	Total cost including all charges.	Total cost per mile run.		
		Rs.	Rs.	A.	P.
1897, June	1,535,936	13,28,234	0	13	10·04
„ December	1,616,892	13,90,471	0	13	9·11
1898, June	1,551,560	11,87,290	0	12	2·92
„ December	1,559,578	12,90,400	0	13	2·86

Compared with the corresponding period of 1897, the expenses of the Locomotive Department may be stated as follows:—

Locomotive	Running	decrease	Rs. 851.
„	Repairs and renewals	increase	„ 6,442.
Carriage and Wagon	Running	decrease	„ 3,400.
„	Repairs and Renewals	„	„ 64,298.

The decrease in the mileage worked of some 57,314 miles is reported, and of roughly a lakh of rupees in the total cost of working the Department. The tendency is for coal, as its cost becomes lower, to push wood for locomotive purposes out of the market, and the effect of the new contract which has been entered into from the 1st of April 1899, will doubtless be to show a further decrease in the cost of fuel burnt. Mr. Phipps on page 3 of his report submits a full statement of his difficulties with the wood contractors.

Owing to plague and plague restrictions the passenger trains on several sections of the line are not so heavily loaded as formerly, but unfortunately the coal bill is but little affected by the loss of three or four carriages on light passenger trains.

As explained by the Locomotive Superintendent, the heavy renewals of passenger and goods stock upon which we have been engaged for many years, are now practically ended.

It is understood that the Calicut-Cannanore Line is to be proceeded with as a standard gauge railway; and this being so, the extra stock sanctioned for the open line and for the new extension and held back for a settlement of the gauge question will now be proceeded with.

During the half-year 2,620 vehicles were repaired and none renewed as against 3,017 and 46, respectively, during the corresponding half-year.

9. The **Electric telegraph** wires, block, needle and Morse instruments, electric starting semaphores and intercommunication in trains were maintained satisfactorily during the half-year. Thirteen engines and 101 vehicles were fitted or re-fitted with electrical intercommunication appliances during the half-year.

10. The **Medical Officer** reports that there was a decrease of 2,791 in the number of employés, to whom it was found necessary to grant sick certificates. There were in all during the half-year 3,003 cases of sickness dealt with against a total of 5,794 cases for the corresponding half-year; but, as the Medical Officer explains in para. 2 of his report, out-patients are not now recorded in the official returns. There were 13 cases of cholera, of which 6 proved fatal, and 5 and 4 non-fatal cases of small-pox and plague respectively. The Medical Officer's remarks on plague cases and the result of inoculation will be read with interest. There were in all 27 deaths reported by the Apothecaries.

11. Colonel C. E. Phipps, Commandant, has been unable up to date to send me his report upon the **Madras Railway Volunteers** for the past year, but I may state

that the regiment was successful in winning the Bangalore Cup, the chief prize of the South of India Rifle Association, at the meeting held at Bangalore in September.

12. **Railway schools** were maintained at eight of the important stations on the line. The total number of children on the register at 31st December was 403 and the average attendance 341. The cost to the Company of maintaining these schools during the period under review was Rs. 6,066.

13. The Company's contribution to the **Provident Institution** amounted for the half-year to Rs. 19,792-2-4, and this sum will be found entered in Abstract G of the Capital and Revenue Accounts. The total amount at credit of the institution at the end of the year was Rs. 9,22,865-11-3. When the revised rules, accepted by the Board, have been sanctioned by the Government of India, an additional contribution of Rs. 40,385 will be made to the fund, and this amount will be found entered in the Net Revenue Account.

14. **Lines worked by the Company—**

Net earnings of

1. The Mysore State Kolar Gold Fields Railway are for the half-year Rs. 28,212-9-11, equal to a return of 7 per cent. upon the Capital outlay.

Net earnings of

2. The Madras-Ennur Section of the Bezwada-Madras Railway for the half-year are Rs. 5,490-10-9, equal to a return of 1·83 per cent. per annum on the total Capital outlay.

NEW PROJECTS.

The **Arcot-Ranipet** Branch is ready to be opened, and we are only now waiting for Government sanction to place the branch at the disposal of the public.

The estimate for re-aligning and improving the **Kolar Gold Fields Railway** has been sanctioned and the work connected with it will be taken in hand without delay.

The **Beach Line Extension** will be vigorously proceeded with as soon as the plans have been sanctioned by the Madras Municipality. All works within municipal limits require the approval of the President of the Municipality, and that officer's sanction is awaited before we cross the main public road near Rayapuram and remove or extend various drains and man-holes connected with the Madras drainage system.

The survey of the **Shoranur-Cochin Railway** is practically completed, and if the Rajah of Cochin decides that the work of construction of the branch is to be carried out by the Madras Railway, the necessary staff will be posted without delay.

15. The following movements in the **Company's Staff** in India during the half-year are recorded:—

Mr H. C. West, Chief Engineer, retired from the Company's service on the 3rd October 1898.

Mr. E. W. Stoney, District Engineer, returned from furlough leave and assumed charge of the office of Chief Engineer on the 3rd October 1898.

Mr. H. J. Stanley, Assistant Loco. Superintendent, proceeded on sixteen months' furlough leave on the 3rd November 1898.

Loco. Foreman O. Horrocks retired from the Company's service on the 31st December 1898.

Latheshop Foreman E. Outon returned from leave and resumed charge of his duties on the 24th October 1898.

Covenanted Engine Drivers Howard and Malthouse arrived and reported themselves for duty on the 5th December 1898.

Mr. G. Wallington, Assistant Traffic Manager, proceeded home on twelve months' furlough leave on the 27th July 1898.

I have the honor to be,

Sir,

Your most obedient servant,

LOUIS S. MOSS,
Agent and Manager.

MADRAS RAILWAY VOLUNTEERS,
PERAMBUR WORKS,
MADRAS, *4th April* 1899.

From

LIEUT.-COLONEL C. E. PHIPPS, A.D.C.,
Commandant, Madras Railway Volunteers,

To

THE AGENT AND MANAGER,
Madras Railway Company.

SIR,

I have pleasure in reporting, for your own information and for that of the Board of Directors, upon the work and progress of the Madras Railway Volunteers during the official year just closed.

2. The following figures give the customary comparison as to the strength, number of efficients, etc., of the Regiment, and I also enclose the usual statements giving this information in each Company, and also the Roll of Officers :—

——	1897-98.	1898-99.
Greatest strength during the year	1,005	998
Strength at close of the year	952	955
Number of extra-efficients	368	480
„ of efficients	571	441
„ of non-efficients	13	34
Percentage of extra-efficients and efficients to strength	98	96
Number on rolls who have passed Proficiency test	123	126

3. The number of extra-efficients shows a very satisfactory increase, these being 50·26 per cent. of the strength of the Regiment as compared with 38·65 per cent., the result of the last year's work. The number of non-efficients has somewhat increased, although it is at the same time less than was recorded for 1896 and other preceding years, while the total percentage of efficients and extra-efficients to the total strength has fallen by ·02.

4. The Regimental figure of merit works out to 48 as against 44 for last year, which being as it is an improvement in the special direction where it is most important improvement should take place, is a matter for congratulation.

5. It was unfortunately not possible to arrange for a Camp of Exercise during the year since, although the special grant made for this purpose by Government covers the greater part of the expenditure incurred, there are many expenses in connection with the holding of a Camp of Exercise which are not included in this special grant, and which have consequently to be met from Regimental funds, and much as I should have liked to have been able to have held the Camp, I was not of opinion that the funds at my disposal were sufficient to justify my doing so in view of certain other charges which it was anticipated would fall upon them during

the year. The fact that the Camp was not held has probably conduced in some way to the slight increase in the number of the non-efficients.

6. The Head-Quarter Companies were inspected at Perambur on the 14th February by Brigadier-General E. Brooke-Anderson, and the out-station Companies being inspected by Officers detailed from the several commands between the 27th February and 9th March. The reports which have reached me are all very favourable.

7. Two Brigade parades have been attended during the season, at the last of which specially ordered by Brigadier-General T. Cummins, D.S.O., shortly before his departure on leave, I had the honour of commanding the Brigade while the Regiment was commanded for me by Major D. Ross-Johnson.

8. The competition for the "Moss Medal" has not yet been completed, but the keen interest taken in it by all ranks is as great as ever, the more so since Lieut. Heaton, who has now won it for two years, stands well forward in the scores made, and if again successful this year will, under the conditions laid down, win it for good.

9. The Chief Engineer's Challenge Shield, owing to the regretted retirement of Mr. West from the Company's service, has not again been fired for. Great interest was in past years taken in this Inter-company match, and although unfortunately the annual competition for it has now ceased, the Shield will remain as evidence of the great interest always taken by Mr. West in the Railway Regiment, and his ever willing aid in furthering its welfare.

10. An exceedingly handsome Challenge Cup has been presented by Mr. F. J. E. Spring, C.I.E., for competition between teams selected from each of the three Railway Volunteer Regiments which come within the circle of control of the Consulting Engineer to the Madras Government.

11. The conditions of the match are such as to make it an eminently instructive practice in field-firing. Each man in each team is represented at the targets by an earthen pot filled with water, and on each pot being hit, the man bearing the corresponding number in the opposing team is fallen out.

12. The competition took place on the 13th January last at Acharapakam between a team of this Regiment and a team of the South Indian Railway Volunteers, with the result that the Madras Railway Volunteer team were successful in winning the Cup for the year with a list of 25 casualties as against 32, the loss inflicted by them upon their opponents. The conditions of the competition are entirely new, and the match was an exceedingly interesting and instructive one.

13. The Parade grounds, Ranges and Armouries have all been maintained in good order and are complete and meet all requirements.

14. The re-construction of the Jalarpet Range has not yet been commenced as the Revenue Authorities have not yet been able to make over the necessary land. Permission to continue the use of the old Range in its present condition has been extended for another year, and it is hoped that the difficulty with regard to the land will be got over shortly when the much-needed alterations of the Range will be at once commenced.

15. There have been no changes in the Permanent Staff during the year.

16. Lieut. R. B. Ward was awarded the V. D. Medal, which was presented by H. E. the Governor of Madras at a special parade held on the 17th September 1897, and during the year, 5 Volunteers and Non-Commissioned Officers have been granted the Volunteer Long Service Medal.

17. Lieut. W. Ward has been fortunate enough to win the Command Medal for the year 1897-98 awarded by Government to him as the best shot in the Madras Command for the year.

18. It also gives me very much pleasure to record that the Regimental team which attended the Meeting of S. I. R. A. in Bangalore in September last were able to win and bring back to Perambur once more that much-coveted trophy, the Bangalore Cup. From 1885 to 1891, or for 7 years in succession, this Cup was won by the Madras Railway Volunteer team, but until the year now under review, although on several occasions our team has been well up in the scores, the prize has gone elsewhere.

19. The success was the more gratifying since it was the first year in which the team had been armed with the Lee Metford Rifle, and further the new rifles had only been served out to the men for about a fortnight before the meeting.

20. I regret to have to record the resignation of two Officers of standing in the Regiment Major T. Wake and Captain E. R. Ross. Major Wake's resignation was the more to be regretted, since he had only lately been specially promoted to Field rank, and I had hoped to have been able to rely upon him for Field Officers' duty at the Head Quarters parades.

21. The Band has been maintained throughout the year up to full strength and has derived much benefit from the careful instruction it has received from Band Sergeant Taylor.

22. In conclusion I must express my appreciation of the cordial assistance I have at all times received from yourself and from the heads of the several Departments, without which the difficulty of securing general and individual efficiency would be greatly enhanced.

I have the honour to be,

Sir,

Your most obedient Servant,

C. E. PHIPPS, LIEUT.-COLONEL,

Commandant, Madras Railway Volunteers.

MADRAS RAILWAY VOLUNTEERS.

Roll of Railway Officers showing efficiency, 1898-99.

Rank and Name.		Drills.	Musketry.	Qualification.			Remarks.
				E. E.	E.	N. E.	
Lt.-Col.	Phipps, C. E., A. D. C.	27	(a) 44	1			
,,	Taylor, J. L. ...	19	(a) 35	1			
Major	Ross-Johnson, D. ...	15	(a) 30	1			
Capt.	Chisholm, R. ...	12	(a) 31	1			
,,	Ewing, J. M. ...	12	(a) 33	1			
,,	Pigott, R. E. ...	...	...	...	...	1	On leave.
,,	Pilkington, A. ...	9	(a) 45	1			
,,	Pawley, F. A. ...	11	(a) 16	...	1		
,,	Duncan, J. B. ...	10	102	1			
,,	Greenall, R. ...	10	(a) 30	1			
,,	Corben, A. ...	12	(a) 42	1	...	...	(a) Revolver course.
,,	Stanley, H. J. ...	9	(a) 39	1			
Lieut.	Ward, R. B., V. D. ...	16	(a) 38	1			
,,	Heaton, W. ...	16	140	1			
,,	Currie, J. ...	18	(a) 33	1			
,,	Driver, E. C. V. ...	20	(a) 38	1			
,,	Wright, S. ...	41	(a) 34	1			
,,	Bamford, R. G. ...	14	(a) 38	1			
,,	Davies, J. T. ...	37	128	1			
,,	Ward, W. ...	11	129	1			
2nd ,,	Walters, F. I. ...	13	(a) 44	1			
,,	Gale, A. C. ...	...	114	...	...	1	
,,	Porteous, P. G. ...	14	(a) 41	1			
,,	Francis, A. H. ...	36	(a) 33	1			
,,	Dinwoodie, J. F. ...	34	104	...	1		
,,	Evans, E. C. ...	9	(a) 34	1			
,,	Giles, G. W. ...	18	(a) 93	1			
			Total ...	23	2	2	

PERAMBUR,
4th April 1899.

C. E. PHIPPS, LIEUT.-COLONEL,
Commandant, Madras Railway Volunteers.

MADRAS RAILWAY VOLUNTEERS.

Statement showing the enrolled strength and the number of efficients in each Company on the 31st March 1899.

Company.	Enrolled strength.	Efficients.				Non-efficients.	Head Quarters.
		Officers.	N. C. Officers.	Volunteers.	Total.		
"A" Co:	62	6	9	45	60	2	Perambur Works.
"B" ,,	66	2	7	57	66	...	Do.
"C" ,,	66	3	6	57	66	...	Do.
"D" ,,	60	2	5	53	60	...	Do.
"E" ,,	106	1	9	85	95	11	Do.
"F" ,,	97	5	8	71	84	13	Do.
Cadets.	67	...	5	62	67	...	Do.
"G" Co:	84	2	8	69	79	5	Arkonam.
"H" ,,	83	4	4	74	82	1	Gooty.
"I" ,,	82	1	10	69	80	2	Jalarpet.
"K" ,,	84	2	13	69	84	...	Bangalore
"L" ,,	98	1	12	85	98	...	Podanur.
Total ...	955	29	96	796	921	34	

PERAMBUR,
4th April 1899.

C. E. PHIPPS, LIEUT.-COLONEL,
Commandant, Madras Railway Volunteers.

MADRAS RAILWAY VOLUNTEERS.

Return of Non-Efficients in each Railway Department on the 31st March 1899.

Locomotive Department	1
Traffic Department	21
Engineer's do.	5
Telegraph Engineer's Department	1
Medical Department	0
Audit do.	2
Non-Railway Employés	4
Total	34

MADRAS RAILWAY VOLUNTEERS.

Statement showing the number of Volunteers in each Railway Department on the 31st March 1899.

Locomotive Department	491
Traffic do.	308
Engineer's do.	43
Telegraph Engineers' Department	34
Medical Department	3
Audit do.	11
Non-Railway Employés	65
Total	955

PERAMBUR,
4th April 1899.

C. E. PHIPPS, LIEUT.-COLONEL,
Commandant, Madras Railway Volunteers.

CHIEF ENGINEER'S

REPORT

FOR THE HALF-YEAR ENDED

31st December 1898.

No.

MADRAS RAILWAY COMPANY,
CHIEF ENGINEER'S OFFICE,
MADRAS, *18th March* 1899.

To

THE AGENT AND MANAGER,
Madras Railway Company.

SIR,

I have the honor to submit my report on the Way and Works for the half-year ending the 31st December 1898.

The inspection of the North-West Line was made between the 9th and 11th, that of the Terminal Buildings, Central Station, Salt Cotaurs, Perambur and Ennur Branch on the 24th January 1899, while the South-West Line, Arcot-Ranipet Branch, and Calicut-Cannanore Railway to Elathur were inspected between the 25th January and 1st February 1899.

1. Earth-work.—Protective works along the foreshore at Rayapuram, opposite the Madras Railway General Offices, are being carried out by the Madras Harbour Trust Board. During the half-year the cuttings and embankments throughout the line have been well maintained.

2. Fences.—The vegetable fencing is being renewed and repaired where practicable, but there are many places where aloes do not grow well and where this fence will never be really efficient; these occur chiefly between Katpadi and Jalarpet, and Olavakkot and Ottapalam.

Statements prepared by District Engineers in 1897 showed that a total length of 221 miles (single) of vegetable fence would require to be ultimately replaced by wire fence, and the cost of this was estimated at Rs. 2,88,662. My predecessor, Mr. West, decided that this work should be carried out gradually at the rate of 20 miles (single) a half-year.

3. Stations.—The station buildings, yards, platforms and staff quarters were found to be neatly kept and efficiently maintained.

The remodelling of station yards where necessary is being gradually carried out. Mulanur Station is finished and Gooty Station is nearly completed, and estimates have been sanctioned for Nagari and Razampeta. Estimates for Jalarpet, Nandalur, Reddipalle and Urampadu have been submitted for Government sanction, and plans and estimates for other stations are under preparation.

All work at Bangalore City has been stopped since October 1898 in consequence of the plague, as the requisite labor could not be got, and it is difficult to tell when work can be resumed.

The following works were completed during the half-year :—

Alteration of sidings at Rayapuram.

Foot over-bridge at Elephant gate-crossing near Salt Cotaurs, Madras.

Alteration to station-house at Podanur.

Extension of through siding at Washermanpet to connect with lay-bye at Rayapuram.

Depôt shed at Arkonam.

Conversion of Travelling Auditor's bungalow into a school-room at Arkonam.

Cast iron railings and gates at east end of platform at Bangalore City.

Extension of goods shed lay-bye at Morappur.

Crane line at Balaghat.

Additional dock, carriage turntable and 5-ton crane at Kallayi.

Extension of platform, alteration of siding and ash pit at Kamalapuram.

Line leading from timber yard into saw mills at Perambur Workshops.

Extension of ballast siding at Trivellore.

Alterations and additions to sidings at Marikuppam.

Six houses for subordinate staff at Somanur.

Double bungalow for family Guards at Podanur.

Wall for timber yard at Arkonam.

30-ton weigh bridge at Salem.

Alterations and additions to station-house at Oorgaum.

4. **Bridges.**—Bridges are all very well maintained, and the running over all girders was very smooth. Stops were made at the Papaghni, Chitravathi, Penner, Cauvery, Ferok and Kallai Bridges, as well as at some minor ones.

During the half-year the strengthening of weak girders has been proceeded with in the manner shown and at the bridges stated in the following list:—

Bridge No.	Mileage.	Particulars.	No. of openings to be strengthened.	Proposed mode of strengthening.	State of progress.
28	$\frac{307}{17}$, S. W. L.	Nilgiri Branch.	2 64 feet.	To have central masonry piers.	Central piers built. Iron work in progress.
29	$\frac{308}{7}$ „	Do.	4 64 „	Do.	Do.
49	$\frac{312}{13}$ „	Do.	2 64 „	Do.	Do.
52	$\frac{313}{12}$ „	Do.	4 64 „	Do.	Do.
60	$\frac{314}{10}$ „	Do.	2 64 „	Do.	Do.
89	$\frac{321}{13}$ „	Do.	4 64 „	Do.	Not begun.
426	$\frac{142}{10}$, N. W. L.	...	2 64 „	Do.	Completed.
743	$\frac{232}{3}$ „	Jootoor ...	4 64 „	Do.	Do.
744	$\frac{232}{10}$ „	...	2 64 „	Do.	In progress.
794	$\frac{248}{9}$ „	Conavonka ...	4 64 „	Do.	Do.
795	$\frac{248}{15}$ „	Chinnavonka ...	2 64 „	Do.	Do.
835	$\frac{263}{3}$ „	Lingulavonka ...	4 64 „	Do.	Not begun.

5. **Water-supply.**—There has been an ample supply of water during the half-year under review, and the new tanks at Whitefield, supplied from a pumping station at $\frac{203}{2}$ miles, were brought into use in December 1898.

Additional watering arrangements at Jalarpet were completed in October 1898.

The locomotive tank at Bowringpet is being raised and enlarged.

A well, 10 feet in diameter at bridge No. 89 at $\frac{321}{13}$ miles, Nilgiri Branch, is nearly completed. This is intended to supplement the water-supply at Karamadai Station.

A well, 6 feet in diameter, is in progress for supplying the station staff with water at Totiyapalaiyam, and arrangements are in progress for supplying the staff quarters and platform at Nandalur with water from the locomotive supply.

Arrangements have also been made for supplying Bangalore Cantonment Station with water from the Municipal Water Works.

6. **Permanent-way.**—Throughout the Main Line and several Branches the road was found to be well maintained and generally to be in good running order.

In the following table is shown the lengths and descriptions of rails laid at the end of the half-year under review and three preceding half-years:—

	Half-year ending			
	December 1898.	June 1898.	December 1897.	June 1897.
	Miles.	Miles.	Miles.	Miles.
84 lbs. iron rails	23·50	26·60	28·64	27·78
75 „ do.	303·30	308·69	311·42	315·79
65 „ do.	119·74	122·19	124·03	127·17
30 feet bull-headed steel rails, 75 and 76 lbs. ...	93·94	74·77	69·75	61·85
30 „ double-headed steel rails, 75 lbs.	32·56	32·38	32·38	32·38
20 „ and other double-headed steel rails, 75 lbs....	303·05	311·30	309·72	310·98
Flat-footed steel on bridges, 75 lbs.	5·54	5·70	5·69	5·68
Total ...	881·63	881·63	881·63	881·63
Kolar Gold Fields Railway.				
84 lbs. iron rails	0·77	0·61	0·63	0·12
75 „ do.	7·15	7·31	7·29	7·61
75 „ double-headed steel rails, 20 feet and others.	2·08	2·08	2·08	2·27
Total ...	10·00	10·00	10·00	10·00

Madras-Ennur Section of B. M. Railway.

75 lbs. flat-footed 30 feet steel rails	8·37
75 „ double-headed 30 feet steel rails	·08
Total ...	8·45

During the half-year, 47·093 miles of rails, were replaced by—

		Miles.
10,531	bull-headed 30 feet steel rails ... ... =	29·918
4,941	new and second-hand, 20 feet and other double-headed steel rails ... ... =	9·307
4,166	second-hand double-headed iron rails, 20 feet and others. =	7·868
19,638	=	47·093

as compared with 17·38 miles in the previous half-year.

7. **Pot-sleepers.**—The total number now laid is estimated at 3,284,873, of which 4,158 were found broken, and these were renewed during the half-year. This is equivalent to 1·312 miles out of a total mileage of 900 miles, or ·127 per cent. as compared with 6,081, or ·185 per cent. in the previous half-year.

Stoney's joint pots continue to give good results, but the recommendations made by Messrs. Upcott, Fowler, Spring and Thompson in their half-yearly reports to give them a more extended trial have not been acted on.

8. New type fish-plates.—The work done to date in replacing the older type by these is shown below :—

—	New type fish-plates used with bull-headed steel rails.		New type fish-plates used to replace old patterns on double-headed steel rails.		Total.	
	Miles.	Number.	Miles.	Number.	Miles.	Number.
Done up to 30th June 1898 ..	74·76	50,556	330·58	322,569	405·34	373,125
Done during the half-year ending 31st December 1898	19·18	13,507	27·15	28,675	46·33	42,182
Total ...	93·94	64,063	357·73	351,244	451·67	415,307
Deduct those removed in connection with laying of 30 ft. bull-headed steel rails	...	...	16·63	17,564	16·63	17,564
Net done up to 31st December 1898.	93·94	64,063	341·10	333,680	435·04	397,743

28·07 miles of 75 lbs. double-headed steel rails are still fished with old type fish-plates as under :—

Total length of double-headed and bull-headed steel rails including sidings.	Length already fished with new type fish-plates.	Length still to be fished.
Miles.	Miles.	Miles.
463·11	435·04	28·07

9. Maintenance.—The cost of maintenance per mile for the entire Railway compared with that of the two previous half-years is as follows :—

Half year ending 31st December 1897.

	Rs.	A.	P.
Total cost of Maintenance including Sidings	619	10	10
Extra expenditure	32	13	5
Ordinary expenditure ...	586	13	5

Half-year ending 30th June 1898.

	Rs.	A.	P.
Total cost of Maintenance including Sidings	532	10	10
Extra expenditure	48	11	1
Ordinary expenditure ...	483	15	9

Half-year ending 31st December 1898.

	Rs.	A.	P.
Total cost of Maintenance including Sidings	694	8	3
Extra expenditure...	24	0	0
Ordinary expenditure ...	670	8	3

		Rs.	A.	P.	Rs.	A.	P.
Total cost of Maintenance during the half-year ending 31st December 1897					7,94,854	3	3
Less value of old rails and other items taken into stock ... ... Rs.		1,52,242	11	6			
Less cost of working Kolar Gold Fields Railway ... ... „		15,100	5	3			
Less sum chargeable to Fire Insurance Fund ... ... „		7	0	0	1,67,350	0	9
					6,27,504	2	6
Cost of Ordinary Expenditure per mile including Kolar Gold Fields Railway	Rs. 6,08,549 4 8 / 1037 =				586	13	5

The details of Extraordinary Expenditure for the half-year ended 31st December 1897 are as follows :—

		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
S. W. Line.	30 feet opening in lieu of 30 feet arch at $\frac{168}{10}$ miles, B. Br. ...	1,235	9	6						
	Revenue portion of Sanctioned Works	14,802	8	2	16,038	1	8			
N. W. Line.	Covering dusty portion of the line with broken stone ...	429	12	1						
	Revenue portion of Sanctioned Works	5,340	5	0						
	Restoration of bridge at $\frac{95}{2·3}$ miles.	4,726	9	7						
	Do. at $\frac{107}{10·11}$ „	7,520	6	9	18,017	1	5	34,055	3	1
Cost of Extra Expenditure per mile					Rs. 34,055 3 1 / 1037 =			32	13	5

	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Total cost of Maintenance during the half-year ending 31st December 1898.	.....			10,05,891	8	3			
Less value of old rails and other items taken into stock	2,86,026	1	7						
Less cost of Working Kolar Gold Fields Railway	16,124	8	10	3,02,150	10	5	7,03,740	13	10
Cost of Ordinary Expenditure per mile including Kolar Gold Fields Railway.	.....			Rs. 6,94,987 1 0 / 1,036½ =			670	8	3

The details of Extraordinary Expenditure for the half-year ending 31st December 1898 are as follows :—

		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
S. W. Line.	Revenue portion of sanctioned Schedule Works	6,093	13	7						
	Strengthening Girder Bridges at $\frac{31·3}{12}$ miles	569	0	0	6,662	13	7			
N. W. Line.	Revenue portion of sanctioned Schedule Works	3,158	11	3						
	Covering dusty portion of the line with broken stone ...	14,621	4	8						
	Strengthening Girder Bridges at $\frac{24·8}{9}$, $\frac{24·8}{1·6}$ and $\frac{26·3}{3}$ miles ...	435	8	2	18,215	8	1	24,878	5	8
Cost of Extra Expenditure per mile ...					Rs. 24,878 5 8 / 1,036½ =			24	0	0

The nett increase in the Maintenance Expenditure Rs. 76,237 for the half-year ending 31st December 1898 over the corresponding half-year in 1897, is chiefly due to heavy charges for carriage and loss by exchange Rs. 28,537 and Rs. 44,682 respectively, together equal to Rs. 73,219.

10. Covering sand ballast with broken stone.—The state of this work is shown below :—

Section.	Covered.	Remaining to be covered.
	Miles.	Miles.
Madras to Mettupalaiyam	327·33	*Nil.*
Podanur to Calicut including Palghat Branch (This includes about 41 miles covered with laterite ballast) ...	50·28	63·34
Jalarpet to Bangalore	49·25	38·17
Arkonam to Raichur	186·88	121·40
Total ...	613·74	222·91

The freedom from dust on the portions covered and consequent comfort to travellers compared with uncovered ballast is most marked.

11. Signals and interlocking.—The several installations of interlocking apparatus on the North-West Line continue to work satisfactorily, with the exception of Saxby and Farmer's hydraulic system at Nagari, which cannot be got to work as described in my special report to you, dated 15th February 1899.

The cost of these several installations and the dates on which they were set to work are given below for convenience of reference :—

Stations.	Descriptions.	Date of opening.	Booked cost excluding loss by exchange.	Actual cost including loss by exchange.
			Rs.	Rs.
Tiruttani ...	Saxby and Farmer's ordinary system ...	March 1895 ...	8,886	12,241
Nagari ...	Do. do. hydraulic system...	...	9,702 (not in use)	14 297
Puttur ...	Dutton's system	June 1896 ...	4,286	5,822
Pudi ...	Stoney's do.	June 1894 ...	...	6,093
Mamanduru ...	Do. do.	April 1896 ...	...	5,695
Peddapadu ...	Phipps' arrangement (Detects only) ...	Dec. 1896 ...	...	1,171

In order to get the real cost of those supplied from England, loss by exchange needs to be added, in order that their cost may be fairly compared with those of Pudi, Mamanduru and Peddapadu made in this country. In the figures of cost given for Tiruttani, Nagari and Puttur the rupee is taken at 1*s.* 10*d.* when calculating the cost of English materials, the difference between that and its current value being charged to maintenance as loss by exchange.

The orders of Government to alter all signals, so that they shall show a danger signal in the event of any connection breaking, are being carried out, and this work is practically finished.

The distant signals throughout the line have all been altered.

Home Signals.

Division.	Total No. to be done.	Done previously.	Done during the half-year.	Total done up to 31st December 1898.	Still remaining to be done.
South-West Line	113	98	15	113	*Nil.*
North-West Line	42	38	...	38	4

The signals between Rayapuram and Washermenpet have been re-arranged.

12. Sale of old rails.—The value realized from the sale of old rails is as under :—

Half-year ending	Value of old iron rails sold.	Value of unserviceable iron or steel rails used for works.	Total value.
	Rs.	Rs.	Rs.
31st December 1897	27,417	3,664	31,081
30th June 1898	30,172	3,673	33,845
31st December 1898	29,427	6,662	36,089

13. Engineering Staff.—

Mr. A. B. Strange is still on furlough.

Mr. H. J. Thompson returned from three months' privilege leave on 3rd July 1898.

Mr. A. C. Gale proceeded on privilege leave on 14th July 1898, and returned on 17th October 1898.

Mr. F. A. Pawley proceeded on special leave on 12th August 1898.

Mr. H. C. West retired from service on 2nd October 1898.

Mr. E. W. Stoney returned from 18 months' furlough, and assumed charge of the office of Chief Engineer on 3rd October 1898.

Mr. H. W. Perry, Temporary Assistant Engineer in charge of Arcot-Ranipet Branch, resigned the service on the 21st December 1898.

14. Nilgiri Railway.—This line, 16·35 miles long, between Mettupalaiyam and Coonoor, of which 12 miles are rack, (Kullar to Coonoor) was handed over to the Madras Railway Company to work on the 7th September 1898, and opened on the 1st October 1898. The earthwork began to slip on the 4th October 1898, and further slips frequently interrupted traffic, so that the line had to be closed on the 29th October 1898. Up to that date 34 slips, estimated to amount to 87,610 cubic feet, took place, and subsequently 100 slips, aggregating 202,364 cubic feet, occurred, making in all 134 slips, amounting to 289,974 cubic feet of earth.

In addition to this, several other failures of work occurred, the chief being a bridge at 400 chains and the Glenmore cutting retaining wall.

The works necessary to repair these, and, as far as practicable, prevent their recurrence, has caused this Department considerable labor and anxiety. These are now in active progress, some 2,500 coolies being employed thereon, and it is hoped that the line may be re-opened for traffic about the middle of May, provided the foundations of the Glenmore retaining wall can be got in early enough.

These matters have been fully dealt with in my detailed reports to you.

NEW PROJECTS.

1. Calicut-Cannanore Extension.—The question of the gauge to be adopted on this line is still under consideration by Government, and no decision has yet been communicated to us, with the result that the work of construction has been much delayed and hampered. Earthwork and minor bridges of the maximum metre gauge and minimum broad gauge width were sanctioned for the first 26 miles on the 2nd April 1898, and these are being constructed as quickly as land is handed over.

The acquisition of land from beyond the 26th mile was sanctioned on the 26th January 1899.

Provisional sanction for the construction of earthwork and bridges from 26 to 59 miles has just been received similar to that accorded for 0 to 26 miles.

2. Shoranur-Cochin Railway.—Final plans and estimates, amounting to Rs. 22,34,390 for the first section of 30 miles of a metre gauge Railway between Shpranur and Pudukad, were sent forward on the 10th January 1899 for sanction, but nothing has been since heard of these.

The re-alignment and final survey of the remaining portion between Pudukad and Ernakulam (Cochin), 35 miles long, has just been completed by Mr. A. M. Stevenson and his staff, and the plans and estimates are now being prepared for submission to Government.

3. Arcot-Ranipet Branch is nearly finished, and will, it is hoped, be ready for opening about the end of March 1899. The delay in opening this is due to the non-receipt of permanent-way materials from England.

Kolar Gold Fields Railway.—An estimate for the re-alignment and improvement of this Branch, amounting to Rs. 2,77,580, was forwarded to the Agent on the 26th July 1898.

The re-construction of staff quarters and other works at an estimated cost of Rs. 15,132-8-0, rendered necessary by their being originally badly built during construction, was in progress, but is now stopped, plague having broken out at the Mines, which has caused all our men to go away.

4. Junction of Madras Railway and Bezwada-Madras Railway at Basin Bridge (near Salt Cotaurs, Madras) and new engine shed for Bezwada-Madras Railway at Madras.—As these works are not now required, nothing further has been done with regard to them.

5. Beach Line Extension.—An estimate, amounting to Rs. 75,669, has just been sanctioned by Government for this work which is being set out and for which materials are being collected.

The following diagrams accompany this report, *viz.* :—

No. 1. Different descriptions of rails on the Main Line for 10 half-years, from 1894 to 1898 ;

No. 2. Defective rails removed and broken pots replaced for 29 years, from 1870 to 1898 ;

No. 3. Cost of maintenance of permanent-way per mile per half-year for 37 half-years, from December 1880 to December 1898 ;

and it is hoped that these may be useful to the Board for future easy reference and comparison ; they exhibit very clearly much useful information connected with permanent-way.

