

RAILWAY BRANCH.

G.O., No. 1418-19. *Sy.*

DATED 18th Nov. 1898.

[Despatch Abstract.]

*Interlocking Arrangements at
Peralam Station.*

*Ordered that a copy of letter from
the Agent, S. & Ry., furnishing the
particulars of the —, be forwarded
to the Govt. of India as called for.*

Forwarded

Indexed.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
	996K	—	24.11.96				
	420.21R	—	18.11.98				
	195.6R	—	20.2.99				
	307.8R	—	18.3.99				

FURTHER PAPERS.

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

Public Works (1898) Department.

Railway
CURRENT No. 1187

SERIAL
No. 58

From
The Govt. of India

No. 2828 of 13th Oct. 98.
Order

Copy forwarded
to the Agent South Indian
Railway for favour of report.

No. 1147 R.S.

Dated 4th October 1898

Received
Registered } 12.10.98

Enclosures

Spare copies

SUBJECT.

Interlocking arrangements
at Peralam station

Requesting to be furnished
with particulars of the
referred to in the Inspection
Report^{S. J. Ry} for half year
ended 30th June 1898.

Despatched on 13/10/98

BACK PAPERS.

No. 1147 R.S.
GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY STORES.



To

Simla, the 4th October 1898.

Sir,

I have the honour to be,

Sir,

Your most obedient servant,

Offg: Under Secretary.

Documents accompanying:-

Nil.

S.A.

South Indian Railway.

Copy of a letter, No. D/6245 D
2288, dated 14th November 1898.
from the Chief Engineer.
to the Agent, South Indian Railway.

Your letter No. R954/14 of 25th ultimo.
Peralam Junction arrangements.
Installation of Sutton's System of Interlocking.

I have the pleasure to give you the information asked for by the Government of India.

The interlocking arrangements at Peralam were designed and erected by Messrs Sutton and Company. The small ferrotype sketch attached gives the arrangements of the Station, the tracing which also accompanies this letter shows the details of the interlocking arrangements and the Traffic Manager's printed Circular No. 4365 contains the instructions that have been issued for the working of the signals &c, since the arrangements were passed.

The arrangements consist (1st) of a frame containing 6 levers and a locking apparatus erected on the platform, and from which the 6 signals are worked, the frame contains the usual interlocking machinery, (2nd) of the rodding and locking apparatus for the cross over road leading from the Mayavaram Mutpet Railway to the Karaikkal Railway. Both the cross over road points are worked from the points on the Mayavaram Mutpet Railway by 2 levers contained in a frame. The normal position of the crossover road is for the points

AGENT'S OFFICE,
TRICHINOPOLY,

7th November 1898.

Accompaniment to the Agent's letter

No. 1000 of 8.11-1898 8th Nov.

True copy.

W. de Meunier
for Agent.

Copy continued.

points to be set for the Mayavaram Mutupet Railway and in this position they are ^{locked}. When it is required to work the cross-over, the Key has to be taken from the locking apparatus in the 6 lever frame on the platform (and this can only be done when the 6 levers are locked) with this key the lock of the point levers is opened and with one lever the points are released, with the 2^d the points are manipulated. No signal can then be pulled off until the cross over is restored to its normal position the levers locked and the key returned to the frame on the platform.

At the Inspection, the Train had come in from Mayavaram to go on to Karaikkal, to do this, the cross-over had to be used.

The locking arrangements had only been then recently completed and were waiting to be passed by the Government Inspecting Officer prior to the issuing of working instructions by the Traffic Manager.

The Signals are worked by wire in the usual way from the levers at the platform and the Station Master not having received the working instructions considered, he could not start the Inspection Train without lowering the Starting Signal and so went to it and lifted the counterpoise weight instead of hand signalling, the train past it.

AGENT'S OFFICE,
TRICHINOPOLY,

7th November 1898.

Accompaniment to the Agent's letter

No. 1000 of 8-11-1898 M.S.

True copy.

