M R O. 1—77,036—3-6-37.

(1) Number of pages_____

(2) Date of repair_____

(3) Initials of the Referencer_____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 3609-CC Press Misc.

231-33

Dated 16 11 1869.

Not to be folded or roughly handled

No. 231. Read the following letter from the Consulting Engineer for Railways, to the Secretary to Government, Public Works Department, dated Madras, 8th November 1869, No. 365 :—

In further reply to the Order of Government, dated the 23rd July 1869, No. 2,420, and in continuation of my letter, dated the 2nd instant, No. 357, I have the honour to submit a letter* from the Agent of the Great Southern of India Railway, giving cover to a report from the Locomotive Superintendent upon the spark-catchers which have been tried upon that line.

* No. 3,171, 3rd November 1869.

From the Agent of the Great Southern of India Railway, to the Consulting Engineer for Railways, dated Negapatam, 3rd November 1869, No. 3,171.

With reference to your letter, No. 229, of the 26th July last, regarding spark-catchers, I have the honour to forward herewith copy* of a report from the Locomotive Superintendent, which explains the cause of delay in submitting the information called for.

* With original sketches.

From the Locomotive and Carriage Superintendent, to the Agent of the Great Southern of India Railway, dated Negapatam, 1st November 1869, No. 451.

Spark-Catchers.

Consulting Engineer's No. 229.

The delay in answering the Consulting Engineer's queries has arisen from my having been away on leave, and from my wish to submit a report upon a new spark-catcher I am constructing, which is not yet done. As a reply is pressed for I can give information only upon the spark-catchers we have had in use. They are of three kinds : the ordinary "crinoline" spark-catcher ; one, the design of a Bombay Engineer ; and another, the idea of one of my Foremen. Of the crinoline no drawing is needed to explain it. These we had sent out my predecessor condemned as being useless from various causes : firstly, the tops were only wired of a very coarse mesh, and failed to arrest the sparks at all ; and, secondly, the baffle being a fixture *under* the wire mesh, it was, with the greatest difficulty, that an engine could be got to make any steam when first lighting up in the shed for want of draught. These crinolines are also a source of constant expense from corrosion of the plates at the bottom where the ashes and priming collect. They are also cumbersome and ugly. I have information regarding their use on the Madras Railway (where they are the kind adopted) to the effect that they are, although in a measure effective as actual arresters of sparks, great drawbacks to the engine's steaming—the drivers saying, that they are always "fighting for steam." I have not myself tried any of them, as I hope to effect the required result in a manner more effective and pleasing in appearance. The second class of arresters and the one now in use is a wire gauze placed on the nazzle of the blast pipe, and made to fit the top of the smoke-box at the aperture for the funnel. It answers tolerably well, but has its drawbacks ; such as, being soon burnt away by the fire, chocking with small ash, and, if the mesh is too small, preventing the engine steaming. With attention from the driver in keeping it clear at stations, it is as effective as any I have seen. I give an ink-sketch of it. The other one tried, the design of my Foreman, also failed in point of the engine steaming. I send an ink-sketch of it. I propose a further experiment with this by inserting a plate at the red line to prevent the escape of the steam being baffled by the exhaust. The cause of failure in this design was, that the ash and exhaust-steam chamber got chocked by the constant discharge of exhaust-steam, and could not free itself through the gauze, thereby stopping the draught. No spark-catcher that I have seen or heard of is effective as not being an impediment to the engine's steaming powers. If a driver cannot get steam he cannot keep time or haul a load, the traffic being therefrom a sufferer. I purpose continuing my experiments until I succeed in perfecting a thoroughly effective arrester, or until I hear of one that is a success.

Proceedings of the Madras Government, Public Works Department, 10th November 1869.

No. 232. ORDER THEREON, 10th November 1869, No. 3,609.

RAILWAY, No. 21.

ORDERED that this letter and its accompaniment be forwarded to the Government of India, with reference to their letter, No. 899-R., of the 9th July 1869.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

No. 233. DOCKET, No. 3,610, dated 10th November 1869.

COPY of the above forwarded to the Government of India, in continuation of Docket, No. 3,552, dated 5th November 1869.

(True Extract.)

Colonel, R. E.,
Secretary to Government.

Exd. F. R. Bantleman.

CONSULTING ENGINEER'S OFFICE,

Railway Department,

No. 365

From Major P. H. M. Shaw-Stewart R.E.
Consulting Engineer for Railways,

To Colonel C. A. Orr R.E.
Secretary to Government,
Public Works Department,
Fort Saint George.

SIR,

In further reply to the order of Govern-
ment dated the 25th July 1869, No. 2420, and
in continuation of my letter dated the 2d
instant, No. 357, I have the honour to submit
a letter from the Agent of the Great Southern
of India Railway giving cover to a report
from the Locomotive Superintendent upon the
Spark-catchers which have been tried upon
that line.

I have the honour to be
Sir
Your most obedient Servant
Major R.E.
Cons. Engr. for Railways.

No. 3171. 8 Nov. 1869.