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

E. W. STONEY,
Chief Engineer.

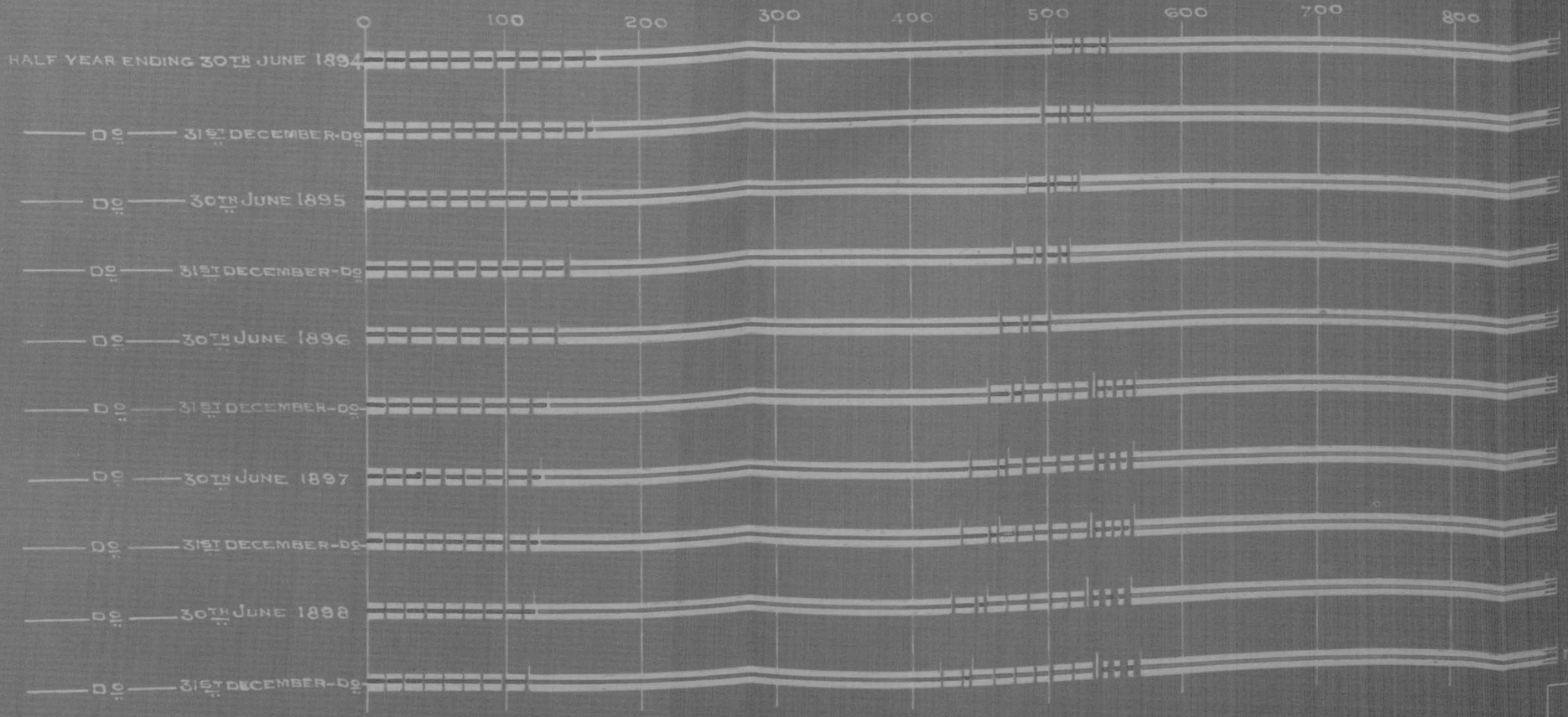
№ 1

MADRAS RAILWAY

DIAGRAM SHEWING THE DIFFERENT DESCRIPTION OF RAILS ON THE MAIN LINE FOR 10 HALF YEARS FROM 1894 TO 1898

MADRAS RAILWAY

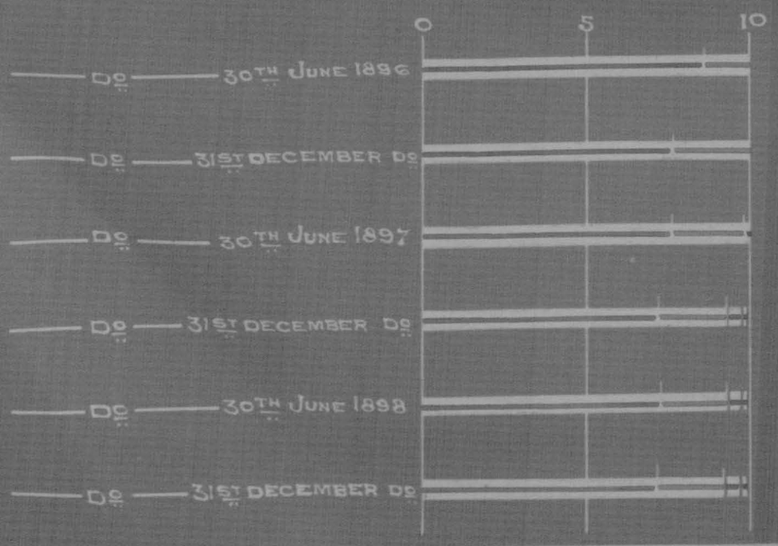
SCALE 100 MILES TO 1 INCH



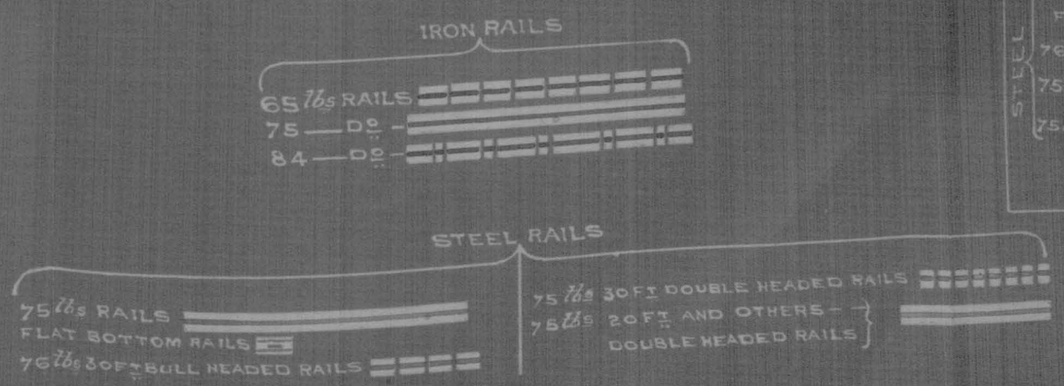
Chief Engineer
28th February 1899

K.G.F. RAILWAY

SCALE 5 MILES TO 1 INCH



REFERENCE



SUMMARY

SHEWING TOTAL MILES OF DIFFERENT DESCRIPTION OF RAILS LAID ON MADRAS RAILWAY UP TO 30TH DECEMBER 1898

	DESCRIPTION OF RAILS	LENGTH IN MILES M.RY	LENGTH IN MILES K.G.F.RY
IRON	65 lbs — RAILS	119.74	"
	75 lbs — Do	303.30	7.15
	84 lbs — Do	23.50	.77
STEEL	FLAT BOTTOM RAILS	5.54	"
	76 lbs 30 FT BULL Hd RAILS	93.94	"
	75 lbs 30 FT DOUBLE Hd RAILS	32.56	"
	75 lbs 20 FT AND OTHERS DOUBLE Hd RAILS	303.05	2.08
	TOTAL	881.63	10.00

2.3.99

No 2

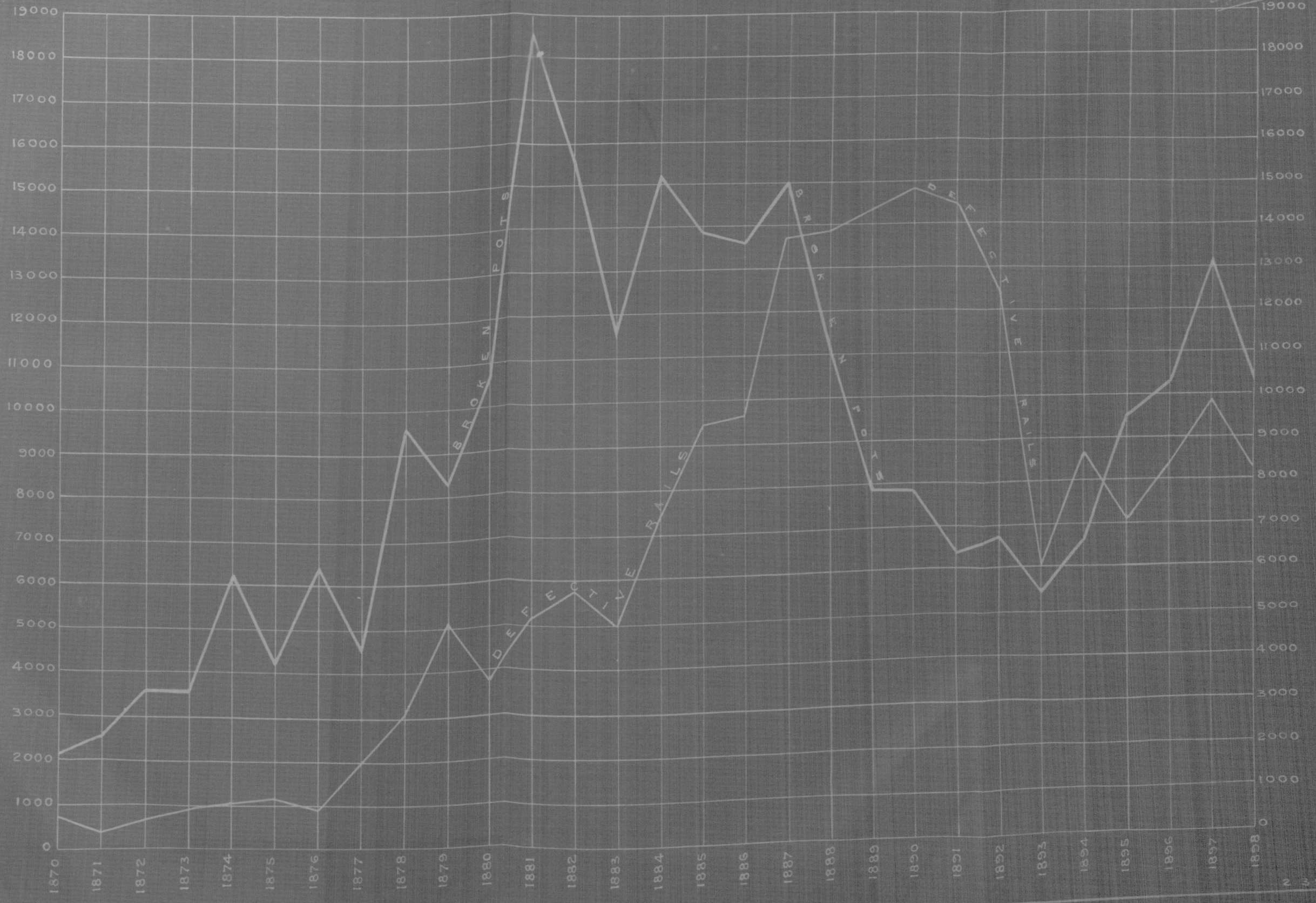
MADRAS RAILWAY

DIAGRAM OF DEFECTIVE RAILS REMOVED & BROKEN POTS REPLACED

FOR 29 YEARS FROM 1870 TO 1898

VERTICAL SCALE 1000 RAILS / Do —— 1000 POTS } TO ½ INCH — HORIZONTAL SCALE 1 YEAR TO ½ INCH

CHIEF ENGINEER
28th FEBRUARY 1899



No. 3

MADRAS RAILWAY

DIAGRAM SHEWING COST OF MAINTENANCE OF PERMANENT WAY

PER MILE PER HALF YEAR

FOR 37-½ YEARS FROM DECEMBER 1880 TO DECEMBER 1898

HORIZONTAL SCALE ONE YEAR = 1 INCH

VERTICAL SCALE 100 RUPEES = 1 INCH

Edwd. N. Stevens

CHIEF ENGINEER.
MARCH 1899.



MADRAS RAILWAY COMPANY,
CHIEF AUDITOR'S OFFICE,
MADRAS, 13*th March* 1899.

To

THE AGENT AND MANAGER,

Madras Railway Company.

DEAR SIR,

I beg to forward herewith the usual statements of the Company's accounts for the half-year ending 31st December 1898.

CAPITAL.

1. *Statement No. V.*—The capital expenditure for the half-year after crediting a sum of Rs. 10,321-9-8 amounted to Rs. 1,94,439-3-6 and was incurred chiefly on stations and buildings, earthwork and rolling stock. The credit of Rs. 10,321-9-8 consists of Rs. 3,200 recovered from the Madras Municipality being moiety of cost of foot over bridge at Elephant Gate level crossings, and of Rs. 7,121 9-8 transferred from a deposit made by the Great Indian Peninsula Railway for proportion of expenditure during the half-year on the construction of joint bogie stock for Madras-Bombay through traffic.

2. *Statement No. VI.*—The total capital outlay on open line account including suspense from the commencement of operations to end of the half-year under review was Rs. 12,19,00,970 and the expenditure excluding suspense, Rs. 11,95,62,675, which gives an average of Rs. 1,42,469 per mile open.

3. *Arcot-Ranipet Branch Line.*—The capital expenditure during the half-year amounted to Rs. 1,48,546, making the total expenditure to 31st December 1898 Rs. 2,01,485.

4. *Calicut-Cannanore Extension.*—The amount expended during the half-year on the construction of this line was Rs. 51,238, making the total expenditure to 31st December 1898 Rs. 1,37,549.

REVENUE.

General Results.

5. The following table shews the general results of working :—

——	Half-year ending Dec. 1897.	Half-year ending Dec. 1898.	Difference.	
	Miles.	Miles.	Miles.	Per cent.
Mean mileage worked	839·22	839·22	...	...
Train mileage	1,318,652	1,270,984	— 47,668	— 3·61
	No.	No.	No.	
Average number of trains over the whole line daily in both directions	8·54	8·23	— ·31	...
	Rs.	Rs.	Rs.	Rs.
Gross earnings	56,75,752	50,85,747	— 5,90,005	— 10·40
Working expenses	27,63,201	27,40,731	— 22,470	— ·81
Net earnings	29,12,551	23,45,016	— 5,67,535	— 19·49
Percentage of working expenses to gross earnings	48·68	53·89	+ 5·21	...
Percentage of net earnings to capital outlay including suspense	2·40	1·92	— ·48	...

6. The gross earnings per mean mile worked per week averaged Rs. 233 against Rs. 260 and were realized at a cost of 53·89 per cent. against 48·68 per cent. in the corresponding half of the previous year.

7. The percentage of working expenses to gross earnings for the year 1898 was 48·68 against 47·65 for 1897.

Gross Earnings.

8. The following table shews the gross earnings for the two half-years :—

——	Half-year ending Dec. 1897.	Half-year ending Dec. 1898.	Difference.	
			Amount.	Per cent.
	Rs.	Rs.	Rs.	Rs.
Coaching	22,47,823	17,67,075	— 4,80,748	— 21·39
Goods	32,93,437	32,18,808	— 74,629	— 2·27
Electric Telegraph	9,769	8,587	— 1,182	— 12·10
Steam-boat	...	...	...	...
Sundries	1,24,723	91,277	— 33,446	— 26·82
Total ...	56,75,752	50,85,747	—5,90,005	— 10·40

9. **Abstract H.**—*Coaching Traffic.*—The number of passengers of the various classes carried including troops and police and season tickets, and the earnings therefrom compare as follows :—

——	First Class.		Second Class.		Third Class.		Total.	
	No.	Earnings.	No.	Earnings.	No.	Earnings.	No.	Earnings.
		Rs.		Rs.		Rs.		Rs.
Second half of 1897...	11,783	89,029	51,505½	1,26,881	4,855,581	17,07,770	4,918,869½	19,23,680
Second half of 1898...	10,499	94,216	43,612½	1,14,288	3,582,016½	12,76,955	3,636,128	14,85,459
Increase	...	5,187	...	...	...	...	...	...
Decrease	1,284	...	7,893	12,593	1,273,564½	4,30,815	1,282,741½	4,38,221

10. The increases and decreases in the various descriptions of passenger traffic are shewn in the detail statement of Abstract H, *vide* para. 114.

11. The first-class traffic shews a decrease of 1,284 and increase Rs. 5,187.

12. The second-class traffic shews a decrease of 7,893 and Rs. 12,593, practically all due to troops and police traffic.

13. The third-class traffic shews a decrease of 1,273,564½ and Rs. 4,30,815 including a decrease of Rs. 7,170 under the heading of Troops and Police. The decrease in ordinary traffic is due to a large falling off in the number travelling, attributable to plague restrictions during the past half-year.

14. The number of third-class passengers and unit mileage by mail and ordinary trains respectively excluding excess, return, troops and police and season tickets traffic are as follows :—

Mail.		*Ordinary.*	
Number.	Unit Mileage.	Number.	Unit Mileage.
633,557	36,492,546	2,726,333½	73,791,183.

15. In passengers' luggage a decrease of Rs. 5,131 is recorded.

16. The receipts from horse, carriage and dog traffic both ordinary and Military shew decreases in the former to the extent of Rs. 2,415 and in the latter to the extent of Rs. 966.

17. Military baggage shews a decrease of Rs. 15,588.

18. Parcels for the Public shew a decrease of Rs. 20,391 which is explained by the fact that during December 1897 half-year, considerable traffic was conveyed in connection with Frontier expeditions.

19. **Abstract I.**—*Goods Traffic.*—The following is a summary of the tonnage of goods lifted and the earnings therefrom, as compared with the corresponding period of 1897 :—

——	Half-year ending December 1897.		Half-year ending December 1898.	
	Quantity.	Earnings.	Quantity.	Earnings.
	Tons.	Rs.	Tons.	Rs.
Merchandise, General	442,393	29,10,464	371,348	26,84,124
Military Stores	878	35,236	954	37,983
Railway Materials for construction	294	871	1,887	5,423
Coal (including Locomotive Revenue)	83,419	2,74,691	106,462	3,98,145
Revenue Stores (excluding Locomotive Coal) ...	86,566	41,518	100,661	69,566
Other Goods Traffic	...	30,657	...	23,567
	613,550	32,93,437	581,312	32,18,808
Less—Outstanding irrecoverable or not recovered ...	...	...	...	...
Total ...	613,550	32,93,437	581,312	32,18,808

20. **Merchandise, General.**—The decrease Tons 71,045 and Rs. 2,26,340 is attributable to less grain traffic during the half-year and to a falling off generally owing to Plague restrictions and heavy rains.

21. **Coal** (*including Locomotive Revenue*).—Increase Tons 23,043 and Rs. 1,23,454. The whole of this increase is in public traffic, principally in consignments from Rayapuram Station. Receipts from locomotive coal shew a decrease.

22. **Other Goods Traffic** reveals a decrease of Rs. 7,090.

23. The following table shews some of the principal commodities included above, under the head of "Merchandise, General" carried during the two half-years under comparison :—

	Half-year ending December 1897.		Half-year ending December 1898.	
	Quantity.	Earnings.	Quantity.	Earnings.
COTTON—	Tons.	Rs.	Tons.	Rs.
Raw	3,913	59,092	9,418	1,14,777
DYES AND TANS—				
Others	10,031	84,348	6,873	62,207
GRAIN AND PULSE—				
Rice in the husk	10,021	41,434	9,099	66,839
Rice not in the husk	41,402	2,44,652	19,986	1,11,727
Jawar and Bajra	22,442	1,42,323	15,438	1,43,246
Gram and Pulse	20,519	1,35,214	14,917	79,656
Others	31,286	1,88,407	32,380	2,50,365
HIDES AND SKINS—				
(1) HIDES OF CATTLE—				
(*b*) Raw	4,890	61,378	1,496	10,702
(2) SKINS OF SHEEP, &C.—				
(*a*) Dressed or Tanned	4,074	59,654	2,069	31,056
(*b*) Raw	9,626	1,02,330	8,840	92,023
METALS—				
Iron	8,707	87,530	4,566	54,355
OILS—				
Kerosine	6,170	70,099	7,019	87,743
OIL SEEDS—				
Others	4,722	27,490	6,984	59,416
PROVISIONS—				
Others	28,437	2,12,315	25,874	2,09,631
SALT	28,162	1,50,549	29,327	1,61,526
SPICES—				
Betel-nuts	5,242	48,804	4,695	50,747
SUGAR—				
Unrefined, *viz.*, Molasses and Jaggery or Gur and other Saccharine Produce	11,754	56,740	15,828	61,885
TIMBER	58,493	2,20,353	52,695	2,10,497
ALL OTHER ARTICLES OF MERCHANDISE	37,204	3,57,364	30,639	3,22,353

NOTE.—The Traffic Manager's Report will give the causes of the principal differences in the receipts from the various commodities.

24. **Cotton**—*Raw.*—Increase tons 5,505 and Rs. 55,685. This is made up of Rs. 31,000 in Local and Rs. 25,000 in Through. The increase in Local Traffic is shewn to be generally in bookings from Adoni and Raichur whilst the increase in through is to a great extent due to Traffic from Southern Mahratta Railway and beyond *via* Guntakal.

25. **Dyes and Tans**—*Others.*—Decrease Tons 3,158 and Rs. 22,141.

26. **Grain and Pulse**—*Rice in the husk.*—Decrease Tons 922 and increase Rs. 25,405. The increase is in through traffic received *via* Bangalore City.

27. **Grain and Pulse**—*Rice not in the husk.*—Decrease Tons 21,416 and Rs. 1,32,925. The decrease in local traffic is found to be in consignments from Arcot and Katpadi, whilst the decrease in through appears in received traffic *via* Katpadi and Arkonam.

28. **Grain and Pulse**—*Jawar and Bajra.*—Decrease Tons 7,004 and increase Rs. 923.

29. **Grain and Pulse**—*Gram and Pulse.*—Decrease Tons 5,602 and Rs. 55,558. The local portion of the decrease appears in traffic from Coimbatore, Tiruppur and Morappur whilst the decrease in through occurs principally in forwarded traffic *viâ* Raichur, and Bangalore City, the falling off *viâ* the former junction being considerably the heavier, a somewhat large increase is however recorded in this commodity *viâ* Raichur to Madras Railway stations.

30. **Grain and Pulse**—*Others.*—Increase Tons 1,094 and Rs. 61,958. The entire increase practically appears in through traffic principally in received consignments *viâ* Bangalore City and forwarded traffic *viâ* Arkonam, Katpadi and Erode, a decrease in this traffic *viâ* Raichur to Great Indian Peninsula and beyond is also recorded.

31. **Hides and Skins**—*Hides of Cattle, Raw.*—Decrease Tons 3,394 and Rs. 50,676. The local decrease appears in consignments from Salt Cotaurs, whilst a somewhat considerable decrease is recorded in traffic to Madras Railway Company stations *viâ* Raichur.

32. **Hides and Skins**—*Skins of Sheep, &c., Dressed or Tanned.*—Decrease Tons 2,005 and Rs. 28,598. Local traffic from Bangalore Cantonment here shews a falling off. The decrease in through is in consignments from G. I. P. and beyond *viâ* Raichur.

33. **Hides and Skins.**—*Skins of Sheep, &c., Raw.*—Decrease Tons 786 and Rs. 10,305.

34. **Metals**—*Iron.*—Decrease Tons 4,141 and Rs. 33,175. The greater portion of this decrease appears in Local Traffic consigned from Salt Cotaurs.

35. **Oils**—*Kerosine.*—Increase Tons 849 and Rs. 17,644.

36. **Oil Seeds**—*Others.*—Increase Tons 2,262 and Rs. 31,956. The local increase in this traffic is shewn in bookings from Adoni, Kupgal and Calicut whilst the increase in through traffic appears principally in consignments to M. R. C. Stations *viâ* Bangalore City.

37. **Provisions**—*Others.*—Decrease Tons 2,563 and Rs. 2,684.

38. **Salt.**—Increase Tons 1,165 and Rs. 10,977.

39. **Spices**—*Betel-nuts.*—Decrease Tons 547 and increase Rs. 1,943.

40. **Sugar**—*Unrefined, viz., Molasses and Jaggery or Gur and other Saccharine Produce.*—Increase Tons 4,074 and Rs. 5,145.

41. **Timber.**—Decrease Tons 5,798 and Rs. 9,856.

42. **All other articles of Merchandise.**—Decrease Tons 6,565 and Rs. 35,011.

Working Expenses.

43. The working expenses compare as follows with those of December 1897 half-year :—

	SECOND HALF OF 1897.		SECON HALF OF 1898.		DIFFERENCE.	
	Amount.	Per cent. on Gross Earnings.	Amount.	Per cent. on Gross Earnings.	Amount.	Per cent.
	Rs.		Rs.		Rs.	
Maintenance	6,27,504	11·05	7,03,741	13·84	+ 76,237	+ 12·15
Locomotive	10,79,084	19·01	10,55,342	20·75	− 23,742	− 2·20
Carriage and Wagon ...	3,11,387	5·49	2,35,058	4·62	− 76,329	− 24·51
Traffic	4,21,155	7·42	4,29,914	8·45	+ 8,759	+ 2·08
General	2,82,841	4·98	2,72,281	5·36	− 10,560	− 3·73
Steam-boat	...	...	...	...	...	...
Special and Miscellaneous ...	41,229	·73	44,395	·87	+ 3,166	+ 7·68
Total ...	27,63,200	48·68	27,40,731	53·89	− 22,469	− 0·81

44. **Abstract A.**—A net increase of Rs. 76,237 occurs under Maintenance charges.

45. Under "General Superintendence" there is a net increase of Rs. 406 entirely due to a larger outlay for office expenses, chiefly on surveying instruments, the various changes in the Engineering Staff consequent on Mr. West's retirement and the transfer of Mr. French to the Calicut-Cannanore Extension having reduced the outlay on Engineers' salaries by Rs. 2,817.

46. "Maintenance and Renewal of Permanent Way."—There is a increase of Rs. 34,450, of which Rs. 14,192 is in covering sand ballast with broken stones. The increase in ordinary outlay on materials, after crediting the value of stores returned to stock is Rs. 25,132, due to heavier renewals with 30 foot rails. The outlay on "Wages" is Rs. 4,873 less.

47. "Repairs of Bridges, &c."—Decrease Rs. 17,926.

48. "Repairs of Stations and Buildings."—Decrease Rs. 9,163.

49. "New Minor Works."—Decrease Rs. 3,164.

50. "Unclassified Expenditure."—Increase Rs. 72,651. "Loss by Exchange" is Rs. 44,682 more and "Carriage of Revenue Stores" Rs. 28,537 more than in the corresponding period of 1897 due to larger renewals of rails.

51. There is a credit to Abstract A of Rs. 16,125 for working the Kolar Gold Fields Railway.

52. The number of miles of rails removed during the half-year was 94·7610 against 50·2882 in the second half of 1897.

53. The cost of maintaining a mile of single track including sidings was Rs. 694·53 against Rs. 619·62. The figures in this and preceding paragraphs include the mileage maintained for the Kolar Gold Fields Railway.

54. **Abstract B.**—*Locomotive Expenses.*—Decrease Rs. 23,742.

55. Under "General Superintendence" of Abstracts B and C there is an increase of Rs. 3,686, in subordinate superintendents and office expenses, in the former owing to the filling up of vacancies which existed in the previous period and in the latter chiefly owing to the Chief Draughtsman having acted as General Storekeeper in 1897.

56. "Running Expenses."—A decrease of Rs. 7,131 there having been a decrease of 57,314 in the engine mileage.

57. "Fuel."—Apparent increase of Rs. 5,096 but really a decrease of Rs. 7,253 as the amount charged includes a sum of Rs. 12,349 value of fuel destroyed by fire in the stacks at Raichur. Credit for the latter sum is given at the foot of the abstract by charging off to Fire Insurance Fund.

58. The charge for water shows an increase of Rs. 1,221.

59. "Maintenance and Renewal of Locomotive Engines."—There is an increase of Rs. 6,807. Two new engines were charged to December 1897 half-year while none have been charged for in the period under review but the consequent saving is more than covered by heavy issues of boilers and materials for repairs to existing stock. A decrease of Rs. 10,438 appears in the charge for wages.

60. "Unclassified Expenditure."—Decrease Rs. 21,825 of which Rs 5,527 is in the carriage of Revenue Stores and Rs. 16,298 in loss by Exchange.

61. There are credits of Rs. 24,464 to Abstract B for working the Kolar Gold Fields Railway and of Rs. 3,768 for working the Madras-Ennur Line.

62. The cost of the department per train-mile was Annas 13·31 against Annas 13·09 and per engine-mile Annas 11·12 against Annas 10·95 in the second half of 1897.

63. **Abstract C.**—*Carriage and Wagon Expenses.*—A decrease of Rs. 76,329.

64. "Repairs and renewals of Vehicles."—Decrease Rs. 62,122, due to a smaller number of vehicles having been repaired and also, no doubt, to more economical working of the department.

65. "Repairs and renewals of Machinery, &c."—Decrease Rs. 2,176.

66. There is a decrease of Rs. 3,400 in the cost of cleaning and oiling vehicles.

67. "Unclassified Expenditure."—Decrease Rs. 8,630 chiefly in loss by exchange due to a more favourable rate of exchange and to a decreased consumption of English stores.

68. There are credits to this abstract of Rs. 5,386 for working the Kolar Gold Fields Railway and of Rs. 830 for working the Madras-Ennur Line.

69. The carriage and wagon expenses per train-mile were Annas 2·96 against Annas 3·78 and per 1,000 vehicle-miles run by home vehicles Rs. 8·74 against Rs. 10·50 in the corresponding half of 1897.

70. **Abstract D.**—*Traffic Expenses.*—A net increase of Rs. 8,760.

71. "Salaries, Wages, &c."—A net increase of Rs. 289. There is an increase in the cost of General Superintendence of Rs. 5,481 which is fully explained by a gratuity of Rs. 7,364 paid to Mr. G. R. Byron in August 1898. The cost of Station Staff is less by Rs. 4,020 due to a saving in the charges for loading and unloading goods and to the stoppage of famine batta which cost Rs. 2,026 in December 1897 half-year. There is a decrease of Rs. 1,172 in the cost of Train staff.

72. "Fuel, Lighting, &c."—Increase Rs. 3,909 due to a larger outlay on wagon covers.

73. "Printing, Stationery and Tickets."—Increase Rs. 1,810.

74. "Unclassified Expenditure."—Increase Rs. 3,293 all in loss by exchange chiefly owing to a large consumption of English canvass on wagon covers.

75. There are credits to this abstract of Rs. 9,853 for working the Kolar Gold Fields Railway and of Rs. 1,518 for working the Madras-Ennur Line.

76. The charges for station staff, the tonnage of goods lifted, and the ton-mileage of goods carried compare as follows :—

—	Second half of 1897.	Second half of 1898.	Difference.	
	Tons.	Tons.	Tons.	Per cent.
Tonnage of goods	613,550	581,312	– 32,238	– 5·25
	Ton-miles.	Ton-miles.	Ton-miles.	
Ton-mileage of goods	76,569,943	75,086,994	– 1,482,949	– 1·94
	Rs.	Rs.	Rs.	
Station Staff	1,98,524	1,94,504	– 4,020	– 2·02
Train Staff	61,972	60,800	– 1,172	– 1·89

77. The total cost of the department averaged Annas 5·42 against Annas 5·10 per train-mile in the second half of 1897.

78. **Abstract E.**—"General Charges" show a net increase of Rs. 10,560.

79. There is a decrease of Rs. 3,119 in Home expenditure.

80. "Salaries of Indian Management" show a decrease of Rs. 3,940. The decrease in the Agent's Office is Rs. 2,651, chiefly due to the Agent and Manager's return from furlough in September 1897 and consequent saving to that office of the pay of Mr. West who acted during Mr. Moss' absence. A decrease of Rs. 2,280 in the Audit Department is principally due to vacancies in the subordinate staff not having been filled.

81. "Unclassified Expenditure."—There is a decrease under the head of loss by exchange of Rs. 4,614 due to a smaller consumption of English stores and to the more favourable rate of exchange.

82. There are credits to this abstract of Rs. 6,352 for working the Kolar Gold Fields Railway and of Rs. 978 for working the Madras-Ennur Line.

83. **Abstract G.**—"Special and Miscellaneous Expenditure" shows an increase of Rs. 3,165.

84. "Compensation."—Increase Rs. 1,464.

85. There are credits to this abstract of Rs. 1,018 from the Kolar Gold Fields Railway and of Rs. 157 from the Madras-Ennur Line.

86. *Kolar Gold Fields Railway.*—A sum of Rs. 63,197 being the cost of working this line for the half-year to 31st December 1898 (exclusive of Rs. 4,898 for hire of rolling stock and Rs. 1,657 proportion of rent of Bowringpet Joint Station)has been recovered and distributed over the several abstracts of the Madras Railway Revenue Accounts as shown against each.

87. *Madras-Ennur Section of the Bezwada-Madras Railway.*—A sum of Rs. 11,473, being the cost of working this line for the second half of 1898 (exclusive of Rs. 893 for hire of rolling stock) has been recovered. Of this sum Rs. 4,223 represents the actual cost of engineering maintenance and the balance has been distributed over the other abstracts of expenditure in the Madras Railway Revenue accounts as credits.

88. Statement of train-mileage No. XIV. As compared with the second half of 1897, there was a decrease in the train-mileage of 49,661 or about 3·67 per cent.; the miscellaneous engine-mileage was 19·69 per cent. of train-mileage against 19·54 per cent. in the corresponding half of the previous year.

SUPPLEMENTARY.

89. Every endeavour has been made to comply with the Chairman's request for the early submission of the accounts which was communicated to me in your letter No. 1887 of 21st ultimo. Departmental figures for the calculation of Bowringpet Joint Station expenses only came to hand on the 6th instant and the accounts for December were closed on the 8th idem from which date until the 13th, when they were submitted to you, they were in the possession of the Government examining staff.

90. The total Capital expenditure of the half-year has been as follows :—

Madras Railway Line open for Traffic—

	Rs.	A.	P.
Cash	1,06,296	15	1
Stores	98,463	14	1
Rs.	2,04,760	13	2

Less credit—

Amount recovered from Revenue Officer, Madras Municipality, on account of moiety of cost of foot over bridge at Elephant-gate Level Crossings	Rs.	3,200	0	0
Amount transferred from the deposit made by the G. I. P. Railway for the proportion chargeable to that Company for expenses incurred during the half-year for the construction of Joint Bogie stock for Madras-Bombay through traffic	„	7,121	9	8
		10,321	9	8
Rs.		1,94,439	3	6

Arcot-Ranipet Branch—

	Rs.	A.	P.
Cash	59,369	1	10
Stores	89,177	0	7
Rs.	1,48,546	2	5

Calicut-Cannanore Extension—

	Rs.	A.	P.
Cash	49,990	5	5
Stores	1,247	6	7
Rs.	51,237	12	0

91. The following particulars show in detail the capital outlay of the half-year on the open line :—

ALTERATIONS AND ADDITIONS TO STATIONS AND STATION YARDS.