W. de Meunier
for Agent.

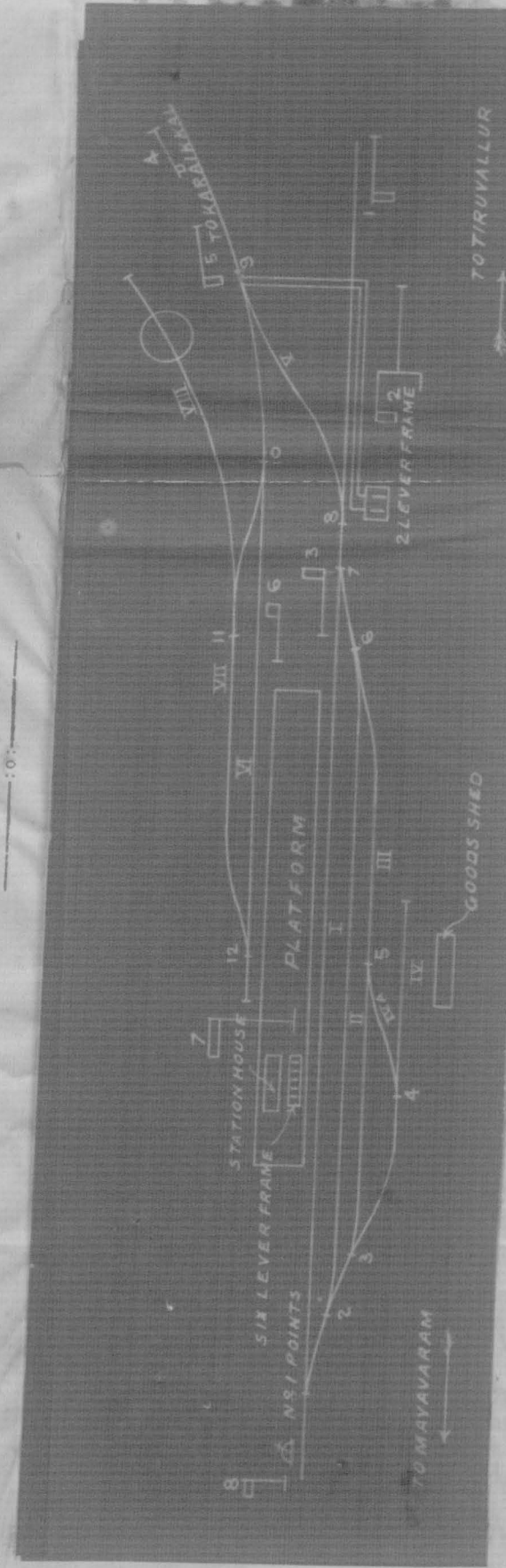
5253 98
1000 2845 1 49
520 1-6-99
8.11.98

G. 4365.

SOUTH INDIAN RAILWAY COMPANY, LD.

TRAFFIC CIRCULAR NO. G. 886.
TRAFFIC MANAGER'S OFFICE,
Tchinopoly, June 21st 1898.

Rules for working PERALAM station with Dutton's interlocking system.



1. Above is a sketch of the Peralam station and when reporting accidents &c, the lines, points, signals and sidings as herein shewn must be quoted.

2. The sidings are to be described as follows:—

No. I.	Mayavaram-Tiruvallur Main Line	No. V.	Karaikal Cross over Road
No. II.	Through siding	No. VI.	Karaikal Platform line
No. III.	do. do.	No. VII.	Karaikal Through siding
No. IV.	Goods shed line N 9 I V A Goods shed siding Karaikal	No. VIII.	Turntale line

3. Signal No. 1 is the Distant signal for trains from Tiruvallur and must be treated as a Stop Signal that is, it must not be passed when "On."

Signal No. 2 is the Home signal for trains from Tiruvallur.

Signal No. 3 is the Starting signal for trains to Tiruvallur.

Signal No. 4 is the Distant signal for trains running from Karaikal and must be treated as a Stop signal.

Signal No. 5 is the Home signal for trains from Karaikal.

Signal No. 6 is the Starting signal for trains running to Karaikal.

Signal No. 7 is the Home signal for trains coming from Mayavaram, it is on the platform close to the six-lever frame and is worked from a lever at the foot of the post.

Signal No. 8 is the Distant signal for trains coming from Mayavaram and is worked from a lever fixed opposite No. 2 Points.

4. The signal levers (of which there are six) are situated on the platform. The numbers given to the levers apply also to the corresponding signals.

Lever No. 1 works the Distant signal for trains from Tiruvallur.

" " 2 works the Home signal for trains from Tiruvallur.

" " 3 also prevents No. 7 signal for trains from Mayavaram being given for a train to come in from Tiruvallur.