Madras
8 November 1869

Loco: Supt's upon the
Spark catchers which
have been tried upon
the G-I-P-Rly-

Dy. 1869 Light
Transport for Loco's

RAILWAY DEPARTMENT.

No. 4694

From

The Consulting Engineer
for Railways,

To

The Secretary to Government,
Public Works Department,
Fort Saint George.

No 5695 & 5696 - 10 Loco's

Dated 8th November 1869
Received 9th "

No. 215-
Loco's 8

Submitting a Report
Drawing & Specification
of the G-I-P Rly Company
Loco to a Report for

No 231.

No. 451.

Great Southern of India Railway.
Loco & Carr. Superts Office
Negapatam, 1st November 1869.

My dear Sir,

Consulting Engineer's No. 229 Spark Catchers.

The delay in answering the Consulting Engineer's queries has arisen from my having been away on leave and from my wish to submit a report upon a new spark catcher I am constructing which is not yet done — as a reply is prefred for, I can give information only upon the spark catchers we have had in use — They are of three kinds — The Ordinary "Crinoline" spark catcher, one the design of a Bombay Engineer, and another the idea of one of my Foreman — of the crinoline no drawing is needed to explain it — These we had sent out my predecessor condemned as being useless from various causes — 1st'ly the tops were only wired of a very coarse mesh and failed to arrest the sparks at all & 2nd'ly — the baffle being a fixture under the wire mesh, it was with the greatest difficulty that an Engine could be got to make any steam when first lighting up in the shed for want of draught — These crinolines are also a source of constant expense from corrosion of the plates at the bottom where the ashes and priming collect — They are also cumbersome

cumbersome and ugly— I have information regarding their use on the Madras Railway where they are the kind adopted to the effect that they are all in a measure effective as actual arresters of sparks, great drawbacks to the Engines steaming, the drivers saying that they are always fighting for steam— I have not myself tried any of them as I hope to effect the required result in a manner more effective and pleasing in appearance— The second class of arresters and the one now in use is a wire guage placed on the nozzle of the blast pipe and made to fit the top of the smoke box at the aperture for the funnel— It answers tolerably well but has its drawbacks such as being soon burnt away by the fire, choking with small ash, and if the mesh is too small preventing the Engine steaming— With attention from the Driver in keeping it clear at stations it is as effective as any I have seen. I give an ink sketch of it— The other one tried the design of my foreman also failed in spite of the Engine steaming— I send an ink sketch of it— I propose a further experiment with this by inserting a plate at the red line to prevent the escape of the steam being baffled by the exhaust. The cause of failure in this design was that the ash and exhaust steam chamber got chocked by the constant discharge of exhaust steam and could not free itself through the gauze thereby

thereby stopping the draught— No spark catcher that I have seen or heard of is effective as not being an impediment to the Engine's steaming powers— If a Driver cannot get steam he cannot keep time or haul a load, the traffic being therefrom a sufferer— I purpose continuing my experiments until I succeed in perfecting a thoroughly effective arrester or until I hear of one that is a success—

Yours faithfully

/signed/ Edward. J. Steward

Locomotive & Carr. Supdt.

/signed/ William S. Betts Esqre.

Agent.

Negapatam.

/True Copy/-

/signed/ William S. Betts.

Agent.

No. 3171.

Great Southern of India Railway
Agents Office.
Negapatam 3rd November 1869.

From,

The Agent
Great Southern of India Railway.

To,

The Consulting Engineer
for Railways.
Madras.

Sir

With reference to your letter No. 229. of the 26th July last, regarding "spark catchers" I have the honor to forward herewith Copy of a report from the Locomotive superintendant which explains the Cause of delay in submitting the information called for. with original Sketches.

I have the honor to be
Sir
Your most Obedient servant
(Signed) William S. Betts
Agent.

X? attd.

Public Works Department

No. 3609.

Proceedings of the Madras Government.

Under date the 10th Novr 1869

Read the following.

From. The Consulting Engineer for Railways. } M. & N. No. 365 Dated 8th November 1869

Ordered that this letter and its accompaniment be forwarded to the Government of India with reference to their letter No. 899 R of the 9th July 1869 -

Docket No. 3610 dated 10th November—1869.

Copy of the above forwarded to the Govt.

Other forwarding Letter for Railways -

Ld. S. Despt 11/11/69.
P. C. — 12/11/69.

of Indigo in con-
tinuation of Pass-
No. 3392 dated 5th
November 1869

7

Exam. in

Ins. s. dest. 11/11/69 with quittances
P.C. 19/11/69.

Cur 4694

Govt. of {1869} Madras.

PUBLIC WORKS.

To The Consulting Engr for Railways and to the Secretary to the Govt of India

Dr

Rect

Govt Work[illegible] Rs 3609-5-10

Nos 231-232-4238

Spark Catchers (3)] Ordering orders on the letter from the Cons Engr submitting a report from the Superintending Engr of the S. Ry on the Spark catchers which have been tried upon that line.

Spark Catchers (3)] A copy of and Govt. relative to Spark catchers which have been tried on the G. of S. Ry forwarded to the Govt of India.