	Rs.	A.	P.	Rs.	A.	P.
Bangalore City	48,171	9	3			
Arkonam	12,180	8	7			
Rayapuram	12,024	3	4			
Perambur	10,407	5	2			
Salt Cotaurs	5,249	15	11			
Whitefield	5,223	8	1			
Yerragudipadu	4,428	14	2			
Jalarpet	2,982	1	0			
Gooty	2,945	1	8			
Mullanur	2,934	6	10			
Kalamalla	2,821	6	10			
Trivellore	2,525	3	10			
Nandalur	2,327	13	4			
Washermenpet	1,920	10	5			
Calicut	1,625	5	5			
Bisanattam	1,514	6	4			
Kallayi	1,453	15	5			
Podanur	1,394	14	2			
Virinchipuram	1,383	8	8			
Ponpadi	1,171	9	3			
Raichur	1,118	4	7			
Buddireddippatti	1,101	14	2			
Guntakal	1,030	2	2			
Other Stations: less credits Rs. 670-2-5	4,735	14	11			
				1,32,672	11	6
Strengthening bridge at $\frac{107}{10\text{-}11}$ mile				8,773	2	4
Filling up side ditches at $\frac{3}{13\text{-}20}$ mile, S. W. Line				3,744	9	6
Strengthening bridge at $\frac{232}{3}$ mile				2,322	3	7
Other bridges, &c., less credits Rs. 2,426-7-9				1,553	1	6
Plant—						
Locomotive Shop Plant	Rs.	6,640	14	0		
Stations and Office Furniture	„	511	1	0		
				7,151	15	0
Working Stock—						
Fitting engines, tenders and carriages with vacuum brake				9,531	11	6
Converting 7 third class carriages into composites				5,449	9	9
Constructing 6 oil tank wagons				317	2	1
46 third-class carriages				449	12	11
2 composite bogie day 17 third-class carriages 2 do. do. with brakes 2 ordinary brake vans } Ennur Line Stock				16,836	15	4
5 bogie third class carriages, Madras—G. I. P. Through Stock				5,636	4	6
Rupees				1,94,439	3	6

92. The following is a summary of the operations on the Store Accounts during the half-year :—

			Rs.	A.	P.
Store balances at 30th June 1898			27,51,096	10	7
Add Receipts—					
From England	Rs.	2,30,642 8 1			
„ Local purchases...	„	8,26,485 4 7			
			10,57,127	12	8
			38,08,224	7	3
Deduct Issues—					
Capital Account	Rs.	98,463 14 1			
Do. (Arcot-Ranipet Branch)	„	43,208 14 1			
Do. (Calicut-Cannanore Extension)	„	20,305 10 1			
Revenue Stores	„	10,51,931 3 8			
By Sales	„	1,99,461 14 5			
			14,13,371	8	4
Stores balances at 31st December 1898		Rs.	...23,94,852	14	11

93. The following particulars show the balances of the several Store Accounts at 31st December 1898, as compared with 30th June 1898 :—

	30th June 1898.	31st December 1898.
General Store Account ...Rs.	3,58,868	Rs. 3,13,317
Locomotive Store and Workshop Account... „	12,82,348	„ 11,46,819
Engineering do. do. ... „	7,89,062	„ 7,68,624
All others, including stores in transitu ... „	3,20,818	„ 1,66,092
Total... Rs.	27,51,096	Rs. 23,94,852

94. The figures show a reduction under all heads.

95. The total of Rs. 23,94,852 includes Rs. 3,68,972 for returned stores, of which Rs. 7,703 belongs to the Locomotive Department, Rs. 4,626 to the Telegraph, and the balance, Rs. 3,56,643 to the Engineer's.

REVENUE.

96. The percentage of expenditure to gross earnings for the past three half-years has been as under—

December 1897	48·68 per cent.
June 1898	43·97 „
December 1898	53·89 „

97. The net revenue amounts to Rs. 23,45,016 as compared with Rs. 29,12,551 in the corresponding half of 1897. It gives at 1*s.* 10*d.* per rupee, £214,959-16-2 equal to £1-18-6 per cent. for the half-year on the Capital bearing interest at the 31st December 1898, *viz.*, £11,155,630.

98. The following results of our traffic operations in the way of dividend are continued from the last report :—

Period.	Miles open.	Capital raised at 31st December 1898.	Net Revenue.			Average per cent. per annum for periods of five years, &c.		
		£	£	*s*	*d.*	£	*s.*	*d.*
Average for 5 years, 1871—75 ...	845	10,280,682	235,549	1	0	2	6	0
Do. 1876—80 ...	858	10,526,673	224,439	17	6	2	2	9
Do. 1881—85 ...	860	10,638,258	245,448	10	6	2	6	1
Do. 1886—90 ...	842	10,697,630	327,998	6	9	3	1	3
Do. 1891—95 ...	840	11,017,630	448,194	19	8	4	1	4
The year 1896	840	11,057,630	493,651	12	6	4	9	3
Do. 1897	840	11,155,630	550,200	10	6	4	18	8
Do. 1898	840	11,155,630	504,341	6	7	4	10	5

99. Of the decrease of Rs. 5,90,005 in the Revenue earnings, Rs. 4,80,748 is in Coaching traffic for which the prevalence of plague and consequent restrictions are wholly responsible. There was a falling off of no less then 1,282,741½ in the number of passengers carried.

100. The decrease of Rs. 2,26,340 in the earnings from General Merchandise is probably to a great extent due to the same cause as the falling off in Coaching traffic, the movement of Coal, in the receipts from which there was a satisfactory increase, not being affected as the plague had not reached the gold fields before the close of the year.

101. Although working expenses show a decrease of Rs. 22,469 compared with December 1897 half-year, the economical working to which attention was drawn in para. 112 of my report on June 1898 half-year's accounts has not been maintained as, compared with that period, the expenditure of the half-year under review shows an increase of Rs. 2,62,884 of which more than 1½ lacs occurs in Abstract A, and 1 lac in Abstract B.

102. The amount charged to Revenue for "Loss by Exchange" on the cost of Revenue Stores and Home Expenditure for the half-year under review was Rs. 1,67,717 which sum was increased to Rs. 1,72,337 by adjustments in exchange on previons periods.

103. The rate of exchange was 15·9287*d.* per rupee which is ·5802*d.* above the final rate given by Government for the previous half-year.

104. The following particulars are taken from the accounts of the Kolar Gold Fields Railway :—

Receipts—				
From Coaching traffic	Rs.	21,846	1	10
„ Goods do	„	75,770	2	2
„ Electric Telegraph	„	115	13	0
„ Sundries	„	232	12	2
Total... Rs.		97,964	13	2
Expenses—				
Madras Railway for cost of working ...	Rs.	63,197	1	8
Do do for use of rolling stock.	„	4,898	3	10
Share of rent of Bowringpet Joint Station	„	1,656	13	9
		69,752	3	3
Net Revenue... Rs.		28,212	9	11

equal to a return of nearly 7 per cent. per annum on the Capital outlay, including suspense, of the Mysore Durbar, which is stated at Rs. 8,09,537-9-1.

105. The following particulars are taken from the accounts of the Madras-Ennur section of the Bezwada-Madras Railway :—

Receipts—				
From Coaching traffic	Rs.	15,310	0	7
„ Goods do	„	2,460	7	4
„ Electric Telegraph	„	24	3	0
„ Sundries	„	62	3	5
Total... Rs.		17,856	14	4
Expenses—				
Actual cost of Engineering Maintenance ...	Rs.	4,223	7	8
Madras Railway percentage proportion for other expenses	„	7,249	14	5
Hire of rolling stock	„	892	13	6
		12,366	3	7
Net Revenue... Rs.		5,490	10	9

This is equal to a return at the rate of 1·83 per cent. per annum on the capital outlay (exclusive of charge for capitalization of Land Revenue) Rs. 5,99,150.

106. I am submitting for the favour of Government acceptance our supplementary claim on account of surplus profits of previous half-years as follows:—

Outstandings of June 1898 half-year since realized ...	Rs.	1,493	1 10
Reduction in working expenses due to adjustments by Government of India in the rate of exchange for December 1897 and June 1898 half-years	„	2,442	6 11
Other minor Claims	„	211	4 3
Total Rs. ...		4,146	13 0
One per cent. for credit of Provident Institution	Rs.	41	7 6
		4,105	5 6
One moiety due from Government	„	2,052	10 9

107. A further claim for refund of a moiety of Interest charged on overdrawn capital in December 1897 and June 1898 half-years has been made and from your No. 10684 of 23rd January, I gather that it has been referred for the action of the Board.

108. The Board of Directors having intimated to the Secretary of State their acceptance of the revised rules proposed for application to the Provident Institutions of State as well as Guaranteed and assisted Railways which are to have effect from 1st January 1898, the Government of India have sanctioned contributions on the higher scale from Revenue Funds being entered in the Company's Net Revenue account and additional sums of Rs. 37,187 and Rs. 40,385 have been provided in the accounts for June 1898 and December 1898 half-years respectively.

109. These amounts will however only be made available to the Institution when formal sanction has been accorded to the introduction of the new scale.

110. An agreement has been entered into with the Nilgiri Railway Company, Ld., for the working by the Madras Railway of the Nilgiri Railway from Mettupalaiyam to Coonoor as from the 1st October 1898 on which date the line was experimentally opened for traffic.

111. In consequence of serious breaches the line was again closed to traffic on the 28th of the same month and it has not yet been re-opened.

The cost of the experiment, less the earnings from the traffic which was carried, has been charged to the Capital account of the Nilgiri Railway Company.

112. The work of repairing and completing the Railway is being carried out by the Madras Railway at the cost of the Nilgiri Railway Company who, up to the end of the year, had remitted Rs. 29,825-3-10 against Rs. 52,669-12-0 which has been ascertained to have been our expenditure to 31st December 1898.

Earnings.

113. **Abstract H.**—*Coaching Traffic*—Form No. X of the accounts presents the following results when compared with the corresponding half-year :—

Abstract H, December 1897	Rs.	22,47,822	10 5
Do. „ 1898	„	17,67,074	14 3
Decrease ...	Rs.	4,80,747	12 2

114. The details of the above results are given in the following table :—

TRAFFIC.	Half-year ending December 1897.			Half-year ending December 1898.			Increase.			Decrease.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Ordinary Passengers, 1st Class.	80,887	1	6	87,813	0	8	6,925	15	2	...	...	...
Periodical ...	2,684	3	3	544	12	9	...	...	...	2,139	6	6
2nd Class ...	93,698	12	0	93,964	1	9	265	5	9	...	...	...
Periodical ...	4,966	5	1	2,017	1	10	...	...	...	2,949	3	3
3rd Class ...	16,57,093	9	3	12,37,331	5	4	...	...	...	4,19,762	3	11
Periodical ...	6,128	1	1	2,244	9	6	...	...	...	3,883	7	7
Troops and Police, 1st Class...	5,458	2	0	5,858	7	3	400	5	3	...	...	...
2nd Class...	28,215	10	0	18,306	3	5	...	...	...	9,909	6	7
3rd Class...	44,548	9	9	37,379	0	4	...	...	...	7,169	9	5
Passengers' Luggage ...	62,788	6	4	57,607	2	0	...	...	...	5,181	4	4
Carriages ...	7,784	2	9	7,619	8	0	...	...	...	164	10	9
Horses ...	22,964	6	1	20,503	4	2	...	...	...	2,461	1	11
Dogs ...	2,718	5	11	2,928	11	0	210	5	1	...	...	...
Parcels ...	1,69,622	9	9	1,49,231	13	0	...	...	...	20,390	12	9
Do. for Revenue ...	3,369	13	4	3,178	15	3	...	...	...	190	14	1
Special Trains ...	366	0	0	2,570	0	0	2,204	0	0	...	...	...
Miscellaneous ...	970	8	6	1,420	0	9	449	8	3	...	...	...
Haulage and hire of Post Office Vans ...	24,916	8	7	24,469	15	3	...	...	...	446	9	4
MILITARY.												
Military Baggage ...	24,207	5	3	8,619	1	8	...	...	...	15,588	3	7
Carriages ...	...	...	...	61	8	0	61	8	0	..	...	...
Horses ...	4,389	14	0	3,346	11	0	...	...	...	1,043	3	0
Dogs, &c. ...	44	4	0	59	9	4	15	5	4	...	...	...
	22,47,822	10	5	17,67,074	14	3	10,532	4	10	4,91,280	1	0
									Deduct Increase ...	10,532	4	10
									Net Decrease ...	4,80,747	12	2

115. The ordinary coaching traffic, ascertained by eliminating all troops and police, and military items of traffic is continued from the last report—

	Rs.	A.	P.
December 1880	11,47,898	1	5
June 1881	12,54,404	1	5
December 1881	12,18,181	7	10
June 1882	12,78,447	11	0
December 1882	13,02,002	4	1
June 1883	12,97,015	15	6
December 1883	12,73,014	2	7
June 1884	14,10,745	4	7
December 1884	13,85,847	11	7
June 1885	14,63,321	5	7
December 1885	15,29,401	15	10
June 1886	15,02,885	3	6
December 1886	15,49,747	3	4
June 1887	15,84,759	3	3
December 1887	15,31,357	3	9
June 1888	16,61,024	2	10
December 1888	17,13,097	12	10
June 1889	17,81,789	6	8
December 1889	17,75,541	7	2
June 1890	17,64,039	8	10
December 1890	18,19,560	1	1
June 1891	17,68,118	0	7
December 1891	16,52,970	14	10
June 1892	17,24,126	14	10
December 1892	18,03,769	5	4
June 1893	19,49,056	4	11
December 1893	18,72,896	13	4
June 1894	19,27,016	3	8
December 1894	20,47,177	7	9
June 1895	23,03,421	12	8
December 1895	22,46,345	3	11
June 1896	22,79,220	11	1
December 1896	21,63,575	1	6
June 1897	22,17,352	1	7
December 1897	21,40,958	13	5
June 1898	21,36,141	8	3
December 1898	16,93,444	5	3

116. Statement showing 3rd and 4th Class Receipts minus Troops and Police from 1873 to December 1898.

PERIOD.	3rd-Class Single Journey, Excess, Return Journey and Season Tickets.			4th or Cooly Class.			Total 3rd and 4th Classes.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Half-year ending June 1873 ...	8,54,760	15	9	93,640	13	0	9,48,401	12	9
,, December 1873 ...	8,41,653	1	4	1,08,073	9	0	9,49,726	10	4
,, June 1874 ...	7,89,366	1	11	1,13,226	15	0	9,02,593	0	11
,, December 1874 ...	8,31,655	4	7	1,18,789	11	0	9,50,444	15	7
,, June 1875 ...	7,32,250	15	8	1,68,858	13	0	9,01,109	12	8
,, December 1875 ...	6,72,465	4	6	1,73,676	13	0	8,46,142	1	6
,, June 1876 ...	7,16,531	11	6	2,03,373	9	0	9,19,905	4	6
,, December 1876 ...	7,41,657	1	7	2,19,170	13	0	9,60,827	14	7
,, June 1877 ...	6,38,448	12	8	2,42,352	2	6	8,80,800	15	2
,, December 1877 ...	8,79,633	13	10	1,20,088	11	0	9,99,722	8	10
,, June 1878 ...	9,01,376	1	3	67,642	11	0	9,69,018	12	3
,, December 1878 ...	8,04,743	8	3	1,14,829	12	0	9,19,573	4	3
,, June 1879 ...	6,35,114	10	2	2,65,729	13	0	9,00,844	7	2
,, December 1879 ...	9,29,071	10	9	...	...	...	9,29,071	10	9
,, June 1880 ...	9,04,920	9	10	...	...	...	9,04,920	9	10
,, December 1880 ...	8,96,463	1	1	...	...	...	8,96,463	1	1
,, June 1881 ...	9,52,306	12	1	...	...	...	9,52,306	12	1
,, December 1881 ...	9,43,731	12	9	...	...	...	9,43,731	12	9
,, June 1882 ...	9,72,568	4	7	...	...	...	9,72,568	4	7
,, December 1882 ...	10,05,113	6	2	...	..	...	10,05,113	6	2
,, June 1883 ...	10,10,789	4	7	...	...	...	10,10,789	4	7
,, December 1883 ...	9,61,665	0	1	...	...	...	9,61,665	0	1
,, June 1884 ...	10,58,699	12	8	...	...	...	10,58,699	12	8
,, December 1884 ...	10,47,457	10	4	...	...	...	10,47,457	10	4
,, June 1885 ...	10,95,135	7	6	...	...	...	10,95,135	7	6
,, December 1885 ...	11,65,264	9	5	...	...	...	11,65,264	9	5
,, June 1886 ...	11,59,988	9	10	...	...	...	11,59,988	9	10
,, December 1886 ...	11,84,455	6	3	...	...	...	11,84,455	6	3
,, June 1887 ...	12,20,247	9	0	...	...	...	12,20,247	9	0
,, December 1887 ...	11,61,859	8	10	...	...	...	11,61,859	8	10
,, June 1888 ...	12,48,832	15	11	...	...	...	12,48,832	15	11
,, December 1888 ...	13,34,289	7	9	...	...	...	13,34,289	7	9
,, June 1889 ...	13,57,252	6	7	...	...	...	13,57,252	6	7
,, December 1889 ...	13,92,223	13	3	...	...	...	13,92,223	13	3
,, June 1890 ...	13,69,221	5	1	...	...	...	13,69,221	5	1
,, December 1890 ...	14,48,927	4	1	...	...	...	14,48,927	4	1

PERIOD.	3rd-Class Single Journey, Excess, Return Journey, and Season Tickets.			4th or Cooly Class.			Total 3rd and 4th Classes.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Half-year ending June 1891 ...	14,00,154	9	11	...	...	...	14,00,154	9	11
,, December 1891 ...	12,73,641	14	9	...	...	...	12,73,641	14	9
,, June 1892 ...	13,53,452	15	6	...	...	...	13,53,452	15	6
,, December 1892 ...	14,11,625	15	5	...	...	...	14,11,625	15	5
,, June 1893 ...	15,37,298	5	4	...	...	...	15,37,298	5	4
,, December 1893 ...	14,57,772	11	4	...	...	...	14,57,772	11	4
,, June 1894 ...	15,09,595	15	2	...	...	..	15,09,595	15	2
,, December 1894 ...	15,78,599	10	11	...	..	..	15,78,599	10	11
,, June 1895 ...	18,29,510	14	1	...	...	...	18,29,510	14	1
,, December 1895 ...	17,36,777	1	3	...	...	...	17,36,777	1	3
,, June 1896 ...	17,86,841	4	8	...	...	...	17,86,841	4	8
,, December 1896 ...	16,99,951	5	3	...	...	...	16,99,951	5	3
,, June 1897 ...	17,18,521	11	3	...	...	...	17,18,521	11	3
,, December 1897 ...	16,63,221	10	4	...	...	...	16,63,221	10	4
,, June 1898 ...	16 32,615	13	11	...	...	...	16,32,615	13	11
,, December 1898 ...	12,39,575	14	10	...	...	...	12,39,575	14	10
,,									

117. The number, mileage and earnings of 3rd-Class Ordinary traffic, leaving out Troops and Police, are as follows:—

PERIOD.	Number.	Mileage.	Earnings.		
			Rs.	A.	P.
Half-year ending December 1879	1,774,690	76,638,889½	(a) 9,29,071	10	9
,, June 1880	1,964,346	79,706,402	(b) 9,04,920	9	4
,, December 1880	1,943,145	86,424,275	8,96,463	1	1
,, June 1881	2,111,075	91,844,076	9,52,306	12	1
,, December 1881	2,067,218½	90,818,781	9,43,731	12	9
,, June 1882	2,189,409	93,761,162	9,72,568	4	7
,, December 1882	2,046,457	96,895,425	10,05,113	6	2
,, June 1883	2,195,218½	97,623,795	10,10,789	4	7
,, December 1883	2,150,308	97,581,832	(c) 9,61,665	0	1
,, June 1884	2,593,543	108,370,675	10,58,699	12	8
,, December 1884	2,488,817	108,124,439	10,47,457	10	4
,, June 1885	2,639,473½	112,860,077	10,95,135	7	6
,, December 1885	2,798,556	121,224,909	11,65,264	9	5
,, June 1886	2,928,490	120,522,393	11,59,988	9	10
,, December 1886	3,288,543½	135,980,143	(d) 11,84,455	6	3
,, June 1887	3,543,684½	140,170,209	12,20.247	9	0
,, December 1887	3,372,135½	133,848,628	11,61,859	8	10
,, June 1888	3,724,290	142,695,239	(e) 12,48,832	15	11
,, December 1888	3,951,553½	151,690,598	13,34,289	7	9
,, June 1889	4,198,943	155,414,335	13,57,252	6	7
,, December 1889	4,218,179	159,361,635	13,92,223	13	3
,, June 1890	4,184,208	156,902,111	(f) 13,69,221	5	1
,, December 1890	4,133,756½	162,833,527	(g) 14,48,927	4	1
,, June 1891	4,206,099½	156,004,790	14,00,154	9	11
,, December 1891	3,919,473	148,726,896	(h) 12,73,641	14	9
,, June 1892	4,259,953½	159,063,622	13,53,452	15	6
,, December 1892	4,487,133	165,641,362	14,11,625	15	5
,, June 1893	4,998,677	180,292,338	15,37,298	5	4
,, December 1893	4,675,724	170,719,562	14,57,772	11	4
,, June 1894	4,954,351	177,046,939	15,09,595	15	2
,, December 1894	5,048,748	185,288,555	15,78,599	10	11
,, June 1895	4,314,512	166,901,011	(i) 18,29,510	14	1
,, December 1895	4,327,774	157,966,610	(k) 17,36,777	1	3
,, June 1896	4,814,350½	162,524,803	17,86,841	4	8
,, December 1896	4,727,778½	155,332,652	16,99,951	5	3
,, June 1897	5,057,896½	157,058,852	17,18,521	11	3
,, December 1897	4,821,593	152,579,394	16,63,221	10	4
,, June 1898	4,600,357½	149,008,513	16,32,615	13	11
,, December 1898	3,554,861½	112,349,592	12,39,575	14	10
,,					

NOTE.—(a) Half-year ending 1879, 2 pies for Ordinary trains from 1st July, 1879 and 4 pies for Mail trains.
(b) Half-year ending June, 1880, 2 pies are charged for Ordinary trains and 4 pies for Mail trains for first four months, and 2 pies by all trains for the last 2 months, viz., from 1st May, 1880.
(c) Fare and half for Return tickets from 1st October, 1883.
(d) One and half pies for single journey passengers for Ordinary trains and 2 pies for Mail trains, but to and from stations between Podanur and Mettupalaiyam and Podanur and Beypore, 1½ pies rate charged by Mail trains.
(e) Half-year ending June, 1888, on and after 5th March, 1888, 2 pies are charged for passengers booked to and from stations west of Podanur by Mail trains except that for stations on the Nilgiri and Palghat branches the fares by Mail trains are 1½ pies per mile.
Nilgiri and Palghat branches the fares by Mail trains throughout the line are 2 pies per mile.
(f) From 1st March, 1890, the fares by Mail trains throughout the line are 3 pies per mile.
(g) From 1st October, 1890, the fares by Mail trains are 2½ pies per mile except that for stations between Podanur and Calicut and Palghat branches the fares by Mail trains are 1½ pies per mile.
(h) From 1st August, 1891, the fares by Mail trains between Podanur and Olavakkot and between Tirur and Calicut are raised from 1½ to 2½ pies per mile and between Olavakkot and Tirur from 1½ to 2 pies per mile.
The fares by ordinary trains all over the line are increased from 1½ to 2 pies.
(i) From July, 1895, the above figures include periodical ticket traffic as number of trips, instead of number of tickets issued.
(k) From July, 1895, the above figures include periodical ticket traffic as number of trips, instead of number of tickets issued.

118. The receipts from Parcels traffic (Public) during the past ten years have been as follows :—

	Rs.	A.	P.
Half-year ending December 1888	1,22,872	15	2
„ June 1889	1,14,325	6	2
„ December 1889	1,22,051	4	4
„ June 1890	1,06,372	12	1
„ December 1890	1,23,187	6	8
„ June 1891	1,04,585	8	4
„ December 1891	1,18,642	12	8
„ June 1892	1,01,956	0	11
„ December 1892	1,34,095	5	1
„ June 1893	1,15,188	2	4
„ December 1893	1,49,422	7	5
„ June 1894	1,30,321	15	4
„ December 1894	1,67,055	9	8
„ June 1895	1,33,435	13	3
„ December 1895	1,47,925	7	4
„ June 1896	1,42,225	5	4
„ December 1896	1,44,519	8	3
„ June 1897	1,43,104	14	6
„ December 1897	1,69,622	9	9
„ June 1898	1,56,591	0	1
„ December 1898	1,49,231	13	0

119. It will be seen from a comparison of the several heads of Abstract I, that the following have been the fluctuations which have led to the net decrease of Rs. 74,628-14-0 :—

TRAFFIC.	Half-year ending December 1897.			Half-year ending December 1898.			Increase.			Decrease.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
1. Merchandise, General ...	29,10,463	14	0	26,84,124	3	7	...	...	...	2,26,339	10	5
2. Military Stores ...	35,235	9	0	37,982	15	0	2,747	6	0	...	...	...
3. Railway Materials ...	870	11	0	5,423	2	0	4,552	7	0	...	...	...
4. Coal	2,74,691	1	0	3,98,145	7	1	1,23,454	6	1	...	...	...
5. Revenue Stores ...	41,518	7	5	69,565	9	5	28,047	2	0	...	...	...
6. Live Stock	9,902	6	9	10,450	13	0	548	6	3	...	...	...
7. Military Live Stock ...	9,686	6	6	1,918	11	8	...	...	...	7,767	10	10
8. Rents and Demurrage ...	7,024	8	9	6,861	9	8	...	...	...	162	15	1
9. Interest on Outstanding Bills	...	...	...	...	...	...	...	...	...	...	...	...
10. Miscellaneous	4,043	10	4	4,335	5	4	291	11	0	...	...	...
TOTAL ...	32,93,436	10	9	32,18,807	12	9	1,59,641	6	4	2,34,270	4	4
										Deduct Increase ...	1,59,641	6	4
										Net Decrease ...	74,628	14	0

120. The following table prepared from the Analysis will show the progress of our business and the economy observed in conducting it:—

TRAFFIC.	Dec. 1888.	June 1889.	Dec. 1889.	June 1890.	Dec. 1890.	June 1891.	Dec. 1891.	June 1892.	Dec. 1892.	June 1893.	Dec. 1893.	June 1894.	Dec. 1894.	June 1895. *	Dec. 1895. *	June 1896. †	Dec. 1896. †	June 1897. †	Dec. 1897. †	June 1898. †	Dec. 1898. †
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Total earnings per train-mile ...	3·552	3·778	3·903	3·977	3·757	3·802	3·612	3·811	3·828	4·064	3·888	4·041	4·171	4·53	4·31	4·38	4·34	4·57	4·30	4·44	3·99
„ working expenses per train-mile ...	2·097	2·128	2·405	2·109	1·943	2·220	2·024	2·147	2·086	1·880	1·965	2·089	2·181	2·13	2·08	2·21	2·22	2·14	2·09	1·96	2·17
Total net earnings per train-mile...	1·455	1·650	1·503	1·868	1·809	1·582	1·518	1·664	1·742	2·184	1·923	1·942	1·950	2·40	2·23	2·17	2·12	2·43	2·21	2·48	1·82
COACHING TRAFFIC.																					
Average sum received for carrying a unit one mile.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.	Pies.
First class ...	10·95	14·67	9·37	11·66	10·16	11·24	9·73	10·32	10·32	10·18	9·94	11·65	10·42	10·46	10·37	11·55	9·83	10·08	9·41	11·02	11·44
Second class ...	5·58	5·51	5·21	5·33	4·52	5·48	5·16	5·29	5·34	5·18	4·92	5·25	5·19	5·01	4·72	4·52	4·98	4·79	4·14	4·61	5·10
Lowest class ...	1·70	1·68	1·68	1·68	1·72	1·73	1·65	1·63	1·64	1·64	1·64	1·64	1·64	2·10	2·11	2·11	2·10	2·09	2·09	2·10	2·11
Average for all classes ...	1·87	1·87	1·87	1·84	1·86	1·90	1·81	1·78	1·79	1·78	1·79	1·80	1·78	2·26	2·30	2·27	2·26	2·27	2·24	2·28	2·33
Average cost of hauling a coaching unit one mile.																					
Per passenger unit ...	1·01	·99	1·07	·90	·91	1·09	1·03	1·04	1·03	·82	·90	·92	·89	·90	·96	·99	1·04	·95	·98	·90	1·24
Average profit per passenger ...	·36	·88	·74	·94	·95	·81	·78	·74	·76	·96	·89	·88	·89	1·36	1·34	1·28	1·22	1·32	1·32	1·38	1·09
Average sum received for other coaching traffic per ton per mile.	37·30	39·25	35·31	38·60	37·60	39·77	37·34	37·92	36·88	39·07	32·21	37·66	31·32	26·98	35·69	26·80	35·22	34·22	31·14	35·51	33·63
Average cost of hauling other coaching traffic per ton per mile.	13·46	14·06	14·39	12·17	11·81	14·00	12·52	13·29	11·81	11·16	9·31	11·96	9·12	11·11	9·92	11·52	10·67	9·91	8·40	8·99	10·41
Average profit per ton	23·84	25·19	20·92	26·43	25·79	25·77	24·82	24·63	25·07	27·91	22·90	25·70	22·20	25·87	25·77	25·28	24·55	24·81	22·74	26·52	23·22
GOODS TRAFFIC.																					
Average sum receivd for carrying a ton one mile	7·79	7·90	7·60	7·83	7·49	7·42	7·16	8·33	8·27	8·12	8·25	8·57	8·52	8·46	8·34	8·49	8·43	8·34	8·37	8·39	8·30
Average cost of hauling a goods unit, *viz.*, one ton one mile ...	5·02	4·73	4·88	4·13	4·05	4·46	4·25	4·63	4·41	3·76	4·30	4·58	4·67	4·38	4·48	4·72	4·70	4·20	4·49	3·97	4·66
Average profit on working a goods unit (*viz.*, one ton), one mile ...	2·77	3·17	2·72	3·70	3·44	2·96	3·01	3·70	3·86	4·36	3·45	3·99	3·85	4·08	3·86	3·77	3·73	4·14	3·88	4·42	3·64

* Including Kolar Gold Fields State Railway.
† „ „ and Madras-Ennur Railway.

121. The following Classification of all Goods carried is designed to shew Country and Foreign Trade :—

Description.	Half-year ending December 1897.		Half-year ending December 1898.	
	Maunds.	Rupees.	Maunds.	Rupees.
COUNTRY TRADE.				
Food Grains	3,444,556	7,58,586	2,532,763	6,56,708
Miscellaneous articles for Domestic consumption	2,024,340	5,82,162	1,856,530	6,04,545
Salt and Saltpetre	768,901	1,51,500	800,275	1,62,207
Materials used in Building, Construction and Manufacture	2,599,622	3,58,925	2,071,687	3,11,365
Cloths, Piece goods and Twist (Indian) ...	165,647	72,188	149,516	67,022
Sundries	1,170,686	4,15,988	968,414	3,73,461
Total ...	10,173,752	23,89,349	8,369,185	21,75,308
FOREIGN TRADE.				
Exports or Colonial Produce...	1,459,276	4,99,573	1,484,259	4,51,495
Imports, Cloths, Piece goods and Twist (European)	97,976	56,517	80,016	44,836
European Stores for consumption in India ...	134,278	48,237	108,383	42,279
Coal and Coke for the public	1,797,086	2,51,280	2,707,488	3,80,745
Do. for the Company	473,771	23,411	190,651	17,400
Railway Materials, &c.	209,528	2,895	144,405	13,611
Total ...	4,171,915	8,81,913	4,715,202	9,50,367
Grand Total ...	14,345,667	32,21,262	13,084,387	31,25,675

122. The following statement is framed to give a comparison of the Internal Trade, (sub-divided into Food Grains and other Commodities) and the External or Foreign Trade (Exports or Imports) passing over the Railway for a series of years :—

PERIODS.	Country Trade.				Foreign Trade, Exports or Imports.		Railway Stores.		Total.	
	Food Grains.		Other Commodities.							
	Weight.	Amount.	Weight.	Amount.	Weight.	Amount.	Weight.	Amount.	Weight.	Amount.
	Maunds.	Rupees.	Maunds.	Rupees.	Maunds.	Rupees.	Maunds.	Rupees.	Maunds.	Rupees.
December 1876	6,448,865	15,09,576	8,276,612	17,24,504	1,961,615	10,20,858	31,521	4,791	16,718,613	42,59,729
Do. 1877	20,037,072	47,11,730	5,526,394	17,51,285	1,323,601	5,65,916	36,818	6,159	26,923,885	70,35,090
Do. 1878	6,068,324	12,59,187	6,897,239	15,83,706	1,508,633	6,72,187	38,055	4,646	14,512,251	35,19,726
Do. 1879	5,724,530	12,24,775	10,068,871	16,84,744	1,791,713	7,66,609	27,769	3,755	17,612,883	36,79,883
Do. 1880	3,553,664	6,58,852	11,107,066	17,94,168	1,876,213	7,99,668	51,461	8,685	16,588,404	32,61,373
Do. 1881	3,377,162	6,38,158	8,070,509	18,42,019	2,112,658	8,52,893	85,805	16,013	13,646,134	33,49,083
Do. 1882	3,380,180	6,44,323	7,131,950	20,54,220	2,676,042	10,35,624	2,723	528	13,190,895	37,34,695
Do. 1883	3,158,585	4,90,871	8,168,934	21,47,050	2,679,301	9,82,154	5,067	1,387	14,011,887	36,21,462
Do. 1884	4,757,712	7,03,707	8,628,133	22,07,239	3,044,239	9,05,763	2,242,349	20,133	18,672,433	38,36,842
Do. 1885	5,392,637	7,60,500	9,320,806	23,08,174	2,366,882	7,83,519	716,531	2,81,658	17,736,856	41,33,851
Do. 1886	4,919,219	7,42,809	9,505,486	22,55,441	3,070,405	10,77,417	612,079	2,16,169	18,107,189	42,91,836
Do. 1887	4,764,534	7,00,158	11,045,625	24,08,793	3,022,418	10,77,268	977,516	2,80,148	19,810,093	44,66,367
Do. 1888	5,397,284	8,55,062	11,414,388	25,09,664	2,796,380	10,41,747	556,794	82,813	20,164,846	44,89,286
Do. 1889	5,903,788	11,08,772	11,610,840	25,13,396	3,348,244	12,13,195	1,335,291	1,95,869	22,198,163	50,31,232
Do. 1890	6,233,007	10,96,066	12,956,764	25,85,619	3,532,286	12,80,920	859,999	1,97,166	23,582,056	51,59,771
Do. 1891	7,816,784	14,15,899	11,428,971	25,85,640	3,939,242	11,73,211	1,004,857	1,88,837	24,189,854	53,63,587
Do. 1892	6,250,715	13,20,407	11,291,235	27,89,039	4,706,829	13,65,830	1,406,171	59,357	23,654,950	55,34,633
Do. 1893	7,195,917	16,31,950	11,684,042	29,37,169	5,561,551	15,57,186	371,355	35,269	24,812,865	61,61,574
Do. 1894	5,070,000	11,65,590	11,926,771	30,26,752	6,090,168	16,35,151	817,187	30,858	23,904,126	58,58,351
Do. 1895	4,936,020	12,28,406	12,665,222	31,57,426	6,557,311	17,22,098	332,630	13,495	24,491,183	61,21,425
Do. 1896	4,964,813	11,10,352	12,594,690	30,31,028	6,925,138	17,56,169	431,206	36,824	24,915,847	59,34,373
Do. 1897	6,946,083	14,96,646	13,556,506	32,34,163	7,628,765	17,97,124	257,134	9,135	28,388,488	65,37,068
Half-year ending June 1898	2,549,354	5,93,103	6,871,400	16,86,985	3,893,612	9,07,637	46,349	7,606	13,360,715	31,95,331
Do. December 1898	2,522,763	6,56,708	5,846,422	15,18,600	4,570,797	9,36,756	144,405	13,611	13,084,387	31,25,675

The total in the foregoing for the past half-year, *viz.*, Rupees 31,25,675 is made up from items in Abstract I of the Revenue Account, thus :—

1. Merchandise ...	...	Rs. 26,84,124
2. Military Stores ...	...	,, 37,983
3. Railway Materials ...	...	,, 5,423
4. Coal for the Public, &c.	...	,, 3,98,145
		Rs. 31,25,675

123. The following are the chief Commodities interchanged with Foreign Railways working with the Madras Railway in the half-year under review, and the corresponding half-year in 1897 :—This statement shews an increase in weight of 5,506 tons and in amount of Rs. 87,721 during the past half-year.