" " 3 works the Starting signal for trains to Tiruvallur.

" " 4 works the Distant signal for trains from Karaikal.

" " 5 works the Home signal for trains from Karaikal.

" " 6 works the Starting signal for trains to Karaikal.

5. Cross over road No. V can only be worked by the levers at No. 7 Points. When it is required to use the Cross over, the key, which must invariably be kept on the six lever frame at the station, must be inserted in the lock on the lever frame of Points No. 7, 8.

When this Cross over road is used, all the signals 1 to 6, both inclusive, are locked at danger and hand signals must be used for engines or trains requiring to pass over it.

The points for the Cross over road are interlocked with the signals, but all other points are independent of them.

HENRY DAVIES,
Traffic Manager.

No. 1000

South Indian Railway Co., Ltd. 63

AGENT'S OFFICE,

TRICHINOPOLY, 8th November 1898.

From

The AGENT,

SOUTH INDIAN RAILWAY,

ref

To

The CONSULTING ENGINEER FOR RAILWAYS,

MADRAS.



Sir,

SN^o 56 With reference to your Memorandum —
No 2828 dated 13th October 1898, regarding the interlocking
arrangements at Peralam junction, I have the honor to
forward a copy of our Chief Engineer's letter No D/62460^o
of 4th November 1898 describing the arrangements in use,
together with a copy of the Traffic Circular, and a —
tracing of the diagram, referred to by the Chief Engineer.

I have the honor to be

Sir

Your most obedient servant

A. B. S. Shetty

Captain R. E.

Agent

3 Enclosures by ~~hand post~~

MAD

3 Currents

Forwarding copy of the
letter with the letter of
the P.O. Office, and the
minutes which the Traffic Circular
was signed to and given copy of and for
on file.

JWS

16/11

Papers to be read in Proceedings:—

Again G.O., dated

189 , No.

Again G.O., dated

189 , No.

Current No. 1187

of 1898, dated 4th Oct. , from *Genl. of L.R.*

Envelope " 2828

" 1898, " 13th Oct. , " *Gen. L.R. & L.R. S.I.R.*

Letter " 1000

" 1898, " 8th Nov. , " *Genl. S.I.R. & L.R.*

ORDER.

No 1418. Dtd 18/11/98
 A copy of the *Genl. S.I.R.* Ltr. will be
 forwarded to the *Genl. of L.R.* in reply to their Ltr.
No. 1147. R.S. of 4th Oct. 98 *F.R.S.*

A

No. 1419. Dtd 18/11/98

Forwarded.

F.R.S.

B

16/11/98

Despatched on 18/11/98
 22

Dated
Received

No.

ENCLOSURE.

To

THE AGENT,
 South Indian Railway,
 Trichinopoly,
 THE CONSULTING ENGINEER FOR
 RAILWAYS,
 Madras.

18

RAILWAY.

Government {1898} of Madras.
PUBLIC WORKS.

Recd.

} 1898.

Enclosures

Regd.

Spare copies

G.O., No. 1097 Ry., 29th August 1898.

AUGUST.

Report of Inspection of the South Indian Railway System

The Government Inspector's — for the half-year ended the 30th June 1898, communicated to the Agent for information and necessary action; and copy of the Proceedings forwarded to the Government of India.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

SOUTH INDIAN RAILWAY SYSTEM.

METRE GAUGE.

Total mileage open for traffic 1,119 miles.

INSPECTION REPORT FOR THE HALF-YEAR ENDED 30TH JUNE 1898.

The inspection was carried out between the 4th and 16th July. The Chief Engineer was present throughout; the District officers accompanied the train over their respective divisions.

2. *Formation*.—Banks and cuttings are in good order.

3. *Bridges and Culverts*.—With reference to paragraph 6 of the last inspection report, it appears that for many years the subject of removing the spoil heaps, which obstruct the waterway of the *Gingee* and *Tondiar* rivers (miles 84/10 and 86/1), has been under consideration. These spoil heaps have already been cut through in several places: to further remove the obstruction would cost a lot of money and involve the acquisition of valuable land. As no water has passed through the land spans since 1885, I am of opinion that the present *status quo* may be allowed to stand.

4. *Gadilam River (Mile 124)*.—The longitudinal timbers are simply bolted to the rail bearer and not held in place by chubbs on the cross girders. With reference to paragraph 12 of the last report, it is expected that this bridge will be cross-sleepered in about 2 years' time, till then the present arrangement may be allowed to stand.