DESCRIPTION OF COMMODITY.	To and from Foreign Railways.			
	Half-year ending December 1897.		Half-year ending December 1898.	
	Tons.	Rs.	Tons.	Rs.
I. Coal and Coke carried for the Public and Foreign Railways	57,278	2,20,734	90,538	3,51,257
II. Cotton, Raw	731	8,383	3,887	33,139
III. Cotton, Manufactured—				
1. Twist and Yarn, European ...	575	8,294	554	7,187
2. Do. Indian	1,095	9,786	1,171	10,362
3. Piece Goods, European	478	8,285	519	9,843
4. Do. Indian	1,532	18,051	1,643	18,617
IV. Drugs and Chemicals—				
1. Intoxicating, other than Opium ...	...	...	...	...
2. Non-intoxicating—				
(*a*). Cinchona bark	...	...	89	1,104
(*b*). Others	701	6,110	783	8,388
V. Dyes and Tans—				
1. Indigo	145	2,361	166	3,029
2. Myrabolams	312	1,972	254	1,767
3. Cutch	...	...	...	...
4. Turmeric	484	3,382	491	3,456
5. Aniline dyes	...	...	...	...
6. Others	5,989	50,335	4,582	38,080
VI. Grain and Pulse—				
1. Wheat	779	5,941	767	4,403
2. Rice in the husk	2,479	10,076	5,428	46,369
3. Rice not in the husk	13,068	69,175	3,793	23,202
4. Jawar and Bajra	15,121	87,766	5,391	34,632
5. Gram and Pulse	10,741	73,647	9,174	46,876
6. Others	15,106	72,731	18,618	1,34,568
VII. Hides and Skins—				
1. Hides of Cattle—				
(*a*). Dressed or tanned ...	...	...	...	...
(*b*). Raw	3,231	48,050	457	3,968
2. Skins of Sheep, &c.—				
(*a*). Dressed or tanned ...	1,758	28,294	864	17,092
(*b*). Raw	7,651	88,982	5,850	68,031
VIII. Horns	...	...	73	634
IX. Jute—				
1. Raw	...	...	...	...
2. Gunny Bags and Cloth	1,419	13,383	1,024	9,383
X. Lac—				
1. Stick	...	...	...	...
2. Shell	...	...	...	...
XI. Leather, Manufactured	45	1,196	42	1,173
XII. Liquors—				
1. Beer	671	10,529	666	10,151
2. Spirits	1,193	7,041	756	6,089
3. Wines	...	...	...	...
XIII. Metals—				
1. Copper, unwrought	...	...	...	...
2. Brass, unwrought	...	...	...	...
3. Copper, wrought	...	...	...	...
4. Brass, wrought	...	...	...	...
5. Iron	94	1,406	97	1,533
6. Others	3,606	34,637	2,220	26,260
XIV. Oils—	41	574	100	1,631
1. Kerosine	1,340	19,515	1,620	23,561
2. Castor	789	1,833	619	3,078
3. Cocoanut	123	1,522	145	1,924
4. Others	705	3,763	895	7,813
Carried forward ...	149,280	9,17,694	163,276	9,58,600

DESCRIPTION OF COMMODITY.	To and from Foreign Railways.			
	Half-year ending December 1897.		Half-year ending Decembr 1898.	
	Tons.	Rs.	Tons.	Rs.
Brought forward...	149,280	9,17,694	163,276	9,58,600
XV. Oil Seeds—				
1. Linseed	...	...	...	...
2. Rape and Mustard	...	...	...	...
3. Til or Jingili	6,281	36,109	5,149	38,300
4. Poppy	...	...	...	...
5. Earthnuts	1,254	2,917	552	1,351
6. Castor	227	1,439	910	4,767
7. Others	2,251	11,694	2,960	23,678
XVI. Opium	...	...	...	...
XVII. Paper and Paste Board	110	2,067	45	764
XVIII. Provisions—				
1. Ghee	364	4,145	436	5,027
2. Dried fruits and nuts	213	2,511	216	1,458
3. Others	9,627	64,808	8,576	65,673
XIX. Railway Plant and Rolling Stock *carried for the Public and Foreign Railways*—				
1. Loco. engines and tenders and parts thereof	...	...	472	2,526
2. Carriages and trucks and parts thereof	...	...	...	...
3. Materials—				
(*a*). Steel rails and fish plates...	7,275	1,522	386	505
(*b*). Sleepers and keys of steel and cast iron	...	...	...	...
(*c*). Other sorts	...	...	920	3,032
XX. Salt	2,652	9,046	2,716	16,731
XXI. Saltpetre, &c.—				
1. Saltpetre	...	...	...	...
2. Other saline substances ...	...	...	...	...
XXII. Silk, Raw—				
1. Foreign	...	...	...	...
2. Indian	45	965	47	958
XXIII. Silk, Piece Goods—				
1. Foreign	...	...	...	...
2. Indian	...	...	...	...
XXIV. Spices—				
1. Betel nuts	2,960	28,947	2,253	27,452
2. Pepper	377	4,538	313	4,040
3. Ginger	134	1,010	125	1,005
4. Chillies	1,022	10,934	489	4,273
5. Cardamoms	...	...	...	...
6. Others	417	2,494	176	1,269
XXV. Stone and Lime	10,925	14,678	5,965	12,383
XXVI. Sugar—				
1. Refined or crystallized including sugarcandy	1,543	10,649	1,667	11,058
2. Unrefined, *viz.*, mollasses and jaggery or gur and other saccharine produce	7,284	30,328	11,862	37,698
XXVII. Tea—				
1. Foreign	...	...	...	...
2. Indian	36	1,477	61	2,233
XXVIII. Timber	23,985	97,684	24,040	1,11,336
XXIX. Tobacco—				
1. Unmanufactured	1,401	10,305	1,178	9,417
2. Manufactured—				
(*a*). Cigars	348	4,704	343	4,234
(*b*). Other sorts	306	3,751	427	5,822
XXX. Wool, Raw	124	633	138	989
XXXI. Wool, Manufactured—				
1. Piece Goods, European ...	37	911	32	1,019
2. Piece Goods, Indian	204	2,541	222	2,975
3. Shawls	...	...	...	...
XXXII. All other Articles of Merchandise ...	13,646	1,52,585	13,882	1,61,104
Total ...	244,328	14,33,986	249,834	15,21,707

124. The interchange of Passenger Traffic with the Railways that are connected with the Madras Railway is given in the following table, and shews a decrease in number by 83,831 and in amount of Rs. 66,640-2-0 as compared with the corresponding half-year :—

PASSENGERS' TRAFFIC.		To and from Foreign Railways.							
		Half-year ending December 1897.				Half-year ending December 1898.			
		No.	Amount.			No.	Amount.		
			Rs.	A.	P.		Rs.	A.	P.
Passengers	1st Class	3,617	29,359	12	2	4,042	35,721	3	1
	2nd Class	8,157½	34,685	6	6	8,670½	38,592	1	1
	3rd Class	363,468½	3,35,016	15	0	282,203	2,66,535	2	5
Soldiers	1st Class	602½	4,619	0	9	543	4,854	6	0
	2nd Class	5,668½	24,681	14	0	4,847	16 227	8	1
	3rd Class	19,743½	34,732	9	2	17,312	32,318	12	3
Return Fares	1st Class	156	1,133	11	0	200	1,950	15	0
	2nd Class	305	1,297	0	0	444	2,025	4	0
	3rd Class	4,975	364	9	9	4,691	862	10	4
Excess	1st Class	...	1,268	0	0	...	1,343	5	0
	2nd Class	...	189	4	9	...	221	11	6
	3rd Class	...	212	0	6	...	257	2	10
	Total ...	406,693½	4,67,560	3	7	322,862½	4,00,920	1	7

Expenditure.

125. The notes against each head of Expenditure in the following table shew, generally, in a comparative form, the work done in each department for each half-year :—

DEPARTMENTS.	Half-year ending December 1897.					Half-year ending December 1898.				
	Work of Departments.	Cost.			Per cent.	Work of Departments.	Cost.			Per cent.
	Ms. chs. ft.	Rs.	A.	P.		Ms. chs. ft.	Rs.	A.	P.	
Abstract **A.** Maintenance of Way, Works and Stations ...	1,047 53 0½	6,50,530	13	8	11·19	1,047 16 62½	7,24,088	14	4	13·92
Abstract **B.** Locomotive Expenses ...	Gross mileage of engines, 1,616,892. Number of engines under repair at any one time, 37.	11,06,617	15	8	19·03	Gross mileage of engines, 1,559,578. Number of engines under repair at any one time, 37.	10,83,573	2	4	20·83
Abstract **C.** Carriage and Wagon Expenses.	Number of vehicles under repair at any one time, 200. Number constructed and renewed, 73.	3,19,448	10	1	5·49	Number of vehicles under repair at any one time, 167. Number constructed and renewed, 14.	2,41,273	6	6	4·64
Abstract **D.** Traffic Expenses ...	Profitable train mileage, 1,352,633. Number of stations, 161.	4,31,530	4	3	7·42	Profitable train mileage, 1,302,972. Number of stations, 164.	4,41,285	3	2	8·48
Abstract **E.** General Charges ...	Miles 858.	2,89,928	3	1	4·99	Miles 858.	2,79,611	13	9	5·38
Abstract **G.** Special and Miscellaneous Expenditure.	.....	49,217	0	8	·85	.....	53,016	12	5	1·02
	Total ...	28,47,272	15	5		Total ...	28,22,849	4	6	

Railway Schools.

126. The particulars of attendance and cost of all Railway Schools during the half-year are as under :—

NAME OF SCHOOL.	Number on Register.	Average attendance.	Expenditure.			Receipts.			Net Cost.		
			Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Perambur	121	105·56	(a)2,361	8	10	682	15	0	1,678	9	10
Arkonam	26	22·83	486	1	3	120	15	4	365	1	11
Katpadi	14	11·18	468	7	10	68	2	11	400	4	11
Jalarpet	66	59 65	1,043	7	10	393	15	0	649	8	10
Salem	31	26·62	872	11	7	172	1	1	700	10	6
Podanur	60	44·88	1,281	15	4	313	4	1	968	11	3
Renigunta	...	...	13	0	0	...	...	...	13	0	0
Gooty	39	35·43	864	8	8	220	11	7	643	13	1
Raichur	46	34·85	1,122	3	7	536	4	9	585	14	10
Railway School Library	...	...	60	0	0	...	...	...	60	0	0
Total ...	...	...	8,574	0	11	2,508	5	9	6,065	11	2

(a) The expenditure on Perambur School includes the cost of Gymnastic Instructors.

Madras Railway Provident Institution.

127. The following details are given in continuation of those contained in my report for the half-year ending 30th June 1898 :—

Number of Subscribers.

	30th June 1898.	31st December 1898.
Obligatory	3,064	3,149
Voluntary	72	69
Total ...	3,136	3,218

Amount at credit at 31st December 1898—

	Rs.	A.	P.
Obligatory	8,16,458	0	5
Voluntary	47,964	5	2
Bonus	19,792	2	4
„ Calicut-Cannanore Extension Staff ...	287	14	7
Profit and Loss Account	11,675	10	0
Reserve Fund	24,244	5	2
Subscribers old balances	2,269	13	8
Uncashed Cheque	173	7	11
Total ...	9,22,865	11	3

The above bonus has been included in the accounts of the half-year under review.

The following Securities were purchased during the half-year :—

Calcutta Municipal Debentures ... ... Rs. 30,000

Staff.

128. I availed myself of three months' privilege leave which you kindly granted to me from 23rd September 1898.

Mr. A. Corben returned to duty on the 16th August 1898 from privilege leave granted to him from 16th May 1898.

Mr. A. H. Francis was granted privilage leave for 26 days during the half-year December 1898.

129. A list of statements forwarded herewith is annexed.

Yours faithfully,

F. DUNSTERVILLE,
Chief Auditor.

MADRAS RAILWAY COMPANY,
CHIEF AUDITOR'S OFFICE,
MADRAS, 13*th March* 1899.

To

THE AGENT AND MANAGER,
Madras Railway Company.

DEAR SIR,

I beg to report as follows on the working of the Mysore State Kolar Gold Fields Railway for the half-year ending 31st December 1898:—

CAPITAL.

Statements Nos. V, VI and XVIII.—There was no capital expenditure transferred to final heads during the half-year. The total capital outlay, including suspense, from the commencement of operations to the end of the half-year under review, is Rs. 8,09,538, and the expenditure, excluding suspense, Rs. 7,40,184, which gives an average of Rs. 74,018 per mile open.

REVENUE.

General Results.

The following table shews the general results of working:—

—	Half-year ending Dec. 1897.	Half-year ending Dec. 1898.	Difference.	
	Miles.	Miles.	Miles.	Per cent.
Mean mileage worked	10	10	...	...
Train mileage	19,324	19,924	+ 600	+ 3·10
	No.	No.	No.	
Average number of trains over the whole line daily in both directions	10·50	10·83	+ ·33	...
	Rs.	Rs.	Rs.	Rs.
Gross earnings..	1,10,000	97,965	— 12,035	— 10·94
Working expenses	63,613	69,752	+ 6,139	+ 9·65
Net earnings	46,387	28,213	— 18,174	— 39·18
Percentage of working expenses to gross earnings	57·83	71·20	+ 13·37	...
Percentage of net earnings to capital outlay, including suspense	5·86	3·49	— 2·37	...

The gross earnings per mean mile worked per week averaged Rs. 377 against Rs. 423 and were realized at a cost of 71·20 per cent. against 57·83 per cent. in the corresponding half of the previous year.

The percentage of working expenses to gross earnings for the year 1898 was 59·74 against 56·77 for 1897.

The net earnings amounted to Rs. 28,212-9-11, which gives a return at the rate of 6·97 per cent. per annum on the capital outlay, including suspense.

Gross Earnings.

The following table shews the gross earnings for the two half-years:—

—	Half-year ending Dec. 1897.	Half-year ending Dec. 1898.	Difference.	
			Amount.	Per cent.
	Rs.	Rs.	Rs.	Rs.
Coaching	27,166	21,846	— 5,320	— 19·58
Goods	82,619	75,770	— 6,849	— 8·29
Electric Telegraph	89	116	+ 27	+ 30·34
Steam-boat	...	...	...	...
Sundries	126	233	+ 107	+ 84·92
Total ...	1,10,000	97,965	— 12,035	— 10·94

Abstract H.—*Coaching Traffic.*—The number of passengers of the various classes carried, including Troops and Police and Season tickets, and the earnings therefrom, are as follows:—

—	First Class.		Second Class.		Third Class.		Total.	
	No.	Earnings.	No.	Earnings.	No.	Earnings.	No.	Earnings.
		Rs.		Rs.		Rs.		Rs.
Second half of 1897 ...	1,782	702	7,375½	1,434	325,605	23,647	334,762½	25,783
Second half of 1898 ...	1,969	745	8,038	1,470	261,936	18,231	271,943	20,446

The receipts from passengers' luggage amount to Rs. 797.
The earnings under horse, carriage and dog traffic are Rs. 104.
Parcels for the public shew a receipt of Rs. 287.

Abstract I.—*Goods Traffic.*—The following is a summary of the tonnage of goods lifted and the earnings therefrom, as compared with the corresponding period of 1897 :—

—	Half-year ending December 1897.		Half-year ending December 1898.	
	Quantity.	Earnings.	Quantity.	Earnings.
	Tons.	Rs.	Tons.	Rs.
Merchandise, General	37,042	33,737	35,148	21,027
Military Stores	...	...	...	...
Railway materials for construction	...	...	99	27
Coal (including Locomotive Revenue)	57,147	48,658	89,399	54,112
Revenue Stores (excluding Locomotive Coal) ...	65	15	2,406	408
Other Goods traffic	...	208	...	196
	94,254	82,618	127,052	75,770
Less outstandings irrecoverable or not recovered ...	...	...	...	...
Total ..	94,254	82,618	127,052	75,770

The following table shews some of the principal commodities carried during the two half-years:—

—	Half-year ending December 1897.		Half-year ending December 1898.	
	Quantity.	Earnings.	Quantity.	Earnings.
	Tons.	Rs.	Tons.	Rs.
Coal	57,147	48,658	89,399	54,112
Stone and Lime	5,574	4,988	5,544	3,356
Timber	22,337	19,593	20,669	11,501

Working Expenses.

The Kolar Gold Fields Railway is worked by the Madras Railway Company, and the charge to the Mysore Durbar therefor is ascertained in the manner set forth in the foot-note to Statement No. 8 of the printed accounts.

Statistics.

The usual statements accompany this report for the information of the Durbar.

Yours faithfully,

F. DUNSTERVILLE,
Chief Auditor.

MADRAS RAILWAY COMPANY,
Chief Auditor's Office,
Madras, *13th March* 1899.

To

The Agent and Manager,
Madras Railway Company.

Dear Sir,

I beg to report as follows on the working of the Madras-Ennur section of the Bezwada-Madras Railway for the half-year ending 31st December 1898 :—

CAPITAL.

Statements Nos. V, VI and XVIII.—There has been no capital expenditure during the half-year. The total capital outlay (excluding capitalization of abatement of land revenue) from the commencement of operations to the end of the half-year under review is Rs. 5,99,149-15-4, which gives an average of Rs. 70,905 per mile open.

REVENUE.

General Results.

The following table shews the general results of working :—

—	Half-year ending December 1897.	Half-year ending December 1898.	Difference.	
	Miles.	Miles.	Miles.	Per cent.
Mean mileage worked	8·45	8·45	...	...
Train-mileage	14,657	12,064	— 2,593	— 17·69
	No.	No.	No.	
Average number of trains over the whole line daily in both directions...	9·43	7·76	— 1·67	...
	Rs.	Rs.	Rs.	Rs.
Gross Earnings	29,291	17,857	— 11,434	— 39·04
Working Expenses	20,460	12,366	— 8,094	— 39·56
Net Earnings	8,831	5,491	— 3,340	— 37·82
Percentage of Working Expenses to Gross Earnings	69·85	69·25	— ·60	...
Percentage of Net Earnings to Capital Outlay, including Suspense ...	1·49	·92	— ·57	...

The Gross Earnings per mean mile worked per week averaged Rupees 81 against Rupees 133 and were realized at a cost of 69·25 per cent. against 69·85 per cent. in the corresponding half of the previous year.

The percentage of Working Expenses to Gross Earnings for the year 1898 was 58·07 against 63·20 for 1897.

The Net Earnings amounted to Rs. 5,490-10-9, which gives a return of 1·83 per cent. per annum on the total capital outlay including suspense.

Gross Earnings.

The following table shows the Gross Earnings for the half-year under review :—

——	Half-year ending December 1897.	Half-year ending December 1898.	Difference.	
			Amount.	Per cent.
	Rs.	Rs.	Rs.	Rs.
Coaching	16,963	15,310	− 1,653	− 9·74
Goods	12,215	2,461	− 9,754	− 79·85
Electric Telegraph	15	24	+ 9	+ 60·00
Steam-boat	.....	.....	.....	.....
Sundries	98	62	− 36	− 36·73
Total ...	29,291	17,857	− 11,434	− 39·04

Abstract H.—*Coaching Traffic.*—The number of passengers of the various classes carried including troops and police and season tickets, and the earnings therefrom, are as follows :—

——	First Class.		Second Class.		Third Class.		Total.	
	No.	Earnings.	No.	Earnings.	No.	Earnings.	No.	Earnings.
		Rs.		Rs.		Rs.		Rs.
Second half of 1897 ...	699½	255	1,675	327	263,853½	15,788	266,228	16,370
Second half of 1898 ...	767	334	1,323	300	235,890½	14,013	237,980½	14,647

The receipts from passengers' luggage amount to Rs. 607.

The earnings under Horse, Carriage and Dog traffic are Rs. 21.

Parcels for the Public shew a receipt of Rs. 14.

Abstract I.—*Goods Traffic.*—The following is a summary of the tonnage of goods lifted and the earnings therefrom, as compared with the corresponding period of 1897 :—

——	Half-year ending December 1897.		Half-year ending December 1898.	
	Quantity.	Earnings.	Quantity.	Earnings.
	Tons.	Rs.	Tons.	Rs.
Merchandise, General	22,983	11,606	3,358	2,251
Military Stores	...	...	...	...
Railway materials for construction	66	15	...	...
Coal (including Locomotive Revenue)	8	4	505	183
Revenue Stores (including Locomotive Coal)	4,389	399	223	25
Other Goods Traffic	...	191	...	1
	27,446	12,215	4,086	2,460
Less—Outstandings irrecoverable or not recovered ...	...	...	...	...
Total ...	27,446	12,215	4,086	2,460

The following table shews some of the principal commodities carried during the two half-years :—

——	Half-year ending December 1897.		Half year ending December 1898.	
	Quantity.	Earnings.	Quantity.	Earnings.
	Tons.	Rs.	Tons.	Rs.
Metals—				
Iron	9,811	4,640	702	420
By Plant, &c.—				
Rails and Fish Plates	3,127	2,969	1,362	1,197
Timber	3,411	1,679	97	43

Working Expenses.

The working arrangement is embodied in letter, No. 159, dated 28th February 1896, addressed by you to the Consulting Engineer for Railways, Madras, the chief provisions being that the actual expenditure incurred upon the maintenance and renewal of way, works and stations shall be charged, other expenses to be calculated at the same percentage of the gross earnings of the State line as shall in each half-year be found to represent the percentage of working expenses (exclusive of maintenance and renewal of way, works and stations) on gross earnings of the amalgamated undertaking. Five per cent. of gross earnings of the State line to be paid to Madras Railway for use of rolling stock.

The following figures are taken from the printed accounts :—

	Rs.	A.	P.
Actual outlay on maintenance of way, works and stations...	4,223	7	8
Percentage expenses under other Abstract heads	7,249	14	5
Hire of rolling-stock, &c.	892	13	6

The actual outlay on engineering maintenance, Rs. 4,223, is equal to 23·65 per cent. of the gross receipts, as compared with 13·84 per cent. on the Madras Railway.

The sum of Rs. 7,250 paid to Madras Railway Company for charges under other Abstract heads of expenditure is equal to a payment of Rs. 0-9-7 on each of the 12,064 train miles run over the Madras-Ennur line, while the actual expenditure incurred by the Madras Railway under those heads of expenditure on the whole undertaking amounted to Rs. 1-9-8 per train-mile.

Yours faithfully,

F. DUNSTERVILLE,

Chief Auditor.

No. 301.

MADRAS RAILWAY COMPANY,
MEDICAL OFFICER'S OFFICE,
RAYAPURAM, *3rd March* 1899.

To

THE AGENT AND MANAGER.
Madras Railway.

SIR,

I have the honor to forward you my report on the health of the Company's employés and on the conservancy of stations on both lines for the half-year ending 31st December 1898.

2. 3,003 admission sick certificates were granted during the half-year, as against 5,794 issued in the corresponding half of last year. I must explain that it was formerly the practice for some Apothecaries to include in their returns the cases of out-patients, *i.e.*, those receiving medicine while remaining at duty, but such cases are not now included in my half-yearly report, and that circumstance partly accounts for the large diminution of 2,791 in the cases treated during the half-year under review, compared with last year.

3. *Mortality.*—The number of deaths amongst the Company's employés during the half-year reported to me is 27, and this number includes only those who were being treated by the Company's staff at the time of their decease. No doubt there are others, mostly of the menial class, who go away in serious sickness to their villages to be among their relations, some of whom are never again seen or heard of, and no record can be obtained of the mortality amongst that class. The causes of death were various, the chief one being cholera of which there were six cases. There appear to me to be two noteworthy points in the mortality list *viz.*, no case of mortality from small-pox and only one from malarial fever. There were no less than 1,265 admissions for malarial fever during the half-year, with only one death, and considering that it is malarial fever that contributes so heavily to swell the death roll of Indian towns and villages, it is some satisfaction to me to be able to draw your attention to the solitary instance of mortality, out of 1,265 cases, on the Company's line, and to suggest that this happy record is largely owing to the skill and devotion to patients, which the Apothecary staff exercise in the conduct of their cases. The other circumstance to which I invite your kind notice is the absence of any mortality from small-pox during the half-year, and it has been my privilege, for several successive half-years, to record the same pleasing event. The number of cases of small-pox during each half-year is always small, and the cases are invariably of a benign type, and these circumstances are no doubt to be attributed to the strict manner in which the Company insists that every employé in their service, and every woman and child living on their premises, shall be vaccinated against small-pox. Employés to their credit recognise the beneficent character of the Company's vaccination rules, and not one of those misguided persons called "conscientious objectors," so numerous in some enlightened English towns, are to be found on the Madras Railway.

4. *Cholera.*—There have been thirteen cases of cholera amongst employés during the half-year, five of them at Renigunta, the only town on the line where the disease may be said to have been epidemic. The remaining eight cases were scattered over the line, each one at a different station.

5. *Plague.*—This epidemic had been raging in Bombay, and on the Great Indian Peninsula and Southern Mahratta Railways, for about two years before it invaded any station on the Madras Railway. Unhappily it appeared at Bangalore City Station, obviously imported from

some station on the Southern Mahratta Railway, in the beginning of September 1898. Several employés and members of their families were attacked, both at the Bangalore City and Cantonment Stations, but beyond these few instances no case of plague has occurred at any other station on the Railway. It has only as yet touched the fringe of the Company's system, and it is to be hoped that the active disinfecting measures which the Company's Apothecaries in the infected area are carrying out will prevent any further invasion of Railway premises. Employés on the Bangalore Branch came forward eagerly to be inoculated against plague when the disease was threatening their stations, but at other stations, remote from the infected district, the staff, for various reasons, put off the operation. If the epidemic unfortunately reaches their doors, they, in their turn, will, I am sure, immediately apply for the undoubted benefits of inoculation. I obtained some statistics a few weeks ago at Malur, a village on the Bangalore Branch of the Railway, which show its unquestionable efficacy against plague, and I think they are worth recording. They correspond, I may say, with statistics obtained as to the efficacy of inoculation from all other districts where the operation is practised, and they are perfectly reliable and accurate.

Malur population	3,180
Persons inoculated	377
Do. uninoculated	2,803
Attacks among inoculated	4 = 1·06%
Do. uninoculated	228 = 8%

If the inoculated had been attacked at the same rate as the uninoculated, 30 should have been seized, but only 4 were.

Of the 4 inoculated persons attacked none died, all recovered.

Of the 228 uninoculated attacked 198 died = 87%.

If the inoculated had died at the same rate as the uninoculated, 3½ of them should have died, but they all recovered.

6. *Quarantine.*—It was found necessary during the half-year to place 18 persons in quarantine at an expenditure in wages of Rs. 148-13-10, on account of the appearance of small-pox in their houses, and one person through plague having appeared in his home, the latter drawing Rs. 19-13-0.

7. *Staff.*—The medical and conservancy staff have, as a rule, acquitted themselves in the discharge of their duties to my complete satisfaction.

8. I have inspected all the dispensaries and conservancy arrangements on the line and found the same in good order.

I have the honor to be,

Sir,

Your most obedient servant,

J. CURRIE,
Medical Officer,
Madras Railway.

Comparative statement of cases treated during the half-years ending 31st December 1897 and 31st December 1898.

Date.	Small-pox.	Measles.	Influenza.	Plague.	Simple Fever.	Malarial Fever.	Remittent Fever.	Cholera.	Choleraic Diarrhœa.	Dysentery.	Diarrhœa.	Accidents and other diseases	Total Treated.
1897.													
July	1	...	...	...	22	226	3	2	...	33	57	514	858
August	...	...	...	...	26	296	...	5	...	44	77	503	951
September	...	...	...	...	47	373	2	9	...	52	69	478	1,030
October	...	...	...	...	38	455	...	3	...	38	44	514	1,092
November	...	...	...	...	33	403	...	1	...	36	47	479	999
December	1	..	...	...	34	327	2	...	...	20	30	450	864
Grand Total ...	2	...	...	...	200	2,080	7	20	...	223	324	2,938	5,794
1898.													
July	...	1	5	...	9	191	1	1	...	24	39	178	449
August	...	...	4	...	24	233	...	2	...	36	41	244	584
September	2	...	3	..	21	214	1	2	...	24	25	172	464
October	2	...	2	...	22	217	1	1	...	21	23	204	493
November	1	...	5	4	14	219	...	4	...	28	23	269	567
December	...	...	2	...	13	191	...	3	...	18	30	189	446
Grand Total ...	5	1	21	4	103	1,265	3	13	...	151	181	1,256	3,003

Return of vaccination for the half-year ending 31st December 1898.

No. vaccinated.	Traffic Department. Sex.				Locomotive Department. Sex.				Engineer Department. Sex.			
			Children.				Children.				Children.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
770	1	...	44	...	1	1	...	...	708	15	...	...

MADRAS RAILWAY COMPANY,
LOCOMOTIVE SUPERINTENDENT'S OFFICE,
Perambur Works, 22nd March 1899.

L. S. MOSS ESQ.,
Agent and Manager,
Madras Railway.

SIR,

1. I have the honour to submit my report upon the working of the Locomotive, and Carriage and Wagon Departments, for the half-year ending 31st December 1898.

2. A tabular statement is attached, shewing the expenditure in detail, under each of the several sub-heads of account, as compared with similar figures for the previous and corresponding periods, the general totals as shewn in this statement being as follows:—

Half-year ending.	Mileage.	Total cost of Department including all charges.			Total cost per mile.		
		Rs.	As.	P.	Rs.	As.	P.
December 1897	1,616,892	13,90,471	5	7	0	13	9·11
June 1898	1,551,560	11,87,290	3	5	0	12	2·92
December 1898	1,559,578	12,90,399	14	6	0	13	2·86

3. From a comparison of the figures, the final results of the half-years' working will be found to be—

	Half-year ending 31st December 1898 compared with:—	
	Preceding half-year.	Corresponding half-year.
	Per cent.	Per cent.
Miles run	Increase 0·52	Decrease 3·54
Total cost of Department, including working and repairs of engines, and vehicles, together with loss by exchange, carriage of Revenue Stores, &c.	Increase 8·68	Decrease 7·20
Total cost as above, per mile	Increase 8·13	Decrease 3·79.

which, bearing all the facts in mind, may be said to be fairly satisfactory.

4. A reduction in the mileage worked of 57,314 miles has occurred, and although a corresponding decline in the gross cost of working must necessarily therefore be looked for, there are certain fixed, and non-fluctuating, charges which cannot follow fluctuations in mileage, the effect of which is ordinarily, and as they are distributed over a shorter mileage, to bring about a correspondingly higher gross mileage rate.

5. It is satisfactory therefore to note that, in the half-year in question, the contrary has resulted, and that the gross cost per mile of working has, as a matter of fact, decreased to a greater degree, than has the total mileage run, or rather the total work done, the figures being—

Gross cost of working per mile ... ... Decrease 3·79 per cent.
Mileage run ... ... Decrease 3·54 per cent.

Locomotive Engines: Running.

6. In wages and salaries a reduction is seen under each head, the wages of Drivers and Firemen having fallen by 4·6 per cent., while the total wages of the Running Staff is 3·9 per cent. less than during the corresponding half year.

7. In Fuel there is, I am sorry to say, an increase more or less all round, and this increase may be attributed to several causes.

8. With regard to the Coal, the increase in total consumption per mile amounts to ·68 lbs. the cost being enhanced by pies ·58, and in explanation of this, I would refer to the unfortunate fire that broke out in the coal stacks at Raichur in May 1898.

9. As is recorded in correspondence, a total quantity of 822 tons of coal was destroyed in this fire, the value of this having been written off against the Fire Insurance Fund. You will however probably remember, I mentioned at the Official Meeting in July, when the matter was discussed, that considerable damage had also been done to the rest of the coal in the stacks, which had been on fire, and from the consumption sheets of the Engines which had been using the burnt, or rather scorched, coal, I estimated that it had deteriorated by probably 15 per cent. (Subsequent experience shewed that the more correct figure was probably 30 per cent.)

10. I suggested that a further debit should be passed to the Fire Insurance Fund on ..s account, but it was held that this could not be done, and the coal has therefore been used up as it was, and without allowance.

11. Undamaged coal was issued to all Mail train Engines, the damaged coal being used entirely on the Goods, and Mixed trains. The total quantity so scorched was about 1,855 tons, and as the greater part of this was issued during the half year under reference, this fact will more than account for the increase in the total consumption per mile, appearing in the statement. The increase in the cost, is of course due to the increase in the quantity burnt.

12. There still remained at the close of the half-year, a balance of about 680 tons of the burnt coal which had not then been used, but which is still being issued to all Goods and Mixed trains on the Division. Owing however to the cancelment of the second Mixed train between Gooty and Raichur, the number of Engines using this coal is reduced, and the coal is therefore lasting longer, but I am hoping that, in any case, before the windy season begins, it will all be gone; if not, arrangements will have to be made to eke it out with a larger proportion of good coal.

13. The increase, both in quantity burnt, and cost per mile, under wood is somewhat larger, and in explanation of this I would cite, in the first place, the following figures :—

		Half-year ending December 1898.	Half-year ending December 1897.	Increase per cent.
Total number of vehicles in a Goods train.	Tons.	28·44	27·40	3·80
Average load of a loaded Goods vehicle.	"	6·15	6·07	1·32
Average weight of a Goods train.	"	373·03	367·12	1·61

from which it will be observed, that an appreciable increase in the weight of the trains handled has to be allowed for, and since the greater part of this extra loading has, it is understood, been upon the heavy coal trains working over the Ghaut, and Jalarpet and Bangalore Division, where wood is exclusively used, the effect is naturally felt upon the wood mileage consumption.

14. An immense amount of trouble has been experienced for many months past, in regard to the wood supply, both at Jalarpet, and on the Western Coast.

15. On the Jalarpet District, partly due to the plague, and partly to other reasons, there has been the greatest difficulty in keeping up the supplies, and for months we have been living, so to speak, entirely from hand to mouth. On two or three occasions, the stocks ran down to under a fortnight's consumption, and it was only by taking the most vigorous, and prompt action with the Contractors, that I succeeded in staving off a wood famine.

16. The result of course has been that, not only have we been obliged, in order to keep things going, to accept inferior wood, which had the stocks been larger would have been rejected, but the wood that has come in has perforce had to be burnt green and wet, and as a consequence, in order to maintain steam, the Engines have had to be "flogged," which in its turn has meant considerable waste of fuel.

17. On the West Coast again, due in some measure to the abnormally heavy monsoon, and also to the extension in the use of wood fuel, in Mills and other Factories, which have been established in the Coimbatore and Palghat Districts, and to which reference has been made in previous reports, the supplies have been falling off continually.

18. The Contractors have over and over again demanded increases in their rates, and as the Government Forest Department have never been able to help us, in the matter of the wood supplies in Malabar, it has been a difficult matter to stand against the demands made.

19. Practically the whole of our supplies, on this District, are drawn from the jungles between Podanur and a little west of Olavakkot, and we have never been able to get wood, in any quantity, although several attempts to do this have been from time to time made, on the West Coast itself.

20. In December 1897 I succeeded in getting an offer for a large quantity of wood fuel, which was to be delivered by the back water at Kadalundi, and Ferok, and I hoped by this that I had succeeded in at last tapping a fresh source of supply. Unfortunately however, after a few months working, the quality of the back water wood became so bad, that a very large quantity of it had to be rejected, and the final outcome was that in the new contracts, which were entered into in December 1898, increased rates have had to be given. The new contracts are now working fairly well, and, although the wood, now coming in, is costing more, it is of first rate quality.

21. Although, upon the western half of the S. W. Line, wood fuel will probably, for some years to come, still continue to be used, the opening of the Bezwada-Madras Railway has rendered it possible to bring coal into Madras at a rate, which will enable it to finally oust wood elsewhere. Under the existing arrangements with the Government Forest Department, and with the Native Wood Contractors, we shall have to continue the use of wood on a part of the Jalarpet Division for some few months still, but I am arranging to introduce Singareni coal entirely, on the Arkonam-Nundalur District at once, and will also, so soon as the necessary alterations can be made in the engines, and stocks of coal can be worked up, substitute coal for wood between Jalarpet and Bangalore.

22. A series of trials was conducted during January and February last, to arrive at the relative value, of sea-borne coal from the Gourangdhi Field, and rail-borne Singareni coal, delivered over the B. M. Railway direct from the Mines.

23. The result of these trials is reported in my letter No. B. 2718/210 dated 1st March 1899, to your address, and they seem to shew that the quality of the two fuels is, for locomotive purposes, as nearly as possible similar.

24. It is hoped that the outcome of the new coal contract which has now been entered into, will be a very considerable reduction in the fuel bill in future half years.

25. Under Oil, Tallow, and Waste a slight increase occurs, which is fully accounted for by the still abnormally high price of castor oil.

26. So far as possible, mineral oils of different kinds have been substituted for castor oil, but it seems to be a very difficult thing to ensure that the supplies of these mineral oils shall be of an equable quality.

27. The Vacuum Oil Company, who have a practical monopoly of, at any rate, the Indian Mineral Oil Market, introduces from time to time, with a more or less loud flourish of trumpets, new brands of oil, each and all of which is, when produced, said to be superior to all its predecessors, but, so far as my own experience goes, they all seem to suffer from the same complaint, and each and all sooner or later merges into a more or less, generally a good deal more, unsatisfactory lubricant.

28. Our present brand of Mineral Oil is known as Crank Case Oil, and, as being now delivered, is better than the later shipments of Engine Axle Oil, which it succeeded.

29. So long as Castor Oil maintains its present very high market price, the use of a cheaper oil, for wagon and other stock so far as possible, is compulsory, but there is absolutely no question but that if Castor Oil could only be obtained at a fair price, it is infinitely superior for use in this country to any other oil, whether vegetable, or mineral.

Locomotive Engines: Repairs.

30. A saving in Wages amounting to Rs. 10,509, is found under this head, and, although the total cost of repairs is Rs. 6,447 greater, than the expenditure for the corresponding half-year, the excess is entirely in Materials.

31. During the half-year, 30 engines passed through the Shops, as compared with 31 during the second half of 1897. It had been hoped that two of the new K. $C._2^2$ engines which are under order, would have arrived in India in time to have allowed of their being charged off, during the half-year, but owing to a question that had arisen, as to certain alterations which were thought advisable in the design, their construction was delayed, and the engines have not yet been received.

32. It was found necessary to issue from Stores a larger quantity of material than usual, the following being the chief items:—

	Rs.
Four new locomotive boilers	31,998
Boiler plates, iron and copper	11,135
Boiler tubes, chiefly copper, to replace red metal tubes in the K. $C._2$ and other engines.	45,162
Engine tyres	10,327

33. The necessity for replacing the red metal tubes with tubes of other material, has formed the subject of correspondence, and, until the whole of these are replaced, I fear a somewhat heavy expenditure under this head must be looked for. The new boilers, and the remainder of the boiler material, have been issued to the older engines, of cheifly the K. A. and K. $B._2$ Classes, many of which having now been running since 1877, must be expected to require heavy repairs.

34. The total expenditure upon Engines, Repairs, and Running is, it will be seen, Rs. 1,917 less than the amount for the corresponding term.

Carriages and Wagons: Running.

35. Special remark does not seem to be necessary under this head, although it is noted that there is a reduction under both Material and Wages, the cost per mile, during the half-year, being less by 5·77 per cent. than that during the half-year with which comparison is being made.

Carriages and Wagons: Repairs.

36. 2,620 vehicles were dealt with in the shops during the half-year, as compared with 3,017, which passed through during the second half of the previous year.

37. The last 12 of the Wooden Covered Goods Wagons, and one Low-Sided Wagon, were built, at the cost of Revenue, and the first of the three 58-feet bogie carriages, being built at the cost of Capital, was further completed, and handed over for use on the S. W. Line Mails between Madras and Bangalore.

38. The remaining two carriages are well in hand, and one of them at any rate will, I anticipate, be finished in time for the Easter traffic. The one Carriage that is running is, I believe, much appreciated by the travelling public, many of whom, as it runs of course on alternate days only, time their journeys so as to travel in it, in preference to the ordinary four-wheeled Carriages.

39. Sanction was given for the construction of 46 third class carriages, for which the Traffic Department had applied, as well as for the renewal of some 20 of the Engineering Department Ballast Wagons, in the form of Rail Trucks; but, owing to the proposition that has been put forward by the Consulting Engineer, with regard to the conversion of the gauge of the West Coast District, work upon both these sanctions has been postponed, and it was fortunate therefore that the construction of the Carriage Stock for the B. M. Railway so fitted in, as to have allowed of the utilization of the Carriage Building Shops upon it.

40. Had this not been so, it would have been necessary to temporarily largely reduce hands, pending the settlement of the West Coast Conversion question, and this I should have been most loth to do, since experienced Carriage builders cannot be picked up when wanted, and the body of men whom we have trained from their boyhood in the Workshops, if once dispersed, could probably never have been got together again.

41. The total amount spent under Carriages and Wagons Repairs is Rs. 64,298 less than that for the corresponding half-year, and, since the renewal of the whole of the old 8-ton wagon stock has now been completed, the expenditure under this head is not likely to again vary much.

Staff.

42. Mr. Pilkington, the Deputy Loco. Superintendent, was granted 3 months' privilege leave, from July 1898.

43. Mr. H. J. Stanley, 1st Assistant Loco. Superintendent, was granted furlough for 16 months, and left for England on the 3rd November 1898.

44. Mr. E. Outon, Lathe Shop Foreman, who, as recorded in my last half-year's report, was granted 6 months' leave, returned to duty on the 21st October 1898.

45. Covenanted Drivers Howard, and Malthouse, who were engaged by the Board on agreements for 3 years, arrived in India, and reported themselves for duty on the 5th December last.

46. Mr. O. Horrocks, who had been in the Company's service since August 1864, resigned his appointment at the close of the year. Mr. Horrocks was granted leave for two months during November and December and finally made over charge, and retired, on the 31st December 1898. In consideration of his long and faithful service, a special recommendation has been submitted in his behalf, for a gratuity of 12 months' pay of which, as advised, the Board have been good enough to approve.

I have the honour to be,

Sir,

Your most obedient servant,

C. E. PHIPPS,

Locomotive Superintendent.

MADRAS RAILWAY.

Abstract of Expenditure for working and maintaining Locomotive Engines, Carriages and Wagons for the Half-year ending 31st December 1898.

LOCOMOTIVE DEPARTMENT.

LOCOMOTIVE ENGINES—Running.

Half-year ending	Total Engine Miles worked.	Wages and Salaries: Drivers and Firemen. Rs.	A.	P.	Cleaners, Water and Fuel Coolies. Rs.	A.	P.	Total. Rs.	A.	P.	Cost per Mile. Rs.	A.	P.	Coal and Patent Fuel: Total Consumption. Quantity. Cwts.	Cost. Rs.	A.	P.	Per Mile. Quantity. Lbs.	Cost. Rs.	A.	P.
Dec. 1897 ...	1,616,892	1,48,726	0	7	41,628	6	10	1,90,354	7	5	0	1	10·60	368,566¼	2,54,073	8	9	49·59	0	4	10·60
June 1898 ...	1,551,560	1,43,660	0	2	41,155	0	8	1,84,815	0	10	0	1	10·87	362,375¼	2,44,618	5	0	49·26	0	4	8·99
Dec. 1898 ...	1,559,578	1,41,943	10	1	41,065	7	8	1,83,009	1	9	0	1	10·53	379,972	2,60,909	3	5	50·27	0	4	11·18

Half-year ending	Firewood: Total Consumption. Quantity. Lbs.	Cost. Rs.	A.	P.	Per Mile. Quantity. Lbs.	Cost. Rs.	A.	P.	Average Cost per Mile of Coal, Patent Fuel and Firewood. Rs.	A.	P.	Oil, Tallow, Waste, &c.: Actual Cost. Rs.	A.	P.	Cost per Mile. Rs.	A.	P.	Total Cost. Rs.	A.	P	Cost per Mile. Rs.	A.	P.
Dec. 1897 ...	100,631,750	2,13,842	7	6	128·29	0	4	4·34	0	4	7·56	32,981	11	1	0	0	3·92	6,91,252	2	9	0	6	10·08
June 1898 ...	92,202,525	1,95,930	5	10	126·72	0	4	3·70	0	4	6·52	36,842	11	4	0	0	4·56	6,62,206	7	0	0	6	9·95
Dec. 1898 ...	99,812,950	2,12,102	8	3	139·99	0	4	9·11	0	4	10·23	34,380	7	10	0	0	4·23	6,90,401	5	3	0	7	0·99

LOCOMOTIVE ENGINES—Repairs.

Half-year ending	Total Engine Miles worked.	Cost of: Material. Rs.	A.	P.	Wages of Workmen. Rs.	A.	P.	Total Cost. Rs.	A.	P	Cost per Mile. Rs.	A.	P.
Dec. 1897 ...	1,616,892	1,28,546	0	1	1,38,035	5	10	2,66,581	5	11	0	2	7·66
		74,302	2	5				2,12,337	9	3	0	1	1·21
June 1898 ...	1,551,560	74,672	5	5	1,21,287	5	5	1,95,959	10	10	0	2	0·25
Dec. 1898 ...	1,559,578	1,45,501	1	4	1,27,526	14	8	2,73,028	0	0	0	2	9·61

Figures in red show actual expenses after deducting value of two locomotive engines replaced at cost of Revenue in the corresponding half-year.

LOCOMOTIVE ENGINES—Gross Cost of Running and Repairs.

Running, Total Cost. Rs.	A.	P.	Repairs, Total Cost. Rs.	A.	P.	Proportion of Supervision and Office Expenses. Rs.	A.	P.	Total Cost. Rs.	A.	P.	Deduct for K. G. F. Ry., Madras-Ennur Ry. and Fire Insurance Fund. Rs.	A.	P.	Nett Total. Rs.	A.	P.	Cost per Mile. Rs.	A.	P.
6,91,252	2	9	2,66,581	5	11	66,341	9	2	10,24,175	1	10	27,534	0	7	**9,96,641**	**1**	**3**	**0**	**9**	**10·35**
			2,12,337	9	3				9,69,931	5	2				9,42,397	4	7	0	9	9·81
6,62,206	7	0	1,95,959	10	10	71,008	15	2	9,29,175	1	0	22,846	14	8	**9,06,328**	**2**	**4**	**0**	**9**	**4·15**
6,90,401	5	3	2,73,028	0	0	71,875	7	7	10,35,304	12	10	40,580	8	0	**9,94,724**	**4**	**10**	**0**	**10**	**2·46**

CARRIAGE AND WAGON DEPARTMENT.

CARRIAGES AND WAGONS—Running.

Half-year ending	Total Engine Miles worked.	Cost of: Material. Rs.	A.	P.	Wages of Workmen. Rs.	A.	P.	Total Cost. Rs.	A.	P.	Cost per Mile. Rs.	A.	P.
Dec. 1897 ...	1,616,892	17,885	10	3	20,102	0	5	37,987	10	8	0	0	4·51
June 1898 ...	1,551,560	17,482	4	4	20,248	5	2	37,730	9	6	0	0	4·67
Dec. 1898 ...	1,559,578	14,831	1	10	19,756	12	10	34,587	14	8	0	0	4·25

CARRIAGES AND WAGONS—Repairs.

Cost of: Material. Rs.	A.	P.	Wages of Workmen. Rs.	A.	P.	Total Cost. Rs.	A.	P.	Cost per Mile. Rs.	A.	P.
1,38,299	14	8	97,716	2	6	2,36,016	1	2	0	2	9·93
88,986	8	3	73,685	13	0	1,62,672	5	3	0	2	2·91
96,052	2	2	75,665	13	4	1,71,717	15	6	0	2	2·8

CARRIAGES AND WAGONS—Gross Cost of Running and Repairs.

Running, Total Cost. Rs.	A.	P.	Repairs, Total Cost. Rs.	A.	P.	Proportion of Supervision and Office Expenses. Rs.	A.	P.	Total. Rs.	A.	P.	Deduct for K. G. F. Ry., Madras-Ennur Ry. and Fire Insurance Fund. Rs.	A.	P.	Nett Total. Rs.	A.	P.	Cost per Mile. Rs.	A.	P.
37,987	10	8	2,36,016	1	2	19,816	5	7	2,93,820	1	5	8,061	3	7	**2,85,758**	**13**	**10**	**0**	**2**	**9·93**
37,730	9	6	1,62,672	5	3	22,423	14	0	2,22,826	12	9	5,405	8	4	**2,17,421**	**4**	**5**	**0**	**2**	**2·91**
34,587	14	8	1,71,717	15	6	17,968	13	11	2,24,274	12	1	6,215	4	10	**2,18,059**	**7**	**3**	**0**	**2**	**2·8**

SUMMARY—*Total Gross Cost of Working the Locomotive and Carriage and Wagon Department.*

Half-year ending	Locomotives, Total Cost. Rs.	A.	P	Carriages & Wagons, Total Cost. Rs.	A.	P	Total Cost. Rs.	A.	Cost per Mile. Rs.	A.	P.	Loss by Exchange and Carriage of Revenue Stores. Rs.	A.	P.	Final Total Cost of Working. Rs.	A.	P.	Final Total Cost per Mile. Rs.	A.	P.
December 1897	9,96,641	1	3	2,85,758	13	10	12,82,399	15	0	12	8·28	1,08,071	6	6	**13,90,471**	**5**	**7**	**0**	**13**	**9·11**
	9,42,397	4	7				12,28,156	2	1	12	1·84	87,281	2	6	13,15,437	4	11	0	13	0·20
June 1898	9,06,328	2	4	2,17,421	4	5	11,23,749	6	0	11	7·06	63,540	12	8	**11,87,290**	**3**	**5**	**0**	**12**	**2·92**
December 1898	9,94,724	4	10	2,18,059	7	3	12,12,783	12	0	12	5·30	77,616	2	5	**12,90,399**	**14**	**6**	**0**	**13**	**2·86**

PERAMBUR WORKS,
22nd March 1899.

C. E. PHIPPS,
Locomotive Superintendent.

MADRAS RAILWAY COMPANY,
TELEGRAPH ENGINEER'S OFFICE,
ARKONAM, 21*th February* 1899.

No. 8806/615.

THE AGENT AND MANAGER,
Madras Railway.

DEAR SIR,

REPORT FOR THE HALF-YEAR ENDING 31st DECEMBER 1898.

I beg to submit my report for the half-year ending 31st December 1898.

OFFICES AND FITTINGS.

Telegraph instruments, fittings, &c., were shifted and refixed at the following stations in consequence of alterations to station buildings by the Engineering Department :—

Ambattur.
Oorgaum.
Tirur.
Koduru.
Razampeta.

Needle and block instruments were fixed at the undermentioned stations on the Nilgiri Mountain Railway and brought into use on the 1st October 1898 :—

Mettupalaiyam.
Kullar.
Adderley.
Hill Grove.
Runnymede.
Coonoor.

The block instruments and the telephones were transferred from the wooden bunk into the new block cabin at Rayapuram.

Tangal Station on the Ennur Line was closed and the needle instrument there transferred to Korukkupett, which was re-opened.

ELECTRIC STARTING SEMAPHORES.

The Electric Starting Semaphores at the undermentioned stations were renewed :—

South-West Line.			*North-West Line.*		
Arcot	...	Down.	Kamalapuram	...	Down.
Tiruvallam	...	Up.	Rayalcheru	...	Up.
Lakkiti	...	Down.	Tungabhadra	...	Down.
Ottapalam	...	Down.			

The levers of the undermentioned Electric Starting Semaphores were shifted into new pits owing to alterations of station buildings :—

Erode Down.
Olavakkot Up.

The terminal post of the Up Electric Semaphore at Ferok was renewed.

Comparative statement of percentage of semaphore failures for the half-year ending 31st December 1898.

—	Half-year ending 31st December 1897.	Half-year ending 31st December 1898.
Total number of semaphore operations (not including those for ballast and locomotive wood trains)	154,364	146,907
Number of failures—		
(*a*) Due to Station Staff	89	55
(*b*) Due to faults in apparatus caused by lightning and interference without Inspector's knowledge ...	36	41
(*c*) Due to faults in apparatus	98	99
Total ...	223	195
Percentage of failures to number of operations	0·14	0·13

LINE WORK.

Telegraph alignments at the undermentioned stations were altered :—

Buddireddipatti.
Mettupalaiyam.
Nandalur.

The office standard at Bangalore City was shifted and cross-over wires were altered to enable the Engineering Department to erect covering over the passenger platform at that station.

A telegraph post was erected and wires raised at Mulanur in order to prevent the water coolies interfering with them.

Telegraph rail posts at $\frac{25}{9,10\&11}$ near Trivellore were lengthened and wires raised to enable the Engineering Department to extend ballast siding.

Telegraph posts $\frac{257}{4\text{ to }8}$ were shifted to enable the Engineering Department to carry out the alteration to locomotive sidings at Gooty.

Insulators on No. 2 needle circuit were renewed between Salem and Podanur.

Time signal wires which were led to the old telegraph workshops were dismantled and new wires erected from 43/3 mile to the new telegraph workshops at Arkonam.

The following telegraph posts were renewed :—

South-West Line, $\frac{336}{3}$, $\frac{348}{14}$, $\frac{365}{13}$, & $\frac{387}{1}$.

Nilgiri Branch, $\frac{306}{2}$ & $\frac{310}{20}$.

Lakkiti Station yard, 1 post.

North-West Line, $\frac{110}{8}$, $\frac{167}{1}$, $\frac{168}{1\&13}$, $\frac{169}{1\text{-}4\&11}$, $\frac{173}{10}$, $\frac{176}{8\&9}$, $\frac{178}{4}$, $\frac{179}{3\&10}$, $\frac{183}{4\&5}$, $\frac{191}{4\&15}$, $\frac{193}{18}$, $\frac{194}{4}$, $\frac{196}{7}$, $\frac{198}{15}$, $\frac{202}{11}$, $\frac{204}{10\&12}$, $\frac{205}{9}$, $\frac{207}{7\&12}$ & $\frac{227}{5\&11}$.

LIGHTNING CONDUCTORS.

A lightning conductor with finial was erected on the Locomotive Foreman's bungalow at Nandalur.

BELL CIRCUIT.

The gate bell fixed in the station bunk was shifted to the adjacent Gateman's bunk at Veyasarpaudy.

The following are comparative statements of interruptions on the telegraph and block circuits :—

INTERRUPTIONS ON TELEGRAPH LINES.

—	Interruptions caused by the neglect and carelessness of Signallers.	Accidental interruptions.	Total.
Half-year ending 31st December 1898 ...	8	39	47
Half-year ending 31st December 1897 ...	1	48	49

Of the accidental interruptions—

14 were due to instrumental faults.
12 „ „ to line faults.
8 „ „ to unknown causes.
3 „ „ to weak signals.
2 „ „ to battery faults.

INTERRUPTIONS OF BLOCK SECTIONS.

—	Miles open.	No. of Circuits.	Interruptions caused by the neglect and carelessness of Signallers.	Accidental interruptions.	Total.
Half-year ending 31st December 1898...	874½	131	17	82	99
Half-year ending 31st December 1897...	857½	126	12	66	78

Of the accidental interruptions—

35 were due to instrumental faults.
13 „ „ to line faults.
4 „ „ to battery faults.
30 „ „ to lightning.

INTERCOMMUNICATION.

The undermentioned vehicles were fitted with electrical intercommunication appliances at Perambur Works :—

—	Vehicles newly fitted.	Vehicles refitted.
Bogie composite	1	...
Covered goods	12	6
Third-class carriages	...	34
First-class carriages	...	7
Engines	...	12
Second-class carriages	...	2
Brake vans	...	5
Baggage vans	...	3
Horse boxes	...	19
Ballast wagon	...	1
Carriage trucks	...	6
Tank wagon	...	1
Post office vans	...	4
Bogie engine	...	1

Statement showing the working of electrical intercommunication in trains.

—	Half-year ending 31st December 1897.	Half-year ending 31st December 1898.
Total mileage of fitted trains	1,278,243	1,265,172
Mileage of fitted trains with complete communication ...	1,272,915	1,256,951
Percentage of interruption	0·41	0·65

List of cases in which electrical intercommunication was used and trains stopped during the half-year.

Date.		Particulars taken from the Guard's Journals.
1898.		*Fire.*
August	17	The 4-45 o'clock train was stopped near Kulipalaiyam Station to extinguish fire on O. G. 271.
September	13	The 4-45 o'clock train was stopped at $\frac{250}{18}$ mile to extinguish fire on C. G. 116.
December	5	The 18-15 o'clock mail train was stopped at $\frac{213}{18}$ mile to extinguish fire on A. 24.
		Safety of Passengers and Public Property.
July	7	The 20-0 o'clock train was stopped at Avadi immediately after being put in motion, in consequence of the Gateman opening the door of a third-class brake van and trying to push in two third-class passengers while the train was in motion.
August	25	The 9-0 o'clock train was stopped at 193rd mile owing to a large bundle of wool having dropped from O. G. 865.
September	21	The 18-30 o'clock mail train was stopped at Jalarpet west points to detect a passenger who jumped into brake van while the train was in motion.
,,	29	The 18-30 o'clock mail train was stopped near Erode to detect three passengers who jumped into train while the train was in motion.
October	19	The 12-45 o'clock train was stopped at Bisanattam after being started to pick up the Collector on Plague Duty, who could not catch the train in time.
November	5	The 13-43 o'clock train was stopped after starting from Mulanur owing to another train having been sighted in the opposite direction.

ELECTRIC CLOCKS.

Statement showing the working of the electric clocks during the half-year.

—		1898. July.	August.	September.	October.	November.	December.	Mean of six months.
Clock failures.	Caused through circumstances beyond Signaller's control. per cent.	0·00	0·19	0·78	1·52	0·39	0·00	0·48
	Caused through the negligence of Signallers. ,,	0·76	0·00	1·18	1·14	0·57	0·76	0·90
Clock errors 2 minutes and over ... ,,		0·19	0·00	0·39	0·00	0·00	0·00	0·10
Do. under 2 minutes but 1 minute and over. ,,		0·00	0·00	0·00	0·00	0·00	0·00	0·00
Do. under 1 minute ... ,,		99·05	99·81	97·65	97·34	98·04	98·86	98·46
Clock stopped ... ... ,,		0·00	0·00	0·00	0·00	0·00	0·38	0·06
		100·00	100·00	100·00	100·00	100·00	100·00	100·00

Appended is a statement showing the total cost of maintenance of the Electric Telegraph during the half-year under report.

Yours faithfully,

JOHN B. DUNCAN,

Ag. Telegraph Engineer.

MADRAS RAILWAY COMPANY,
TRAFFIC MANAGER'S OFFICE,
MADRAS, 1*st April* 1899.

To

THE AGENT AND MANAGER,
Madras Railway Company,
RAYAPURAM.

SIR,

I have the honor to submit my report upon the traffic of the Madras Railway for the half-year ending 31st December 1898.

2. OPEN MILEAGE.—The open mileage (including the Kolar Gold Fields and Madras-Ennur Railways worked by the Madras Railway Company) on the 31st December 1898 was the same as on the 30th June 1898, viz., 859 miles.

3. TRAIN SERVICE.—A revised train service was introduced on the 16th November 1898.

Down Trains—S. W. Line.

No. 75 a new Local Passenger train leaves Madras at 5-45 for Trivellore.

No. 111 Local Passenger train leaves Madras at 17-35 instead of 17-30 and is cancelled from Trivellore to Arkonam.

No. 31 Mixed train leaves Salem at 18-40 instead of 19-0.

No. 87 Mail train leaves Madras at 18-15 instead of 18-30, Mettupalaiyam arrival 9-24 instead of 9-40 and Calicut 14-9 instead of 14-22.

No. 83 Mixed train leaves Arkonam at 4-50 instead of 5-0, Jalarpet arrival 11-50 instead of 12-15.

No. 17 Mixed train leaves Madras at 5-0 instead of 4-45 and arrives at Coimbatore 18-47 instead of 18-17.

No. 73 Mixed train leaves Madras at 19-0 instead of 13-0 and arrives at Katpadi 1-55 instead of 20-45.

No. 121 Mixed train leaves Podanur at 18-45-instead of 18-30 and arrives at Olavakkot at 21-5 instead of 20-48.

Up Trains—S. W. Line.

No. 206 a new Local Passenger train leaves Trivellore at 7-20 for Madras.

No. 172 Local Passenger train is cancelled from Arkonam to Trivellore and leaves Trivellore at 19-40 instead of 20-50 and arrives at Madras 21-0 instead of 22-5.

No. 102 Mixed train leaves Mettupalaiyam at 20-25 instead of 21-25 and arrives at Madras 18-45 instead of 19-0.

No. 30 Mixed train leaves Coimbatore at 5-20 instead of 5-40 and arrives at Arkonam 11-30 instead of 11-42 and is cancelled beyond Arkonam.

No. 42 Mail train leaves Calicut at 9-40 instead of 9-15 and arrives at Madras 7-0 instead of 6-30.

No. 132 Mixed train leaves Calicut at 12-20 instead of at 12-30 and arrives at Podanur at 22-10 instead of 22-11.

No. 8 Mixed train leaves Jalarpet at 8-0 as before and is extended to Madras where it arrives at 20-45.

Down Trains—Bangalore Branch.

No. 149 Mixed train leaves Jalarpet at 14-30 as before but does not run beyond Bowringpet.

No. 151 Mixed train leaving Bangalore Cant. at 6-0 is cancelled.

Up Trains—Bangalore Branch.

No. 50 Mixed train leaves Bangalore City at 12-45 as before but does not run beyond Bowringpet.

Down Trains—N. W. Line.

No. 37 Passenger train leaves Madras at 9-0 as before and arrives at Gooty at 4-4 instead of 4-26.

No. 39 Mixed train leaves Madras at 13-30 instead of 18-40 and arrives at Riachur at 1-15 instead of 5-45.

No. 181 Mixed train leaves Arkonam at 9-10 instead of 9-15 and arrives at Renigunta at 12-24 instead of 12-30.

No. 81 Mail train leaves Madras at 18-45 instead of 20-45 and arrives at Raichur as before stopping at 14 additional stations.

Up Trains—N. W. Line.

No. 14 Mail train leaves Raichur at 15-0 as before and arrives at Madras at 6-15 instead of 5-45.

No. 32 Mixed train leaves Gooty at 21-10 instead of 20-42 and arrives at Madras at 15-20 instead of 16-0.

No. 4 Mixed train leaves Raichur at 0-5 instead of 0-45 and arrives at Arkonam at 3-20 instead of 3-35.

No. 28 Mixed train leaves Arkonam at 7-0 instead of 6-50 and arrives at Madras at 9-25 as before.

Rayapuram, Palghat and Nilgiri Branches.

Rayapuram, Palghat and Nilgiri Branch trains have been re-timed to connect with the altered main line trains.

Down Trains—Madras-Ennur Railway.

No. 195 Mixed train leaves Rayapuram at 18-5 instead of 18-0 and arrives at Ennur at 18-47 instead of 18-45.

4. FARES AND RATES.—The **PASSENGER FARES** were not altered during the half-year ending 31st December 1898. They are shown below :—

First class	... ...	12 pies.
Second class	... ...	6 „
Third class { Mail	... ...	2½ „
Third class { Other trains	... ...	2 „

The following changes in the **GOODS RATES** were made during the half-year :—

JULY.

Commodities.	Conditions.	Rates per md. per mile.	Alterations.	Rates per md. per mile.	Remarks.
Wool, Loose ...	In wagon loads of 81 mds.	0·666 pie.	In wagon loads from Bangalore to *via* Itarsi for Traffic to Cawnpore, Agra and *via*.	0·333 pie.	To create new traffic.

AUGUST.

Commodities.	Conditions.	Rates per md. per mile.	Alterations.	Rates per md. per mile.	Remarks.
Chillies, Dry ...	In wagon loads Madras to Bombay at O. R.	4 annas per wagon per mile.	In wagon loads between Madras and Bombay.	3 annas per wagon per mile.	In competition with sea traffic.
Flour ...	O.R. ...	0·370 pie. ...	In wagon loads of (270 mds.) at O. R. between Bombay and Madras.	0·132 pie.	Do.
Grain and Seeds...	In wagon loads of (270 to 324 mds.) at O.R.	0·200 pie.	In wagon loads of 270 to 324 mds. at O. R. from *via* Raichur to Bangalore for traffic from G.I.P. and connected Railways.	0·128 pie.	Equalization of rates.
Horns ...	At O.R. from Madras to Bombay.	0·296 pie.	Between Madras & Bombay.	0·180 pie.	In competition with see traffic.
Oats ...	In wagon loads of 8 tons at O.R. for distances of 350 miles and over.	0·204 pie.	*Via* Raichur to Bangalore for traffic from Poona.	0·131 pie.	Equalization of rates.
Twist ...	From Bombay to Madras.	0·353 pie.	Between Bombay & Madras.	0·262 pie.	In competition with see traffic.

DECEMBER.

Cotton, Pressed to 25 lb. and over.	From Devangiri to to Madras *via* Bangalore City.	0·592 pie.	Cotton pressed to over 25 lb.	0·356 pie.	To Equalise with the longer route.
Grain and Seeds, Common.	In wagon loads of 270 to 324 mds at O.R. between *via* Raichur and Bangalore.	0·128 pie.	For traffic from I. M. Ry. Stations *via* Raichur.	0·118 pie.	Equalization with the rate *via* Guntakul.
Cotton, Loose in Borahs.	At O. R. in wagon loads of 90 mds. from Raichur to Guntakul.	1·111 pie.	At O. R. wagon loads of 90 mds. from Raichur to Guntakal.	0·888 pie.	To bring down loose cotton to Guntakal to be pressed there and rebooked.

The rates here given do not include the many rapid and temporary changes which have taken place in consequence of the Marmagoa dispute, as the commodities and rate lists which would have to be included to make them intelligible, even to a Traffic Officer, would necessitate an appendix.

5. TRAFFIC TRAIN MILES.—The traffic train mileage for the December half-years of 1897 and 1898 is shown in the following table :—

Allocation.	Description of train.	December 1897. Madras Railway.	K. G. F. Railway.	Madras-Ennur Railway.	Total.	December 1898. Madras Railway.	K. G. F. Railway.	Madras-Ennur Railway.	Total.
		Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Coaching...	Mail	322,736	...	...	322,736	322,736	...	...	322,736
	Passenger	169,698	...	...	169,698	170,866	...	...	170,866
	Special	1,570	...	...	1,570	3,995	...	64	4,059
	Troops	6,490	...	...	6,490	1,799	...	...	1,799
Mixed ...	Ordinary	616,020	14,750	12,000	642,770	573,657	14,720	12,000	600,377
Goods ...	Ordinary	46,943	...	1,607	48,550	47,839	...	...	47,839
	Extra	92,914	4,214	...	97,128	94,534	4,674	...	99,208
	Ballast trains for construction.	...	...	...	...	459	...	...	459
	Light engines ...	36,795	360	76	37,231	26,863	530	...	27,393
	Maintenance ...	8,991	...	974	9,965	10,892	...	...	10,892
	Fuel	16,495	...	...	16,495	17,344	...	...	17,344
	Total ...	1,318,652	19,324	14,657	1,352,633	1,270,984	19,924	12,064	1,302,972

Excluding maintenance and fuel mileage the total train mileage of the Madras Railway was 1,242,748 against 1,293,166 for the corresponding period of 1897 or a decrease of 50,418 miles, equivalent to 3·90 per cent.

Taking the figures as shown in the Capital and Revenue accounts where Mixed and Light Engine mileage is divided between the Coaching and Goods traffic, a decrease of 28,311

occurs in Coaching and 22,107 in Goods train mileage on the Madras Railway, a decrease of 1,428 in Coaching and an increase of 2,028 in Goods on the K. G. F. S. Railway, and an increase of 852 in Coaching and a decrease of 2,471 in Goods on the Madras-Ennur Railway.

6. GROSS AND NET TRAFFIC FOR YEARS 1889 to 1898.—The following table is designed to show the gross traffic receipts, total expenses, net receipts, number of passengers, tonnage of goods, traffic expenses, and percentage of traffic expenses on gross receipts, for 10 years ending 31st Dec. 1898.

Years.	Gross Receipts.	Total Expenses.	Net Receipts.	No. of Passengers carried including Troops and Police.	Tons of Goods carried including Railway Material and Revenue Stores.	Expenses of Traffic Department.	Percentage of Traffic Expense on Gross Receipts.
	Rs.	Rs.	Rs.	No.	No.	Rs.	Rs.
1889 ...	91,10,895	53,72,473	37,38,422	8,528,953	1,097,441	7,99,976	8·7
1890 ...	95,06,134	49,84,654	45,21,480	8,433,081	1,193,415	8,20,687	8·6
1891 ...	93,44,688	54,38,158	39,06,530	8,240,222½	1,177,910	8,54,582	10·9
1892 ...	96,24,670	53,32,537	42,92,133	8,889,950	1,118,857	8,43,744	8·8
1893 ...	1,05,05,036	50,83,294	54,21,742	9,826,256	1,156,894	8,99,985	8·6
1894 ...	1,03,21,012	53,73,150	49,47,862	10,160,062½	1,076,542	8,69,955	8·4
1895 ...	1,12,08,407	53,29,676	58,78,731	8,983,791	1,129,221	8,31,875	7·4
1896 ...	1,08,80,251	54,94,961	53,85,290	9,723,265	1,117,213	8,61,827	7·9
1897 ...	1,14,65,314	54,63,126	60,02,188	10,073,753½	1,239,848	8,25,838	7·2
1898 ...	1,07,20,483	52,18,578	55,01,905	8,331,703	1,166,416	8,49,896	7·9

7. GROSS AND NET EARNINGS.—Compared with the corresponding period of 1897 the earnings from all sources for the half-year ended December 1898 were Rs. 50,85,747 against Rs. 56,75,752 or a decrease of Rs. 5,90,005 equivalent to 10·40 per cent.

The net earnings were Rs. 23,45,016 against Rs. 29,12,551 or 46·11 per cent. of Revenue.

The working expenses were Rs. 27,40,731 against Rs. 27,63,200 or 53·89 per cent. of Revenue.

The average receipts per train mile were Rs. 4·00 against Rs. 4·30 in consequence of light trains owing to plague.

8. The increases and decreases in the gross earnings are shown in the following table :—

Heads.	Earnings.		Increase.	Decrease.	Net decrease.
	Half-year ending Dec. 1897.	Half-year ending Dec. 1898.			
	Rs.	Rs.	Rs.	Rs.	Rs.
Passengers	18,45,458	14,23,915	...	4,21,543	
Troops and Police ...	78,222	61,544	...	16,678	
Passengers' luggage ...	86,995	66,226	...	20,769	
Parcels	1,69,623	1,49,232	...	20,391	
Parcels (Revenue) ...	3,370	3,178	...	192	
Horses, carriages and dogs.	37,901	34,520	...	3,381	
Special trains	366	2,570	2,204	...	
Goods	31,96,980	31,02,852	...	94,128	
Goods (Revenue) ...	64,929	86,966	22,037	...	
Railway material ...	871	5,423	4,552	...	
Live stock	19,588	12,370	...	7,218	
Rents and demurrage ...	7,025	6,862	...	163	
Miscellaneous	5,015	5,755	740	...	
Haulage of postal vans ...	24,917	24,470	...	447	
Sundries	1,24,723	91,277	...	33,446	
Telegraph	9,769	8,587	...	1,182	
Total ...	56,75,752	50,85,747	29,533	6,19,538	5,90,005

9. The net decrease in the working expenses is explained as follows :—

Heads.	Expenditure.		Increase.	Decrease.	Net decrease.
	Dec. 1897.	Dec. 1898.			
	Rs.	Rs.	Rs.	Rs.	Rs.
Permanent way	6,27,504	7,03,741	76,237	...	
Locomotive	10,79,084	10,55,342	...	23,742	
Repairs to carriages and wagons.	3,11,387	2,35,058	...	76,329	
Traffic	4,21,155	4,29,914	8,759	...	
General charges	2,82,841	2,72,281	...	10,560	
Special and miscellaneous ...	41,229	44,395	3,166	...	
Total ...	27,63,200	27,40,731	88,162	1,10,631	22,469

10. PASSENGER TRAFFIC.—The receipts from passengers (exclusive of troops and police) were Rs. 14,23,914 against Rs. 18,45,459 or a decrease of Rs. 4,21,545 equivalent to 22·84 per cent. The lowest class contributed in money 87·05 per cent. against 90·12 per cent. and in number 98·64 per cent. against 98·84 per cent.