5. *Single 25-ft. girder (Mile 216)*.—A laminated crack has been discovered in the top flange near one of the abutments and will be watched.

6. At mile 275, a hill stream which flows parallel to the railway shows a tendency to erode its banks, cutting towards the railway. It was agreed that the banks should be pitched in preference to groining.

7. *Level-crossings, Tanjore and Trichinopoly districts*.—A number of occupation level-crossings, the approaches of which were originally made by the railway, are now quite impassable for want of attention by the District Boards. This, of course, only concerns the convenience of the villagers.

8. At *Chetpat* station, an arrangement is on trial by which it is assured that the gates are shut and bolted before the gateman can pull off the gate signal. The arrangement worked satisfactorily and I think should be extended to all busy crossings.

9. *Gate lights*.—Most of the gate fixed signals show white instead of green as an all-right signal; this should be altered. Gate-keepers should also be instructed to show green and not white with their hand lamps.

10. *Fencing*.—On the Pondicherry Branch and south of Madura particularly, but all over the line generally, the aloe fencing is in a most unsatisfactory state. This is chiefly the result of dead plants having caught fire. The gaps thus formed have to

be replanted—a process which not only takes up the gangsmen's time, but which does not ensure the gap being effectually closed for some three years, during which period other gaps have formed. The Chief Engineer proposes to replace the worst portions with wire-fencing, an estimate for which is now before Government.

11. On the Erode Branch, the wire fence, though not erected on the boundary, has been undercut owing to encroachment by the ryots. The fencing is in its present condition quite useless as a preventative to cattle trespass, but to re-fix it will cost a lot of money. I suggest for consideration whether it would not be better to remove all the fencing from this branch and use it in re-placing the alocs on the main line.

12. *Ballast and Permanent-way*.—The road throughout has been kept up to its usual standard of efficiency; the Villupuram-Dharmavaram was, perhaps, as a whole, in the best order, while that south of Dindigul was the worst.

13. The Peralam-Karaikkal road ran very smoothly. The restriction of speed over this section might now be removed.

14. A new type of deep fish plate is being tried near Villupuram on the Pakala section.

15. In *Ammayanayakanur* yard I noticed a very large proportion of loose fish bolts.

16. The work of arranging the point padlocks so that the switches can be locked over for the siding as well as for the main line is in progress.

17. *Stations and Buildings*.—In building the new goods shed at Madras Beach, provision must be made for the new suggested alignment outside of the Lighthouse Battery.

18. Some additional waiting shelter seems to be required at Chetpet where there is a large passenger traffic at certain times of the day.

19. Considerable delay and consequent disappointment to the people most concerned has taken place in the commencement of work on the new stations promised at Noyel, Mogaralapalle, Adudorai, Tirunellikaval. I understand the estimates are now ready and that no further delay is anticipated.

20. *Karur*.—The Traffic Department ask for a parcel office; one of the two waiting-rooms should be converted for the purpose.

21. At *Tinnerelly* and *Koilpati* the floor of the waiting-room needs attention.

22. At *Gudur* the new buildings are about half completed.

23. *Station yards—Chingleput*.—The outside points leading to the ballast siding should be taken out and the connection made at the platform end instead. Some other alterations, principally the provision of shunting necks, were discussed and approved.

24. *Kolatur, North*.—At this station there is a long dead end siding, sometimes used for crossing trains. On a recent occasion a goods train ran over the buffer stops at the end. I do not advocate any alteration owing to the station being on a grade of 1 in 200, but I consider the main line points should be fitted with Annett's locks.

25. *Villupuram*.—A new engine shed road should be included in the proposed alterations, the existing engine road being converted into a shunting neck. A scissors crossing at the north end of the yard would obviate the necessity for any shunting engine ever to go outside the points on the main line.

26. *Cuddalore Old Town*.—Some extensive alterations at the locomotive yard exit are proposed, but I do not think the work is justified in view of the impending abolition of this as a locomotive station.

27. The locomotive disc signal at present faces the wrong way. It should control engines coming on to the main line and should not refer to engines coming from off the main line or out of the sheds. Both the siding and the disc signals should be worked by the main line pointsman, the latter, if possible, being detected with the main line points.

28. *Tiruvallur*.—To satisfy the demands of the Traffic Department it was agreed that the island platform should be extended at the west end up to the water column and the cross-over road shifted further out.