11. The receipts from each class of passengers are shown in the following table :—

Half-years ending	First class.	Second class.	Third class.	Total.
	Rs.	Rs.	Rs.	Rs.
31st Dec. 1898	88,357	95,981	12,39,576	14,23,914
Do. 1897	83,571	98,665	16,63,223	18,45,459
Increase in 1898	4,786	...	...	...
Decrease in 1898	...	2,684	4,23,647	4,21,545
Increase per cent.	5·73	...	...	...
Decrease do.	...	2·72	25·47	22·84

12. The numbers carried in each class were :—

Half-years ending	First class.	Second class.	Third class.	Total.
	No.	No.	No.	No.
31st Dec. 1898	9,978	39,008	3,554,861½	3,603,847½
Do. 1897	11,189	45,403	4,821,593	4,878,185
Increase in 1898	...	...	...	...
Decrease in 1898	1,211	6,395	1,266,731½	1,274,337½
Increase per cent.	...	...	...	...
Decrease do.	10·82	14·08	26·27	26·12

13. The percentage of numbers and average mileage of each class were as follows :—

Periods.	Percentage of numbers.			Average mileage.		
	First class.	Second class.	Third class.	First class.	Second class.	Third class.
Half-year ending 31st Dec. 1898.	0·28	1·08	98·64	*149	95	32
Do. do. 1897.	0·23	0·93	98·84	155	110	32

* What would seem to be an consistency in the decreased average mileage of 1st class passengers is due to decrease of Rs. 2,139-6-6 in 1st class periodical ticket receipts, and to the manner in which, under Government orders a periodical ticket-holder is counted as 40 single journey passengers.

14. The average fare paid by each class of passenger was:—

Period.	First class.	Second class.	Third class.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Half-year ending 31st December 1898... ...	8 13 9	2 7 4	0 5 7
Do. do. 1897... ...	7 7 6	2 2 9	0 5 6

15. The following statement shows numbers of and receipts from Troops and Police for the two half years :—

Half-years.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
31st Dec. 1898 ...	521	5,859	4,604½	18,306	27,155	37,379	32,280½	61,544
Do. 1897 ...	594	5,458	6,102½	28,216	33,988	44,549	40,684½	78,223
Increase in 1898 ...	...	401	...	...	...	...	...	...
Decrease in 1898 ...	73	...	1,498	9,910	6,833	7,170	8,404	16,679
Increase per cent. ...	...	7·35	...	...	...	...	...	...
Decrease per cent. ...	12·29	...	24·55	35·12	20·10	16·09	20·66	21·32

16. In the first class passenger traffic there was a decrease of 10·82 per cent. in number and an increase of 5·73 per cent. in money. In the 2nd class there was a decrease of 14·08 per cent. in number and 2·72 per cent. in money. In the 3rd class there was a decrease of 26·27 per cent. in number and 25·47 per cent. in money. The average sum paid by a third class passenger by *all* trains was annas 5-7 against annas 5-6. The average value by *Mail* trains was annas 11-8 against annas 11-10 The percentage of numbers carried by the *Mail* trains was 18 against 17 and by *other* trains 82 against 83.

It is difficult to explain the increase in 1st class passenger receipts, unless it is due to Periodcal ticket-holders, (whose tickets were not renewed owing to plague in Bangalore) being compelled to travel a larger number of times than they anticipated, giving the Railway more revenue from single fares than would have accrued from the Periodical tickets.

The decreases in 2nd and 3rd class passenger traffic were both due to plague, and plague restrictions, particularly the latter, but although it is very discouraging to see passengers frightened away from the Railway, and to receive the weekly returns shewing a regular decrease in revenue while additional labour and anxiety are imposed upon the Railway Staff, and while, instead of a corresponding reduction in Staff the reverse is demanded by the circumstances of the case, still the only reasonable course open to Government seems clearly to be that which is being followed.

17. The Return fare and Festival traffic is shewn in the following table :—

Half-years ending.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
31st Dec. 1898..	724	2,431	9,052	3,879	194,971	9,034	204,747	15,344
Do. 1897...	2,556	3,785	14,193	6,142	225,208	11,488	241,957	21,415
Increase in 1898...	...	...	...	...	...	...	...	...
Decrease in 1898...	1,832	1,354	5,141	2,263	30,237	2,454	37,210	6,071

18. The number of 3rd class passengers booked by all trains on different sections of the line, in the second half-years of 1897 and 1898, is shown in the following table :—

Between	Half-year ending Dec.		Increase per cent.	Decrease per cent.
	1897.	*1898.		
Madras to Jalarpet	1,630,493	1,247,801	...	23·47
Tirupattur to Podanur	664,286	486,138	...	26·82
Bangalore Branch	544,072	320,624	...	41·07
Nilgiri Branch	272,333	195,030	...	28·39
Madukarai to Calicut	575,631	481,245	...	16·39
Tiruttani to Cuddapah	463,738	333,404	...	28·11
Krishnapuram to Raichur	445,834	222,302	...	50·14
Ex-Great Indian Peninsula, Southern Mahratta, South Indian, Kolar Gold Fields and Madras-Ennur Railways	...	73,347	...	...
Total ...	4,596,387	3,359,891	...	26·90

* As the Audit Department have discontinued the compilation of sectional figures, it is impossible to do more than give approximate figures in this form; but, although the present percentage comparisons are vitiated, the figures will be useful for corresponding periods at a later date.

19. The heavy percentages of decrease in the 3rd class passenger traffic, as shewn in para. 18, although general, do not hide the two Madras Railway Districts in which the most serious epidemics have existed, *viz.*, in the Bangalore and Krishnapuram to Raichur Districts where the approximate decreases appear as 41·07 and 50·14, respectively.

20. PARCELS.—Compared with the corresponding period of 1897 there was a decrease of 1·53 per cent. in number, and of 12·02 per cent. in money. The average receipt per parcel was Rs. 0·76 against Rs. 0·85. The decrease both in the number and receipts from local parcels traffic is partly due to the introduction of conference rates under the mileage system which has led to a proportion of the parcels being sent as Goods, and a further decrease is attributed to the plague.

21. The following table shows the number and revenue derived from parcels for the December half-years of the last ten years :—

Half-years ending December.	Number.		Receipts.		Total.	
	Local.	Foreign.	Local.	Foreign.	Number.	Receipts.
	No.	No.	Rs.	Rs.	No.	Rs.
1889	75,506	51,251	78,504	43,548	126,757	1,22,052
1890	78,803	54,935	76,235	46,952	133,738	1,23,187
1891	69,218	50,688	74,587	44,056	119,906	1,18,643
1892	78,515	55,926	84,815	49,280	134,441	1,34,095
1893	93,638	62,524	99,415	50,007	156,162	1,49,422
1894	108,140	75,382	1,10,192	56,864	183,522	1,67,056
1895	91,015	84,720	85,755	62,170	175,735	1,47,925
1896	89,228	92,931	82,027	62,493	182,159	1,44,520
1897	96,760	103,844	94,659	74,963	200,604	1,69,622
1898	70,375	127,165	70,827	78,405	197,540	1,49,232

22. GOODS TRAFFIC.—Compared with the corresponding period of 1897, the receipts from Goods Traffic (exclusive of Railway Material and Revenue Stores) were Rs. 31,02,852 against Rs. 31,96,980,or a decrease of 2·94 per cent., the tonnage being 471,761 against 509,286 or a decrease of 7·37 per cent. The average sum earned per ton carried was Rs. 6·58 against Rs. 6·28 and the average sum per ton per mile was 8·41 pies against 8·36 pies. The fluctuations in the commodities which contributed to this result are shown in para 25 .

23. The following table is designed to show the weight and revenue of the public goods traffic for the last ten years :—

Years.	Goods traffic exclusive of Madras Railway material and Revenue stores.	Government stores and Foreign Railway material.	For the Public.	
			Weight.	Receipts.
	Rs.	Rs.	Tons.	Rs.
1889	49,78,001	2,13,405	763,428	47,64,596
1890	51,37,890	2,35,771	830,527	49,02,119
1891	53,11,395	2,34,601	840,032	50,76,794
1892	54,68,885	1,07,988	795,128	53,60,897
1893	61,18,911	78,837	878,194	60,49,074
1894	58,10,094	86,071	815,834	57,24,023
1895	60,81,879	77,109	861,067	60,04,770
1896	59,01,797	1,11,687	865,497	57,90,110
1897	64,93,499	84,423	999,413	64,09,076
1898	62,76,681	87,725	947,197	61,88,956

24. Statement showing earnings from and tonnage of goods traffic for the December half-years of 1897 and 1898 :—

Details.	Half-year ending Dec. 1897.	Half-year ending Dec. 1898.
Receipts from goods ... ... Rs.	31,96,980	31,02,852
Tonnage of goods ... ... Tons	509,286	471,761
Average receipt, per ton carried ... ... Rs.	6·28	6·58
Do. per ton per mile ... ... Pies	8·36	8·41

25. The increase and decrease in each important commodity composing the goods traffic for half-year ending 31st December 1898 is detailed in the following statement :—

Description.	Increase.		Description.	Decrease.	
	Tons.	Rs.		Tons.	Rs.
Coal and Coke	33,444	1,29,465	Cotton, Manufactured ...	1,252	16,847
Cotton, Unmanufactured..	5,505	55,685	Dyes and Tans	3,358	21,524
Drugs and Chemicals ...	345	4,856	Grain and Pulse	33,861	1,01,878
Oils	405	17,685	Hides and Skins... ...	6,789	96,628
Oil Seeds	...	13,476	Jute	1,116	10,647
Railway Plant and Rolling Stock.	...	6,164	Liquors	952	5,958
			Metals	4,507	36,365
Salt	1,165	10,977	Oil Seeds	1,868	...
Sugar	5,470	12,845	Paper and Paste Board ...	76	1,578
Tea	31	1,249	Provisions	2,623	3,926
Wool, Raw	71	1,400	Railway Plant and Rolling Stock.	3,985	...
Commodities which yielded a total revenue of less than Rs. 1,000 each during the half-year.	63	529	Spices	1,320	4,069
			Stone and Lime	9,089	1,339
			Timber	5,798	9,856
			Tobacco	787	2,032
			All others Articles of Merchandise.	6,565	25,011
By Decrease	37,525	94,128	Commodities which yielded a total revenue of less than Rs. 1,000 each during the half-year.	81	801
Total ...	84,027	3,48,459	Total ...	84,027	3,48,459

26. The total quantity of Grain carried over the whole system was 92,673 tons, yielding a receipt of Rs. 6,56,708 against 126,534 tons and a receipt of Rs. 7,58,586 or a decrease of 26·76 per cent. in weight and of 13·43 per cent. in money. The average receipt per ton carried was Rs. 7·09 against Rs. 5·99.

A reference to para. 25 will shew an approximate decrease of two lakhs of rupees in grain and skins. The decrease in the revenue from skins was undoubtedly due to plague, and there is evidence that, owing to plague and plague restrictions, local stocks of grain were used in the place of grain ordinarily imported from other Districts. The fortunate increases in our coal and cotton traffic, however, largely helped to balance these decreases.

27. The following table is designed to show the tonnage of Grain *sent* from and *received* at each district during the half-years ending 31st December 1897 and 1898 :—

Districts.	1897.				1898.			
	Sent from		Received in		Sent from		Received in	
	Tons.	Percentage of tons.	Tons.	Percentage of tons.	Tons.	Percentage of tons.	Tons.	Percentage of tons.
Madras	7,022	5·55	11,055	8·74	12,741	13·75	13,304	14·36
North Arcot ...	20,714	16·37	6,954	5·50	10,190	11·00	10,405	11·23
Salem	18,244	14·42	4,084	3·23	5,975	6·45	16,009	17·28
Coimbatore	15,458	12·22	11,244	8·88	1,066	1·15	19,419	20·95
Malabar	8,263	6·53	23,964	18·94	6,041	6·52	5,512	5·95
Cuddapah	2,766	2·18	5,334	4·21	2,059	2·22	2,467	2·66
Bellary	11,017	8·71	15,936	12·59	21,115	22·78	2,687	2·90
South Indian Railway...	9,386	7·42	2,526	2·00	2,558	2·76	5,118	5·52
Great Indian Peninsula Railway.	1,259	0·99	15,942	12·60	15,103	16·30	175	0·19
Mysore Dominions ...	14,366	11·35	10,703	8·46	7,560	8·16	8,769	9·46
Intra	18,039	14·26	18,792	14·85	8,265	8·91	8,808	9·50
Total ...	126,534	100·00	126,534	100·00	92,673	100·00	92,673	100·00

28. The following table shows the tonnage of Grain brought into Madras during the two periods by Sea, by Buckingham Canal, and by the Madras Railway :—

Means of Transport.	1897.	1898.
	Tons.	Tons.
Sea	12,930	33,628
Buckingham Canal	11,207	25,416
Madras Railway	10,600	13,159
Total ...	34,737	72,203

29. The Cotton was contributed by the following Railways and Local stations :—

Stations.	Half-year ending 31st Dec. 1897.			Half-year ending 31st Dec. 1898.		
	Pressed.	Loose.	Total.	Pressed.	Loose.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Southern Mahratta Railway ...	231	2	233	2,590	2	2,592
Adoni	693	150	843	2,183	180	2,363
Raichur	118	22	140	761	48	809
Tadpatri	173	19	192	385	...	385
Guntakal	...	...	...	988	5	993
Yerraguntla	261	1	262	270	10	280
Krishnapuram	19	...	19	...	...	...
Muddanuru	...	...	...	...	...	...
Great Indian Peninsula Railway...	55	52	107	...	24	24
Mysore State Railway	112	...	112	392	...	392
Tiruppur	1,135	54	1,189	912	...	912
Coimbatore...	94	21	115	60	26	86
Somanur	472	...	472	187	4	191
Singanallur	17	...	17	79	...	79
Erode	138	29	167	134	18	152
Sankaridrug	...	...	...	...	...	...
Minor Stations	18	27	45	4	156	160
Total ...	3,536	377	3,913	8,945	473	9,418

30. And was distributed as follows :—

Stations.	Half-year ending 31st Dec. 1897.			Half-year ending 31st Dec. 1898.		
	Pressed.	Loose.	Total.	Pressed.	Loose.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Madras	2,660	20	2,680	7,787	15	7,802
Tadpatri	...	2	2	...	...	...
Adoni	...	58	58	...	47	47
Raichur	...	...	...	26	...	26
Malabar	388	81	469	272	...	272
Guntakal	...	111	111	73	201	274
Southern Mahratta Railway ...	98	23	121	37	1	38
Great Indian Peninsula Railway..	52	30	82	696	...	696
South Indian Railway	13	13	26	31	32	63
Coimbatore District	...	10	10	14	29	43
Bangalore	321	28	349	7	23	30
Minor Stations	4	1	5	2	125	127
Total ...	3,536	377	3,913	8,945	473	9,418

31. The condition in which the Cotton was carried is shown in the following table :—

Condition.	December 1897.		December 1898.	
	Tons.	Rs.	Tons.	Rs.
Loose	377	5,585	473	3,973
Full pressed	3,536	53,507	8,945	1,10,804
Total ...	3,913	59,092	9,418	1,14,777

32. The following table shows the quantity of Cotton brought into Madras during the two half-years under comparison :—

Districts.	1897.	1898.
	Tons.	Tons.
Coimbatore and Salem	1,254	1,078
Bangalore City	...	7
North-West Line	1,028	3,748
Southern Mahratta Railway...	343	2,969
Great Indian Peninsula Railway	55	...
Total ...	2,680	7,802

33. Tonnage of Cotton delivered by Railway and the tonnage exported from Madras during the last and corresponding half-years :—

Periods.	Delivered by Railway at Madras.	Exported at Madras.
	Tons.	Tons.
Half-year ending December 1897	2,680	1,648
Do. do. 1898	7,802	5,590

34. The following statement shows the Cotton traffic during the December half of the last ten years :—

Half-years ending.	Pressed.	Loose.	Total.		Average Receipts per ton carried.
			Weight.	Receipts.	
	Tons.	Tons.	Tons.	Rs.	Rs.
December 1889	10,050	3,123	13,173	1,66,786	$12\frac{1}{2}$
Do. 1890	12,857	4,054	16,911	2,14,792	$12\frac{11}{16}$
Do. 1891	9,635	2,632	12,267	1,51,268	$12\frac{5}{16}$
Do. 1892	5,343	2,118	7,461	1,10,056	$14\frac{3}{4}$
Do. 1893	11,792	3,814	15,606	2,16,645	$13\frac{3}{4}$
Do. 1894	8,420	2,375	10,795	1,56,986	$14\frac{3}{5}$
Do. 1895	8,245	1,562	9,807	1,38,341	$14\frac{1}{10}$
Do. 1896	8,621	1,611	10,232	1,37,714	$13\frac{1}{2}$
Do. 1897	3,536	377	3,913	59,092	$15\frac{1}{10}$
Do. 1898	8,945	473	9,418	1,14,777	$12\frac{1}{5}$

35. The following figures show the Ground-nut traffic during the last ten half-years :—

Periods.	Total Weight.	Total Receipts.
	Tons.	Rs.
Half-year ending 30th June 1894	7,476	26,997
Do. 31st December 1894	3,378	15,101
Do. 30th June 1895	5,769	17,772
Do. 31st December 1895	2,326	7,576
Do. 30th June 1896	5,765	19,055
Do. 31st December 1896	2,401	6,418
Do. 30th June 1897	2,245	7,744
Do. 31st December 1897	2,184	7,915
Do. 30th June 1898	2,790	7,513
Do. 31st December 1898	1,182	3,927

36. Tonnage of Salt carried out of Madras to the various districts during the half-years ending 31st December 1897 and 1898:—

Districts.	1897.		1898.	
	Tons.	Tons.	Tons.	Tons.
Between Madras, Arkonam and Conjeveram ...	...	1,587	...	2,366
Cuddapah	59		35	
Other Stations on North-West Line ...	2,581		2,885	
		2,640		2,920
Arcot and Katpadi	...	2,693	...	3,004
Between Gudiyattam and Vaniyambadi ...	...	1,320	...	1,499
Bangalore	365		307	
Other Stations on Bangalore Branch ...	1,047		1,444	
		1,412		1,751
Salem	258		114	
Other Stations in Salem District ...	2,729		3,091	
		2,987		3,205
Erode, Tiruppur and Coimbatore ...	...	3,546	...	3,549
Southern Mahratta Railway	...	108	...	95
South Indian Railway...	...	276	...	401
Kolar Gold Fields State Railway ...	...	...	...	8
Total ...	...	16,569	...	18,798

37. The following statement shows the Salt carried from certain South West line stations, and the districts to which it was sent :—

Stations.	Half-year ending 31st Dec. 1897.		Half-year ending 31st Dec. 1898.	
	Sent from	Received at	Sent from	Received at
	Tons.	Tons.	Tons.	Tons.
Calicut	5,828	...	5,531	...
Ferok	1,182	...	807	...
Kallayi	143	...	51	...
Tirur	1,227	...	1,429	...
Erode	87	...	60	...
Coimbatore	16	...	24	...
Palghat	...	...	2	...
Salem	12	...	...	...
Vencatachellum	981	...	815	...
Nellore	614	...	251	...
North Arcot District	...	142	...	66
Salem District	...	2,730	...	2,768
Coimbatore District	...	3,043	...	3,074
Malabar District	...	2,594	...	2,025
Cuddapah District	...	1,435	...	1,000
Bellary District	...	18	...	...
Mysore Dominions	...	128	...	37
Total ...	10,090	10,090	8,970	8,970

38. The total quantity of Salt carried over the whole system was 29,327 tons yielding a revenue of Rs. 1,61,526 against 28,162 tons with the revenue of Rs. 1,50,549 in money. The sum earned per ton hauled was Rs. 5·5 against 5·3. The exports from Madras amounted to 18,798 tons or 64 per cent. of the traffic carried.

39. The following table shows the Salt traffic carried out of Madras in each year for the five years ending 31st December 1898 :—

Districts.	1894.	1895.	1896.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.
Between Madras and Conjeveram ...	1,963	1,696	1,333	2,244	4,947
Cuddapah	1,497	1,143	340	119	127
Other Stations on North-West Line ...	6,402	5,443	3,986	4,846	5,341
Arcot and Katpadi	6,146	5,043	4,614	5,014	5,907
Gudiyattam and Vaniyambadi	3,294	3,081	2,437	2,562	3,056
Bangalore	2,281	1,511	556	488	402
Mysore State Railway...	24	30	10	...	...
Other Stations on Bangalore Branch ...	1,707	1,748	1,463	1,980	2,352
Salem	823	149	260	306	126
Other Stations in Salem District ...	5,026	4,621	3,274	4,559	5,560
Erode, Tiruppur and Coimbatore ...	7,897	5,812	4,287	5,852	6,529
Malabar	10	...	...	...	...
Great Indian Peninsula Railway ...	5	70	...	...	...
Southern Mahratta Railway	1,004	428	231	159	342
South Indian Railway	700	858	674	629	785
Kolar Gold Fields State Railway ...	...	...	...	2	8
Total ...	38,779	31,638	23,465	28,760	35,482

40. Approximate Statement of traffic to the Gold Mines for the two half-years ending December 1897 and 1898.

Staples.	Half-year ending Dec. 1897.						Half-year ending Dec. 1898.					
	Total traffic at Bisanattam, Kamasamudram and Bowringpet.		Total traffic at Stations on the K. G. F. S. Ry.		Total.		Total traffic at Bisanattam, Kamasamudram and Bowringpet.		Total traffic at Stations on the K. G. F. S. Ry.		Total.	
	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.
Coal and Coke	4,400	17,191	60,133	2,55,356	64,533	2,72,547	1,363	6,013	88,493	3,80,310	89,856	3,86,323
Timber	9,003	24,399	6,682	58,543	15,685	82,942	768	6,018	9,613	87,791	10,381	93,809
Firewood	5,429	5,359	13,027	17,652	18,456	23,011	6,035	7,125	11,415	12,246	17,450	19,371
Machinery	242	2,680	2,336	34,026	2,578	36,706	653	301	1,849	25,412	2,502	25,713
Unclassified Articles... ...	2,498	28,487	8,431	52,231	10,929	80,718	7,252	51,541	9,214	60,644	16,466	1,12,185
Total ...	21,572	78,116	90,609	4,17,808	112181	4,95,924	16,071	70,998	120,584	5,66,403	136,655	6,37,401

41. A brief explanation of the variations in the commodities referred to in para. 25 is given below :—

		From		To
Coal and Coke—Increase.	Larger despatches of Coal and Coke.	Rayapuram	...	K. G. F. S. Ry.
		Madras	...	Mettupalaiyam.
		Do.	...	Madras-Ennur Ry.
Cotton, Unmanufactured —Increase.	Larger despatches of Cotton Pressed.	Guntakal	...	G. I. P. Railway.
		Adoni	...	Madras.
		Raichur	...	Do.
		S. M. Railway	...	Do.

		From		To
Drugs and Chemicals— Increase...	Larger despatches of Chinchona Bark.	Bowringpet	...	Madras.
		S. M. Railway	...	Coimbatore District.
	Larger despatches of Other Drugs and Chemicals.	Madras	...	Salem District.
		Do.	...	Coimbatore District.
		Do	...	Bangalore Branch.
		Do.	...	S. M. Railway.
		S. M. Railway	...	Madras.
		Do.	...	Coimbatore District.
Oils—Increase ...	Larger despatches of Kerosine Oil.	Rayapuram	...	Bangalore Branch.
		Do.	...	G. I. P. Railway.
		Tirur	...	Coimbatore District.
		Do.	...	Malabar District.
		G. I. P. Railway	...	Madras.
		Do.	..	Bangalore City.
	Larger despatches of Cocoanut Oil.	Shoranore	...	Malabar District.
		Malabar District	...	Bangalore Branch.
		Do.	...	S. M. Railway.
Sugar—Increase ...	Larger despatches of Refined Sugar.	Arcot	...	Madras.
		Bowringpet	...	Do.
		Do.	...	North Arcot District.
		Do.	...	S. M. Railway.
	Larger despatches of Unrefined Sugar.	Tiruppur	...	Malabar District.
		Do.	...	Bellary District.
		Do.	...	S. M. Railway.
		S. I. Railway	...	North Arcot District.
		S M. do.	...	Bellary District.
		Do.	...	Raichur.
Tea—Increase ...	Larger despatches of Tea, Indian.	Madras	...	Bangalore.
		Coimbatore District.		Madras.
		Do.	...	Malabar District.
		Do.	...	G. I. P. Railway.
Wool, Raw—Increase ...	Larger despatches of Wool, Raw.	Madras	...	Bangalore.
		Adoni	...	Do.
		Do.	...	G. I. P. Railway
Cotton, Manufactured— Decrease.	Smaller despatches of Twist and Yarn (European).	Madras	...	Salem District.
		Bangalore City	...	Madras,
		Do.	...	Coimbatore.
		G. I. P. Railway	...	Madras.
		Do.	...	Bellary District.
	Smaller despatches of Twist and Yarn (Indian.)	Madras	...	North Arcot District.
		Do.	...	Bellary District.
		S. M. Railway	...	Do.
	Smaller despatches of Piece Goods (European.)	Madras	...	Bangalore Branch.
		Do.	...	G. I. P. Railway.
		G. I. P. Railway	...	Madras.
	Smaller despatches of Piece Goods (Indian).	Salem	...	Coimbatore District.
		Do.	...	S. M. Railway.
		Coimbatore	...	Malabar District.
Dyes and Tans—Decrease.	Smaller despatches of Myrabolams.	Madras	...	North Arcot District.
		Do.	...	G. I. P. Railway.
		Bangalore City	...	Madras.
		Salem	...	Do.
		Do.	...	S. I. Railway.
	Smaller despatches of Other Dyes and Tans.	Madras	...	North Arcot District.
		Bangalore	...	Madras.
		Do.	...	Salem District.
		Do.	...	Coimbatore District.
		Do.	...	S. I. Railway.
		Vaniyambadi	...	Madras.
		Do.	...	North Arcot District.
		Do.	...	Coimbatore District.
		G. I. P. Railway	...	Madras.

		From		To
Grain and Pulse— Decrease.	Smaller despatches of Wheat.	S. M. Railway	...	Raichur.
		Do.	...	Bellary District.
	Smaller despatches of Rice in the Husk, (Paddy.)	Madras.	...	Coimbatore District.
		Morappur	...	Do.
		Palghat	...	Malabar District.
		S. I. Railway	...	North Arcot District.
		Do.	...	Coimbatore District.
	Smaller despatches of Rice, not in the Husk.	Arcot	...	Malabar District.
		Katpadi	...	Do.
		Do.	...	Bangalore Branch.
		Jalarpet	...	Do.
		Tirupattur	...	Do.
		Do.	...	Malabar District.
		Salem District	...	Coimbatore.
		Do.	...	Malabar District.
		S. M. Railway	...	Bellary District.
		S. I. do.	...	Malabar District.
	Smaller despatches of Jawar and Bajra (Cholum and Cumbu).	Salem	...	Bellary District.
		Do.	...	G. I. P. Railway.
		Tiruppur	...	Salem.
		Do.	...	G. I. P. Railway.
		Do.	...	S. M. Railway.
		S. M. Railway	...	Salem District.
		Do.	...	Bellary District.
	Smaller despatches of Gram and Pulse.	Salem District	...	Madras.
		Do.	...	Bangalore Branch.
		Do.	...	S. I. Railway.
		Do.	...	G. I. P. Railway.
		Coimbatore District		Madras.
		Do.	...	Malabar District.
		Do.	...	S. M. Railway.
		Do.	...	G. I. P. Railway.
Hides and Skins— Decrease...	Smaller despatches of Cattle Hides, Dressed or Tanned.	Arcot	...	Madras.
		Vaniyambadi	..	Do.
		Coimbatore	...	Do.
		Do.	...	Malabar District.
	Smaller despatches of Cattle Hides, Raw.	Madras	...	North Arcot District.
		G. I. P. Railway	...	Madras.
		S. M. do.	...	North Arcot District.
		Do.	...	Madras.
	Smaller despatches of Sheep Skins, Dressed or Tanned.	Mailpatti	...	Madras.
		Bangalore	...	Do.
		G. I. P. Railway	...	Do.
Jute - Decrease ...	Smaller despatches of Jute, Raw.	S. M. Railway	...	Madras.
		Do.	...	Raichur.
		Coimbatore District		S. I. Railway.
	Smaller despatches of Gunny Bags and Cloth.	Madras	...	North Arcot District.
		Do.	...	Bangalore Branch.
		Do.	...	S. M. Railway.
		S. M. Railway	...	Katpadi.
		Do.	...	Coimbatore District.
Liquors—Decrease ...	Smaller despatches of Beer.	Mettupalaiyam	...	Madras.
		Do	...	Bangalore Branch.
	Smaller despatches of Spirits.	Arcot	...	Madras.
		Do.	...	Cuddapah District.
		Do.	...	Bellary District.
		Do.	...	S. I. Railway
		S. M. Railway	...	Bellary District.
	Smaller despatches of Wines.	Madras	...	Mettupalaiyam.
		Do.	...	Bangalore.
Metals—Decrease ...	Smaller despatches of Copper, Unwrought.	Madras	...	Coimbatore District.
	Smaller despatches of Brass, Unwrought.	Madras	...	Katpadi.
		Do.	...	Salem District.
		Do.	...	Coimbatore District.
	Smaller despatches of Copper, Wrought.	Coimbatore	...	Salem.
		Do.	...	Tiruppur.
	Smaller despatches of Brass, Wrought.	North Arcot District		S. I. Railway.
		Do.	...	Bangalore Branch.
		Coimbatore	...	Malabar District.
		Do.	...	S. M. Railway.

		From		To
Metals—Decrease (*contd.*)	Smaller despatches of Cast Iron and Steel.	Madras	...	Mettupalaiyam.
		Do.	...	Bangalore Branch.
		Do.	...	S. M. Railway.
		K. G. F. S. Railway		Madras.
	Smaller despatches of Unwrought Iron and Steel.	S. M. Railway	...	Do.
		Do.	...	Gooty.
		Bangalore Branch	...	Madras.
		Do.	...	K. G. F. S. Railway.
	Smaller despatches of Wrought Iron and Steel.	Madras	...	Bangalore Branch.
		Do.	...	K. G. F. S. Railway.
		Rayapuram	...	Madras-Ennur Ry.
	Smaller despatches of Manufactured Iron and Steel.	Madras	...	Bangalore.
		Do.	...	S. M. Railway.
		Rayapuram	...	Mettupalaiyam.
		Do.	...	K. G. F. S. Railway
	Smaller despatches of Other Metals.	Madras	...	Coimbatore District.
		Malabar District	...	Do.
Oil Seeds—Decrease ...	Smaller despatches of Til or Gingelli seeds.	Tiruppur	...	Madras.
		Do.	...	Malabar District.
		S. M. Railway	...	Madras.
		Do.	...	Erode.
		Do.	...	Malabar District.
		G. I. P. Railway	...	Madras.
		Do.	...	North Arcot District.
	Smaller despatches of Earthnuts (Ground-nut seeds).	Tiruttani	...	Madras.
		Do.	...	S. I. Railway.
		Nagari	...	Do.
	Smaller despatches of Castor seeds.	Salem District	...	Madras.
		Do.	...	Coimbatore District.
		Do.	...	Bellary District
		Coimbatore District.		Madras.
		Do.	...	Sankaridrug.
Paper and Paste Board—Decrease ...	Smaller despatches of Paper and Paste Board.	Madras	...	Bangalore Branch.
		G. I. P. Railway	...	Madras.
		Do.	...	Mettupalaiyam.
Provisions—Decrease ...	Smaller despatches of Dried Fruits and Nuts.	Vaniyambadi	...	Madras.
		Do.	...	Adoni.
		Do.	...	Raichur.
		Malabar District	...	Adoni.
	Smaller despatches of Other Provisions.	Madras	...	Bangalore Branch.
		Tiruppur	...	Madras.
		Do.	...	Malabar District.
		Do.	...	S. I. Railway.
		Mettupalaiyam	...	Madras.
		Do.	...	Coimbatore District.
		Do.	...	S. I. Railway.
		Ferok	...	S. M. Railway.
		Do.	...	Bangalore Branch.
		S. M. Railway	...	Madras.
		Do.	...	Bellary District.
Railway Plant and Rolling Stock—Decrease.	Smaller despatches of Steel Rails and fish plates.	Rayapuram	...	Madras-Ennur Ry.
Spices—Decrease ...	Smaller despatches of Betel Nuts.	Madras	...	North Arcot District.
		Do.	...	S. I. Railway.
		S. M. Railway	...	Madras.
		Do.	...	Cuddapah District.
		Do.	...	Bellary District.
	Smaller despatches of Chillies.	Madras	...	North Arcot District.
		S. M. Railway	...	Madras.
		Do.	...	Cuddapah District.
		Do.	...	Bellary District.
		Bangalore Branch	...	North Arcot District.
		Do.	...	S. I. Railway.
	Smaller despatches of Other Spices.	North Arcot District		Salem District.
		Do.	...	Bangalore Branch.
		Cuddapah District	...	Madras.
		Do.	...	S. I. Railway.
		Do.	...	G. I. P. Railway.

		From		To
Stone and Lime—Decrease ...	Smaller despatches of Stone and Lime.	Rayapuram	...	Madras-Ennur Ry.
		Ambattur	...	Madras.
		Avadi	...	Do.
		Do.	...	Madras-Ennur Ry.
		Tirupattur	...	K. G. F. S. Railway.
		Do.	...	Bangalore Branch.
Timber—Decrease ...	Smaller despatches of Timber.	Madras	..	Bangalore Branch.
		Do.	...	K. G. F. S. Railway.
		Puttur	...	Madras.
		Renigunta	...	Do.
		Mullanur	...	Kamasamudram.
		Devankundi	...	K. G. F. S. Railway.
		Malur	...	Do.
		Palghat	...	S. I. Railway.
		Do.	...	Salem
Tobacco—Decrease ...	Smaller despatches of Unmanufactured Tobacco.	Coimbatore	...	Malabar District.
		Razampeta	...	Madras.
		S. M. Railway	...	Do.
		Do.	...	Bellary District.
		Do.	...	Bangalore Branch.
	Smaller despatches of Manufactured Tobacco, Cigars.	Coimbatore	...	Madras.
		Do.	...	Bangalore Branch.
		S. I. Railway	...	Do.
All other Articles of Merchandise—Decrease.	Smaller despatches of All Other Articles of Merchandise.	Madras	...	K. G. F. S. Railway.
		Bowringpet	...	Bangalore Branch.
		Bangalore	...	Madras.
		Do.	...	K. G. F. S. Railway.
		Sankaridrug	...	S. I. Railway.
		Palghat	...	K. G. F. S. Railway.
		Do.	...	Coimbatore.
		Do.	...	Bangalore Branch.
		Calicut	...	Coimbatore.

42. The interchange of the principal commodities with Foreign Railways during the two half-years under review, was as follows:—

Commodities.	1897.		1898.	
	Tons.	Rs.	Tons.	Rs.
Coal and Coke	57,278	2,20,734	90,538	3,51,257
Cotton, unmanufactured	731	8,383	3,887	33,139
Do. manufactured	3,680	44,416	3,886	46,009
Dyes and Tans	6,929	58,053	5,501	46,383
Grain and Pulse	57,294	3,19,336	43,171	2,90,050
Hides and Skins	12,689	1,66,328	7,194	89,442
Liquors	1,888	18,016	1,443	16,633
Metals	3,811	37,377	2,452	29,798
Oils	2,957	26,573	3,279	36,376
Oil Seeds	10,074	52,871	9,677	68,713
Provisions	10,204	71,464	9,227	72,158
Railway Plant and Rolling Stock..	7,380	1,931	2,173	6,167
Salt	2,651	9,946	2,716	16,731
Spices	4,911	47,934	3,357	38,039
Sugar	8,827	40,977	13,528	48,756
Timber	23,985	97,684	24,040	1,11,336
Tobacco	2,056	18,760	1,948	19,503
All other Articles of Merchandise.	13,187	1,47,807	13,204	1,57,763
Total ...	230,532	13,88,590	241,221	14,78,303

43. ABSTRACT OF COMMODITIES.—A detailed statement of the principal commodities carried during the half-year under review will be found printed on pages 20, 21 and 22 of the Capital and Revenue Accounts prepared by the Chief Auditor for the half-year ending December 1898.

44. WORKING EXPENSES.—The net Increase of Rs. 8,759 in the working expenses of the Traffic Department is shewn in detail in Statement No. 20 of the Appendix. It is more than covered by Mr. Byron's gratuity, Rs. 7,000, and increased loss by exchange, Rs. 3,734.

45. GENERAL.—The competitive trouble is again with us, having made its re-appearance in September, 1898 (as explained in para. 19 of a Madras Railway note on the Marmagoa question) but in a much more serious form than previously.

(*a*). The four Railways concerned have had both collective and independent agreements since the development of the competing lines in Southern India, but none of these agreements can possess any permanent stability in the absence of a principle which would prevent unnecessary and unreasonable competition between Indian Railways. If either Railway withdraws from such an agreement a rates-war may be said to be immininent at any time, because the action of Railways concerned then depends entirely upon individual views of what is, or is not, fair and reasonable competition instead of upon a fixed principle. The only known solution of this difficulty which has stood the test of time is the English Railway Clearing House principle advocated in Government of India Order No. 1446. R. T, dated 12th December, 1887 (vide paras 4 and 30 of the note sent to the Board on the Marmagoa question).

(*b*). The revenue of the Madras Railway during the half-year under review was practically unaffected by the competition which took place in December. This competition was dealt with in para. 22 of the Marmagoa note. But an additional complication has since presented itself, the Southern Mahratta Railway having refused to forward traffic from their Stations to Madras by the Madras Railway routes *via* Guntakal or *via* Bangalore, even when so consigned by the senders. This position has been taken up openly by the Southern Mahratta Railway with European as well as Native* senders, and is believed to be without parallel in the history of either English or Indian Railways, at least during the last 25 years. In England it would certainly be illegal. The Government Solicitor, Madras, states that, in his opinion, it is also illegal in India unless the sender accepts a receipt note indicating the route by which the traffic is to be compulsorily diverted instead of the route shewn on the forwarding note. In England such receipt notes are not issued by Railways. In India they are absolutely necessary though it is self-evident that their introduction was not intended to permit any Railway to evade the spirit if not the letter, of the law by forcibly diverting traffic from a route by which the sender desired it to be forwarded. If the Madras and other Railways concerned decided to follow the example set by the Southern Mahratta Railway it is difficult to see where the matter would end. The Agent and Manager has requested the Madras Government to refer this new feature to the Government of India.

*See paras 4 and 29 of the Madras Railway note on the Marmagoa question.

(*c*) In addition to the policy just described the Southern Mahratta Railway have now quoted in conpetition with the Great Indian Peninsula, Madras and South Indian Railways the lowest rates which, under their contract, they are permitted to quote as follows:—

All special Class Goods.	For all other Class Goods 1 to 5, inclusive.
$\frac{1}{10}$ pie per maund, per mile	$\frac{1}{6}$ pie per maund, per mile

without restriction as to loading, and the rates by the broad-gauge route, as well as for through traffic over the South Indian Railway have been correspondingly reduced, except where it has been possible to balance Southern Mahratta Railway, reductions by defensive increases, a course which both the Great Indian Peninsula and Madras Railway, have been

compelled to adopt to minimise, as far as possible, any loss in revenue from Goods traffic, which may be expected to take place during the first half of 1899. As an illustration of this the cotton rates from Adoni may be taken both with Bombay and with Madras:—

(1) Existing through rate per maund for full-pressed cotton, Adoni to Bombay, *via* Raichur.			(2) Proposed through rate as under (1) notified by Southern Mahratta Railway *via* Guntakul and Marmagoa.			(3) Through rate as under (1) as increased *via* Guntakul and Marmagoa by Madras Railway defensive revision.	
	Miles.			Miles.			Revision.
M. Ry.	43	Rs. 0 3 8	M. Ry.	32	Rs. 0 2 11		Rs. 0 5 8
G. I. P. Ry.	443	„ 0 12 2	S. M. Ry.	235	„ 0 3 3		„ 0 3 3
			W. I. P. Ry.	51	„ 0 0 9		„ 0 0 9
		Rs. 0 15 10*	B.I.S.N.Co.	253	„ 0 1 0		„ 0 1 0
					Rs. 0 7 11		Rs. 0 10 8*

* The *via* Raichur rate will be reduced to Annas 10·8 per maund.

(1) Do. per maund per mile.		(2)		(3)	
M. Ry.	0·926 pie.	M. Ry.	0·926		2·000 pies.
G. I. P. Ry.	0·330 „	S. M. Ry.	0·166		0·166 pie.
		W. I. P. Ry.	0·176		0·176 „
		B. I. S. N. Co.	0·047		0·047 „

Immediately Madras merchants hear of these reductions in the Bombay rates they will expect the same rates per maund per mile as *via* Raichur to be applied to Madras and the Bombay shipping freights being lower than from Madras it seems probable this concession will have to be made to prevent all the cotton from going to Bombay. The through rate from Adoni to Madras will then stand at Rs. 0—6—8 per maund instead of Rs. 0—8—6, as at present. The action of the Southern Mahratta Railway in these matters scarcely seems to accord with the idea of a truce which it was understood had been temporarily arranged between the Great Indian Peninsula and Southern Mahratta Railway Boards.

(*d*) A self inflicted loss which is also being imposed upon the Southern Mahratta Railway on traffic from Southern Mahratta Railway Stations to Madras is also difficult to understand though its object may perhaps be clear to Government Officers. The compulsory diversion of traffic for Madras *via* the Dharmavaram route referred to in para. (*b*) gives the Southern Mahratta Railway considerably less revenue than if it travelled by the shorter routes *via* Guntakal or *via* Bangalore as follows:—

		S. M. Ry. proportion. Through rates per Maund for Grain.	Per Maund per Mile.
	Miles		
Mysore to Madras.			
Via Bangalore	86	Rs. 0 2 11	0·333 pie
Via Dharmavaram	197	„ 0 1 9	0·104 „
Paschamvahini to Madras.			
Via Bangalore	78	Rs. 0 2 8	0·333 pie
Via Dharmavaram	189	„ 0 1 7	0·101 „
Hospet to Madras.			
Via Guntakal	71	Rs. 0 2 6	0·333 pie
Via Dharmavaram	134	„ 0 1 4	0·119 „
Bellary to Madras.			
Via Guntakal	31	Rs. 0 1 4	0·333 pie
Via Dharmavaram	94	„ 0 0 9	0·100 „

If, therefore, the average loss to the Southern Mahratta Railway in revenue is say one anna per maund and if it is correctly reported that 40 wagons per day have been diverted to the Dharmavaram route for 48 days at an average of 108 maunds or 4 tons per wagon, there would be a loss of Rs. 12,960. That the Southern Mahratta Railway staff have received direct instructions to send traffic *viâ* Dharmavaram at the lower proportions is clear from their Circular No. R 13, dated 10th March 1899, a copy of which reached me, apparently from Dharwar, and 15 copies of which are sent herewith. In the majority of cases the rate obtained by the Southern Mahratta and South Indian Railways for carrying this diverted traffic *viâ* Dharmavaram is $\frac{1}{10}$th of a pie per maund per mile, whereas by the shorter routes the Southern Mahratta Railway would obtain normal rates.

(*e*) If the Boards of the Great Indian Peninsula, Southern Mahratta, South Indian and Madras Railways could agree that pending a final settlement of the question there shall be no lower rates either through or by re-booking than those in force by the shortest route between any forwarding and receiving station or place, on either of the four Railways (except that the *viâ*, Marmagoa through or local rates, to or from Southern Mahratta Railway Stations only, with shipping and all other charges included shall be fixed at, say, 4 pies per maund less than the all rail route or such other sum as the Southern Mahratta and Great Indian Peninsula Boards could agree to as a temporary measure equal class and other conditions to apply) the truce could be fairly and satisfactorily applied until controversial points had been disposed of subsequently. The present temporary arrangement is all in favor of the Southern Mahratta Railway.

NILGIRI MOUNTAIN RAILWAY.—The Nilgiri Mountain Railway was worked experimentally for Goods traffic from 1st until 28th October, with results which have already been communicated to the Board.

46. APPENDICES.—

The undermentioned statements are enclosed :—

1. Coaching traffic Receipts in each month.
2. Goods do. do.
3. Comparison of Coaching Receipts for 1897 and 1898.
4. Do. Goods do. do.
5. Average Receipts per mile open and per mile run during 1897 and 1898.
6. Expenditure table for 1897 and 1898.
7. Percentage of Working Expenses for 1897 and 1898.
8. Do. Revenue do. do.
9. Passenger traffic exclusive of return fares and soldiers for 1898.
10. Average Receipts per mile open do. do.
11. Passenger traffic inclusive of return fares but exclusive of soldiers for 1898.
12. Average Receipts per mile open do. do.
13. Return fare traffic for 1898.
14. Comparison of Passenger traffic inclusive of return fares but exclusive of soldiers for 1897 and 1898.
15. Comparison of Passenger traffic exclusive of return fares and soldiers for 1897 and 1898.
16. Comparison of Return fare traffic for 1897 and 1898.
17. Parcels, Treasure and Passengers' luggage for 1897 and 1898.
18. Gross Earnings and Tonnage of Goods traffic.
19. Comparison of Goods traffic for 1897 and 1898.
20. Comparative statement of Traffic Expenses for 1897 and 1898.
21. Table of Coaching traffic in and out at stations for 1897 and 1898.
22. Table of Goods do. do. do. do.

I have the honor to be,
Sir,
Your most obedient servant,
(Signed) F. W. READ,
Traffic Manager.

APPENDIX

TO

TRAFFIC MANAGER'S HALF-YEARLY REPORT FOR 31st December 1898.

1. *Coaching Traffic receipts in each month for the half-year ending* 31*st December* 1898.

Months.	Passengers.		Passengers' luggage.		Carriages, horses and dogs.		Parcels.		Special trains.	Miscellaneous.	Haulage of Post Office vehicles.	Total.
	Passengers and season tickets.	Troops and Police.	Ordinary.	Military.	Ordinary.	Military.	Ordinary.	Revenue.				
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
July	2,99,092	6,495	9,110	463	4,701	263	27,469	637	...	763	4,077	3,53,070
August	2,94,007	9,127	9,749	918	4,933	543	30,079	579	...	313	4,064	3,54,312
September	2,22,076	11,515	7,727	868	4,610	420	20,948	512	1,080	70	4,058	2,73,884
October	1,98,672	9,453	9,430	1,787	8,806	354	22,718	512	210	14	4,080	2,56,036
November	1,89,014	13,189	12,231	2,057	4,194	591	21,670	470	1,080	126	4,064	2,48,636
December	2,21,054	11,815	9,360	2,526	3,807	1,298	26,348	468	200	134	4,127	2,81,137
Total...	14,23,915	61,544	57,607	8,619	31,051	3,469	1,49,232	3,178	2,570	1,420	24,470	17,67,075

2. *Goods Traffic receipts in each month for the half-year ending* 31*st December* 1898.

Months.	Merchandise and military stores and coal for the public.	Railway materials for construction.	Revenue stores.	Live stock.		Rents and demurrage.	Miscellaneous.	Total.
				Ordinary.	Military.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
July	5,78,819	600	9,547	949	...	1,277	809	5,92,001
August	5,48,081	912	21,251	1,397	61	1,041	1,075	5,73,818
September	4,88,482	1,125	13,997	1,870	52	882	662	5,07,070
October	4,84,142	2,083	15,681	1,954	551	1,090	461	5,05,962
November	4,77,050	352	20,956	2,300	232	945	802	5,02,637
December	5,26,278	351	5,534	1,981	1,023	1,627	526	5,37,320
Total ...	31,02,852	5,423	86,966	10,451	1,919	6,862	4,335	32,18,808

3. *Comparison of the Coaching traffic for the half-years ending December* 1897 *and June and December* 1898.

Half-years.	Passengers.		Passengers' luggage.		Carriages, horses and dogs.		Parcels.		Special trains.	Miscellaneous.	Haulage of Post Office vehicles.	Total.
	Passengers and season tickets.	Troops and Police.	Ordinary.	Military.	Ordinary.	Military.	Ordinary.	Revenue.				
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
December 1897 ...	18,45,458	78,222	62,788	24,207	33,467	4,434	1,69,623	3,370	366	971	24,917	22,47,823
June 1898 ...	18,39,135	84,765	70,428	19,870	41,560	5,289	1,56,591	2,992	...	1,002	24,434	22,46,066
December 1898 ...	14,23,915	61,544	57,607	8,619	31,051	3,469	1,49,232	3,178	2,570	1,420	24,470	17,67,075

4. *Comparison of the Goods traffic for the half-years ending December 1897 and June and December 1898.*

Half-years.	Merchandise and military stores and coal for the public.	Railway material for construction.	Revenue stores.	Live stock.				Rents and demurrage.	Miscellaneous.	Total.
				Ordinary.		Military.				
				Horses.	Other live stock.	Horses.	Other live stock.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
December 1897...	31,96,980	871	64,929	3,359	6,543	9,686	...	7,025	4,044	32,93,437
June 1898...	31,73,829	3,903	67,883	2,162	6,350	8,618	...	6,190	3,531	32,72,466
December 1898...	31,02,852	5,423	86,966	3,684	6,767	1,919	...	6,862	4,335	32,18,808

5. *Average receipt per "mile open" and per "mile run" for the same periods.*

Period.	Per mile open.	Per mile run.
	Rs.	Rs.
Half-year ending December 1897	6,756·85	4·30
Do. do. June 1898	6,708·02	4·45
Do. do. December 1898	6,054·46	4·00

6. *Table of expenditure for the half-years ending December 1897 and June and December 1898.*

Period.	Permanent way.	Locomotive.	Repairs to carriages and wagons.	Traffic.	General charges.	Special and miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Half-year ending December 1897...	6,27,504	10,79,084	3,11,387	4,21,155	2,82,841	41,229	27,63,200
Do. do. June 1898...	5,41,515	9,57,248	2,30,042	4,19,982	2,86,478	42,582	24,77,847
Do. do. December 1898...	7,03,741	10,55,342	2,35,058	4,20,914	2,72,281	44,395	27,40,731

7. *Percentage of working expenses for the same periods.*

Period.	Permanent way.	Locomotive.	Repairs to carriages and wagons.	Traffic.	General charges.	Special and miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Half-year ending December 1897...	22·71	39·05	11·27	15·24	10·24	1·49	100·00
Do. do. June 1898...	21·86	38·63	9·28	16·95	11·56	1·72	100·00
Do. do. December 1898...	25·68	38·50	8·58	15·69	9·93	1·62	100·00

8. *Percentage of revenue for the same periods.*

Period.	Permanent way.	Locomotive.	Repairs to carriages and wagons.	Traffic.	General charges.	Special and miscellaneous.	Profits.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Half-year ending Dec. 1897...	11·05	19·01	5·49	7·42	4·98	0·73	51·32	100·00
Do. do. June 1898...	9·61	16·99	4·08	7·45	5·08	0·76	56·03	100·00
Do. do. Dec. 1898...	13·84	20·75	4·62	8·45	5·36	0·87	46·11	100·00

9. *Passenger traffic, exclusive of return fares and soldiers, in each month for the half-year ending December 1898.*

Months.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
July	1,456½	13,556	5,265½	16,792	701,354	2,66,008	708,076	2,96,356
August	1,473½	12,510	4,700½	13,384	714,971	2,64,270	721,145	2,90,164
September	1,413	12,105	4,837	13,885	530,238½	1,93,672	536,488½	2,19,662
October	1,655	15,410	5,035½	15,136	457,348	1,65,969	464,038½	1,96,515
November	1,425	14,216	4,292	13,704	461,752½	1,59,496	467,469½	1,87,416
December	1,831	18,127	5,825½	19,201	494,226½	1,81,128	501,883	2,18,456
Total ...	9,254	85,924	29,956	92,102	3,359,890½	12,30,543	3,399,100½	14,08,569

10. *Average of passenger traffic, exclusive of return fares and soldiers, for the half-year ending December 1898.*

	Average miles open.	First class.	Second class.	Third class.	Total.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Average receipt per mile open	840	102 4 7	109 10 4	1,464 14 11	1,676 13 10
Average percentage of numbers	...	0·27	0·88	98·85	100·00
Average mileage of passengers	...	149	98	33	...
Average percentage of receipts	...	6·10	6·54	87·36	100·00

11. *Passenger traffic in each month, inclusive of return fares, but exclusive of soldiers for the half-year ending December 1898.*

Months.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
July	1,668½	13,835	6,904½	17,531	746,038	2,67,726	754,611	2,99,092
August	1,646½	12,794	6,354½	14,319	739,666	2,66,894	747,667	2,94,007
September	1,551	12,360	6,568	14,649	543,887½	1,95,067	552,006½	2,22,076
October	1,683	15,663	6,491½	15,590	523,642	1,67,419	531,816½	1,98,672
November	1,533	14,609	5,315	14,077	480,072½	1,60,328	486,920½	1,89,014
December	1,896	19,096	7,374½	19,815	521,555½	1,82,142	530,826	2,21,053
Total ...	9,978	88,357	39,008	95,981	3,554,861½	12,39,576	3,603,847½	14,23,914

12. *Average of passenger traffic, inclusive of return fares, but exclusive of soldiers, for the half-year ending December* 1898.

	Miles open.	First class.	Second class.	Third class.	Total.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Average receipt per mile open	840	105 3 0	114 4 2	1,475 11 0	1,695 2 2
Average percentage of numbers	...	0·28	1·08	98·64	100·00
Average mileage of passengers	...	149	95	32	...
Average percentage of receipts	...	6·21	6·74	87·05	100·00

13. *Return fare traffic for the half-year ending 31st December* 1898.

Months.	Periodical tickets.								Return tickets.							
	First class.		Second class.		Third class.		Total.		First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
July ...	200	122	1,600	473	39,800	490	41,600	1,085	12	157	39	266	4,884	1,228	4,935	1,651
August ...	160	181	1,600	611	14,880	215	16,640	1,007	13	102	54	325	9,815	2,409	9,882	2,836
September ...	120	121	1,640	343	9,720	189	11,480	653	18	134	91	420	3,929	1,206	4,038	1,760
October ...	...	...	1,400	174	63,160	713	64,560	887	28	253	56	281	3,134	737	3,218	1,271
November ...	80	120	1,000	195	16,040	242	17,120	557	28	273	23	178	2,280	590	2,331	1,041
December ...	...	...	1,480	222	25,000	395	26,480	617	65	968	69	391	2,329	620	2,463	1,979
Total ...	560	544	8,720	2018	168,600	2244	177,880	4,806	164	1887	332	1861	26,371	6,790	26,867	10,538

14. *Comparison of the passenger traffic, inclusive of return fares, but exclusive of soldiers, for the half-years ending December* 1897 *and June and December* 1898.

Half-years.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
Half-year ending December 1897	11,189	83,571	45,403	98,665	4,821,593	16,63,223	4,878,185	18,45,459
Do. do. June 1898	10,497	98,440	46,722½	1,08,078	4,600,357½	16,32,616	4,657,577	18,39,134
Do. do. December 1898	9,978	88,357	39,008	95,981	3,554,861½	12,39,576	3,603,847½	14,23,914

15. *Comparison of the passenger traffic, exclusive of return fares and soldiers, for the half-years ending December* 1897 *and June and December* 1898.

Period.	First class.		Second class.		Third class.		Total.	
	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
December 1897	8,633	79,789	31,210	92,522	4,596,385	16,51,731	4,636,228	18,24,042
June 1898	9,406	94,359	32,388½	1,02,443	4,356,445½	16,16,592	4,398,240	18,13,394
December 1898	9,254	85,924	29,956	92,102	3,359,890½	12,30,543	3,399,100½	14,08,569

16. *Comparison of the return fare traffic for the half-years ending December* 1897 *and June and December* 1898.

Period.		First class.		Second class.		Third class.		Total.	
		No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
Half-year ending Dec. 1897.	Trivellore ...	...	...	...	...	**9,087**	**2,249**	**9,087**	**2,249**
	Other excursions ...	2,556	3,785	14,193	6,142	216,121	9,239	232,870	19,166
Half-year ending June 1898.	Trivellore ...	...	...	...	...	**26,767**	**6,471**	**26,767**	**6,471**
	Other excursions ...	1,091	4,080	14,334	5,635	217,145	9,554	232,570	19,269
Half-year ending Dec. 1898.	Trivellore ...	...	...	...	...	**11,465**	**2,766**	**11,465**	**2,766**
	Other excursions ...	724	2,431	9,052	3,879	183,506	6,268	193,282	12,578

17. *Parcels, treasure and passenger's luggage for the half-years ending December* 1897 *and June and December* 1898.

Period.	Parcels.			Luggage.				
				Ordinary.		Military.		Total.
	No.	Rs.	Revenue parcels.	Public.	Treasure.	By ordinary trains.	By troop trains.	
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
December 1897	200,604	1,69,622	3,370	36,331	26,457	5,351	18,856	86,995
June 1898	233,188	1,56,591	2,992	39,211	31,217	5,695	14,175	90,298
December 1898	197,540	1,49,232	3,179	32,790	24,817	6,248	2,371	66,226

18. *Gross earnings and tonnage of goods, exclusive of Railway materials and Revenue stores, for the half-year ending* 31*st December* 1898.

Months.	Tons.	Rupees.
July	88,180	5,78,819
August	81,860	5,48,081
September	72,499	4,88,482
October	72,440	4,84,142
November	74,520	4,77,050
December	82,262	5,26,278
Total ...	471,761	31,02,852

19. *Comparison of the goods traffic, exclusive of Railway materials and Revenue stores, for the half-years ending December* 1897 *and June and December* 1898.

Period.	Tons.	Rupees.
Half-year ending December 1897	509,286	31,96,980
Do. do. June 1898	481,380	31,73,829
Do. do. December 1898	471,761	31,02,852

20. *Comparative statement of the traffic expenses for the half-years ending December* 1897 *and June and December* 1898.

Period.	Traffic Manager and Assistants.	Office establishment.	Travelling allowances.	Contingencies.	Station Masters, Clerks and Porters.	Guards and Assistant Guards and Overtime allowances.	Fire, lights, water and general stores.	Wagon covers & ropes.	Office and station fittings and furniture.	Clothing of Guards and Porters.	Printing, stationery and tickets.	Miscellaneous.	Traffic expenses at joint stations.	Loss on exchange.	Carriage of revenue stores.	Charges for delivery and collection of goods.	Deduct Cost of Working K. F., S. and Madras Ennur Railways.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1897 Dec.	44,355	23,749	3,660	438	1,98,524	61,972	36,913	2,449	1,514	5,951	36,732	2,728	7,684	2,154	1,765	943	10,376	4,21,155
1898 June	43,015	24,190	4,470	572	1,96,829	62,094	38,008	2,319	511	6,050	36,315	2,974	6,473	3,533	1,165	1,334	9,870	4,19,982
1898 Dec.	48,997	777	3,494	415	1,94,504	60,800	38,128	6,196	460	5,431	38,541	2,641	8,345	5,888	1,324	1,464	11,491	4,29,914

MADRAS RAILWAY,
TRAFFIC MANAGER'S OFFICE,
Madras, 1st April 1899.

(Signed) F. W. READ
Traffic Manager.

21. *The following Table shows the Coaching Traffic in and out of the following Stations on the Madras Railway for the half-years ending 31st December 1897 and 1898.*

These figures are compiled from the Chief Auditor's Return T. A. No. 44, the actual Number of Passengers and Coaching Receipts being extracted.

STATIONS.	Number of Passengers.						Coaching Receipts.					
	1897.			1898.			1897.			1898.		
	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.
	No.	No.	No.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras	334,478	304,427	638,905	259,513	246,579	506,092	3,46,078	3,37,624	6,83,702	3,01,041	2,77,765	5,78,806
Rayapuram...	99,637	108,004	207,641	81,757	90,258	172,015	4,412	14,161	18,573	3,697	11,259	14,956
Veyasarpaudy	5,793	7,468	13,261	4,496	6,228	10,724	140	575	715	113	241	354
Washermenpet Junction	109,243	118,918	228,161	100,652	112,543	213,195	7,452	16,183	23,635	6,021	13,493	19,514
Perambur	185,752	206,197	391,949	166,980	176,662	343,642	8,118	19,024	27,142	5,625	14,935	20,560
Villivakkam	43,500	45,791	89,291	31,933	32,228	64,161	2,635	3,142	5,777	2,232	2,490	4,722
Ambattur	19,336	18,488	37,824	13,809	12,340	26,149	1,689	1,722	3,411	1,288	1,201	2,489
Avadi	65,021	65,422	130,443	52,352	50,871	103,223	9,976	10,711	20,687	8,329	8,698	17,027
Tinnanur	39,580	39,518	79,098	27,016	26,271	53,287	5,709	5,910	11,619	4,264	4,240	8,504
Sevvapet Road	17,879	18,209	36,088	14,048	14,150	28,198	2,849	2,922	5,771	2,303	2,298	4,601
Trivellore	96,418	86,222	182,640	83,035	67,815	150,850	23,672	20,282	43,954	21,159	16,760	37,919
Kadambattur	25,074	26,554	51,628	19,374	20,301	39,675	4,339	4,719	9,058	3,519	3,737	7,256
Manur	12,878	13,647	26,525	8,863	9,360	18,223	1,770	2,049	3,819	1,264	1,499	2,763
Chinnamapet	12,998	12,937	25,935	10,829	10,499	21,328	2,533	2,568	5,101	2,333	2,224	4,557
Mosur	5,668	6,041	11,709	4,488	4,677	9,165	819	1,029	1,848	672	782	1,454
Arkonam Junction...	152,037	150,858	302,895	96,443	98,918	195,361	61,069	60,423	1,21,492	45,590	41,810	87,400
Tiruttani	78,367	63,092	141,459	64,128	49,485	113,613	14,907	11,062	25,969	15,072	10,931	26,003
Ponpadi	9,643	9,687	19,330	6,497	7,371	13,868	786	918	1,704	678	919	1,597
Nagari	36,847	36,708	73,555	30,856	31,425	62,281	6,450	6,613	13,063	6,146	6,495	12,641
Vepagunta	7,130	8,064	15,194	5,303	6,148	11,451	983	1,266	2,249	772	1,014	1,786
Puttur	37,588	39,736	77,324	32,610	32,783	65,393	6,896	7,691	14,587	6,456	6,836	13,292
Taduku	1,033	1,513	2,546	2,005	2,266	4,271	101	184	285	299	357	656
Pudi	22,258	22,975	45,233	17,529	18,143	35,672	3,711	4,194	7,905	3,012	3,406	6,418
Renigunta Junction	72,224	72,589	144,813	49,450	46,682	96,132	45,136	45,722	90,858	26,826	24,726	51,552
Mamanduru	2,857	2,949	5,806	1,666	1,706	3,372	328	432	760	195	257	452
Peddapadu	6,462	6,590	13,052	4,339	4,177	8,516	1,346	1,393	2,739	931	969	1,900
Koduru	17,193	17,575	34,768	12,701	12,707	25,408	4,906	5,609	10,515	3,755	3,877	7,632
Urampadu	8,635	9,052	17,687	7,706	7,966	15,672	1,477	1,788	3,265	1,410	2,259	3,669
Reddipalli	13,579	14,988	28,567	10,230	10,697	20,927	2,862	3,822	6,684	2,244	2,727	4,971
Razampeta	28,997	27,592	56,589	22,769	22,691	45,460	7,892	7,438	15,330	6,476	6,585	13,061
Nandalur	22,900	22,231	45,131	22,678	21,897	44,575	5,402	5,341	10,743	5,622	5,522	11,144
Vontimitta	18,739	18,350	37,089	15,794	15,799	31,593	4,017	5,425	9,442	3,433	4,281	7,714
Siddhavattam	1,835	1,946	3,781	1,340	1,580	2,920	382	269	651	162	215	377
Cuddapah	55,921	56,813	112,734	41,987	42,846	84,833	31,235	29,309	60,544	22,224	22,361	44,585
Krishnapuram	10,030	9,974	20,004	10,100	9,127	19,227	1,617	2,122	3,739	1,941	1,777	3,718
Gangayapalli	9,834	9,194	19,028	6,794	6,613	13,407	1,044	1,222	2,266	908	981	1,889
Kamalapuram	18,496	18,751	37,247	14,072	14,555	28,627	3,837	4,074	7,911	3,058	3,492	6,550
Yerragudipadu	4,974	4,962	9,936	3,617	3,699	7,316	705	825	1,530	514	614	1,128
Yerraguntla	20,848	19,591	40,439	17,882	16,749	34,631	9,498	10,732	20,230	8,197	12,077	20,274
Kalamala	4,090	3,728	7,818	3,742	3,609	7,351	772	808	1,580	771	937	1,708
Muddanuru	15,324	15,711	31,035	11,099	11,320	22,419	5,784	5,656	11,440	4,399	4,275	8,674
Mangapatnam	3,576	3,566	7,142	2,315	2,518	4,833	633	730	1,363	477	567	1,044
Kondapuram	9,402	9,321	18,723	6,230	6,246	12,476	2,954	2,988	5,942	2,200	2,255	4,455
Regadipalli	4,298	4,396	8,694	2,603	2,687	5,290	888	1,021	1,909	583	687	1,270
Vanganur	4,331	4,413	8,744	3,072	2,614	5,686	1,080	1,162	2,242	839	744	1,583
Tadpatri	27,339	28,031	55,370	17,999	17,834	35,833	10,177	10,143	20,320	7,278	6,891	14,169
Penneru	11,395	11,092	22,487	6,001	5,495	11,496	1,642	1,750	3,392	1,126	1,074	2,200
Rayalcheruvu	13,499	13,727	27,226	8,059	7,916	15,975	3,079	3,097	6,176	2,016	2,000	4,016
Jakkalacheruvu	3,227	3,045	6,272	1,980	1,969	3,949	540	546	1,086	421	420	841
Gooty	35,237	34,504	69,741	26,506	25,817	52,323	11,316	13,638	24,954	14,888	12,457	27,345
Patakottacheru	4,464	4,564	9,028	1,716	1,680	3,396	496	551	1,047	268	348	616
Timmancherla	9,368	10,390	19,758	4,462	4,835	9,297	2,005	2,298	4,303	1,158	1,277	2,435
Guntakal Junction...	34,636	30,648	65,284	14,970	12,899	27,869	29,641	25,838	55,479	14,687	11,936	26,623
Nancherla	3,450	3,470	6,920	2,128	2,260	4,388	912	846	1,758	627	683	1,310
Molagavalli	3,834	3,789	7,623	2,267	2,100	4,367	605	736	1,341	460	421	881
Aspari	8,125	7,763	15,888	2,761	22,55	5,016	1,539	1,584	3,123	560	514	1,074
Nagarur	5,794	5,058	10,852	1,278	954	2,232	612	652	1,264	205	181	386
Adoni	50,298	52,426	102,724	27,348	29,129	56,477	19,018	17,105	36,123	13,225	12,013	25,238
Kupgal	12,039	11,215	23,254	4,364	3,200	7,564	1,514	1,645	3,159	689	587	1,276
Kosgi	17,808	17,571	35,379	8,373	9,023	17,396	3,219	3,480	6,699	1,784	2,274	4,058
Tungabhadra	13,142	13,771	26,913	3,258	4,952	8,210	2,968	2,736	5,704	1,520	2,612	4,162
Matmari	14,163	14,535	28,698	4,218	2,514	6,732	1,876	2,056	3,932	741	397	1,138
Raichur Junction	25,479	24,162	49,641	11,934	11,644	23,578	28,694	25,199	53,893	18,024	18,756	36,780
Munnal	15,330	16,786	32,116	13,034	12,666	25,700	2,209	3,034	5,243	2,498	2,609	5,107
Sholinghur	29,448	29,714	59,162	24,648	24,141	48,789	8,382	7,950	16,332	7,954	7,465	15,419
Thalangai...	2,993	3,838	6,831	2,352	3,147	5,499	289	474	765	256	464	720
Arcot	77,244	75,615	152,859	63,557	60,459	124,016	31,204	30,910	62,114	27,541	25,006	52,547
Ponnai Road	5,333	7,355	12,688	4,708	5,961	10,669	459	936	1,395	459	924	1,383
Tiruvallam	17,916	19,694	37,610	13,002	13,568	26,570	5,625	6,685	12,310	4,321	4,378	8,699
Katpadi Junction	154,716	141,377	296,093	107,075	99,102	206,177	83,433	75,380	158,813	57,310	52,464	109,774
Latteri	5,872	8,245	14,117	4,401	5,688	10,089	519	912	1,431	454	731	1,185
Virinchipuram	19,202	20,467	39,669	12,188	12,868	25,056	4,354	5,520	9,874	3,381	3,574	6,955
Kavanur *	...	...	...	3,176	3,848	7,024	...	...	...	368	673	1,041
Gudiyattam	60,667	57,620	118,287	44,199	41,534	85,733	16,280	16,915	33,195	13,062	12,848	25,910
Vallathoor...	15,062	13,758	28,820	11,038	9,902	20,940	2,456	2,867	5,323	1,884	2,042	3,926
Mailpatti	27,054	30,920	57,974	18,831	21,457	40,288	7,136	7,640	14,776	4,991	5,092	10,083
Ambur	59,876	62,628	122,504	42,239	43,609	85,848	14,938	18,852	33,790	11,149	16,775	27,924
Vinnamangalam	5,014	6,800	11,814	3,508	4,354	7,862	517	1,129	1,646	389	749	1,138
Vaniyambadi	74,263	73,487	147,750	48,691	48,591	97,282	20,926	20,203	41,129	16,013	15,402	31,405

* Opened 5th May 1898.

The following Table shows the Coaching Traffic in and out of the following Stations on the Madras Railway for the half-years ending 31st December 1897 and 1898—continued.