29. *Mayavaram*.—The shunting neck agreed to at the last inspection was again discussed and approved of with the addition of a cross-over from the branch side of the station. The necessity for a new line for stabling goods wagons on, was agreed to.

30. *Madura*.—An estimate, amounting to Rs. 3,000, for re-arranging the locomotive yard exits, was discussed. In view of the construction of the Madu Pamban Railway and the then necessary re-arrangement of the yard, I think small dead ends with weighted switches and inter-locked signals will suffice for the present.

31. *Satur*.—An extension of the goods shed is required. An engine turn-table is also necessary here as a number of goods trains stop at and return from this station.

32. *Tatapara*.—The land for the Ceylon Government coolie depôt has been transferred and the buildings are nearly complete.

33. *Tuticorin*.—A meeting between the principal officials concerned has been held, who I understand have settled the question of siding and shedding accommodation.

34. *Trichinopoly*.—The plan showing the proposed alterations to the yard was inspected and, with a few modifications, approved.

35. *Junction stations*.—At Villupuram, Mayavaram, Tiruvalur and Tanjore, where long island platforms have been provided, I put forward, for consideration, the suggestion that it would be both safer and more economical in permanent-way and interlocking arrangements to use the platforms as for a double line, *i.e.*, keeping all up trains, whether branch or main line, on one side and all down trains on the other side. This system will not only simplify the signalling, but all shunting outside the outermost facing points can be more easily avoided.

36. A large quantity of permanent-way, sufficient, for instance, to provide shunting necks at several stations is, I think, in excess of requirements at the following stations and might be transferred as opportunity occurs:—

Kadiri—the triangle which is never used.

Chinna Tippiasamudrum—a long loop and half the goods shed line a connection being put in nearer the shed.

Chittoor—one long loop.

Vellore—one and a half long loops.

Katpadi—one and a half long loops.

37. *Mount Capper quarry*.—The upper portion of this siding is on a grade of 1 in 75 falling towards the main line. I think a slip point or dead end worked in connection with the siding home signal is advisable to prevent any possibility of wagons, which may have escaped during shunting operations at the quarry, running direct on to the main line.

38. *Signals*.—Several signals in the Mayavaram-Mutupet section require stops to prevent the arms being raised or lowered beyond the proper positions.

39. A recent case of averted collision, whereby two mail trains were only saved by the prompt use of the vacuum brake, points to the necessity of progress being made in the erection of proper home signals at the points.

40. Many signals, especially starting signals, show red and white instead of red and green. This defect should be speedily remedied.

41. Some uniformity might be arrived at in the matter of semaphore back lights. The English practice might be adopted with advantage, *i.e.*, when the signal is off—back light—*nil*, when on—*white*.

42. *Peralam Junction*.—The Dutton interlocking installation at the south end of this station was inspected and passed for opening. It is designed to prevent any collision occurring at the junction with the Karaikkal line. The back lights on the starting signals should be blocked up.

43. *Tiruvallur Junction*.—The interlocking at the east end of this station would be made more complete and safer were the points at the east end of the north island platform line (No. 20 I believe) weighted, and held only for shunting. By this arrangement no train from the Mayavaram side could possibly be turned on to the north side of the platform.

44. *Nidamangalam*.—The new siding signal should be of the semaphore type, and should be provided with an Annett's lock.

45. *Tirupati*.—The slip siding disc shows green and *nil*, instead of red and green, respectively.

46. *Traffic*.—The inhabitants of Padalam have petitioned for the day mail to Madras to be stopped there. From a traffic point of view there is practically nothing to choose between Padalam and Kolatur North, where the train does stop. Padalam, however is a good watering station.

47. The Stationmaster of Peralam was found holding up the counterweight of the interlocked starting signal, being unable, owing to the interlocking, to obtain the signal by regular means. He had not been furnished with a copy of the special rules and therefore did not know he was doing wrong; but I think the incident points to the necessity for the issue of a circular warning all concerned against the practice.

48. There are stringent rules on the subject of the cleansing of horse-boxes, but at Tinnevely and Pakala I found some horse-boxes in a very dirty condition.

49. The guard of No. 72 Train, on the 14th July, was found deliberately booking false time at Chandragiri. In view of the importance, particularly on this section where some difficulty has occurred owing to late running, of ascertaining how time is lost and why it is not made up, serious notice should be taken of this case.

50. At Cuddalore New Town, I also found all concerned booking false time by 13 minutes in the case of No. 50 Goods of the 17th July.

51. Unless the late running of trains on the Dharmavaram Branch can be otherwise remedied, the solution will be to start the trains from Pakala and Dharmavaram at about 6 o'clock.

52. *Rolling-stock, Workshops, &c.*—The first of the new break-down trains (that at Villupuram) was inspected and seemed to be very complete.

53. At Negapatam the Locomotive Superintendent presented his usual budget of requirements, most of which were modest and seemed necessary.

54. *Axle failures*.—During the preceding twelve months the following failures have taken place:—11 Engine axles, 5 Wagon axles, 9 Wagon journals.

The engine axles were those under the new O. class engines. No derailments took place, the fractures being discovered in time. Nearly all the wagon axles were of the old 3" $\times$ 6 $\frac{1}{8}$ " journal type. The following precautions have been taken to prevent, as far as possible, any serious disaster:—

- (1) No wagons, except those fitted with axles having journals 7" $\times$ 3 $\frac{1}{4}$ ", are run on mixed trains.
- (2) The gross load of the four-wheeled wagon stock fitted with axles having journals 6 $\frac{1}{8}$ " $\times$ 3" has been reduced from 12 to 10 tons.
- (3) Every effort is being made to replace the weaker type of axles by new ones of the stronger type.

55. *Quarry sidings*.—The *Pulliyarpati* quarry siding was inspected with a view to passing it for passenger traffic. The following points seem to require attention. A single 4-ft. culvert requires increased waterway to the extent of 3 spans of 8 feet; at present there is a substantial temporary bridge. A considerable length of surface line requires ballast walling. There are no platforms or other conveniences either at Tanjore or Pulliyarpati. With these exceptions the siding complies with all requirements and, in my opinion, can be safely opened for the only class of passenger traffic, *i.e.*, ballast coolies, which it is intended to serve.

56. *Mount Capper quarry siding*.—There are several temporary bridges of an extremely kutchra description. The sleepers are very old, and, except at the joints, are 3 feet apart (8 to the 24 ft. rail). There are no platforms or conveniences. I do not consider this siding fit for passenger traffic although it might be safe enough for ballast trains, with coolies, run at very slow speeds.

57. *Clutch sidings*.—Cases of run-away wagons have recently occurred at Vaiyampatti and Chandragiri. It is now practically agreed that on the South Indian Railway slip sidings taking off the loop are required at several stations. I would suggest that the work be carried out, say, at the rate of two each half-year.

58. *Land*.—Much trouble is experienced owing to ryots encroaching on the railway land outside the fences (*vide* paragraph 11). The Chief Engineer proposes to engage a Revenue Survey party to authoritatively demarcate the boundaries. This, I think, a good suggestion.

MADRAS,
1st August 1898.

C. T. R. SCOVELL,
Government Inspector of Railways.

Remarks by the Senior Government Inspector of Railways, Madras.

The report on the whole is satisfactory. The Agent should report in due course what steps he proposes to take with a view to remedying the defects brought to notice.

Signals are referred to in paragraphs 9, 27, 38, 39, 40, 41, 42, 45, 47. The defects noticed should be corrected and the scheme of coloured lights systematized.

Sidings are referred to in paragraphs 15, 23, 35, 37, 43, 57. Proposals should be put forward in due course by the Agent.

The matters referred to in paragraphs 18, 21, 46, affect the convenience of the public and should be attended to.

I have no objection to the present restriction of speed on the Peralam-Karikal branch being removed as soon as the Agent and the French Colonial authorities agree to alter the present timing.

OOTACAMUND,
11th August 1898.

FRANCIS J. E. SPRING,
Senior Govt. Inspector of Rys., Madras.

ORDER—No. 1097 Ry., dated 29th August 1898.

Communicated to the Agent, South Indian Railway, for information and necessary action, and to the Local and Municipal Department with reference to paragraph 7 of the report.

2. A copy of these Proceedings will be forwarded for the information of the Government of India.

[Here enter No. 1098 Ry., dated 29th August 1898.]

(True Extract.)

FRANCIS J. E. SPRING,
Joint Secretary.

To the Agent, South Indian Railway.
" Consulting Engineer for Railways.
" Local and Municipal Department.