STATIONS.	Number of Passengers.						Coaching Receipts.					
	1897.			1898.			1897.			1898.		
	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.
	No.	No.	No.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Kettandapatti	8,102	9,314	17,416	5,342	5,968	11,310	690	1,185	1,875	681	942	1,623
Jalarpet Junction	90,436	86,279	176,715	48,196	46,991	95,187	30,867	31,283	62,150	18,297	18,880	37,177
Patchur	14,662	16,777	31,439	10,002	9,373	19,375	2,904	4,457	7,361	2,441	2,363	4,804
Mulanur	7,602	7,411	15,013	3,653	3,824	7,477	785	921	1,706	465	528	993
Kuppam	36,101	36,455	72,556	22,264	22,875	45,139	9,560	9,237	18,796	6,705	6,595	13,300
Gudupalli	9,921	11,923	21,844	5,327	6,526	11,853	1,239	2,197	3,437	709	1,238	1,947
Bisanattam	14,879	14,562	29,441	13,094	10,994	24,088	4,927	5,541	10,468	4,759	4,556	9,315
Kamasamudram	18,699	18,153	36,852	14,136	12,525	26,661	3,991	3,198	7,189	4,142	2,876	7,018
Bowringpet Junction	81,944	73,623	155,567	47,310	45,204	92,514	44,446	33,165	77,611	28,478	22,735	51,213
Tyakal	20,667	21,073	41,740	12,884	11,507	24,396	2,775	3,103	5,878	1,732	1,861	3,593
Malur	35,630	34,389	70,019	17,295	16,789	34,084	12,663	12,676	25,339	7,233	8,468	15,701
Devankundi	16,413	16,435	32,848	7,412	8,407	15,819	2,573	2,669	5,242	1,297	1,545	2,842
Whitefield	34,491	31,358	65,849	14,705	13,241	27,946	6,011	5,494	11,505	2,967	2,769	5,736
Krishnarajapuram	16,865	19,986	36,851	7,677	7,955	15,632	2,617	3,285	5,902	1,547	1,423	2,970
Bangalore Cantonment	152,886	93,572	246,458	68,873	50,831	119,704	1,64,714	1,37,375	3,02,089	90,667	78,906	1,69,573
Do. City Junction	28,992	71,691	100,683	15,839	38,704	54,543	28,118	52,311	80,429	15,527	39,289	54,816
Bangalore Pettah	...	15,075	15,075	...	4,769	4,769	32	13,287	13,319	11	4,118	4,129
Tirupattur	77,336	74,509	151,845	52,374	50,256	102,630	28,847	26,810	55,657	20,565	19,648	40,213
Kagankarai	11,033	12,096	23,129	6,258	6,939	13,197	1,579	2,050	3,629	1,051	1,351	2,402
Samalpatti	16,381	16,800	33,181	11,095	10,557	21,652	4,860	5,270	10,130	3,332	3,210	6,542
Kallavi	10,148	10,889	21,037	6,856	7,124	13,980	1,916	2,435	4,351	1,435	1,600	3,035
Morappur	25,958	25,506	51,464	17,601	16,687	34,288	10,380	10,192	20,572	7,264	6,465	13,729
Buddireddippatti	8,059	7,618	15,677	5,152	50,16	10,168	2,176	2,245	4,421	1,431	1,546	2,977
Mallapuram	13,151	13,582	26,733	8,695	9,632	18,327	4,206	4,229	8,435	2,962	3,148	6,110
Lokur	1,873	1,664	3,537	1,589	1,126	2,715	213	256	469	187	212	399
Kadiampatti	9,489	10,213	19,702	6,514	7,321	13,835	1,890	2,178	4,068	1,368	1,516	2,884
Thinnappatti	13,675	12,546	26,221	7,263	6,644	13,907	1,743	1,787	3,530	1,178	1,165	2,343
Salem	92,835	91,763	184,598	63,117	62,871	125,988	58,655	59,709	1,18,364	44,482	48,158	92,640
Ariyanur	6,653	9,075	15,728	4,359	5,650	10,009	916	1,455	2,371	823	1,199	2,022
McDonald's Choultry	16,441	17,648	34,089	12,243	12,472	24,715	3,209	4,028	7,237	2,556	2,778	5,334
Sankaridrug	31,297	29,735	61,032	23,109	21,716	44,825	7,634	7,697	15,331	5,582	51,56	10,738
Anangur	7,972	7,108	15,080	5,393	5,134	10,527	662	722	1,384	512	531	1,043
Cauvery	7,908	9,150	17,058	5,650	6,141	11,791	737	1,115	1,852	650	906	1,556
Erode	106,652	104,633	211,285	77,322	75,259	152,581	60,851	55,829	1,16,680	43,325	39,780	83,105
Totiapalaiyam	2,286	2,803	5,089	1,972	2,435	4,407	191	277	468	197	303	500

Perundurai...	23,404	19,789	43,193	16,925	14,043	30,968	4,766	4,255	9,021	3,877	3,152	7,029
Ingur	5,175	6,499	11,674	5,477	6,230	11,707	935	1,564	2,499	1,234	1,640	2,877
Viziamangalam	7,506	8,158	15,664	5,377	6,081	11,458	1,636	1,835	3,471	1,144	1,362	2,506
Uttukuli	15,926	16,251	32,177	13,154	13,079	26,233	4,251	4,573	8,824	3,749	3,918	7,667
Kulipalaiyam	2,485	3,142	5,627	2,039	2,643	4,682	351	603	954	381	528	909
Tiruppur	42,137	43,398	85,535	3,2562	33,222	65,784	18,933	19,391	38,324	13,332	13,089	26,421
Dharapuram Out Agency* ...	...	...	...	...	...	...	...	...	...	...	...	..
Mangalam	20,516	19,660	40,176	16,920	16,497	33,417	5,646	5,590	11,236	4,659	4,705	9,364
Somanur	12,670	13,266	25,936	10,143	10,423	20,566	2,737	3,157	5,894	2,456	2,451	4,907
Sulur	15,041	15,577	30,618	11,872	11,739	23,611	3,400	3,704	7,104	2,762	2,673	5,435
Singanallur	12,362	12,261	24,623	11,252	8,845	20,097	2,773	2,618	5,391	2,597	1,967	4,564
Podanur Junction	78,192	76,565	154,757	62,653	62,601	125,254	19,818	24,651	44,469	15,388	15,826	31,214
Coimbatore...	143,309	135,979	279,288	112,298	110,164	222,462	59,094	53,806	1,12,900	48,206	46,689	94,895
Tudiyalur	15,969	16,311	32,280	12,322	12,441	24,763	2,122	2,314	4,436	1,890	1,965	3,855
Periyanayakkanpalayam	10,863	12,151	23,014	8,216	9,447	17,663	1,302	1,697	2,999	1,022	1,229	2,251
Karaimadai...	19,834	18,249	38,083	15,772	13,569	29,341	2,951	3,106	6,057	2,346	2,193	4,539
Mettupalaiyam	62,452	70,628	133,080	50,215	58,209	108,424	53,277	84,546	1,37,823	49,612	77,820	1,27,432
Madukarai	6,707	9,330	16,037	7,204	6,898	14,102	1,470	1,733	3,293	1,868	1,867	3,735
Walayar	5,187	6,096	11,283	3,827	4,473	8,300	983	1,165	2,148	816	934	1,750
Kanyikod	11,048	11,883	22,931	9,946	9,080	19,926	3,084	3,582	6,666	2,792	2,837	5,629
Olavakkot Junction	45,864	50,017	95,881	35,966	39,812	75,778	17,959	20,933	38,892	13,891	15,529	29,420
Palghat	46,213	37,894	84,107	42,680	34,674	77,354	28,256	22,881	51,137	24,954	19,716	44,670
Parli	9,769	11,695	21,464	10,278	11,895	22,173	2,693	3,418	6,111	2,675	2,979	5,654
Maukarai	10,761	11,908	22,669	12,379	13,049	25,428	4,032	4,307	8,339	4,497	4,614	9,111
Lakkiti	16,430	18,781	35,211	15,581	16,266	31,847	4,529	5,275	9,804	4,191	4,538	87,29
Ottappalam...	26,937	25,393	52,330	26,354	2,5875	52,229	7,461	7,695	15,156	6,852	6,960	13,812
Shoranur	33,057	32,448	65,505	29,071	29,364	58,434	22,193	20,143	42,336	21,422	23,991	45,413
Pattambi	26,125	24,950	51,075	24,140	22,687	46,827	12,016	17,365	29,381	11,911	13,485	25,396
Pallipuram	9,135	9,371	18,506	8,542	8,607	17,149	2,220	2,324	4,544	2,048	2,186	4,234
Kuttippuram	9,352	9,529	18,881	8,805	9,100	17,905	2,633	2,655	5,288	2,452	2,607	5,059
Edakkolam	13,600	15,279	28,879	12,190	13,286	25,476	3,901	4,505	8,406	3,614	4,060	76,74
Tirur	41,369	40,518	81,887	38,428	36,531	74,959	12,292	17,356	29,648	12,165	14,101	26,266
Tanore	23,960	24,996	48,956	19,310	19,449	38,759	3,663	8,530	12,193	3,055	3,966	70,21
Parpanangadi	45,413	46,446	91,859	37,489	36,539	74,028	6,309	7,477	13,786	5,816	6,196	12,012
Kadalundi	12,661	13,024	25,685	9,318	9,839	19,157	1,140	1,312	2,452	951	1,214	2,165
Ferok	45,072	45,809	90,881	40,476	41,680	82,156	4,797	5,320	10,117	5,073	5,377	10,450
Kallayi	23,633	32,095	55,728	30,202	33,303	63,505	4,817	7,468	12,285	5,584	7,912	13,496
Calicut	92,696	81,278	173,974	71,343	70,028	141,371	59,212	54,285	1,13,497	50,429	45,653	96,082
Southern Mahratta Railway ...	35,132	41,702	76,834	28,954	33,739	62,693	79,196	75,215	1,54,411	69,472	68,651	1,38,123
Great Indian Peninsula Railway...	19,370	13,497	32,867	14,397	12,578	26,975	1,60,707	72,042	2,32,749	1,28,906	74,961	2,03,867
South Indian Railway	57,007	79,906	136,913	54,787	70,614	125,401	78,980	91,920	1,70,900	73,092	77,911	1,51,003
Kolar Gold Fields State Railway...	54,499	56,357	110,856	31,784	34,811	66,595	43,595	59,082	1,02,677	30,062	47,701	77,763
Madras-Ennur Railway	26,644	22,585	49,229	21,970	19,233	41,203	511	454	965	478	480	958

N.B.—This statement is intended to shew the relative importance of each station on the Madras Railway, but the actual total receipts for any particular section of the railway cannot be obtained from it.

* Opened 9th March 1898.

22. *The following Table shows the Goods Traffic in and out of the following Stations on the Madras Railway, for the half-years ending 31st December 1897 and 1898, together with the gross traffic receipts.*

These figures are compiled from the Chief Auditor's Returns T. A. No. 44, the Public Merchandise and Railway Materials being included in one total, and maunds converted into tons.

STATIONS.	Tonnage of Goods and Railway Materials.						Goods Receipts.						Gross Receipts, Coaching & Goods, Inwards and Outwards.	
	1897.			1898.			1897.			1898.				
	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras ...	...	...	...	...	...	...	3,213	1,652	4,865	4,459	2,263	6,722	6,88,567	5,85,528
Salt Cotaurs ...	83,855	53,637	137,492	77,418	49,171	126,589	651,292	563,765	12,15,057	6,52,035	5,17,025	11,69,060	12,15,057	11,69,060
Rayapuram ...	1,232	82,941	84,173	2,410	110,301	112,711	1.017	336,170	3,37,187	2,836	5,04,912	5,07,748	3,55,760	5,22,704
Veyasarpaudy ...	...	...	...	...	...	...	...	...	...	...	...	...	715	354
Washermenpet Junc	67	...	67	...	...	...	88	16	104	18	24	42	23,739	19,556
Perambur ...	1,476	146	1,622	1,109	867	1,976	2,369	2,154	4,523	2,599	2,755	5,354	31,665	25,914
Villivakkam ...	11	23	34	47	1	48	91	39	130	85	20	105	5,907	4,827
Ambattur ...	2	7,257	7,259	1	3,353	3,354	8	6,384	6,392	21	1,953	1,974	9,803	4,463
Avadi ...	378	7381	7,759	209	2,121	2,330	2,022	8,260	10,282	1,103	1,308	2,411	30,969	19,438
Tinnanur ...	61	516	577	114	234	348	281	5,629	5,910	263	222	485	17,529	8,989
Sevvapet Road ...	102	64	166	109	24	133	278	381	659	252	105	357	6 430	4,958
Trivellore ...	1,243	888	2,131	986	689	1,675	6233	6,694	12,927	5,094	1,174	6,268	56,881	44,187
Kadambattur ...	278	981	1,259	256	748	1,004	1,011	4,365	5,376	905	1,086	1,991	14,434	9,247
Manur ...	66	282	348	53	188	241	245	514	759	252	330	582	4,578	3,345
Chinnamapet ...	123	1,305	1,428	103	1,247	1,350	418	2,746	3,164	352	2,379	2,731	8,265	7,288
Mosur ...	8	153	161	5	64	69	35	398	433	25	193	218	2,281	1,672
Arkonam Junction..	1,178	2,589	3,767	1,317	2,370	3,687	5,362	11,139	16,501	5,230	6,774	12,004	1,37,993	99,404
Tiruttani ...	1,458	1,829	3,287	1,120	1,335	2,455	7,791	7,271	15,062	6,335	4,257	10,592	41,031	36,595
Ponpadi ...	24	129	153	42	72	114	127	551	678	170	218	388	2,382	1,985
Nagari ...	897	1,818	2,715	975	836	1,811	4,522	7,735	12,257	4,972	3,022	7,994	25,320	20,635
Vepagunta ...	16	189	205	23	79	102	67	965	1,032	98	299	397	3,281	2,183
Puttur ...	562	3,050	3,612	588	1,898	2,486	2,153	10,362	12,515	2,634	6,067	8,701	27,102	21,993
Taduku ...	...	7	7	1	4	5	...	17	17	7	18	25	302	681
Pudi ...	215	1,303	1,518	1,141	737	1,878	740	6,661	7,401	325	2,404	2,729	15,506	9,147
Renigunta Junction	766	3,169	3,935	1,058	2,611	3,669	4,805	11,536	16,341	7,682	9,659	17,341	1,07,199	68,893
Mamanduru ...	1	332	333	8	355	363	5	1,096	1,101	22	1,139	1,161	1,861	1,613
Peddapadu ...	43	1,855	1,898	41	2,270	2,311	144	7,573	7,717	180	8,766	8,946	10,456	10,846
Koduru ...	404	923	1,327	624	490	1,114	1,706	4,355	6,061	3,401	2,826	6,227	16,576	13,859
Urampadu ...	47	377	424	53	300	353	262	2,208	2,470	206	1,532	1,738	5,735	5,407
Reddipalle ...	48	323	371	46	250	296	659	2,063	2,722	291	1,783	2,074	9,406	7,045
Razampeta ...	1,261	1,506	2,767	1,227	1,366	2,593	6,568	10,744	17,312	7,190	1,0737	17,927	32,642	30,988
Nandalur ...	343	154	497	171	178	349	1,112	745	1,857	683	1,609	2,292	12,600	13,436
Vontimitta ...	110	260	370	53	381	434	571	2,428	2,999	300	3,138	3,438	12,441	11,152
Siddhavattam ...	2	5	7	1	10	11	15	40	55	6	37	43	706	420
Cuddapah	6,800	3,959	10,759	3,617	3,101	6,718	38,868	28,294	67,162	26,100	20,603	46,703	1,27,706	91,288
Krishnapuram ...	466	229	695	167	242	409	2,551	1,845	4,396	898	1,265	2,163	8,135	5,881
Gangayapalli ...	99	186	285	125	200	325	1,054	861	1,915	1,025	1,137	2,162	4,181	4,051
Kamalapuram ...	534	200	734	843	354	1,197	2,718	904	3,622	4,433	2,559	6,992	11,533	13,542
Yerragudipadu ...	32	18	50	27	21	48	125	80	205	134	229	363	1,735	1,491
Yerraguntla ...	2,521	2,998	5,519	1,273	4,410	5,683	14,351	18,047	32,398	9,527	26,826	36,353	52,628	56,627
Kalamala ...	16	16	32	10	59	69	52	142	194	38	414	452	1,774	2,160
Muddanuru... ...	2,425	675	3,100	773	281	1,054	19,397	4,488	23,885	5,936	2,682	8,618	35,325	17,292
Mangapatnam ...	21	73	94	18	79	97	83	439	522	54	682	736	1,885	1,780
Kondapuram ...	601	359	960	87	551	638	4,860	2,704	7,564	430	4,610	5,040	13,506	9,495
Regadipalli ...	...	...	...	4	6	10	...	...	...	16	72	88	1,909	13,58
Vanganur	87	74	161	29	46	75	366	391	757	80	242	322	2,999	1,905
Tadpatri	3,427	1,206	4,633	2,178	1,721	3,899	25,702	8,871	34,573	15,047	15,779	30,826	54,893	44,995
Penneru	168	269	437	18	315	333	659	753	1,412	79	804	883	4,804	3,083
Rayalcheruvu ...	677	249	926	169	121	290	3,764	1,494	5,258	1,018	831	1,849	11,434	5,865
Jakkalacheruvu ...	27	6	33	22	4	26	117	21	138	94	50	144	1,224	985
Gooty	1,805	658	2,463	1,009	713	1,722	10,809	4,023	14,837	7,938	7,744	15,682	39,791	43,027
Patakottacheru ...	45	65	110	2	18	20	130	215	345	17	185	202	1,392	818
Timmancherla ...	574	441	1,015	279	1,258	1,537	5,433	2,741	8,174	2,465	13,726	16,191	12,477	18,626
Guntakal Junction...	490	294	784	926	993	1,919	6,866	1,605	8,471	10,670	5,868	16,538	63,950	43,161
Nancherla	161	84	245	121	564	685	1,355	253	1,608	524	6,139	6,663	3,366	7,973
Molagavalli ...	124	21	145	51	816	867	369	147	516	193	9,242	9,435	1,857	10,316
Aspari	931	125	1,056	21	464	485	11,923	302	12,225	107	5,831	5,938	15,348	7,012
Nagarur	5	3	8	1	34	35	17	6	23	1	488	489	1,287	875
Adoni	11,520	4,305	15,825	5,610	6,148	11,758	69,554	27,635	97,189	33,566	69,431	1,02,997	1,33,312	1,28,235
Kupgal	117	104	221	85	583	668	450	1,632	2,082	201	6,187	6,388	5,241	7,664
Kosgi	942	360	1,302	281	219	500	9,625	2,060	11,685	1,978	1,786	3,764	18,384	7,822
Tungabhadra ...	20	151	171	38	86	124	164	437	601	178	566	744	6,305	4,906
Matmari	61	151	212	25	524	549	178	607	785	103	7,095	7,198	4,717	8,336
Raichur Junction ...	7,067	912	7,979	2,470	9,609	12,079	73,339	10,178	83,517	27,301	1,09,173	1,36,474	1,37,410	1,73,254
Munnal	366	373	739	305	184	489	1,536	1,649	3,185	1,112	725	1,837	8,428	6,944
Sholinghur	546	1,568	2,114	723	2,220	2,943	2,300	5,464	7,764	3,137	4,605	7,742	24,096	23,161
Thalangai ...	...	12	12	3	6	9	3	43	46	18	28	46	809	766
Arcot	14,318	12,492	26,810	26,160	9,232	35,392	59,587	86,985	1,46,572	78,264	54,797	1,33,061	2,08,686	1,85,608
Ponnai Road ...	12	13	25	33	69	102	76	68	144	222	357	5,379	1,539	1,962
Tiruvallam	106	204	310	182	225	407	673	1,147	1,820	1,171	1,350	2,521	14,130	11,220
Katpadi Junction ...	6,615	15,218	21,833	...	6,362	14,094	51,198	1,11,304	1,62,502	52,372	42,952	95,324	3,21,315	2,05,098
Latteri ...	2	9	11	1	12	13	10	83	93	7	97	104	1,524	1,289
Virinchipuram ...	89	68	157	91	76	167	637	465	1,102	832	483	1,315	10,976	8,270
Kavanur* ...	...	...	...	11	42	53	..	...	...	45	335	380	...	1,421
Gudiyattam... ...	2,933	2,228	5,161	3,559	1,792	5,351	17,824	12,907	30,731	24,628	10,186	34,814	63,926	60,724
Vallathoor	138	101	239	180	143	323	962	725	1,687	1,352	905	2,257	7,010	6,183
Mailpatti	1,348	1,392	2,740	1,220	1,365	2,585	6,355	9,398	15,753	5,359	9,555	14,914	30,529	24,997
Ambur	1,714	2,056	3,800	2,481	1,853	4,334	10,899	11,990	22,889	15,768	11,367	27,135	56,679	55,059
Vinnamangalam ...	4	66	70	6	19	25	35	684	719	61	166	227	2,365	1,365
Vaniyambadi ...	4,202	3,246	7,448	4,559	3,584	8,143	26,857	19,281	46,138	28,662	19,598	48,260	87,267	79,675
Kettandapatti ...	25	99	124	31	67	98	92	719	811	125	344	469	2,686	2,092

* Opened 5th May 1898.

22. *The following Table shows the Goods Traffic in and out of the following Stations on the Madras Railway, for the half-years ending, &c.*—contd.

The following Table shows the Goods Traffic in and out of the following Stations on the Madras Railway, for the half-years ending, &c.—contd.

STATIONS.	Tonnage of Goods and Railway Materials.						Goods Receipts.						Gross Receipts, Coaching and Goods Inwards and Outwards.	
	1897.			1898.			1897.			1898.				
	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	Inwards.	Outwards.	Total.	1897.	1898.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Jalarpet Junction...	370	997	1,367	498	986	1,484	2,149	4,016	6,165	2,665	4,871	7,536	68,315	44,713
Patchur	306	543	849	483	667	1,150	962	1,749	2,711	1,781	2,258	4,039	10,072	8,843
Mulanur	16	1,545	1,561	36	1,353	1,389	47	1,407	1,454	138	1,216	1,354	3,160	2,347
Kuppam	809	2,779	3,588	767	2,131	2,898	4,260	9,539	13,799	4,161	6,899	11,060	32,596	24,360
Gudupalli	7	88	95	10	162	172	66	405	471	62	948	1,010	3,907	2,957
Bisanattam ...	3,790	18	3,808	4,336	31	4,367	5,470	79	5,549	7,090	100	7,190	16,017	16,505
Kamasamudram ...	2,415	475	2,890	2,134	280	2,414	2,064	763	2,827	2,016	1,125	3,141	10,016	10,159
Bowringpet Junc...	15,365	6,343	21,708	9,602	3,646	13,248	70,771	32,975	1,03,746	61,892	18,502	80,394	1,81,357	1,31,607
Tyakal	79	1,604	1,683	72	2,380	2,452	451	4,184	4,635	468	3,898	4,366	10,513	7,959
Malur	569	7,116	7,685	890	4,520	5,410	3,586	22,005	25,591	5,932	13,640	19,572	50,930	35,273
Devankundi ...	107	3,224	3,331	170	2,014	2,184	557	7,182	7,739	1,114	5,523	6,637	12,981	9,479
Whitefield ...	352	8,599	8,951	654	8,415	9,069	3,661	17,582	21,243	5,216	16,320	21,536	32,748	27,272
Krishnarajapuram..	207	1,049	1,256	199	1,448	1,647	1,932	2,392	4,324	2,172	2,237	4,409	10,226	7,379
Bangalore Cant. ...	15,183	4,275	19,458	12,246	3,141	15,387	1,34,310	51,768	1,86,078	1,27,390	39,882	1,67,272	4,88,167	3,36,845
Do. City Junc.	12,748	10,822	23,570	8,849	6,399	15,248	1,24,589	91,307	2,15,896	1,04,635	54,856	1,59,491	2,96,325	2,14,307
Bangalore Pettah...	...	...	...	...	...	...	...	...	...	...	...	...	13,319	4,129
Tirupattur ...	4,118	10,620	14,738	5,389	7,325	12,714	25,657	45,629	71,286	34,892	30,300	65,192	1,26,943	1,05,405
Kagankarai ...	13	122	135	22	34	56	39	819	858	3,113	282	395	4,487	2,797
Samalpatti ...	198	1,006	1,204	251	563	814	1,444	5,724	7,168	1,995	3,288	5,283	17,298	11,825
Kallavi	46	739	785	120	223	343	220	4,729	4,949	620	1,196	1,816	9,300	4,851
Morappur ...	1,442	4,156	5,598	1,925	2,285	4,210	10,792	24,474	35,266	14,643	13,836	28,479	55,838	42,208
Buddireddippatti ...	30	538	568	80	170	250	193	5,190	5,383	473	1,067	1,540	9,804	4,517
Mallapuram ...	116	587	703	107	277	384	647	3,770	4,417	528	1,703	2,231	12,852	8,341
Lokur ...	...	36	36	1	44	45	7	203	210	4	121	125	679	524
Kadiampatti ...	266	569	835	139	545	684	1,889	2,596	4,485	977	2,111	3,088	8,553	5,972
Thinnappatti ...	2	23	25	563	652	1,215	28	38	66	6,018	1,034	7,052	3,596	9,395
Salem	12,088	11,832	23,920	18,440	4,019	22,459	92,694	1,03,438	1,96,132	1,59,325	31,483	1,90,808	3,14,496	2,83,448
Ariyanur	6	130	136	13	119	132	39	1,593	1,632	68	1,656	1,724	4,003	3,746
McDonald's Choultry	525	586	1,111	474	265	739	4,078	4,852	8,930	3,498	2,392	5,890	16,167	11,224
Sankaridrug ...	2,410	3,868	6,278	2,201	2,518	4,719	13,302	17,704	31,006	18,282	10,347	28,629	46,337	39,367
Anangur ..	...	2	2	...	2	2	...	14	14	...	21	21	1,398	1,064
Cauvery	145	862	1,007	47	380	427	702	3,649	4,351	340	1,764	2,104	6,203	3,660
Erode	5,066	4,055	9,121	7,602	2,409	10,011	36,580	38,115	74,695	62,021	22,898	84,919	1,91,375	1,68,024
Totyapalaiyam ...	...	19	19	1	16	17	6	193	199	8	187	195	667	695
Perunturai ...	233	201	434	234	146	380	2,320	1,732	4,052	1,637	1,333	2,970	13,073	9,999
Ingur	...	5	5	1	4	5	2	45	47	3	26	29	2,546	2,906
Viziamangalam ...	3	131	134	4	302	306	31	356	387	29	712	741	3,858	3,247
Uttukuli	441	466	907	327	410	737	1,593	1,836	3,429	2,064	1,849	3,913	12,253	11,580
Kulipalaiyam ...	9	104	113	11	129	140	71	1,040	1,111	71	1,199	1,270	2,065	2,179
Tiruppur	5,934	12,675	18,609	9,141	4,795	13,936	48,949	1,23,918	1,72,867	82,262	48,953	1,31,215	2,11,191	1,57,636
Dharapuram out-Agency*	...	...	...	109	204	313	...	...	...	1,320	2,592	3,912	...	3,912
Mangalam ...	2,467	382	2,849	4,427	373	4,800	16,788	3,119	19,907	40,502	2,469	42,971	31,143	52,335
Somanur	217	712	929	242	327	569	864	9,565	10,429	856	4,315	5,171	16,323	10,078
Sulur	138	817	955	202	775	977	786	8,548	9,334	1,473	7,109	8,582	16,438	14,017
Singánallúr ...	112	300	412	73	283	356	605	2,239	2,844	749	3,197	3,946	8,235	8,510
Podanur Junction...	2,029	1,037	3,066	647	815	1,462	8,466	8,935	17,401	3,162	5,351	8,513	61,870	39,727
Coimbatore ...	17,249	9,031	26,280	18,490	4,346	22,836	80,563	80,625	1,61,188	1,25,504	34,998	1,60,502	2,74,088	2,55,397
Tudiyalur ...	173	296	469	30	182	212	282	1,199	1,481	104	571	675	5,917	4,530
Periyanayakkanpalayam	1	6	7	1	6	7	6	16	22	7	18	25	3,021	2,276
Karaimadai ...	313	319	632	309	140	449	1,233	2,838	4,071	1,763	764	2,527	10,128	7,066
Mettupalaiyam ...	10,135	4,948	15,083	10,941	4,348	15,289	89,665	47,534	1,37,199	92,131	40,743	1,32,874	7,25,022	2,60,306
Madukarai ...	69	251	320	133	579	712	298	1,347	1,645	580	2,213	2,793	4,848	6,528
Walayar	2	412	414	2	557	559	15	590	605	16	493	509	2,753	2,259
Kanyikod ...	162	4,072	4,234	239	1,214	1,453	1,224	5,936	7,160	1,712	1,935	3,647	13,826	9,276
Olavakkot Junction.	633	4,582	5,215	1,000	4,923	5,923	1,747	21,516	23,263	2,824	21,674	24,498	62,155	53,918
Palghat	8,892	10,973	19,865	7,146	6,695	13,841	52,861	56,652	1,09,513	53,277	45,322	98,599	1,66,650	1,43,269
Parli	348	2,823	3,171	249	1,831	2,080	1,516	8,626	10,142	1,086	6,797	7,883	16,253	13,537
Mankarai ...	209	466	675	270	551	821	781	2,130	2,911	920	3,412	4,332	11,250	13,443
Lakkiti	299	508	807	355	467	822	1,292	2,028	3,320	1,472	1,892	3,364	13,124	12,093
Ottappalam... ...	546	1,125	1,671	508	924	1,432	2,502	6,374	8,876	1,748	4,026	5,774	24,032	19,566
Shoranur ...	3,267	1,715	4,982	1,575	1,739	3,314	14,217	11,299	25,516	11,133	14,328	25,461	67,852	70,874
Pattambi ...	477	806	1,283	314	924	1,238	2,315	6,352	8,667	1,476	7,461	8,937	38,048	34,333
Pallipuram ...	34	112	146	34	72	106	183	981	1,164	132	449	581	5,708	4,815
Kuttippuram ...	351	197	548	219	142	361	1,571	1,642	3,213	1,133	1,294	2,427	8,501	7,486
Edakkolam ...	174	812	986	59	690	749	722	6,266	6,988	252	4,851	5,103	15,394	12,777
Tirur	8,809	6,301	15,110	2,573	6,475	9,048	54,586	39,839	94,425	17,311	40,229	57,540	1,24,073	83,806
Tanore	2,016	2,216	4,232	1,182	1,589	2,771	6,242	21,765	28,007	4,424	18,425	22,849	40,200	29,870
Parpanangadi ...	2,086	1,842	3,928	1,162	1,352	2,514	9,223	14,937	24,160	3,954	11,534	15,488	37,946	27,500
Kadalundi ...	149	448	597	45	239	284	816	2,325	3,141	158	1,233	1,391	5,593	3,556
Ferok	3,265	3,338	6,603	1,836	3,571	5,407	24,041	22,315	46,356	12,798	23,308	36,106	56,473	46,556
Kallayi	1,674	10,509	12,183	1,206	12,703	13,909	7,924	89,036	96,960	4,264	1,08,079	1,12,343	1,09,245	1,25,839
Calicut	20,005	11,991	31,996	8,222	12,292	20,514	1,58,613	90,528	2,49,141	75,837	93,559	1,69,396	3,62,638	2,65,478
S. M. Railway ...	17,231	43,405	60,636	8,887	50,086	58,973	1,68,029	2,23,377	3,91,406	1,14,054	3,91,259	5,05,313	5,45,817	6,43,436
G. I. P. do. ...	26,163	12,307	38,470	9,989	19,986	29,975	2,37,604	1,91,311	4,28,915	1,15,082	2,00,751	3,15,833	6,61,664	5,19,700
S. I. do. ...	23,275	25,153	48,428	22,805	19,498	42,303	1,09,637	1,40,166	2,49,803	1,26,550	81,813	2,08,363	4,20,703	3,59,366
K. G. F. S. Ry. ...	87,131	485	87,616	1,20,321	386	1,20,707	3,68,370	2,479	3,70,849	5,14,958	2,166	5,17,124	4,73,526	5,94,887
Madras-Ennur Ry.	13,566	9,351	22,917	1,906	1,812	3,718	3,617	30,283	33,900	1,532	3,348	4,880	34,864	5,838

* Opened 9th March 1898.

N. B.—This statement is intended to show the relative importance of each station on the Madras Railway, but the actual total receipts for any particular section of the Railway cannot be obtained from it.

LAWRENCE ASYLUM PRESS.

22. *The following Table shows the Goods T*

SOUTHERN MAHRATTA RAILWAY.

Traffic Manager's Office,

DHARWAR, 10th March, 1899.

CIRCULAR LETTER No. R 13.

To

ALL STATION MASTERS,

S. M. RAILWAY.

With reference to para 8 of Rate Circular No.R62 of 20th December 1898, the staff are informed that the Madras Railway have reduced their rates between Guntakal and Madras and Bangalore and Madras as shewn in the margin(They have still further reduced their rates in - through booking but these do not come in force till the 1st April and you will be duly advised of the changes in my next Rate Circular). For consignments not in wagon loads the ordinary rates apply and there is no induce - ment in such cases for booking to Madras Railway stations and rebooking from there.

In the case however of consignments in wagon loads of 270 to 324 maunds to which the lower rates do apply there is a direct inducement to rebook, and to prevent this the following procedure should be followed in the case of consignments in wagon loads of 270 to 324 maunds.

The local rates between the S. M. Railway stations and the Junction and the Junction and Madras should be added together and divided in mileage proportion on the through distance to Madras via Dharmavaram and the S.I. Railway; the proportions thus arrived at being the rates chargeable in local booking (provided of course they do not fall below the minimum chargeable to and from Dharmavaram) for traffic which it is intended to rebook to and from Madras. The consignment should then be booked to Dharmavaram freight being calculated at the rate stated in the preceding sentence. Receipts should then be issued for the consignment as follows:-

(a)

I. For all goods classified in the Special and 1st class including salt, sugar, jaggery, kerosine oil, piece goods grain and seeds at owner's risk in wagon loads of 324 maunds.	Between Salt Cottaurs, Rayapuram and Bangalore annas 2-1 per maund. Between Salt Cottaurs, Rayapuram, Gooty, Timmencherla and Guntakal annas 2-7 per maund.
II. For all goods classified in the 2nd, 3rd, 4th and 5th classes at owner's risk in wagon loads of 324 maunds.	Between Salt Cottaurs, Rayapuram and Bangalore annas 3-4 per maund. Between Salt Cottaurs, Rayapuram, Gooty, Timmencherla and Guntakal annas 4-1 per maund.

(a) For the journey to Dharmavaram. The consignor should be required to endorse and sign his instructions as to rebooking on this, and the receipt should be sent attached to the invoice to Dharmavaram.

(b) For the journey Dharmavaram to Madras a second receipt should be issued on behalf of the S. I. Railway and should be headed Dharmavaram and signed " For Station Master Dharmavaram ". On this receipt, the freight to Dharmavaram should be shewn " Paid on ", and the freight from Dharmavaram to Madras " To pay ", the latter being the difference between the sum of the local rates and the S. M. Railway proportion. Thus, Bellary has 270 maunds of onions to book to Madras.

The sum of the local rates is,

Bellary to Guntakal -	As.1-4
Guntakal to Madras -	As.2-7
Total	As.3-11

The total amount of 47 pies divided in mileage proportion on the through distance of 472 miles via Dharmavaram to Madras makes the S. M. and S. I. Railways proportions 9 and 38 pies respectively. As these are not below the minimum chargeable, the consignment should be booked to Dharmavaram the charge over the S. M. Railway being calculated at 9 pies a maund; the charge over the S. I. Railway being calculated at 38 pies a maund.

In the case of consignments thus booked between Dharmavaram and Madras terminals need not be taken into account at all either on the S. M. or S. I. Railway.

At Dharmavaram fresh invoices will be issued for the consignments, the labels will be altered, and the wagons sent on without delay.

If

If these orders are not clearly understood and the station has any traffic to book to Madras, I should be asked for an explanation of the points about which there is doubt.

(Signed) NEVILLE PRIESTLEY.

Traffic Manager.

Form No. :.

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187

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